Table of Contents

Overview .................................................................................................................. OV-i

Fisheries-Independent Monitoring

Introduction ............................................................................................................. FIM-1
Methods ................................................................................................................... FIM-3
Study Areas ........................................................................................................... FIM-6
Tampa Bay ............................................................................................................. TB-1
Charlotte Harbor .................................................................................................. CH-1
Northern Indian River Lagoon ............................................................................... IR-1
Cedar Key ................................................................................................................ CK-1
Apalachicola Bay ................................................................................................... AP-1
Southern Indian River Lagoon ............................................................................... TQ-1
Northeast Florida ................................................................................................. JX-1

Fish Health Monitoring ......................................................................................... FH-1

Species Profiles

Introduction ............................................................................................................. SP-1
Red Drum, *Sciaenops ocellatus* ......................................................................... SP-5
Spotted Seatrout, *Cynoscion nebulosus* ......................................................... SP-17
Sheepshead, *Archosargus probatocephalus* ................................................... SP-29
Striped Mullet, *Mugil cephalus* ..................................................................... SP-39
Pinfish, *Lagodon rhomboides* ......................................................................... SP-45
Common Snook, *Centropomus undecimalis* .................................................. SP-55
Blue Crab, *Callinectes sapidus* ...................................................................... SP-61
Intentionally Left Blank
Overview

This report provides a summary of the data collected in 2015 by the Florida Fish and Wildlife Conservation Commission (FWC) Fish and Wildlife Research Institute’s (FWRI) Fisheries-Independent Monitoring (FIM) program. Monitoring was conducted monthly following a stratified-random sampling (SRS) design in Tampa Bay, Charlotte Harbor, the northern Indian River Lagoon, Cedar Key, the southern Indian River Lagoon, Apalachicola Bay, and northeast Florida. Gears used for routine monitoring in the various areas included 21.3-m seines, 6.1-m otter trawls, and 183-m haul seines (Table OV15-01).

There were 1,932,008 animals collected in 6,332 samples from all study areas (Figure OV15-01). The most samples were collected with 21.3-m seines (n=3,128), followed by 6.1-m otter trawls (n=1,788), and 183-m haul seines (n=1,416). Total sampling effort in the study areas ranged from 144 hauls made in southern Indian River Lagoon to 1,356 hauls made in northeast Florida (Table OV15-02). The total number of animals collected ranged from 28,913 in southern Indian River Lagoon to 759,266 in Tampa Bay. The majority of animals were collected in 21.3-m seines (n=1,429,901; 74.0% of the total catch).

Small fishes such as Anchoa mitchilli, Lagodon rhomboides, Eucinostomus spp., and seasonal recruits such as Leiostomus xanthurus, Mugil cephalus, and Micropogonias undulatus dominated samples. Recreationally and commercially important animals (i.e., Selected Taxa; see Table FIM15-02) accounted for 9.3% (n=180,099) of the overall catch and comprised between 2.9% (Tampa Bay) and 30.3% (northeast Florida) of the total SRS catches from each study area. Selected Taxa were among the 10 most abundant taxa in some areas: Farfantepenaeus duorarum in Charlotte Harbor; M. cephalus and M. undulatus in the northern Indian River Lagoon; Cynoscion arenarius, M. cephalus and L. xanthurus in Cedar Key; Mugil curema, Archosargus probatocephalus, and Centropomus undecimalis in the southern Indian River Lagoon; L. xanthurus, M. undulatus, Litopenaeus setiferus, and C. arenarius in Apalachicola Bay; and L. xanthurus, L. setiferus, M. undulatus, and M. cephalus in northeast Florida (Tables OV15-03 and –04).
A total of 1,635 fish and select invertebrates were culled for fish health analyses of gross external abnormalities (including external parasites). Numbers of reported abnormalities from each study area ranged from six (Cedar Key) to 1,481 (northern Indian River Lagoon; see Fish Health section).

Species profiles, including indices of young-of-the-year relative abundance, were generated for many species of commercial, recreational, or ecological importance: *Sciaenops ocellatus* (Red Drum), *Cynoscion nebulosus* (Spotted Seatrout), *A. probatocephalus* (Sheepshead), *M. cephalus* (Striped Mullet), *L. rhomboides* (Pinfish), *C. undecimalis* (Common Snook), and *Callinectes sapidus* (Blue Crab; see Species Profile section).
Figure OV15-01. Summary of 2015 FIM program catch and effort data. ‘Samples’ are the total number of deployments by gear, and ‘Animals’ are the total number of animals collected by each sampling method.
Table OV15-01. Gear usage by field laboratory for FIM program stratified-random sampling, 2015.

<table>
<thead>
<tr>
<th>Field Lab</th>
<th>21.3-m Seines</th>
<th></th>
<th>183-m Haul Seines</th>
<th>6.1-m Otter Trawls</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bay</td>
<td>River</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tampa Bay</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Charlotte Harbor</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>N. Indian River</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Cedar Key</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>S. Indian River</td>
<td>--</td>
<td>--</td>
<td>X</td>
<td>--</td>
</tr>
<tr>
<td>Apalachicola</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Northeast Florida</td>
<td>--</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
Table OV15-02. Summary of catch and effort data by area for FIM program stratified-random sampling, 2015. ‘Hauls’ are the total number of net deployments by each gear, and ‘Animals’ are the total number of animals collected by each sampling method.

<table>
<thead>
<tr>
<th>Gear</th>
<th>Tampa Bay</th>
<th>Charlotte Harbor</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hauls</td>
<td>Animals</td>
<td>Hauls</td>
<td>Animals</td>
</tr>
<tr>
<td>21.3-m seine</td>
<td>744</td>
<td>658,413</td>
<td>504</td>
<td>213,825</td>
</tr>
<tr>
<td>183-m haul seine</td>
<td>240</td>
<td>50,730</td>
<td>204</td>
<td>37,869</td>
</tr>
<tr>
<td>6.1-m otter trawl</td>
<td>336</td>
<td>50,123</td>
<td>360</td>
<td>43,933</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>1,320</strong></td>
<td><strong>759,266</strong></td>
<td><strong>1,068</strong></td>
<td><strong>295,627</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gear</th>
<th>N. Indian River Lagoon</th>
<th>Cedar Key</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hauls</td>
<td>Animals</td>
<td>Hauls</td>
<td>Animals</td>
</tr>
<tr>
<td>21.3-m seine</td>
<td>488</td>
<td>323,295</td>
<td>420</td>
<td>39,212</td>
</tr>
<tr>
<td>183-m haul seine</td>
<td>228</td>
<td>63,177</td>
<td>192</td>
<td>20,328</td>
</tr>
<tr>
<td>6.1-m otter trawl</td>
<td>96</td>
<td>16,070</td>
<td>180</td>
<td>15,009</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>812</strong></td>
<td><strong>402,542</strong></td>
<td><strong>792</strong></td>
<td><strong>74,549</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gear</th>
<th>S. Indian River Lagoon</th>
<th>Apalachicola Bay</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hauls</td>
<td>Animals</td>
<td>Hauls</td>
<td>Animals</td>
</tr>
<tr>
<td>21.3-m seine</td>
<td>.</td>
<td>.</td>
<td>396</td>
<td>52,818</td>
</tr>
<tr>
<td>183-m haul seine</td>
<td>144</td>
<td>28,913</td>
<td>216</td>
<td>31,424</td>
</tr>
<tr>
<td>6.1-m otter trawl</td>
<td>.</td>
<td>.</td>
<td>228</td>
<td>95,411</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>144</strong></td>
<td><strong>28,913</strong></td>
<td><strong>840</strong></td>
<td><strong>179,653</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gear</th>
<th>Northeast Florida</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hauls</td>
<td>Animals</td>
<td></td>
</tr>
<tr>
<td>21.3-m seine</td>
<td>576</td>
<td>142,338</td>
<td></td>
</tr>
<tr>
<td>183-m haul seine</td>
<td>192</td>
<td>7,828</td>
<td></td>
</tr>
<tr>
<td>6.1-m otter trawl</td>
<td>588</td>
<td>41,292</td>
<td></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>1,356</strong></td>
<td><strong>191,458</strong></td>
<td></td>
</tr>
</tbody>
</table>
Table OV15-03. Top 10 numerically dominant taxa collected in FIM program stratified-random sample areas, 2015.

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Number</th>
<th>Scientific Name</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tampa Bay</strong></td>
<td></td>
<td><strong>Charlotte Harbor</strong></td>
<td></td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>531,449</td>
<td>Anchoa mitchilli</td>
<td>99,897</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>51,893</td>
<td>Lagodon rhomboides</td>
<td>77,810</td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td>31,417</td>
<td>Eucinostomus spp.</td>
<td>28,723</td>
</tr>
<tr>
<td>Menidia spp.</td>
<td>29,747</td>
<td>Lucania parva</td>
<td>19,410</td>
</tr>
<tr>
<td>Lucania parva</td>
<td>13,126</td>
<td>Menidia spp.</td>
<td>8,664</td>
</tr>
<tr>
<td>Harengula jaguana</td>
<td>11,863</td>
<td>Eucinostomus gula</td>
<td>5,884</td>
</tr>
<tr>
<td>Microgobius gulosus</td>
<td>8,198</td>
<td>Farfantepenaeus duorarum</td>
<td>5,612</td>
</tr>
<tr>
<td>Eucinostomus gula</td>
<td>7,800</td>
<td>Orthopristis chrysoptera</td>
<td>5,393</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>6,768</td>
<td>Microgobius gulosus</td>
<td>4,759</td>
</tr>
<tr>
<td>Eucinostomus harengulus</td>
<td>6,465</td>
<td>Sardinella aurita</td>
<td>3,168</td>
</tr>
</tbody>
</table>

Σ = 698,726  255,320

Total (Selected Taxa) 21,982  16,305

Grand Total of Animals Collected 759,266  295,627

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Number</th>
<th>Scientific Name</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N. Indian River Lagoon</strong></td>
<td></td>
<td><strong>Cedar Key</strong></td>
<td></td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>246,070</td>
<td>Anchoa mitchilli</td>
<td>23,310</td>
</tr>
<tr>
<td>Brevoortia spp.</td>
<td>22,543</td>
<td>Lagodon rhomboides</td>
<td>11,633</td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td>16,563</td>
<td>Menidia spp.</td>
<td>3,299</td>
</tr>
<tr>
<td>Diapterus auratus</td>
<td>16,039</td>
<td>Bairdiella chrysoura</td>
<td>3,034</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>11,770</td>
<td>Cynoscion arenarius</td>
<td>2,796</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>7,248</td>
<td>Mugil cephalus</td>
<td>2,369</td>
</tr>
<tr>
<td>Menidia spp.</td>
<td>6,631</td>
<td>Harengula jaguana</td>
<td>2,220</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>6,576</td>
<td>Leiostomus xanthurus</td>
<td>2,168</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>5,701</td>
<td>Eucinostomus spp.</td>
<td>1,743</td>
</tr>
<tr>
<td>Eucinostomus harengulus</td>
<td>5,461</td>
<td>Portunus spp.</td>
<td>1,461</td>
</tr>
</tbody>
</table>

Σ = 344,602  54,033

Total (Selected Taxa) 32,583  13,497

Grand Total of Animals Collected 402,542  74,549
Table OV15-03. (Continued)

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Number</th>
<th>Scientific Name</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Diapterus auratus</em></td>
<td>5,926</td>
<td><em>Anchoa mitchilli</em></td>
<td>78,679</td>
</tr>
<tr>
<td><em>Lagodon rhomboides</em></td>
<td>5,260</td>
<td><em>Lagodon rhomboides</em></td>
<td>16,657</td>
</tr>
<tr>
<td><em>Mugil curema</em></td>
<td>3,666</td>
<td><em>Leiostomus xanthurus</em></td>
<td>6,802</td>
</tr>
<tr>
<td><em>Harengula jaguana</em></td>
<td>2,557</td>
<td><em>Menidia spp.</em></td>
<td>6,470</td>
</tr>
<tr>
<td><em>Brevoortia spp.</em></td>
<td>1,367</td>
<td><em>Micropterus salmoides</em></td>
<td>5,886</td>
</tr>
<tr>
<td><em>Ariopsis felis</em></td>
<td>1,231</td>
<td><em>Micropogonias undulatus</em></td>
<td>5,419</td>
</tr>
<tr>
<td><em>Archosargus probatocephalus</em></td>
<td>997</td>
<td><em>Litopenaeus setiferus</em></td>
<td>4,856</td>
</tr>
<tr>
<td><em>Eucinostomus gula</em></td>
<td>853</td>
<td><em>Cynoscion arenarius</em></td>
<td>4,181</td>
</tr>
<tr>
<td><em>Archosargus rhomboidalis</em></td>
<td>686</td>
<td><em>Harengula jaguana</em></td>
<td>3,819</td>
</tr>
<tr>
<td><em>Centropomus undecimalis</em></td>
<td>677</td>
<td><em>Orthopristis chrysoptera</em></td>
<td>3,658</td>
</tr>
<tr>
<td>Σ</td>
<td>23,220</td>
<td>123,427</td>
<td></td>
</tr>
<tr>
<td>Total (Selected Taxa)</td>
<td>7,572</td>
<td>30,228</td>
<td></td>
</tr>
<tr>
<td>Grand Total of Animals Collected</td>
<td>28,913</td>
<td>179,653</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Anchoa mitchilli</em></td>
<td>58,036</td>
</tr>
<tr>
<td><em>Leiostomus xanthurus</em></td>
<td>20,479</td>
</tr>
<tr>
<td><em>Anchoa hepsetus</em></td>
<td>14,005</td>
</tr>
<tr>
<td><em>Litopenaeus setiferus</em></td>
<td>13,743</td>
</tr>
<tr>
<td><em>Menidia menidia</em></td>
<td>9,448</td>
</tr>
<tr>
<td><em>Micropogonias undulatus</em></td>
<td>9,215</td>
</tr>
<tr>
<td><em>Menidia spp.</em></td>
<td>7,002</td>
</tr>
<tr>
<td><em>Mugil cephalus</em></td>
<td>5,337</td>
</tr>
<tr>
<td><em>Gambusia holbrooki</em></td>
<td>4,734</td>
</tr>
<tr>
<td><em>Bairdiella chrysoura</em></td>
<td>3,856</td>
</tr>
<tr>
<td>Σ</td>
<td>145,855</td>
</tr>
<tr>
<td>Total (Selected Taxa)</td>
<td>57,932</td>
</tr>
<tr>
<td>Grand Total of Animals Collected</td>
<td>191,458</td>
</tr>
</tbody>
</table>

**S. Indian River Lagoon**

**Apalachicola Bay**

**Northeast Florida**
<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Number</th>
<th>Scientific Name</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>4,549</td>
<td>Farfantepenaeus duorarum</td>
<td>5,612</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>2,934</td>
<td>Cynoscion arenarius</td>
<td>1,533</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>2,808</td>
<td>Leiostomus xanthurus</td>
<td>1,270</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>2,083</td>
<td>Lutjanus griseus</td>
<td>946</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>1,409</td>
<td>Callinectes sapidus</td>
<td>923</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>1,318</td>
<td>Centropomus undecimalis</td>
<td>895</td>
</tr>
<tr>
<td>Mugil trichodon</td>
<td>978</td>
<td>Menticirrhus americanus</td>
<td>776</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>955</td>
<td>Archosargus probatocephalus</td>
<td>633</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>952</td>
<td>Menippe spp.</td>
<td>625</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>950</td>
<td>Mugil cephalus</td>
<td>625</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>878</td>
<td>Sciaenops ocellatus</td>
<td>618</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>808</td>
<td>Cynoscion nebulosus</td>
<td>550</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>397</td>
<td>Lutjanus synagris</td>
<td>518</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>354</td>
<td>Mugil trichodon</td>
<td>263</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>123</td>
<td>Paralichthys albigutta</td>
<td>236</td>
</tr>
<tr>
<td>Menippe spp.</td>
<td>118</td>
<td>Elops saurus</td>
<td>137</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>101</td>
<td>Trachinotus falcatus</td>
<td>85</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>89</td>
<td>Mycteroperca microlepis</td>
<td>19</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>72</td>
<td>Menticirrhus saxatilis</td>
<td>14</td>
</tr>
<tr>
<td>Menticirrhus saxatilis</td>
<td>40</td>
<td>Mugil curema</td>
<td>7</td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td>17</td>
<td>Pogonias cromis</td>
<td>4</td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td>17</td>
<td>Lutjanus analis</td>
<td>3</td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td>13</td>
<td>Trachinotus carolinus</td>
<td>3</td>
</tr>
<tr>
<td>Menticirrhus littoralis</td>
<td>8</td>
<td>Epinephelus morio</td>
<td>2</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>7</td>
<td>Penaeidae spp.</td>
<td>2</td>
</tr>
<tr>
<td>Mycteroperca microlepis</td>
<td>4</td>
<td>Pomatomus saltatrix</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rachycentron canadum</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Epinephelus itajara</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Micropogonias undulatus</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td><strong>21,982</strong></td>
<td>Total</td>
<td><strong>16,305</strong></td>
</tr>
</tbody>
</table>
Table OV15-04. (Continued)

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Number</th>
<th>Scientific Name</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N. Indian River Lagoon</strong></td>
<td></td>
<td><strong>Cedar Key</strong></td>
<td></td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>7248</td>
<td>Cynoscion arenarius</td>
<td>2,796</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>5701</td>
<td>Mugil cephalus</td>
<td>2,369</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>4485</td>
<td>Leiostomus xanthurus</td>
<td>2,168</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>3455</td>
<td>Menticirrhus americanus</td>
<td>1,228</td>
</tr>
<tr>
<td>Farfantepenaeus spp.</td>
<td>2322</td>
<td>Callinectes sapidus</td>
<td>1,046</td>
</tr>
<tr>
<td>Archosargus probatocepalus</td>
<td>2123</td>
<td>Farfantepenaeus spp.</td>
<td>902</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>2054</td>
<td>Farfantepenaeus duorarum</td>
<td>652</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>1124</td>
<td>Sciaenops ocellatus</td>
<td>603</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>762</td>
<td>Cynoscion nebulosus</td>
<td>264</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>619</td>
<td>Elops saurus</td>
<td>238</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>606</td>
<td>Paralichthys albigutta</td>
<td>227</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>487</td>
<td>Mugil curema</td>
<td>155</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>447</td>
<td>Pogonias cromis</td>
<td>152</td>
</tr>
<tr>
<td>Litopenaeus setiferus</td>
<td>345</td>
<td>Archosargus probatocepalus</td>
<td>147</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>282</td>
<td>Menippe spp.</td>
<td>140</td>
</tr>
<tr>
<td>Cynoscion complex</td>
<td>96</td>
<td>Micropogonias undulatus</td>
<td>113</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>74</td>
<td>Mugil trichodon</td>
<td>91</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>60</td>
<td>Centropomus undecimalis</td>
<td>45</td>
</tr>
<tr>
<td>Farfantepenaeus aztecutus</td>
<td>56</td>
<td>Trachinotus falcatus</td>
<td>40</td>
</tr>
<tr>
<td>Lutjanus analis</td>
<td>48</td>
<td>Lutjanus griseus</td>
<td>29</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>40</td>
<td>Trachinotus carolinus</td>
<td>25</td>
</tr>
<tr>
<td>Mugil rubrioculus</td>
<td>24</td>
<td>Lutjanus synagris</td>
<td>16</td>
</tr>
<tr>
<td>Megalops atlanticus</td>
<td>24</td>
<td>Menticirrhus saxatiilis</td>
<td>15</td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td>23</td>
<td>Pomatomus saltatrix</td>
<td>15</td>
</tr>
<tr>
<td>Albula vulpes</td>
<td>21</td>
<td>Mycteroperca microlepis</td>
<td>11</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>18</td>
<td>Scomberomorus maculatus</td>
<td>9</td>
</tr>
<tr>
<td>Menippe spp.</td>
<td>9</td>
<td>Rachycentron canadum</td>
<td>1</td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paralichthys lethostigma</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mycteroperca microlepis</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scomberomorus regalis</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Epinephelus itajara</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scomberomorus cavalla</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>32,583</td>
<td><strong>Total</strong></td>
<td>13,497</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Number</td>
<td>Scientific Name</td>
<td>Number</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>--------</td>
<td>----------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td><em>Mugil curema</em></td>
<td>3,666</td>
<td><em>Leiostomus xanthurus</em></td>
<td>6,802</td>
</tr>
<tr>
<td><em>Archosargus probatocephalus</em></td>
<td>997</td>
<td><em>Micropogonias undulatus</em></td>
<td>5,419</td>
</tr>
<tr>
<td><em>Centropomus undecimalis</em></td>
<td>677</td>
<td><em>Litopenaeus setiferus</em></td>
<td>4,856</td>
</tr>
<tr>
<td><em>Mugil cephalus</em></td>
<td>656</td>
<td><em>Cynoscion arenarius</em></td>
<td>4,181</td>
</tr>
<tr>
<td><em>Elops saurus</em></td>
<td>445</td>
<td><em>Mugil cephalus</em></td>
<td>2,239</td>
</tr>
<tr>
<td><em>Lutjanus griseus</em></td>
<td>227</td>
<td><em>Farfantepenaeus spp.</em></td>
<td>1,357</td>
</tr>
<tr>
<td><em>Leiostomus xanthurus</em></td>
<td>200</td>
<td><em>Callinectes sapidus</em></td>
<td>1,323</td>
</tr>
<tr>
<td><em>Micropogonias undulatus</em></td>
<td>198</td>
<td><em>Sciaenops ocellatus</em></td>
<td>676</td>
</tr>
<tr>
<td><em>Lutjanus analis</em></td>
<td>118</td>
<td><em>Cynoscion nebulosus</em></td>
<td>524</td>
</tr>
<tr>
<td><em>Pogonias cromis</em></td>
<td>106</td>
<td><em>Menticirrhus americanus</em></td>
<td>508</td>
</tr>
<tr>
<td><em>Lutjanus synagris</em></td>
<td>105</td>
<td><em>Farfantepenaeus duorarum</em></td>
<td>399</td>
</tr>
<tr>
<td><em>Achirus lineatus</em></td>
<td>39</td>
<td><em>Paralichthys albigutta</em></td>
<td>338</td>
</tr>
<tr>
<td><em>Sciaenops ocellatus</em></td>
<td>37</td>
<td><em>Menippe spp.</em></td>
<td>309</td>
</tr>
<tr>
<td><em>Cynoscion nebulosus</em></td>
<td>32</td>
<td><em>Elops saurus</em></td>
<td>290</td>
</tr>
<tr>
<td><em>Paralichthys albigutta</em></td>
<td>15</td>
<td><em>Farfantepenaeus aztecus</em></td>
<td>239</td>
</tr>
<tr>
<td><em>Trachinotus falcatus</em></td>
<td>15</td>
<td><em>Lutjanus synagris</em></td>
<td>177</td>
</tr>
<tr>
<td><em>Paralichthys lethostigma</em></td>
<td>11</td>
<td><em>Mugil curema</em></td>
<td>138</td>
</tr>
<tr>
<td><em>Albula vulpes</em></td>
<td>5</td>
<td><em>Archosargus probatocephalus</em></td>
<td>126</td>
</tr>
<tr>
<td><em>Pomatomus saltatrix</em></td>
<td>5</td>
<td><em>Lutjanus griseus</em></td>
<td>91</td>
</tr>
<tr>
<td><em>Trachinotus carolinus</em></td>
<td>5</td>
<td><em>Pogonias cromis</em></td>
<td>60</td>
</tr>
<tr>
<td><em>Scomberomorus maculatus</em></td>
<td>4</td>
<td><em>Paralichthys lethostigma</em></td>
<td>58</td>
</tr>
<tr>
<td><em>Megalops atlanticus</em></td>
<td>2</td>
<td><em>Menticirrhus saxatilis</em></td>
<td>31</td>
</tr>
<tr>
<td><em>Lutjanus apodus</em></td>
<td>2</td>
<td><em>Trachinotus falcatus</em></td>
<td>27</td>
</tr>
<tr>
<td><em>Lutjanus jocu</em></td>
<td>2</td>
<td><em>Trachinotus carolinus</em></td>
<td>24</td>
</tr>
<tr>
<td><em>Mugil rubriculus</em></td>
<td>2</td>
<td><em>Mycteroperca microlepis</em></td>
<td>14</td>
</tr>
<tr>
<td><em>Mycteroperca microlepis</em></td>
<td>1</td>
<td><em>Pomatomus saltatrix</em></td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Scomberomorus maculatus</em></td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Menticirrhus littoralis</em></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Megalops atlanticus</em></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Epinephelus morio</em></td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>7,572</strong></td>
<td><strong>Total</strong></td>
<td><strong>30,228</strong></td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Number</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>---------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>20,479</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Litopenaeus setiferus</td>
<td>13,743</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>9,215</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>5,337</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mugil curema</td>
<td>3,598</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farfantepenaeus spp.</td>
<td>1,670</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>922</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cynoscion complex</td>
<td>626</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farfantepenaeus aztecs</td>
<td>466</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>368</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paralichthys lethostigma</td>
<td>336</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>262</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elops saurus</td>
<td>236</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td>131</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>111</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>107</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paralichthys dentatus</td>
<td>58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td>54</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td>43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Menippe spp.</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Albula vulpes</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Menticirrhus saxatilis</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paralichthys squamileenst</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cynoscion nothus</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Megalops atlanticus</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Menticirrhus littoralis</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rachycentron canadum</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>57,932</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Intentionally Left Blank
Introduction

The Florida Fish and Wildlife Conservation Commission (FWC) Fish and Wildlife Research Institute’s (FWRI) Fisheries-Independent Monitoring (FIM) program is a long-term program designed to monitor the relative abundance of fishery resources in Florida’s major estuarine, coastal, and reef systems. The program was developed to: 1) address the critical need for effective assessment techniques for an array of species and sizes of fishes and selected invertebrates; 2) provide timely information for use in management plans; and 3) monitor trends in the relative abundance of taxa in a variety of estuarine and marine systems throughout Florida.

Proper management of Florida’s marine fisheries resources requires information from a number of sources. Traditional methods of monitoring changes in fish stocks have used catch-per-unit-effort (CPUE) data derived directly from commercial and recreational fisheries. Analysis of these fisheries-dependent data can provide some information on the status of fish stocks; however, there are inherent problems in using data from these sources. Changes in vessel types, fleet size, fishing gear, or methods of operation can make fisheries-dependent data difficult to interpret (Ultang 1977). Additionally, closed seasons, changes in size or bag limits, and fluctuations in market values can further bias catch data and subsequent analyses. Fisheries-independent sampling, which targets juvenile and sub-adult fishes that have not been subjected to fishing pressure, can provide less biased estimates of trends in fish stocks than fisheries-dependent sampling (Myers and Cadigan 1993). Changes in juvenile abundance within a season can be attributed to natural mortality, immigration, emigration, or recruitment. Shifts in juvenile abundance can also be used to forecast changes in the adult stock, allowing necessary modifications to harvest regulations to be implemented before the fish have fully recruited to the fishery (Goodyear 1985). The FIM program was established to provide this type of timely information for use in management plans.

The Fish and Wildlife Research Institute initiated the FIM program in 1985 with funding provided by a Federal Sport Fish Restoration (SFR) grant. In 1988, additional funding became available from special appropriations. The FIM program is also...

Florida’s coastline extends from subtropical to temperate regions and includes habitats such as seagrass beds, salt marshes, and mangroves. These habitats provide critical nursery areas for many fish and invertebrate species. It is estimated that more than 70% of the recreationally-important species and more than 90% of the commercially-important species in the Gulf of Mexico are estuarine-dependent during at least one stage of their life histories (Lindall and Saloman 1997). The FIM program data are summarized and analyzed for all fish and selected invertebrate species collected, yielding information on the relative abundance, recruitment, habitat use, and distribution of hundreds of estuarine and marine species. This approach provides a unique source of information on economically valuable species as well as on many poorly understood non-game species that may influence fisheries or may be important ecological indicators. This type of multi-species, multi-habitat, long-term monitoring program is extremely valuable for documenting ecosystem changes, evaluating the effects of natural and anthropogenic disturbances, and making management decisions (Coull 1985, Wolfe et al. 1987).

Although the FIM program has always used a suite of gears (e.g., seines, trawls, trammel nets) capable of capturing a broad range of fish species and sizes from a variety of habitats, initial program efforts focused primarily on collecting young-of-the-year (YOY) fishes that could be used to develop recruitment indices. The program expanded its efforts to monitor larger-sized fishes in Tampa Bay by developing 183-m haul seines (fixed stations sampled between 1993 and 1995; year-round stratified-random sampling [SRS] implemented in 1996), 183-m purse seines (implemented in 1997; discontinued in 2004), and by developing a visual sampling program for reef fishes in the Florida Keys (implemented in 1998; discontinued in 2004). The 183-m haul seine was implemented as part of the SRS component of the program in Charlotte Harbor during 1996, in the
northern and southern IRL and Cedar Key during 1997, in Apalachicola Bay during 1998, and in northeast Florida during 2001. The purse seine was implemented for SRS in Charlotte Harbor in 1998 and was used on a trial basis in Apalachicola Bay during 2000 and 2001, but was no longer used in any sampling area after 2004. Through the use of visual surveys in the Florida Keys, fisheries-independent information was obtained in this unique area of Florida for the first time in 1998, but was no longer incorporated as part of the FIM program after 2004. The FIM program also implemented a seasonal directed sampling program for Striped Mullet (*Mugil cephalus*) in Tampa Bay and Charlotte Harbor in 1993. Directed sampling for the Striped Mullet program utilizes a 366-m trammel net. After the 2008-2009 sampling season the seasonal directed sampling program was discontinued in both areas and has transitioned into a year-round monthly sampling survey completed every five years. In 1993, the FIM program implemented a seasonal directed sampling program in Tampa Bay for Red Drum (*Sciaenops ocellatus*) and further initiated a seasonal directed program for Red Drum in the northern Indian River Lagoon in 1995. The Red Drum sampling program utilizes a 547 m trammel net. The directed sampling in Indian River Lagoon was discontinued in 1999 but seasonal sampling for Red Drum in Tampa Bay is at a reduced level. The entire suite of gears and methods used by the FIM program captures fishes at various stages of development, from initial recruitment into the estuary through harvestable sizes, thereby providing a continuous gauge of a particular stock’s relative abundance, age and size composition, and reproductive potential. This report summarizes FIM program SRS data collected during 2015. Results from the sampling efforts in each estuary are presented separately. This report also summarizes results from fish health monitoring of samples collected by the FIM program. Profiles of several species that are of particular interest because of their recreational or commercial value in Florida are also presented, providing critical information for these species while also describing some of the ways the FIM program data are used to assess the status of important Florida fisheries.

**Methods**

The FIM program uses a stratified-random sampling design in all study areas. Each study area was divided into sampling zones based upon geographic and logistical
criteria, and each zone was further subdivided into 1-nm² grids that were randomly selected for sampling. Sampling grids were stratified by habitat and depth, thereby identifying the gear types that could be used in those areas. A single sample was collected at each randomly selected site. In most cases, the number of monthly samples collected in each zone with each gear was proportional to the number of grids in the zone that could be sampled with a particular gear.

The FIM program uses a multi-gear approach to collect data on various life history stages of fishes and selected invertebrates from a wide variety of habitats (Table FIM15-01). A 21.3-m center bag seine targeted YOY and juvenile fishes in shallow water (≤1.8-m); a 6.1-m otter trawl targeted YOY, juvenile, and adult fish in deep water (1.0–7.6-m); a 183-m haul seine targeted sub-adult and adult fish along shorelines in water depths ≤2.5-m. Several different techniques were used, depending upon habitat, to stratify the samples collected with the various gears. The 21.3-m center bag seine was used in Tampa Bay, Charlotte Harbor, the northern IRL, Cedar Key, Apalachicola Bay, and northeast Florida. Two deployment techniques were used. The bay seine technique was used in all estuaries except northeast Florida to sample shallow areas, and was pre-stratified by the presence or absence of bottom vegetation (except in the Cedar Key area) or the presence of a shoreline. The river seine technique was used in all estuaries to sample the shorelines of creeks and rivers. River seine deployments in Tampa Bay and Charlotte Harbor were pre-stratified by the presence or absence of overhanging shoreline vegetation. River seine deployments in the northern IRL, Cedar Key, Apalachicola Bay, and northeast Florida were not pre-stratified by habitat type. Samples collected with 183-m haul seines in Tampa Bay and Charlotte Harbor were pre-stratified by the presence or absence of overhanging shoreline vegetation. Samples collected with this gear were not stratified by habitat type in Cedar Key, Apalachicola Bay, and northeast Florida. All sampling was conducted during daytime hours (one hour after sunrise to one hour before sunset). Additional sampling details are described in the FIM program’s Procedure Manual (FWC-FWRI 2015).
The sample work-up technique was similar for all samples, regardless of gear type or sampling regime. Environmental data consisting of water chemistry, habitat characteristics, and physical parameters such as current and tidal conditions were recorded for each sample. All fish and selected invertebrate species captured were identified to the lowest practical taxonomic level, counted, and a random sample of at least 10 individuals were measured (standard length for teleosts, precaudal length for sharks, disc width for rays, carapace width for crabs, and post-orbital head length for shrimp). A detailed explanation of the standard sample work-up for data collection is described in the FIM program’s Procedure Manual (FWC-FWRI 2015).

Certain taxa were not identified to species because of the possibility of hybridization (e.g., *Brevoortia* spp., *Menidia* spp.; Dahlberg 1970, Middaugh et al. 1986) or because they were morphologically or meristically indistinguishable at small juvenile sizes (e.g., *Eucinostomus* spp. <40 mm SL; Matheson 1983). In northern and southern IRL and northeast Florida sections, species accounts of *Cynoscion regalis* (Weakfish) and *Cynoscion arenarius* (Sand Seatrout) will be referred to collectively as *Cynoscion* complex. These two species mix and hybridize along the Atlantic coast of Florida and identification can only be determined with certainty by genetic testing (Tringali et al. 2004). Animals were released except for representative samples of each taxon (for laboratory confirmation of field identifications) and samples required for specific research projects. The taxonomic nomenclature in this report follows the American Fisheries Society’s Common and Scientific Names of Fishes (Page et al. 2013). A detailed explanation of the standard sample work-up for data collection is described in the FIM program’s Procedure Manual (FWC-FWRI 2015).

Data for this report were summarized separately for each estuarine system and for each gear type. Data were also summarized separately for all taxa and for taxa of recreational or commercial importance (‘Selected Taxa’; Table FIM15-02). Abundance estimates were calculated for 21.3-m seines and 6.1-m trawls as the number of animals/100 m² of area sampled. Catch-per-unit-effort (CPUE) was calculated for 183-m haul seine samples as the number of animals/set. The appendices for each study area describe the catch by month, gear, stratum, and zone.
Study Areas

The FIM program conducted sampling in Tampa Bay, Charlotte Harbor, the northern IRL, Cedar Key, the southern IRL, Apalachicola Bay, and northeast Florida, (Figure FIM15-01). Sampling was conducted over a wide range of habitats encompassing different bottom types, shoreline types, and offshore areas. In addition to sampling in major estuaries, tidally-influenced portions of rivers that flow into Tampa Bay (Alafia, Braden, Little Manatee, and Manatee Rivers), Charlotte Harbor (Peace, Myakka, and Caloosahatchee Rivers), the Indian River Lagoon (Turkey Creek, St. Sebastian, and St. Lucie Rivers), the Cedar Key area (Suwannee River), Apalachicola Bay (Apalachicola River), and northeast Florida (St. Marys, Nassau, and St. Johns Rivers) were also sampled. The Tampa Bay, Charlotte Harbor, and northern IRL study areas were described in the FIM Program 1994 Annual Data Summary Report (FDEP-FMRI 1995). The Cedar Key study area was described in the FIM Program 1996 Annual Data Summary Report (FDEP-FMRI 1997); the southern IRL study area was described in the FIM Program 1997 Annual Data Summary Report (FDEP-FMRI 1998); the Apalachicola Bay study area and changes to the southern IRL study area were described in the FIM Program 1998 Annual Data Summary Report (FDEP-FMRI 1999); and the northeast Florida study area was described in the FIM Program 2001 Annual Data Summary Report (FDEP-FMRI 2002).
References


Figure FIM15-01. Locations of Fisheries-Independent Monitoring program field laboratories. Years indicate initiation of sampling. If sampling was discontinued at a field lab, the last year of sampling is also provided.
Table FIM15-01. Description of monthly monitoring sampling gears used in 2015. A more detailed description of each gear can be found in the FIM program’s Procedure Manual.

<table>
<thead>
<tr>
<th>Gear</th>
<th>Deployment</th>
<th>Mesh Size (mm)</th>
<th>Area Sampled</th>
<th>Description of use</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.3-m Seine (center bag)</td>
<td>Bay</td>
<td>3.2</td>
<td>140 m²</td>
<td>• used in near-shore and shoreline areas ≤ 1.5 m</td>
</tr>
<tr>
<td></td>
<td>River</td>
<td>3.2</td>
<td>68 m²</td>
<td>• used along river shorelines ≤ 1.8 m</td>
</tr>
<tr>
<td>183-m Haul Seine (center bag)</td>
<td>Boat</td>
<td>38.1</td>
<td>4,120 m²</td>
<td>• used along shorelines and exposed sandbars ≤ 2.5 m</td>
</tr>
<tr>
<td>6.1-m Otter Trawl</td>
<td>Straight Tow</td>
<td>38.1</td>
<td>1,130 m² - 2,259 m²</td>
<td>• used in areas from 1.8-m to 7.6-m deep</td>
</tr>
<tr>
<td></td>
<td>Arc Tow</td>
<td>38.1 (3.2-mm liner)</td>
<td>1,130 m² - 2,259 m²</td>
<td>• used in areas from 1.0-m to 1.7-m deep</td>
</tr>
</tbody>
</table>
Table FIM15-02. Animals designated as Selected Taxa because of their commercial or recreational importance.

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albula vulpes</td>
<td>Bonefish</td>
</tr>
<tr>
<td>Alpheste afer</td>
<td>Mutton Hamlet</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>Sheepshead</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>Blue Crab</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>Common Snook</td>
</tr>
<tr>
<td>Cephalopholis cruentata</td>
<td>Graysby</td>
</tr>
<tr>
<td>Cephalopholis fulva</td>
<td>Coney</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>Sand Seatrout</td>
</tr>
<tr>
<td>Cynoscion complex</td>
<td>Seatrout</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>Spotted Seatrout</td>
</tr>
<tr>
<td>Cynoscion nothus</td>
<td>Silver Seatrout</td>
</tr>
<tr>
<td>Cynoscion regalis</td>
<td>Weakfish</td>
</tr>
<tr>
<td>Dermatolepis inermis</td>
<td>Marbled Grouper</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>Ladyfish</td>
</tr>
<tr>
<td>Epinephelus adscensionis</td>
<td>Rock Hind</td>
</tr>
<tr>
<td>Epinephelus drummondhayi</td>
<td>Speckled Hind</td>
</tr>
<tr>
<td>Epinephelus guttatus</td>
<td>Red Hind</td>
</tr>
<tr>
<td>Epinephelus itajara</td>
<td>Atlantic Goliath Grouper</td>
</tr>
<tr>
<td>Epinephelus morio</td>
<td>Red Grouper</td>
</tr>
<tr>
<td>Epinephelus striatus</td>
<td>Nassau Grouper</td>
</tr>
<tr>
<td>Farfantepenaeus aztecor</td>
<td>Brown Shrimp</td>
</tr>
<tr>
<td>Farfantepenaeus brasiliensis</td>
<td>Pinkspot Shrimp</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>Pink Shrimp</td>
</tr>
<tr>
<td>Farfantepenaeus spp.</td>
<td>Penaeid Shrimps</td>
</tr>
<tr>
<td>Hyporthodus flavolimbatus</td>
<td>Yellowedge Grouper</td>
</tr>
<tr>
<td>Hyporthodus mystacinus</td>
<td>Misty Grouper</td>
</tr>
<tr>
<td>Hyporthodus nigritus</td>
<td>Warsaw Grouper</td>
</tr>
<tr>
<td>Hyporthodus niveatus</td>
<td>Snowy Grouper</td>
</tr>
<tr>
<td>Leistostomus xanthurus</td>
<td>Spot</td>
</tr>
<tr>
<td>Litopenaeus setiferus</td>
<td>White Shrimp</td>
</tr>
<tr>
<td>Lutjanus analis</td>
<td>Mutton Snapper</td>
</tr>
<tr>
<td>Lutjanus apodus</td>
<td>Schoolmaster</td>
</tr>
<tr>
<td>Lutjanus buccanella</td>
<td>Blackfin Snapper</td>
</tr>
<tr>
<td>Lutjanus campechanus</td>
<td>Red Snapper</td>
</tr>
<tr>
<td>Lutjanus cyanopterus</td>
<td>Cubera Snapper</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>Gray Snapper</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Lutjanus jocu</td>
<td>Dog Snapper</td>
</tr>
<tr>
<td>Lutjanus mahogoni</td>
<td>Mahogany Snapper</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>Lane Snapper</td>
</tr>
<tr>
<td>Lutjanus vivanus</td>
<td>Silk Snapper</td>
</tr>
<tr>
<td>Megalops atlanticus</td>
<td>Tarpon</td>
</tr>
<tr>
<td>Menippe spp.</td>
<td>Stone Crab</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>Southern Kingfish</td>
</tr>
<tr>
<td>Menticirrhus littoralis</td>
<td>Gulf Kingfish</td>
</tr>
<tr>
<td>Menticirrhus saxatilis</td>
<td>Northern Kingfish</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>Atlantic Croaker</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>Striped Mullet</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>White Mullet</td>
</tr>
<tr>
<td>Mugil liza</td>
<td>Liza</td>
</tr>
<tr>
<td>Mugil rubrioculus</td>
<td>Redeye Mullet</td>
</tr>
<tr>
<td>Mugil trichodon</td>
<td>Fantail Mullet</td>
</tr>
<tr>
<td>Mycteroperca bonaci</td>
<td>Black Grouper</td>
</tr>
<tr>
<td>Mycteroperca microlepis</td>
<td>Gag</td>
</tr>
<tr>
<td>Mycteroperca phenax</td>
<td>Scamp</td>
</tr>
<tr>
<td>Mycteroperca tigris</td>
<td>Tiger Grouper</td>
</tr>
<tr>
<td>Mycteroperca venenosa</td>
<td>Yellowfin Grouper</td>
</tr>
<tr>
<td>Panulirus argus</td>
<td>Spiny Lobster</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>Gulf Flounder</td>
</tr>
<tr>
<td>Paralichthys dentatus</td>
<td>Summer Flounder</td>
</tr>
<tr>
<td>Paralichthys lethostigma</td>
<td>Southern Flounder</td>
</tr>
<tr>
<td>Paralichthys oblongus</td>
<td>Fourspot Flounder</td>
</tr>
<tr>
<td>Paralichthys squamilectus</td>
<td>Broad Flounder</td>
</tr>
<tr>
<td>Penaeidae spp.</td>
<td>Shrimps</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>Black Drum</td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td>Bluefish</td>
</tr>
<tr>
<td>Rachycentron canadum</td>
<td>Cobia</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>Red Drum</td>
</tr>
<tr>
<td>Scomberomorus cavalla</td>
<td>King Mackerel</td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td>Spanish Mackerel</td>
</tr>
<tr>
<td>Scomberomorus regalis</td>
<td>Cero</td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td>Florida Pompano</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>Permit</td>
</tr>
<tr>
<td>Trachinotus goodei</td>
<td>Palometa</td>
</tr>
</tbody>
</table>
**Tampa Bay**

Tampa Bay is a drowned river estuary located on the western central coast of Florida. The bay is connected to the Gulf of Mexico through two main channels located on either side of Egmont Key and several smaller passes and channels to the north of Mullet and Long Keys and to the south of Anna Maria Island. Freshwater inflow into the bay comes from over 100 tributaries, although more than 80% enters from four main rivers (Alafia, Hillsborough, Manatee, and Little Manatee; Schmidt and Luther 2002). Shoreline vegetation consists largely of mangroves and marsh grasses, and bottom substrates are typically characterized as sand, mud, oysters, or a combination thereof (Flannery 1989). Seagrass meadows are the dominant vegetative cover in Tampa Bay and are widely distributed throughout the bay (Haddad 1989).

The Fisheries-Independent Monitoring (FIM) program has conducted intensive sampling of fish and selected invertebrates in Tampa Bay since 1989. The area sampled was divided into five geographically-defined bay zones (A-E) and four riverine zones (K-N; Figure TB15-01). The riverine zones were defined as the Alafia (K), Little Manatee (L), Manatee (M), and Braden (N) rivers. Monthly stratified-random sampling (SRS) was conducted in Zones A-E using 21.3-m bay seines, 183-m haul seines, and 6.1-m bay otter trawls. Monthly SRS was conducted in Zones K-N with 21.3-m river seines and 6.1-m river otter trawls. All methods were the same as those described in the Methods section of this report. This section summarizes data collected by the FIM program during 2015 in Tampa Bay.

**Stratified-Random Sampling**

A total of 759,266 animals, which included 156 identifiable taxonomic groups of fishes and 10 taxa of selected invertebrates, were collected from 1,320 Tampa Bay SRS samples in 2015 (Table TB15-01, Appendices TB15-01, -02, and -03). *Anchoa mitchilli* (n=531,449) was the most numerous taxon collected, representing 70.0% of the total catch. *Lagodon rhomboides* (n=51,893) was the next most abundant taxon collected, accounting for an additional 6.8% of the total catch. Twenty-six Selected Taxa (n=21,982 animals) composed 2.9% of the total catch. *Farfantepenaeus duorarum* (n=4,549) was the most abundant Selected Taxon, representing 0.6% of the total catch. *Mugil cephalus* (n=2,934), *Leiostomus xanthurus* (n=2,808), and *Centropomus undecimalis* (n=2,083) were the next most abundant
Selected Taxa, comprising an additional 1.0% of the total catch. Collections in 2015 included no species new to the Tampa Bay FIM collection.

Bay Sampling

21.3-m Bay Seines. A total of 263,452 animals were collected in 408 21.3-m bay seines, representing 34.7% of the overall SRS catch (Table TB15-01). *Anchoa mitchilli* (n=164,210), *L. rhomboides* (n=16,360), *Eucinostomus* spp. (n=15,768), and *Lucania parva* (n=12,750) were the most abundant taxa, accounting for 79.4% of the 21.3-m bay seine catch (Table TB15-02). The taxa most frequently caught in 21.3-m bay seines were *Eucinostomus* spp. (58.8% occurrence), *Microgobius gulosus* (51.5% occurrence), and *L. rhomboides* (45.3% occurrence).

A total of 6,980 animals from 20 Selected Taxa were collected, representing 2.6% of the entire 21.3-m bay seine catch (Table TB15-03). *Farfantepenaeus duorarum* (n=2,979) and *L. xanthurus* (n=1,480) and were the most abundant Selected Taxa, accounting for 63.9% of the Selected Taxa collected by this gear. The Selected Taxa most frequently caught in 21.3-m bay seines were *F. duorarum* (38.7% occurrence), *Cynoscion nebulosus* (24.3% occurrence), and *Callinectes sapidus* (17.2% occurrence).

183-m Haul Seines. A total of 50,730 animals were collected in 240 183-m haul seines, representing 6.7% of the overall SRS catch (Table TB15-01). *Lagodon rhomboides* (n=31,704) was the most abundant taxon, accounting for 62.5% of the 183-m haul seine catch (Table TB15-04). The taxa most frequently caught in 183-m haul seines were *L. rhomboides* (66.7% occurrence) and *C. undecimalis* (57.5% occurrence).

A total of 6,105 animals from 24 Selected Taxa were collected, representing 12.0% of the entire 183-m haul seine catch (Table TB15-05). *Centropomus undecimalis* (n=1,825), *Elops saurus* (n=783), and *Mugil trichodon* (n=742) were the most abundant Selected Taxa, accounting for 54.9% of the Selected Taxa collected by this gear. The Selected Taxa most frequently caught in 183-m haul seines were *C. undecimalis* (57.5% occurrence), *Archosargus probatocephalus* (55.0% occurrence), and *M. cephalus* (37.1% occurrence).

6.1-m Bay Otter Trawls. A total of 19,641 animals were collected in 180 6.1-m bay otter trawls, representing 2.6% of the overall SRS catch (Table TB15-01). *Anchoa mitchilli* (n=6,392) and *L. rhomboides* (n=2,256) were the most abundant taxa, accounting for 44.0% of the 6.1-m bay otter trawl catch (Table TB15-06). The taxa most frequently caught in 6.1-
m bay otter trawls were *Prionotus scitulus* (59.4% occurrence), *F. duorarum* (47.8% occurrence), and *L. rhomboides* (34.4% occurrence).

A total of 2,254 animals from 13 Selected Taxa were collected, representing 11.5% of the entire 6.1-m bay otter trawl catch (Table TB15-07). *Farfantepenaeus duorarum* (n=763), *Cynoscion arenarius* (n=486), and *C. sapidus* (n=431) were the most abundant Selected Taxa, accounting for 74.5% of the Selected Taxa collected by this gear. The Selected Taxa most frequently caught in 6.1-m bay otter trawls were *F. duorarum* (47.8% occurrence) and *Paralichthys albigutta* (31.7% occurrence).

**River Sampling**

*21.3-m River Seines.* A total of 394,961 animals were collected in 336 21.3-m river seines, representing 52.0% of the overall SRS catch (Table TB15-01). *Anchoa mitchilli* (n=336,491) was the most abundant taxon collected, accounting for 85.2% of the 21.3-m river seine catch (Table TB15-08). *Menidia* spp. (n=19,287) and *Eucinostomus* spp. (n=13,960) were the next most abundant taxa, accounting for an additional 8.4% of the 21.3-m river seine catch. The taxa most frequently caught in 21.3-m river seines were *Menidia* spp. (81.3% occurrence) and *Eucinostomus* spp. (80.4% occurrence).

A total of 5,199 animals from 17 Selected Taxa were collected, representing 1.3% of the entire 21.3-m river seine catch (Table TB15-09). *Mugil cephalus* (n=2,360) and *L. xanthurus* (n=909) were the most abundant Selected Taxa, accounting for 62.9% of the Selected Taxa collected by this gear. The Selected Taxa most frequently caught in 21.3-m river seines were *F. duorarum* (35.1% occurrence) and *C. undecimalis* (25.3% occurrence).

*6.1-m River Otter Trawls.* A total of 30,482 animals were collected in 156 6.1-m river otter trawls, representing 4.0% of the overall SRS catch (Table TB15-01). *Anchoa mitchilli* (n=24,356) was the most abundant taxon collected, accounting for 79.9% of the 6.1-m river otter trawl catch (Table TB15-10). The taxon most frequently caught in 6.1-m river otter trawls was *C. sapidus* (55.1% occurrence).

A total of 1,444 animals from 15 Selected Taxa were collected, representing 4.7% of the entire 6.1-m river otter trawl catch (Table TB15-11). *Farfantepenaeus duorarum* (n=395), *C. arenarius* (n=352), and *Menticirrhus americanus* (n=242) were the most abundant Selected Taxa, accounting for 68.5% of the Selected Taxa collected by this gear. The Selected Taxa most frequently caught in the 6.1-m river otter trawls were *C. sapidus* (55.1% occurrence), *F. duorarum* (35.3% occurrence), and *C. arenarius* (17.9% occurrence).
References


Figure TB15-01. Map of Tampa Bay sampling area. Zones are labeled A-E and K-N.
Table TB15-01. Summary of catch and effort data for Tampa Bay stratified-random sampling, 2015.

<table>
<thead>
<tr>
<th>Zone</th>
<th>21.3-m bay seine</th>
<th>21.3-m river seine</th>
<th>183-m haul seine</th>
<th>6.1-m otter trawl</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Animals</td>
<td>Hauls</td>
<td>Animals</td>
<td>Hauls</td>
<td>Animals</td>
</tr>
<tr>
<td>A</td>
<td>47,986</td>
<td>84</td>
<td></td>
<td></td>
<td>6,510</td>
</tr>
<tr>
<td>B</td>
<td>28,819</td>
<td>72</td>
<td></td>
<td></td>
<td>8,507</td>
</tr>
<tr>
<td>C</td>
<td>138,246</td>
<td>108</td>
<td></td>
<td></td>
<td>3,131</td>
</tr>
<tr>
<td>D</td>
<td>25,699</td>
<td>60</td>
<td></td>
<td></td>
<td>15,276</td>
</tr>
<tr>
<td>E</td>
<td>22,702</td>
<td>84</td>
<td></td>
<td></td>
<td>17,306</td>
</tr>
<tr>
<td>K</td>
<td></td>
<td></td>
<td>116,067</td>
<td>96</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td></td>
<td></td>
<td>165,134</td>
<td>108</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td></td>
<td></td>
<td>41,482</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td></td>
<td></td>
<td>72,278</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>263,452</td>
<td>408</td>
<td>394,961</td>
<td>336</td>
<td>50,730</td>
</tr>
</tbody>
</table>
Table TB15-02. Catch statistics for 10 dominant taxa collected in 408 21.3-m bay seine samples during Tampa Bay stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
<td>CV</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>164,210</td>
<td>62.3</td>
<td>28.73</td>
<td>134.85</td>
<td>947.47</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>16,360</td>
<td>6.2</td>
<td>28.64</td>
<td>6.31</td>
<td>445.05</td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td>15,768</td>
<td>6.0</td>
<td>27.61</td>
<td>3.17</td>
<td>232.02</td>
</tr>
<tr>
<td>Lucania parva</td>
<td>12,750</td>
<td>4.8</td>
<td>22.32</td>
<td>5.17</td>
<td>468.12</td>
</tr>
<tr>
<td>Menidia spp.</td>
<td>10,459</td>
<td>4.0</td>
<td>18.31</td>
<td>3.55</td>
<td>391.60</td>
</tr>
<tr>
<td>Harengula jaguana</td>
<td>7,983</td>
<td>3.0</td>
<td>13.98</td>
<td>7.38</td>
<td>1,066.80</td>
</tr>
<tr>
<td>Microgobius gulosus</td>
<td>6,506</td>
<td>2.5</td>
<td>11.39</td>
<td>2.11</td>
<td>373.75</td>
</tr>
<tr>
<td>Eucinostomus gula</td>
<td>3,857</td>
<td>1.5</td>
<td>39.2</td>
<td>6.75</td>
<td>286.73</td>
</tr>
<tr>
<td>Floridichthys carpio</td>
<td>3,118</td>
<td>1.2</td>
<td>5.46</td>
<td>1.25</td>
<td>463.48</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>2,979</td>
<td>1.1</td>
<td>5.22</td>
<td>1.50</td>
<td>579.36</td>
</tr>
<tr>
<td>Subtotal</td>
<td>243,990</td>
<td>92.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>263,452</td>
<td>100.0</td>
<td>461.23</td>
<td>142.50</td>
<td>624.07</td>
</tr>
</tbody>
</table>
Table TB15-03. Catch statistics for Selected Taxa collected in 408 21.3-m bay seine samples during Tampa Bay stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>2,979</td>
<td>1.1</td>
<td>38.7</td>
<td>5.22</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>1,480</td>
<td>0.6</td>
<td>8.6</td>
<td>2.59</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>704</td>
<td>0.3</td>
<td>9.8</td>
<td>1.23</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>649</td>
<td>0.3</td>
<td>24.3</td>
<td>1.14</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>220</td>
<td>0.1</td>
<td>3.7</td>
<td>0.39</td>
</tr>
<tr>
<td>Mugil trichodon</td>
<td>220</td>
<td>0.1</td>
<td>3.7</td>
<td>0.39</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>187</td>
<td>0.1</td>
<td>17.2</td>
<td>0.33</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>147</td>
<td>0.1</td>
<td>5.4</td>
<td>0.26</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>117</td>
<td>&lt;0.1</td>
<td>8.3</td>
<td>0.20</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>70</td>
<td>&lt;0.1</td>
<td>7.1</td>
<td>0.12</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>45</td>
<td>&lt;0.1</td>
<td>2.2</td>
<td>0.08</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>41</td>
<td>&lt;0.1</td>
<td>5.9</td>
<td>0.07</td>
</tr>
<tr>
<td>Menticirrhus saxatilis</td>
<td>38</td>
<td>&lt;0.1</td>
<td>2.5</td>
<td>0.07</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>31</td>
<td>&lt;0.1</td>
<td>2.9</td>
<td>0.05</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>16</td>
<td>&lt;0.1</td>
<td>1.5</td>
<td>0.03</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>11</td>
<td>&lt;0.1</td>
<td>0.7</td>
<td>0.02</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>9</td>
<td>&lt;0.1</td>
<td>1.2</td>
<td>0.02</td>
</tr>
<tr>
<td>Species</td>
<td>Number</td>
<td>%</td>
<td>Density Estimate (animals/100m²)</td>
<td>Standard Length (mm)</td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------</td>
<td>---</td>
<td>---------------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Occur</td>
<td>Mean</td>
</tr>
<tr>
<td><em>Centropomus undecimalis</em></td>
<td>9</td>
<td>&lt;0.1</td>
<td>1.5</td>
<td>0.02</td>
</tr>
<tr>
<td><em>Menticirrhus littoralis</em></td>
<td>4</td>
<td>&lt;0.1</td>
<td>0.5</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td><em>Trachinotus carolinus</em></td>
<td>3</td>
<td>&lt;0.1</td>
<td>0.2</td>
<td>0.01</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>6,980</td>
<td>2.6</td>
<td>.</td>
<td>12.22</td>
</tr>
</tbody>
</table>
Table TB15-04. Catch statistics for 10 dominant taxa collected in 240 183-m haul seine samples during Tampa Bay stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean catch-per-unit-effort.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Catch-per-unit-effort (animals/set)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td></td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>31,704</td>
<td>62.5</td>
<td>66.7</td>
<td>132.10</td>
<td>16.74</td>
</tr>
<tr>
<td>Harengula jaguana</td>
<td>2,569</td>
<td>5.1</td>
<td>6.3</td>
<td>10.70</td>
<td>8.09</td>
</tr>
<tr>
<td>Eucinostomus gula</td>
<td>2,039</td>
<td>4.0</td>
<td>43.3</td>
<td>8.50</td>
<td>2.44</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>1,825</td>
<td>3.6</td>
<td>57.5</td>
<td>7.60</td>
<td>1.07</td>
</tr>
<tr>
<td>Ariopsis felis</td>
<td>1,635</td>
<td>3.2</td>
<td>21.3</td>
<td>6.81</td>
<td>1.91</td>
</tr>
<tr>
<td>Orthopristis chrysoptera</td>
<td>1,506</td>
<td>3.0</td>
<td>20.8</td>
<td>6.28</td>
<td>2.00</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>826</td>
<td>1.6</td>
<td>10.8</td>
<td>3.44</td>
<td>2.57</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>783</td>
<td>1.5</td>
<td>23.8</td>
<td>3.26</td>
<td>1.13</td>
</tr>
<tr>
<td>Mugil trichodon</td>
<td>742</td>
<td>1.5</td>
<td>25.8</td>
<td>3.09</td>
<td>1.24</td>
</tr>
<tr>
<td>Strongylura notata</td>
<td>701</td>
<td>1.4</td>
<td>49.2</td>
<td>2.92</td>
<td>0.41</td>
</tr>
<tr>
<td>Subtotal</td>
<td>44,330</td>
<td></td>
<td></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Totals</td>
<td>50,730</td>
<td>100.0</td>
<td>211.38</td>
<td>22.37</td>
<td>163.98</td>
</tr>
</tbody>
</table>

TB-10
Table TB15-05. Catch statistics for Selected Taxa collected in 240 183-m haul seine samples during Tampa Bay stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean catch-per-unit-effort.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Catch-per-unit-effort (animals/set)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>1,825</td>
<td>3.6</td>
<td>57.5</td>
<td>7.60</td>
<td>1.07</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>783</td>
<td>1.5</td>
<td>23.8</td>
<td>3.26</td>
<td>1.13</td>
</tr>
<tr>
<td>Mugil trichodon</td>
<td>742</td>
<td>1.5</td>
<td>25.8</td>
<td>3.09</td>
<td>1.24</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>682</td>
<td>1.3</td>
<td>55.0</td>
<td>2.84</td>
<td>0.34</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>427</td>
<td>0.8</td>
<td>37.1</td>
<td>1.78</td>
<td>0.47</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>322</td>
<td>0.6</td>
<td>22.9</td>
<td>1.34</td>
<td>0.51</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>309</td>
<td>0.6</td>
<td>20.8</td>
<td>1.29</td>
<td>0.26</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>288</td>
<td>0.6</td>
<td>14.6</td>
<td>1.20</td>
<td>0.46</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>173</td>
<td>0.3</td>
<td>26.7</td>
<td>0.72</td>
<td>0.14</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>112</td>
<td>0.2</td>
<td>22.9</td>
<td>0.47</td>
<td>0.09</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>88</td>
<td>0.2</td>
<td>13.3</td>
<td>0.37</td>
<td>0.10</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>86</td>
<td>0.2</td>
<td>5.8</td>
<td>0.36</td>
<td>0.17</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>75</td>
<td>0.2</td>
<td>15.0</td>
<td>0.31</td>
<td>0.07</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>63</td>
<td>0.1</td>
<td>2.9</td>
<td>0.26</td>
<td>0.11</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>57</td>
<td>0.1</td>
<td>7.5</td>
<td>0.24</td>
<td>0.14</td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td>17</td>
<td>&lt;0.1</td>
<td>4.6</td>
<td>0.07</td>
<td>0.03</td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td>17</td>
<td>&lt;0.1</td>
<td>0.4</td>
<td>0.07</td>
<td>0.07</td>
</tr>
<tr>
<td>Species</td>
<td>Number</td>
<td>%</td>
<td>Catch-per-unit-effort (animals/set)</td>
<td>Standard Length (mm)</td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------</td>
<td>---</td>
<td>-----------------------------------</td>
<td>----------------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
<td>CV</td>
</tr>
<tr>
<td><em>Lutjanus synagris</em></td>
<td>16</td>
<td>&lt;0.1</td>
<td>2.1</td>
<td>0.07</td>
<td>0.04</td>
</tr>
<tr>
<td><em>Trachinotus carolinus</em></td>
<td>10</td>
<td>&lt;0.1</td>
<td>0.8</td>
<td>0.04</td>
<td>0.04</td>
</tr>
<tr>
<td><em>Mycteroperca microlepis</em></td>
<td>4</td>
<td>&lt;0.1</td>
<td>1.3</td>
<td>0.02</td>
<td>0.01</td>
</tr>
<tr>
<td><em>Menticirrhus littoralis</em></td>
<td>4</td>
<td>&lt;0.1</td>
<td>1.3</td>
<td>0.02</td>
<td>0.01</td>
</tr>
<tr>
<td><em>Menticirrhus americanus</em></td>
<td>2</td>
<td>&lt;0.1</td>
<td>0.4</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td><em>Micropogonias undulatus</em></td>
<td>2</td>
<td>&lt;0.1</td>
<td>0.4</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td><em>Menticirrhus saxatilis</em></td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.4</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>6,105</td>
<td>12.0</td>
<td>25.44</td>
<td>2.36</td>
<td>143.92</td>
</tr>
</tbody>
</table>
Table TB15-06. Catch statistics for 10 dominant taxa collected in 180 6.1-m bay otter trawl samples during Tampa Bay stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number No.</th>
<th>% No.</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>6,392</td>
<td>32.5</td>
<td>10.6</td>
<td>2.32</td>
<td>1.08</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>2,256</td>
<td>11.5</td>
<td>34.4</td>
<td>0.97</td>
<td>0.36</td>
</tr>
<tr>
<td>Portunus spp.</td>
<td>2,198</td>
<td>11.2</td>
<td>27.2</td>
<td>0.87</td>
<td>0.49</td>
</tr>
<tr>
<td>Prionotus scitulus</td>
<td>1,413</td>
<td>7.2</td>
<td>59.4</td>
<td>0.55</td>
<td>0.16</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>1,122</td>
<td>5.7</td>
<td>18.3</td>
<td>0.43</td>
<td>0.25</td>
</tr>
<tr>
<td>Eucinostomus gula</td>
<td>1,003</td>
<td>5.1</td>
<td>31.1</td>
<td>0.39</td>
<td>0.08</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>763</td>
<td>3.9</td>
<td>47.8</td>
<td>0.30</td>
<td>0.13</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>486</td>
<td>2.5</td>
<td>16.7</td>
<td>0.18</td>
<td>0.06</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>431</td>
<td>2.2</td>
<td>23.9</td>
<td>0.17</td>
<td>0.05</td>
</tr>
<tr>
<td>Orthopristis chrysoptera</td>
<td>355</td>
<td>1.8</td>
<td>24.4</td>
<td>0.15</td>
<td>0.04</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>16,419</strong></td>
<td><strong>83.6</strong></td>
<td><strong>.</strong></td>
<td><strong>.</strong></td>
<td><strong>.</strong></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>19,641</strong></td>
<td><strong>100.0</strong></td>
<td><strong>7.55</strong></td>
<td><strong>1.40</strong></td>
<td><strong>248.78</strong></td>
</tr>
<tr>
<td>Species</td>
<td>Number of Specimens</td>
<td>% Occur</td>
<td>Density Estimate (animals/100m²)</td>
<td>Standard Length (mm)</td>
<td></td>
</tr>
<tr>
<td>---------------------------------</td>
<td>---------------------</td>
<td>---------</td>
<td>---------------------------------</td>
<td>----------------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
<td>CV</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>763</td>
<td>3.9</td>
<td>47.8</td>
<td>0.30</td>
<td>0.13</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>486</td>
<td>2.5</td>
<td>16.7</td>
<td>0.18</td>
<td>0.06</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>431</td>
<td>2.2</td>
<td>23.9</td>
<td>0.17</td>
<td>0.05</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>139</td>
<td>0.7</td>
<td>19.4</td>
<td>0.05</td>
<td>0.01</td>
</tr>
<tr>
<td>Menippe spp.</td>
<td>118</td>
<td>0.6</td>
<td>17.8</td>
<td>0.05</td>
<td>0.01</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>120</td>
<td>0.6</td>
<td>31.7</td>
<td>0.05</td>
<td>0.01</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>76</td>
<td>0.4</td>
<td>5.0</td>
<td>0.03</td>
<td>0.02</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>60</td>
<td>0.3</td>
<td>8.3</td>
<td>0.02</td>
<td>0.01</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>38</td>
<td>0.2</td>
<td>7.2</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>16</td>
<td>0.1</td>
<td>4.4</td>
<td>0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>4</td>
<td>&lt;0.1</td>
<td>2.2</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>2</td>
<td>&lt;0.1</td>
<td>1.1</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.6</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>2,254</strong></td>
<td><strong>11.5</strong></td>
<td>.</td>
<td><strong>0.87</strong></td>
<td><strong>0.17</strong></td>
</tr>
</tbody>
</table>
Table TB15-08. Catch statistics for 10 dominant taxa collected in 336 21.3-m river seine samples during Tampa Bay stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td></td>
<td></td>
<td>Mean               Stderr    CV    Max    Mean    Stderr    Min    Max</td>
<td></td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>336,491</td>
<td>85.2</td>
<td>56.3</td>
<td>1,472.74           466.32   580.40  141,552.94</td>
<td>27 0.01  13  56</td>
</tr>
<tr>
<td>Menidia spp.</td>
<td>19,287</td>
<td>4.9</td>
<td>81.3</td>
<td>84.41              14.75    320.25  3,552.94</td>
<td>36 0.08  12  86</td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td>13,960</td>
<td>3.5</td>
<td>80.4</td>
<td>61.10              6.48     194.38  866.18</td>
<td>26 0.05  9  52</td>
</tr>
<tr>
<td>Eucinostomus harengulus</td>
<td>4,040</td>
<td>1.0</td>
<td>69.0</td>
<td>17.68              1.99     206.16  370.59</td>
<td>59 0.22  40 105</td>
</tr>
<tr>
<td>Anchoa hepsetus</td>
<td>2,754</td>
<td>0.7</td>
<td>4.5</td>
<td>12.05              7.11     1,080.68 2,141.18</td>
<td>33 0.11  21  67</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>2,360</td>
<td>0.6</td>
<td>14.3</td>
<td>10.33              4.43     785.77  1,033.82</td>
<td>26 0.24  15 325</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>1,906</td>
<td>0.5</td>
<td>9.5</td>
<td>8.34               4.33     951.96  1,288.24</td>
<td>38 0.42  10 109</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>1,487</td>
<td>0.4</td>
<td>35.1</td>
<td>6.51               1.23     345.14  238.24</td>
<td>32 0.37  12 131</td>
</tr>
<tr>
<td>Microgobius gulosus</td>
<td>1,333</td>
<td>0.3</td>
<td>55.1</td>
<td>5.83               0.96     300.45  194.12</td>
<td>25 0.19  10  50</td>
</tr>
<tr>
<td>Eugerres plumieri</td>
<td>1,306</td>
<td>0.3</td>
<td>32.4</td>
<td>5.72               1.24     398.61  288.24</td>
<td>41 0.72  9  210</td>
</tr>
<tr>
<td>Subtotal</td>
<td>384,924</td>
<td>97.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>394,961</td>
<td>100.0</td>
<td>97.5</td>
<td>1,728.65           466.56   494.74  141,557.35</td>
<td>2 558</td>
</tr>
</tbody>
</table>
Table TB15-09. Catch statistics for Selected Taxa collected in 336 21.3-m river seine samples during Tampa Bay stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
<td>CV</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>2,360</td>
<td>0.6</td>
<td>14.3</td>
<td>10.33</td>
<td>4.43</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>909</td>
<td>0.2</td>
<td>14.6</td>
<td>3.98</td>
<td>1.65</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>503</td>
<td>0.1</td>
<td>15.8</td>
<td>2.20</td>
<td>0.53</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>355</td>
<td>0.1</td>
<td>35.1</td>
<td>1.55</td>
<td>0.21</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>247</td>
<td>0.1</td>
<td>25.3</td>
<td>1.08</td>
<td>0.16</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>205</td>
<td>0.1</td>
<td>3.0</td>
<td>0.90</td>
<td>0.72</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>155</td>
<td>&lt;0.1</td>
<td>20.2</td>
<td>0.68</td>
<td>0.14</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>122</td>
<td>&lt;0.1</td>
<td>8.6</td>
<td>0.53</td>
<td>0.17</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>104</td>
<td>&lt;0.1</td>
<td>16.1</td>
<td>0.46</td>
<td>0.08</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>81</td>
<td>&lt;0.1</td>
<td>4.5</td>
<td>0.35</td>
<td>0.16</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>73</td>
<td>&lt;0.1</td>
<td>3.3</td>
<td>0.32</td>
<td>0.18</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>26</td>
<td>&lt;0.1</td>
<td>6.5</td>
<td>0.11</td>
<td>0.02</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>24</td>
<td>&lt;0.1</td>
<td>1.2</td>
<td>0.11</td>
<td>0.09</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>17</td>
<td>&lt;0.1</td>
<td>2.7</td>
<td>0.07</td>
<td>0.03</td>
</tr>
<tr>
<td>Mugil trichodon</td>
<td>16</td>
<td>&lt;0.1</td>
<td>1.5</td>
<td>0.07</td>
<td>0.04</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.3</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Menticirrhus saxatilis</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.3</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Totals</td>
<td>5,199</td>
<td>1.3</td>
<td>.</td>
<td>22.75</td>
<td>4.80</td>
</tr>
</tbody>
</table>
Table TB15-10. Catch statistics for 10 dominant taxa collected in 156 6.1-m river otter trawl samples during Tampa Bay stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
<td>CV</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>24,356</td>
<td>79.9</td>
<td>35.3</td>
<td>22.26</td>
<td>7.26</td>
</tr>
<tr>
<td>Trinectes maculatus</td>
<td>1,412</td>
<td>4.6</td>
<td>42.3</td>
<td>1.29</td>
<td>0.30</td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td>1,415</td>
<td>4.6</td>
<td>44.9</td>
<td>1.29</td>
<td>0.24</td>
</tr>
<tr>
<td>Farfantepeaneps duorarum</td>
<td>395</td>
<td>1.3</td>
<td>35.3</td>
<td>0.37</td>
<td>0.08</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>352</td>
<td>1.2</td>
<td>17.9</td>
<td>0.31</td>
<td>0.10</td>
</tr>
<tr>
<td>Eugerres plumieri</td>
<td>340</td>
<td>1.1</td>
<td>9.6</td>
<td>0.30</td>
<td>0.14</td>
</tr>
<tr>
<td>Microgobius gulosus</td>
<td>290</td>
<td>1.0</td>
<td>37.2</td>
<td>0.27</td>
<td>0.06</td>
</tr>
<tr>
<td>Eucinostomus harengulus</td>
<td>258</td>
<td>0.9</td>
<td>31.4</td>
<td>0.24</td>
<td>0.06</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>242</td>
<td>0.8</td>
<td>16.7</td>
<td>0.21</td>
<td>0.16</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>223</td>
<td>0.7</td>
<td>55.1</td>
<td>0.20</td>
<td>0.02</td>
</tr>
<tr>
<td>Subtotal</td>
<td>29,283</td>
<td>96.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>30,482</td>
<td>100.0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table TB15-11. Catch statistics for Selected Taxa collected in 156 6.1-m river otter trawl samples during Tampa Bay stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>395</td>
<td>1.3</td>
<td>35.3</td>
<td>0.37</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>352</td>
<td>1.2</td>
<td>17.9</td>
<td>0.31</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>242</td>
<td>0.8</td>
<td>16.7</td>
<td>0.21</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>223</td>
<td>0.7</td>
<td>55.1</td>
<td>0.20</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>55</td>
<td>0.2</td>
<td>8.3</td>
<td>0.05</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>46</td>
<td>0.2</td>
<td>8.3</td>
<td>0.04</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>36</td>
<td>0.1</td>
<td>11.5</td>
<td>0.03</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>35</td>
<td>0.1</td>
<td>14.1</td>
<td>0.03</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>28</td>
<td>0.1</td>
<td>7.1</td>
<td>0.03</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>17</td>
<td>0.1</td>
<td>4.5</td>
<td>0.02</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>6</td>
<td>&lt;0.1</td>
<td>2.6</td>
<td>0.01</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>3</td>
<td>&lt;0.1</td>
<td>1.3</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>3</td>
<td>&lt;0.1</td>
<td>1.3</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>2</td>
<td>&lt;0.1</td>
<td>1.3</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.6</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>1,444</td>
<td>4.7</td>
<td>.</td>
<td>1.30</td>
</tr>
</tbody>
</table>
Appendix TB15-01. Monthly summary of species collected during Tampa Bay stratified-random sampling, 2015. Effort, or total number of hauls, is labeled 'E'. Taxa are arranged alphabetically.

<table>
<thead>
<tr>
<th>Species</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acanthostracion quadricornis</td>
<td>20</td>
<td>8</td>
<td>6</td>
<td>15</td>
<td>10</td>
<td>2</td>
<td>21</td>
<td>8</td>
<td>11</td>
<td>15</td>
<td>8</td>
<td>23</td>
<td>147</td>
</tr>
<tr>
<td>Achiridae sp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Achirus lineatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Adinia xenica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Aluterus schoepfii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Ameiurus catus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>Anarchopterus criniger</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Anchoa cubana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>66</td>
</tr>
<tr>
<td>Anchoa hepsetus</td>
<td>1</td>
<td></td>
<td></td>
<td>242</td>
<td></td>
<td>2,562</td>
<td></td>
<td>51</td>
<td>8</td>
<td>22</td>
<td>.</td>
<td>.</td>
<td>2,905</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>11,726</td>
<td>19,190</td>
<td>12,109</td>
<td>32,795</td>
<td>21,469</td>
<td>67,263</td>
<td>83,322</td>
<td>8,837</td>
<td>26,195</td>
<td>33,177</td>
<td>121,280</td>
<td>94,086</td>
<td>531,449</td>
</tr>
<tr>
<td>Anchoa spp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>21</td>
</tr>
<tr>
<td>Ancylopsetta quadrocellata</td>
<td></td>
<td>1</td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>108</td>
<td>114</td>
<td>50</td>
<td>21</td>
<td>130</td>
<td>89</td>
<td>67</td>
<td>95</td>
<td>48</td>
<td>80</td>
<td>56</td>
<td>97</td>
<td>955</td>
</tr>
<tr>
<td>Argopecten spp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>Ariopsis felis</td>
<td>4</td>
<td>2</td>
<td>19</td>
<td>58</td>
<td>50</td>
<td>422</td>
<td>281</td>
<td>120</td>
<td>60</td>
<td>41</td>
<td>322</td>
<td>484</td>
<td>1,863</td>
</tr>
<tr>
<td>Astroscopus y-graecum</td>
<td></td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Bagre marinus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>46</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>17</td>
<td>31</td>
<td>17</td>
<td>942</td>
<td>926</td>
<td>775</td>
<td>1,184</td>
<td>1,743</td>
<td>220</td>
<td>653</td>
<td>151</td>
<td>109</td>
<td>6,768</td>
</tr>
<tr>
<td>Bathygobius soporator</td>
<td>8</td>
<td>5</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>Bathygobius spp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Belonesox belizanus</td>
<td></td>
<td>1</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>
### Appendix TB15-01. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brevoortia spp.</td>
<td>102</td>
<td>9</td>
<td>24</td>
<td>1,226</td>
<td>13</td>
<td>39</td>
<td>74</td>
<td>1</td>
<td>.</td>
<td>26</td>
<td>1</td>
<td>.</td>
<td>1,515</td>
</tr>
<tr>
<td>Calamus arctifrons</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Calamus pennae</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Calamus spp.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Callinectes ornatus</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>80</td>
<td>107</td>
<td>219</td>
<td>273</td>
<td>214</td>
<td>76</td>
<td>79</td>
<td>31</td>
<td>33</td>
<td>59</td>
<td>54</td>
<td>93</td>
<td>1,318</td>
</tr>
<tr>
<td>Caranx cryos</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Caranx hippos</td>
<td>2</td>
<td>.</td>
<td>4</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>18</td>
<td>2</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>18</td>
<td>68</td>
</tr>
<tr>
<td>Caranx latus</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>159</td>
<td>80</td>
<td>187</td>
<td>61</td>
<td>139</td>
<td>280</td>
<td>196</td>
<td>215</td>
<td>118</td>
<td>215</td>
<td>270</td>
<td>163</td>
<td>2,083</td>
</tr>
<tr>
<td>Centropristis striata</td>
<td>10</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>6</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>5</td>
<td>1</td>
<td>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chaetodipterus faber</td>
<td>59</td>
<td>.</td>
<td>15</td>
<td>122</td>
<td>1</td>
<td>34</td>
<td>42</td>
<td>12</td>
<td>22</td>
<td>23</td>
<td>413</td>
<td>6</td>
<td>749</td>
</tr>
<tr>
<td>Chasmodes saburrae</td>
<td>7</td>
<td>3</td>
<td>3</td>
<td>8</td>
<td>7</td>
<td>28</td>
<td>46</td>
<td>21</td>
<td>36</td>
<td>8</td>
<td>11</td>
<td>8</td>
<td>186</td>
</tr>
<tr>
<td>Chilomycterus schoepfii</td>
<td>73</td>
<td>23</td>
<td>18</td>
<td>15</td>
<td>11</td>
<td>13</td>
<td>31</td>
<td>18</td>
<td>20</td>
<td>43</td>
<td>43</td>
<td>30</td>
<td>338</td>
</tr>
<tr>
<td>Chloroscombus chrysurus</td>
<td>5</td>
<td>.</td>
<td>12</td>
<td>20</td>
<td>12</td>
<td>6</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>.</td>
<td>1</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>Citharichthys macrops</td>
<td>.</td>
<td>1</td>
<td>6</td>
<td>8</td>
<td>2</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>Ctenogobius boleosoma</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>4</td>
</tr>
<tr>
<td>Ctenogobius smaragdus</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>5</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>2</td>
<td>2</td>
<td>10</td>
<td>19</td>
<td>183</td>
<td>25</td>
<td>177</td>
<td>123</td>
<td>195</td>
<td>172</td>
<td>37</td>
<td>5</td>
<td>950</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>15</td>
<td>10</td>
<td>.</td>
<td>15</td>
<td>56</td>
<td>106</td>
<td>265</td>
<td>145</td>
<td>170</td>
<td>113</td>
<td>44</td>
<td>13</td>
<td>952</td>
</tr>
<tr>
<td>Cyprinodon variegatus</td>
<td>261</td>
<td>130</td>
<td>9</td>
<td>4</td>
<td>138</td>
<td>14</td>
<td>.</td>
<td>2</td>
<td>35</td>
<td>76</td>
<td>20</td>
<td>1</td>
<td>690</td>
</tr>
<tr>
<td>Dasyatis americana</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>2</td>
<td>.</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>8</td>
</tr>
<tr>
<td>Species</td>
<td>Jan</td>
<td>Feb</td>
<td>Mar</td>
<td>Apr</td>
<td>May</td>
<td>Jun</td>
<td>Jul</td>
<td>Aug</td>
<td>Sep</td>
<td>Oct</td>
<td>Nov</td>
<td>Dec</td>
<td>Totals</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>--------</td>
</tr>
<tr>
<td></td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=1,320</td>
</tr>
<tr>
<td><em>Dasyatis sabina</em></td>
<td>29</td>
<td>31</td>
<td>36</td>
<td>50</td>
<td>136</td>
<td>59</td>
<td>44</td>
<td>28</td>
<td>15</td>
<td>30</td>
<td>55</td>
<td>15</td>
<td>528</td>
</tr>
<tr>
<td><em>Dasyatis say</em></td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>.</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>.</td>
<td>26</td>
</tr>
<tr>
<td><em>Decapterus punctatus</em></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td><em>Diapterus auratus</em></td>
<td>1</td>
<td>.</td>
<td>12</td>
<td>12</td>
<td>6</td>
<td>7</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>8</td>
<td>60</td>
</tr>
<tr>
<td><em>Diploduc formosum</em></td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>5</td>
</tr>
<tr>
<td><em>Diplo pneum holbrookii</em></td>
<td>.</td>
<td>4</td>
<td>7</td>
<td>.</td>
<td>.</td>
<td>9</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>2</td>
<td>152</td>
<td>1</td>
<td>190</td>
</tr>
<tr>
<td><em>Dorosoma petenense</em></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td><em>Echeneis neucratoides</em></td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td><em>Echeneis sp.</em></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td><em>Elops saurus</em></td>
<td>209</td>
<td>8</td>
<td>359</td>
<td>87</td>
<td>27</td>
<td>58</td>
<td>40</td>
<td>19</td>
<td>8</td>
<td>34</td>
<td>17</td>
<td>12</td>
<td>878</td>
</tr>
<tr>
<td><em>Etropus crossotus</em></td>
<td>4</td>
<td>6</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>30</td>
</tr>
<tr>
<td><em>Eucinostomus argenteus</em></td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td><em>Eucinostomus gula</em></td>
<td>1,008</td>
<td>414</td>
<td>368</td>
<td>183</td>
<td>209</td>
<td>157</td>
<td>692</td>
<td>1,126</td>
<td>896</td>
<td>879</td>
<td>994</td>
<td>874</td>
<td>7,800</td>
</tr>
<tr>
<td><em>Eucinostomus harengulus</em></td>
<td>396</td>
<td>430</td>
<td>381</td>
<td>888</td>
<td>823</td>
<td>317</td>
<td>455</td>
<td>415</td>
<td>605</td>
<td>314</td>
<td>766</td>
<td>675</td>
<td>6,465</td>
</tr>
<tr>
<td><em>Eucinostomus spp.</em></td>
<td>3,956</td>
<td>2,065</td>
<td>2,469</td>
<td>1,016</td>
<td>359</td>
<td>1,732</td>
<td>3,444</td>
<td>3,140</td>
<td>2,154</td>
<td>2,782</td>
<td>4,184</td>
<td>4,116</td>
<td>31,417</td>
</tr>
<tr>
<td><em>Eugerres plumieri</em></td>
<td>12</td>
<td>33</td>
<td>21</td>
<td>14</td>
<td>15</td>
<td>175</td>
<td>1,404</td>
<td>698</td>
<td>150</td>
<td>75</td>
<td>72</td>
<td>103</td>
<td>2,772</td>
</tr>
<tr>
<td><em>Farantepenaeus duorarum</em></td>
<td>178</td>
<td>76</td>
<td>141</td>
<td>125</td>
<td>87</td>
<td>164</td>
<td>593</td>
<td>640</td>
<td>1,314</td>
<td>576</td>
<td>410</td>
<td>245</td>
<td>4,549</td>
</tr>
<tr>
<td><em>Floridichthys carpio</em></td>
<td>716</td>
<td>107</td>
<td>328</td>
<td>142</td>
<td>462</td>
<td>356</td>
<td>73</td>
<td>352</td>
<td>206</td>
<td>241</td>
<td>232</td>
<td>84</td>
<td>3,299</td>
</tr>
<tr>
<td><em>Fundulus confluentus</em></td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td><em>Fundulus grandis</em></td>
<td>25</td>
<td>61</td>
<td>153</td>
<td>9</td>
<td>.</td>
<td>16</td>
<td>10</td>
<td>20</td>
<td>58</td>
<td>4</td>
<td>.</td>
<td>6</td>
<td>362</td>
</tr>
<tr>
<td><em>Fundulus seminolis</em></td>
<td>.</td>
<td>9</td>
<td>.</td>
<td>3</td>
<td>20</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>13</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>61</td>
</tr>
<tr>
<td><em>Fundulus similis</em></td>
<td>256</td>
<td>9</td>
<td>68</td>
<td>1,354</td>
<td>180</td>
<td>110</td>
<td>411</td>
<td>3</td>
<td>124</td>
<td>16</td>
<td>159</td>
<td>148</td>
<td>2,838</td>
</tr>
<tr>
<td>Species</td>
<td>Jan</td>
<td>Feb</td>
<td>Mar</td>
<td>Apr</td>
<td>May</td>
<td>Jun</td>
<td>Jul</td>
<td>Aug</td>
<td>Sep</td>
<td>Oct</td>
<td>Nov</td>
<td>Dec</td>
<td>Totals</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>--------</td>
</tr>
<tr>
<td><strong>Fundulus spp.</strong></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Gambusia holbrooki</strong></td>
<td>103</td>
<td>15</td>
<td>103</td>
<td>103</td>
<td>103</td>
<td>103</td>
<td>103</td>
<td>103</td>
<td>103</td>
<td>103</td>
<td>103</td>
<td>103</td>
<td>103</td>
</tr>
<tr>
<td><strong>Gerreidae spp.</strong></td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td><strong>Gobiesox strumosus</strong></td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td><strong>Gobiosoma bosc</strong></td>
<td>386</td>
<td>386</td>
<td>386</td>
<td>386</td>
<td>386</td>
<td>386</td>
<td>386</td>
<td>386</td>
<td>386</td>
<td>386</td>
<td>386</td>
<td>386</td>
<td>386</td>
</tr>
<tr>
<td><strong>Gobiosoma longipala</strong></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td><strong>Gobiosoma robustum</strong></td>
<td>780</td>
<td>780</td>
<td>780</td>
<td>780</td>
<td>780</td>
<td>780</td>
<td>780</td>
<td>780</td>
<td>780</td>
<td>780</td>
<td>780</td>
<td>780</td>
<td>780</td>
</tr>
<tr>
<td><strong>Gobiosoma spp.</strong></td>
<td>970</td>
<td>970</td>
<td>970</td>
<td>970</td>
<td>970</td>
<td>970</td>
<td>970</td>
<td>970</td>
<td>970</td>
<td>970</td>
<td>970</td>
<td>970</td>
<td>970</td>
</tr>
<tr>
<td><strong>Gymnura micrura</strong></td>
<td>122</td>
<td>122</td>
<td>122</td>
<td>122</td>
<td>122</td>
<td>122</td>
<td>122</td>
<td>122</td>
<td>122</td>
<td>122</td>
<td>122</td>
<td>122</td>
<td>122</td>
</tr>
<tr>
<td><strong>Haemulon plumieri</strong></td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td><strong>Harengula jagauana</strong></td>
<td>1,186</td>
<td>1,186</td>
<td>1,186</td>
<td>1,186</td>
<td>1,186</td>
<td>1,186</td>
<td>1,186</td>
<td>1,186</td>
<td>1,186</td>
<td>1,186</td>
<td>1,186</td>
<td>1,186</td>
<td>1,186</td>
</tr>
<tr>
<td><strong>Hippocampus erectus</strong></td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td><strong>Hippocampus zosterae</strong></td>
<td>56</td>
<td>56</td>
<td>56</td>
<td>56</td>
<td>56</td>
<td>56</td>
<td>56</td>
<td>56</td>
<td>56</td>
<td>56</td>
<td>56</td>
<td>56</td>
<td>56</td>
</tr>
<tr>
<td><strong>Hoplosternum littorale</strong></td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td><strong>Hyporhamphus meeki</strong></td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td><strong>Hyporhamphus spp.</strong></td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td><strong>Hypopsoblennius hentz</strong></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td><strong>Labidesthes sicculus</strong></td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
</tr>
<tr>
<td><strong>Lactophrys trigonus</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Lagodon rhomboides</strong></td>
<td>51,893</td>
<td>51,893</td>
<td>51,893</td>
<td>51,893</td>
<td>51,893</td>
<td>51,893</td>
<td>51,893</td>
<td>51,893</td>
<td>51,893</td>
<td>51,893</td>
<td>51,893</td>
<td>51,893</td>
<td>51,893</td>
</tr>
<tr>
<td><strong>Leiostomus xanthurus</strong></td>
<td>2,808</td>
<td>2,808</td>
<td>2,808</td>
<td>2,808</td>
<td>2,808</td>
<td>2,808</td>
<td>2,808</td>
<td>2,808</td>
<td>2,808</td>
<td>2,808</td>
<td>2,808</td>
<td>2,808</td>
<td>2,808</td>
</tr>
<tr>
<td><strong>Lepisosteus osseus</strong></td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
</tr>
</tbody>
</table>
### Appendix TB15-01. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>110</td>
<td>110</td>
<td>110</td>
<td>110</td>
<td>110</td>
<td>110</td>
<td>110</td>
<td>110</td>
<td>110</td>
<td>110</td>
<td>110</td>
<td>110</td>
<td>1,320</td>
</tr>
<tr>
<td>Lepomis macrochirus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>4</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>4</td>
</tr>
<tr>
<td>Lepomis microlophus</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Lepomis spp.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>9</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>9</td>
</tr>
<tr>
<td>Limulus polyphemus</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>10</td>
<td>.</td>
<td>26</td>
<td>1</td>
<td>1</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Lophogobius cyprinoides</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Lucania goodei</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Lucania parva</td>
<td>116</td>
<td>218</td>
<td>77</td>
<td>335</td>
<td>325</td>
<td>3,800</td>
<td>2,376</td>
<td>2,522</td>
<td>932</td>
<td>1,701</td>
<td>480</td>
<td>244</td>
<td>13,126</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>10</td>
<td>12</td>
<td>64</td>
<td>62</td>
<td>64</td>
<td>60</td>
<td>45</td>
<td>46</td>
<td>24</td>
<td>397</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>11</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>23</td>
<td>3</td>
<td>10</td>
<td>7</td>
<td>40</td>
<td>5</td>
<td>101</td>
</tr>
<tr>
<td>Membras martinica</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>24</td>
<td>131</td>
<td>218</td>
<td>10</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>385</td>
</tr>
<tr>
<td>Menidia spp.</td>
<td>806</td>
<td>1,157</td>
<td>1,410</td>
<td>3,596</td>
<td>5,480</td>
<td>2,356</td>
<td>4,290</td>
<td>3,062</td>
<td>2,116</td>
<td>2,068</td>
<td>2,136</td>
<td>1,270</td>
<td>29,747</td>
</tr>
<tr>
<td>Menippe spp.</td>
<td>15</td>
<td>4</td>
<td>8</td>
<td>25</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td>4</td>
<td>23</td>
<td>11</td>
<td>14</td>
<td>3</td>
<td>118</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>10</td>
<td>3</td>
<td>6</td>
<td>3</td>
<td>76</td>
<td>46</td>
<td>362</td>
<td>20</td>
<td>25</td>
<td>200</td>
<td>19</td>
<td>38</td>
<td>808</td>
</tr>
<tr>
<td>Menticirrhus littoralis</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Menticirrhus saxatilis</td>
<td>.</td>
<td>2</td>
<td>2</td>
<td>14</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>40</td>
</tr>
<tr>
<td>Microgobius gulosus</td>
<td>263</td>
<td>184</td>
<td>401</td>
<td>226</td>
<td>366</td>
<td>1,050</td>
<td>1,524</td>
<td>1,157</td>
<td>439</td>
<td>832</td>
<td>903</td>
<td>853</td>
<td>8,198</td>
</tr>
<tr>
<td>Microgobius thalassinus</td>
<td>.</td>
<td>1</td>
<td>13</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>42</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>10</td>
<td>.</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Micropterus salmoides</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>4</td>
</tr>
<tr>
<td>Monacanthus ciliatus</td>
<td>10</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>14</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>45</td>
<td>1,587</td>
<td>584</td>
<td>291</td>
<td>153</td>
<td>80</td>
<td>9</td>
<td>64</td>
<td>47</td>
<td>8</td>
<td>44</td>
<td>22</td>
<td>2,934</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>26</td>
<td>2</td>
<td>23</td>
<td>27</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>7</td>
<td>14</td>
<td>123</td>
</tr>
<tr>
<td>Species</td>
<td>Jan</td>
<td>Feb</td>
<td>Mar</td>
<td>Apr</td>
<td>May</td>
<td>Jun</td>
<td>Jul</td>
<td>Aug</td>
<td>Sep</td>
<td>Oct</td>
<td>Nov</td>
<td>Dec</td>
<td>Totals</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>--------</td>
</tr>
<tr>
<td>Mugil trichodon</td>
<td>78</td>
<td>8</td>
<td>446</td>
<td>55</td>
<td>78</td>
<td>18</td>
<td>20</td>
<td>12</td>
<td>14</td>
<td>45</td>
<td>26</td>
<td>178</td>
<td>978</td>
</tr>
<tr>
<td>Mycteropecra microlepis</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>4</td>
</tr>
<tr>
<td>Nicholsina usta</td>
<td>8</td>
<td>6</td>
<td>3</td>
<td>14</td>
<td>3</td>
<td>22</td>
<td>18</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>7</td>
<td>1</td>
<td>83</td>
</tr>
<tr>
<td>Notropis maculatus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Notropis petersoni</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>95</td>
</tr>
<tr>
<td>Ocyurus chrysurus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Ogcocephalus cubifrons</td>
<td>1</td>
<td>3</td>
<td>.</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>Oligoplites saurus</td>
<td>.</td>
<td>.</td>
<td>6</td>
<td>7</td>
<td>29</td>
<td>265</td>
<td>116</td>
<td>83</td>
<td>55</td>
<td>37</td>
<td>6</td>
<td>3</td>
<td>607</td>
</tr>
<tr>
<td>Ophidion holbrookii</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Opisthonomia oglinum</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>307</td>
<td>2</td>
<td>186</td>
<td>38</td>
<td>23</td>
<td>248</td>
<td>8</td>
<td>7</td>
<td>154</td>
<td>973</td>
</tr>
<tr>
<td>Opistognathus robinsi</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Opsanus beta</td>
<td>3</td>
<td>.</td>
<td>5</td>
<td>21</td>
<td>15</td>
<td>14</td>
<td>17</td>
<td>13</td>
<td>17</td>
<td>24</td>
<td>11</td>
<td>3</td>
<td>143</td>
</tr>
<tr>
<td>Oreochromis/Sarotherodon spp.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>15</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>18</td>
</tr>
<tr>
<td>Orthopristis chrysoptera</td>
<td>365</td>
<td>355</td>
<td>205</td>
<td>473</td>
<td>201</td>
<td>473</td>
<td>266</td>
<td>250</td>
<td>130</td>
<td>60</td>
<td>433</td>
<td>14</td>
<td>3,225</td>
</tr>
<tr>
<td>Paralichthys marmoratus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>.</td>
<td>4</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>16</td>
<td>19</td>
<td>89</td>
<td>53</td>
<td>39</td>
<td>26</td>
<td>33</td>
<td>13</td>
<td>15</td>
<td>23</td>
<td>17</td>
<td>11</td>
<td>354</td>
</tr>
<tr>
<td>Peprilus paru</td>
<td>.</td>
<td>1</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>4</td>
</tr>
<tr>
<td>Poecilia latipinna</td>
<td>13</td>
<td>1</td>
<td>11</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>10</td>
<td>2</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>41</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>.</td>
<td>11</td>
<td>7</td>
<td>.</td>
<td>19</td>
<td>.</td>
<td>2</td>
<td>2</td>
<td>.</td>
<td>7</td>
<td>37</td>
<td>4</td>
<td>89</td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>17</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>17</td>
</tr>
<tr>
<td>Portunus spp.</td>
<td>13</td>
<td>21</td>
<td>74</td>
<td>24</td>
<td>58</td>
<td>222</td>
<td>1,750</td>
<td>53</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>4</td>
<td>2,221</td>
</tr>
<tr>
<td>Prionotus scitulus</td>
<td>50</td>
<td>45</td>
<td>101</td>
<td>40</td>
<td>22</td>
<td>48</td>
<td>534</td>
<td>386</td>
<td>34</td>
<td>47</td>
<td>139</td>
<td>51</td>
<td>1,497</td>
</tr>
</tbody>
</table>
### Appendix TB15-01. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Month</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jan</td>
<td>Feb</td>
<td>Mar</td>
<td>Apr</td>
<td>May</td>
<td>Jun</td>
<td>Jul</td>
<td>Aug</td>
<td>Sep</td>
<td>Oct</td>
<td>Nov</td>
<td>Dec</td>
</tr>
<tr>
<td></td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=1,320</td>
</tr>
<tr>
<td>Prionopterus tribulus</td>
<td>19</td>
<td>12</td>
<td>23</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>4</td>
<td>6</td>
<td>17</td>
<td>12</td>
</tr>
<tr>
<td>Pterygoplichthys spp.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Rhinopterus constrictus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Rhinoptera bonasus</td>
<td>4</td>
<td>.</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td>.</td>
<td>.</td>
<td>9</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Rimpaenaeus constrictus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sardinella aurita</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>43</td>
<td>183</td>
<td>247</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sarotherodon melanotheron</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>65</td>
<td>67</td>
<td>57</td>
<td>12</td>
<td>4</td>
<td>10</td>
<td>5</td>
<td>29</td>
<td>19</td>
<td>229</td>
<td>482</td>
<td>430</td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td>7</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>.</td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td>Scorpaena brasilensis</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Selene vomer</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>10</td>
<td>.</td>
<td>13</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Serranus subligarius</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sicyonia laevigata</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sicyonia typica</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sphoeroides nepelus</td>
<td>38</td>
<td>13</td>
<td>26</td>
<td>34</td>
<td>41</td>
<td>32</td>
<td>31</td>
<td>21</td>
<td>29</td>
<td>46</td>
<td>43</td>
<td>36</td>
</tr>
<tr>
<td>Sphoeroides spengleri</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sphyraena barracuda</td>
<td>2</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>4</td>
<td>12</td>
<td>.</td>
</tr>
<tr>
<td>Sphyraea tiburo</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>9</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Stephanolepis hispidus</td>
<td>14</td>
<td>.</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>28</td>
<td>2</td>
<td>7</td>
<td>3</td>
<td>1</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Strongylura marina</td>
<td>3</td>
<td>.</td>
<td>2</td>
<td>4</td>
<td>16</td>
<td>2</td>
<td>5</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Strongylura notata</td>
<td>46</td>
<td>146</td>
<td>33</td>
<td>44</td>
<td>92</td>
<td>107</td>
<td>113</td>
<td>128</td>
<td>60</td>
<td>132</td>
<td>66</td>
<td>120</td>
</tr>
<tr>
<td>Strongylura spp.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>11</td>
<td>9</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>
### Appendix TB15-01. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=110</td>
<td>E=1,320</td>
</tr>
<tr>
<td>Strongylura timucu</td>
<td>.</td>
<td>23</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>3</td>
<td>2</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>35</td>
</tr>
<tr>
<td>Symphurus plagiusa</td>
<td>15</td>
<td>10</td>
<td>37</td>
<td>10</td>
<td>16</td>
<td>14</td>
<td>9</td>
<td>43</td>
<td>14</td>
<td>26</td>
<td>25</td>
<td>10</td>
<td>229</td>
</tr>
<tr>
<td>Syngnathus floridus</td>
<td>13</td>
<td>12</td>
<td>4</td>
<td>.</td>
<td>2</td>
<td>12</td>
<td>10</td>
<td>18</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>24</td>
<td>103</td>
</tr>
<tr>
<td>Syngnathus louisianae</td>
<td>2</td>
<td>1</td>
<td>.</td>
<td>13</td>
<td>7</td>
<td>14</td>
<td>37</td>
<td>19</td>
<td>12</td>
<td>15</td>
<td>12</td>
<td>11</td>
<td>143</td>
</tr>
<tr>
<td>Syngnathus scovelli</td>
<td>36</td>
<td>28</td>
<td>49</td>
<td>110</td>
<td>60</td>
<td>112</td>
<td>158</td>
<td>96</td>
<td>143</td>
<td>59</td>
<td>68</td>
<td>69</td>
<td>988</td>
</tr>
<tr>
<td>Synodontidae sp.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Synodus foetens</td>
<td>31</td>
<td>26</td>
<td>24</td>
<td>43</td>
<td>58</td>
<td>32</td>
<td>18</td>
<td>25</td>
<td>20</td>
<td>28</td>
<td>52</td>
<td>38</td>
<td>395</td>
</tr>
<tr>
<td>Tilapia mariae</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>9</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>13</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>15</td>
<td>.</td>
<td>14</td>
<td>3</td>
<td>.</td>
<td>10</td>
<td>8</td>
<td>3</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>16</td>
<td>72</td>
</tr>
<tr>
<td>Trinectes maculatus</td>
<td>300</td>
<td>230</td>
<td>88</td>
<td>148</td>
<td>72</td>
<td>44</td>
<td>91</td>
<td>272</td>
<td>502</td>
<td>436</td>
<td>260</td>
<td>226</td>
<td>2,669</td>
</tr>
<tr>
<td>Tylosurus crocodilus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Urophycis floridana</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>8</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>26,314</strong></td>
<td><strong>31,800</strong></td>
<td><strong>26,607</strong></td>
<td><strong>52,630</strong></td>
<td><strong>39,858</strong></td>
<td><strong>87,671</strong></td>
<td><strong>113,602</strong></td>
<td><strong>33,698</strong></td>
<td><strong>43,447</strong></td>
<td><strong>54,196</strong></td>
<td><strong>139,553</strong></td>
<td><strong>109,890</strong></td>
<td><strong>759,266</strong></td>
</tr>
</tbody>
</table>
Appendix TB15-02. Summary by gear and stratum of species collected during Tampa Bay stratified-random sampling, 2015. Sampling with 21.3-m bay seine was stratified by the presence or absence of a shoreline (‘Shore’ or offshore) within 5-m. Offshore sets were further stratified by the presence or absence of bottom vegetation (‘Veg’ or ‘Unveg’). Sampling with 21.3-m river seine and 183-m haul seine was stratified by the presence or absence of overhanging vegetation (‘Over’ or ‘Nonover’). Sampling with 6.1-m otter trawl was not stratified. Effort, or the total number of hauls, is labeled ‘E’. Taxa are arranged alphabetically.

<table>
<thead>
<tr>
<th>Species</th>
<th>Gear and Strata</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21.3-m bay seine</td>
<td>21.3-m river seine</td>
</tr>
<tr>
<td></td>
<td>Veg</td>
<td>Unveg</td>
</tr>
<tr>
<td>Acanthostracion quadricornis</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>Achiridae sp.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Achirus lineatus</td>
<td>43</td>
<td>37</td>
</tr>
<tr>
<td>Adinia xenica</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Aluterus schoepfii</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Ameiurus catus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Anarchopterus criniger</td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td>Anchoa cubana</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Anchoa hepsetus</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>9,263</td>
<td>7,094</td>
</tr>
<tr>
<td>Anchoa spp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ancylopsetta quadrocellata</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>31</td>
<td>2</td>
</tr>
<tr>
<td>Argopecten spp.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Ariopsis felis</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>Astroscopus y-graecum</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Bagre marinus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>2,085</td>
<td>177</td>
</tr>
<tr>
<td>Bathygobius soporator</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Bathygobius spp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Belonesox belizanus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Brevoortia spp.</td>
<td>.</td>
<td>1,113</td>
</tr>
<tr>
<td>Calamus arcticifrons</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Calamus penna</td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td>Calamus spp.</td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td>Callinectes ornatus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Species</td>
<td>Gear and Strata</td>
<td></td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-----------------</td>
<td>-------</td>
</tr>
<tr>
<td></td>
<td>21.3-m bay seine</td>
<td>21.3-m river seine</td>
</tr>
<tr>
<td></td>
<td>Veg</td>
<td>Unveg</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>32</td>
<td>14</td>
</tr>
<tr>
<td>Caranx crysos</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caranx hippos</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caranx latus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centropristis striata</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Chaetodipterus faber</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Chasmodes saburrae</td>
<td>82</td>
<td>3</td>
</tr>
<tr>
<td>Chilomycterus schoepfii</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Chloroscombrus chrysurus</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Citharichthys macrops</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ctenogobius boleosoma</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ctenogobius smaragdus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>398</td>
<td>19</td>
</tr>
<tr>
<td>Cyprinodon variegatus</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Dasyatis americana</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dasyatis sabina</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Dasyatis say</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Decapterus punctatus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diapterus auratus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diplectrum formosum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diplodus holbrookii</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Dorosoma petenense</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Echeneis neucratoides</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Echeneis sp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elops saurus</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Etropus cossstats</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eucinostomus argenteus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eucinostomus gula</td>
<td>774</td>
<td>532</td>
</tr>
<tr>
<td>Eucinostomus harengulus</td>
<td>20</td>
<td>199</td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td>5,000</td>
<td>1,645</td>
</tr>
<tr>
<td>Species</td>
<td>Gear and Strata</td>
<td>21.3-m bay seine</td>
</tr>
<tr>
<td>--------------------------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Veg E=118</td>
</tr>
<tr>
<td><em>Eugerres plumieri</em></td>
<td></td>
<td>35</td>
</tr>
<tr>
<td><em>Farfantepenaeus duorarum</em></td>
<td></td>
<td>1,044</td>
</tr>
<tr>
<td><em>Floridichthys carpio</em></td>
<td></td>
<td>245</td>
</tr>
<tr>
<td><em>Fundulus confluentus</em></td>
<td></td>
<td>.</td>
</tr>
<tr>
<td><em>Fundulus grandis</em></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Fundulus seminolis</em></td>
<td></td>
<td>.</td>
</tr>
<tr>
<td><em>Fundulus similis</em></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><em>Fundulus spp.</em></td>
<td></td>
<td>.</td>
</tr>
<tr>
<td><em>Gambusia holbrooki</em></td>
<td></td>
<td>.</td>
</tr>
<tr>
<td>Gerreidae spp.</td>
<td></td>
<td>.</td>
</tr>
<tr>
<td><em>Gobiesox strumosus</em></td>
<td></td>
<td>.</td>
</tr>
<tr>
<td><em>Gobiosoma bosc</em></td>
<td></td>
<td>.</td>
</tr>
<tr>
<td><em>Gobiosoma longipala</em></td>
<td></td>
<td>.</td>
</tr>
<tr>
<td><em>Gobiosoma robustum</em></td>
<td></td>
<td>195</td>
</tr>
<tr>
<td><em>Gobiosoma spp.</em></td>
<td></td>
<td>120</td>
</tr>
<tr>
<td><em>Gymnura micrura</em></td>
<td></td>
<td>.</td>
</tr>
<tr>
<td><em>Haemulon plumieri</em></td>
<td></td>
<td>60</td>
</tr>
<tr>
<td><em>Harengula jaguana</em></td>
<td></td>
<td>2,279</td>
</tr>
<tr>
<td><em>Hippocampus erectus</em></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td><em>Hippocampus zosterae</em></td>
<td></td>
<td>27</td>
</tr>
<tr>
<td><em>Hoplosternum littorale</em></td>
<td></td>
<td>.</td>
</tr>
<tr>
<td><em>Hyporhamphus meeki</em></td>
<td></td>
<td>13</td>
</tr>
<tr>
<td><em>Hyporhamphus spp.</em></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Hypsoblennius hentz</em></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td><em>Labidesthes sicculus</em></td>
<td></td>
<td>.</td>
</tr>
<tr>
<td><em>Lactophrys trigonus</em></td>
<td></td>
<td>.</td>
</tr>
<tr>
<td><em>Lagodon rhomboides</em></td>
<td></td>
<td>12,418</td>
</tr>
<tr>
<td><em>Leiostomus xanthurus</em></td>
<td></td>
<td>85</td>
</tr>
<tr>
<td><em>Lepisosteus osseus</em></td>
<td></td>
<td>.</td>
</tr>
<tr>
<td><em>Lepomis macrochirus</em></td>
<td></td>
<td>.</td>
</tr>
<tr>
<td><em>Lepomis microlophus</em></td>
<td></td>
<td>.</td>
</tr>
<tr>
<td><em>Lepomis spp.</em></td>
<td></td>
<td>.</td>
</tr>
</tbody>
</table>
### Appendix TB15-02. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Gear and Strata</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21.3-m bay seine</td>
<td>21.3-m river seine</td>
</tr>
<tr>
<td></td>
<td>Veg</td>
<td>Unveg</td>
</tr>
<tr>
<td><strong>Limulus polyphemus</strong></td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td><strong>Lophogobius cyprinoides</strong></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><strong>Lucania goodei</strong></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><strong>Lucania parva</strong></td>
<td>5,245</td>
<td>55</td>
</tr>
<tr>
<td><strong>Lutjanus griseus</strong></td>
<td>21</td>
<td>1</td>
</tr>
<tr>
<td><strong>Lutjanus synagris</strong></td>
<td>44</td>
<td>.</td>
</tr>
<tr>
<td><strong>Membras martinica</strong></td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td><strong>Menidia spp.</strong></td>
<td>482</td>
<td>764</td>
</tr>
<tr>
<td><strong>Menippe spp.</strong></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><strong>Menticirrhus americanus</strong></td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td><strong>Menticirrhus littoralis</strong></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><strong>Menticirrhus saxatilis</strong></td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td><strong>Microgobius gulosus</strong></td>
<td>1,486</td>
<td>1,651</td>
</tr>
<tr>
<td><strong>Microgobius thalassinus</strong></td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td><strong>Micropogonias undulatus</strong></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><strong>Micropterus salmoides</strong></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><strong>Monacanthus ciliatus</strong></td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td><strong>Mugil cephalus</strong></td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td><strong>Mugil curema</strong></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><strong>Mugil trichodon</strong></td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td><strong>Mycteroperca microlepis</strong></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><strong>Nicholsina usta</strong></td>
<td>17</td>
<td>1</td>
</tr>
<tr>
<td><strong>Notropis maculatus</strong></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><strong>Notropis petersoni</strong></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><strong>Ocyurus chrysurus</strong></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><strong>Ogcocephalus cubifrons</strong></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><strong>Oligoplites saurus</strong></td>
<td>30</td>
<td>34</td>
</tr>
<tr>
<td><strong>Ophidion holbrookii</strong></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><strong>Opisthonomogogus aglinum</strong></td>
<td>2</td>
<td>270</td>
</tr>
<tr>
<td><strong>Opistognathus robinsi</strong></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><strong>Opsanus beta</strong></td>
<td>3</td>
<td>.</td>
</tr>
<tr>
<td><strong>Oreochromis/Sarotherodon spp.</strong></td>
<td>.</td>
<td>18</td>
</tr>
<tr>
<td>Species</td>
<td>Gear and Strata</td>
<td>21.3-m bay seine</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Veg</td>
</tr>
<tr>
<td>Orthopristis chrysoptera</td>
<td></td>
<td>822</td>
</tr>
<tr>
<td>Paraclinus marmoratus</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Pteroparlius paru</td>
<td></td>
<td>.</td>
</tr>
<tr>
<td>Poecilia latipinna</td>
<td></td>
<td>.</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td></td>
<td>.</td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td></td>
<td>.</td>
</tr>
<tr>
<td>Portunus spp.</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Prionotus scitulus</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Prionotus tribulus</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Pterygoplichthys spp.</td>
<td></td>
<td>.</td>
</tr>
<tr>
<td>Rhinobatos lentiginosus</td>
<td></td>
<td>.</td>
</tr>
<tr>
<td>Rhinoptera bonasus</td>
<td></td>
<td>.</td>
</tr>
<tr>
<td>Rimapenaeus constrictus</td>
<td></td>
<td>.</td>
</tr>
<tr>
<td>Sardinella aurita</td>
<td></td>
<td>195</td>
</tr>
<tr>
<td>Sarotherodon melanotheron</td>
<td></td>
<td>.</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td></td>
<td>297</td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td></td>
<td>.</td>
</tr>
<tr>
<td>Scorpaena brasiliensis</td>
<td></td>
<td>.</td>
</tr>
<tr>
<td>Selene vomer</td>
<td></td>
<td>.</td>
</tr>
<tr>
<td>Serranus subligarius</td>
<td></td>
<td>.</td>
</tr>
<tr>
<td>Sicynnla laevigata</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Sicynnla typica</td>
<td></td>
<td>.</td>
</tr>
<tr>
<td>Sphoeroides nephelus</td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>Sphoeroides spengleri</td>
<td></td>
<td>.</td>
</tr>
<tr>
<td>Sphyraena barracuda</td>
<td></td>
<td>.</td>
</tr>
<tr>
<td>Sphyrrna tiburo</td>
<td></td>
<td>.</td>
</tr>
<tr>
<td>Stephanolepis hispidus</td>
<td></td>
<td>22</td>
</tr>
<tr>
<td>Strongylura marina</td>
<td></td>
<td>.</td>
</tr>
<tr>
<td>Strongylura notata</td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>Strongylura spp.</td>
<td></td>
<td>.</td>
</tr>
<tr>
<td>Strongylura timucu</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

Appendix TB15-02. (Continued)
### Appendix TB15-02. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>21.3-m bay seine</th>
<th>21.3-m river seine</th>
<th>183-m haul seine</th>
<th>6.1-m otter trawl</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Veg</td>
<td>Unveg</td>
<td>Shore</td>
<td>Over</td>
<td>Nonover</td>
</tr>
<tr>
<td>Symphurus plagiusa</td>
<td>29</td>
<td>24</td>
<td>25</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Syngnathus floridae</td>
<td>90</td>
<td></td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Syngnathus louisianae</td>
<td>46</td>
<td>5</td>
<td>36</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Syngnathus scovelli</td>
<td>498</td>
<td>27</td>
<td>290</td>
<td>20</td>
<td>8</td>
</tr>
<tr>
<td>Synodontidae sp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Synodus foetens</td>
<td>45</td>
<td>58</td>
<td>68</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td>Tilapia mariae</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>38</td>
</tr>
<tr>
<td>Trinectes maculatus</td>
<td>19</td>
<td>8</td>
<td>24</td>
<td>722</td>
<td>461</td>
</tr>
<tr>
<td>Tylosurus crocodilus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Urophycis floridana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>43,824</td>
<td>13,695</td>
<td>205,933</td>
<td>140,393</td>
<td>254,568</td>
</tr>
</tbody>
</table>
Appendix TB15.03. Summary by zone of species collected during Tampa Bay stratified-random sampling, 2015. Zones A-E were located in Tampa Bay, while Zones K (Alafia River), L (Little Manatee River), M (Manatee River), and N (Braden River) represent tributaries of Tampa Bay. Effort, or the total number of hauls, is labeled 'E'. Taxa are arranged alphabetically.

<table>
<thead>
<tr>
<th>Species</th>
<th>Zone Designation</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Acanthostracion quadricornis</td>
<td>9</td>
<td>40</td>
</tr>
<tr>
<td>Achiridae sp.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Achirus lineatus</td>
<td>49</td>
<td>74</td>
</tr>
<tr>
<td>Adinia xenica</td>
<td>.</td>
<td>12</td>
</tr>
<tr>
<td>Aluterus schoepfii</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Ameiurus catus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Anachropterus criniger</td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td>Anchoa cubana</td>
<td>.</td>
<td>33</td>
</tr>
<tr>
<td>Anchoa hepsetus</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>26,345</td>
<td>13,164</td>
</tr>
<tr>
<td>Anchoa spp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ancylopsetta quadrocellata</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>109</td>
<td>182</td>
</tr>
<tr>
<td>Argopecten spp.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Ariopsis felis</td>
<td>626</td>
<td>230</td>
</tr>
<tr>
<td>Astroscopus y-graecum</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Bagre marinus</td>
<td>134</td>
<td>3</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>1,501</td>
<td>998</td>
</tr>
<tr>
<td>Bathygobius soperator</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Bathygobius spp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Belonesox belizanus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Brevoortia spp.</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Calamus arctifrons</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Calamus penna</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Calamus spp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Callinectes ornatus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>89</td>
<td>331</td>
</tr>
<tr>
<td>Caranx cryos</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Caranx hippos</td>
<td>15</td>
<td>18</td>
</tr>
<tr>
<td>Caranx latus</td>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>
Appendix TB15-03. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Zone</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>289</td>
<td>448</td>
</tr>
<tr>
<td>Centropristis striata</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Chaetodipterus faber</td>
<td>134</td>
<td>20</td>
</tr>
<tr>
<td>Chasmodipterus saburrae</td>
<td>77</td>
<td>17</td>
</tr>
<tr>
<td>Chilomycterus schoepfii</td>
<td>33</td>
<td>45</td>
</tr>
<tr>
<td>Chloroscombrus chrysurus</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Citharichthys macrops</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Ctenogobius boleosoma</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ctenogobius smaragdus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>161</td>
<td>10</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>280</td>
<td>143</td>
</tr>
<tr>
<td>Cyprinodon variegatus</td>
<td>430</td>
<td>165</td>
</tr>
<tr>
<td>Dasyatis americana</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Dasyatis sabina</td>
<td>60</td>
<td>92</td>
</tr>
<tr>
<td>Dasyatis say</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Decapterus punctatus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Diploglossus auratus</td>
<td>17</td>
<td>2</td>
</tr>
<tr>
<td>Diplotremus formosum</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Diplodus holbrookii</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Dorosoma petenense</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Echeneis neucratoides</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Echeneis sp.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>107</td>
<td>286</td>
</tr>
<tr>
<td>Etropus crososus</td>
<td>.</td>
<td>7</td>
</tr>
<tr>
<td>Eucinostomus argenteus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Eucinostomus gula</td>
<td>941</td>
<td>1,618</td>
</tr>
<tr>
<td>Eucinostomus harengulus</td>
<td>578</td>
<td>382</td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td>1,679</td>
<td>2,618</td>
</tr>
<tr>
<td>Eugenes plumieri</td>
<td>102</td>
<td>802</td>
</tr>
<tr>
<td>Farfantepeneaus duorarum</td>
<td>286</td>
<td>450</td>
</tr>
<tr>
<td>Floridichthys carpio</td>
<td>1,866</td>
<td>320</td>
</tr>
<tr>
<td>Fundulus confluentus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Fundulus grandis</td>
<td>123</td>
<td>47</td>
</tr>
</tbody>
</table>

TB-34
Appendix TB15-03. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Zone</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A=168</td>
<td>E=156</td>
</tr>
<tr>
<td>Fundulus seminolis</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Fundulus similis</td>
<td>300</td>
<td>57</td>
</tr>
<tr>
<td>Fundulus spp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Gambusia holbrooki</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Gerreidae spp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Gobiosox strumosus</td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td>Gobiosoma bosc</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Gobiosoma longipala</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Gobiosoma robustum</td>
<td>460</td>
<td>61</td>
</tr>
<tr>
<td>Gobiosoma spp.</td>
<td>292</td>
<td>32</td>
</tr>
<tr>
<td>Gymnura micrura</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Hyphorhamphus meeki</td>
<td>28</td>
<td>4</td>
</tr>
<tr>
<td>Hyphorhamphus spp.</td>
<td>7</td>
<td>.</td>
</tr>
<tr>
<td>Hypsoblennius hentz</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Labodesthes sicculus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lactophrys trigonus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>2,072</td>
<td>7,604</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>35</td>
<td>415</td>
</tr>
<tr>
<td>Lepisosteus osseus</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Lepomis macrochirus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lepomis microlophus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lepomis spp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Limulus polyphemus</td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td>Lophogobius cyprinoides</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lucania goodei</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lucania parva</td>
<td>6,000</td>
<td>3,138</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>6</td>
<td>21</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>3</td>
<td>6</td>
</tr>
</tbody>
</table>
Appendix TB15-03. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Zone</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Membras martinica</td>
<td>213</td>
<td>5</td>
</tr>
<tr>
<td>Menidia spp.</td>
<td>2,905</td>
<td>2,623</td>
</tr>
<tr>
<td>Menippe spp.</td>
<td>46</td>
<td>21</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>48</td>
<td>23</td>
</tr>
<tr>
<td>Menticirrhus littoralis</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Menticirrhus saxatilis</td>
<td>.</td>
<td>16</td>
</tr>
<tr>
<td>Microgobius gulosus</td>
<td>2,690</td>
<td>1,415</td>
</tr>
<tr>
<td>Microgobius thalassinus</td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>3</td>
<td>.</td>
</tr>
<tr>
<td>Micropterus salmoides</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Monacanthus ciliatus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>71</td>
<td>95</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>Mugil trichodon</td>
<td>436</td>
<td>119</td>
</tr>
<tr>
<td>Mycteroperca microlepis</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Nicholsina usta</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Notropis maculatus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Notropis petersoni</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ocyurus chrysurus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ogocephalus cubifrons</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Oligoplites saurus</td>
<td>88</td>
<td>73</td>
</tr>
<tr>
<td>Ophidion holbrookii</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Opisthodonogamia oglinum</td>
<td>45</td>
<td>474</td>
</tr>
<tr>
<td>Opistognathus robinsi</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Opsanus beta</td>
<td>35</td>
<td>14</td>
</tr>
<tr>
<td>Oreochromis/Sarotherodon spp.</td>
<td>.</td>
<td>18</td>
</tr>
<tr>
<td>Orthopristis chrysoptera</td>
<td>52</td>
<td>665</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>51</td>
<td>101</td>
</tr>
<tr>
<td>Peprilus paru</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Poecilia latipinna</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Species</td>
<td>Zone</td>
<td>Totals</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------</td>
<td>---------</td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Portunus spp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prionotus scitulus</td>
<td>34</td>
<td>581</td>
</tr>
<tr>
<td>Prionotus tribulus</td>
<td>17</td>
<td>9</td>
</tr>
<tr>
<td>Pterygoplichthys spp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhinobatos lentiginosus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhinoptera bonasus</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Rimapenaeus constrictus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sardinella aurita</td>
<td></td>
<td>181</td>
</tr>
<tr>
<td>Sarotherodon melanotheron</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>364</td>
<td>95</td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Scorpaena brasilensis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selene vomer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serranus subligarius</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sicyonia laevigata</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sicyonia typica</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sphoeroides nephelus</td>
<td>141</td>
<td>92</td>
</tr>
<tr>
<td>Sphoeroides spengleri</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sphyraena barracuda</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sphyra pneuiburo</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Stephanolepis hispidus</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Strongylura marina</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Strongylura notata</td>
<td>147</td>
<td>158</td>
</tr>
<tr>
<td>Strongylura spp.</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Strongylura timucu</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Symphurus plagiusa</td>
<td>14</td>
<td>26</td>
</tr>
<tr>
<td>Syngnathus floridiae</td>
<td>16</td>
<td>34</td>
</tr>
<tr>
<td>Syngnathus louisianae</td>
<td>50</td>
<td>34</td>
</tr>
<tr>
<td>Syngnathus scovelli</td>
<td>373</td>
<td>119</td>
</tr>
<tr>
<td>Synodontidae sp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Synodus foetens</td>
<td>56</td>
<td>56</td>
</tr>
<tr>
<td>Tilapia mariae</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Species</td>
<td>Zone</td>
<td>Totals</td>
</tr>
<tr>
<td>-------------------------</td>
<td>------</td>
<td>--------</td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>41</td>
<td>.</td>
</tr>
<tr>
<td>Trinectes maculatus</td>
<td>56</td>
<td>10</td>
</tr>
<tr>
<td>Tylosurus crocodilus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Urophycis floridana</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Totals</td>
<td>56,765</td>
<td>42,053</td>
</tr>
</tbody>
</table>
Charlotte Harbor

Charlotte Harbor is a drowned river estuary located on the southwestern coast of Florida (Charlotte Harbor National Estuary Program 2000). The bay is connected to the Gulf of Mexico by passes at Boca Grande, San Carlos, and several smaller inlets. Freshwater inflow principally comes from the Peace, Caloosahatchee, and Myakka rivers. Shoreline vegetation consists largely of fringing mangroves, and seagrasses are the dominant bottom vegetation in shallow waters.

The Fisheries-Independent Monitoring (FIM) program has conducted intensive sampling of fish and selected invertebrates in Charlotte Harbor since 1989. The area sampled was divided into four geographically-defined bay zones (A-D) and two riverine zones (M and P; Figure CH15-01). Monthly stratified-random sampling (SRS) was conducted in Zones A – D using 21.3-m bay seines, 183-m haul seines, and 6.1-m bay otter trawls. Monthly SRS was conducted in Zones M and P with 21.3-m river seines and 6.1-m river otter trawls. All methods were the same as those described in the Methods section of this report. This section summarizes data collected by the FIM program during 2015 in Charlotte Harbor.

Stratified-Random Sampling

A total of 295,627 animals, which included 140 taxa of fishes and 10 taxa of selected invertebrates, were collected from 1,068 Charlotte Harbor SRS samples in 2015 (Table CH15-01, Appendices CH15-01, -02, and -03). *Anchoa mitchilli* (n=99,897), *Lagodon rhomboides* (n=77,810), and *Eucinostomus* spp. (n=28,723) were the most numerous species collected, representing 69.8% of the total catch. *Lucania parva* (n=19,410) and *Menidia* spp. (n=8,664) were the next most abundant taxa collected, accounting for an additional 9.5% of the total catch. Twenty-nine Selected Taxa (n=16,305 animals) composed 5.5% of the total catch. *Farfantepenaeus duorarum* (n=5,612), *Cynoscion arenarius* (n=1,533), and *Leiostomus xanthurus* (n=1,270) were the most abundant Selected Taxa, representing 2.8% of the total catch. *Lutjanus griseus* (n=946), *Callinectes sapidus* (n=923), and *Centropomus undecimalis* (n=895) were the next most abundant Selected Taxa, comprising an additional 0.9% of the total catch.
Collections in 2015 included one species new to the Charlotte Harbor FIM collection: *Cosmocampus albirostris* (Whitenose Pipefish).

**Bay Sampling**

21.3-m Bay Seines. A total of 159,051 animals were collected in 408 21.3-m bay seines, representing 53.8% of the overall SRS catch (Table CH15-01). *Anchoa mitchilli* (n=41,929), *L. rhomboides* (n=38,155), *Eucinostomus* spp. (n=23,276), and *Lucania parva* (n=19,397) were the most abundant taxa, accounting for 77.2% of the 21.3-m bay seine catch (Table CH15-02). The taxa most frequently caught in 21.3-m bay seines were *Eucinostomus* spp. (77.2% occurrence) and *L. rhomboides* (70.1% occurrence).

A total of 6,615 animals from 19 Selected Taxa were collected, representing 4.2% of the entire 21.3-m bay seine catch (Table CH15-03). *Farfantepenaeus duorarum* (n=3,917) and *L. xanthurus* (n=1,224) were the most abundant Selected Taxa, accounting for 77.7% of the Selected Taxa collected with this gear. The Selected Taxon most frequently caught in 21.3-m bay seines was *F. duorarum* (54.4% occurrence).

183-m Haul Seines. A total of 37,869 animals were collected in 204 183-m haul seines, representing 12.8% of the total SRS catch (Table CH15-01). *Lagodon rhomboides* (n=28,276) was the most abundant species, accounting for 74.7% of the 183-m haul seine catch (Table CH15-04). The taxa most frequently caught in 183-m haul seines were *L. rhomboides* (73.0% occurrence) and *C. undecimalis* (56.9% occurrence).

A total of 3,477 animals from 24 Selected Taxa were collected, representing 9.2% of the entire 183-m haul seine catch (Table CH15-05). *Centropomus undecimalis* (n=850), *L. griseus* (n=759), and *Archosargus probatocephalus* (n=586) were the most abundant Selected Taxon, accounting for 63.1% of the Selected Taxa collected with this gear. The Selected Taxa most frequently caught in 183-m haul seines were *C. undecimalis* (56.9% occurrence), *A. probatocephalus* (48.5% occurrence), and *Mugil cephalus* (40.2% occurrence).

6.1-m Bay Otter Trawls. A total of 32,667 animals were collected in 288 6.1-m bay otter trawls, representing 11.1% of the overall SRS catch (Table CH15-01). *Lagodon rhomboides* (n=11,099), *Anchoa mitchilli* (n=2,864), and *Orthopristis chrysoptera* (n=2,544) were the most abundant taxa collected, accounting for 50.5% of the 6.1-m bay
otter trawl catch (Table CH15-06). The taxa most frequently caught in 6.1-m bay otter trawls were *Prionotus scitulus* (71.2% occurrence), *Portunus* spp. (48.3% occurrence), *F. duorarum* (46.9% occurrence), and *L. rhomboides* (42.4% occurrence).

A total of 4,051 animals from 17 Selected Taxa were collected, representing 12.4% of the entire 6.1-m bay otter trawl catch (Table CH15-07). *Farfantepenaeus duorarum* (n=1,308), *C. arenarius* (n=823), and *Menippe* spp. (n=622) were the most abundant Selected Taxa, accounting for 68.0% of the Selected Taxa collected with this gear. The Selected Taxa most frequently caught in 6.1-m bay otter trawls were *F. duorarum* (46.9% occurrence) and *Menippe* spp. (35.8% occurrence).

**River Sampling**

21.3-m River Seines. A total of 54,774 animals were collected in 96 21.3-m river seines, representing 18.5% of the overall SRS catch (Table CH15-01). *Anchoa mitchilli* (n=46,513) was the most abundant taxon collected, accounting for 84.9% of the 21.3-m river seine catch (Table CH15-08). The taxa most frequently caught in 21.3-m river seines were *Menidia* spp. (71.9% occurrence), *Eucinostomus* spp. (69.8% occurrence), and *A. mitchilli* (60.4% occurrence).

A total of 963 animals from 13 Selected Taxa were collected, representing 1.8% of the entire 21.3-m river seine catch (Table CH15-09). *Sciaenops ocellatus* (n=252), *Mugil cephalus* (n=249), and *C. arenarius* (n=185) were the most abundant Selected Taxa, accounting for 71.2% of the Selected Taxa collected with this gear. The Selected Taxa most frequently caught in 21.3-m river seines were *F. duorarum* (30.2% occurrence), *S. ocellatus* (21.9% occurrence), and *C. sapidus* (20.8% occurrence).

6.1-m River Otter Trawls. A total of 11,266 animals were collected in 72 6.1-m river otter trawls, representing 3.8% of the overall SRS catch (Table CH15-01). *Anchoa mitchilli* (n=8,591) was the most abundant taxon collected, accounting for 76.3% of the 6.1-m river otter trawl catch (Table CH15-10). The taxa most frequently caught in 6.1-m river otter trawls were *F. duorarum* (66.7% occurrence) and *C. arenarius* (61.1% occurrence).

A total of 1,199 animals from eight Selected Taxa were collected, representing 10.6% of the entire 6.1-m river otter trawl catch (Table CH15-11). *Cynoscion arenarius*
(n=503), *F. duorarum* (n=303), *Menticirrhus americanus* (n=212), and *C. sapidus* (n=161) were the most abundant Selected Taxa, accounting for 98.3% of the Selected Taxa collected with this gear. The Selected Taxa most frequently caught in the 6.1-m river otter trawls were *F. duorarum* (66.7% occurrence), *C. arenarius* (61.1% occurrence), and *C. sapidus* (58.3% occurrence).
References

Figure CH15-01. Map of Charlotte Harbor sampling area. Zones are labeled A - D, M, and P.

<table>
<thead>
<tr>
<th>Zone</th>
<th>21.3-m bay seine</th>
<th>21.3-m river seine</th>
<th>183-m haul seine</th>
<th>6.1-m otter trawl</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Animals</td>
<td>Hauls</td>
<td>Animals</td>
<td>Hauls</td>
<td>Animals</td>
</tr>
<tr>
<td>A</td>
<td>25,515</td>
<td>120</td>
<td>.</td>
<td>.</td>
<td>1,534</td>
</tr>
<tr>
<td>B</td>
<td>60,250</td>
<td>96</td>
<td>.</td>
<td>.</td>
<td>10,766</td>
</tr>
<tr>
<td>C</td>
<td>26,124</td>
<td>96</td>
<td>.</td>
<td>.</td>
<td>8,508</td>
</tr>
<tr>
<td>D</td>
<td>47,162</td>
<td>96</td>
<td>.</td>
<td>.</td>
<td>17,061</td>
</tr>
<tr>
<td>M</td>
<td>.</td>
<td>.</td>
<td>38,634</td>
<td>48</td>
<td>.</td>
</tr>
<tr>
<td>P</td>
<td>.</td>
<td>.</td>
<td>16,140</td>
<td>48</td>
<td>.</td>
</tr>
<tr>
<td>Totals</td>
<td>159,051</td>
<td>408</td>
<td>54,774</td>
<td>96</td>
<td>37,869</td>
</tr>
</tbody>
</table>
Table CH15-02. Catch statistics for 10 dominant taxa collected in 408 21.3-m bay seine samples during Charlotte Harbor stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>41,929</td>
<td>26.4</td>
<td>15.2</td>
<td>73.41</td>
<td>33.37</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>38,155</td>
<td>24.0</td>
<td>70.1</td>
<td>66.80</td>
<td>9.11</td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td>23,276</td>
<td>14.6</td>
<td>77.2</td>
<td>40.75</td>
<td>3.66</td>
</tr>
<tr>
<td>Lucania parva</td>
<td>19,397</td>
<td>12.2</td>
<td>40.0</td>
<td>33.96</td>
<td>6.96</td>
</tr>
<tr>
<td>Menidia spp.</td>
<td>6,965</td>
<td>4.4</td>
<td>25.2</td>
<td>12.19</td>
<td>3.30</td>
</tr>
<tr>
<td>Microgobius gulosus</td>
<td>4,515</td>
<td>2.8</td>
<td>53.7</td>
<td>7.90</td>
<td>0.88</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>3,917</td>
<td>2.5</td>
<td>54.4</td>
<td>6.86</td>
<td>1.11</td>
</tr>
<tr>
<td>Eucinostomus gula</td>
<td>3,205</td>
<td>2.0</td>
<td>53.9</td>
<td>5.61</td>
<td>0.58</td>
</tr>
<tr>
<td>Sardinella aurita</td>
<td>3,168</td>
<td>2.0</td>
<td>0.5</td>
<td>5.55</td>
<td>4.92</td>
</tr>
<tr>
<td>Floridichthys carpio</td>
<td>1,890</td>
<td>1.2</td>
<td>20.6</td>
<td>3.31</td>
<td>0.85</td>
</tr>
<tr>
<td>Subtotal</td>
<td>146,417</td>
<td>92.1</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Totals</td>
<td>159,051</td>
<td>100.0</td>
<td>278.45</td>
<td>37.52</td>
<td>272.17</td>
</tr>
</tbody>
</table>
Table CH15-03. Catch statistics for Selected Taxa collected in 408 21.3-m bay seine samples during Charlotte Harbor stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>3,917</td>
<td>2.5</td>
<td>54.4</td>
<td>6.86</td>
<td>1.11</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>1,224</td>
<td>0.8</td>
<td>7.1</td>
<td>2.14</td>
<td>1.42</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>458</td>
<td>0.3</td>
<td>23.5</td>
<td>0.80</td>
<td>0.13</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>238</td>
<td>0.2</td>
<td>10.5</td>
<td>0.42</td>
<td>0.11</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>165</td>
<td>0.1</td>
<td>17.9</td>
<td>0.29</td>
<td>0.05</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>147</td>
<td>0.1</td>
<td>2.2</td>
<td>0.26</td>
<td>0.24</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>138</td>
<td>0.1</td>
<td>13.0</td>
<td>0.24</td>
<td>0.04</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>95</td>
<td>0.1</td>
<td>5.9</td>
<td>0.17</td>
<td>0.07</td>
</tr>
<tr>
<td>Mugil trichodon</td>
<td>74</td>
<td>0.1</td>
<td>2.9</td>
<td>0.13</td>
<td>0.07</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>35</td>
<td>&lt;0.1</td>
<td>4.7</td>
<td>0.06</td>
<td>0.02</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>35</td>
<td>&lt;0.1</td>
<td>0.2</td>
<td>0.06</td>
<td>0.06</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>28</td>
<td>&lt;0.1</td>
<td>6.4</td>
<td>0.05</td>
<td>0.01</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>22</td>
<td>&lt;0.1</td>
<td>2.9</td>
<td>0.04</td>
<td>0.01</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>19</td>
<td>&lt;0.1</td>
<td>1.7</td>
<td>0.03</td>
<td>0.01</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>11</td>
<td>&lt;0.1</td>
<td>2.7</td>
<td>0.02</td>
<td>0.01</td>
</tr>
<tr>
<td>Menticirrhus saxatilis</td>
<td>4</td>
<td>&lt;0.1</td>
<td>1.0</td>
<td>0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Menippe spp.</td>
<td>2</td>
<td>&lt;0.1</td>
<td>0.5</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Lutjanus analis</td>
<td>2</td>
<td>&lt;0.1</td>
<td>0.5</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Mycteroperca microlepis</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.2</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>6,615</td>
<td>4.2</td>
<td></td>
<td>11.58</td>
<td>1.86</td>
</tr>
</tbody>
</table>
Table CH15-04. Catch statistics for 10 dominant taxa collected in 204 183-m haul seine samples during Charlotte Harbor stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean catch-per-unit-effort.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Catch-per-unit-effort (animals/set)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td></td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>28,276</td>
<td>74.7</td>
<td>73.0</td>
<td>138.61</td>
<td>22.70</td>
</tr>
<tr>
<td>Orthopristis chrysoptera</td>
<td>1,324</td>
<td>3.5</td>
<td>26.5</td>
<td>6.49</td>
<td>1.68</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>850</td>
<td>2.2</td>
<td>56.9</td>
<td>4.17</td>
<td>0.61</td>
</tr>
<tr>
<td>Eucinostomus gula</td>
<td>817</td>
<td>2.2</td>
<td>38.2</td>
<td>4.00</td>
<td>0.77</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>759</td>
<td>2.0</td>
<td>33.3</td>
<td>3.72</td>
<td>0.75</td>
</tr>
<tr>
<td>Ariopsis felis</td>
<td>714</td>
<td>1.9</td>
<td>35.8</td>
<td>3.50</td>
<td>0.76</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>586</td>
<td>1.6</td>
<td>48.5</td>
<td>2.87</td>
<td>0.54</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>517</td>
<td>1.4</td>
<td>17.6</td>
<td>2.53</td>
<td>0.96</td>
</tr>
<tr>
<td>Strongylura notata</td>
<td>410</td>
<td>1.1</td>
<td>48.0</td>
<td>2.01</td>
<td>0.29</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>357</td>
<td>0.9</td>
<td>40.2</td>
<td>1.75</td>
<td>0.30</td>
</tr>
<tr>
<td>Subtotal</td>
<td>34,610</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>37,869</td>
<td>100.0</td>
<td></td>
<td>185.63</td>
<td>25.14</td>
</tr>
</tbody>
</table>
Table CH15-05. Catch statistics for Selected Taxa collected in 204 183-m haul seine samples during Charlotte Harbor stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean catch-per-unit-effort.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Catch-per-unit-effort (animals/set)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td></td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>850</td>
<td>2.2</td>
<td>56.9</td>
<td>4.17</td>
<td>0.61</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>759</td>
<td>2.0</td>
<td>33.3</td>
<td>3.72</td>
<td>0.75</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>586</td>
<td>1.6</td>
<td>48.5</td>
<td>2.87</td>
<td>0.54</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>357</td>
<td>0.9</td>
<td>40.2</td>
<td>1.75</td>
<td>0.30</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>188</td>
<td>0.5</td>
<td>25.0</td>
<td>0.92</td>
<td>0.20</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>133</td>
<td>0.4</td>
<td>24.5</td>
<td>0.65</td>
<td>0.15</td>
</tr>
<tr>
<td>Mugil trichodon</td>
<td>130</td>
<td>0.3</td>
<td>17.2</td>
<td>0.64</td>
<td>0.17</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>122</td>
<td>0.3</td>
<td>25.5</td>
<td>0.60</td>
<td>0.12</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>112</td>
<td>0.3</td>
<td>27.0</td>
<td>0.55</td>
<td>0.08</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>65</td>
<td>0.2</td>
<td>17.2</td>
<td>0.32</td>
<td>0.08</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>58</td>
<td>0.2</td>
<td>8.3</td>
<td>0.28</td>
<td>0.09</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>50</td>
<td>0.1</td>
<td>5.4</td>
<td>0.25</td>
<td>0.13</td>
</tr>
<tr>
<td>Mycteroperca microlepis</td>
<td>16</td>
<td>&lt;0.1</td>
<td>3.4</td>
<td>0.08</td>
<td>0.04</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>16</td>
<td>&lt;0.1</td>
<td>3.4</td>
<td>0.08</td>
<td>0.05</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>13</td>
<td>&lt;0.1</td>
<td>4.4</td>
<td>0.06</td>
<td>0.02</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>7</td>
<td>&lt;0.1</td>
<td>2.0</td>
<td>0.03</td>
<td>0.02</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>4</td>
<td>&lt;0.1</td>
<td>1.5</td>
<td>0.02</td>
<td>0.01</td>
</tr>
</tbody>
</table>
Table CH15-05. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>% Occur</th>
<th>Catch-per-unit-effort (animals/set)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td><em>Trachinotus carolinus</em></td>
<td>3</td>
<td>&lt;0.1</td>
<td>1.5</td>
<td>0.01</td>
</tr>
<tr>
<td><em>Rachycentron canadum</em></td>
<td>2</td>
<td>&lt;0.1</td>
<td>1.0</td>
<td>0.01</td>
</tr>
<tr>
<td><em>Pomatomus saltatrix</em></td>
<td>2</td>
<td>&lt;0.1</td>
<td>0.5</td>
<td>0.01</td>
</tr>
<tr>
<td><em>Menippe sp.</em></td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.5</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td><em>Epinephelus itajara</em></td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.5</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td><em>Epinephelus morio</em></td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.5</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td><em>Lutjanus analis</em></td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.5</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Totals</td>
<td>3,477</td>
<td>9.2</td>
<td>17.04</td>
<td>1.52</td>
</tr>
</tbody>
</table>
Table CH15-06. Catch statistics for 10 dominant taxa collected in 288 6.1-m bay otter trawl samples during Charlotte Harbor stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number No.</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²) Mean</th>
<th>Stderr</th>
<th>CV</th>
<th>Max</th>
<th>Mean</th>
<th>Stderr</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Lagodon rhomboides</em></td>
<td>11,099</td>
<td>34.0</td>
<td>42.4</td>
<td>2.64</td>
<td>0.52</td>
<td>332.50</td>
<td>103.82</td>
<td>84</td>
<td>0.23</td>
<td>12</td>
<td>198</td>
</tr>
<tr>
<td><em>Anchoa mitchilli</em></td>
<td>2,864</td>
<td>8.8</td>
<td>8.7</td>
<td>0.68</td>
<td>0.25</td>
<td>637.85</td>
<td>51.67</td>
<td>45</td>
<td>0.18</td>
<td>24</td>
<td>65</td>
</tr>
<tr>
<td><em>Orthopristis chrysoptera</em></td>
<td>2,544</td>
<td>7.8</td>
<td>32.6</td>
<td>0.60</td>
<td>0.12</td>
<td>339.69</td>
<td>20.69</td>
<td>97</td>
<td>0.71</td>
<td>17</td>
<td>205</td>
</tr>
<tr>
<td><em>Eucinostomus</em> spp.</td>
<td>1,837</td>
<td>5.6</td>
<td>29.5</td>
<td>0.44</td>
<td>0.13</td>
<td>489.65</td>
<td>22.80</td>
<td>27</td>
<td>0.15</td>
<td>10</td>
<td>39</td>
</tr>
<tr>
<td><em>Eucinostomus gula</em></td>
<td>1,824</td>
<td>5.6</td>
<td>39.2</td>
<td>0.43</td>
<td>0.06</td>
<td>249.43</td>
<td>8.70</td>
<td>76</td>
<td>0.31</td>
<td>40</td>
<td>115</td>
</tr>
<tr>
<td><em>Portunus</em> spp.</td>
<td>1,803</td>
<td>5.5</td>
<td>48.3</td>
<td>0.43</td>
<td>0.11</td>
<td>416.97</td>
<td>22.94</td>
<td>43</td>
<td>0.21</td>
<td>10</td>
<td>68</td>
</tr>
<tr>
<td><em>Prionotus scitulus</em></td>
<td>1,405</td>
<td>4.3</td>
<td>71.2</td>
<td>0.33</td>
<td>0.04</td>
<td>199.31</td>
<td>7.67</td>
<td>95</td>
<td>0.87</td>
<td>21</td>
<td>194</td>
</tr>
<tr>
<td><em>Farfantepenaeus duorarum</em></td>
<td>1,308</td>
<td>4.0</td>
<td>46.9</td>
<td>0.31</td>
<td>0.05</td>
<td>270.22</td>
<td>7.02</td>
<td>18</td>
<td>0.25</td>
<td>2</td>
<td>49</td>
</tr>
<tr>
<td><em>Cynoscion arenarius</em></td>
<td>823</td>
<td>2.5</td>
<td>14.2</td>
<td>0.19</td>
<td>0.05</td>
<td>473.09</td>
<td>8.97</td>
<td>41</td>
<td>1.27</td>
<td>7</td>
<td>205</td>
</tr>
<tr>
<td><em>Menippe</em> spp.</td>
<td>622</td>
<td>1.9</td>
<td>35.8</td>
<td>0.15</td>
<td>0.03</td>
<td>308.00</td>
<td>4.59</td>
<td>20</td>
<td>0.57</td>
<td>1</td>
<td>93</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>26,129</strong></td>
<td><strong>80.0</strong></td>
<td><strong>.</strong></td>
<td><strong>.</strong></td>
<td><strong>.</strong></td>
<td><strong>.</strong></td>
<td><strong>.</strong></td>
<td><strong>.</strong></td>
<td><strong>.</strong></td>
<td><strong>1</strong></td>
<td><strong>205</strong></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>32,667</strong></td>
<td><strong>100.0</strong></td>
<td><strong>7.76</strong></td>
<td><strong>0.75</strong></td>
<td><strong>163.59</strong></td>
<td><strong>108.81</strong></td>
<td><strong>.</strong></td>
<td><strong>.</strong></td>
<td><strong>1</strong></td>
<td><strong>928</strong></td>
<td></td>
</tr>
</tbody>
</table>
Table CH15-07. Catch statistics for Selected Taxa collected in 288 6.1-m bay otter trawl samples during Charlotte Harbor stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m$^2$)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
<td>CV</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>1,308</td>
<td>4.0</td>
<td>46.9</td>
<td>0.31</td>
<td>0.05</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>823</td>
<td>2.5</td>
<td>14.2</td>
<td>0.19</td>
<td>0.05</td>
</tr>
<tr>
<td>Menippe spp.</td>
<td>622</td>
<td>1.9</td>
<td>35.8</td>
<td>0.15</td>
<td>0.03</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>388</td>
<td>1.2</td>
<td>18.8</td>
<td>0.09</td>
<td>0.03</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>365</td>
<td>1.1</td>
<td>24.7</td>
<td>0.09</td>
<td>0.02</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>348</td>
<td>1.1</td>
<td>17.4</td>
<td>0.09</td>
<td>0.03</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>113</td>
<td>0.4</td>
<td>26.7</td>
<td>0.03</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>40</td>
<td>0.1</td>
<td>4.5</td>
<td>0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>19</td>
<td>0.1</td>
<td>3.1</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>8</td>
<td>&lt;0.1</td>
<td>2.1</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>4</td>
<td>&lt;0.1</td>
<td>1.4</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Menticirrhus saxatilis</td>
<td>4</td>
<td>&lt;0.1</td>
<td>1.4</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>3</td>
<td>&lt;0.1</td>
<td>0.3</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Penaeidae spp.</td>
<td>2</td>
<td>&lt;0.1</td>
<td>0.3</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Mycteroperca microlepis</td>
<td>2</td>
<td>&lt;0.1</td>
<td>0.3</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Epinephelus morio</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.3</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.3</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>4,051</td>
<td>12.4</td>
<td>0.96</td>
<td>0.11</td>
<td>198.25</td>
</tr>
<tr>
<td>Species</td>
<td>Number No.</td>
<td>Number %</td>
<td>Number % Occur</td>
<td>Density Estimate (animals/100m²) Mean</td>
<td>Density Estimate (animals/100m²) Stderr</td>
</tr>
<tr>
<td>----------------------</td>
<td>------------</td>
<td>-----------</td>
<td>----------------</td>
<td>--------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>46,513</td>
<td>84.9</td>
<td>60.4</td>
<td>712.52</td>
<td>294.51</td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td>3,606</td>
<td>6.6</td>
<td>69.8</td>
<td>55.24</td>
<td>14.32</td>
</tr>
<tr>
<td>Menidia spp.</td>
<td>1,699</td>
<td>3.1</td>
<td>71.9</td>
<td>26.03</td>
<td>7.41</td>
</tr>
<tr>
<td>Eucinostomus harengulus</td>
<td>555</td>
<td>1.0</td>
<td>52.1</td>
<td>8.50</td>
<td>2.55</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>252</td>
<td>0.5</td>
<td>21.9</td>
<td>3.86</td>
<td>2.00</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>249</td>
<td>0.5</td>
<td>11.5</td>
<td>3.81</td>
<td>2.10</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>223</td>
<td>0.4</td>
<td>22.9</td>
<td>3.42</td>
<td>1.15</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>185</td>
<td>0.3</td>
<td>14.6</td>
<td>2.83</td>
<td>1.09</td>
</tr>
<tr>
<td>Microgobius gulosus</td>
<td>149</td>
<td>0.3</td>
<td>35.4</td>
<td>2.28</td>
<td>0.62</td>
</tr>
<tr>
<td>Brevoortia spp.</td>
<td>118</td>
<td>0.2</td>
<td>2.1</td>
<td>1.81</td>
<td>1.46</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>53,549</strong></td>
<td><strong>97.8</strong></td>
<td><strong>.</strong></td>
<td><strong>.</strong></td>
<td><strong>.</strong></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>54,774</strong></td>
<td><strong>100.0</strong></td>
<td><strong>.</strong></td>
<td><strong>839.06</strong></td>
<td><strong>296.30</strong></td>
</tr>
</tbody>
</table>
Table CH15-09. Catch statistics for Selected Taxa collected in 96 21.3-m river seine samples during Charlotte Harbor stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number No.</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
<td>CV</td>
<td>Max</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>252</td>
<td>0.5</td>
<td>21.9</td>
<td>3.86</td>
<td>2.00</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>249</td>
<td>0.5</td>
<td>11.5</td>
<td>3.81</td>
<td>2.10</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>185</td>
<td>0.3</td>
<td>14.6</td>
<td>2.83</td>
<td>1.09</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>71</td>
<td>0.1</td>
<td>30.2</td>
<td>1.09</td>
<td>0.25</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>61</td>
<td>0.1</td>
<td>20.8</td>
<td>0.93</td>
<td>0.33</td>
</tr>
<tr>
<td>Mugil trichodon</td>
<td>59</td>
<td>0.1</td>
<td>7.3</td>
<td>0.90</td>
<td>0.46</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>29</td>
<td>0.1</td>
<td>5.2</td>
<td>0.44</td>
<td>0.34</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>18</td>
<td>&lt;0.1</td>
<td>10.4</td>
<td>0.28</td>
<td>0.13</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>11</td>
<td>&lt;0.1</td>
<td>6.3</td>
<td>0.17</td>
<td>0.08</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>10</td>
<td>&lt;0.1</td>
<td>8.3</td>
<td>0.15</td>
<td>0.06</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>9</td>
<td>&lt;0.1</td>
<td>7.3</td>
<td>0.14</td>
<td>0.05</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>5</td>
<td>&lt;0.1</td>
<td>5.2</td>
<td>0.08</td>
<td>0.03</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>4</td>
<td>&lt;0.1</td>
<td>1.0</td>
<td>0.06</td>
<td>0.06</td>
</tr>
<tr>
<td>Totals</td>
<td>963</td>
<td>1.8</td>
<td>14.75</td>
<td>3.24</td>
<td>215.03</td>
</tr>
</tbody>
</table>
Table CH15-10. Catch statistics for 10 dominant taxa collected in 72 6.1-m river otter trawl samples during Charlotte Harbor stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m$^2$)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
<td>CV</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>8,591</td>
<td>76.3</td>
<td>44.4</td>
<td>16.10</td>
<td>4.90</td>
</tr>
<tr>
<td>Trinectes maculatus</td>
<td>678</td>
<td>6.0</td>
<td>58.3</td>
<td>1.27</td>
<td>0.39</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>503</td>
<td>4.5</td>
<td>61.1</td>
<td>0.95</td>
<td>0.29</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>303</td>
<td>2.7</td>
<td>66.7</td>
<td>0.57</td>
<td>0.11</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>212</td>
<td>1.9</td>
<td>45.8</td>
<td>0.40</td>
<td>0.11</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>184</td>
<td>1.6</td>
<td>22.2</td>
<td>0.34</td>
<td>0.18</td>
</tr>
<tr>
<td>Ariopsis felis</td>
<td>176</td>
<td>1.6</td>
<td>43.1</td>
<td>0.33</td>
<td>0.13</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>161</td>
<td>1.4</td>
<td>58.3</td>
<td>0.30</td>
<td>0.08</td>
</tr>
<tr>
<td>Microgobius gulosus</td>
<td>62</td>
<td>0.6</td>
<td>31.9</td>
<td>0.12</td>
<td>0.03</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>57</td>
<td>0.5</td>
<td>18.1</td>
<td>0.11</td>
<td>0.03</td>
</tr>
<tr>
<td>Subtotal</td>
<td>10,927</td>
<td>97.0</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Totals</td>
<td>11,266</td>
<td>100.0</td>
<td>21.12</td>
<td>4.85</td>
<td>195.05</td>
</tr>
</tbody>
</table>
Table CH15-11. Catch statistics for Selected Taxa collected in 72 6.1-m river otter trawl samples during Charlotte Harbor stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>503</td>
<td>4.5</td>
<td>61.1</td>
<td>0.95</td>
<td>0.29</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>303</td>
<td>2.7</td>
<td>66.7</td>
<td>0.57</td>
<td>0.11</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>212</td>
<td>1.9</td>
<td>45.8</td>
<td>0.40</td>
<td>0.11</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>161</td>
<td>1.4</td>
<td>58.3</td>
<td>0.30</td>
<td>0.08</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>8</td>
<td>0.1</td>
<td>6.9</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Menticirrhus saxatilis</td>
<td>6</td>
<td>0.1</td>
<td>4.2</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>3</td>
<td>&lt;0.1</td>
<td>4.2</td>
<td>0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>3</td>
<td>&lt;0.1</td>
<td>2.8</td>
<td>0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>1,199</strong></td>
<td><strong>10.6</strong></td>
<td><strong>.</strong></td>
<td><strong>2.25</strong></td>
<td><strong>0.42</strong></td>
</tr>
</tbody>
</table>
Appendix CH15-01.  Monthly summary of species collected during Charlotte Harbor stratified-random sampling, 2015. Effort, or total number of hauls, is labeled 'E'. Taxa are arranged alphabetically.

<table>
<thead>
<tr>
<th>Species</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>E=89</td>
<td>E=89</td>
<td>E=89</td>
<td>E=89</td>
<td>E=89</td>
<td>E=89</td>
<td>E=89</td>
<td>E=89</td>
<td>E=89</td>
<td>E=89</td>
<td>E=89</td>
<td>E=89</td>
<td>E=1,068</td>
</tr>
<tr>
<td>Acanthostracion quadricornis</td>
<td>30</td>
<td>22</td>
<td>2</td>
<td>22</td>
<td>47</td>
<td>47</td>
<td>20</td>
<td>25</td>
<td>24</td>
<td>17</td>
<td>21</td>
<td>7</td>
<td>284</td>
</tr>
<tr>
<td>Achirus lineatus</td>
<td>15</td>
<td>3</td>
<td>17</td>
<td>14</td>
<td>12</td>
<td>26</td>
<td>32</td>
<td>37</td>
<td>16</td>
<td>27</td>
<td>27</td>
<td>23</td>
<td>249</td>
</tr>
<tr>
<td>Adinia xenica</td>
<td>.</td>
<td>.</td>
<td>8</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>8</td>
</tr>
<tr>
<td>Aetobatus narinari</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Aluterus schoepfii</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>3</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>8</td>
</tr>
<tr>
<td>Amelurus catus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>8</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>8</td>
</tr>
<tr>
<td>Anarchopterus criniger</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>4</td>
</tr>
<tr>
<td>Anchoa hepsetus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>54</td>
<td>18</td>
<td>2</td>
<td>.</td>
<td>74</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>13,209</td>
<td>1,488</td>
<td>3,499</td>
<td>544</td>
<td>3,197</td>
<td>789</td>
<td>16,310</td>
<td>1,289</td>
<td>15,134</td>
<td>8,046</td>
<td>18,135</td>
<td>18,257</td>
<td>99,897</td>
</tr>
<tr>
<td>Anchoa sp.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Ancylopsetta quadrocellata</td>
<td>3</td>
<td>4</td>
<td>9</td>
<td>6</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>.</td>
<td>42</td>
</tr>
<tr>
<td>Anguilla rostrata</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>37</td>
<td>121</td>
<td>29</td>
<td>41</td>
<td>14</td>
<td>38</td>
<td>83</td>
<td>46</td>
<td>88</td>
<td>40</td>
<td>49</td>
<td>47</td>
<td>633</td>
</tr>
<tr>
<td>Argopecten irradians</td>
<td>.</td>
<td>.</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>64</td>
<td>28</td>
<td>6</td>
<td>2</td>
<td>12</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Ariopsis felis</td>
<td>80</td>
<td>27</td>
<td>118</td>
<td>156</td>
<td>20</td>
<td>146</td>
<td>129</td>
<td>118</td>
<td>96</td>
<td>83</td>
<td>46</td>
<td>70</td>
<td>1,089</td>
</tr>
<tr>
<td>Astropecten y-graecum</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Bagre marinus</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>.</td>
<td>2</td>
<td>23</td>
<td>11</td>
<td>6</td>
<td>1</td>
<td>53</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>11</td>
<td>14</td>
<td>9</td>
<td>265</td>
<td>361</td>
<td>617</td>
<td>350</td>
<td>236</td>
<td>132</td>
<td>146</td>
<td>122</td>
<td>207</td>
<td>2,470</td>
</tr>
<tr>
<td>Bathygobius soporator</td>
<td>11</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>18</td>
</tr>
<tr>
<td>Brevoortia spp.</td>
<td>.</td>
<td>.</td>
<td>118</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>118</td>
</tr>
<tr>
<td>Calamus penna</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Calamus proridens</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Calamus spp.</td>
<td>1</td>
<td>5</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>8</td>
</tr>
<tr>
<td>Species</td>
<td>Jan</td>
<td>Feb</td>
<td>Mar</td>
<td>Apr</td>
<td>May</td>
<td>Jun</td>
<td>Jul</td>
<td>Aug</td>
<td>Sep</td>
<td>Oct</td>
<td>Nov</td>
<td>Dec</td>
<td>Totals</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>--------</td>
</tr>
<tr>
<td>Callinectes ornatus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>6</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>82</td>
<td>93</td>
<td>300</td>
<td>93</td>
<td>56</td>
<td>32</td>
<td>30</td>
<td>24</td>
<td>31</td>
<td>13</td>
<td>87</td>
<td>82</td>
<td>923</td>
</tr>
<tr>
<td>Callinectes spp.</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Caranx hippos</td>
<td>.</td>
<td>48</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>17</td>
<td>8</td>
<td>29</td>
<td>111</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>39</td>
<td>37</td>
<td>130</td>
<td>62</td>
<td>46</td>
<td>73</td>
<td>74</td>
<td>81</td>
<td>102</td>
<td>42</td>
<td>146</td>
<td>63</td>
<td>895</td>
</tr>
<tr>
<td>Centropristis striata</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>3</td>
<td>6</td>
<td>.</td>
<td>4</td>
<td>2</td>
<td>7</td>
<td>11</td>
<td>3</td>
<td>37</td>
</tr>
<tr>
<td>Chaetodipterus faber</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>24</td>
<td>22</td>
<td>28</td>
<td>41</td>
<td>8</td>
<td>4</td>
<td>2</td>
<td>133</td>
<td></td>
</tr>
<tr>
<td>Chasmodes saburrae</td>
<td>9</td>
<td>3</td>
<td>15</td>
<td>5</td>
<td>12</td>
<td>14</td>
<td>12</td>
<td>7</td>
<td>.</td>
<td>4</td>
<td>4</td>
<td>16</td>
<td>101</td>
</tr>
<tr>
<td>Chilomycterus schoepfii</td>
<td>78</td>
<td>52</td>
<td>42</td>
<td>35</td>
<td>89</td>
<td>59</td>
<td>56</td>
<td>37</td>
<td>37</td>
<td>65</td>
<td>58</td>
<td>39</td>
<td>647</td>
</tr>
<tr>
<td>Chloroscombrus chrysurus</td>
<td>16</td>
<td>29</td>
<td>28</td>
<td>117</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>16</td>
<td>1</td>
<td>1</td>
<td>221</td>
</tr>
<tr>
<td>Cichlasoma urophthalmus</td>
<td>16</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>16</td>
</tr>
<tr>
<td>Citharichthys macrops</td>
<td>9</td>
<td>5</td>
<td>7</td>
<td>4</td>
<td>.</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td>6</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>49</td>
</tr>
<tr>
<td>Cosmocampus albirostris</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Ctenogobius boleosoma</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>37</td>
<td>18</td>
<td>35</td>
<td>15</td>
<td>20</td>
<td>9</td>
<td>508</td>
<td>261</td>
<td>173</td>
<td>227</td>
<td>104</td>
<td>126</td>
<td>1,533</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>19</td>
<td>8</td>
<td>6</td>
<td>10</td>
<td>35</td>
<td>42</td>
<td>153</td>
<td>158</td>
<td>48</td>
<td>25</td>
<td>31</td>
<td>15</td>
<td>550</td>
</tr>
<tr>
<td>Cyprinodon variegatus</td>
<td>36</td>
<td>12</td>
<td>11</td>
<td>11</td>
<td>2</td>
<td>3</td>
<td>48</td>
<td>.</td>
<td>1</td>
<td>44</td>
<td>1</td>
<td>3</td>
<td>172</td>
</tr>
<tr>
<td>Dasyatis americana</td>
<td>.</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>9</td>
<td>5</td>
<td>3</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>3</td>
<td>29</td>
</tr>
<tr>
<td>Dasyatis sabina</td>
<td>13</td>
<td>14</td>
<td>17</td>
<td>11</td>
<td>13</td>
<td>9</td>
<td>23</td>
<td>13</td>
<td>4</td>
<td>25</td>
<td>8</td>
<td>25</td>
<td>175</td>
</tr>
<tr>
<td>Dasyatis say</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>4</td>
</tr>
<tr>
<td>Diapterus auratus</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>10</td>
<td>1</td>
<td>29</td>
<td>28</td>
<td>64</td>
<td>12</td>
<td>24</td>
<td>7</td>
<td>12</td>
<td>188</td>
</tr>
<tr>
<td>Diplectrum formosum</td>
<td>2</td>
<td>10</td>
<td>13</td>
<td>6</td>
<td>3</td>
<td>6</td>
<td>4</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>60</td>
</tr>
<tr>
<td>Diplodus holbrooki</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>7</td>
<td>17</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Echeneis neuctratoides</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
</tr>
</tbody>
</table>

CH-20
### Appendix CH15-01. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Elops saurus</strong></td>
<td>24</td>
<td>6</td>
<td>12</td>
<td>8</td>
<td>1</td>
<td>11</td>
<td>7</td>
<td>9</td>
<td>17</td>
<td>20</td>
<td>14</td>
<td>8</td>
<td>137</td>
</tr>
<tr>
<td><strong>Epinephelus itajara</strong></td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td><strong>Epinephelus morio</strong></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td><strong>Etropus crosstus</strong></td>
<td>28</td>
<td>27</td>
<td>14</td>
<td>4</td>
<td>1</td>
<td>.</td>
<td>17</td>
<td>5</td>
<td>15</td>
<td>8</td>
<td>21</td>
<td>13</td>
<td>40</td>
</tr>
<tr>
<td><strong>Eucinostomus gula</strong></td>
<td>613</td>
<td>386</td>
<td>229</td>
<td>308</td>
<td>319</td>
<td>187</td>
<td>392</td>
<td>706</td>
<td>461</td>
<td>810</td>
<td>749</td>
<td>724</td>
<td>5,884</td>
</tr>
<tr>
<td><strong>Eucinostomus harenegulus</strong></td>
<td>78</td>
<td>58</td>
<td>111</td>
<td>233</td>
<td>330</td>
<td>374</td>
<td>405</td>
<td>82</td>
<td>147</td>
<td>221</td>
<td>196</td>
<td>2,652</td>
<td></td>
</tr>
<tr>
<td><strong>Eucinostomus spp.</strong></td>
<td>2,589</td>
<td>1,634</td>
<td>1,488</td>
<td>543</td>
<td>1,251</td>
<td>1,403</td>
<td>2,528</td>
<td>2,447</td>
<td>2,197</td>
<td>4,544</td>
<td>4,098</td>
<td>4,001</td>
<td>28,723</td>
</tr>
<tr>
<td><strong>Eugerres plumieri</strong></td>
<td>15</td>
<td>1</td>
<td>4</td>
<td>32</td>
<td>8</td>
<td>128</td>
<td>184</td>
<td>95</td>
<td>33</td>
<td>15</td>
<td>57</td>
<td>7</td>
<td>579</td>
</tr>
<tr>
<td><strong>Farfantepenaeus duorarum</strong></td>
<td>321</td>
<td>189</td>
<td>250</td>
<td>54</td>
<td>93</td>
<td>357</td>
<td>626</td>
<td>893</td>
<td>869</td>
<td>1,028</td>
<td>551</td>
<td>381</td>
<td>5,612</td>
</tr>
<tr>
<td><strong>Florichthys carpio</strong></td>
<td>153</td>
<td>47</td>
<td>109</td>
<td>30</td>
<td>179</td>
<td>205</td>
<td>78</td>
<td>326</td>
<td>363</td>
<td>146</td>
<td>138</td>
<td>1,890</td>
<td></td>
</tr>
<tr>
<td><strong>Fundulus grandis</strong></td>
<td>106</td>
<td>71</td>
<td>19</td>
<td>1</td>
<td>32</td>
<td>15</td>
<td>21</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.</td>
<td>1</td>
<td>276</td>
</tr>
<tr>
<td><strong>Fundulus similis</strong></td>
<td>4</td>
<td>.</td>
<td>214</td>
<td>21</td>
<td>25</td>
<td>16</td>
<td>18</td>
<td>32</td>
<td>.</td>
<td>6</td>
<td>1</td>
<td>.</td>
<td>337</td>
</tr>
<tr>
<td><strong>Gambusia holbrooki</strong></td>
<td>13</td>
<td>1</td>
<td>22</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>4</td>
<td>60</td>
<td>.</td>
<td>8</td>
<td>.</td>
<td>108</td>
</tr>
<tr>
<td><strong>Ginglymostoma cirratum</strong></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>.</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td><strong>Gobiosox strumosus</strong></td>
<td>2</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td><strong>Gobiosoma bosc</strong></td>
<td>2</td>
<td>.</td>
<td>3</td>
<td>2</td>
<td>.</td>
<td>4</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>4</td>
<td>.</td>
<td>20</td>
</tr>
<tr>
<td><strong>Gobiosoma longipala</strong></td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>4</td>
<td>6</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td><strong>Gobiosoma robustum</strong></td>
<td>146</td>
<td>154</td>
<td>148</td>
<td>60</td>
<td>63</td>
<td>71</td>
<td>18</td>
<td>26</td>
<td>12</td>
<td>3</td>
<td>78</td>
<td>44</td>
<td>823</td>
</tr>
<tr>
<td><strong>Gobiosoma spp.</strong></td>
<td>39</td>
<td>25</td>
<td>9</td>
<td>6</td>
<td>36</td>
<td>60</td>
<td>84</td>
<td>22</td>
<td>20</td>
<td>18</td>
<td>19</td>
<td>12</td>
<td>350</td>
</tr>
<tr>
<td><strong>Gymnachirus melas</strong></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td><strong>Gymnura micrura</strong></td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td><strong>Haemulon aurolineatum</strong></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Haemulon plumieri</strong></td>
<td>11</td>
<td>7</td>
<td>10</td>
<td>10</td>
<td>4</td>
<td>46</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>19</td>
<td>29</td>
<td>9</td>
<td>156</td>
</tr>
<tr>
<td><strong>Harengula jaguana</strong></td>
<td>8</td>
<td>.</td>
<td>.</td>
<td>127</td>
<td>27</td>
<td>82</td>
<td>37</td>
<td>166</td>
<td>205</td>
<td>107</td>
<td>264</td>
<td>189</td>
<td>1,212</td>
</tr>
<tr>
<td><strong>Hemicaranx amblyrhynchus</strong></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>5</td>
</tr>
</tbody>
</table>
### Appendix CH15-01. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>E=89</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hippocampus brasiliensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Hemiramphus zosterae</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>7</td>
<td>5</td>
<td>1</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>Hypleurochilus caudovittatus</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Hyperhamphus meeki</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Hyperhamphus unifasciatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Hypsobleniuss hentz</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Ictalurus punctatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Labidesthes sicculus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>4,850</td>
<td>3,943</td>
<td>12,987</td>
<td>9,732</td>
<td>5,385</td>
<td>4,471</td>
<td>5,545</td>
<td>7,126</td>
<td>5,438</td>
<td>5,136</td>
<td>3,522</td>
<td>77,810</td>
<td></td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>30</td>
<td>100</td>
<td>1,100</td>
<td>14</td>
<td>8</td>
<td>15</td>
<td></td>
<td>2</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>1,270</td>
</tr>
<tr>
<td>Lepisosteus osseus</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td>3</td>
<td>1</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Lepisosteus platyrhincus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Limulus polyphemus</td>
<td>5</td>
<td>9</td>
<td>26</td>
<td>1</td>
<td>3</td>
<td></td>
<td>6</td>
<td>2</td>
<td>15</td>
<td>1</td>
<td>1</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td>Lophogobius cyprinoides</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>3</td>
<td>2</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Lucania parva</td>
<td>51</td>
<td>929</td>
<td>299</td>
<td>524</td>
<td>2,512</td>
<td>4,743</td>
<td>2,288</td>
<td>1,612</td>
<td>1,110</td>
<td>1,564</td>
<td>3,197</td>
<td>581</td>
<td>19,410</td>
</tr>
<tr>
<td>Lutjanus analis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>8</td>
<td>10</td>
<td>17</td>
<td>13</td>
<td>32</td>
<td>55</td>
<td>97</td>
<td>105</td>
<td>166</td>
<td>180</td>
<td>188</td>
<td>75</td>
<td>946</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>13</td>
<td>9</td>
<td>10</td>
<td>3</td>
<td>6</td>
<td>37</td>
<td>19</td>
<td>69</td>
<td>80</td>
<td>138</td>
<td>112</td>
<td>22</td>
<td>518</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17</td>
<td>48</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Menticirrhus saxatilis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17</td>
<td>48</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Membras martinica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>75</td>
</tr>
<tr>
<td>Menidida spp.</td>
<td>161</td>
<td>313</td>
<td>295</td>
<td>864</td>
<td>1,395</td>
<td>2,438</td>
<td>474</td>
<td>1,461</td>
<td>345</td>
<td>333</td>
<td>388</td>
<td>197</td>
<td>8,664</td>
</tr>
<tr>
<td>Menippe spp.</td>
<td>26</td>
<td>86</td>
<td>25</td>
<td>24</td>
<td>21</td>
<td>13</td>
<td>12</td>
<td>23</td>
<td>57</td>
<td>52</td>
<td>190</td>
<td>96</td>
<td>625</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>126</td>
<td>49</td>
<td>15</td>
<td>36</td>
<td>11</td>
<td>21</td>
<td>75</td>
<td>18</td>
<td>5</td>
<td>42</td>
<td>220</td>
<td>158</td>
<td>776</td>
</tr>
<tr>
<td>Microgobius gulosus</td>
<td>284</td>
<td>242</td>
<td>289</td>
<td>253</td>
<td>437</td>
<td>571</td>
<td>839</td>
<td>445</td>
<td>384</td>
<td>649</td>
<td>313</td>
<td>53</td>
<td>4,759</td>
</tr>
</tbody>
</table>
### Appendix CH15-01. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Month</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jan E=89</td>
<td>Feb E=89</td>
</tr>
<tr>
<td>Microgobius thalassinus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Monacanthus ciliatus</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>55</td>
<td>183</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Mugil trichodon</td>
<td>12</td>
<td>23</td>
</tr>
<tr>
<td>Mullus auratus</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Mycteroperca microlepis</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Nicholsina usta</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Ocyurus chrysurus</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Ogocephalus cubifrons</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Oligoplites saurus</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Opisthonema oglinum</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Opsanus beta</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Orthopristis chrysoptera</td>
<td>328</td>
<td>82</td>
</tr>
<tr>
<td>Paracanthus marmoratus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>18</td>
<td>21</td>
</tr>
<tr>
<td>Penaeidae spp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Pepilus paru</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Poecilia latipinna</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Portunus spp.</td>
<td>63</td>
<td>71</td>
</tr>
<tr>
<td>Priacanthus rubio</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Priacanthus scitulus</td>
<td>121</td>
<td>124</td>
</tr>
<tr>
<td>Priacanthus tribulus</td>
<td>44</td>
<td>11</td>
</tr>
</tbody>
</table>
### Appendix CH15-01. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Month</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jan</td>
<td>Feb</td>
</tr>
<tr>
<td>Pristis pectinata</td>
<td>E=89</td>
<td>E=89</td>
</tr>
<tr>
<td>Rachycentron canadum</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Raja eglanteria</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Rhinobatos lentiginosus</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Rhinoptera bonasus</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Rimapenaeus constrictus</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>Sardinella aurita</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>58</td>
<td>37</td>
</tr>
<tr>
<td>Scorpaena brasiliensis</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Selene vomer</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Serranichilus pumilio</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Serranus subligarius</td>
<td>.</td>
<td>4</td>
</tr>
<tr>
<td>Sicyonia laevigata</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Sicyonia typica</td>
<td>.</td>
<td>-</td>
</tr>
<tr>
<td>Spherooides nepheus</td>
<td>31</td>
<td>22</td>
</tr>
<tr>
<td>Spherooides spengleri</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Sphyraena barracuda</td>
<td>.</td>
<td>7</td>
</tr>
<tr>
<td>Sphyraena sp.</td>
<td>.</td>
<td>-</td>
</tr>
<tr>
<td>Sphyrina tiburo</td>
<td>3</td>
<td>.</td>
</tr>
<tr>
<td>Stephanolepis hispidus</td>
<td>45</td>
<td>22</td>
</tr>
<tr>
<td>Strongylura marina</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Strongylura notata</td>
<td>32</td>
<td>26</td>
</tr>
<tr>
<td>Strongylura spp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Strongylura timucu</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Syacium papillosum</td>
<td>.</td>
<td>1</td>
</tr>
</tbody>
</table>
Appendix CH15-01. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symphurus plagiusa</td>
<td>27</td>
<td>13</td>
<td>84</td>
<td>13</td>
<td>24</td>
<td>9</td>
<td>13</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>37</td>
<td>30</td>
<td>289</td>
</tr>
<tr>
<td>Symphurus floridus</td>
<td>5</td>
<td>6</td>
<td>2</td>
<td>3</td>
<td>26</td>
<td>11</td>
<td>7</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>76</td>
</tr>
<tr>
<td>Syngnathus louisianae</td>
<td>9</td>
<td>14</td>
<td>8</td>
<td>6</td>
<td>7</td>
<td>17</td>
<td>16</td>
<td>18</td>
<td>5</td>
<td>7</td>
<td>10</td>
<td>14</td>
<td>131</td>
</tr>
<tr>
<td>Syngnathus scovelli</td>
<td>66</td>
<td>92</td>
<td>83</td>
<td>57</td>
<td>109</td>
<td>86</td>
<td>109</td>
<td>64</td>
<td>57</td>
<td>40</td>
<td>44</td>
<td>32</td>
<td>839</td>
</tr>
<tr>
<td>Synodus foetens</td>
<td>23</td>
<td>22</td>
<td>16</td>
<td>12</td>
<td>11</td>
<td>25</td>
<td>17</td>
<td>27</td>
<td>11</td>
<td>19</td>
<td>31</td>
<td>46</td>
<td>260</td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>.</td>
<td>29</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>35</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>14</td>
<td>.</td>
<td>85</td>
</tr>
<tr>
<td>Trinectes maculatus</td>
<td>64</td>
<td>23</td>
<td>106</td>
<td>22</td>
<td>77</td>
<td>34</td>
<td>52</td>
<td>220</td>
<td>198</td>
<td>363</td>
<td>98</td>
<td>46</td>
<td>1,303</td>
</tr>
<tr>
<td>Tylosurus crocodilus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Urophycis floridana</td>
<td>.</td>
<td>2</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>4</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>24,546</td>
<td>11,219</td>
<td>24,264</td>
<td>15,825</td>
<td>22,236</td>
<td>19,738</td>
<td>32,642</td>
<td>21,564</td>
<td>30,943</td>
<td>26,032</td>
<td>35,937</td>
<td>30,681</td>
<td>295,627</td>
</tr>
</tbody>
</table>
Summary by gear and stratum of species collected during Charlotte Harbor stratified-random sampling, 2015. Sampling with 21.3-m bay seine was stratified by the presence or absence of a shoreline (‘Shore’ or offshore) within 5-m. Offshore sets were further stratified by the presence or absence of bottom vegetation (‘Veg’ or ‘Unveg’). Sampling with 21.3-m river seine and 183-m haul seine was stratified by the presence or absence of overhanging vegetation (‘Over’ or ‘Nonover’). Sampling with 6.1-m otter trawl was not stratified. Effort, or the total number of hauls, is labeled ‘E’. Taxa are arranged alphabetically.

<table>
<thead>
<tr>
<th>Species</th>
<th>Gear and Strata</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21.3-m bay seine</td>
<td>21.3-m river seine</td>
</tr>
<tr>
<td></td>
<td>Veg</td>
<td>Unveg</td>
</tr>
<tr>
<td>Acanthostracion quadricornis</td>
<td>4</td>
<td>.</td>
</tr>
<tr>
<td>Achirus lineatus</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>Adinia xenica</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Aetobatus narinari</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Aluterus schoepfii</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ameiurus catus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Anarchopterus criniger</td>
<td>1</td>
<td>16</td>
</tr>
<tr>
<td>Anchoa hepsetus</td>
<td>3,058</td>
<td>303</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>15</td>
<td>56</td>
</tr>
<tr>
<td>Anchoa sp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ancylopsetta quadrocellata</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Anguilla rostrata</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Argopecten irradians</td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td>Ariopsis felis</td>
<td>15</td>
<td>56</td>
</tr>
<tr>
<td>Astroscopus y-graeicum</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Bagre marinus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>781</td>
<td>89</td>
</tr>
<tr>
<td>Bathygobius soporator</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Brevoortia spp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Calamus penna</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Calamus proridens</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Calamus spp.</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Callinectes ornatus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>52</td>
<td>16</td>
</tr>
<tr>
<td>Callinectes spp.</td>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>
### Appendix CH15-02. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Gear and Strata</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>21.3-m bay seine</td>
<td>21.3-m river seine</td>
<td>183-m haul seine</td>
<td>6.1-m otter trawl</td>
<td>Totals</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Veg</td>
<td>Unveg</td>
<td>Shore</td>
<td>Over</td>
<td>Nonover</td>
<td>Over</td>
<td>Nonover</td>
</tr>
<tr>
<td>Caranx hippos</td>
<td></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td></td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Centropristis striata</td>
<td></td>
<td>3</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>9</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Chaetodipterus faber</td>
<td></td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Chasmodes saburrae</td>
<td></td>
<td>44</td>
<td>5</td>
<td>42</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Chilomycterus schoepfii</td>
<td></td>
<td>23</td>
<td>1</td>
<td>9</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Chloroscombus chrysurus</td>
<td></td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Cichlasoma urophthalmus</td>
<td></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>16</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Citharrichthys macrops</td>
<td></td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td>Cosmocampus albirostris</td>
<td></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ctenogobius boleosoma</td>
<td></td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td></td>
<td>4</td>
<td>9</td>
<td>9</td>
<td>102</td>
<td>83</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td></td>
<td>244</td>
<td>44</td>
<td>170</td>
<td>3</td>
<td>2</td>
<td>30</td>
<td>35</td>
</tr>
<tr>
<td>Cyprinodon variegatus</td>
<td></td>
<td>4</td>
<td>26</td>
<td>122</td>
<td>10</td>
<td>10</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Dasyatis americana</td>
<td></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>23</td>
<td>6</td>
<td>.</td>
</tr>
<tr>
<td>Dasyatis sabina</td>
<td></td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>70</td>
<td>20</td>
</tr>
<tr>
<td>Dasyatis say</td>
<td></td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Diapterus auratus</td>
<td></td>
<td>4</td>
<td>.</td>
<td>35</td>
<td>6</td>
<td>1</td>
<td>135</td>
<td>5</td>
</tr>
<tr>
<td>Diplectrum formosum</td>
<td></td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Diplodus holbrookii</td>
<td></td>
<td>13</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>4</td>
<td>21</td>
<td>6</td>
</tr>
<tr>
<td>Echeneis neucratoides</td>
<td></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>4</td>
<td>84</td>
</tr>
<tr>
<td>Elops saurus</td>
<td></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Epinephelus itajara</td>
<td></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Epinephelus morio</td>
<td></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Etrusus crotus</td>
<td></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Eucinostomus gula</td>
<td></td>
<td>964</td>
<td>80</td>
<td>2,161</td>
<td>10</td>
<td>21</td>
<td>430</td>
<td>387</td>
</tr>
<tr>
<td>Eucinostomus harengulus</td>
<td></td>
<td>97</td>
<td>115</td>
<td>1,113</td>
<td>232</td>
<td>323</td>
<td>90</td>
<td>55</td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td></td>
<td>6,214</td>
<td>1,118</td>
<td>15,944</td>
<td>1,834</td>
<td>1,772</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Eugerres plumieri</td>
<td></td>
<td>2</td>
<td>1</td>
<td>272</td>
<td>61</td>
<td>36</td>
<td>189</td>
<td>7</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td></td>
<td>1,188</td>
<td>275</td>
<td>2,454</td>
<td>35</td>
<td>5</td>
<td>8</td>
<td>1,611</td>
</tr>
<tr>
<td>Floridichthys carpio</td>
<td></td>
<td>185</td>
<td>28</td>
<td>1,677</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Fundulus grandis</td>
<td></td>
<td>.</td>
<td>.</td>
<td>156</td>
<td>76</td>
<td>41</td>
<td>3</td>
<td>.</td>
</tr>
</tbody>
</table>
### Appendix CH15-02. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>21.3-m bay seine</th>
<th>21.3-m river seine</th>
<th>183-m haul seine</th>
<th>6.1-m otter trawl</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Veg</td>
<td>Unveg</td>
<td>Shore</td>
<td>Over</td>
<td>Nonover</td>
</tr>
<tr>
<td>Fundulus similis</td>
<td>.</td>
<td>.</td>
<td>263</td>
<td>52</td>
<td>22</td>
</tr>
<tr>
<td>Gambusia holbrooki</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>30</td>
<td>78</td>
</tr>
<tr>
<td>Ginglymostoma cirratum</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>4</td>
</tr>
<tr>
<td>Gobiesox strumosus</td>
<td>.</td>
<td>.</td>
<td>5</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Gobiosoma bosc</td>
<td>.</td>
<td>.</td>
<td>5</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Gobiosoma longipala</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Gobiosoma robustum</td>
<td>204</td>
<td>33</td>
<td>487</td>
<td>11</td>
<td>15</td>
</tr>
<tr>
<td>Gobiosoma spp.</td>
<td>91</td>
<td>21</td>
<td>104</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>Gymnachirus melas</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Gymnura micrura</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Haemulon aurolineatum</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Haemulon plumieri</td>
<td>43</td>
<td>.</td>
<td>12</td>
<td>.</td>
<td>20</td>
</tr>
<tr>
<td>Harengula jaguana</td>
<td>464</td>
<td>14</td>
<td>450</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Hemicaranx amblyrhnchus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Hemiramphus brasiliensis</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Hippocampus erectus</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Hippocampus zosterae</td>
<td>16</td>
<td>1</td>
<td>42</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Hypleurochilus caudovittatus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Hyporhamphus meeki</td>
<td>8</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Hyporhamphus unifasciatus</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Hypsoblenius hentzi</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ictalurus punctatus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Labidesthes sicculus</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>22,354</td>
<td>2,205</td>
<td>13,596</td>
<td>94</td>
<td>129</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>5</td>
<td>.</td>
<td>1,219</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>Lepisosteus osseus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Lepisosteus platyrhincus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Limnus polyphemus</td>
<td>.</td>
<td>.</td>
<td>4</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Lophogobius cyprinoides</td>
<td>.</td>
<td>.</td>
<td>6</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Lucania parva</td>
<td>7,163</td>
<td>323</td>
<td>11,911</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Lutjanus analis</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>66</td>
<td>.</td>
<td>72</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Species</td>
<td>Gear and Strata</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----------------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
</tr>
<tr>
<td></td>
<td>Veg</td>
<td>Unveg</td>
<td>Shore</td>
<td>Over</td>
<td>Nonover</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21.3-m bay seine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21.3-m river seine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>183-m haul seine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.1-m otter trawl</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>77</td>
<td>.</td>
<td>18</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Membras martinica</td>
<td></td>
<td></td>
<td></td>
<td>14</td>
<td>33</td>
</tr>
<tr>
<td>Menidia spp.</td>
<td>245</td>
<td>16</td>
<td>6,704</td>
<td>1,027</td>
<td>672</td>
</tr>
<tr>
<td>Menippe spp.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>138</td>
<td>3</td>
<td>6</td>
<td>2</td>
<td>27</td>
</tr>
<tr>
<td>Menticirrhus saxatilis</td>
<td></td>
<td>.</td>
<td>4</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Microgobius gulosus</td>
<td>1,728</td>
<td>448</td>
<td>2,339</td>
<td>108</td>
<td>41</td>
</tr>
<tr>
<td>Microgobius thalassinus</td>
<td></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Monacanthus ciliatus</td>
<td></td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>.</td>
<td>6</td>
<td>13</td>
<td>119</td>
<td>130</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>7</td>
<td>.</td>
</tr>
<tr>
<td>Mugil trichodon</td>
<td>2</td>
<td>.</td>
<td>72</td>
<td>20</td>
<td>39</td>
</tr>
<tr>
<td>Mullus auratus</td>
<td></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Mycteroperca microlepis</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>6</td>
</tr>
<tr>
<td>Nicholsina usta</td>
<td>17</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>21</td>
</tr>
<tr>
<td>Ocyurus chrysurus</td>
<td></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ogocephalus cubifrons</td>
<td></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Oligoplites saurus</td>
<td>12</td>
<td>3</td>
<td>67</td>
<td>13</td>
<td>16</td>
</tr>
<tr>
<td>Opisthonema oglinum</td>
<td>63</td>
<td>1</td>
<td>608</td>
<td>.</td>
<td>89</td>
</tr>
<tr>
<td>Opsanus beta</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>67</td>
</tr>
<tr>
<td>Orthopristis chrysoptera</td>
<td>1,101</td>
<td>107</td>
<td>313</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Paracanthus marmoratus</td>
<td>16</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>3</td>
<td>2</td>
<td>6</td>
<td>.</td>
<td>69</td>
</tr>
<tr>
<td>Penaeidae spp.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Peprilus paru</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Poecilia latipinna</td>
<td>24</td>
<td>.</td>
<td>159</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Portunus spp.</td>
<td>.</td>
<td>1</td>
<td>3</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Prionotus rubio</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Prionotus scitulus</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Species</td>
<td>21.3-m bay seine</td>
<td>21.3-m river seine</td>
<td>183-m haul seine</td>
<td>6.1-m otter trawl</td>
<td>Totals</td>
</tr>
<tr>
<td>-------------------------</td>
<td>------------------</td>
<td>--------------------</td>
<td>------------------</td>
<td>-------------------</td>
<td>--------</td>
</tr>
<tr>
<td></td>
<td>Veg</td>
<td>Unveg</td>
<td>Shore</td>
<td>Over</td>
<td>Nonover</td>
</tr>
<tr>
<td>Prionus tribulus</td>
<td>10</td>
<td>.</td>
<td>9</td>
<td>.</td>
<td>6</td>
</tr>
<tr>
<td>Pristis pectinata</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Rachycentron canadum</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Raja eglanteria</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Rhinobatos lentiginosus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Rhinoptera bonasus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>4</td>
</tr>
<tr>
<td>Rimapenaeus constrictus</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Sardinella aurita</td>
<td>.</td>
<td>.</td>
<td>3,168</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>72</td>
<td>15</td>
<td>151</td>
<td>48</td>
<td>204</td>
</tr>
<tr>
<td>Scorpaena brasilensis</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Selene vomer</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Serranichthys pumilio</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Serranus subligarius</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sicyonia laevigata</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sicyonia typica</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sphoeroides nepelius</td>
<td>33</td>
<td>6</td>
<td>68</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Sphoeroides spengleri</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sphyraena barracuda</td>
<td>1</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>22</td>
</tr>
<tr>
<td>Sphyraena sp.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sphyra tiburo</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>5</td>
</tr>
<tr>
<td>Stephanolepis hispidus</td>
<td>39</td>
<td>1</td>
<td>8</td>
<td>.</td>
<td>45</td>
</tr>
<tr>
<td>Strongylura marina</td>
<td>1</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Strongylura notata</td>
<td>13</td>
<td>1</td>
<td>170</td>
<td>20</td>
<td>32</td>
</tr>
<tr>
<td>Strongylura spp.</td>
<td>1</td>
<td>.</td>
<td>6</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Strongylura timucu</td>
<td>1</td>
<td>.</td>
<td>13</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Syngnathus papillosum</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Symphurus plagius</td>
<td>13</td>
<td>5</td>
<td>10</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Syngnathus floridae</td>
<td>17</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Syngnathus louisianae</td>
<td>20</td>
<td>1</td>
<td>14</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Syngnathus scovelli</td>
<td>327</td>
<td>64</td>
<td>327</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Synodus foetens</td>
<td>28</td>
<td>6</td>
<td>36</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Species</td>
<td>21.3-m bay seine</td>
<td>21.3-m river seine</td>
<td>183-m haul seine</td>
<td>6.1-m otter trawl</td>
<td>Totals</td>
</tr>
<tr>
<td>------------------------</td>
<td>------------------</td>
<td>-------------------</td>
<td>------------------</td>
<td>------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>.</td>
<td>.</td>
<td>35</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Trinectes maculatus</td>
<td>.</td>
<td>1</td>
<td>5</td>
<td>8</td>
<td>40</td>
</tr>
<tr>
<td>Tylosurus crocodilus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Urophycis floridana</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>47,369</td>
<td>5,494</td>
<td>106,188</td>
<td>33,571</td>
<td>21,203</td>
</tr>
</tbody>
</table>
Appendix CH15-03. Summary by zone of species collected during Charlotte Harbor stratified-random sampling, 2015. Zones A-D were located in Charlotte Harbor, while Zones M (Myakka River) and P (Peace River) represent tributaries of Charlotte Harbor. Effort, or the total number of hauls, is labeled ‘E’. Taxa are arranged alphabetically.

<table>
<thead>
<tr>
<th>Species</th>
<th>Zone</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>E=264</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acanthostracion quadricornis</td>
<td>3</td>
<td>80</td>
</tr>
<tr>
<td>Achirus lineatus</td>
<td>46</td>
<td>47</td>
</tr>
<tr>
<td>Adinia xenica</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Aetobatus narinari</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Aluterus schoepfi</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Ameiurus catus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Anarchopterus criniger</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>9,285</td>
<td>21,068</td>
</tr>
<tr>
<td>Anchoa sp.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Ancylopsetta quadrocellata</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>Anguilla rostrata</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>42</td>
<td>248</td>
</tr>
<tr>
<td>Argopecten irradians</td>
<td>1</td>
<td>111</td>
</tr>
<tr>
<td>Ariopsis felis</td>
<td>460</td>
<td>59</td>
</tr>
<tr>
<td>Astroscopus y-graecum</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Bagre marinus</td>
<td>35</td>
<td>.</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>683</td>
<td>250</td>
</tr>
<tr>
<td>Bathygobius soporator</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Brevoortia spp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Calamus penna</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Calamus proridens</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Calamus spp.</td>
<td>.</td>
<td>7</td>
</tr>
<tr>
<td>Callinectes ornatus</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>457</td>
<td>91</td>
</tr>
<tr>
<td>Callinectes spp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Caranx hippos</td>
<td>3</td>
<td>28</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>110</td>
<td>406</td>
</tr>
<tr>
<td>Centropristis striata</td>
<td>.</td>
<td>9</td>
</tr>
<tr>
<td>Chaetodipterus faber</td>
<td>40</td>
<td>19</td>
</tr>
</tbody>
</table>

CH-32
<table>
<thead>
<tr>
<th>Species</th>
<th>Zone</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A 24</td>
<td>B 23</td>
</tr>
<tr>
<td>Chasmodes saburrae</td>
<td>19</td>
<td>21</td>
</tr>
<tr>
<td>Chilomycterus schoepfii</td>
<td>51</td>
<td>234</td>
</tr>
<tr>
<td>Chloroscombrus chrysurus</td>
<td>151</td>
<td>32</td>
</tr>
<tr>
<td>Cichlasoma urophthalmus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Citharinhtys macrops</td>
<td>.</td>
<td>31</td>
</tr>
<tr>
<td>Cosmocampus albirostris</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ctenogobius boleosoma</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cynoscio arenarius</td>
<td>609</td>
<td>1</td>
</tr>
<tr>
<td>Cynoscio nebulosus</td>
<td>163</td>
<td>123</td>
</tr>
<tr>
<td>Cyprinodn variegatus</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Dasyatis americana</td>
<td>.</td>
<td>4</td>
</tr>
<tr>
<td>Dasyatis sabina</td>
<td>47</td>
<td>19</td>
</tr>
<tr>
<td>Dasyatis say</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Diapterus auratus</td>
<td>46</td>
<td>90</td>
</tr>
<tr>
<td>Diplectrum formosum</td>
<td>1</td>
<td>28</td>
</tr>
<tr>
<td>Diplodus holbrookii</td>
<td>.</td>
<td>34</td>
</tr>
<tr>
<td>Echeineis neucratoides</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>43</td>
<td>33</td>
</tr>
<tr>
<td>Epinephelus itajara</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Epinephelus morio</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Etropus crosstus</td>
<td>17</td>
<td>50</td>
</tr>
<tr>
<td>Eucinostomus gula</td>
<td>609</td>
<td>1,721</td>
</tr>
<tr>
<td>Eucinostomus harenegulus</td>
<td>687</td>
<td>417</td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td>3,222</td>
<td>6,854</td>
</tr>
<tr>
<td>Eugerres plumieri</td>
<td>282</td>
<td>15</td>
</tr>
<tr>
<td>Farfanptenaecus duorarum</td>
<td>1,897</td>
<td>1,442</td>
</tr>
<tr>
<td>Floridichthys carpio</td>
<td>168</td>
<td>200</td>
</tr>
<tr>
<td>Fundulus grandis</td>
<td>73</td>
<td>39</td>
</tr>
<tr>
<td>Fundulus similis</td>
<td>.</td>
<td>213</td>
</tr>
<tr>
<td>Gambusia holbrooki</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ginglymostomma cirratum</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Gobiesox strumus</td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td>Gobiosoma bosc</td>
<td>5</td>
<td>.</td>
</tr>
</tbody>
</table>
### Appendix CH15-03. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Zone</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Gobiosoma longipala</td>
<td>.</td>
<td>8</td>
</tr>
<tr>
<td>Gobiosoma robustum</td>
<td>158</td>
<td>226</td>
</tr>
<tr>
<td>Gobiosoma spp.</td>
<td>98</td>
<td>48</td>
</tr>
<tr>
<td>Gymnachirus melas</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Gymnura micrura</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Haemulon aurolineatum</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Haemulon plumieri</td>
<td>.</td>
<td>51</td>
</tr>
<tr>
<td>Harengula jaguana</td>
<td>8</td>
<td>354</td>
</tr>
<tr>
<td>Hemicanx amblyrhythus</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Hemiramphus brasiliensis</td>
<td>.</td>
<td>4</td>
</tr>
<tr>
<td>Hippocampus erectus</td>
<td>2</td>
<td>21</td>
</tr>
<tr>
<td>Hippocampus zosterae</td>
<td>8</td>
<td>19</td>
</tr>
<tr>
<td>Hypleurochilus caudovittatus</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Hyporhamphus meeki</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Hyporhamphus unifasciatus</td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td>Hypsoblennius hentz</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ictalurus punctatus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Labidesthes sicculus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>6,277</td>
<td>26,023</td>
</tr>
<tr>
<td>Leioptus xanthurus</td>
<td>182</td>
<td>883</td>
</tr>
<tr>
<td>Lepisosteus osseus</td>
<td>3</td>
<td>.</td>
</tr>
<tr>
<td>Lepisosteus platyrhincus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Limulus polyphemus</td>
<td>38</td>
<td>2</td>
</tr>
<tr>
<td>Lophogobius cyprinoides</td>
<td>4</td>
<td>.</td>
</tr>
<tr>
<td>Lucania parva</td>
<td>1,684</td>
<td>5,858</td>
</tr>
<tr>
<td>Lutjanus analis</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>32</td>
<td>249</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>15</td>
<td>137</td>
</tr>
<tr>
<td>Membas martinica</td>
<td>.</td>
<td>13</td>
</tr>
<tr>
<td>Menidia spp.</td>
<td>1,694</td>
<td>604</td>
</tr>
<tr>
<td>Menopippe spp.</td>
<td>2</td>
<td>294</td>
</tr>
<tr>
<td>Menticirrhbus americanus</td>
<td>497</td>
<td>6</td>
</tr>
<tr>
<td>Menticirrhbus saxatilis</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Species</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><em>Microgobius gulosus</em></td>
<td>2146</td>
<td>891</td>
</tr>
<tr>
<td><em>Microgobius thalassinus</em></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><em>Micropogonias undulatus</em></td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td><em>Monacanthus ciliatus</em></td>
<td>.</td>
<td>9</td>
</tr>
<tr>
<td><em>Mugil cephalus</em></td>
<td>57</td>
<td>124</td>
</tr>
<tr>
<td><em>Mugil curema</em></td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td><em>Mugil trichodon</em></td>
<td>7</td>
<td>100</td>
</tr>
<tr>
<td><em>Mullus auratus</em></td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td><em>Mycteroperca microlepis</em></td>
<td>.</td>
<td>6</td>
</tr>
<tr>
<td><em>Nicholsina usta</em></td>
<td>1</td>
<td>186</td>
</tr>
<tr>
<td><em>Ocyurus chrysurus</em></td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td><em>Ogcocephalus cubifrons</em></td>
<td>4</td>
<td>48</td>
</tr>
<tr>
<td><em>Oligoplites saurus</em></td>
<td>62</td>
<td>25</td>
</tr>
<tr>
<td><em>Opisthonema oglinum</em></td>
<td>47</td>
<td>533</td>
</tr>
<tr>
<td><em>Opsanus beta</em></td>
<td>6</td>
<td>31</td>
</tr>
<tr>
<td><em>Orthopristis chrysoptera</em></td>
<td>226</td>
<td>1811</td>
</tr>
<tr>
<td><em>Paraclinus marmoratus</em></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><em>Paralichthys albigutta</em></td>
<td>32</td>
<td>79</td>
</tr>
<tr>
<td><em>Penaeidae spp.</em></td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td><em>Peprilus paru</em></td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td><em>Poecilia latipinna</em></td>
<td>17</td>
<td>69</td>
</tr>
<tr>
<td><em>Pogonias cromis</em></td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><em>Pomatomus saltatrix</em></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><em>Portunus spp.</em></td>
<td>19</td>
<td>1264</td>
</tr>
<tr>
<td><em>Pristis rubio</em></td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td><em>Prionotus scitulus</em></td>
<td>340</td>
<td>567</td>
</tr>
<tr>
<td><em>Prionotus tribulus</em></td>
<td>279</td>
<td>31</td>
</tr>
<tr>
<td><em>Pristis pectinata</em></td>
<td>3</td>
<td>.</td>
</tr>
<tr>
<td><em>Rachycentron canadum</em></td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td><em>Raja eglanteria</em></td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td><em>Rhinobatos lentiginosus</em></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><em>Rhinoptera bonasus</em></td>
<td>5</td>
<td>.</td>
</tr>
<tr>
<td><em>Rimapenaeus constrictus</em></td>
<td>162</td>
<td>2</td>
</tr>
</tbody>
</table>
### Appendix CH15-03. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Zone</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Sardinella aurita</td>
<td>.</td>
<td>2,784</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>169</td>
<td>33</td>
</tr>
<tr>
<td>Scorpaena brasiliensis</td>
<td>.</td>
<td>26</td>
</tr>
<tr>
<td>Selene vomer</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Serranichthys pumilio</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Serranus subligarius</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Sicyonia laevigata</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Sicyonia typica</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Sphoeroides nephelus</td>
<td>53</td>
<td>86</td>
</tr>
<tr>
<td>Sphoeroides spengleri</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Sphyraena barracuda</td>
<td>.</td>
<td>14</td>
</tr>
<tr>
<td>Sphyraena sp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sphyrna tiburo</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Stephanolepis hispidus</td>
<td>2</td>
<td>193</td>
</tr>
<tr>
<td>Strongylura marina</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Strongylura notata</td>
<td>56</td>
<td>174</td>
</tr>
<tr>
<td>Strongylura spp.</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Strongylura timucu</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Syacium papillosum</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Symphurus plagiusa</td>
<td>173</td>
<td>25</td>
</tr>
<tr>
<td>Syngnathus floridae</td>
<td>1</td>
<td>46</td>
</tr>
<tr>
<td>Syngnathus louisianae</td>
<td>13</td>
<td>66</td>
</tr>
<tr>
<td>Syngnathus scovelli</td>
<td>211</td>
<td>235</td>
</tr>
<tr>
<td>Synodus foetens</td>
<td>57</td>
<td>66</td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>1</td>
<td>63</td>
</tr>
<tr>
<td>Trinectes maculatus</td>
<td>369</td>
<td>28</td>
</tr>
<tr>
<td>Tylosurus crocodilus</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Urophycis floridana</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>34,512</td>
<td>78,586</td>
</tr>
</tbody>
</table>
Northern Indian River Lagoon

The sampling area identified as the northern Indian River Lagoon (IRL) system is a narrow estuary located along the eastern central coast of Florida, which extends from the northern terminus of the Indian River Lagoon proper south to Vero Beach. The northern IRL is connected to the Atlantic Ocean by one permanent inlet (Sebastian Inlet) and one intermittently open conduit via the Canaveral Locks that links the Banana River to the Atlantic Ocean just south of Cape Canaveral. Freshwater inflow primarily comes from the St. Sebastian River and from numerous creeks located mainly along the western shoreline (Paperno and Brodie 2004). Shoreline vegetation consists largely of fringing mangrove, Brazilian pepper, and marsh grasses. Bottom substrates are typically characterized as sand or mud mixed with shell hash and occasional oysters. Seagrasses, primarily *Halodule wrightii*, are the dominant vegetative cover in the northern IRL (Steward et al. 2006).

The Fisheries-Independent Monitoring (FIM) program has conducted intensive sampling of fish and selected invertebrates in the northern IRL since 1990. The area sampled was divided into six geographically-defined bay zones (A-E, and H) and one riverine zone (F; Figure IR15-01). Monthly stratified-random sampling (SRS) was conducted in Zones C, D, and H using 21.3-m bay and 183-m haul seines. Zone H was also sampled monthly with 6.1-m bay otter trawls. Monthly SRS was conducted in Zone E with only 183-m haul seines. Zone F was sampled monthly with 21.3-m river seines. Zones A, B, and E were sampled seasonally (October and November) with 21.3-m bay seines. All methods were the same as those described in the Methods section of this report. This section summarizes data collected by the FIM program during 2015 in the northern IRL.

**Stratified-Random Sampling**

A total of 402,542 animals, which included 148 taxa of fishes and 17 taxa of selected invertebrates, were collected from 812 northern IRL samples in 2015 (Table IR15-01; Appendices IR15-01, -02, and -03). *Anchoa mitchilli* (n=246,070) was the most numerous species collected, representing 61.1% of the total catch. The four next most
abundant taxa, *Brevoortia* spp. (n=22,543), *Eucinostomus* spp. (n=16,563), *Diapterus auratus* (n=16,039), and *Lagodon rhomboides* (n=11,770) accounted for an additional 16.6% of the total catch. Thirty-three Selected Taxa (n=32,583 animals) composed 8.1% of the total catch. *Mugil cephalus* (n=7,248), *Micropogonias undulatus* (n=5,701), and *Leiostomus xanthurus* (n=4,485) were the most abundant Selected Taxa, representing 4.3% of the total catch. *Mugil curema* (n=3,455), Farfantepenaeus spp. (n=2,322), *Archosargus probatocephalus* (n=2,123), and *Sciaenops ocellatus* (n=2,054) were the next most abundant Selected Taxa, accounting for an additional 2.5% of the total catch. Collections in 2015 included several species new to the northern IRL FIM collection: *Arenaeus cribrarius* (Speckled Swimming Crab), *Diapterus rhombeus* (Rhombic Mojarra), *Prionotus rubio* (Blackwing Searobin), *Scomberomorus cavalla* (King Mackerel), *Sicyonia typica* (Kinglet Rock Shrimp).

**Bay Sampling**

21.3-m *Bay Seines*. A total of 269,742 animals were collected in 380 21.3-m bay seines, representing 67.0% of the overall SRS catch (Table IR15-01). *Anchoa mitchilli* (n=208,804) was the most abundant species, accounting for 77.4% of the animals collected in 21.3-m bay seine catch (Table IR15-02). The taxa most frequently caught in the 21.3-m bay seines were *A. mitchilli* (56.1% occurrence), *Microgobius gulosus* (47.6% occurrence), and *Eucinostomus* spp. (42.6% occurrence).

A total of 17,382 animals from 26 Selected Taxa were collected, representing 6.4% of the entire 21.3-m bay seine catch (Table IR15-03). *Mugil cephalus* (n=5,575) and *M. undulatus* (n=4,630) were the most abundant Selected Taxa, accounting for 58.7% of the Selected Taxa collected with this gear. The Selected Taxa most frequently caught in 21.3-m bay seines were *Farfantepenaeus* spp. (28.4% occurrence), *Cynoscion nebulosus* (28.2% occurrence), and *M. curema* (21.6% occurrence).

183-m *Haul Seines*. A total of 63,177 animals were collected in 228 183-m haul seines, representing 15.7% of the overall SRS catch (Table IR15-01). *Brevoortia* spp. (n=19,187), *L. rhomboides* (n=7,068), and *D. auratus* (n=6,780) were the most abundant species, accounting for 52.3% of the 183-m haul seine catch (Table IR15-04). The taxa
most frequently caught in the 183-m haul seines were *M. curema* (80.3% occurrence), *Sphoeroides nephelus* (72.8% occurrence), and *Ariopsis felis* (71.5% occurrence).

A total of 11,562 animals from 32 Selected Taxa were collected, representing 18.3% of the entire 183-m haul seine catch (Table IR15-05). *Mugil curema* (n=2,986), *A. probatocephalus* (n=1,922), *M. cephalus* (n=1,437), and *L. xanthurus* (n=1,411) were the most abundant Selected Taxa, accounting for 67.1% of the Selected Taxa collected with this gear. The Selected Taxa most frequently caught in the 183-m haul seines were *M. curema* (80.3% occurrence), *M. cephalus* (67.5% occurrence), and *A. probatocephalus* (65.8% occurrence).

6.1-m Bay Otter Trawls. A total of 16,070 animals were collected in 96 6.1-m bay otter trawls, representing 4.0% of the overall SRS catch (Table IR15-01). *Anchoa mitchilli* (n=7,978) and *L. rhomboides* (n=1,988) were the most abundant taxa, accounting for 62.0% of the 6.1-m bay otter trawl catch (Table IR15-06). The taxa most frequently caught in 6.1-m bay otter trawls were *Eucinostomus* spp. and *Farfantepenaeus* spp. (both 61.5% occurrence).

A total of 1,601 animals from 22 Selected Taxa were collected, representing 10.0% of the entire 6.1-m bay otter trawl catch (Table IR15-07). *Leiostomus xanthurus* (n=530), *Farfantepenaeus* spp. (n=375), and *M. undulatus* (n=294) were the most abundant Selected Taxa, accounting for 74.9% of the Selected Taxa collected in this gear. The Selected Taxa most frequently caught in the 6.1-m bay otter trawl were *Farfantepenaeus* spp. (61.5% occurrence), *Callinectes sapidus* (33.3% occurrence), and *M. undulatus* (25.0% occurrence).

River Sampling

21.3-m River Seines. A total of 53,553 animals were collected in 108 21.3-m river seines, representing 13.3% of the overall SRS collections (Table IR15-01). *Anchoa mitchilli* (n=29,288) was the most abundant species collected, accounting for 54.7% of the 21.3-m river seine catch (Table IR15-08). The taxa most frequently caught in 21.3-m river seines were *Eucinostomus* spp. (88.9% occurrence), *D. auratus* (81.5% occurrence), and *Eucinostomus harengulus* (71.3% occurrence).
A total of 2,038 animals from 17 Selected Taxa were collected, representing 3.8% of the entire 21.3-m river seine catch (Table IR15-09). *Farfantepenaeus* spp. (n=564), *L. xanthurus* (n=374), and *Centropomus undecimalis* (n=332) were the most abundant Selected Taxa, accounting for 62.3% of the Selected Taxa collected in this gear. The Selected Taxa most frequently caught in 21.3-m river seines were *C. undecimalis* (47.2% occurrence), *Farfantepenaeus* spp. (46.3% occurrence), and *C. sapidus* (25.0% occurrence).
References


Figure IR15-01. Map of the northern Indian River Lagoon sampling area. Zones are labeled A–F, and H.
Table IR15-01. Summary of catch and effort data for northern Indian River Lagoon stratified-random sampling, 2015.

<table>
<thead>
<tr>
<th>Zone</th>
<th>21.3-m bay seine</th>
<th>21.3-m river seine</th>
<th>183-m haul seine</th>
<th>6.1-m otter trawl</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Animals</td>
<td>Hauls</td>
<td>Animals</td>
<td>Hauls</td>
<td>Animals</td>
</tr>
<tr>
<td>A</td>
<td>2,618</td>
<td>16</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>B</td>
<td>2,265</td>
<td>14</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>C</td>
<td>141,067</td>
<td>120</td>
<td>29,493</td>
<td>48</td>
<td>.</td>
</tr>
<tr>
<td>D</td>
<td>29,058</td>
<td>96</td>
<td>9,234</td>
<td>72</td>
<td>.</td>
</tr>
<tr>
<td>E</td>
<td>18,223</td>
<td>14</td>
<td>9,350</td>
<td>48</td>
<td>.</td>
</tr>
<tr>
<td>F</td>
<td>.</td>
<td>.</td>
<td>53,553</td>
<td>108</td>
<td>.</td>
</tr>
<tr>
<td>H</td>
<td>76,511</td>
<td>120</td>
<td>15,100</td>
<td>60</td>
<td>16,070</td>
</tr>
<tr>
<td></td>
<td><strong>Totals</strong></td>
<td><strong>380</strong></td>
<td><strong>53,553</strong></td>
<td><strong>228</strong></td>
<td><strong>16,070</strong></td>
</tr>
</tbody>
</table>
Table IR15-02. Catch statistics for 10 dominant taxa collected in 380 21.3-m bay seine samples during northern Indian River Lagoon stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td></td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td><strong>Anchoa mitchilli</strong></td>
<td>208,804</td>
<td>77.4</td>
<td>56.1</td>
<td>392.49</td>
<td>101.80</td>
</tr>
<tr>
<td><strong>Eucinostomus spp.</strong></td>
<td>8,000</td>
<td>3.0</td>
<td>42.6</td>
<td>15.04</td>
<td>3.22</td>
</tr>
<tr>
<td><strong>Menidia spp.</strong></td>
<td>6,113</td>
<td>2.3</td>
<td>31.8</td>
<td>11.49</td>
<td>4.90</td>
</tr>
<tr>
<td><strong>Mugil cephalus</strong></td>
<td>5,575</td>
<td>2.1</td>
<td>15.0</td>
<td>10.48</td>
<td>5.72</td>
</tr>
<tr>
<td><strong>Micropogonias undulatus</strong></td>
<td>4,630</td>
<td>1.7</td>
<td>7.1</td>
<td>8.70</td>
<td>6.91</td>
</tr>
<tr>
<td><strong>Harengula jaguana</strong></td>
<td>4,167</td>
<td>1.5</td>
<td>7.4</td>
<td>7.83</td>
<td>6.40</td>
</tr>
<tr>
<td><strong>Diapterus auratus</strong></td>
<td>3,548</td>
<td>1.3</td>
<td>27.9</td>
<td>6.67</td>
<td>1.49</td>
</tr>
<tr>
<td><strong>Lucania parva</strong></td>
<td>3,187</td>
<td>1.2</td>
<td>18.2</td>
<td>5.99</td>
<td>1.60</td>
</tr>
<tr>
<td><strong>Microgobius gulosus</strong></td>
<td>2,555</td>
<td>1.0</td>
<td>47.6</td>
<td>4.80</td>
<td>0.85</td>
</tr>
<tr>
<td><strong>Lagodon rhomboides</strong></td>
<td>2,367</td>
<td>0.9</td>
<td>20.5</td>
<td>4.45</td>
<td>1.44</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>248,946</td>
<td>92.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>269,742</td>
<td>100.0</td>
<td>507.03</td>
<td>103.11</td>
<td>396.43</td>
</tr>
</tbody>
</table>
Table IR15-03. Catch statistics for Selected Taxa collected in 380 21.3-m bay seine samples during northern Indian River Lagoon stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Catch-per-unit-effort (animals/set)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td></td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>5,575</td>
<td>2.1</td>
<td>15.0</td>
<td>10.48</td>
<td>5.72</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>4,630</td>
<td>1.7</td>
<td>7.1</td>
<td>8.70</td>
<td>6.91</td>
</tr>
<tr>
<td>Leioctomus xanthurus</td>
<td>2,170</td>
<td>0.8</td>
<td>15.0</td>
<td>4.08</td>
<td>1.14</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>1,497</td>
<td>0.6</td>
<td>14.7</td>
<td>2.81</td>
<td>2.32</td>
</tr>
<tr>
<td>Farfantepeneus spp.</td>
<td>1,362</td>
<td>0.5</td>
<td>28.4</td>
<td>2.56</td>
<td>0.64</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>797</td>
<td>0.3</td>
<td>28.2</td>
<td>1.50</td>
<td>0.29</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>385</td>
<td>0.1</td>
<td>21.6</td>
<td>0.72</td>
<td>0.23</td>
</tr>
<tr>
<td>Litopenaeus setiferus</td>
<td>311</td>
<td>0.1</td>
<td>4.5</td>
<td>0.58</td>
<td>0.41</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>203</td>
<td>0.1</td>
<td>12.1</td>
<td>0.38</td>
<td>0.10</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>98</td>
<td>&lt;0.1</td>
<td>11.1</td>
<td>0.18</td>
<td>0.05</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>92</td>
<td>&lt;0.1</td>
<td>6.3</td>
<td>0.17</td>
<td>0.07</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>64</td>
<td>&lt;0.1</td>
<td>6.6</td>
<td>0.12</td>
<td>0.04</td>
</tr>
<tr>
<td>Cynoscion complex</td>
<td>49</td>
<td>&lt;0.1</td>
<td>4.7</td>
<td>0.09</td>
<td>0.03</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>28</td>
<td>&lt;0.1</td>
<td>2.6</td>
<td>0.05</td>
<td>0.03</td>
</tr>
<tr>
<td>Lutjanus analis</td>
<td>24</td>
<td>&lt;0.1</td>
<td>1.6</td>
<td>0.05</td>
<td>0.02</td>
</tr>
<tr>
<td>Farfantepenaes aztecs</td>
<td>18</td>
<td>&lt;0.1</td>
<td>2.6</td>
<td>0.03</td>
<td>0.01</td>
</tr>
<tr>
<td>Albula vulpes</td>
<td>16</td>
<td>&lt;0.1</td>
<td>1.6</td>
<td>0.03</td>
<td>0.02</td>
</tr>
</tbody>
</table>
Table IR15-03. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>% Occur</th>
<th>% Occur</th>
<th>Mean</th>
<th>Stderr</th>
<th>CV</th>
<th>Max</th>
<th>Mean</th>
<th>Stderr</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>14</td>
<td>&lt;0.1</td>
<td>2.1</td>
<td>0.03</td>
<td>0.01</td>
<td>876.09</td>
<td>3.57</td>
<td>17</td>
<td>0.72</td>
<td>15</td>
<td>25</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>11</td>
<td>&lt;0.1</td>
<td>0.5</td>
<td>0.02</td>
<td>0.02</td>
<td>1,780.52</td>
<td>7.14</td>
<td>413</td>
<td>17.40</td>
<td>321</td>
<td>554</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>8</td>
<td>&lt;0.1</td>
<td>1.8</td>
<td>0.02</td>
<td>0.01</td>
<td>765.04</td>
<td>1.43</td>
<td>125</td>
<td>31.01</td>
<td>31</td>
<td>239</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>8</td>
<td>&lt;0.1</td>
<td>1.8</td>
<td>0.02</td>
<td>0.01</td>
<td>765.04</td>
<td>1.43</td>
<td>152</td>
<td>45.71</td>
<td>19</td>
<td>304</td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td>8</td>
<td>&lt;0.1</td>
<td>0.3</td>
<td>0.02</td>
<td>0.02</td>
<td>1,949.36</td>
<td>5.71</td>
<td>23</td>
<td>0.00</td>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>5</td>
<td>&lt;0.1</td>
<td>0.3</td>
<td>0.01</td>
<td>0.01</td>
<td>1,949.36</td>
<td>3.57</td>
<td>39</td>
<td>5.54</td>
<td>22</td>
<td>54</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>3</td>
<td>&lt;0.1</td>
<td>0.8</td>
<td>0.01</td>
<td>&lt;0.01</td>
<td>1,122.49</td>
<td>0.71</td>
<td>115</td>
<td>20.66</td>
<td>74</td>
<td>140</td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td>3</td>
<td>&lt;0.1</td>
<td>0.3</td>
<td>0.01</td>
<td>0.01</td>
<td>1,949.36</td>
<td>2.14</td>
<td>17</td>
<td>0.67</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>Mugil rubrioculus</td>
<td>2</td>
<td>&lt;0.1</td>
<td>0.3</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>1,949.36</td>
<td>1.43</td>
<td>18</td>
<td>0.50</td>
<td>17</td>
<td>18</td>
</tr>
<tr>
<td>Menippe sp.</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.3</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>1,949.36</td>
<td>0.71</td>
<td>27</td>
<td>.</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td>Totals</td>
<td>17,382</td>
<td>6.4</td>
<td></td>
<td>32.67</td>
<td>9.51</td>
<td>567.57</td>
<td>2,685.00</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>554</td>
</tr>
</tbody>
</table>
Table IR15-04. Catch statistics for 10 dominant taxa collected in 228 183-m haul seine samples during northern Indian River Lagoon stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean catch per-unit-effort.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
<td>CV</td>
</tr>
<tr>
<td>Brevoortia spp.</td>
<td>19,187</td>
<td>30.4</td>
<td>7.9</td>
<td>84.15</td>
<td>1,454.74</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>81.08</td>
<td>18,482.00</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>7,068</td>
<td>11.2</td>
<td>59.6</td>
<td>31.00</td>
<td>302.40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6.21</td>
<td>718.00</td>
</tr>
<tr>
<td>Diapterus auratus</td>
<td>6,780</td>
<td>10.7</td>
<td>55.3</td>
<td>29.74</td>
<td>209.06</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.12</td>
<td>347.00</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>4,568</td>
<td>7.2</td>
<td>21.1</td>
<td>20.04</td>
<td>821.80</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10.90</td>
<td>2,283.00</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>2,986</td>
<td>4.7</td>
<td>80.3</td>
<td>13.10</td>
<td>212.05</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.84</td>
<td>275.00</td>
</tr>
<tr>
<td>Eucinostomus harengulus</td>
<td>2,370</td>
<td>3.8</td>
<td>48.7</td>
<td>10.39</td>
<td>293.79</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.02</td>
<td>249.00</td>
</tr>
<tr>
<td>Ariopsis felis</td>
<td>2,250</td>
<td>3.6</td>
<td>71.5</td>
<td>9.87</td>
<td>192.81</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.26</td>
<td>185.00</td>
</tr>
<tr>
<td>Sphoeroides nephelus</td>
<td>2,134</td>
<td>3.4</td>
<td>72.8</td>
<td>9.36</td>
<td>215.14</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.33</td>
<td>196.00</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>1,922</td>
<td>3.0</td>
<td>65.8</td>
<td>8.43</td>
<td>212.56</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.19</td>
<td>132.00</td>
</tr>
<tr>
<td>Eucinostomus gula</td>
<td>1,752</td>
<td>2.8</td>
<td>34.2</td>
<td>7.68</td>
<td>352.53</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.79</td>
<td>265.00</td>
</tr>
<tr>
<td>Subtotal</td>
<td>51,017</td>
<td>80.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>63,177</td>
<td>100.0</td>
<td></td>
<td>277.09</td>
<td></td>
</tr>
</tbody>
</table>

CV: Coefficient of Variation

Max: Maximum
Min: Minimum
Table IR15-05. Catch statistics for Selected Taxa collected in 228 183-m haul seine samples during northern Indian River Lagoon stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean catch-per-unit-effort.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number No.</th>
<th>%</th>
<th>% Occur</th>
<th>Catch-per-unit-effort (animals/set)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>2,986</td>
<td>4.7</td>
<td>80.3</td>
<td>13.10</td>
<td>1.84</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>1,922</td>
<td>3.0</td>
<td>65.8</td>
<td>8.43</td>
<td>1.19</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>1,437</td>
<td>2.3</td>
<td>67.5</td>
<td>6.30</td>
<td>0.81</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>1,411</td>
<td>2.2</td>
<td>31.6</td>
<td>6.19</td>
<td>2.06</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>751</td>
<td>1.2</td>
<td>26.3</td>
<td>3.29</td>
<td>0.82</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>723</td>
<td>1.1</td>
<td>16.7</td>
<td>3.17</td>
<td>1.71</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>526</td>
<td>0.8</td>
<td>36.8</td>
<td>2.31</td>
<td>0.79</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>472</td>
<td>0.8</td>
<td>49.6</td>
<td>2.07</td>
<td>0.29</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>268</td>
<td>0.4</td>
<td>25.4</td>
<td>1.18</td>
<td>0.39</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>266</td>
<td>0.4</td>
<td>21.1</td>
<td>1.17</td>
<td>0.48</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>256</td>
<td>0.4</td>
<td>15.4</td>
<td>1.12</td>
<td>0.43</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>145</td>
<td>0.2</td>
<td>18.9</td>
<td>0.64</td>
<td>0.16</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>131</td>
<td>0.2</td>
<td>13.6</td>
<td>0.57</td>
<td>0.21</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>37</td>
<td>0.1</td>
<td>6.1</td>
<td>0.16</td>
<td>0.05</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>37</td>
<td>0.1</td>
<td>5.3</td>
<td>0.16</td>
<td>0.06</td>
</tr>
<tr>
<td>Cynoscion complex</td>
<td>32</td>
<td>0.1</td>
<td>2.6</td>
<td>0.14</td>
<td>0.08</td>
</tr>
<tr>
<td>Megalops atlanticus</td>
<td>24</td>
<td>&lt;0.1</td>
<td>3.1</td>
<td>0.11</td>
<td>0.06</td>
</tr>
</tbody>
</table>
Table IR15-05. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>% Occur</th>
<th>Catch-per-unit-effort (animals/set)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Lutjanus analis</td>
<td>21</td>
<td>&lt;0.1</td>
<td>3.1</td>
<td>0.09</td>
</tr>
<tr>
<td>Farfantepenaeus spp.</td>
<td>21</td>
<td>&lt;0.1</td>
<td>2.2</td>
<td>0.09</td>
</tr>
<tr>
<td>Mugil rubrioculus</td>
<td>20</td>
<td>&lt;0.1</td>
<td>4.8</td>
<td>0.09</td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td>20</td>
<td>&lt;0.1</td>
<td>2.2</td>
<td>0.09</td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td>9</td>
<td>&lt;0.1</td>
<td>2.6</td>
<td>0.04</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>9</td>
<td>&lt;0.1</td>
<td>1.8</td>
<td>0.04</td>
</tr>
<tr>
<td>Farfantepenaeus aztecs</td>
<td>8</td>
<td>&lt;0.1</td>
<td>2.2</td>
<td>0.04</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>8</td>
<td>&lt;0.1</td>
<td>1.8</td>
<td>0.04</td>
</tr>
<tr>
<td>Paralichthys lethostigma</td>
<td>5</td>
<td>&lt;0.1</td>
<td>2.2</td>
<td>0.02</td>
</tr>
<tr>
<td>Menippe spp.</td>
<td>4</td>
<td>&lt;0.1</td>
<td>1.8</td>
<td>0.02</td>
</tr>
<tr>
<td>Albula vulpes</td>
<td>4</td>
<td>&lt;0.1</td>
<td>1.3</td>
<td>0.02</td>
</tr>
<tr>
<td>Litopenaeus setiferus</td>
<td>4</td>
<td>&lt;0.1</td>
<td>0.4</td>
<td>0.02</td>
</tr>
<tr>
<td>Scomberomorus regalis</td>
<td>2</td>
<td>&lt;0.1</td>
<td>0.9</td>
<td>0.01</td>
</tr>
<tr>
<td>Mycteroperca microlepis</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.4</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Scomberomorus cavalla</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.4</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.4</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>11,562</strong></td>
<td><strong>18.3</strong></td>
<td><strong>50.71</strong></td>
<td><strong>4.28</strong></td>
</tr>
</tbody>
</table>
Table IR15-06. Catch statistics for 10 dominant taxa collected in 96 6.1-m bay otter trawl samples during northern Indian River Lagoon stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>7,978</td>
<td>49.7</td>
<td>32.3</td>
<td>15.04</td>
<td>6.85</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>1,988</td>
<td>12.4</td>
<td>45.8</td>
<td>3.81</td>
<td>2.05</td>
</tr>
<tr>
<td>Gobiosoma spp.</td>
<td>910</td>
<td>5.7</td>
<td>39.6</td>
<td>1.94</td>
<td>0.54</td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td>844</td>
<td>5.3</td>
<td>61.5</td>
<td>1.73</td>
<td>0.51</td>
</tr>
<tr>
<td>Gobiosoma robustum</td>
<td>612</td>
<td>3.8</td>
<td>36.5</td>
<td>1.29</td>
<td>0.41</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>530</td>
<td>3.3</td>
<td>14.6</td>
<td>1.06</td>
<td>0.75</td>
</tr>
<tr>
<td>Farfantepenaeus spp.</td>
<td>375</td>
<td>2.3</td>
<td>61.5</td>
<td>0.95</td>
<td>0.34</td>
</tr>
<tr>
<td>Diapterus auratus</td>
<td>383</td>
<td>2.4</td>
<td>26.0</td>
<td>0.77</td>
<td>0.39</td>
</tr>
<tr>
<td>Eucinostomus gula</td>
<td>362</td>
<td>2.3</td>
<td>32.3</td>
<td>0.73</td>
<td>0.25</td>
</tr>
<tr>
<td>Syngnathus scovelli</td>
<td>312</td>
<td>1.9</td>
<td>33.3</td>
<td>0.67</td>
<td>0.16</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>14,294</td>
<td>88.9</td>
<td></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>16,070</td>
<td>100.0</td>
<td>31.60</td>
<td>7.21</td>
<td>223.45</td>
</tr>
</tbody>
</table>

IR-14
Table IR15-07.  Catch statistics for Selected Taxa collected in 96 6.1-m bay otter trawl samples during northern Indian River Lagoon stratified-random sampling, 2015.  Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean.  Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number No.</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²) Mean</th>
<th>Stderr</th>
<th>CV</th>
<th>Max</th>
<th>Standard Length (mm) Mean</th>
<th>Stderr</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Leiostomus xanthurus</em></td>
<td>530</td>
<td>3.3</td>
<td>14.6</td>
<td>1.06</td>
<td>0.75</td>
<td>687.17</td>
<td>65.53</td>
<td>21</td>
<td>1.05</td>
<td>11</td>
<td>186</td>
</tr>
<tr>
<td><em>Farfantepenaeus spp.</em></td>
<td>375</td>
<td>2.3</td>
<td>61.5</td>
<td>0.95</td>
<td>0.34</td>
<td>349.91</td>
<td>30.58</td>
<td>9</td>
<td>0.14</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td><em>Micropogonias undulatus</em></td>
<td>294</td>
<td>1.8</td>
<td>25.0</td>
<td>0.58</td>
<td>0.27</td>
<td>463.28</td>
<td>22.36</td>
<td>35</td>
<td>2.10</td>
<td>11</td>
<td>173</td>
</tr>
<tr>
<td><em>Callinectes sapidus</em></td>
<td>96</td>
<td>0.6</td>
<td>33.3</td>
<td>0.21</td>
<td>0.05</td>
<td>240.22</td>
<td>2.89</td>
<td>40</td>
<td>3.21</td>
<td>9</td>
<td>186</td>
</tr>
<tr>
<td><em>Archosargus probatocephalus</em></td>
<td>69</td>
<td>0.4</td>
<td>18.8</td>
<td>0.14</td>
<td>0.05</td>
<td>360.74</td>
<td>4.05</td>
<td>40</td>
<td>6.06</td>
<td>11</td>
<td>206</td>
</tr>
<tr>
<td><em>Cynoscion nebulosus</em></td>
<td>54</td>
<td>0.3</td>
<td>14.6</td>
<td>0.11</td>
<td>0.04</td>
<td>334.98</td>
<td>1.93</td>
<td>30</td>
<td>2.97</td>
<td>13</td>
<td>123</td>
</tr>
<tr>
<td><em>Lutjanus griseus</em></td>
<td>44</td>
<td>0.3</td>
<td>16.7</td>
<td>0.09</td>
<td>0.03</td>
<td>341.00</td>
<td>2.31</td>
<td>94</td>
<td>8.72</td>
<td>13</td>
<td>228</td>
</tr>
<tr>
<td><em>Menticirrhus americanus</em></td>
<td>27</td>
<td>0.2</td>
<td>10.4</td>
<td>0.05</td>
<td>0.02</td>
<td>450.02</td>
<td>2.02</td>
<td>52</td>
<td>11.78</td>
<td>17</td>
<td>233</td>
</tr>
<tr>
<td><em>Farfantepenaeus aztecs</em></td>
<td>25</td>
<td>0.2</td>
<td>16.7</td>
<td>0.05</td>
<td>0.02</td>
<td>302.60</td>
<td>1.18</td>
<td>17</td>
<td>0.47</td>
<td>15</td>
<td>25</td>
</tr>
<tr>
<td><em>Paralichthys albigutta</em></td>
<td>20</td>
<td>0.1</td>
<td>17.7</td>
<td>0.04</td>
<td>0.01</td>
<td>249.71</td>
<td>0.67</td>
<td>168</td>
<td>13.70</td>
<td>33</td>
<td>246</td>
</tr>
<tr>
<td><em>Farfantepenaeus duororum</em></td>
<td>16</td>
<td>0.1</td>
<td>14.6</td>
<td>0.04</td>
<td>0.01</td>
<td>264.24</td>
<td>0.45</td>
<td>16</td>
<td>0.38</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td><em>Cynoscion complex</em></td>
<td>15</td>
<td>0.1</td>
<td>4.2</td>
<td>0.03</td>
<td>0.02</td>
<td>695.54</td>
<td>1.93</td>
<td>58</td>
<td>13.14</td>
<td>13</td>
<td>190</td>
</tr>
<tr>
<td><em>Sciaenops ocellatus</em></td>
<td>11</td>
<td>0.1</td>
<td>5.2</td>
<td>0.03</td>
<td>0.02</td>
<td>630.85</td>
<td>1.62</td>
<td>52</td>
<td>5.77</td>
<td>15</td>
<td>74</td>
</tr>
<tr>
<td><em>Litopenaeus setiferus</em></td>
<td>6</td>
<td>&lt;0.1</td>
<td>2.1</td>
<td>0.01</td>
<td>0.01</td>
<td>830.98</td>
<td>0.96</td>
<td>7</td>
<td>1.23</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td><em>Menippe spp.</em></td>
<td>4</td>
<td>&lt;0.1</td>
<td>4.2</td>
<td>0.01</td>
<td>&lt;0.01</td>
<td>490.65</td>
<td>0.27</td>
<td>32</td>
<td>9.44</td>
<td>5</td>
<td>46</td>
</tr>
<tr>
<td><em>Lutjanus synagris</em></td>
<td>4</td>
<td>&lt;0.1</td>
<td>4.2</td>
<td>0.01</td>
<td>&lt;0.01</td>
<td>484.72</td>
<td>0.19</td>
<td>59</td>
<td>26.62</td>
<td>25</td>
<td>138</td>
</tr>
<tr>
<td><em>Mugil curema</em></td>
<td>3</td>
<td>&lt;0.1</td>
<td>2.1</td>
<td>0.01</td>
<td>&lt;0.01</td>
<td>727.22</td>
<td>0.39</td>
<td>117</td>
<td>17.75</td>
<td>96</td>
<td>152</td>
</tr>
</tbody>
</table>
Table IR15-07. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Catch-per-unit-effort (animals/set)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
<td>CV</td>
</tr>
<tr>
<td>Lutjanus analis</td>
<td>3</td>
<td>&lt;0.1</td>
<td>3.1</td>
<td>&lt;0.01</td>
<td>560.79</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>1</td>
<td>&lt;0.0</td>
<td>1.0</td>
<td>&lt;0.01</td>
<td>979.80</td>
</tr>
<tr>
<td>Epinephelus itajara</td>
<td>1</td>
<td>&lt;0.1</td>
<td>1.0</td>
<td>&lt;0.01</td>
<td>979.80</td>
</tr>
<tr>
<td>Paralichthys lethostigma</td>
<td>1</td>
<td>&lt;0.1</td>
<td>1.0</td>
<td>&lt;0.01</td>
<td>979.80</td>
</tr>
<tr>
<td>Mycteroperca microlepis</td>
<td>1</td>
<td>&lt;0.1</td>
<td>1.0</td>
<td>&lt;0.01</td>
<td>979.80</td>
</tr>
<tr>
<td>Albula vulpes</td>
<td>1</td>
<td>&lt;0.1</td>
<td>1.0</td>
<td>&lt;0.01</td>
<td>979.80</td>
</tr>
<tr>
<td>Totals</td>
<td>1,601</td>
<td>10.0</td>
<td>.</td>
<td>3.43</td>
<td>0.88</td>
</tr>
</tbody>
</table>
Table IR15-08. Catch statistics for 10 dominant taxa collected in 108 21.3-m river seine samples during northern Indian River Lagoon stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²) Mean</th>
<th>Stderr</th>
<th>CV</th>
<th>Max</th>
<th>Standard Length (mm) Mean</th>
<th>Stderr</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anchoa mitchilli</td>
<td>29,288</td>
<td>54.7</td>
<td>40.7</td>
<td>398.80</td>
<td>114.87</td>
<td>299.35</td>
<td>6,032.35</td>
<td>28</td>
<td>0.03</td>
<td>16</td>
<td>62</td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td>7,718</td>
<td>14.4</td>
<td>88.9</td>
<td>105.09</td>
<td>15.12</td>
<td>149.54</td>
<td>1,023.53</td>
<td>25</td>
<td>0.08</td>
<td>8</td>
<td>39</td>
</tr>
<tr>
<td>Diapterus auratus</td>
<td>5,328</td>
<td>10.0</td>
<td>81.5</td>
<td>72.55</td>
<td>13.98</td>
<td>200.32</td>
<td>929.41</td>
<td>33</td>
<td>0.17</td>
<td>11</td>
<td>153</td>
</tr>
<tr>
<td>Brevoortia spp.</td>
<td>2,428</td>
<td>4.5</td>
<td>16.7</td>
<td>33.06</td>
<td>16.42</td>
<td>516.15</td>
<td>1,347.06</td>
<td>31</td>
<td>0.12</td>
<td>21</td>
<td>57</td>
</tr>
<tr>
<td>Gambusia holbrooki</td>
<td>1,952</td>
<td>3.6</td>
<td>42.6</td>
<td>26.58</td>
<td>10.90</td>
<td>426.16</td>
<td>954.41</td>
<td>22</td>
<td>0.09</td>
<td>9</td>
<td>42</td>
</tr>
<tr>
<td>Eucinostomus harengulus</td>
<td>1,358</td>
<td>2.5</td>
<td>71.3</td>
<td>18.49</td>
<td>3.80</td>
<td>213.70</td>
<td>317.65</td>
<td>52</td>
<td>0.26</td>
<td>40</td>
<td>90</td>
</tr>
<tr>
<td>Eugerres plumieri</td>
<td>791</td>
<td>1.5</td>
<td>36.1</td>
<td>10.77</td>
<td>3.78</td>
<td>364.46</td>
<td>258.82</td>
<td>33</td>
<td>1.00</td>
<td>9</td>
<td>256</td>
</tr>
<tr>
<td>Farfantepenaeus spp.</td>
<td>564</td>
<td>1.1</td>
<td>46.3</td>
<td>7.68</td>
<td>3.71</td>
<td>502.34</td>
<td>395.59</td>
<td>8</td>
<td>0.12</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>Menidia spp.</td>
<td>518</td>
<td>1.0</td>
<td>37.0</td>
<td>7.05</td>
<td>1.75</td>
<td>257.65</td>
<td>122.06</td>
<td>36</td>
<td>0.33</td>
<td>15</td>
<td>60</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>374</td>
<td>0.7</td>
<td>18.5</td>
<td>5.09</td>
<td>1.97</td>
<td>402.37</td>
<td>148.53</td>
<td>26</td>
<td>0.70</td>
<td>8</td>
<td>96</td>
</tr>
<tr>
<td>Subtotal</td>
<td>50,319</td>
<td>94.0</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>256</td>
</tr>
<tr>
<td>Totals</td>
<td>53,553</td>
<td>100.0</td>
<td>.</td>
<td>729.21</td>
<td>125.55</td>
<td>178.93</td>
<td>6,347.06</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>476</td>
</tr>
</tbody>
</table>
Table IR15-09. Catch statistics for Selected Taxa collected in 108 21.3-m river seine samples during northern Indian River Lagoon stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
<td>CV</td>
</tr>
<tr>
<td>Farfantepenaeus spp.</td>
<td>564</td>
<td>1.1</td>
<td>46.3</td>
<td>7.68</td>
<td>3.71</td>
</tr>
<tr>
<td>Leioptomus xanthurus</td>
<td>374</td>
<td>0.7</td>
<td>18.5</td>
<td>5.09</td>
<td>1.97</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>332</td>
<td>0.6</td>
<td>47.2</td>
<td>4.52</td>
<td>1.06</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>236</td>
<td>0.4</td>
<td>11.1</td>
<td>3.21</td>
<td>1.79</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>128</td>
<td>0.2</td>
<td>25.0</td>
<td>1.74</td>
<td>0.57</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>84</td>
<td>0.2</td>
<td>3.7</td>
<td>1.14</td>
<td>0.94</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>81</td>
<td>0.2</td>
<td>11.1</td>
<td>1.10</td>
<td>0.63</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>74</td>
<td>0.1</td>
<td>8.3</td>
<td>1.01</td>
<td>0.57</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>54</td>
<td>0.1</td>
<td>8.3</td>
<td>0.74</td>
<td>0.34</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>34</td>
<td>0.1</td>
<td>19.4</td>
<td>0.46</td>
<td>0.14</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>29</td>
<td>0.1</td>
<td>17.6</td>
<td>0.39</td>
<td>0.10</td>
</tr>
<tr>
<td>Litopenaeus setiferus</td>
<td>24</td>
<td>&lt;0.1</td>
<td>7.4</td>
<td>0.33</td>
<td>0.17</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>9</td>
<td>&lt;0.1</td>
<td>1.9</td>
<td>0.12</td>
<td>0.09</td>
</tr>
<tr>
<td>Farfantepenaeus aztecus</td>
<td>5</td>
<td>&lt;0.1</td>
<td>3.7</td>
<td>0.07</td>
<td>0.04</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>5</td>
<td>&lt;0.1</td>
<td>1.9</td>
<td>0.07</td>
<td>0.05</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>2</td>
<td>&lt;0.1</td>
<td>1.9</td>
<td>0.03</td>
<td>0.02</td>
</tr>
<tr>
<td>Mugil rubricolus</td>
<td>2</td>
<td>&lt;0.1</td>
<td>0.9</td>
<td>0.03</td>
<td>0.03</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.9</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Totals</td>
<td>2,038</td>
<td>3.8</td>
<td>.</td>
<td>27.75</td>
<td>5.88</td>
</tr>
</tbody>
</table>
Appendix IR15-01. Monthly summary of species collected during northern Indian River Lagoon stratified-random sampling, 2015. Effort, or total number of hauls, is labeled 'E'. Taxa are arranged alphabetically.

<table>
<thead>
<tr>
<th>Species</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achirus lineatus</td>
<td>14</td>
<td>6</td>
<td>7</td>
<td>10</td>
<td>10</td>
<td>9</td>
<td>24</td>
<td>29</td>
<td>21</td>
<td>10</td>
<td>21</td>
<td>4</td>
<td>165</td>
</tr>
<tr>
<td>Agonostomus monticola</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>15</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Albula vulpes</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>6</td>
<td>3</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>2</td>
<td>7</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>Aluterus schoepfii</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>6</td>
<td>3</td>
<td>.</td>
<td>21</td>
<td>.</td>
<td>.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anchoa cubana</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>6</td>
<td>3</td>
<td>.</td>
<td>2</td>
<td>7</td>
<td>21</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Anchoa hepsetus</td>
<td>68</td>
<td>.</td>
<td>.</td>
<td>377</td>
<td>94</td>
<td>43</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>10</td>
<td>.</td>
<td>5</td>
<td>598</td>
</tr>
<tr>
<td>Anchoa lamprotaenia</td>
<td>3</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Anchoa lyolepis</td>
<td>45</td>
<td>88</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>9</td>
<td>2</td>
<td>2</td>
<td>106</td>
<td>30</td>
<td>.</td>
<td></td>
<td>282</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>949</td>
<td>4,779</td>
<td>13,875</td>
<td>3,020</td>
<td>11,306</td>
<td>52,341</td>
<td>22,001</td>
<td>21,195</td>
<td>28,366</td>
<td>31,815</td>
<td>52,217</td>
<td>4,206</td>
<td>246,070</td>
</tr>
<tr>
<td>Anchoa spp.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Anisotremus virginicus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>5</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>122</td>
<td>20</td>
<td>122</td>
<td>388</td>
<td>198</td>
<td>267</td>
<td>233</td>
<td>257</td>
<td>218</td>
<td>166</td>
<td>80</td>
<td>52</td>
<td>2,123</td>
</tr>
<tr>
<td>Archosargus rhomboidalis</td>
<td>4</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>29</td>
<td>1</td>
<td>3</td>
<td>21</td>
<td>8</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>Archosargus spp.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>2</td>
<td>.</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>.</td>
<td>2</td>
<td>1</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Arenaeus cribrarius</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Argpecten sp.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Ariopsis felis</td>
<td>19</td>
<td>189</td>
<td>217</td>
<td>104</td>
<td>357</td>
<td>194</td>
<td>287</td>
<td>257</td>
<td>215</td>
<td>290</td>
<td>276</td>
<td>82</td>
<td>2,487</td>
</tr>
<tr>
<td>Atherinopsidae sp.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Bagre marinus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>2</td>
<td>.</td>
<td>5</td>
<td>4</td>
<td>.</td>
<td></td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>32</td>
<td>879</td>
<td>2,379</td>
<td>105</td>
<td>1,028</td>
<td>303</td>
<td>295</td>
<td>734</td>
<td>280</td>
<td>266</td>
<td>239</td>
<td>36</td>
<td>6,576</td>
</tr>
<tr>
<td>Bathygobius spp.</td>
<td>2</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Species</td>
<td>Jan</td>
<td>Feb</td>
<td>Mar</td>
<td>Apr</td>
<td>May</td>
<td>Jun</td>
<td>Jul</td>
<td>Aug</td>
<td>Sep</td>
<td>Oct</td>
<td>Nov</td>
<td>Dec</td>
<td>Totals</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>--------</td>
</tr>
<tr>
<td>Brevoortia spp.</td>
<td>E=64</td>
<td>E=64</td>
<td>E=64</td>
<td>E=64</td>
<td>E=64</td>
<td>E=64</td>
<td>E=64</td>
<td>E=64</td>
<td>E=64</td>
<td>E=64</td>
<td>E=64</td>
<td>E=64</td>
<td>22,543</td>
</tr>
<tr>
<td>Callinectes ornatus</td>
<td>12</td>
<td>.</td>
<td>1</td>
<td>8</td>
<td>11</td>
<td>35</td>
<td>10</td>
<td>8</td>
<td>2</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>89</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>53</td>
<td>19</td>
<td>36</td>
<td>34</td>
<td>31</td>
<td>16</td>
<td>32</td>
<td>100</td>
<td>17</td>
<td>61</td>
<td>17</td>
<td>31</td>
<td>447</td>
</tr>
<tr>
<td>Callinectes similis</td>
<td>2</td>
<td>.</td>
<td>2</td>
<td>203</td>
<td>18</td>
<td>8</td>
<td>26</td>
<td>2</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>264</td>
</tr>
<tr>
<td>Callinectes spp.</td>
<td>.</td>
<td>6</td>
<td>.</td>
<td>2</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>9</td>
</tr>
<tr>
<td>Caranx hippus</td>
<td>12</td>
<td>5</td>
<td>2</td>
<td>29</td>
<td>19</td>
<td>35</td>
<td>12</td>
<td>2</td>
<td>10</td>
<td>10</td>
<td>27</td>
<td>18</td>
<td>181</td>
</tr>
<tr>
<td>Caranx latus</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Carcharhinus leucas</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Centropomus parallelus</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>15</td>
<td>3</td>
<td>31</td>
<td>29</td>
<td>34</td>
<td>54</td>
<td>209</td>
<td>68</td>
<td>35</td>
<td>15</td>
<td>74</td>
<td>39</td>
<td>606</td>
</tr>
<tr>
<td>Chaetodipterus faber</td>
<td>7</td>
<td>.</td>
<td>1</td>
<td>19</td>
<td>25</td>
<td>26</td>
<td>28</td>
<td>14</td>
<td>32</td>
<td>8</td>
<td>1</td>
<td>.</td>
<td>161</td>
</tr>
<tr>
<td>Charybdis helleri</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Chasmodes saburrae</td>
<td>1</td>
<td>5</td>
<td>.</td>
<td>1</td>
<td>12</td>
<td>12</td>
<td>16</td>
<td>25</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>78</td>
</tr>
<tr>
<td>Chilomycterus schoepfi</td>
<td>8</td>
<td>17</td>
<td>28</td>
<td>31</td>
<td>21</td>
<td>37</td>
<td>23</td>
<td>55</td>
<td>16</td>
<td>24</td>
<td>10</td>
<td>17</td>
<td>287</td>
</tr>
<tr>
<td>Chloroscombrus chrysurus</td>
<td>118</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>15</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>139</td>
</tr>
<tr>
<td>Cichlasoma urophthalmus</td>
<td>1</td>
<td>.</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>2</td>
<td>8</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Citharichthys macrops</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Citharichthys spilopterus</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>6</td>
<td>7</td>
<td>24</td>
<td>26</td>
<td>5</td>
<td>17</td>
<td>6</td>
<td>15</td>
<td>8</td>
<td>121</td>
</tr>
<tr>
<td>Clupeidae sp.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Ctenogobius boleosoma</td>
<td>154</td>
<td>9</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>19</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>193</td>
</tr>
<tr>
<td>Ctenogobius pseudofasciatus</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Ctenogobius shufeldti</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>9</td>
<td>.</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>Ctenogobius smaragdus</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>4</td>
<td>7</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Ctenogobius sp.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Species</td>
<td>Month</td>
<td>Totals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------------</td>
<td>-------------</td>
<td>----------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jan</td>
<td>Feb</td>
<td>Mar</td>
<td>Apr</td>
<td>May</td>
<td>Jun</td>
<td>Jul</td>
<td>Aug</td>
<td>Sep</td>
<td>Oct</td>
<td>Nov</td>
<td>Dec</td>
<td>E=812</td>
</tr>
<tr>
<td>Cynoscion complex</td>
<td>1</td>
<td>.</td>
<td>17</td>
<td>6</td>
<td>4</td>
<td>7</td>
<td>6</td>
<td>14</td>
<td>16</td>
<td>25</td>
<td></td>
<td></td>
<td>96</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>16</td>
<td>39</td>
<td>27</td>
<td>17</td>
<td>37</td>
<td>45</td>
<td>125</td>
<td>268</td>
<td>165</td>
<td>268</td>
<td>103</td>
<td>14</td>
<td>1,124</td>
</tr>
<tr>
<td>Cyprinodon variegatus</td>
<td>.</td>
<td>5</td>
<td>23</td>
<td>1</td>
<td>.</td>
<td>130</td>
<td>207</td>
<td>24</td>
<td>7</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>397</td>
</tr>
<tr>
<td>Dasyatis sabina</td>
<td>19</td>
<td>13</td>
<td>139</td>
<td>100</td>
<td>112</td>
<td>106</td>
<td>154</td>
<td>161</td>
<td>76</td>
<td>83</td>
<td>147</td>
<td>60</td>
<td>1,170</td>
</tr>
<tr>
<td>Dasyatis say</td>
<td>18</td>
<td>7</td>
<td>17</td>
<td>23</td>
<td>33</td>
<td>28</td>
<td>45</td>
<td>40</td>
<td>20</td>
<td>23</td>
<td>36</td>
<td>36</td>
<td>316</td>
</tr>
<tr>
<td>Diapterus auratus</td>
<td>671</td>
<td>754</td>
<td>830</td>
<td>450</td>
<td>755</td>
<td>456</td>
<td>1,995</td>
<td>3,354</td>
<td>1,507</td>
<td>1,985</td>
<td>1,786</td>
<td>1,496</td>
<td>16,039</td>
</tr>
<tr>
<td>Diapterus rhombeus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Diapterus spp.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>186</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>186</td>
</tr>
<tr>
<td>Diplodus holbrooki</td>
<td>.</td>
<td>14</td>
<td>62</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>76</td>
</tr>
<tr>
<td>Dormitator maculatus</td>
<td>1</td>
<td>3</td>
<td>15</td>
<td>.</td>
<td>5</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>27</td>
</tr>
<tr>
<td>Eleotris amblyopsis</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>12</td>
<td>189</td>
<td>31</td>
<td>80</td>
<td>48</td>
<td>37</td>
<td>47</td>
<td>19</td>
<td>35</td>
<td>25</td>
<td>33</td>
<td>63</td>
<td>619</td>
</tr>
<tr>
<td>Elops smithi</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Elops spp.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Epinephelus itajara</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Etropus crosotus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Eucinostomus argenteus</td>
<td>.</td>
<td>.</td>
<td>4</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>8</td>
<td>.</td>
<td>.</td>
<td>13</td>
</tr>
<tr>
<td>Eucinostomus gula</td>
<td>45</td>
<td>92</td>
<td>170</td>
<td>499</td>
<td>135</td>
<td>91</td>
<td>569</td>
<td>599</td>
<td>750</td>
<td>363</td>
<td>147</td>
<td>253</td>
<td>3,713</td>
</tr>
<tr>
<td>Eucinostomus harengulus</td>
<td>252</td>
<td>126</td>
<td>379</td>
<td>770</td>
<td>771</td>
<td>242</td>
<td>1,059</td>
<td>1,039</td>
<td>439</td>
<td>167</td>
<td>91</td>
<td>126</td>
<td>5,461</td>
</tr>
<tr>
<td>Eucinostomus jonesii</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>27</td>
<td>19</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>3</td>
<td>2</td>
<td>65</td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td>2,881</td>
<td>1,376</td>
<td>1,142</td>
<td>794</td>
<td>991</td>
<td>1,033</td>
<td>653</td>
<td>2,022</td>
<td>2,140</td>
<td>714</td>
<td>1,484</td>
<td>1,333</td>
<td>16,563</td>
</tr>
<tr>
<td>Eugerres plumieri</td>
<td>5</td>
<td>.</td>
<td>.</td>
<td>179</td>
<td>363</td>
<td>137</td>
<td>37</td>
<td>57</td>
<td>5</td>
<td>3</td>
<td>5</td>
<td>9</td>
<td>800</td>
</tr>
<tr>
<td>Evorthodus lyricus</td>
<td>3</td>
<td>13</td>
<td>8</td>
<td>39</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>7</td>
<td>2</td>
<td>83</td>
</tr>
<tr>
<td>Farfantepeaes aztecus</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>7</td>
<td>16</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>8</td>
<td>4</td>
<td>56</td>
</tr>
</tbody>
</table>
## Appendix IR15-01. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>E=64</td>
<td>E=64</td>
<td>E=64</td>
<td>E=64</td>
<td>E=64</td>
<td>E=64</td>
<td>E=64</td>
<td>E=64</td>
<td>E=64</td>
<td>E=86</td>
<td>E=86</td>
<td>E=84</td>
<td>E=812</td>
</tr>
<tr>
<td><em>Farfantepenaeus duorarum</em></td>
<td>12</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>.</td>
<td>1</td>
<td>7</td>
<td>1</td>
<td>.</td>
<td>5</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><em>Farfantepenaeus spp.</em></td>
<td>449</td>
<td>101</td>
<td>127</td>
<td>154</td>
<td>164</td>
<td>97</td>
<td>29</td>
<td>467</td>
<td>374</td>
<td>86</td>
<td>109</td>
<td>165</td>
<td>.</td>
</tr>
<tr>
<td><em>Floridichthys carpio</em></td>
<td>39</td>
<td>120</td>
<td>221</td>
<td>83</td>
<td>473</td>
<td>170</td>
<td>160</td>
<td>340</td>
<td>46</td>
<td>80</td>
<td>300</td>
<td>52</td>
<td>.</td>
</tr>
<tr>
<td><em>Fundulus grandis</em></td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>5</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><em>Fundulus seminolis</em></td>
<td>3</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><em>Gambusia holbrooki</em></td>
<td>20</td>
<td>223</td>
<td>309</td>
<td>680</td>
<td>33</td>
<td>16</td>
<td>11</td>
<td>39</td>
<td>50</td>
<td>18</td>
<td>108</td>
<td>450</td>
<td>.</td>
</tr>
<tr>
<td>Gerreidae sp.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><em>Gerres cinereus</em></td>
<td>2</td>
<td>1</td>
<td>.</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>42</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td>.</td>
</tr>
<tr>
<td><em>Gobiesox strumosus</em></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><em>Gobiomorus dormitor</em></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td><em>Gobionellus oceanicus</em></td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>.</td>
<td>4</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>9</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td><em>Gobiosoma bosc</em></td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>6</td>
<td>6</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><em>Gobiosoma robustum</em></td>
<td>100</td>
<td>15</td>
<td>70</td>
<td>37</td>
<td>403</td>
<td>310</td>
<td>151</td>
<td>41</td>
<td>17</td>
<td>9</td>
<td>4</td>
<td>8</td>
<td>.</td>
</tr>
<tr>
<td><em>Gobiosoma spp.</em></td>
<td>167</td>
<td>16</td>
<td>58</td>
<td>167</td>
<td>452</td>
<td>282</td>
<td>212</td>
<td>193</td>
<td>46</td>
<td>116</td>
<td>50</td>
<td>11</td>
<td>.</td>
</tr>
<tr>
<td><em>Gymnura micrura</em></td>
<td>.</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>10</td>
<td>4</td>
<td>17</td>
<td>11</td>
<td>4</td>
<td>8</td>
<td>11</td>
<td>3</td>
<td>.</td>
</tr>
<tr>
<td><em>Haemulon parra</em></td>
<td>22</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>9</td>
<td>4</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>38</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><em>Haemulon plumierii</em></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><em>Haemulon sciuarus</em></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><em>Harengula jaguana</em></td>
<td>219</td>
<td>4</td>
<td>14</td>
<td>3,704</td>
<td>239</td>
<td>114</td>
<td>14</td>
<td>294</td>
<td>68</td>
<td>86</td>
<td>170</td>
<td>48</td>
<td>.</td>
</tr>
<tr>
<td><em>Hemichromis letourneuxi</em></td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><em>Heterandria formosa</em></td>
<td>.</td>
<td>7</td>
<td>1</td>
<td>54</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>69</td>
<td>.</td>
</tr>
<tr>
<td><em>Hippocampus erectus</em></td>
<td>2</td>
<td>1</td>
<td>.</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>.</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><em>Hippocampus zosterae</em></td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>5</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>
### Appendix IR15-01. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hyporhamphus meeki</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>8</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>15</td>
<td>E=64</td>
</tr>
<tr>
<td>Hyporhamphus spp.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Labidesthes sicculus</td>
<td>39</td>
<td>110</td>
<td>7</td>
<td>10</td>
<td>1</td>
<td>9</td>
<td>.</td>
<td>1</td>
<td>3</td>
<td>13</td>
<td>16</td>
<td>59</td>
<td>268</td>
</tr>
<tr>
<td>Labridae sp.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Labrisomus nuchipinnis</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Lachnolaimus maximus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Lactophrys trigonus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>.</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>951</td>
<td>1,368</td>
<td>639</td>
<td>1,621</td>
<td>689</td>
<td>808</td>
<td>1,807</td>
<td>426</td>
<td>521</td>
<td>336</td>
<td>1,742</td>
<td>862</td>
<td>11,770</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>33</td>
<td>870</td>
<td>1,542</td>
<td>486</td>
<td>258</td>
<td>154</td>
<td>328</td>
<td>58</td>
<td>41</td>
<td>76</td>
<td>593</td>
<td>46</td>
<td>4,485</td>
</tr>
<tr>
<td>Lepisosteus osseus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Lepisosteus platyrhincus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Lepomis auritus</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Lepomis gulosus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Lepomis macrochirus</td>
<td>8</td>
<td>29</td>
<td>.</td>
<td>1</td>
<td>6</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>11</td>
<td>21</td>
<td>6</td>
<td>6</td>
<td>88</td>
</tr>
<tr>
<td>Lepomis micropholis</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>6</td>
<td>2</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>10</td>
</tr>
<tr>
<td>Lepomis spp.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>15</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Limulus polyphemus</td>
<td>.</td>
<td>4</td>
<td>2</td>
<td>.</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>9</td>
<td>26</td>
</tr>
<tr>
<td>Litopenaeus setiferus</td>
<td>7</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>16</td>
<td>.</td>
<td>.</td>
<td>9</td>
<td>266</td>
<td>42</td>
<td>3</td>
<td>345</td>
<td></td>
</tr>
<tr>
<td>Lobotes surinamensis</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Lophogobius cyprinoides</td>
<td>3</td>
<td>7</td>
<td>22</td>
<td>6</td>
<td>9</td>
<td>35</td>
<td>42</td>
<td>3</td>
<td>5</td>
<td>77</td>
<td>1</td>
<td>3</td>
<td>213</td>
</tr>
<tr>
<td>Lucania goodei</td>
<td>.</td>
<td>4</td>
<td>7</td>
<td>13</td>
<td>.</td>
<td>.</td>
<td>4</td>
<td>6</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Lucania parva</td>
<td>91</td>
<td>404</td>
<td>488</td>
<td>29</td>
<td>130</td>
<td>378</td>
<td>512</td>
<td>298</td>
<td>116</td>
<td>604</td>
<td>225</td>
<td>25</td>
<td>3,300</td>
</tr>
<tr>
<td>Lutjanus analis</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>9</td>
<td>15</td>
<td>2</td>
<td>.</td>
<td>9</td>
<td>9</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>7</td>
<td>10</td>
<td>31</td>
<td>26</td>
<td>64</td>
<td>43</td>
<td>51</td>
<td>7</td>
<td>30</td>
<td>282</td>
</tr>
</tbody>
</table>
### Appendix IR15-01. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lutjanus synagris</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9</td>
<td>1</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Megalops atlanticus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td>9</td>
<td></td>
<td>2</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Membras martinica</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>27</td>
<td>5</td>
<td>9</td>
<td>.</td>
<td>16</td>
<td>30</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>Menidia spp.</td>
<td>108</td>
<td>207</td>
<td>379</td>
<td>660</td>
<td>3,045</td>
<td>471</td>
<td>636</td>
<td>193</td>
<td>253</td>
<td>132</td>
<td>358</td>
<td>189</td>
<td>6,631</td>
</tr>
<tr>
<td>Menipe spp.</td>
<td></td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>9</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>66</td>
<td>1</td>
<td>76</td>
<td>21</td>
<td>22</td>
<td>3</td>
<td>13</td>
<td>14</td>
<td>29</td>
<td>69</td>
<td>118</td>
<td>55</td>
<td>487</td>
</tr>
<tr>
<td>Microgobius gulosus</td>
<td>180</td>
<td>106</td>
<td>34</td>
<td>64</td>
<td>623</td>
<td>179</td>
<td>77</td>
<td>317</td>
<td>179</td>
<td>320</td>
<td>532</td>
<td>37</td>
<td>2,648</td>
</tr>
<tr>
<td>Microgobius microlepis</td>
<td></td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>10</td>
</tr>
<tr>
<td>Microgobius thalassinus</td>
<td></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>3</td>
<td>13</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>20</td>
</tr>
<tr>
<td>Microphis brachyurus</td>
<td></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>4</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>338</td>
<td>72</td>
<td>13</td>
<td>55</td>
<td>52</td>
<td>64</td>
<td>74</td>
<td>381</td>
<td>48</td>
<td>49</td>
<td>85</td>
<td>4,470</td>
<td>5,701</td>
</tr>
<tr>
<td>Micropterus salmoides</td>
<td></td>
<td>.</td>
<td>1</td>
<td>11</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Monacanthus ciliatus</td>
<td></td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>291</td>
<td>1,403</td>
<td>4,404</td>
<td>160</td>
<td>98</td>
<td>158</td>
<td>244</td>
<td>52</td>
<td>56</td>
<td>69</td>
<td>96</td>
<td>217</td>
<td>7,248</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>136</td>
<td>261</td>
<td>241</td>
<td>277</td>
<td>187</td>
<td>291</td>
<td>171</td>
<td>66</td>
<td>71</td>
<td>342</td>
<td>654</td>
<td>758</td>
<td>3,455</td>
</tr>
<tr>
<td>Mugil rubrioculus</td>
<td>3</td>
<td>1</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>8</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>5</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Mugil spp.</td>
<td>.</td>
<td>46</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>46</td>
</tr>
<tr>
<td>Mycteroperca microlepis</td>
<td></td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Notemigonus crysoleucas</td>
<td></td>
<td>.</td>
<td>.</td>
<td>5</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Oligoplites saurus</td>
<td>11</td>
<td>1</td>
<td>1</td>
<td>12</td>
<td>37</td>
<td>37</td>
<td>48</td>
<td>54</td>
<td>75</td>
<td>45</td>
<td>35</td>
<td>11</td>
<td>367</td>
</tr>
<tr>
<td>Opisthodon oglinum</td>
<td>75</td>
<td>1</td>
<td>.</td>
<td>234</td>
<td>10</td>
<td>21</td>
<td>42</td>
<td>160</td>
<td>78</td>
<td>91</td>
<td>8</td>
<td>24</td>
<td>744</td>
</tr>
<tr>
<td>Opsanus tau</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>12</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>22</td>
</tr>
<tr>
<td>Oreochromis/Sarotherodon spp.</td>
<td></td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>16</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>17</td>
</tr>
<tr>
<td>Orthopristis chrysoptera</td>
<td>11</td>
<td>37</td>
<td>24</td>
<td>275</td>
<td>77</td>
<td>179</td>
<td>620</td>
<td>30</td>
<td>21</td>
<td>18</td>
<td>29</td>
<td>139</td>
<td>1,460</td>
</tr>
<tr>
<td>Species</td>
<td>Jan</td>
<td>Feb</td>
<td>Mar</td>
<td>Apr</td>
<td>May</td>
<td>Jun</td>
<td>Jul</td>
<td>Aug</td>
<td>Sep</td>
<td>Oct</td>
<td>Nov</td>
<td>Dec</td>
<td>Totals</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>--------</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>64</td>
<td>64</td>
<td>64</td>
<td>64</td>
<td>64</td>
<td>64</td>
<td>64</td>
<td>64</td>
<td>64</td>
<td>86</td>
<td>86</td>
<td>64</td>
<td>60</td>
</tr>
<tr>
<td>Paralichthys lethostigma</td>
<td>64</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Poecilia latipinna</td>
<td>5</td>
<td>2</td>
<td>5</td>
<td>196</td>
<td>83</td>
<td>20</td>
<td>26</td>
<td>69</td>
<td>146</td>
<td>97</td>
<td>75</td>
<td>38</td>
<td>762</td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td>5</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td></td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Portunus spp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>34</td>
</tr>
<tr>
<td>Prionotus rubio</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Prionotus scitulus</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>29</td>
<td>11</td>
<td>10</td>
<td></td>
<td>2</td>
<td>1</td>
<td>4</td>
<td></td>
<td>71</td>
</tr>
<tr>
<td>Prionotus tribulus</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Rhinoptera bonasus</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Rimapenaeus constrictus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Sardinella aurita</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>64</td>
</tr>
<tr>
<td>Sarotherodon melanotheron</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>19</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>124</td>
<td>120</td>
<td>48</td>
<td>44</td>
<td>27</td>
<td>32</td>
<td>45</td>
<td>45</td>
<td>32</td>
<td>56</td>
<td>78</td>
<td>1,403</td>
<td>2,054</td>
</tr>
<tr>
<td>Scomberomorus cavalla</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Scomberomorus regalis</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Scorpaena grandicornis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Selene vomer</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>4</td>
<td></td>
<td>1</td>
<td>10</td>
<td>5</td>
<td>28</td>
</tr>
<tr>
<td>Sicyonia laevigata</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>Sicyonia parri</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Sicyonia typica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Sparisoma radians</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Sparisoma rubripinne</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>
## Appendix IR15-01. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sphoeroides nepelus</td>
<td>118</td>
<td>292</td>
<td>343</td>
<td>102</td>
<td>222</td>
<td>502</td>
<td>70</td>
<td>201</td>
<td>51</td>
<td>78</td>
<td>221</td>
<td>94</td>
<td>2,294</td>
</tr>
<tr>
<td>Sphoeroides spengleri</td>
<td>3</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>7</td>
<td>.</td>
<td>.</td>
<td>23</td>
</tr>
<tr>
<td>Sphoeroides spp.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Sphoeroides testudineus</td>
<td>10</td>
<td>24</td>
<td>9</td>
<td>8</td>
<td>2</td>
<td>5</td>
<td>7</td>
<td>17</td>
<td>34</td>
<td>7</td>
<td>10</td>
<td>5</td>
<td>138</td>
</tr>
<tr>
<td>Sphyraena barracuda</td>
<td>13</td>
<td>2</td>
<td>6</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>9</td>
<td>8</td>
<td>8</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>60</td>
</tr>
<tr>
<td>Sphyrna tiburo</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>7</td>
</tr>
<tr>
<td>Stephanolepis hispidus</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>6</td>
</tr>
<tr>
<td>Stomolophus meleagris</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Strongylura marina</td>
<td>33</td>
<td>2</td>
<td>4</td>
<td>7</td>
<td>1</td>
<td>4</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>31</td>
</tr>
<tr>
<td>Strongylura notata</td>
<td>25</td>
<td>44</td>
<td>45</td>
<td>53</td>
<td>67</td>
<td>83</td>
<td>133</td>
<td>46</td>
<td>37</td>
<td>53</td>
<td>22</td>
<td>30</td>
<td>638</td>
</tr>
<tr>
<td>Strongylura spp.</td>
<td>.</td>
<td>.</td>
<td>8</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>9</td>
</tr>
<tr>
<td>Strongylura timucu</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Symphurus plagiusa</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Syngnathus louisianae</td>
<td>6</td>
<td>.</td>
<td>7</td>
<td>4</td>
<td>18</td>
<td>12</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>9</td>
<td>4</td>
<td>76</td>
</tr>
<tr>
<td>Syngnathus scovelli</td>
<td>19</td>
<td>14</td>
<td>56</td>
<td>63</td>
<td>134</td>
<td>101</td>
<td>66</td>
<td>37</td>
<td>11</td>
<td>16</td>
<td>22</td>
<td>1</td>
<td>540</td>
</tr>
<tr>
<td>Synodus foetens</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td>16</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>23</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>.</td>
<td>4</td>
<td>.</td>
<td>14</td>
<td>.</td>
<td>11</td>
<td>17</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>16</td>
<td>2</td>
<td>74</td>
</tr>
<tr>
<td>Trinectes maculatus</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>.</td>
<td>2</td>
<td>5</td>
<td>2</td>
<td>.</td>
<td>8</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>26</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>10,407</td>
<td>14,960</td>
<td>30,376</td>
<td>17,030</td>
<td>42,924</td>
<td>60,955</td>
<td>34,258</td>
<td>34,589</td>
<td>37,010</td>
<td>39,933</td>
<td>62,778</td>
<td>17,322</td>
<td>402,542</td>
</tr>
</tbody>
</table>
Summary by gear and stratum of species collected during northern Indian River Lagoon stratified-random sampling, 2015. Sampling with 21.3-m bay seine was stratified by the presence or absence of a shoreline ('Shore' or offshore) within 5-m. Offshore sets were further stratified by the presence or absence of bottom vegetation ('Veg' or 'Unveg'). Sampling with 21.3-m river seine and 183-m haul seine was stratified by the presence or absence of overhanging vegetation ('Over' or 'Nonover'). Sampling with 6.1-m otter trawl was not stratified. Effort, or the total number of hauls, is labeled 'E'. Taxa are arranged alphabetically.

<table>
<thead>
<tr>
<th>Species</th>
<th>Gear and Strata</th>
<th>E=93</th>
<th>E=71</th>
<th>E=216</th>
<th>E=81</th>
<th>E=27</th>
<th>E=181</th>
<th>E=47</th>
<th>E=96</th>
<th>E=812</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achirus lineatus</td>
<td>Veg 21.3-m bay seine</td>
<td>16</td>
<td>8</td>
<td>65</td>
<td>12</td>
<td>1</td>
<td>28</td>
<td>12</td>
<td>23</td>
<td>165</td>
</tr>
<tr>
<td></td>
<td>Unveg 21.3-m bay seine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shore 21.3-m bay seine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agonostomus monticola</td>
<td>Over 21.3-m bay seine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nonover 21.3-m bay seine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Albula vulpes</td>
<td>Veg 21.3-m river seine</td>
<td>2</td>
<td></td>
<td>14</td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Unveg 21.3-m river seine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shore 21.3-m river seine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluterus schoepfii</td>
<td>Over 21.3-m river seine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nonover 21.3-m river seine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anchoa cubana</td>
<td>Veg 183-m haul seine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unveg 183-m haul seine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shore 183-m haul seine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>Over 183-m haul seine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nonover 183-m haul seine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anchoa hepsetus</td>
<td>Veg 6.1-m otter trawl</td>
<td>269</td>
<td>5</td>
<td>237</td>
<td>85</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>598</td>
</tr>
<tr>
<td></td>
<td>Unveg 6.1-m otter trawl</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shore 6.1-m otter trawl</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anchoa lamprotaenia</td>
<td>Veg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unveg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shore</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anchoa lyolepis</td>
<td>Veg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unveg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shore</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anchoa spp.</td>
<td>Veg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unveg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shore</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anisotremus virginicus</td>
<td>Veg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Unveg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shore</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>Veg 21.3-m river seine</td>
<td>18</td>
<td>5</td>
<td>75</td>
<td>21</td>
<td>13</td>
<td>1,519</td>
<td>403</td>
<td>69</td>
<td>2,123</td>
</tr>
<tr>
<td></td>
<td>Unveg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shore</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Archosargus rhomboidalis</td>
<td>Veg</td>
<td>8</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>30</td>
<td>31</td>
<td>2</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td>Unveg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shore</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Archosargus spp.</td>
<td>Veg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unveg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shore</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arenaeus cribrarius</td>
<td>Veg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unveg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shore</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argopeoten sp.</td>
<td>Veg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unveg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shore</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ariopsis felis</td>
<td>Veg</td>
<td>129</td>
<td>24</td>
<td>34</td>
<td>12</td>
<td></td>
<td>1,794</td>
<td>456</td>
<td>38</td>
<td>2,487</td>
</tr>
<tr>
<td></td>
<td>Unveg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shore</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atherinopsidae sp.</td>
<td>Veg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unveg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shore</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bagre marinus</td>
<td>Veg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unveg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shore</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>Veg</td>
<td>368</td>
<td>328</td>
<td>1,164</td>
<td>2</td>
<td></td>
<td>3,707</td>
<td>861</td>
<td>146</td>
<td>6,576</td>
</tr>
<tr>
<td></td>
<td>Unveg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shore</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bathygobius spp.</td>
<td>Veg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unveg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shore</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brevoortia spp.</td>
<td>Veg</td>
<td>19</td>
<td>109</td>
<td>799</td>
<td>2,135</td>
<td>293</td>
<td>18,685</td>
<td>502</td>
<td>1</td>
<td>22,543</td>
</tr>
<tr>
<td></td>
<td>Unveg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shore</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Callinectes ornatus</td>
<td>Veg</td>
<td>1</td>
<td></td>
<td>11</td>
<td></td>
<td></td>
<td>3</td>
<td>5</td>
<td></td>
<td>69</td>
</tr>
<tr>
<td></td>
<td>Unveg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shore</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>Veg</td>
<td>4</td>
<td>5</td>
<td>83</td>
<td>107</td>
<td>21</td>
<td>98</td>
<td>33</td>
<td>96</td>
<td>447</td>
</tr>
<tr>
<td></td>
<td>Unveg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shore</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Callinectes similis</td>
<td>Veg</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
<td>12</td>
<td>3</td>
<td>242</td>
<td>264</td>
</tr>
<tr>
<td></td>
<td>Unveg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shore</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Species</td>
<td>Gear and Strata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>----------------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>21.3-m bay seine</td>
<td>21.3-m river seine</td>
<td>183-m haul seine</td>
<td>6.1-m otter trawl</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Veg</td>
<td>Unveg</td>
<td>Shore</td>
<td>Over</td>
<td>Nonover</td>
<td>Over</td>
<td>Nonover</td>
<td>Over</td>
<td>Nonover</td>
<td>E=93</td>
</tr>
<tr>
<td>Callinectes spp.</td>
<td></td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Caranx hippos</td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
<td>19</td>
<td>2</td>
<td>125</td>
<td>31</td>
<td></td>
<td>181</td>
</tr>
<tr>
<td>Caranx latus</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Carcharhinus leucas</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Centropomus paralellus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td></td>
<td></td>
<td>8</td>
<td>276</td>
<td>56</td>
<td>233</td>
<td>33</td>
<td></td>
<td></td>
<td>606</td>
</tr>
<tr>
<td>Chaetodipterus faber</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>98</td>
<td>57</td>
<td>3</td>
</tr>
<tr>
<td>Charybdis hellerii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Chasmodes saburrae</td>
<td>10</td>
<td>6</td>
<td>46</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>Chilomycterus schoepfii</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>161</td>
<td>72</td>
<td>47</td>
</tr>
<tr>
<td>Chloroscombrus chrysurus</td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17</td>
<td>119</td>
<td></td>
</tr>
<tr>
<td>Cichlasoma urophthalmus</td>
<td></td>
<td></td>
<td></td>
<td>7</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citharichthys macrops</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citharichthys spiopterus</td>
<td>9</td>
<td>11</td>
<td>11</td>
<td>1</td>
<td>51</td>
<td>18</td>
<td>20</td>
<td></td>
<td></td>
<td>121</td>
</tr>
<tr>
<td>Clupeidae sp.</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ctenogobius boleosoma</td>
<td>6</td>
<td>6</td>
<td>156</td>
<td>6</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Ctenogobius pseudofasciatus</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ctenogobius shufeldti</td>
<td></td>
<td></td>
<td></td>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ctenogobius smaragdus</td>
<td>2</td>
<td>9</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ctenogobius sp.</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cynoscion complex</td>
<td>3</td>
<td>16</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>27</td>
<td>15</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>358</td>
<td>32</td>
<td>407</td>
<td>5</td>
<td></td>
<td>138</td>
<td>130</td>
<td>54</td>
<td></td>
<td>1,124</td>
</tr>
<tr>
<td>Cyprinodon variegatus</td>
<td>1</td>
<td></td>
<td>396</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dasyatis sabina</td>
<td>6</td>
<td>21</td>
<td>27</td>
<td>1</td>
<td>789</td>
<td>286</td>
<td>40</td>
<td></td>
<td></td>
<td>1,170</td>
</tr>
<tr>
<td>Dasyatis say</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td></td>
<td>252</td>
<td>48</td>
<td>8</td>
<td></td>
<td></td>
<td>316</td>
</tr>
<tr>
<td>Diapterus auratus</td>
<td>463</td>
<td>752</td>
<td>2,333</td>
<td>4,244</td>
<td>1,084</td>
<td>5,515</td>
<td>1,265</td>
<td>383</td>
<td>16,039</td>
<td></td>
</tr>
<tr>
<td>Diapterus rhombeus</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diapterus spp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>186</td>
<td></td>
<td></td>
<td>186</td>
</tr>
<tr>
<td>Diploplus holbrookii</td>
<td></td>
<td></td>
<td>76</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dormitator maculatus</td>
<td></td>
<td></td>
<td></td>
<td>25</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eleotris amblyopsis</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Species</td>
<td>Gear and Strata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>21.3-m bay seine</td>
<td>21.3-m river seine</td>
<td>183-m haul seine</td>
<td>6.1-m otter trawl</td>
<td>Totals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Veg</td>
<td>Unveg</td>
<td>Shore</td>
<td>Over</td>
<td>Nonover</td>
<td>Over</td>
<td>Nonover</td>
<td>Over</td>
<td>Nonover</td>
<td></td>
</tr>
<tr>
<td>Elops saurus</td>
<td></td>
<td>.</td>
<td>8</td>
<td>83</td>
<td>1</td>
<td>430</td>
<td>96</td>
<td>1</td>
<td>619</td>
<td></td>
</tr>
<tr>
<td>Elops smithi</td>
<td></td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Elops spp.</td>
<td>2</td>
<td>2</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Epinephelus itajara</td>
<td></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Etropus crossoptus</td>
<td></td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Eucinostomus argenteus</td>
<td>3</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>9</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Eucinostomus gula</td>
<td>399</td>
<td>99</td>
<td>1,000</td>
<td>20</td>
<td>81</td>
<td>1,485</td>
<td>267</td>
<td>362</td>
<td>3,713</td>
<td></td>
</tr>
<tr>
<td>Eucinostomus harengulus</td>
<td>339</td>
<td>21</td>
<td>1,364</td>
<td>923</td>
<td>435</td>
<td>1,767</td>
<td>603</td>
<td>9</td>
<td>5,461</td>
<td></td>
</tr>
<tr>
<td>Eucinostomus jonesii</td>
<td>21</td>
<td>.</td>
<td>39</td>
<td>2</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td>1,908</td>
<td>837</td>
<td>5,255</td>
<td>6,539</td>
<td>1,179</td>
<td>1</td>
<td>.</td>
<td>844</td>
<td>16,563</td>
<td></td>
</tr>
<tr>
<td>Eugerres plumieri</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>655</td>
<td>136</td>
<td>5</td>
<td>1</td>
<td>.</td>
<td>800</td>
<td></td>
</tr>
<tr>
<td>Evorthodus lyricus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>78</td>
<td>5</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>83</td>
<td></td>
</tr>
<tr>
<td>Farfantepenaeus aztecs</td>
<td>5</td>
<td>1</td>
<td>12</td>
<td>5</td>
<td>.</td>
<td>4</td>
<td>4</td>
<td>25</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>4</td>
<td>.</td>
<td>10</td>
<td>1</td>
<td>1</td>
<td>7</td>
<td>1</td>
<td>16</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Farfantepenaeus spp.</td>
<td>370</td>
<td>67</td>
<td>925</td>
<td>277</td>
<td>287</td>
<td>21</td>
<td>.</td>
<td>375</td>
<td>2,322</td>
<td></td>
</tr>
<tr>
<td>Floridichthys carpio</td>
<td>132</td>
<td>68</td>
<td>1,883</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>2,084</td>
<td></td>
</tr>
<tr>
<td>Fundulus grandis</td>
<td>.</td>
<td>.</td>
<td>7</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Fundulus seminaris</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>6</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Gambusia holbrooki</td>
<td>1</td>
<td>.</td>
<td>4</td>
<td>437</td>
<td>1,515</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1,957</td>
<td></td>
</tr>
<tr>
<td>Gerreidae sp.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Gerres cinereus</td>
<td>.</td>
<td>.</td>
<td>26</td>
<td>9</td>
<td>.</td>
<td>34</td>
<td>5</td>
<td>.</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td>Gobiesox crumosus</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Gobiomorus dormitor</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Gobionellus oceanicus</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>24</td>
<td>2</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>Gobiosoma bosc</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>19</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Gobiosoma robustum</td>
<td>254</td>
<td>65</td>
<td>234</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>612</td>
<td>1,165</td>
<td></td>
</tr>
<tr>
<td>Gobiosoma spp.</td>
<td>356</td>
<td>79</td>
<td>319</td>
<td>103</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>910</td>
<td></td>
</tr>
<tr>
<td>Gymnura micrura</td>
<td>.</td>
<td>2</td>
<td>6</td>
<td>.</td>
<td>.</td>
<td>41</td>
<td>24</td>
<td>3</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>Haemulon parra</td>
<td>5</td>
<td>.</td>
<td>7</td>
<td>.</td>
<td>24</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>Haemulon plumierii</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Haemulon sciurus</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>
## Appendix IR15-02.  (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Gear and Strata</th>
<th>21.3-m bay seine</th>
<th>21.3-m river seine</th>
<th>183-m haul seine</th>
<th>6.1-m otter trawl</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Veg</td>
<td>Unveg</td>
<td>Shore</td>
<td>Over</td>
<td>Nonover</td>
<td>Over</td>
</tr>
<tr>
<td>Harengula jaguana</td>
<td>434</td>
<td>137</td>
<td>3,596</td>
<td>102</td>
<td>.</td>
<td>439</td>
</tr>
<tr>
<td>Hemichromis letourneuxi</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Heterandria formosa</td>
<td>.</td>
<td>.</td>
<td>10</td>
<td>59</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Hippocampus erectus</td>
<td>1</td>
<td>6</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Hippocampus zosterae</td>
<td>8</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Hyporhamphus meeki</td>
<td>.</td>
<td>9</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>6</td>
</tr>
<tr>
<td>Hyporhamphus spp.</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Labidesthes sicculus</td>
<td>.</td>
<td>.</td>
<td>56</td>
<td>212</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Labridae sp.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Labrisomus nuchipinnis</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Lachnolaimus maximus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lactophrys trigonus</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>4</td>
<td>.</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>535</td>
<td>23</td>
<td>1,809</td>
<td>154</td>
<td>193</td>
<td>5,495</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>259</td>
<td>110</td>
<td>1,801</td>
<td>347</td>
<td>27</td>
<td>1,099</td>
</tr>
<tr>
<td>Lepisosteus osseus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lepisosteus platyrhincus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lepomis auritus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lepomis gulosus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>6</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lepomis macrochirus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>24</td>
<td>64</td>
<td>.</td>
</tr>
<tr>
<td>Lepomis microlophus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>8</td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td>Lepomis spp.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>7</td>
<td>12</td>
<td>.</td>
</tr>
<tr>
<td>Limulus polyphemus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>21</td>
<td>4</td>
</tr>
<tr>
<td>Litopenaeus setiferus</td>
<td>4</td>
<td>307</td>
<td>23</td>
<td>1</td>
<td>4</td>
<td>.</td>
</tr>
<tr>
<td>Lobotes surinamensis</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Lophogobius cyprinoides</td>
<td>.</td>
<td>.</td>
<td>121</td>
<td>92</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lucania goodei</td>
<td>.</td>
<td>.</td>
<td>14</td>
<td>22</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lucania parva</td>
<td>920</td>
<td>5</td>
<td>2,262</td>
<td>70</td>
<td>34</td>
<td>.</td>
</tr>
<tr>
<td>Lutjanus analis</td>
<td>18</td>
<td>1</td>
<td>5</td>
<td>.</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>20</td>
<td>1</td>
<td>43</td>
<td>24</td>
<td>5</td>
<td>130</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>5</td>
<td>.</td>
<td>.</td>
<td>7</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Megalops atlanticus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>14</td>
<td>10</td>
<td>.</td>
</tr>
<tr>
<td>Membras martinica</td>
<td>14</td>
<td>12</td>
<td>65</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Species</td>
<td>Gear and Strata</td>
<td>6.1-m otter trawl</td>
<td>Totals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>----------------</td>
<td>-------------------</td>
<td>--------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>21.3-m bay seine</td>
<td>21.3-m river seine</td>
<td>183-m haul seine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Veg</td>
<td>Unveg</td>
<td>Shore</td>
<td>Over</td>
<td>Nonover</td>
<td>Over</td>
</tr>
<tr>
<td>Menidia spp.</td>
<td>637</td>
<td>128</td>
<td>5,348</td>
<td>387</td>
<td>131</td>
<td>.</td>
</tr>
<tr>
<td>Menippe spp.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>10</td>
<td>43</td>
<td>150</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Microgobius gulosus</td>
<td>692</td>
<td>177</td>
<td>1,686</td>
<td>66</td>
<td>17</td>
<td>.</td>
</tr>
<tr>
<td>Microgobius microlepis</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Microgobius thalassinus</td>
<td>1</td>
<td>4</td>
<td>11</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Microphis brachyurus</td>
<td>.</td>
<td>.</td>
<td>4</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>604</td>
<td>13</td>
<td>4,013</td>
<td>54</td>
<td>.</td>
<td>199</td>
</tr>
<tr>
<td>Micropterus salmoides</td>
<td>.</td>
<td>.</td>
<td>11</td>
<td>2</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Monacanthus ciliatus</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>249</td>
<td>501</td>
<td>4,825</td>
<td>115</td>
<td>121</td>
<td>943</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>27</td>
<td>19</td>
<td>339</td>
<td>56</td>
<td>25</td>
<td>2,514</td>
</tr>
<tr>
<td>Mugil rubrioculus</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>2</td>
<td>.</td>
<td>19</td>
</tr>
<tr>
<td>Mugil spp.</td>
<td>.</td>
<td>.</td>
<td>45</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Mycteroperca microlepis</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Notemigonus crysoleucas</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>5</td>
</tr>
<tr>
<td>Oligoplites saurus</td>
<td>32</td>
<td>17</td>
<td>153</td>
<td>5</td>
<td>2</td>
<td>119</td>
</tr>
<tr>
<td>Opisthonema oglinum</td>
<td>12</td>
<td>43</td>
<td>257</td>
<td>.</td>
<td>.</td>
<td>268</td>
</tr>
<tr>
<td>Opsanus tau</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Oreochromis/Sarotherodon spp.</td>
<td>.</td>
<td>.</td>
<td>16</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Orthopristis chrysoptera</td>
<td>38</td>
<td>1</td>
<td>318</td>
<td>2</td>
<td>.</td>
<td>828</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>22</td>
</tr>
<tr>
<td>Paralichthys lethostigma</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>5</td>
</tr>
<tr>
<td>Poecilia latipinna</td>
<td>.</td>
<td>.</td>
<td>172</td>
<td>24</td>
<td>28</td>
<td>.</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>10</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>719</td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>9</td>
</tr>
<tr>
<td>Portunus spp.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Prionotus rubio</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Prionotus scitulus</td>
<td>.</td>
<td>5</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>27</td>
</tr>
<tr>
<td>Prionotus tribulus</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Rhinoptera bonasus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Rimapenaeus constrictus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>
Appendix IR15-02. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Gear and Strata</th>
<th>21.3-m bay seine</th>
<th>21.3-m river seine</th>
<th>183-m haul seine</th>
<th>6.1-m otter trawl</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Veg (E=93) Unveg (E=71) Shore (E=216) Over (E=81) Nonover (E=27) 183-m haul Over (E=181) Nonover (E=47) E=96 E=812</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sardinella aurita</td>
<td>. . 36 . . . . . . 28 . . 64</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sarotherodon melanotheron</td>
<td>. . . . . . 19 . . . . 19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>8 40 1,449 34 40 412 60 11 2,054</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scomberomorus cavalla</td>
<td>. . . . . . 1 . . . . 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td>. . 8 . . . . . . 1 . . 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scomberomorus regalis</td>
<td>. . . . . . 2 . . . . 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scorpæna grandicornis</td>
<td>. . . . . . 1 . . . . 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selene vomer</td>
<td>. . 2 . . . . 21 4 1 28</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sicyonia laevigata</td>
<td>. . 9 . . . . . . 2 . . 11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sicyonia parri</td>
<td>. . . . . . . . . . 1 . . 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sicyonia typica</td>
<td>. . . . . . . . . . 1 . . 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sparisoma radians</td>
<td>. . 1 . . . . . . . . 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sparisoma rubripinne</td>
<td>. . . . . . 1 . . . . 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sphoeroides nepilus</td>
<td>36 26 45 1 . 1,725 409 52 2,294</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sphoeroides spengleri</td>
<td>. . 2 . . . . 9 7 5 23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sphoeroides spp.</td>
<td>. . 2 . . . . . . . . 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sphoeroides testudineus</td>
<td>4 . 22 9 . 4 85 13 1 138</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sphyraena barracuda</td>
<td>1 . 2 4 9 37 7 . 60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sphyrna tiburo</td>
<td>. 1 . . . . 3 3 . 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stephanolepis hispidus</td>
<td>1 . 2 . . . . 1 . . 6 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stomolophus meleagris</td>
<td>. . . . . . . . . . 1 . . 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongylura marina</td>
<td>3 . 2 . . . . 73 5 . 83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongylura notata</td>
<td>20 45 357 3 11 175 27 . 638</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongylura spp.</td>
<td>. . 9 . . . . . . . . 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongylura timucu</td>
<td>. . . 1 . . . . . . . 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symphurus plagiusa</td>
<td>. . 1 . . 1 5 1 2 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syngnathus louisianae</td>
<td>28 6 12 . . . . 6 24 76</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syngnathus scovelli</td>
<td>115 16 95 2 . . . 312 540</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Synodus foetens</td>
<td>. . 3 . . . . 5 . . 3 11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td>. . 3 . . . . 20 . . 23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>. . 28 4 5 19 18 . 74</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trinectes maculatus</td>
<td>. . 1 21 2 1 . . 1 26</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>22,538 23,524 223,680 42,900 10,653 52,982 10,195 16,070 402,542</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix IR15-03. Summary by zone of species collected during northern Indian River Lagoon stratified-random sampling, 2015. Zones A-C and H were located in the Indian River; Zones D-E encompassed the Banana River; and Zone F encompassed the lower Sebastian River and Turkey Creek. Effort, or the total number of hauls, is labeled ‘E’. Taxa are arranged alphabetically.

<table>
<thead>
<tr>
<th>Species</th>
<th>Zone</th>
<th>Totals</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
<td>H</td>
<td>F</td>
<td>E=16</td>
</tr>
<tr>
<td>Achirus lineatus</td>
<td>8</td>
<td>4</td>
<td>52</td>
<td>10</td>
<td>5</td>
<td>73</td>
<td>13</td>
<td>165</td>
</tr>
<tr>
<td>Agonostomus monticola</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td>7</td>
<td>22</td>
</tr>
<tr>
<td>Albula vulpes</td>
<td></td>
<td></td>
<td>9</td>
<td>1</td>
<td>1</td>
<td>10</td>
<td></td>
<td>21</td>
</tr>
<tr>
<td>Aluterus schoepfii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Anchoa cubana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Anchoa hepsetus</td>
<td></td>
<td></td>
<td>213</td>
<td>1</td>
<td></td>
<td>300</td>
<td>85</td>
<td>598</td>
</tr>
<tr>
<td>Anchoa lamprotaenia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Anchoa lyolepis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>280</td>
<td>2</td>
<td>282</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>1,417</td>
<td>1,336</td>
<td>131,749</td>
<td>10,756</td>
<td>17,860</td>
<td>53,664</td>
<td>29,288</td>
<td>246,070</td>
</tr>
<tr>
<td>Anchoa spp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Anisotremus virginicus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td></td>
<td>1</td>
<td>345</td>
<td>1,231</td>
<td>143</td>
<td>369</td>
<td>34</td>
<td>2,123</td>
</tr>
<tr>
<td>Archosargus rhombo dalis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>72</td>
<td></td>
<td>72</td>
</tr>
<tr>
<td>Archosargus spp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Arenaeus crib rarius</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Argopecten sp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Ariopsis felis</td>
<td>16</td>
<td>10</td>
<td>458</td>
<td>722</td>
<td>821</td>
<td>448</td>
<td>12</td>
<td>2,487</td>
</tr>
<tr>
<td>Atherinopsidae sp.</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Bagre marinus</td>
<td></td>
<td>7</td>
<td></td>
<td>1</td>
<td></td>
<td>5</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>64</td>
<td>8</td>
<td>2,428</td>
<td>240</td>
<td>3,448</td>
<td>386</td>
<td>2</td>
<td>6,576</td>
</tr>
<tr>
<td>Bathygobius spp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Brevoortia spp.</td>
<td></td>
<td>19,234</td>
<td>66</td>
<td>3</td>
<td>812</td>
<td>2,428</td>
<td>22,543</td>
<td></td>
</tr>
<tr>
<td>Callinectes ornatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>86</td>
<td>3</td>
<td>89</td>
<td></td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td></td>
<td>87</td>
<td>3</td>
<td>1</td>
<td>228</td>
<td>128</td>
<td>447</td>
<td></td>
</tr>
<tr>
<td>Callinectes similis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>264</td>
<td>264</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Callinectes spp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caranx hippos</td>
<td></td>
<td>9</td>
<td>59</td>
<td>4</td>
<td>88</td>
<td>21</td>
<td>181</td>
<td></td>
</tr>
<tr>
<td>Caranx latus</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>14</td>
<td></td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>
### Appendix IR15-03. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Zone</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Carcharhinus leucas</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Centropomus parallelus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Chaetodipterus faber</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Charybdis helleri</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Chasmodes saburrae</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Chilomycterus schoepfii</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Chloroscombrus chrysuraus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Cichlasoma urophthalmus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Citharichthys macrops</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Citharichthys spilopterus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Clupeidae sp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ctenogobius boleosoma</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ctenogobius pseudofasciatus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ctenogobius shufeldti</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ctenogobius smaragdus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ctenogobius sp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Cynoscion complex</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>47</td>
<td>35</td>
</tr>
<tr>
<td>Cyprinodon variegatus</td>
<td>6</td>
<td>.</td>
</tr>
<tr>
<td>Dasyatis sabina</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Dasyatis say</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Diapterus auratus</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>Diapterus rhombeus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Diapterus spp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Diplodus holbrookii</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Dormitator maculatus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Eleotris amblyopsis</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td>Elops smithi</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Elops spp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Epinephelus itajara</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Etopus crossotus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Species</td>
<td>Zone</td>
<td>Total</td>
</tr>
<tr>
<td>--------------------------</td>
<td>------</td>
<td>-------</td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>E=16</td>
<td>E=14</td>
</tr>
<tr>
<td>Eucinostomus argenteus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Eucinostomus gula</td>
<td>.</td>
<td>6</td>
</tr>
<tr>
<td>Eucinostomus harengulus</td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td>Eucinostomus jonesii</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td>4</td>
<td>36</td>
</tr>
<tr>
<td>Eucinichthys carpio</td>
<td>10</td>
<td>165</td>
</tr>
<tr>
<td>Fundulus grandis</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Fundulus seminolus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Gambusia holbrooki</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Gerreidae sp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Gerres cinereus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Gobiesox strimusus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Gobiomorus dormitor</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Gobionellus oceanicus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Gobiosoma bosc</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Gobiosoma robustum</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Gobiosoma spp.</td>
<td>45</td>
<td>36</td>
</tr>
<tr>
<td>Gymnura micrura</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Haemulon parra</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Haemulon plumieri</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Haemulon sciurus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Harengula jaguana</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Hemichromis letoumeuxi</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Heterandria formosa</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Hippocampus erectus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Hippocampus zosterae</td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td>Hyporhamphus meeki</td>
<td>.</td>
<td>2</td>
</tr>
</tbody>
</table>
### Appendix IR15-03. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Zone</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Hyporhamphus spp.</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>Labidesthes sicculus</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>Labridae sp.</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>Labrisomus nuchipinnis</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>Lachnolaimus maximus</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>Lactophrys trigonus</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Leostomus xanthurus</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Lepisosteus osseus</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>Lepisosteus platyrhincus</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>Lepomis auritus</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>Lepomis gulosus</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>Lepomis macrochirus</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>Lepomis microlophus</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>Lepomis spp.</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>Limulus polyphemus</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>Litopenaeus setiferus</td>
<td>41</td>
<td>2</td>
</tr>
<tr>
<td>Lobotes surinamensis</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>Lophogobius cyprinoides</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>Lucania goodei</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>Lucania parva</td>
<td>457</td>
<td>96</td>
</tr>
<tr>
<td>Lutjanus analis</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>Megalops atlanticus</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>Membras martinica</td>
<td>7</td>
<td>.</td>
</tr>
<tr>
<td>Menidia spp.</td>
<td>159</td>
<td>111</td>
</tr>
<tr>
<td>Menippe spp.</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td>Microgobius gulosus</td>
<td>179</td>
<td>289</td>
</tr>
<tr>
<td>Microgobius microlepis</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>Microgobius thalassinus</td>
<td>.</td>
<td></td>
</tr>
<tr>
<td>Microphis brachyurus</td>
<td>.</td>
<td></td>
</tr>
</tbody>
</table>
## Appendix IR15-03. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Zone</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Micropterus salmoides</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Monacanthus ciliatus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>7</td>
<td>28</td>
</tr>
<tr>
<td>Mugil rubrioculus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Mugil spp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Mycteroperca microlepis</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Notemigonus crysoleucus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Oligopiltes saurus</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Opisthonema oglinum</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Opsanus tau</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Oreochromis/Sarotherodon spp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Orthopristis chrysoptera</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Paralichthys lethostigma</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Poecilia latipinna</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Portunus spp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Prionotus rubio</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Prionotus scitulus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Prionotus tribulus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Rhinoptera bonasus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Rimapenaeus constrictus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sardinella aurita</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sarotherodon melanotheron</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Scomberomorus cavalla</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Scomberomorus regalis</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Scorpaena grandicornis</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Selene vomer</td>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>
### Appendix IR15-03. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Zone</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>E=16</td>
<td>E=14</td>
</tr>
<tr>
<td><strong>Species</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sicyonia laevigata</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sicyonia parri</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sicyonia typica</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sparisoma radians</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sparisoma rubripinne</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sphoeroides nephepus</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Sphoeroides spengleri</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sphoeroides spp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sphoeroides testudineus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sphyraena barracuda</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sphyra tiburo</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Stephanolepis hispidus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Stomolophus meleagris</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Strongylura marina</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Strongylura notata</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Strongylura spp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Strongylura timucu</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Symphurus plagiusa</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Syngnathus louisianae</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Syngnathus scovelli</td>
<td>23</td>
<td>4</td>
</tr>
<tr>
<td>Synodus foetens</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Trinectes maculatus</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>2,618</td>
<td>2,265</td>
</tr>
</tbody>
</table>
Cedar Key

Cedar Key is in the Suwannee River estuary, an open system located along the Gulf Coast of Florida within the area known as the Big Bend. Freshwater inflow into the estuary comes primarily from the Suwannee River with additional input from many fringing marsh tidal creeks (Lindberg et al. 1992). The shoreline consists largely of marsh grasses, oyster bars, and mud flats. Seagrass meadows primarily occur in the southern portions of the estuary (Tuckey and Dehaven 2006).

The Fisheries-Independent Monitoring (FIM) program has conducted intensive sampling in the Cedar Key area since 1996. The area sampled was divided into two geographically-defined bay zones (B and C) and one riverine zone (F; Figure CK15-01). Monthly stratified-random sampling (SRS) was conducted in Zones B and C using 21.3-m bay seines, 183-m haul seines, and 6.1-m bay otter trawls. Tidal creeks in Zone B were sampled using 21.3-m river seines. Monthly SRS was conducted in Zone F with 21.3-m river seines and 6.1-m river otter trawls. All methods were the same as those described in the Methods section of this report. This section summarizes data collected by the FIM program during 2015 in the Cedar Key area.

Stratified-Random Sampling

A total of 74,549 animals, which included 147 taxa of fishes and 11 taxa of selected invertebrates, were collected from 792 Cedar Key SRS samples in 2015 (Table CK15-01; Appendices CK15-01 and -02). Anchoa mitchilli (n=23,310) and Lagodon rhomboides (n=11,633) were the most numerous taxa collected, representing 46.9% of the total catch. Menidia spp. (n=3,299) and Bairdiella chrysoura (n=3,034) were the next most abundant taxa collected, accounting for an additional 8.5% of the total catch. Twenty-six Selected Taxa (n=13,497 animals) composed 18.1% of the total catch. Cynoscion arenarius (n=2,796), Mugil cephalus (n=2,369), and Leiostomus xanthurus (n=2,168) were the most abundant Selected Taxa, representing 9.8% of the annual catch. Collections in 2015 included four species new to the Cedar Key FIM collection: Aphredoderus sayanus (Pirate Perch), Dactyloscopus moorei (Speckled Stargazer), Hoplosternum littorale (Brown Hoplo), and Lagocephalus laevigatus (Smooth Puffer).
Bay Sampling

21.3-m Bay Seine. A total of 20,278 animals were collected in 252 21.3-m bay seines, representing 27.2% of the overall SRS catch (Table CK15-01). *Anchoa mitchilli* (n=9,519) was the most abundant taxon, accounting for 46.9% of the 21.3-m bay seine catch (Table CK15-02). The taxa most frequently caught in 21.3-m bay seines were *L. rhomboides* (45.6% occurrence) and *A. mitchilli* (33.7% occurrence).

A total of 1,932 animals from 23 Selected Taxa were collected, representing 9.5% of the entire 21.3-m bay seine catch (Table CK15-03). *Mugil cephalus* (n=555), *Farfantepenaeus* spp. (n=369), and *L. xanthurus* (n=364) were the most abundant Selected Taxa, accounting for 66.7% of the Selected Taxa collected by this gear. The Selected Taxa most frequently caught in 21.3-m bay seines were *Callinectes sapidus* (23.4% occurrence) and *Farfantepenaeus* spp. (22.2% occurrence).

183-m Haul Seine. A total of 20,328 animals were collected in 192 183-m haul seines, representing 27.3% of the overall SRS catch (Table CK15-01). *Lagodon rhomboides* (n=9,418), *L. xanthurus* (n=1,435), *M. cephalus* (n=1,297), and *Dasyatis sabina* (n=1,238) were the most abundant taxa, accounting for 65.9% of the 183-m haul seine catch (Table CK15-04). The taxa most frequently caught in 183-m haul seines were *L. rhomboides* (75.0% occurrence), *M. cephalus* (68.2% occurrence), and *D. sabina* (64.6% occurrence).

A total of 4,888 animals from 26 Selected Taxa were collected, representing 24.1% of the entire 183-m haul seine catch (Table CK15-05). *Leiostomus xanthurus* (n=1,435) and *M. cephalus* (n=1,297) were the most abundant Selected Taxa, accounting for 55.9% of the Selected Taxa collected by this gear. The Selected Taxa most frequently caught in 183-m haul seines were *M. cephalus* (68.2% occurrence), *Sciaenops ocellatus* (45.8% occurrence), and *L. xanthurus* (45.3% occurrence).

6.1-m Bay Otter Trawl. A total of 13,142 animals were collected in 120 6.1-m bay otter trawls, representing 17.6% of the overall SRS catch (Table CK15-01). *Cynoscion arenarius* (n=2,567), *A. mitchilli* (n=1,545), and *Portunus* spp. (n=1,386) were the most abundant taxa, accounting for 41.8% of the 6.1-m bay otter trawl catch (Table CK15-06). The taxa most frequently caught in 6.1-m bay otter trawls were *Portunus* spp. (59.2% occurrence).
occurrence), *Etropus crossoptus* (59.2% occurrence), and *Prionotus scitulus* (55.8% occurrence).

A total of 5,064 animals from 13 Selected Taxa were collected, representing 38.5% of the entire 6.1-m bay otter trawl catch (Table CK15-07). *Cynoscion arenarius* (n=2,567) was the most abundant Selected Taxon, accounting for 50.7% of the Selected Taxa collected by this gear. The Selected Taxa most frequently caught in 6.1-m bay otter trawls were *Menticirrhus americanus*, *Farfantepenaeus duorarum*, and *Menippe* spp. (all 35.0% occurrence).

**River Sampling**

**Tidal Creeks**

21.3-m River Seines. A total of 10,114 animals were collected in 108 21.3-m river seines conducted in tidal creeks, representing 13.6% of the overall SRS catch (Table CK15-01). *Anchoa mitchilli* (n=5,244) was the most abundant taxon collected, accounting for 51.9% of the total 21.3-m river seine catch in tidal creeks (Table CK15-08). The taxa most frequently caught in 21.3-m river seines conducted in tidal creeks were *Menidia* spp. (61.1% occurrence) and *A. mitchilli* (50.0% occurrence).

A total of 953 animals from 14 Selected Taxa were collected, representing 9.4% of the entire 21.3-m river seine catch in tidal creeks (Table CK15-09). *Mugil cephalus* (n=470), *L. xanthurus* (n=225), and *C. sapidus* (n=123) were the most abundant Selected Taxa, accounting for 85.8% of the Selected Taxa collected by this gear. The Selected Taxa most frequently caught in 21.3-m river seines conducted in tidal creeks were *C. sapidus* (31.5% occurrence) and *L. xanthurus* (25.0% occurrence).

**Lower Suwannee River**

21.3-m River Seines. A total of 8,820 animals were collected in 60 21.3-m river seine samples conducted in the Lower Suwannee River (LSR), representing 11.8% of the overall SRS catch (Table CK15-01). *Anchoa mitchilli* (n=6,477) was the most abundant taxon collected, accounting for 73.4% of the total 21.3-m river seine catch in the LSR.
The taxa most frequently caught in 21.3-m river seines conducted in the LSR were *C. sapidus* (40.0% occurrence), *L. rhomboïdes* and *Fundulus seminolis* (both 35.0% occurrence), *Eucinostomus* spp. (31.7% occurrence), and *Trinectes maculatus* (30.0% occurrence).

A total of 433 animals from eight Selected Taxa were collected, representing 4.9% of the entire 21.3-m river seine catch in the LSR (Table CK15-11). *Callinectes sapidus* (n=132) was the most abundant Selected Taxon, accounting for 30.5% of the Selected Taxa collected by this gear. The Selected Taxon most frequently caught in 21.3-m river seines conducted in the LSR was *C. sapidus* (40.0% occurrence).

6.1-m River Otter Trawl. A total of 1,867 animals were collected in 60 6.1-m river otter trawl samples conducted in the LSR, representing 2.5% of the overall SRS catch (Table CK15-01). *Anchoa mitchilli* (n=525) and *Eucinostomus* spp. (n=418) were the most abundant taxa collected, accounting for 50.5% of the 6.1-m river otter trawl catch (Table CK15-12). The taxa most frequently caught in 6.1-m river otter trawls conducted in the LSR were *C. sapidus* and *T. maculatus* (both 38.3% occurrence).

A total of 227 animals from eight Selected Taxa were collected, representing 12.2% of the entire 6.1-m river otter trawl catch in the LSR (Table CK15-13). *Callinectes sapidus* (n=106), *C. arenarius* (n=62), and *L. xanthurus* (n=33) were the most abundant Selected Taxa, accounting for 88.5% of the Selected Taxa captured by this gear. The Selected Taxa most frequently caught in 6.1-m river otter trawls conducted in the LSR were *C. sapidus* (38.3% occurrence) and *C. arenarius* (20.0% occurrence).
References


Figure CK15-01. Map of Cedar Key sampling area. Zones are labeled B, C, and F. Grids containing portions of Zones B and F are labeled B/F.
Table CK15-01. Summary of catch and effort data for Cedar Key stratified-random sampling, 2015.

<table>
<thead>
<tr>
<th>Zone</th>
<th>21.3-m bay seine</th>
<th>21.3-m river seine</th>
<th>183-m haul seine</th>
<th>6.1-m otter trawl</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Animals</td>
<td>Hauls</td>
<td>Animals</td>
<td>Hauls</td>
<td>Animals</td>
</tr>
<tr>
<td>B</td>
<td>8,986</td>
<td>120</td>
<td>10,114</td>
<td>108</td>
<td>7,759</td>
</tr>
<tr>
<td>C</td>
<td>11,292</td>
<td>132</td>
<td>.</td>
<td>.</td>
<td>12,569</td>
</tr>
<tr>
<td>F</td>
<td>.</td>
<td>.</td>
<td>8,820</td>
<td>60</td>
<td>.</td>
</tr>
<tr>
<td>Totals</td>
<td>20,278</td>
<td>252</td>
<td>18,934</td>
<td>168</td>
<td>20,328</td>
</tr>
</tbody>
</table>
Table CK15-02. Catch statistics for 10 dominant taxa collected in 252 21.3-m bay seine samples during Cedar Key stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td></td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>9,519</td>
<td>46.9</td>
<td>33.7</td>
<td>26.98</td>
<td>7.90</td>
</tr>
<tr>
<td>Menidia spp.</td>
<td>2,040</td>
<td>10.1</td>
<td>23.4</td>
<td>5.78</td>
<td>1.75</td>
</tr>
<tr>
<td>Harengula jaguana</td>
<td>1,480</td>
<td>7.3</td>
<td>11.1</td>
<td>4.20</td>
<td>1.56</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>1,227</td>
<td>6.1</td>
<td>45.6</td>
<td>3.48</td>
<td>0.80</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>555</td>
<td>2.7</td>
<td>12.3</td>
<td>1.57</td>
<td>0.79</td>
</tr>
<tr>
<td>Ariopsis felis</td>
<td>521</td>
<td>2.6</td>
<td>9.5</td>
<td>1.48</td>
<td>1.03</td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td>476</td>
<td>2.4</td>
<td>19.4</td>
<td>1.35</td>
<td>0.33</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>425</td>
<td>2.1</td>
<td>14.7</td>
<td>1.20</td>
<td>0.36</td>
</tr>
<tr>
<td>Anchoa hepsetus</td>
<td>417</td>
<td>2.1</td>
<td>14.7</td>
<td>1.18</td>
<td>0.57</td>
</tr>
<tr>
<td>Membras martinica</td>
<td>398</td>
<td>2.0</td>
<td>18.7</td>
<td>1.13</td>
<td>0.29</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>17,058</td>
<td>84.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>20,278</td>
<td>100.0</td>
<td>57.48</td>
<td>8.84</td>
<td>244.05</td>
</tr>
</tbody>
</table>

CK-8
Table CK15-03. Catch statistics for Selected Taxa collected in 252 21.3-m bay seine samples during Cedar Key stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
<td>CV</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>555</td>
<td>2.7</td>
<td>12.3</td>
<td>1.57</td>
<td>0.79</td>
</tr>
<tr>
<td>Farfantepenaeus spp.</td>
<td>369</td>
<td>1.8</td>
<td>22.2</td>
<td>1.05</td>
<td>0.29</td>
</tr>
<tr>
<td>Leio stomus xanthurus</td>
<td>364</td>
<td>1.8</td>
<td>15.1</td>
<td>1.03</td>
<td>0.29</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>212</td>
<td>1.1</td>
<td>15.1</td>
<td>0.60</td>
<td>0.20</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>126</td>
<td>0.6</td>
<td>23.4</td>
<td>0.36</td>
<td>0.06</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>59</td>
<td>0.3</td>
<td>11.5</td>
<td>0.17</td>
<td>0.04</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>57</td>
<td>0.3</td>
<td>6.7</td>
<td>0.16</td>
<td>0.05</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>49</td>
<td>0.2</td>
<td>9.9</td>
<td>0.14</td>
<td>0.04</td>
</tr>
<tr>
<td>Mugil trichodon</td>
<td>24</td>
<td>0.1</td>
<td>1.2</td>
<td>0.07</td>
<td>0.06</td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td>23</td>
<td>0.1</td>
<td>0.8</td>
<td>0.07</td>
<td>0.06</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>22</td>
<td>0.1</td>
<td>6.0</td>
<td>0.06</td>
<td>0.02</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>17</td>
<td>0.1</td>
<td>4.8</td>
<td>0.05</td>
<td>0.02</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>14</td>
<td>0.1</td>
<td>1.2</td>
<td>0.04</td>
<td>0.03</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>8</td>
<td>&lt;0.1</td>
<td>1.2</td>
<td>0.02</td>
<td>0.02</td>
</tr>
<tr>
<td>Menticirrhus saxatilis</td>
<td>6</td>
<td>&lt;0.1</td>
<td>2.0</td>
<td>0.02</td>
<td>0.01</td>
</tr>
<tr>
<td>Menippe spp.</td>
<td>5</td>
<td>&lt;0.1</td>
<td>2.0</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Mycteroperca microlepis</td>
<td>5</td>
<td>&lt;0.1</td>
<td>1.2</td>
<td>0.01</td>
<td>0.01</td>
</tr>
</tbody>
</table>
### Table CK15-03. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Number No.</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mean   Stderr  CV   Max</td>
<td>Mean   Stderr  Min</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>4</td>
<td>&lt;0.1</td>
<td>1.6</td>
<td>0.01   0.01  788.97   0.71</td>
<td>118     39.88  21  185</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>3</td>
<td>&lt;0.1</td>
<td>0.8</td>
<td>0.01   0.01  1,181.33  1.43</td>
<td>291     58.67  231 408</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>3</td>
<td>&lt;0.1</td>
<td>0.8</td>
<td>0.01   0.01  1,181.33  1.43</td>
<td>152     4.16   144 158</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>3</td>
<td>&lt;0.1</td>
<td>0.4</td>
<td>0.01   0.01  1,587.45  2.14</td>
<td>49      3.38   42   53</td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td>2</td>
<td>&lt;0.1</td>
<td>0.4</td>
<td>0.01   0.01  1,587.45  1.43</td>
<td>66      1.00   65   67</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>1</td>
<td>&lt;0.1</td>
<td>&lt;0.01</td>
<td>&lt;0.01  &lt;0.01  1,587.45  0.71</td>
<td>203     .      203 203</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.4</td>
<td>&lt;0.01  &lt;0.01  1,587.45  0.71</td>
<td>186     .      186 186</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>1,932</strong></td>
<td><strong>9.5</strong></td>
<td>.</td>
<td><strong>5.48</strong>  <strong>0.97</strong>  <strong>281.77</strong>  <strong>147.86</strong></td>
<td>.    .    . 2 408</td>
</tr>
</tbody>
</table>
Table CK15-04. Catch statistics for 10 dominant taxa collected in 192 183-m haul seine samples during Cedar Key stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean catch-per-unit-effort.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number No.</th>
<th>%</th>
<th>% Occur</th>
<th>Catch-per-unit-effort (animals/set)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>9,418</td>
<td>46.3</td>
<td>75.0</td>
<td>49.05</td>
<td>8.67</td>
</tr>
<tr>
<td>Leioptomus xanthurus</td>
<td>1,435</td>
<td>7.1</td>
<td>45.3</td>
<td>7.47</td>
<td>1.62</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>1,297</td>
<td>6.4</td>
<td>68.2</td>
<td>6.76</td>
<td>1.03</td>
</tr>
<tr>
<td>Dasyatis sabina</td>
<td>1,238</td>
<td>6.1</td>
<td>64.6</td>
<td>6.45</td>
<td>1.25</td>
</tr>
<tr>
<td>Ogcocephalus cubifrons</td>
<td>759</td>
<td>3.7</td>
<td>31.3</td>
<td>3.95</td>
<td>0.83</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>609</td>
<td>3.0</td>
<td>24.0</td>
<td>3.17</td>
<td>0.88</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>524</td>
<td>2.6</td>
<td>45.8</td>
<td>2.73</td>
<td>0.97</td>
</tr>
<tr>
<td>Orthopristis chrysoptera</td>
<td>432</td>
<td>2.1</td>
<td>20.3</td>
<td>2.25</td>
<td>0.54</td>
</tr>
<tr>
<td>Harengula jaguana</td>
<td>379</td>
<td>1.9</td>
<td>16.1</td>
<td>1.97</td>
<td>0.91</td>
</tr>
<tr>
<td>Chaetodipterus faber</td>
<td>366</td>
<td>1.8</td>
<td>20.3</td>
<td>1.91</td>
<td>0.72</td>
</tr>
<tr>
<td>Subtotal</td>
<td>16,457</td>
<td>81.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>20,328</td>
<td>100.0</td>
<td></td>
<td>105.88</td>
<td>10.70</td>
</tr>
<tr>
<td>Species</td>
<td>Number No.</td>
<td>%</td>
<td>% Occur</td>
<td>Catch-per-unit-effort (animals/set)</td>
<td>Standard Length (mm)</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>------------</td>
<td>---</td>
<td>---------</td>
<td>-----------------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mean  Stderr   CV  Max</td>
<td>Mean  Stderr   Min  Max</td>
</tr>
<tr>
<td><em>Leiostomus xanthurus</em></td>
<td>1,435</td>
<td>7.1</td>
<td>45.3</td>
<td>7.47  1.62    300.66  180.00</td>
<td>119  0.55   43  192</td>
</tr>
<tr>
<td><em>Mugil cephalus</em></td>
<td>1,297</td>
<td>6.4</td>
<td>68.2</td>
<td>6.76  1.03    210.54  110.00</td>
<td>214  2.11   64  402</td>
</tr>
<tr>
<td><em>Sciaenops ocellatus</em></td>
<td>524</td>
<td>2.6</td>
<td>45.8</td>
<td>2.73  0.97    491.55  180.00</td>
<td>286  4.35   85  740</td>
</tr>
<tr>
<td><em>Callinectes sapidus</em></td>
<td>272</td>
<td>1.3</td>
<td>38.0</td>
<td>1.42  0.25    242.63  25.00</td>
<td>104  2.30   36  301</td>
</tr>
<tr>
<td><em>Elops saurus</em></td>
<td>236</td>
<td>1.2</td>
<td>32.8</td>
<td>1.23  0.22    244.42  28.00</td>
<td>254  2.79   132 452</td>
</tr>
<tr>
<td><em>Pogonias cromis</em></td>
<td>149</td>
<td>0.7</td>
<td>19.3</td>
<td>0.78  0.29    515.72  50.00</td>
<td>336 16.96  110 876</td>
</tr>
<tr>
<td><em>Archosargus probatocephalus</em></td>
<td>144</td>
<td>0.7</td>
<td>23.4</td>
<td>0.75  0.18    324.02  24.00</td>
<td>316  4.68   185 438</td>
</tr>
<tr>
<td><em>Mugil curema</em></td>
<td>140</td>
<td>0.7</td>
<td>22.4</td>
<td>0.73  0.21    393.68  29.00</td>
<td>189  4.70   99  326</td>
</tr>
<tr>
<td><em>Paralichthys albigutta</em></td>
<td>139</td>
<td>0.7</td>
<td>30.7</td>
<td>0.72  0.13    252.13  16.00</td>
<td>159  4.66   59  362</td>
</tr>
<tr>
<td><em>Cynoscion nebulosus</em></td>
<td>138</td>
<td>0.7</td>
<td>30.7</td>
<td>0.72  0.13    254.44  16.00</td>
<td>199  6.60   72  429</td>
</tr>
<tr>
<td><em>Micropogonias undulatus</em></td>
<td>93</td>
<td>0.5</td>
<td>6.8</td>
<td>0.48  0.18    502.59  25.00</td>
<td>177  3.32   98  265</td>
</tr>
<tr>
<td><em>Menticirrhus americanus</em></td>
<td>78</td>
<td>0.4</td>
<td>14.1</td>
<td>0.41  0.12    399.19  18.00</td>
<td>143  5.79   75  281</td>
</tr>
<tr>
<td><em>Mugil trichodon</em></td>
<td>66</td>
<td>0.3</td>
<td>8.3</td>
<td>0.34  0.12    643.75  29.00</td>
<td>137  2.15   100 190</td>
</tr>
<tr>
<td><em>Farfantepenaeus duorarum</em></td>
<td>49</td>
<td>0.2</td>
<td>9.9</td>
<td>0.26  0.08    454.08  11.00</td>
<td>24   0.70    15  35</td>
</tr>
<tr>
<td><em>Centropomus undecimalis</em></td>
<td>45</td>
<td>0.2</td>
<td>6.8</td>
<td>0.23  0.11    656.69  17.00</td>
<td>671 14.76  392 803</td>
</tr>
<tr>
<td><em>Trachinotus falcatus</em></td>
<td>31</td>
<td>0.2</td>
<td>6.8</td>
<td>0.16  0.07    597.90  12.00</td>
<td>133  24.03  38  469</td>
</tr>
<tr>
<td><em>Pomatomus saltatrix</em></td>
<td>15</td>
<td>0.1</td>
<td>1.6</td>
<td>0.08  0.05    916.06  9.00</td>
<td>264 28.64  121 389</td>
</tr>
<tr>
<td>Species</td>
<td>Number No.</td>
<td>% Occur</td>
<td>Catch-per-unit-effort (animals/set)</td>
<td>Standard Length (mm)</td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------------</td>
<td>---------</td>
<td>-------------------------------------</td>
<td>----------------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
<td>CV</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>7</td>
<td>&lt;0.1</td>
<td>3.1</td>
<td>0.04</td>
<td>0.02</td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td>7</td>
<td>&lt;0.1</td>
<td>2.1</td>
<td>0.04</td>
<td>0.02</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>6</td>
<td>&lt;0.1</td>
<td>2.1</td>
<td>0.03</td>
<td>0.02</td>
</tr>
<tr>
<td>Mycteroperca microlepis</td>
<td>5</td>
<td>&lt;0.1</td>
<td>2.1</td>
<td>0.03</td>
<td>0.01</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>3</td>
<td>&lt;0.1</td>
<td>1.0</td>
<td>0.02</td>
<td>0.01</td>
</tr>
<tr>
<td>Menticirrhus saxatilis</td>
<td>3</td>
<td>&lt;0.1</td>
<td>0.5</td>
<td>0.02</td>
<td>0.02</td>
</tr>
<tr>
<td>Menippe spp.</td>
<td>2</td>
<td>&lt;0.1</td>
<td>1.0</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td>2</td>
<td>&lt;0.1</td>
<td>1.0</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Farfantepenaeus sp.</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.5</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Rachycentron canadum</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.5</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>4,888</strong></td>
<td><strong>24.1</strong></td>
<td>.</td>
<td><strong>25.46</strong></td>
<td><strong>2.60</strong></td>
</tr>
</tbody>
</table>
Table CK15-06. Catch statistics for 10 dominant taxa collected in 120 6.1-m bay otter trawl samples during Cedar Key stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td></td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>2,567</td>
<td>19.5</td>
<td>14.2</td>
<td>1.46</td>
<td>1.25</td>
</tr>
<tr>
<td>Portunus spp.</td>
<td>1,386</td>
<td>10.5</td>
<td>59.2</td>
<td>0.99</td>
<td>0.22</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>1,545</td>
<td>11.8</td>
<td>25.0</td>
<td>0.93</td>
<td>0.33</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>923</td>
<td>7.0</td>
<td>35.0</td>
<td>0.54</td>
<td>0.29</td>
</tr>
<tr>
<td>Farfantepeneaus duorarum</td>
<td>580</td>
<td>4.4</td>
<td>35.0</td>
<td>0.48</td>
<td>0.20</td>
</tr>
<tr>
<td>Etropus crossotus</td>
<td>638</td>
<td>4.9</td>
<td>59.2</td>
<td>0.37</td>
<td>0.07</td>
</tr>
<tr>
<td>Prionotus martis</td>
<td>537</td>
<td>4.1</td>
<td>20.0</td>
<td>0.32</td>
<td>0.09</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>451</td>
<td>3.4</td>
<td>15.0</td>
<td>0.31</td>
<td>0.14</td>
</tr>
<tr>
<td>Farfantepeneaus spp.</td>
<td>445</td>
<td>3.4</td>
<td>14.2</td>
<td>0.27</td>
<td>0.16</td>
</tr>
<tr>
<td>Prionotus scitulus</td>
<td>399</td>
<td>3.0</td>
<td>55.8</td>
<td>0.24</td>
<td>0.04</td>
</tr>
<tr>
<td>Subtotal</td>
<td>9,471</td>
<td>72.0</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Totals</td>
<td>13,142</td>
<td>100.0</td>
<td>8.14</td>
<td>1.70</td>
<td>228.87</td>
</tr>
</tbody>
</table>
Table CK15-07. Catch statistics for Selected Taxa collected in 120 6.1-m bay otter trawl samples during Cedar Key stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
<td>CV</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>2,567</td>
<td>19.5</td>
<td>14.2</td>
<td>1.46</td>
<td>1.25</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>923</td>
<td>7.0</td>
<td>35.0</td>
<td>0.54</td>
<td>0.29</td>
</tr>
<tr>
<td>Farfantepeneaus duorarum</td>
<td>580</td>
<td>4.4</td>
<td>35.0</td>
<td>0.48</td>
<td>0.20</td>
</tr>
<tr>
<td>Farfantepeneaus spp.</td>
<td>445</td>
<td>3.4</td>
<td>14.2</td>
<td>0.27</td>
<td>0.16</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>287</td>
<td>2.2</td>
<td>29.2</td>
<td>0.18</td>
<td>0.05</td>
</tr>
<tr>
<td>Menippe spp.</td>
<td>132</td>
<td>1.0</td>
<td>35.0</td>
<td>0.08</td>
<td>0.02</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>64</td>
<td>0.5</td>
<td>24.2</td>
<td>0.04</td>
<td>0.01</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>20</td>
<td>0.2</td>
<td>6.7</td>
<td>0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>17</td>
<td>0.1</td>
<td>2.5</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>11</td>
<td>0.1</td>
<td>4.2</td>
<td>0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>10</td>
<td>0.1</td>
<td>4.2</td>
<td>0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Menticirrhus saxatilis</td>
<td>6</td>
<td>0.1</td>
<td>1.7</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.8</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Mycteroperca microlepis</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.8</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>5,064</strong></td>
<td><strong>38.5</strong></td>
<td></td>
<td><strong>3.08</strong></td>
<td><strong>1.42</strong></td>
</tr>
</tbody>
</table>
Table CK15-08. Catch statistics for 10 dominant taxa collected in 108 21.3-m river seine samples conducted in tidal creeks during Cedar Key stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m$^2$)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
<td>CV</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>5,244</td>
<td>51.9</td>
<td>50.0</td>
<td>71.41</td>
<td>31.33</td>
</tr>
<tr>
<td>Menidia spp.</td>
<td>971</td>
<td>9.6</td>
<td>61.1</td>
<td>13.22</td>
<td>3.30</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>829</td>
<td>8.2</td>
<td>17.6</td>
<td>11.29</td>
<td>10.38</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>470</td>
<td>4.7</td>
<td>13.9</td>
<td>6.40</td>
<td>4.09</td>
</tr>
<tr>
<td>Membras martinica</td>
<td>457</td>
<td>4.5</td>
<td>4.6</td>
<td>6.22</td>
<td>6.09</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>407</td>
<td>4.0</td>
<td>47.2</td>
<td>5.54</td>
<td>1.22</td>
</tr>
<tr>
<td>Harengula jaguana</td>
<td>346</td>
<td>3.4</td>
<td>4.6</td>
<td>4.71</td>
<td>2.94</td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td>313</td>
<td>3.1</td>
<td>26.9</td>
<td>4.26</td>
<td>1.30</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>225</td>
<td>2.2</td>
<td>25.0</td>
<td>3.06</td>
<td>1.05</td>
</tr>
<tr>
<td>Fundulus grandis</td>
<td>204</td>
<td>2.0</td>
<td>15.7</td>
<td>2.78</td>
<td>1.39</td>
</tr>
<tr>
<td>Subtotal</td>
<td>9,466</td>
<td>93.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>10,114</td>
<td>100.0</td>
<td></td>
<td>137.72</td>
<td>40.29</td>
</tr>
</tbody>
</table>

CK-16
Table CK15-09. Catch statistics for Selected Taxa collected in 108 21.3-m river seine samples conducted in tidal creeks during Cedar Key stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m^2)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>470</td>
<td>4.7</td>
<td>13.9</td>
<td>6.40</td>
<td>4.09</td>
</tr>
<tr>
<td>Leioctomus xanthurus</td>
<td>225</td>
<td>2.2</td>
<td>25.0</td>
<td>3.06</td>
<td>1.05</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>123</td>
<td>1.2</td>
<td>31.5</td>
<td>1.67</td>
<td>0.37</td>
</tr>
<tr>
<td>Farfantepenaus spp.</td>
<td>52</td>
<td>0.5</td>
<td>15.7</td>
<td>0.71</td>
<td>0.28</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>22</td>
<td>0.2</td>
<td>13.9</td>
<td>0.30</td>
<td>0.08</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>17</td>
<td>0.2</td>
<td>11.1</td>
<td>0.23</td>
<td>0.08</td>
</tr>
<tr>
<td>Mentirichus americanus</td>
<td>15</td>
<td>0.2</td>
<td>5.6</td>
<td>0.20</td>
<td>0.14</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>12</td>
<td>0.1</td>
<td>6.5</td>
<td>0.16</td>
<td>0.07</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>7</td>
<td>0.1</td>
<td>5.6</td>
<td>0.10</td>
<td>0.04</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>5</td>
<td>0.1</td>
<td>3.7</td>
<td>0.07</td>
<td>0.04</td>
</tr>
<tr>
<td>Farfantepenaus duorarum</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.9</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Menippe sp.</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.9</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.9</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.9</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Mugil trichodon</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.9</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>953</strong></td>
<td><strong>9.4</strong></td>
<td><strong>.</strong></td>
<td><strong>12.98</strong></td>
<td><strong>4.28</strong></td>
</tr>
</tbody>
</table>
Table CK15-10. Catch statistics for 10 dominant taxa collected in 60 21.3-m river seine samples conducted in the Lower Suwannee River (LSR) during Cedar Key stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number No.</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>6,477</td>
<td>73.4</td>
<td>23.3</td>
<td>158.75</td>
<td>109.65</td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td>535</td>
<td>6.1</td>
<td>31.7</td>
<td>13.11</td>
<td>6.10</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>457</td>
<td>5.2</td>
<td>16.7</td>
<td>11.20</td>
<td>9.34</td>
</tr>
<tr>
<td>Menidia spp.</td>
<td>288</td>
<td>3.3</td>
<td>28.3</td>
<td>7.06</td>
<td>3.17</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>191</td>
<td>2.2</td>
<td>35.0</td>
<td>4.68</td>
<td>1.23</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>132</td>
<td>1.5</td>
<td>40.0</td>
<td>3.24</td>
<td>1.29</td>
</tr>
<tr>
<td>Fundulus seminolis</td>
<td>130</td>
<td>1.5</td>
<td>35.0</td>
<td>3.19</td>
<td>0.95</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>92</td>
<td>1.0</td>
<td>10.0</td>
<td>2.25</td>
<td>1.86</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>91</td>
<td>1.0</td>
<td>8.3</td>
<td>2.23</td>
<td>1.77</td>
</tr>
<tr>
<td>Trinectes maculatus</td>
<td>55</td>
<td>0.6</td>
<td>30.0</td>
<td>1.35</td>
<td>0.41</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>8,448</strong></td>
<td><strong>95.8</strong></td>
<td><strong>.</strong></td>
<td><strong>.</strong></td>
<td><strong>.</strong></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>8,820</strong></td>
<td><strong>100.0</strong></td>
<td><strong>.</strong></td>
<td><strong>216.18</strong></td>
<td><strong>110.19</strong></td>
</tr>
</tbody>
</table>
Table CK15-11. Catch statistics for Selected Taxa collected in 60 21.3-m river seine samples conducted in the Lower Suwannee River (LSR) during Cedar Key stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
<td>CV</td>
</tr>
<tr>
<td><em>Callinectes sapidus</em></td>
<td>132</td>
<td>1.5</td>
<td>40.0</td>
<td>3.24</td>
<td>1.29</td>
</tr>
<tr>
<td><em>Cynoscion arenarius</em></td>
<td>92</td>
<td>1.0</td>
<td>10.0</td>
<td>2.25</td>
<td>1.86</td>
</tr>
<tr>
<td><em>Leiostomus xanthurus</em></td>
<td>91</td>
<td>1.0</td>
<td>8.3</td>
<td>2.23</td>
<td>1.77</td>
</tr>
<tr>
<td><em>Mugil cephalus</em></td>
<td>47</td>
<td>0.5</td>
<td>3.3</td>
<td>1.15</td>
<td>0.85</td>
</tr>
<tr>
<td><em>Cynoscion nebulosus</em></td>
<td>39</td>
<td>0.4</td>
<td>11.7</td>
<td>0.96</td>
<td>0.46</td>
</tr>
<tr>
<td><em>Farfantepenaeus spp.</em></td>
<td>24</td>
<td>0.3</td>
<td>8.3</td>
<td>0.59</td>
<td>0.45</td>
</tr>
<tr>
<td><em>Sciaenops ocellatus</em></td>
<td>5</td>
<td>0.1</td>
<td>5.0</td>
<td>0.12</td>
<td>0.07</td>
</tr>
<tr>
<td><em>Lutjanus griseus</em></td>
<td>3</td>
<td>&lt;0.1</td>
<td>5.0</td>
<td>0.07</td>
<td>0.04</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>433</strong></td>
<td><strong>4.9</strong></td>
<td>.</td>
<td><strong>10.61</strong></td>
<td><strong>3.00</strong></td>
</tr>
</tbody>
</table>
Table CK15-12. Catch statistics for 10 dominant taxa collected in 60 6.1-m river otter trawl samples conducted in the Lower Suwannee River (LSR) during Cedar Key stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
<td>CV</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>525</td>
<td>28.1</td>
<td>30.0</td>
<td>1.28</td>
<td>0.70</td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td>418</td>
<td>22.4</td>
<td>21.7</td>
<td>1.08</td>
<td>0.56</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>263</td>
<td>14.1</td>
<td>15.0</td>
<td>0.63</td>
<td>0.39</td>
</tr>
<tr>
<td>Ictalurus punctatus</td>
<td>134</td>
<td>7.2</td>
<td>25.0</td>
<td>0.35</td>
<td>0.15</td>
</tr>
<tr>
<td>Ameiurus catus</td>
<td>121</td>
<td>6.5</td>
<td>30.0</td>
<td>0.31</td>
<td>0.14</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>106</td>
<td>5.7</td>
<td>38.3</td>
<td>0.25</td>
<td>0.08</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>62</td>
<td>3.3</td>
<td>20.0</td>
<td>0.16</td>
<td>0.06</td>
</tr>
<tr>
<td>Eucinostomus harengulus</td>
<td>57</td>
<td>3.1</td>
<td>15.0</td>
<td>0.15</td>
<td>0.07</td>
</tr>
<tr>
<td>Trinectes maculatus</td>
<td>58</td>
<td>3.1</td>
<td>38.3</td>
<td>0.14</td>
<td>0.04</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>33</td>
<td>1.8</td>
<td>10.0</td>
<td>0.07</td>
<td>0.06</td>
</tr>
<tr>
<td>Subtotal</td>
<td>1,777</td>
<td>95.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>1,867</td>
<td>100.0</td>
<td>4.65</td>
<td>1.15</td>
<td>191.49</td>
</tr>
</tbody>
</table>
Table CK15-13. Catch statistics for Selected Taxa collected in 60 6.1-m river otter trawl samples conducted in the Lower Suwannee River (LSR) during Cedar Key stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number No.</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>106</td>
<td>5.7</td>
<td>38.3</td>
<td>0.25</td>
<td>0.08</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>62</td>
<td>3.3</td>
<td>20.0</td>
<td>0.16</td>
<td>0.06</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>33</td>
<td>1.8</td>
<td>10.0</td>
<td>0.07</td>
<td>0.06</td>
</tr>
<tr>
<td>Farfantepenaeus spp.</td>
<td>11</td>
<td>0.6</td>
<td>10.0</td>
<td>0.03</td>
<td>0.01</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>8</td>
<td>0.4</td>
<td>6.7</td>
<td>0.02</td>
<td>0.01</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>3</td>
<td>0.2</td>
<td>3.3</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>2</td>
<td>0.1</td>
<td>3.3</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>2</td>
<td>0.1</td>
<td>1.7</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Totals</td>
<td>227</td>
<td>12.2</td>
<td></td>
<td>0.55</td>
<td>0.11</td>
</tr>
</tbody>
</table>
Appendix CK15-01. Monthly summary of species collected during Cedar Key stratified-random sampling, 2015. Effort, or total number of hauls, is labeled 'E'. Taxa are arranged alphabetically.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acanthostracion spp.</td>
<td>. . . .</td>
<td>1 . . .</td>
<td>. . . .</td>
<td>1 . . .</td>
<td>. . . .</td>
<td>1 . . .</td>
<td>1 . . .</td>
<td>1 . . .</td>
<td>1 . . .</td>
<td>1 . . .</td>
<td>1 . . .</td>
<td>1 . . .</td>
<td>1 . 2</td>
</tr>
<tr>
<td>Acanthostracion quadricornis</td>
<td>5 . 10</td>
<td>11 . 6</td>
<td>1 . 3</td>
<td>2 . 2</td>
<td>3 . .</td>
<td>1 . .</td>
<td>2 . .</td>
<td>1 . .</td>
<td>18 . .</td>
<td></td>
<td></td>
<td></td>
<td>43 .</td>
</tr>
<tr>
<td>Achirus lineatus</td>
<td>. 2 . 1</td>
<td>. . .</td>
<td>2 . 4</td>
<td>8 . 1</td>
<td>2 . .</td>
<td>1 . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>3 .</td>
</tr>
<tr>
<td>Acipenser oxyrinchus</td>
<td>. . 8</td>
<td>1 . 2</td>
<td>. 1 .</td>
<td>2 . 1</td>
<td>. 17</td>
<td>32 .</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adinia xenica</td>
<td>. . .</td>
<td>. . 2</td>
<td>. . .</td>
<td>2 . 1</td>
<td>. . .</td>
<td>1 . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>1 . 1</td>
</tr>
<tr>
<td>Alosa alabamae</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>2 . 1</td>
<td>. . .</td>
<td>1 . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>3 .</td>
</tr>
<tr>
<td>Aluterus schoepfii</td>
<td>. . .</td>
<td>. . .</td>
<td>. 2 .</td>
<td>. 1 .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>3 .</td>
</tr>
<tr>
<td>Anarchopterus criniger</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>3 . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>3 .</td>
</tr>
<tr>
<td>Anchoa hepsetus</td>
<td>. . .</td>
<td>. . .</td>
<td>35 . 269</td>
<td>209 . 5</td>
<td>32 . 20</td>
<td>74 . 39</td>
<td>683 .</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anchoptes quadrocellata</td>
<td>. . .</td>
<td>. 1 . 2</td>
<td>. 1 .</td>
<td>. . .</td>
<td>4 . 3</td>
<td>. . .</td>
<td>1 . 12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aphredoderus sayanus</td>
<td>. . .</td>
<td>. . .</td>
<td>. 1 .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>1 .</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>8 . 1</td>
<td>3 . 25</td>
<td>10 . 6</td>
<td>5 . 6</td>
<td>27 . 45</td>
<td>11 . 147</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argopecten irradians</td>
<td>. . .</td>
<td>. . .</td>
<td>2 . 6</td>
<td>1 . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>9 .</td>
</tr>
<tr>
<td>Ariopsis felis</td>
<td>1 . 67</td>
<td>15 . 56</td>
<td>36 . 42</td>
<td>84 . 483</td>
<td>51 . 146</td>
<td>53 . 52</td>
<td>1,086 .</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Astrapogon alutus</td>
<td>. . .</td>
<td>. . .</td>
<td>. 1 .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>1 .</td>
</tr>
<tr>
<td>Astroscopus y-graecum</td>
<td>2 . 1</td>
<td>2 . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>5 .</td>
</tr>
<tr>
<td>Bagre marinus</td>
<td>. . .</td>
<td>. . .</td>
<td>1 . 1</td>
<td>. 91</td>
<td>148 . 56</td>
<td>21 . 1</td>
<td>319 .</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>20 . 30</td>
<td>169 . 8</td>
<td>30 . 337</td>
<td>1,266 . 597</td>
<td>343 . 101</td>
<td>63 . 70</td>
<td>3,034 .</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bathy gobius sutorator</td>
<td>. . .</td>
<td>. . .</td>
<td>9 . .</td>
<td>3 . 1</td>
<td>. . .</td>
<td>1 . .</td>
<td>4 . 18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Species</td>
<td>Jan</td>
<td>Feb</td>
<td>Mar</td>
<td>Apr</td>
<td>May</td>
<td>Jun</td>
<td>Jul</td>
<td>Aug</td>
<td>Sep</td>
<td>Oct</td>
<td>Nov</td>
<td>Dec</td>
<td>Totals</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>--------</td>
</tr>
<tr>
<td>Brevoortia spp.</td>
<td>.</td>
<td>1</td>
<td>60</td>
<td>7</td>
<td>21</td>
<td>.</td>
<td>37</td>
<td>2</td>
<td>42</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>178</td>
</tr>
<tr>
<td>Calamus arctifrons</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>15</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>22</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>75</td>
<td>91</td>
<td>148</td>
<td>196</td>
<td>101</td>
<td>44</td>
<td>54</td>
<td>66</td>
<td>37</td>
<td>30</td>
<td>39</td>
<td>165</td>
<td>1,046</td>
</tr>
<tr>
<td>Callinectes similis</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Caranx hippos</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>2</td>
<td>.</td>
<td>2</td>
<td>13</td>
<td>9</td>
<td>.</td>
<td>29</td>
</tr>
<tr>
<td>Carcharhinus leucas</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>3</td>
<td>.</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>19</td>
<td>13</td>
</tr>
<tr>
<td>Centroprips striata</td>
<td>3</td>
<td>5</td>
<td>10</td>
<td>1</td>
<td>8</td>
<td>18</td>
<td>3</td>
<td>3</td>
<td>8</td>
<td>8</td>
<td>9</td>
<td>3</td>
<td>79</td>
</tr>
<tr>
<td>Chaetodipterus faber</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>3</td>
<td>5</td>
<td>99</td>
<td>102</td>
<td>220</td>
<td>45</td>
<td>17</td>
<td>11</td>
<td>503</td>
</tr>
<tr>
<td>Chasmodes saburræ</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>.</td>
<td>7</td>
<td>.</td>
<td>15</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>27</td>
</tr>
<tr>
<td>Chilomycterus schoepfii</td>
<td>8</td>
<td>.</td>
<td>10</td>
<td>.</td>
<td>9</td>
<td>26</td>
<td>6</td>
<td>2</td>
<td>7</td>
<td>14</td>
<td>11</td>
<td>4</td>
<td>97</td>
</tr>
<tr>
<td>Chloroscombrus chrysurus</td>
<td>6</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>5</td>
<td>9</td>
<td>7</td>
<td>5</td>
<td>4</td>
<td>6</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>Citharichthys macrops</td>
<td>7</td>
<td>8</td>
<td>25</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>5</td>
<td>.</td>
<td>1</td>
<td>7</td>
<td>70</td>
</tr>
<tr>
<td>Ctenogobius boleosoma</td>
<td>2</td>
<td>.</td>
<td>4</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>2,320</td>
<td>94</td>
<td>48</td>
<td>243</td>
<td>61</td>
<td>21</td>
<td>5</td>
<td>2</td>
<td>2,796</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>12</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>10</td>
<td>17</td>
<td>50</td>
<td>39</td>
<td>51</td>
<td>35</td>
<td>22</td>
<td>14</td>
<td>264</td>
</tr>
<tr>
<td>Cyprinodon variegatus</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>7</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>11</td>
</tr>
<tr>
<td>Dactylopterus morei</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Dasyatis americana</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Dasyatis sabina</td>
<td>277</td>
<td>12</td>
<td>125</td>
<td>58</td>
<td>85</td>
<td>234</td>
<td>80</td>
<td>69</td>
<td>189</td>
<td>151</td>
<td>58</td>
<td>.</td>
<td>1,364</td>
</tr>
<tr>
<td>Dasyatis say</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>21</td>
<td>74</td>
<td>66</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>19</td>
<td>.</td>
<td>192</td>
</tr>
<tr>
<td>Diapterus auratus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>------------------------------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>--------</td>
</tr>
<tr>
<td>Diplectrum formosum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>7</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>Diplodus holbrookii</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dorosoma cepedianum</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>7</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dorosoma petenense</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Echeneis neucratoides</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>.</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elops saurus</td>
<td>1</td>
<td>.</td>
<td>2</td>
<td>13</td>
<td>14</td>
<td>9</td>
<td>18</td>
<td>33</td>
<td>63</td>
<td>51</td>
<td>34</td>
<td>238</td>
<td></td>
</tr>
<tr>
<td>Etheostoma fusiforme</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Etropus crososus</td>
<td>25</td>
<td>22</td>
<td>32</td>
<td>51</td>
<td>2</td>
<td>2</td>
<td>38</td>
<td>89</td>
<td>150</td>
<td>156</td>
<td>202</td>
<td>185</td>
<td>954</td>
</tr>
<tr>
<td>Eucinostomus gula</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>.</td>
<td>10</td>
<td>6</td>
<td>33</td>
<td>39</td>
<td>124</td>
<td>168</td>
<td>56</td>
<td>444</td>
<td></td>
</tr>
<tr>
<td>Eucinostomus harenangulus</td>
<td>9</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>179</td>
<td>115</td>
<td>81</td>
<td>61</td>
<td>129</td>
<td>53</td>
<td>629</td>
<td></td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td>2</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>182</td>
<td>550</td>
<td>463</td>
<td>82</td>
<td>52</td>
<td>169</td>
<td>241</td>
<td>1,743</td>
<td></td>
</tr>
<tr>
<td>Farfantenpenaeus duorarum</td>
<td>6</td>
<td>20</td>
<td>83</td>
<td>152</td>
<td>32</td>
<td>3</td>
<td>5</td>
<td>322</td>
<td>14</td>
<td>8</td>
<td>5</td>
<td>2</td>
<td>652</td>
</tr>
<tr>
<td>Farfantenpenaeus spp.</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>81</td>
<td>1</td>
<td>74</td>
<td>166</td>
<td>375</td>
<td>131</td>
<td>26</td>
<td>13</td>
<td>26</td>
<td>902</td>
</tr>
<tr>
<td>Floridichthys carpio</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fundulus confluentus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Fundulus grandis</td>
<td>15</td>
<td>50</td>
<td>7</td>
<td>8</td>
<td>8</td>
<td>143</td>
<td>16</td>
<td>8</td>
<td>.</td>
<td>13</td>
<td>3</td>
<td>5</td>
<td>276</td>
</tr>
<tr>
<td>Fundulus seminolis</td>
<td>30</td>
<td>.</td>
<td>9</td>
<td>1</td>
<td>6</td>
<td>25</td>
<td>5</td>
<td>18</td>
<td>6</td>
<td>12</td>
<td>2</td>
<td>32</td>
<td>146</td>
</tr>
<tr>
<td>Fundulus similis</td>
<td>41</td>
<td>5</td>
<td>55</td>
<td>16</td>
<td>9</td>
<td>1</td>
<td>21</td>
<td>17</td>
<td>1</td>
<td>11</td>
<td>6</td>
<td>15</td>
<td>198</td>
</tr>
<tr>
<td>Gambusia holbrooki</td>
<td>4</td>
<td>8</td>
<td>5</td>
<td>6</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>17</td>
<td>43</td>
</tr>
<tr>
<td>Gobiesox strumosus</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>4</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>8</td>
</tr>
<tr>
<td>Gobiosoma bosc</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>5</td>
<td>31</td>
</tr>
<tr>
<td>Gobiosoma longipala</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

**Appendix CK15-01. (Continued)**
### Appendix CK15-01. (Continued)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gobiosoma robustum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td>19</td>
</tr>
<tr>
<td>Gobiosoma spp.</td>
<td>6</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td></td>
<td>3</td>
<td>2</td>
<td>2</td>
<td></td>
<td>3</td>
<td>3</td>
<td></td>
<td>29</td>
</tr>
<tr>
<td>Gymnura micrura</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>9</td>
<td>1</td>
<td>1</td>
<td>19</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>41</td>
</tr>
<tr>
<td>Haemulon plumieri</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14</td>
<td>7</td>
<td></td>
<td>5</td>
<td></td>
<td>26</td>
</tr>
<tr>
<td>Harengula jaguana</td>
<td>3</td>
<td>1</td>
<td></td>
<td>4</td>
<td>134</td>
<td>66</td>
<td>218</td>
<td>1,150</td>
<td>108</td>
<td>533</td>
<td>3</td>
<td></td>
<td>2,220</td>
</tr>
<tr>
<td>Hemicaranx amblyrhyynchus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Hippocampus erectus</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Hippocampus zosterae</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Hoplosternum littorale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Hypleurochilus caudovittatus</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Hyperhamphus meeki</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>Hyperhamphus spp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Hypsoblennius hentzi</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>5</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>Ictalurus punctatus</td>
<td>19</td>
<td>5</td>
<td>6</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>40</td>
<td>54</td>
<td></td>
<td>10</td>
<td></td>
<td>135</td>
</tr>
<tr>
<td>Labidesthes sicculus</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>4</td>
<td></td>
<td>11</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>22</td>
</tr>
<tr>
<td>Lagocephalus laevigatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>214</td>
<td>338</td>
<td>341</td>
<td>211</td>
<td>485</td>
<td>992</td>
<td>775</td>
<td>1,373</td>
<td>1,146</td>
<td>3,176</td>
<td>1,917</td>
<td>665</td>
<td>11,633</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>35</td>
<td>134</td>
<td>186</td>
<td>297</td>
<td>234</td>
<td>194</td>
<td>249</td>
<td>72</td>
<td>535</td>
<td>151</td>
<td>77</td>
<td>4</td>
<td>2,168</td>
</tr>
<tr>
<td>Lepisosteus osseus</td>
<td>6</td>
<td></td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>14</td>
<td>8</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td>37</td>
</tr>
<tr>
<td>Lepisosteus platyrhincus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Lepomis auritus</td>
<td>1</td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Lepomis macrochirus</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
<td></td>
<td>14</td>
</tr>
</tbody>
</table>
### Appendix CK15-01. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lepomis microlophus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Lepomis punctatus</td>
<td>2</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>10</td>
</tr>
<tr>
<td>Lepomis sp.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Limulus polyphemus</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>12</td>
</tr>
<tr>
<td>Lobotes surinamensis</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Lucania goodei</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Lucania parva</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>2</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>9</td>
<td>8</td>
<td>4</td>
<td>29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td>8</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>16</td>
</tr>
<tr>
<td>Membras martinica</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>3</td>
<td>12</td>
<td>541</td>
<td>45</td>
<td>40</td>
<td>73</td>
<td>16</td>
<td>40</td>
<td>83</td>
<td>855</td>
</tr>
<tr>
<td>Menidia spp.</td>
<td>76</td>
<td>43</td>
<td>29</td>
<td>34</td>
<td>51</td>
<td>1,143</td>
<td>662</td>
<td>375</td>
<td>348</td>
<td>203</td>
<td>260</td>
<td>75</td>
<td>3,299</td>
</tr>
<tr>
<td>Menippe spp.</td>
<td>23</td>
<td>12</td>
<td>19</td>
<td>4</td>
<td>4</td>
<td>7</td>
<td>27</td>
<td>4</td>
<td>10</td>
<td>5</td>
<td>13</td>
<td>12</td>
<td>140</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>6</td>
<td>2</td>
<td>45</td>
<td>17</td>
<td>176</td>
<td>52</td>
<td>100</td>
<td>681</td>
<td>56</td>
<td>33</td>
<td>32</td>
<td>28</td>
<td>1,228</td>
</tr>
<tr>
<td>Menticirrhus saxatilis</td>
<td>1</td>
<td>.</td>
<td>3</td>
<td>6</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Microgobius gulosus</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>4</td>
<td>6</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>7</td>
<td>1</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>Microgobius thalassinus</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>11</td>
<td>1</td>
<td>.</td>
<td>26</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>.</td>
<td>.</td>
<td>17</td>
<td>6</td>
<td>.</td>
<td>11</td>
<td>12</td>
<td>61</td>
<td>6</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>113</td>
</tr>
<tr>
<td>Micropterus salmoides</td>
<td>4</td>
<td>.</td>
<td>2</td>
<td>2</td>
<td>10</td>
<td>.</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>.</td>
<td>2</td>
<td>31</td>
</tr>
<tr>
<td>Monacanthus ciliatus</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>6</td>
<td>2</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>275</td>
<td>355</td>
<td>721</td>
<td>143</td>
<td>78</td>
<td>96</td>
<td>83</td>
<td>63</td>
<td>90</td>
<td>79</td>
<td>214</td>
<td>172</td>
<td>2,369</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>11</td>
<td>12</td>
<td>1</td>
<td>17</td>
<td>4</td>
<td>.</td>
<td>14</td>
<td>5</td>
<td>13</td>
<td>6</td>
<td>6</td>
<td>11</td>
<td>155</td>
</tr>
<tr>
<td>Mugil trichodon</td>
<td>2</td>
<td>12</td>
<td>.</td>
<td>.</td>
<td>6</td>
<td>.</td>
<td>36</td>
<td>10</td>
<td>21</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>91</td>
</tr>
</tbody>
</table>

CK-26
<table>
<thead>
<tr>
<th>Species</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Myrophis punctatus</td>
<td></td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>4</td>
</tr>
<tr>
<td>Nicholsina usta</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Notropis petersoni</td>
<td>.</td>
<td>1</td>
<td>3</td>
<td>.</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>.</td>
<td>4</td>
<td>.</td>
<td>.</td>
<td>15</td>
</tr>
<tr>
<td>Ogcocephalus cubifrons</td>
<td>82</td>
<td>18</td>
<td>148</td>
<td>87</td>
<td>33</td>
<td>52</td>
<td>64</td>
<td>50</td>
<td>179</td>
<td>114</td>
<td>34</td>
<td>60</td>
<td>921</td>
</tr>
<tr>
<td>Oligoplites saurus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>17</td>
<td>27</td>
<td>24</td>
<td>17</td>
<td>15</td>
<td>11</td>
<td>2</td>
<td>46</td>
<td>6</td>
</tr>
<tr>
<td>Opisthohema oglinum</td>
<td>.</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>7</td>
<td>2</td>
<td>26</td>
<td>45</td>
<td>29</td>
<td>6</td>
<td>122</td>
</tr>
<tr>
<td>Opsanus beta</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>14</td>
<td>3</td>
<td>2</td>
<td>7</td>
<td>7</td>
<td>1</td>
<td>4</td>
<td>6</td>
<td>46</td>
<td>6</td>
</tr>
<tr>
<td>Orthopristis chrysoptera</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>161</td>
<td>123</td>
<td>34</td>
<td>86</td>
<td>185</td>
<td>154</td>
<td>132</td>
<td>19</td>
<td>897</td>
</tr>
<tr>
<td>Parablenius marmoreus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>5</td>
<td>4</td>
<td>12</td>
<td>13</td>
<td>26</td>
<td>24</td>
<td>37</td>
<td>5</td>
<td>31</td>
<td>30</td>
<td>19</td>
<td>21</td>
<td>227</td>
</tr>
<tr>
<td>Peprilus burti</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>6</td>
</tr>
<tr>
<td>Peprilus paru</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>53</td>
<td>9</td>
<td>1</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>69</td>
<td>6</td>
</tr>
<tr>
<td>Poecilia latipinna</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>6</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>6</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>5</td>
<td>.</td>
<td>1</td>
<td>2</td>
<td>11</td>
<td>18</td>
<td>68</td>
<td>32</td>
<td>11</td>
<td>152</td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>Pomoxis nigromaculatus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Portunus spp.</td>
<td>53</td>
<td>37</td>
<td>278</td>
<td>25</td>
<td>98</td>
<td>220</td>
<td>146</td>
<td>261</td>
<td>18</td>
<td>294</td>
<td>26</td>
<td>5</td>
<td>1,461</td>
</tr>
<tr>
<td>Prionotus martis</td>
<td>79</td>
<td>50</td>
<td>319</td>
<td>85</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>538</td>
</tr>
<tr>
<td>Prionotus scitulus</td>
<td>4</td>
<td>6</td>
<td>52</td>
<td>33</td>
<td>21</td>
<td>9</td>
<td>16</td>
<td>32</td>
<td>40</td>
<td>68</td>
<td>78</td>
<td>72</td>
<td>431</td>
</tr>
<tr>
<td>Prionotus tribulus</td>
<td>35</td>
<td>25</td>
<td>115</td>
<td>50</td>
<td>42</td>
<td>8</td>
<td>8</td>
<td>7</td>
<td>9</td>
<td>16</td>
<td>48</td>
<td>27</td>
<td>390</td>
</tr>
<tr>
<td>Rachycentron canadum</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Species</td>
<td>Month</td>
<td>Totals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jan</td>
<td>Feb</td>
<td>Mar</td>
<td>Apr</td>
<td>May</td>
<td>Jun</td>
<td>Jul</td>
<td>Aug</td>
<td>Sep</td>
<td>Oct</td>
<td>Nov</td>
<td>Dec</td>
<td>E=792</td>
</tr>
<tr>
<td>Rhinobatos lentiginosus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhinoptera bonasus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rimapenaeus constrictus</td>
<td>4</td>
<td>10</td>
<td>6</td>
<td>18</td>
<td></td>
<td></td>
<td>1</td>
<td>4</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sardinella aurita</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>43</td>
<td>47</td>
<td>11</td>
<td>60</td>
<td>40</td>
<td>44</td>
<td>18</td>
<td>19</td>
<td>29</td>
<td>214</td>
<td>42</td>
<td>36</td>
<td>603</td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scorpaena brasiliensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selene vomer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serraniculus pumilio</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serranus subligarius</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sicyonia laevigata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sicyonia parri</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sicyonia typica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sphoeroides niphelus</td>
<td>8</td>
<td>1</td>
<td>5</td>
<td>10</td>
<td>53</td>
<td>36</td>
<td>7</td>
<td>7</td>
<td>3</td>
<td>7</td>
<td>24</td>
<td>9</td>
<td>170</td>
</tr>
<tr>
<td>Sphoeroides spengleri</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sphyraena borealis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sphyra tiburo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stephanolepis hispidus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongylura marina</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongylura notata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongylura spp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongylura timucu</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Species</td>
<td>Jan</td>
<td>Feb</td>
<td>Mar</td>
<td>Apr</td>
<td>May</td>
<td>Jun</td>
<td>Jul</td>
<td>Aug</td>
<td>Sep</td>
<td>Oct</td>
<td>Nov</td>
<td>Dec</td>
<td>Totals</td>
</tr>
<tr>
<td>----------------------</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>--------</td>
</tr>
<tr>
<td>Symphurus plagiusa</td>
<td>.</td>
<td>4</td>
<td>36</td>
<td>44</td>
<td>14</td>
<td>8</td>
<td>9</td>
<td>130</td>
<td>58</td>
<td>41</td>
<td>84</td>
<td>42</td>
<td>470</td>
</tr>
<tr>
<td>Syngnathus floridiae</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>61</td>
<td>2</td>
<td>28</td>
<td>7</td>
<td>3</td>
<td>6</td>
<td>7</td>
<td>128</td>
</tr>
<tr>
<td>Syngnathus louisianae</td>
<td>1</td>
<td>.</td>
<td>5</td>
<td>.</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>14</td>
<td>6</td>
<td>4</td>
<td>8</td>
<td>51</td>
</tr>
<tr>
<td>Syngnathus scovelli</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td>40</td>
<td>4</td>
<td>17</td>
<td>.</td>
<td>8</td>
<td>1</td>
<td>7</td>
<td>93</td>
</tr>
<tr>
<td>Synodus foetens</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>62</td>
<td>15</td>
<td>14</td>
<td>6</td>
<td>2</td>
<td>10</td>
<td>11</td>
<td>6</td>
<td>136</td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>1</td>
<td>21</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>25</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>21</td>
<td>2</td>
<td>7</td>
<td>2</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td></td>
<td>40</td>
</tr>
<tr>
<td>Trinectes maculatus</td>
<td>3</td>
<td>13</td>
<td>7</td>
<td>24</td>
<td>7</td>
<td>18</td>
<td>9</td>
<td>9</td>
<td>13</td>
<td>19</td>
<td>1</td>
<td>19</td>
<td>142</td>
</tr>
<tr>
<td>Tylosurus crocodilus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Urophycis floridana</td>
<td>2</td>
<td>9</td>
<td>27</td>
<td>8</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>46</td>
</tr>
<tr>
<td>Urophycis regia</td>
<td>1</td>
<td>.</td>
<td>4</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>8</td>
</tr>
<tr>
<td>Totals</td>
<td>1,916</td>
<td>1,662</td>
<td>3,622</td>
<td>3,148</td>
<td>5,237</td>
<td>8,640</td>
<td>11,635</td>
<td>8,868</td>
<td>8,104</td>
<td>7,797</td>
<td>10,354</td>
<td>3,566</td>
<td>74,549</td>
</tr>
</tbody>
</table>
Appendix CK15-02. Summary by gear, stratum, and zone of species collected during Cedar Key stratified-random sampling, 2015. Sampling with 21.3-m bay seine was stratified by the presence or absence of a shoreline ('Shore' or offshore) within 5-m. Offshore sets were post-stratified by the presence or absence of bottom vegetation ('Veg' or 'Unveg'). Sampling with 21.3-m river seine, 183-m haul seine, and 6.1-m otter trawl were not stratified. Zone B encompassed the northern portion of the universe and included all tidal creeks; Zone C encompassed the southern portion of the universe; and Zone F encompassed the lower Suwannee River. Effort, or the total number of hauls, is labeled 'E'. Taxa are arranged alphabetically.

<table>
<thead>
<tr>
<th>Species</th>
<th>Gear and Strata</th>
<th>Zone</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21.3-m bay seine</td>
<td>21.3-m river seine</td>
<td>183-m haul seine</td>
</tr>
<tr>
<td>Acanthostracion spp.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acanthostracion quadricornis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achirus lineatus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acipenser oxyrinchus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adinia xenica</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alosa alabamae</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. schoepfii</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ameiurus catus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anarchopterus criniger</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anchoa hepsetus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ancylopsetta quadrocellata</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aphredoderus sayanus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anostracion quadrocellata</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. alutus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Astroscopus y-graecum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bagre marinus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bathyrhadinus soporator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brevoortia spp.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calamus arctifrons</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Callinectes similis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caranx hippos</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Species</td>
<td>Gear and Strata</td>
<td>Zone</td>
<td>Totals</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------</td>
<td>------</td>
<td>--------</td>
</tr>
<tr>
<td></td>
<td>21.3-m bay seine</td>
<td>21.3-m river seine</td>
<td>183-m haul seine</td>
</tr>
<tr>
<td></td>
<td>Veg</td>
<td>Unveg</td>
<td>Shore</td>
</tr>
<tr>
<td>Carcharhinus leucas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centropristis striata</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chaetodipterus faber</td>
<td></td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>Chasmodes saburrae</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chilomycterus schoepfi</td>
<td>7</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Chloroscombrus chrysurus</td>
<td></td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Citharinthys macrops</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ctenogobius boleosoma</td>
<td></td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>1</td>
<td>20</td>
<td>36</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>10</td>
<td>16</td>
<td>33</td>
</tr>
<tr>
<td>Cyprinodon variegatus</td>
<td></td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Dactyluscoptus moorei</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Dasyatis americana</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dasyatis sabina</td>
<td></td>
<td>31</td>
<td>13</td>
</tr>
<tr>
<td>Dasyatis say</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Diaperus auratus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diplectrum formosum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diplodus holbrookii</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dorosoma cepedianum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dorosoma petenense</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Echeneis neucratois</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Etheostoma fusiforme</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Etropus crossotus</td>
<td></td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Eucinostomus gula</td>
<td>5</td>
<td>28</td>
<td>85</td>
</tr>
<tr>
<td>Eucinostomus harengulus</td>
<td>2</td>
<td>66</td>
<td>194</td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td>80</td>
<td>54</td>
<td>342</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>7</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Farfantepenaeus spp.</td>
<td>24</td>
<td>216</td>
<td>129</td>
</tr>
<tr>
<td>Floridichthys carpio</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Fundulus confluentus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fundulus grandis</td>
<td></td>
<td>1</td>
<td>59</td>
</tr>
<tr>
<td>Species</td>
<td>Gear and Strata</td>
<td>Zone</td>
<td>Totals</td>
</tr>
<tr>
<td>-------------------------</td>
<td>----------------</td>
<td>------</td>
<td>--------</td>
</tr>
<tr>
<td></td>
<td>21.3-m bay seine</td>
<td>21.3-m river seine</td>
<td>183-m haul seine</td>
</tr>
<tr>
<td>Fundulus seminolis</td>
<td>146</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Fundulus similis</td>
<td>86</td>
<td>55</td>
<td>56</td>
</tr>
<tr>
<td>Gambusia holbrooki</td>
<td>.</td>
<td>43</td>
<td>.</td>
</tr>
<tr>
<td>Gobiesox strumosus</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Gobiosoma bosc</td>
<td>4</td>
<td>20</td>
<td>.</td>
</tr>
<tr>
<td>Gobiosoma longipala</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Gobiosoma robustum</td>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Gobiosoma spp.</td>
<td>4</td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td>Gymnura micrura</td>
<td>38</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Haemulon plumieri</td>
<td>25</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Harengula jaguana</td>
<td>323</td>
<td>235</td>
<td>922</td>
</tr>
<tr>
<td>Hemicaranx amblyrhynchus</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Hippocampus erectus</td>
<td>.</td>
<td>.</td>
<td>10</td>
</tr>
<tr>
<td>Hippocampus zosterae</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Hoplosternum littorale</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Hypherochilus caudovittatus</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Hyporhamphus meeki</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Hyporhamphus spp.</td>
<td>6</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Hypsoblennius hentz</td>
<td>1</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Ictalurus punctatus</td>
<td>.</td>
<td>1</td>
<td>134</td>
</tr>
<tr>
<td>Labidesthes sicculus</td>
<td>.</td>
<td>22</td>
<td>.</td>
</tr>
<tr>
<td>Lagocephalus laevigatus</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>535</td>
<td>170</td>
<td>522</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>22</td>
<td>342</td>
<td>316</td>
</tr>
<tr>
<td>Lepisosteus osseus</td>
<td>1</td>
<td>1</td>
<td>33</td>
</tr>
<tr>
<td>Lepisosteus platyrhincus</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Lepomis auritus</td>
<td>.</td>
<td>6</td>
<td>.</td>
</tr>
<tr>
<td>Lepomis macrochirus</td>
<td>.</td>
<td>17</td>
<td>.</td>
</tr>
<tr>
<td>Lepomis microlophus</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Lepomis punctatus</td>
<td>.</td>
<td>9</td>
<td>.</td>
</tr>
<tr>
<td>Lepomis sp.</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Limulus polyphemus</td>
<td>.</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Lobotes surinamensis</td>
<td>.</td>
<td>3</td>
<td>.</td>
</tr>
</tbody>
</table>
## Appendix CK15-02. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Gear and Strata</th>
<th>Zone</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21.3-m bay seine</td>
<td>21.3-m river seine</td>
<td>183-m haul seine</td>
</tr>
<tr>
<td></td>
<td>Veg</td>
<td>Unveg</td>
<td>Shore</td>
</tr>
<tr>
<td>Lucania goodei</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lucania parva</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>1</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Lutjanus synagyris</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Membras martinica</td>
<td>6</td>
<td>236</td>
<td>156</td>
</tr>
<tr>
<td>Menidia spp.</td>
<td>32</td>
<td>2,008</td>
<td>1,259</td>
</tr>
<tr>
<td>Menippe spp.</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>56</td>
<td>99</td>
<td>57</td>
</tr>
<tr>
<td>Menticirrhus saxatilis</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Microgobius gulosis</td>
<td>8</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Microgobius thalassinus</td>
<td>13</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Micropterus salmoides</td>
<td></td>
<td></td>
<td>31</td>
</tr>
<tr>
<td>Monacanthus ciliatus</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>1</td>
<td>14</td>
<td>540</td>
</tr>
<tr>
<td>Mugil curema</td>
<td></td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>Mugil trichodon</td>
<td></td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>Mycteroperca microlepis</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Myrophis punctatus</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nicholsina usta</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Notropis petersoni</td>
<td></td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>Ogcocephalus cubifrons</td>
<td>3</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>Oligoplites saurus</td>
<td></td>
<td></td>
<td>27</td>
</tr>
<tr>
<td>Opisthonema oglinum</td>
<td></td>
<td></td>
<td>45</td>
</tr>
<tr>
<td>Opsanus beta</td>
<td>3</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Orthopristis chrysoptera</td>
<td>102</td>
<td>14</td>
<td>10</td>
</tr>
<tr>
<td>Parablennius marmoreus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>1</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>Peprilus burti</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peprilus paru</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poecilia latipinna</td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Species</td>
<td>Gear and Strata</td>
<td>Zone</td>
<td>Totals</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>--------------------------------------</td>
<td>------</td>
<td>--------</td>
</tr>
<tr>
<td></td>
<td>21.3-m bay seine</td>
<td>21.3-m river seine</td>
<td>183-m haul seine</td>
</tr>
<tr>
<td>Pomoxis nigromaculatus</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Portunus spp.</td>
<td>2</td>
<td>46</td>
<td>10</td>
</tr>
<tr>
<td>Prionotus martis</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Prionotus scitulus</td>
<td>1</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td>Prionotus tribulus</td>
<td>.</td>
<td>38</td>
<td>9</td>
</tr>
<tr>
<td>Rachycentron canadum</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Rhinobatos lentiginosus</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Rhinoptera bonasus</td>
<td>.</td>
<td>4</td>
<td>.</td>
</tr>
<tr>
<td>Rimapenaeus constrictus</td>
<td>.</td>
<td>4</td>
<td>.</td>
</tr>
<tr>
<td>Sardinella aurita</td>
<td>.</td>
<td>4</td>
<td>.</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>2</td>
<td>5</td>
<td>42</td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td>.</td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td>Scorpaena brasiliensis</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Selene vomer</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Serranichus pumilio</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Serranus subligarius</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sicyonia laevigata</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sicyonia parri</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sicyonia typica</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sphoeroides nephelus</td>
<td>17</td>
<td>42</td>
<td>41</td>
</tr>
<tr>
<td>Sphoeroides spengleri</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sphyraena borealis</td>
<td>1</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Sphyraena tiburo</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Stephanolepis hispidus</td>
<td>14</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Strongylura marina</td>
<td>.</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Strongylura notata</td>
<td>.</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>Strongylura spp.</td>
<td>.</td>
<td>.</td>
<td>10</td>
</tr>
<tr>
<td>Strongylura timucu</td>
<td>1</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Symphurus plagiusa</td>
<td>31</td>
<td>44</td>
<td>27</td>
</tr>
<tr>
<td>Syngnathus floridiae</td>
<td>67</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Syngnathus louisianae</td>
<td>9</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Syngnathus scovelli</td>
<td>60</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>Syngnathus springeri</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>

Appendix CK15-02. (Continued)
### Appendix CK15-02. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>21.3-m bay seine</th>
<th>21.3-m river seine</th>
<th>183-m haul seine</th>
<th>6.1-m otter trawl</th>
<th>Zone</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Veg E=27</td>
<td>Unveg E=117</td>
<td>Shore E=108</td>
<td>E=168</td>
<td>E=192</td>
<td>E=180</td>
</tr>
<tr>
<td>Synodus foetens</td>
<td>5</td>
<td>29</td>
<td>33</td>
<td>5</td>
<td>13</td>
<td>51</td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td>.</td>
<td>.</td>
<td>23</td>
<td>.</td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>.</td>
<td>.</td>
<td>8</td>
<td>1</td>
<td>31</td>
<td>.</td>
</tr>
<tr>
<td>Trinectes maculatus</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>56</td>
<td>4</td>
<td>81</td>
</tr>
<tr>
<td>Tylosurus crocodilus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Urophycis floridana</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>45</td>
<td>36</td>
</tr>
<tr>
<td>Urophycis regia</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Totals</td>
<td>1,715</td>
<td>7,320</td>
<td>11,243</td>
<td>18,934</td>
<td>20,328</td>
<td>15,009</td>
</tr>
</tbody>
</table>
Apalachicola Bay

Apalachicola Bay is a shallow, semi-enclosed estuary, located on the northwestern coast of Florida. The estuary, bounded by a barrier island complex (St. Vincent Island, Little St. George Island, St. George Island, and Dog Island), is connected to the Gulf of Mexico through four passes (Indian Pass, West Pass, East Pass, and Sikes Cut). East of Dog Island, St. George Sound is open to the Gulf (Figure AP15-01). Freshwater inflow to Apalachicola Bay primarily comes from the Apalachicola River and to a lesser extent the Carrabelle River (Livingston 1983). Shoreline vegetation consists largely of marsh grasses and bottom substrates are typically characterized as sand or mud with oyster beds scattered throughout the bay (Ingle and Dawson 1953). Less than 7% of the substrate is covered by seagrass (Continental Shelf Associates, Inc. 1985).

The Fisheries-Independent Monitoring (FIM) program has conducted intensive sampling of fish and selected invertebrates in Apalachicola Bay since 1998. The area sampled was divided into two geographically-defined bay zones (A and B) and one riverine zone (C; Figure AP15-01). Monthly stratified-random sampling (SRS) was conducted in Zones A and B using 21.3-m bay seines, 183-m haul seines, and 6.1-m bay otter trawls. Monthly SRS was conducted in Zone C with 21.3-m river seines and 6.1-m river otter trawls. All methods were the same as those described in the Methods section of this report. This section summarizes data collected by the FIM program during 2015 in Apalachicola Bay.

Stratified-Random Sampling

A total of 179,653 animals, which included 184 taxa of fishes and 17 taxa of selected invertebrates, were collected from 840 Apalachicola Bay SRS samples in 2015 (Table AP15-01; Appendices AP15-01 and -02). *Anchoa mitchilli* (n=78,679) and *Lagodon rhomboides* (n=16,657) were the most numerous taxa collected, representing 53.1% of the total catch. *Leiostomus xanthurus* (n=6,802), *Menidia* spp. (n=6,470), *Micropterus salmoides* (n=5,886) and *Micropogonias undulatus*. (n=5,419) were the next most abundant taxa collected, accounting for an additional 13.7% of the total catch. Twenty-nine Selected Taxa (n=30,228) composed 16.8% of the total catch. *Leiostomus xanthurus* (n=6,802), *M. undulatus* (n=5,419), *Litopenaeus setiferus* (n=4,856), and *Cynoscion arenarius* (n=4,181) were the most abundant Selected Taxa, representing 11.8% of the annual catch. Collections in 2015
included several species new to the Apalachicola Bay FIM collection: *Lagocephalus laevigatus* (Smooth Puffer), *Pagrus pagrus* (Red Porgy), *Sparisoma rubripinne* (Redfin Parrotfish), *Sparisoma radians* (Bucktooth Parrotfish), *Syacium papillosum* (Dusky Flounder), and *Tylosaurus acus* (Aguion Needlefish).

**Bay Sampling**

21.3-m Bay Seines. A total of 36,080 animals were collected in 240 21.3-m bay seines, representing 20.1% of the overall SRS catch (Table AP15-01). *Anchoa mitchilli* (n=6,740) and *Menidia* spp. (n=5,720) were the most abundant taxa, accounting for 34.5% of the 21.3-m bay seine catch (Table AP15-02). The taxon most frequently caught in 21.3-m bay seines was *L. rhomboides* (54.2% occurrence).

A total of 6,828 animals from 27 Selected Taxa were collected, representing 18.9% of the entire 21.3-m bay seine catch (Table AP15-03). *Leiostomus xanthurus* (n=2,782) and *Farfantepenaeus* spp. (n=1,102) were the most abundant Selected Taxa, accounting for 56.9% of the Selected Taxa collected by this gear. The Selected Taxa most frequently caught in 21.3-m bay seines were *Farfantepenaeus* spp. (39.2% occurrence), *L. xanthurus* (31.3% occurrence), and *Callinectes sapidus* (30.4% occurrence).

183-m Haul Seines. A total of 31,424 animals were collected in 216 183-m haul seines, representing 17.5% of the overall SRS catch (Table AP15-01). *Lagodon rhomboides* (n=12,390), *Harengula jaguana* (n=3,114), and *L. xanthurus* (n=2,534) were the most abundant taxa, accounting for 57.4% of the 183-m haul seine catch (Table AP15-04). The taxa most frequently caught in 183-m haul seines were *Farfantepenaeus* spp. (39.2% occurrence), *L. xanthurus* (31.3% occurrence), and *Dasyatis sabina* (63.0% occurrence).

A total of 8,271 animals from 27 Selected Taxa were collected, representing 26.3% of the entire 183-m haul seine catch (Table AP15-05). *Leiostomus xanthurus* (n=2,534), *M. cephalus*, (n=1,538), *L. setiferus* (n=1,099), and *M. undulatus* (n=1,011) were the most abundant Selected Taxa, accounting for 74.7% of the Selected Taxa collected by this gear. The Selected Taxa most frequently caught in 183-m haul seines were *M. cephalus* (65.3% occurrence), *Sciaenops ocellatus* (57.4% occurrence), and *L. xanthurus* (51.4% occurrence).

6.1-m Bay Otter Trawls. A total of 41,069 animals were collected in 144 6.1-m bay otter trawls, representing 22.9% of the overall SRS catch (Table AP15-01). *Anchoa mitchilli*
(n=22,400) and *M. undulatus* (n=3,296) were the most abundant taxa collected, accounting for 62.6% of the 6.1-m bay otter trawl catch (Table AP15-06). The taxa most frequently caught in 6.1-m bay otter trawls were *Etropus crossoptus* (72.2% occurrence) and *A. mitchilli* (51.4% occurrence).

A total of 9,747 animals from 16 Selected Taxa were collected, representing 23.7% of the entire 6.1-m bay otter trawl catch (Table AP15-07). *Micropogonias undulatus* (n=3,296), *L. setiferus* (n=1,824), *Cynoscion arenarius* (n=1,663), and *L. xanthurus* (n=1,449) were the most abundant Selected Taxa, accounting for 84.5% of the Selected Taxa collected by this gear. The Selected Taxon most frequently caught in 6.1-m bay otter trawls were *Farfantepenaeus duorarum* (45.1% occurrence) and *M. undulatus* (44.4% occurrence).

**River Sampling**

**21.3-m River Seines.** A total of 16,738 animals were collected in 156 21.3-m river seines, representing 9.3% of the overall SRS catch (Table AP15-01). *Micropterus salmoides* (n=5,832), *Notropis petersoni* (n=2,477), and *A. mitchilli* (n=2,004) were the most abundant taxa collected, accounting for 61.6% of the 21.3-m river seine catch (Table AP15-08). The taxa most frequently caught in 21.3-m river seines were *M. salmoides* (53.8% occurrence), *Trinectes maculatus* (46.8% occurrence), and *C. sapidus* (42.3% occurrence).

A total of 474 animals from 13 Selected Taxa were collected, representing 2.8% of the entire 21.3-m river seine catch (Table AP15-09). *Callinectes sapidus* (n=301) and *M. cephalus* (n=91) were the most abundant Selected Taxa, accounting for 82.7% of the Selected Taxa collected by this gear. The Selected Taxon most frequently caught in 21.3-m river seines was *C. sapidus* (42.3% occurrence).

**6.1-m River Otter Trawls.** A total of 54,342 animals were collected in 84 6.1-m river otter trawls, representing 30.2% of the overall SRS catch (Table AP15-01). *Anchoa mitchilli* (n=47,535) was the most abundant taxon collected, accounting for 87.5% of the 6.1-m river otter trawl catch (Table AP15-10). The taxa most frequently caught in 6.1-m river otter trawls were *C. sapidus* (54.8% occurrence), *A. mitchilli* (50.0% occurrence), and *T. maculatus* (50.0% occurrence).

A total of 4,908 animals from 15 Selected Taxa were collected, representing 9.0% of the entire 6.1-m river otter trawl catch (Table AP15-11). *Cynoscion arenarius* (n=2,182) and
L. setiferus (n=1,446) were the most abundant Selected Taxa, accounting for 73.9% of the Selected Taxa collected by this gear. The Selected Taxon most frequently caught in 6.1-m river otter trawls was C. sapidus (54.8% occurrence).
References


Figure AP15-01. Map of Apalachicola Bay sampling area. Zones are labeled A-C. Grids containing portions of Zones A and C are labeled A/C.
Table AP15-01. Summary of catch and effort data for Apalachicola Bay stratified-random sampling, 2015.

<table>
<thead>
<tr>
<th>Zone</th>
<th>21.3-m bay seine</th>
<th>21.3-m river seine</th>
<th>183-m haul seine</th>
<th>6.1-m otter trawl</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Animals</td>
<td>Hauls</td>
<td>Animals</td>
<td>Hauls</td>
<td>Animals</td>
</tr>
<tr>
<td>A</td>
<td>18,920</td>
<td>120</td>
<td>.</td>
<td>.</td>
<td>14,056</td>
</tr>
<tr>
<td>B</td>
<td>17,160</td>
<td>120</td>
<td>.</td>
<td>.</td>
<td>17,368</td>
</tr>
<tr>
<td>C</td>
<td>.</td>
<td>.</td>
<td>16,738</td>
<td>156</td>
<td>.</td>
</tr>
<tr>
<td>Totals</td>
<td>36,080</td>
<td>240</td>
<td>16,738</td>
<td>156</td>
<td>31,424</td>
</tr>
</tbody>
</table>
Table AP15-02. Catch statistics for 10 dominant taxa collected in 240 21.3-m bay seine samples during Apalachicola Bay stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
<td>CV</td>
</tr>
<tr>
<td><em>Anchoa mitchilli</em></td>
<td>6,740</td>
<td>18.7</td>
<td>24.2</td>
<td>20.06</td>
<td>6.40</td>
</tr>
<tr>
<td><em>Menidia</em> spp.</td>
<td>5,720</td>
<td>15.9</td>
<td>35.8</td>
<td>17.02</td>
<td>5.71</td>
</tr>
<tr>
<td><em>Lagodon rhomboides</em></td>
<td>3,808</td>
<td>10.6</td>
<td>54.2</td>
<td>11.33</td>
<td>2.29</td>
</tr>
<tr>
<td><em>Leiostomus xanthurus</em></td>
<td>2,782</td>
<td>7.7</td>
<td>31.3</td>
<td>8.28</td>
<td>1.84</td>
</tr>
<tr>
<td><em>Anchoa hepsetus</em></td>
<td>2,112</td>
<td>5.9</td>
<td>6.3</td>
<td>6.29</td>
<td>5.94</td>
</tr>
<tr>
<td><em>Lucania parva</em></td>
<td>1,461</td>
<td>4.1</td>
<td>11.3</td>
<td>4.35</td>
<td>1.48</td>
</tr>
<tr>
<td><em>Bairdiella chrysoura</em></td>
<td>1,389</td>
<td>3.9</td>
<td>19.6</td>
<td>4.13</td>
<td>1.41</td>
</tr>
<tr>
<td><em>Orthopristis chrysoptera</em></td>
<td>1,382</td>
<td>3.8</td>
<td>19.2</td>
<td>4.11</td>
<td>1.16</td>
</tr>
<tr>
<td><em>Farfantepenaeus</em> spp.</td>
<td>1,102</td>
<td>3.1</td>
<td>39.2</td>
<td>3.28</td>
<td>0.61</td>
</tr>
<tr>
<td><em>Eucinostomus</em> spp.</td>
<td>1,043</td>
<td>2.9</td>
<td>27.5</td>
<td>3.10</td>
<td>0.81</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>27,539</td>
<td>76.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>36,080</td>
<td>100.0</td>
<td>107.38</td>
<td>14.16</td>
<td></td>
</tr>
</tbody>
</table>

AP-8
Table AP15-03. Catch statistics for Selected Taxa collected in 240 21.3-m bay seine samples during Apalachicola Bay stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
<td>CV</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>2,782</td>
<td>7.7</td>
<td>31.3</td>
<td>8.28</td>
<td>1.84</td>
</tr>
<tr>
<td>Farfantepenaeus spp.</td>
<td>1,102</td>
<td>3.1</td>
<td>39.2</td>
<td>3.28</td>
<td>0.61</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>610</td>
<td>1.7</td>
<td>11.3</td>
<td>1.82</td>
<td>0.55</td>
</tr>
<tr>
<td>Litopenaeus setiferus</td>
<td>479</td>
<td>1.3</td>
<td>10.8</td>
<td>1.43</td>
<td>0.59</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>429</td>
<td>1.2</td>
<td>30.4</td>
<td>1.28</td>
<td>0.28</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>376</td>
<td>1.0</td>
<td>10.0</td>
<td>1.12</td>
<td>0.48</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>326</td>
<td>0.9</td>
<td>8.3</td>
<td>0.97</td>
<td>0.53</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>264</td>
<td>0.7</td>
<td>17.1</td>
<td>0.79</td>
<td>0.17</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>107</td>
<td>0.3</td>
<td>8.8</td>
<td>0.32</td>
<td>0.10</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>77</td>
<td>0.2</td>
<td>15.8</td>
<td>0.23</td>
<td>0.05</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>59</td>
<td>0.2</td>
<td>10.4</td>
<td>0.18</td>
<td>0.05</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>55</td>
<td>0.2</td>
<td>7.5</td>
<td>0.16</td>
<td>0.05</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>37</td>
<td>0.1</td>
<td>5.4</td>
<td>0.11</td>
<td>0.04</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>27</td>
<td>0.1</td>
<td>3.3</td>
<td>0.08</td>
<td>0.05</td>
</tr>
<tr>
<td>Menticirrhus saxatilis</td>
<td>23</td>
<td>0.1</td>
<td>2.9</td>
<td>0.07</td>
<td>0.04</td>
</tr>
<tr>
<td>Farfantepenaeus aztecas</td>
<td>22</td>
<td>0.1</td>
<td>1.3</td>
<td>0.07</td>
<td>0.06</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>14</td>
<td>&lt;0.1</td>
<td>2.9</td>
<td>0.04</td>
<td>0.02</td>
</tr>
<tr>
<td>Species</td>
<td>Number</td>
<td>% Occur</td>
<td>Density Estimate (animals/100m²)</td>
<td>Standard Length (mm)</td>
<td></td>
</tr>
<tr>
<td>------------------------------</td>
<td>--------</td>
<td>---------</td>
<td>----------------------------------</td>
<td>----------------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
<td>CV</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>11</td>
<td>&lt;0.1</td>
<td>2.1</td>
<td>0.03</td>
<td>0.02</td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td>8</td>
<td>&lt;0.1</td>
<td>1.3</td>
<td>0.02</td>
<td>0.02</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>5</td>
<td>&lt;0.1</td>
<td>1.7</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>5</td>
<td>&lt;0.1</td>
<td>0.8</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>3</td>
<td>&lt;0.1</td>
<td>0.8</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Paralichthys lethostigma</td>
<td>2</td>
<td>&lt;0.1</td>
<td>0.8</td>
<td>0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Menippe sp.</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.4</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Mycteroperca microlepis</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.4</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.4</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Menticirrhys littoralis</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.4</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.4</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>6,828</strong></td>
<td>18.9</td>
<td><strong>20.32</strong></td>
<td><strong>2.71</strong></td>
<td><strong>206.59</strong></td>
</tr>
</tbody>
</table>
Table AP15-04. Catch statistics for 10 dominant taxa collected in 216 183-m haul seine samples during Apalachicola Bay stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean catch-per-unit-effort.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Catch-per-unit-effort (animals/set)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
<td>Max</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Min</td>
<td>Stderr</td>
<td>Mean</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CV</td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>12,390</td>
<td>39.4</td>
<td>57.36</td>
<td>7.45</td>
<td>190.99</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>761.00</td>
<td></td>
<td>106</td>
</tr>
<tr>
<td>Harengula jaguana</td>
<td>3,114</td>
<td>9.9</td>
<td>14.42</td>
<td>7.57</td>
<td>772.16</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1,574.00</td>
<td></td>
<td>84</td>
</tr>
<tr>
<td>Leistomus xanthurus</td>
<td>2,534</td>
<td>8.1</td>
<td>11.73</td>
<td>2.05</td>
<td>256.44</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>260.00</td>
<td></td>
<td>112</td>
</tr>
<tr>
<td>Orthopristis chrysoptera</td>
<td>1,991</td>
<td>6.3</td>
<td>9.22</td>
<td>2.50</td>
<td>398.18</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>414.00</td>
<td></td>
<td>103</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>1,540</td>
<td>4.9</td>
<td>7.13</td>
<td>1.87</td>
<td>384.62</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>286.00</td>
<td></td>
<td>113</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>1,538</td>
<td>4.9</td>
<td>7.12</td>
<td>1.70</td>
<td>350.44</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>319.00</td>
<td></td>
<td>185</td>
</tr>
<tr>
<td>Litopenaeus setiferus</td>
<td>1,099</td>
<td>3.5</td>
<td>5.09</td>
<td>3.66</td>
<td>1,056.04</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>771.00</td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>1,011</td>
<td>3.2</td>
<td>22.2</td>
<td>4.68</td>
<td>298.04</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>111.00</td>
<td></td>
<td>157</td>
</tr>
<tr>
<td>Dasyatis sabina</td>
<td>899</td>
<td>2.9</td>
<td>63.0</td>
<td>4.16</td>
<td>195.52</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>64.00</td>
<td></td>
<td>225</td>
</tr>
<tr>
<td>Brevoortia spp.</td>
<td>661</td>
<td>2.1</td>
<td>12.5</td>
<td>3.06</td>
<td>809.47</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>352.00</td>
<td></td>
<td>112</td>
</tr>
<tr>
<td>Subtotal</td>
<td>26,777</td>
<td>85.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>31,424</td>
<td>100.0</td>
<td>145.48</td>
<td>15.12</td>
<td>152.78</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1,876.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

AP-11
Table AP15-05. Catch statistics for Selected Taxa collected in 216 183-m haul seine samples during Apalachicola Bay stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean catch-per-unit-effort.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Catch-per-unit-effort (animals/set)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td></td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>2,534</td>
<td>8.1</td>
<td>51.4</td>
<td>11.73</td>
<td>2.05</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>1,538</td>
<td>4.9</td>
<td>65.3</td>
<td>7.12</td>
<td>1.70</td>
</tr>
<tr>
<td>Litopenaeus setiferus</td>
<td>1,099</td>
<td>3.5</td>
<td>11.1</td>
<td>5.09</td>
<td>3.66</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>1,011</td>
<td>3.2</td>
<td>22.2</td>
<td>4.68</td>
<td>0.95</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>611</td>
<td>1.9</td>
<td>57.4</td>
<td>2.83</td>
<td>0.51</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>278</td>
<td>0.9</td>
<td>22.7</td>
<td>1.29</td>
<td>0.45</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>232</td>
<td>0.7</td>
<td>29.6</td>
<td>1.07</td>
<td>0.20</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>214</td>
<td>0.7</td>
<td>36.6</td>
<td>0.99</td>
<td>0.15</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>188</td>
<td>0.6</td>
<td>27.8</td>
<td>0.87</td>
<td>0.19</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>120</td>
<td>0.4</td>
<td>21.8</td>
<td>0.56</td>
<td>0.11</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>115</td>
<td>0.4</td>
<td>25.0</td>
<td>0.53</td>
<td>0.10</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>57</td>
<td>0.2</td>
<td>6.0</td>
<td>0.26</td>
<td>0.13</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>56</td>
<td>0.2</td>
<td>10.2</td>
<td>0.26</td>
<td>0.08</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>50</td>
<td>0.2</td>
<td>11.6</td>
<td>0.23</td>
<td>0.07</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>43</td>
<td>0.1</td>
<td>10.6</td>
<td>0.20</td>
<td>0.05</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>22</td>
<td>0.1</td>
<td>3.2</td>
<td>0.10</td>
<td>0.06</td>
</tr>
<tr>
<td>Paralichthys lethostigma</td>
<td>16</td>
<td>0.1</td>
<td>6.5</td>
<td>0.07</td>
<td>0.02</td>
</tr>
</tbody>
</table>
Table AP15-05. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>Catch-per-unit-effort (animals/set)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td><em>Trachinotus carolinus</em></td>
<td>16</td>
<td>0.1</td>
<td>3.2</td>
<td>0.07</td>
</tr>
<tr>
<td><em>Mycteroperca microlepis</em></td>
<td>13</td>
<td>&lt;0.1</td>
<td>3.7</td>
<td>0.06</td>
</tr>
<tr>
<td><em>Lutjanus griseus</em></td>
<td>12</td>
<td>&lt;0.1</td>
<td>2.8</td>
<td>0.06</td>
</tr>
<tr>
<td><em>Cynoscion arenarius</em></td>
<td>10</td>
<td>&lt;0.1</td>
<td>4.2</td>
<td>0.05</td>
</tr>
<tr>
<td><em>Farfantepenaeus spp.</em></td>
<td>10</td>
<td>&lt;0.1</td>
<td>2.3</td>
<td>0.05</td>
</tr>
<tr>
<td><em>Pomatomus saltatrix</em></td>
<td>7</td>
<td>&lt;0.1</td>
<td>1.9</td>
<td>0.03</td>
</tr>
<tr>
<td><em>Scomberomorus maculatus</em></td>
<td>6</td>
<td>&lt;0.1</td>
<td>2.3</td>
<td>0.03</td>
</tr>
<tr>
<td><em>Menticirrhus saxatilis</em></td>
<td>6</td>
<td>&lt;0.1</td>
<td>1.4</td>
<td>0.03</td>
</tr>
<tr>
<td><em>Farfantepenaeus aztecus</em></td>
<td>3</td>
<td>&lt;0.1</td>
<td>1.4</td>
<td>0.01</td>
</tr>
<tr>
<td><em>Menticirrhus littoralis</em></td>
<td>3</td>
<td>&lt;0.1</td>
<td>1.4</td>
<td>0.01</td>
</tr>
<tr>
<td><em>Epinephelus morio</em></td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.5</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

| Totals | 8,271 | 26.3 | . | 38.29 | 5.47 | 209.76 | 846.00 | . | . | 11 | 830 |
Table AP15-06.  Catch statistics for 10 dominant taxa collected in 144 6.1-m bay otter trawl samples during Apalachicola Bay stratified-random sampling, 2015.  Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean.  Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number No.</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>22,400</td>
<td>54.5</td>
<td>51.4</td>
<td>10.21</td>
<td>2.38</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>3,296</td>
<td>8.0</td>
<td>44.4</td>
<td>1.48</td>
<td>0.43</td>
</tr>
<tr>
<td>Litopenaeus setiferus</td>
<td>1,824</td>
<td>4.4</td>
<td>34.0</td>
<td>0.85</td>
<td>0.34</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>1,663</td>
<td>4.1</td>
<td>33.3</td>
<td>0.76</td>
<td>0.28</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>1,449</td>
<td>3.5</td>
<td>35.4</td>
<td>0.61</td>
<td>0.38</td>
</tr>
<tr>
<td>Ariopsis felis</td>
<td>1,333</td>
<td>3.3</td>
<td>27.1</td>
<td>0.61</td>
<td>0.22</td>
</tr>
<tr>
<td>Anchoa cubana</td>
<td>1,190</td>
<td>2.9</td>
<td>9.0</td>
<td>0.56</td>
<td>0.41</td>
</tr>
<tr>
<td>Etropus crossotus</td>
<td>806</td>
<td>2.0</td>
<td>72.2</td>
<td>0.37</td>
<td>0.05</td>
</tr>
<tr>
<td>Anchoa hepsetus</td>
<td>724</td>
<td>1.8</td>
<td>18.1</td>
<td>0.33</td>
<td>0.24</td>
</tr>
<tr>
<td>Anchoa spp.</td>
<td>424</td>
<td>1.0</td>
<td>2.8</td>
<td>0.20</td>
<td>0.19</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>35,109</td>
<td>85.5</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>41,069</strong></td>
<td><strong>100.0</strong></td>
<td>18.73</td>
<td>3.13</td>
<td>200.32</td>
</tr>
</tbody>
</table>

AP-14
Table AP15-07. Catch statistics for Selected Taxa collected in 144 6.1-m bay otter trawl samples during Apalachicola Bay stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean  Stderr CV Max Mean Stderr Min Max</td>
<td></td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>3,296</td>
<td>8.0</td>
<td>1.48  0.43 345.16 41.35</td>
<td>63 0.46 8 192</td>
</tr>
<tr>
<td>Litopenaeus setiferus</td>
<td>1,824</td>
<td>4.4</td>
<td>0.85  0.34 487.38 35.69</td>
<td>22 0.11 8 53</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>1,663</td>
<td>4.1</td>
<td>0.76  0.28 442.60 35.01</td>
<td>53 0.65 7 232</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>1,449</td>
<td>3.5</td>
<td>0.61  0.38 748.75 54.79</td>
<td>70 0.64 10 180</td>
</tr>
<tr>
<td>Menippe spp.</td>
<td>308</td>
<td>0.8</td>
<td>0.14  0.05 386.18 3.91</td>
<td>17 0.79 2 85</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>298</td>
<td>0.7</td>
<td>0.14  0.05 463.12 6.87</td>
<td>61 1.68 12 230</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>297</td>
<td>0.7</td>
<td>0.14  0.02 181.50 1.35</td>
<td>20 0.26 15 37</td>
</tr>
<tr>
<td>Farfantepenaeus aztecsus</td>
<td>211</td>
<td>0.5</td>
<td>0.09  0.03 436.19 4.11</td>
<td>22 0.29 15 35</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>141</td>
<td>0.3</td>
<td>0.06  0.01 224.73 0.94</td>
<td>61 3.83 10 181</td>
</tr>
<tr>
<td>Farfantepenaeus spp.</td>
<td>130</td>
<td>0.3</td>
<td>0.06  0.01 274.61 1.21</td>
<td>12 0.19 5 14</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>64</td>
<td>0.2</td>
<td>0.03  0.01 313.33 0.67</td>
<td>52 3.76 13 116</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>47</td>
<td>0.1</td>
<td>0.02  &lt;0.01 238.53 0.27</td>
<td>148 9.21 42 264</td>
</tr>
<tr>
<td>Paralichthys lethostigma</td>
<td>11</td>
<td>&lt;0.1</td>
<td>0.01  &lt;0.01 349.56 0.07</td>
<td>241 14.70 125 301</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>4</td>
<td>&lt;0.1</td>
<td>2.1   &lt;0.01 739.93 0.13</td>
<td>121 33.02 22 162</td>
</tr>
<tr>
<td>Menticirrhus saxatilis</td>
<td>2</td>
<td>&lt;0.1</td>
<td>1.4   &lt;0.01 854.26 0.09</td>
<td>110 26.50 83 136</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.7   &lt;0.01 1,200.00 0.06</td>
<td>32 . 32 32</td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.7   &lt;0.01 1,200.00 0.06</td>
<td>130 . 130 130</td>
</tr>
<tr>
<td>Totals</td>
<td>9,747</td>
<td>23.7</td>
<td>4.40  0.96 261.95 103.77</td>
<td>. . 2 301</td>
</tr>
</tbody>
</table>
Table AP15-08. Catch statistics for 10 dominant taxa collected in 156 21.3-m river seine samples during Apalachicola Bay stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m$^2$)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Micropterus salmoides</td>
<td>5,832</td>
<td>34.8</td>
<td>53.8</td>
<td>54.98</td>
<td>51.31</td>
</tr>
<tr>
<td>Notropis petersoni</td>
<td>2,477</td>
<td>14.8</td>
<td>36.5</td>
<td>23.35</td>
<td>4.99</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>2,004</td>
<td>12.0</td>
<td>26.3</td>
<td>18.89</td>
<td>7.80</td>
</tr>
<tr>
<td>Trinectes maculatus</td>
<td>833</td>
<td>5.0</td>
<td>46.8</td>
<td>7.85</td>
<td>1.39</td>
</tr>
<tr>
<td>Menidia spp.</td>
<td>745</td>
<td>4.5</td>
<td>20.5</td>
<td>7.02</td>
<td>3.04</td>
</tr>
<tr>
<td>Lucania parva</td>
<td>633</td>
<td>3.8</td>
<td>34.6</td>
<td>5.97</td>
<td>1.43</td>
</tr>
<tr>
<td>Lepomis macrochirus</td>
<td>492</td>
<td>2.9</td>
<td>30.8</td>
<td>4.64</td>
<td>1.20</td>
</tr>
<tr>
<td>Lepomis punctatus</td>
<td>332</td>
<td>2.0</td>
<td>37.8</td>
<td>3.13</td>
<td>0.61</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>301</td>
<td>1.8</td>
<td>42.3</td>
<td>2.84</td>
<td>0.52</td>
</tr>
<tr>
<td>Notemigonus crysoleucas</td>
<td>297</td>
<td>1.8</td>
<td>22.4</td>
<td>2.80</td>
<td>0.73</td>
</tr>
<tr>
<td>Subtotal</td>
<td>13,946</td>
<td>83.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>16,738</td>
<td>100.0</td>
<td></td>
<td>157.79</td>
<td>52.15</td>
</tr>
</tbody>
</table>

AP-16
<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>% No.</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>301</td>
<td>1.8</td>
<td>42.3</td>
<td>2.84</td>
<td>0.52</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>91</td>
<td>0.5</td>
<td>1.9</td>
<td>0.86</td>
<td>0.60</td>
</tr>
<tr>
<td>Farfantepenaeus spp.</td>
<td>20</td>
<td>0.1</td>
<td>6.4</td>
<td>0.19</td>
<td>0.07</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>18</td>
<td>0.1</td>
<td>1.9</td>
<td>0.17</td>
<td>0.12</td>
</tr>
<tr>
<td>Paralichthys lethostigma</td>
<td>11</td>
<td>0.1</td>
<td>6.4</td>
<td>0.10</td>
<td>0.03</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>8</td>
<td>0.1</td>
<td>4.5</td>
<td>0.08</td>
<td>0.03</td>
</tr>
<tr>
<td>Litopenaeus setiferus</td>
<td>8</td>
<td>0.1</td>
<td>2.6</td>
<td>0.08</td>
<td>0.04</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>4</td>
<td>&lt;0.1</td>
<td>1.9</td>
<td>0.04</td>
<td>0.02</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>4</td>
<td>&lt;0.1</td>
<td>0.6</td>
<td>0.04</td>
<td>0.04</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>3</td>
<td>&lt;0.1</td>
<td>1.9</td>
<td>0.03</td>
<td>0.02</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>3</td>
<td>&lt;0.1</td>
<td>1.3</td>
<td>0.03</td>
<td>0.02</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>2</td>
<td>&lt;0.1</td>
<td>1.3</td>
<td>0.02</td>
<td>0.01</td>
</tr>
<tr>
<td>Megalops atlanticus</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.6</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>474</td>
<td>2.8</td>
<td>4.47</td>
<td>0.84</td>
<td>235.52</td>
</tr>
</tbody>
</table>
Table AP15-10. Catch statistics for 10 dominant taxa collected in 84 6.1-m river otter trawl samples during Apalachicola Bay stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (\% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>No.</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td><strong>Anchoa mitchilli</strong></td>
<td>47,535</td>
<td>87.5</td>
<td>50.0</td>
<td>76.35</td>
<td>36.29</td>
</tr>
<tr>
<td><strong>Cynoscion arenarius</strong></td>
<td>2,182</td>
<td>4.0</td>
<td>28.6</td>
<td>3.51</td>
<td>1.17</td>
</tr>
<tr>
<td><strong>Litopenaeus setiferus</strong></td>
<td>1,446</td>
<td>2.7</td>
<td>21.4</td>
<td>2.32</td>
<td>0.98</td>
</tr>
<tr>
<td><strong>Micropogonias undulatus</strong></td>
<td>732</td>
<td>1.4</td>
<td>25.0</td>
<td>1.12</td>
<td>0.47</td>
</tr>
<tr>
<td><strong>Trinectes maculatus</strong></td>
<td>692</td>
<td>1.3</td>
<td>50.0</td>
<td>1.09</td>
<td>0.43</td>
</tr>
<tr>
<td><strong>Eucinostomus spp.</strong></td>
<td>468</td>
<td>0.9</td>
<td>23.8</td>
<td>0.76</td>
<td>0.24</td>
</tr>
<tr>
<td><strong>Callinectes sapidus</strong></td>
<td>264</td>
<td>0.5</td>
<td>54.8</td>
<td>0.42</td>
<td>0.15</td>
</tr>
<tr>
<td><strong>Ictalurus punctatus</strong></td>
<td>172</td>
<td>0.3</td>
<td>33.3</td>
<td>0.28</td>
<td>0.11</td>
</tr>
<tr>
<td><strong>Symphurus plagiusa</strong></td>
<td>123</td>
<td>0.2</td>
<td>15.5</td>
<td>0.20</td>
<td>0.09</td>
</tr>
<tr>
<td><strong>Farfantepenaeus spp.</strong></td>
<td>95</td>
<td>0.2</td>
<td>17.9</td>
<td>0.15</td>
<td>0.06</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>53,709</td>
<td>98.8</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>54,342</td>
<td>100.0</td>
<td>.</td>
<td>87.22</td>
<td>36.76</td>
</tr>
</tbody>
</table>
Table AP15-11. Catch statistics for Selected Taxa collected in 84 6.1-m river otter trawl samples during Apalachicola Bay stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td></td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>2,182</td>
<td>4.0</td>
<td>28.6</td>
<td>3.51</td>
<td>1.17</td>
</tr>
<tr>
<td>Litopenaeus setiferus</td>
<td>1,446</td>
<td>2.7</td>
<td>21.4</td>
<td>2.32</td>
<td>0.98</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>732</td>
<td>1.4</td>
<td>25.0</td>
<td>1.12</td>
<td>0.47</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>264</td>
<td>0.5</td>
<td>54.8</td>
<td>0.42</td>
<td>0.15</td>
</tr>
<tr>
<td>Farfantepenaeus spp.</td>
<td>95</td>
<td>0.2</td>
<td>17.9</td>
<td>0.15</td>
<td>0.06</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>60</td>
<td>0.1</td>
<td>9.5</td>
<td>0.10</td>
<td>0.06</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>49</td>
<td>0.1</td>
<td>9.5</td>
<td>0.07</td>
<td>0.05</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>19</td>
<td>&lt;0.1</td>
<td>9.5</td>
<td>0.03</td>
<td>0.01</td>
</tr>
<tr>
<td>Paralichthys lethostigma</td>
<td>18</td>
<td>&lt;0.1</td>
<td>10.7</td>
<td>0.03</td>
<td>0.01</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>16</td>
<td>&lt;0.1</td>
<td>7.1</td>
<td>0.03</td>
<td>0.01</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>9</td>
<td>&lt;0.1</td>
<td>3.6</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>7</td>
<td>&lt;0.1</td>
<td>2.4</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>4</td>
<td>&lt;0.1</td>
<td>3.6</td>
<td>0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Farfantepenaeus aztecus</td>
<td>3</td>
<td>&lt;0.1</td>
<td>2.4</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>3</td>
<td>&lt;0.1</td>
<td>3.6</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>1</td>
<td>&lt;0.1</td>
<td>1.2</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>4,908</td>
<td>9.0</td>
<td></td>
<td>7.83</td>
<td>1.93</td>
</tr>
</tbody>
</table>
Appendix AP15-01. Monthly summary of species collected during Apalachicola Bay stratified-random sampling, 2015. Effort, or total number of hauls, is labeled ‘E’. Taxa are arranged alphabetically.

<table>
<thead>
<tr>
<th>Species</th>
<th>Jan E=70</th>
<th>Feb E=70</th>
<th>Mar E=70</th>
<th>Apr E=70</th>
<th>May E=70</th>
<th>Jun E=70</th>
<th>Jul E=70</th>
<th>Aug E=70</th>
<th>Sep E=70</th>
<th>Oct E=70</th>
<th>Nov E=70</th>
<th>Dec E=70</th>
<th>Totals E=840</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acanthostracion quadricornis</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>12</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>5</td>
<td>29</td>
</tr>
<tr>
<td>Achirus lineatus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>6</td>
</tr>
<tr>
<td>Alosa alabamae</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Alosa chrysochloris</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Alosa spp.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Aluterus schoepfi</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>45</td>
</tr>
<tr>
<td>Ameiurus catus</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>4</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Ameiurus natalis</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Amia calva</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Anchoa cubana</td>
<td>127</td>
<td>5</td>
<td>20</td>
<td>1</td>
<td>16</td>
<td>1</td>
<td>326</td>
<td>616</td>
<td>919</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2,031</td>
</tr>
<tr>
<td>Anchoa hepsetus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>25</td>
<td>2,701</td>
<td>36</td>
<td>16</td>
<td>27</td>
<td>19</td>
<td>6</td>
<td>16</td>
<td>2,847</td>
</tr>
<tr>
<td>Anchoa lyolepis</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>1</td>
<td>434</td>
<td>547</td>
<td>164</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1,148</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>442</td>
<td>1,192</td>
<td>349</td>
<td>7,455</td>
<td>2,559</td>
<td>5,465</td>
<td>15,755</td>
<td>7,796</td>
<td>3,337</td>
<td>4,441</td>
<td>28,267</td>
<td>1,621</td>
<td>78,679</td>
</tr>
<tr>
<td>Anchoa spp.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>19</td>
<td>.</td>
<td>403</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>424</td>
</tr>
<tr>
<td>Anclyopsetta quadrocelliata</td>
<td>3</td>
<td>4</td>
<td>9</td>
<td>10</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>2</td>
<td>5</td>
<td>.</td>
<td>36</td>
</tr>
<tr>
<td>Aphredoderus sayanus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>14</td>
<td>8</td>
<td>3</td>
<td>16</td>
<td>15</td>
<td>15</td>
<td>13</td>
<td>14</td>
<td>9</td>
<td>13</td>
<td>4</td>
<td>2</td>
<td>126</td>
</tr>
<tr>
<td>Argopecten irradians</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>5</td>
</tr>
<tr>
<td>Ariopsis felis</td>
<td>15</td>
<td>.</td>
<td>6</td>
<td>14</td>
<td>40</td>
<td>24</td>
<td>32</td>
<td>334</td>
<td>711</td>
<td>294</td>
<td>43</td>
<td>33</td>
<td>1,546</td>
</tr>
<tr>
<td>Astroscopus y-graecum</td>
<td>4</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Bagre marinus</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>14</td>
<td>9</td>
<td>3</td>
<td>1</td>
<td>9</td>
<td>10</td>
<td>6</td>
<td>.</td>
<td>54</td>
</tr>
</tbody>
</table>
# Appendix AP15-01. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Month</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jan</td>
<td>Feb</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>5</td>
<td>125</td>
</tr>
<tr>
<td>Bathygobius soporator</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Brevoortia spp.</td>
<td>85</td>
<td>1</td>
</tr>
<tr>
<td>Calamus arctifrons</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Callinectes ornatus</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>131</td>
<td>250</td>
</tr>
<tr>
<td>Callinectes similis</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Caranx crysos</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Caranx hippos</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Caranx latus</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Carpiodes cyprinus</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Centropristis striata</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Chaetodipterus faber</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Chasmodus saburrue</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>Chilomycterus schoepfi</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Chloroscrombus chrysurus</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Citharichthys macrops</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Citharichthys spilopterus</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Clupeidae sp.</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ctenogobius boleosoma</td>
<td>43</td>
<td>51</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>-</td>
<td>7</td>
</tr>
</tbody>
</table>

<p>|</p>
<table>
<thead>
<tr>
<th>Species</th>
<th>Month</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jan</td>
<td>Feb</td>
</tr>
<tr>
<td>Cyprinella venusta</td>
<td>-</td>
<td>7</td>
</tr>
<tr>
<td>Cyprinodon variegatus</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Dasyatis americana</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Dasyatis sabina</td>
<td>29</td>
<td>63</td>
</tr>
<tr>
<td>Dasyatis say</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Diplectrum bivittatum</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Diplectrum formosum</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Diplectrum sp.</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Diplodus holbrookii</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Dorosoma cepedianum</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Dorosoma petenense</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Echeneis neucratoides</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Elasmobranchus zonatus</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Epinephelus morio</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Erimyzon sucetta</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Esox niger</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Etheostoma edwini</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Etheostoma fusiforme</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Etheostoma swaini</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Etropus crossotus</td>
<td>80</td>
<td>37</td>
</tr>
</tbody>
</table>

Appendix AP15-01. (Continued)
<table>
<thead>
<tr>
<th>Species</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Etropus cyclosquamus</td>
<td>E=70</td>
<td>E=70</td>
<td>E=70</td>
<td>E=70</td>
<td>E=70</td>
<td>E=70</td>
<td>E=70</td>
<td>E=70</td>
<td>E=70</td>
<td>E=70</td>
<td>E=70</td>
<td>E=70</td>
<td>E=840</td>
</tr>
<tr>
<td>Eucinostomus argenteus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>11</td>
</tr>
<tr>
<td>Eucinostomus gula</td>
<td>6</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>14</td>
<td>69</td>
<td>161</td>
<td>40</td>
<td>78</td>
<td>25</td>
<td>.</td>
<td>.</td>
<td>394</td>
</tr>
<tr>
<td>Eucinostomus harengulus</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>19</td>
<td>92</td>
<td>230</td>
<td>98</td>
<td>180</td>
<td>51</td>
<td>.</td>
<td>671</td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>30</td>
<td>261</td>
<td>206</td>
<td>417</td>
<td>417</td>
<td>345</td>
<td>89</td>
<td>.</td>
<td>1,766</td>
</tr>
<tr>
<td>Farfantepenaeus aztecs</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>10</td>
<td>96</td>
<td>58</td>
<td>28</td>
<td>4</td>
<td>33</td>
<td>8</td>
<td>1</td>
<td>.</td>
<td>239</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>7</td>
<td>14</td>
<td>18</td>
<td>81</td>
<td>36</td>
<td>9</td>
<td>51</td>
<td>91</td>
<td>21</td>
<td>31</td>
<td>30</td>
<td>10</td>
<td>399</td>
</tr>
<tr>
<td>Farfantepenaeus spp.</td>
<td>38</td>
<td>43</td>
<td>14</td>
<td>25</td>
<td>22</td>
<td>74</td>
<td>235</td>
<td>338</td>
<td>295</td>
<td>102</td>
<td>71</td>
<td>100</td>
<td>1,357</td>
</tr>
<tr>
<td>Fundulus chrysotus</td>
<td>2</td>
<td>2</td>
<td>.</td>
<td>1</td>
<td>7</td>
<td>3</td>
<td>32</td>
<td>13</td>
<td>82</td>
<td>11</td>
<td>20</td>
<td>2</td>
<td>175</td>
</tr>
<tr>
<td>Fundulus confluentus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>9</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>12</td>
</tr>
<tr>
<td>Fundulus grandis</td>
<td>17</td>
<td>.</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>31</td>
</tr>
<tr>
<td>Fundulus similis</td>
<td>18</td>
<td>3</td>
<td>15</td>
<td>18</td>
<td>43</td>
<td>1</td>
<td>10</td>
<td>31</td>
<td>7</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>146</td>
</tr>
<tr>
<td>Gambusia holbrooki</td>
<td>9</td>
<td>4</td>
<td>.</td>
<td>24</td>
<td>.</td>
<td>1</td>
<td>13</td>
<td>14</td>
<td>63</td>
<td>20</td>
<td>3</td>
<td>.</td>
<td>152</td>
</tr>
<tr>
<td>Gobiesox strumosus</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Gobionellus oceanicus</td>
<td>1</td>
<td>.</td>
<td>2</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>7</td>
</tr>
<tr>
<td>Gobiosoma bosc</td>
<td>25</td>
<td>47</td>
<td>16</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>10</td>
<td>2</td>
<td>4</td>
<td>.</td>
<td>32</td>
<td>20</td>
<td>174</td>
</tr>
<tr>
<td>Gobiosoma longipala</td>
<td>3</td>
<td>.</td>
<td>1</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Gobiosoma robustum</td>
<td>.</td>
<td>8</td>
<td>.</td>
<td>11</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>1</td>
<td>8</td>
<td>.</td>
<td>33</td>
</tr>
<tr>
<td>Gobiosoma spp.</td>
<td>10</td>
<td>27</td>
<td>7</td>
<td>1</td>
<td>.</td>
<td>5</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>18</td>
<td>18</td>
<td>89</td>
<td>.</td>
</tr>
<tr>
<td>Gymnura micrura</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>4</td>
<td>7</td>
<td>13</td>
<td>12</td>
<td>7</td>
<td>23</td>
<td>6</td>
<td>3</td>
<td>2</td>
<td>77</td>
</tr>
<tr>
<td>Haemulon plumieri</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>5</td>
</tr>
<tr>
<td>Halichoeres bivittatus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>7</td>
<td>9</td>
<td>3</td>
<td>3</td>
<td>7</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>29</td>
</tr>
</tbody>
</table>
## Appendix AP15-01. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Month</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jan</td>
<td>Feb</td>
</tr>
<tr>
<td>Harengula jaguana</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hemicaranx amblyrhyynchus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterandria formosa</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Hippocampus erectus</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Hippocampus zosterae</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypleurochilus caudovittatus</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Hypleurochilus sp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hyporhamphus meeki</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hyporhamphus sp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypsoblennius hentzi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ictalurus furcatus</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Ictalurus punctatus</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Kyphosus sp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labidesthes sicculus</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Lachnolaimus maximus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lagocephalus laevigatus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>313</td>
<td>520</td>
</tr>
<tr>
<td>Leioptomus xanthurus</td>
<td>723</td>
<td>564</td>
</tr>
<tr>
<td>Lepisosteus oculatus</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Lepisosteus osseus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lepomis auritus</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Lepomis gulosus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Species</td>
<td>Month</td>
<td>Totals</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------------</td>
<td>--------</td>
</tr>
<tr>
<td></td>
<td>Jan</td>
<td>Feb</td>
</tr>
<tr>
<td><strong>Lepomis macrochirus</strong></td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td><strong>Lepomis microlophus</strong></td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td><strong>Lepomis punctatus</strong></td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td><strong>Lepomis spp.</strong></td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td><strong>Limulus polyphemus</strong></td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td><strong>Litopenaeus setiferus</strong></td>
<td>71</td>
<td>190</td>
</tr>
<tr>
<td><strong>Lobotes surinamensis</strong></td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td><strong>Lucania goodei</strong></td>
<td>133</td>
<td>19</td>
</tr>
<tr>
<td><strong>Lucania parva</strong></td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td><strong>Lutjanus griseus</strong></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><strong>Lutjanus synagris</strong></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><strong>Megalops atlanticus</strong></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><strong>Membras martinica</strong></td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td><strong>Menidia spp.</strong></td>
<td>83</td>
<td>56</td>
</tr>
<tr>
<td><strong>Menippe spp.</strong></td>
<td>6</td>
<td>25</td>
</tr>
<tr>
<td><strong>Menticirrhus americanus</strong></td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td><strong>Menticirrhus littoralis</strong></td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td><strong>Menticirrhus saxatilis</strong></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><strong>Microgobius gulosus</strong></td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td><strong>Microgobius thalassinus</strong></td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td><strong>Micropogonias undulatus</strong></td>
<td>518</td>
<td>371</td>
</tr>
<tr>
<td><strong>Micropterus salmoides</strong></td>
<td>21</td>
<td>8</td>
</tr>
</tbody>
</table>

AP-25
## Appendix AP15-01. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Month</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jan</td>
<td>Feb</td>
</tr>
<tr>
<td>Minytrema melanops</td>
<td>-</td>
<td>.</td>
</tr>
<tr>
<td>Monacanthus ciliatus</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Morone chrysops x saxatilis</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Morone saxatilis</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Moxostoma spp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>161</td>
<td>437</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>Mycteroperca microlepis</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Myrophis punctatus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Narcine bancroftii</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Nicholsina usta</td>
<td>4</td>
<td>.</td>
</tr>
<tr>
<td>Notemigonus crysoleucas</td>
<td>.</td>
<td>4</td>
</tr>
<tr>
<td>Notropis maculatus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Notropis petersoni</td>
<td>.</td>
<td>28</td>
</tr>
<tr>
<td>Notropis texanus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Noturus gyrinus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ogcocephalus cubifrons</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Oligoplites saurus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ophichthus gomesii</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Opisthomena oglinum</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Opsanus beta</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Opsopoeodus emiliae</td>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>
### Appendix AP15-01. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orthopristis chrysoptera</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>71</td>
<td>330</td>
<td>673</td>
<td>347</td>
<td>427</td>
<td>797</td>
<td>824</td>
<td>124</td>
<td>58</td>
<td>3,658</td>
</tr>
<tr>
<td>Pagrus pagrus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Parablennius marmoreus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>12</td>
<td>28</td>
<td>30</td>
<td>39</td>
<td>36</td>
<td>26</td>
<td>33</td>
<td>28</td>
<td>45</td>
<td>37</td>
<td>15</td>
<td>9</td>
<td>338</td>
</tr>
<tr>
<td>Paralichthys lethostigma</td>
<td>8</td>
<td>3</td>
<td>6</td>
<td>7</td>
<td>4</td>
<td>10</td>
<td>3</td>
<td>7</td>
<td>17</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>58</td>
</tr>
<tr>
<td>Pepilinus burti</td>
<td>1</td>
<td>42</td>
<td>2</td>
<td>2</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>6</td>
<td>8</td>
<td>29</td>
</tr>
<tr>
<td>Peprilus paru</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>4</td>
<td>9</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Percina nigrofasciata</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Poecilia latipinna</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>7</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>15</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td>2</td>
<td>7</td>
<td>7</td>
<td>60</td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>8</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>9</td>
</tr>
<tr>
<td>Pomoxis nigromaculatus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>7</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>12</td>
</tr>
<tr>
<td>Porichthys plectrodon</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>.</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Portunus spp.</td>
<td>7</td>
<td>.</td>
<td>13</td>
<td>11</td>
<td>20</td>
<td>15</td>
<td>109</td>
<td>37</td>
<td>13</td>
<td>4</td>
<td>13</td>
<td>3</td>
<td>245</td>
</tr>
<tr>
<td>Prionotus longispinosus</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Prionotus rubio</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Prionotus scitulus</td>
<td>41</td>
<td>18</td>
<td>16</td>
<td>31</td>
<td>3</td>
<td>7</td>
<td>18</td>
<td>40</td>
<td>13</td>
<td>24</td>
<td>60</td>
<td>28</td>
<td>299</td>
</tr>
<tr>
<td>Prionotus tribulus</td>
<td>30</td>
<td>15</td>
<td>39</td>
<td>18</td>
<td>5</td>
<td>3</td>
<td>6</td>
<td>8</td>
<td>26</td>
<td>23</td>
<td>45</td>
<td>2</td>
<td>220</td>
</tr>
<tr>
<td>Rhinoptera bonasus</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>3</td>
<td>14</td>
<td>18</td>
<td>54</td>
<td>3</td>
<td>2</td>
<td>.</td>
<td>1</td>
<td>2</td>
<td>99</td>
</tr>
<tr>
<td>Rimapenaeus constrictus</td>
<td>17</td>
<td>7</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>10</td>
<td>8</td>
<td>5</td>
<td>.</td>
<td>85</td>
<td>48</td>
<td>.</td>
<td>191</td>
</tr>
<tr>
<td>Sardinella aurita</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>18</td>
<td>57</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>Sciaenidae spp.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Species</td>
<td>Jan</td>
<td>Feb</td>
<td>Mar</td>
<td>Apr</td>
<td>May</td>
<td>Jun</td>
<td>Jul</td>
<td>Aug</td>
<td>Sep</td>
<td>Oct</td>
<td>Nov</td>
<td>Dec</td>
<td>Totals</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>--------</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>35</td>
<td>25</td>
<td>93</td>
<td>137</td>
<td>156</td>
<td>33</td>
<td>33</td>
<td>43</td>
<td>33</td>
<td>43</td>
<td>25</td>
<td>20</td>
<td>676</td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Scorpaena brasiliensis</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Selene vomer</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Serranulus pumilio</td>
<td>1</td>
<td>.</td>
<td>4</td>
<td>.</td>
<td>.</td>
<td>13</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Serranus subligarius</td>
<td>2</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>4</td>
<td>3</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>14</td>
</tr>
<tr>
<td>Sicyonia brevirostris</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Sicyonia laevigata</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Sicyonia parri</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Sicyonia typica</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Sparisoma radians</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Sparisoma rubripinne</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Sphoeroides nephelus</td>
<td>2</td>
<td>2</td>
<td>.</td>
<td>3</td>
<td>18</td>
<td>17</td>
<td>4</td>
<td>7</td>
<td>3</td>
<td>28</td>
<td>6</td>
<td>1</td>
<td>91</td>
</tr>
<tr>
<td>Sphoeroides parvus</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>5</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>4</td>
<td>1</td>
<td>.</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Sphoeroides sp.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sphyraena barracuda</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Sphyraena borealis</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Sphyrina tiburo</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>5</td>
<td>.</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Stellifer lanceolatus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>5</td>
<td>4</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Stephanolepis hispidus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>8</td>
<td>69</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>24</td>
<td>43</td>
<td>1</td>
<td>169</td>
<td></td>
</tr>
<tr>
<td>Stomolophus meleagris</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>24</td>
<td>4</td>
<td>13</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>Strongylura marina</td>
<td>.</td>
<td>4</td>
<td>12</td>
<td>13</td>
<td>1</td>
<td>7</td>
<td>22</td>
<td>23</td>
<td>40</td>
<td>65</td>
<td>34</td>
<td>2</td>
<td>223</td>
</tr>
</tbody>
</table>
### Appendix AP15-01. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Jan E=70</th>
<th>Feb E=70</th>
<th>Mar E=70</th>
<th>Apr E=70</th>
<th>May E=70</th>
<th>Jun E=70</th>
<th>Jul E=70</th>
<th>Aug E=70</th>
<th>Sep E=70</th>
<th>Oct E=70</th>
<th>Nov E=70</th>
<th>Dec E=70</th>
<th>Totals E=840</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongylura notata</td>
<td>1</td>
<td>10</td>
<td>28</td>
<td>5</td>
<td>44</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongylura spp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>Syacium papillosum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Symphurus plagiusa</td>
<td>32</td>
<td>25</td>
<td>8</td>
<td>28</td>
<td>22</td>
<td>13</td>
<td>9</td>
<td>83</td>
<td>67</td>
<td>50</td>
<td>109</td>
<td>22</td>
<td>468</td>
</tr>
<tr>
<td>Syngnathus flordiae</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>10</td>
<td>1</td>
<td>6</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td>2</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td>Syngnathus louisianae</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>7</td>
<td>6</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>Syngnathus scovelli</td>
<td>20</td>
<td>15</td>
<td>17</td>
<td>21</td>
<td>6</td>
<td>30</td>
<td>46</td>
<td>60</td>
<td>66</td>
<td>30</td>
<td>10</td>
<td>11</td>
<td>332</td>
</tr>
<tr>
<td>Synodus foetens</td>
<td>10</td>
<td>3</td>
<td>8</td>
<td>26</td>
<td>41</td>
<td>34</td>
<td>23</td>
<td>26</td>
<td>50</td>
<td>37</td>
<td>11</td>
<td>269</td>
<td></td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>27</td>
</tr>
<tr>
<td>Trichiurus lepturus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Trinectes maculatus</td>
<td>59</td>
<td>71</td>
<td>43</td>
<td>316</td>
<td>121</td>
<td>118</td>
<td>404</td>
<td>128</td>
<td>57</td>
<td>95</td>
<td>118</td>
<td>118</td>
<td>1,648</td>
</tr>
<tr>
<td>Tylosurus acus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Tylosurus crocodilus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>Tylosurus sp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Urophycis floridana</td>
<td>62</td>
<td>12</td>
<td>13</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>91</td>
</tr>
<tr>
<td>Urophycis regia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Xiphopenaeus kroyeri</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>3,626</td>
<td>4,484</td>
<td>4,486</td>
<td>22,134</td>
<td>9,303</td>
<td>17,209</td>
<td>25,555</td>
<td>20,064</td>
<td>15,764</td>
<td>17,893</td>
<td>34,601</td>
<td>4,534</td>
<td>179,653</td>
</tr>
</tbody>
</table>
Appendix AP15-02. Summary by gear, stratum, and zone of species collected during Apalachicola Bay stratified-random sampling, 2015. Sampling with 21.3-m bay seine was stratified by the presence or absence of a shoreline (‘Shore’ or offshore) within 5-m. Offshore sets were pre-stratified by the presence or absence of bottom vegetation (‘Veg’ or ‘Unveg’). Sampling with 21.3-m river seine, 183-m haul seine, and 6.1-m otter trawl were not stratified. Zones A and B were located in Apalachicola Bay, and Zone C encompassed the lower Apalachicola River. Effort, or the total number of hauls, is labeled ‘E’. Taxa are arranged alphabetically.

<table>
<thead>
<tr>
<th>Species</th>
<th>Gear and Strata</th>
<th>Zone</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21.3-m bay seine</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Veg</td>
<td>Unveg</td>
<td>Shore</td>
</tr>
<tr>
<td></td>
<td>E=78 E=54 E=108</td>
<td>E=156</td>
<td>E=216 E=228</td>
</tr>
<tr>
<td>Acanthostracion quadricornis</td>
<td>3 . . . . . . .</td>
<td>7</td>
<td>19 .  . . . . .</td>
</tr>
<tr>
<td>Achirus lineatus</td>
<td>. . 1 . . . . .</td>
<td>.</td>
<td>5 .  1 . . . . .</td>
</tr>
<tr>
<td>Alosa alabamiae</td>
<td>. . . . . . . .</td>
<td>2</td>
<td>. . . . . . . .</td>
</tr>
<tr>
<td>Alosa chrysocloris</td>
<td>. . . . . . . .</td>
<td>1</td>
<td>. 3</td>
</tr>
<tr>
<td>Alosa spp.</td>
<td>. . . . . . . .</td>
<td>3</td>
<td>. . . . . . . .</td>
</tr>
<tr>
<td>Aluterus schoepfii</td>
<td>1 . . . . . . .</td>
<td>43</td>
<td>2 . . 46 . . .</td>
</tr>
<tr>
<td>Ameiurus catus</td>
<td>. . . . . . . .</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Ameiurus natalis</td>
<td>. . . . . . . .</td>
<td>2</td>
<td>. . . . . . . .</td>
</tr>
<tr>
<td>Amia calva</td>
<td>. . . . . . . .</td>
<td>2</td>
<td>. . . . . . . .</td>
</tr>
<tr>
<td>Anchoa cubana</td>
<td>840 . . . . . .</td>
<td>1,190</td>
<td>22 2,009 . . .</td>
</tr>
<tr>
<td>Anchoa hepsetus</td>
<td>2,005 2 105 . .</td>
<td>10</td>
<td>725 .666 2,180 1</td>
</tr>
<tr>
<td>Anchoa lyolepis</td>
<td>850 . . . . . .</td>
<td>297</td>
<td>1 1,147 . . .</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>1,454 388 4,896 2,004</td>
<td>69,935</td>
<td>24,854 4,286 49,539 78,679</td>
</tr>
<tr>
<td>Anchoa spp.</td>
<td>. . . . . . . .</td>
<td>424</td>
<td>424 . . . . .</td>
</tr>
<tr>
<td>Ancylopsetta quadricellata</td>
<td>. . . . . . . .</td>
<td>8</td>
<td>28 . 13 23 . .</td>
</tr>
<tr>
<td>Aphredoderus sayanus</td>
<td>. . . . . . . .</td>
<td>1</td>
<td>. . . . . . . .</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>2 . . 3</td>
<td>2</td>
<td>115</td>
</tr>
<tr>
<td>Argopecten irradians</td>
<td>1 . . . . . . .</td>
<td>1</td>
<td>3 . 5 . . . . .</td>
</tr>
<tr>
<td>Ariopsis felis</td>
<td>3 10 31 . . . .</td>
<td>156</td>
<td>1,346 1,287 246</td>
</tr>
<tr>
<td>Astroscopus y-graecum</td>
<td>1 2 1 . . . . .</td>
<td>1</td>
<td>2 . 3 . . . . .</td>
</tr>
<tr>
<td>Bagre marinus</td>
<td>. . . . . . . .</td>
<td>50</td>
<td>. 4 51 . 2</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>631 31 727 . .</td>
<td>8</td>
<td>1,540 222</td>
</tr>
<tr>
<td>Bathyobius soperator</td>
<td>. . . . . . . .</td>
<td>2</td>
<td>. . . . . . . .</td>
</tr>
<tr>
<td>Brevoortia spp.</td>
<td>121 276 6 69 .</td>
<td>661</td>
<td>45 1,068</td>
</tr>
<tr>
<td>Calanus arctifrons</td>
<td>. . . . . . . .</td>
<td>2</td>
<td>. . . . . . . .</td>
</tr>
<tr>
<td>Callinectes ornatus</td>
<td>. . . . . . . .</td>
<td>1</td>
<td>. 1 . . . . . .</td>
</tr>
</tbody>
</table>

AP-30
<table>
<thead>
<tr>
<th>Species</th>
<th>Gear and Strata</th>
<th>Zone</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Veg</td>
<td>Unveg</td>
<td>Shore</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>63</td>
<td>65</td>
<td>301</td>
</tr>
<tr>
<td>Callinectes similis</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Caranx cryos</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Caranx hippos</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Caranx latus</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Carpiodes cyprinus</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Centropristis striata</td>
<td>36</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Chaetodipterus taber</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Chasmodes saburrae</td>
<td>8</td>
<td>.</td>
<td>7</td>
</tr>
<tr>
<td>Chilomycterus schoepfii</td>
<td>9</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Chloroscombrus chrysurus</td>
<td>4</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Citharichthys macrops</td>
<td>.</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Citharichthys spiloterus</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Clupeidae sp.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Ctenogobius boleosoma</td>
<td>90</td>
<td>39</td>
<td>183</td>
</tr>
<tr>
<td>Cynoscion arenarius</td>
<td>1</td>
<td>15</td>
<td>310</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>126</td>
<td>19</td>
<td>119</td>
</tr>
<tr>
<td>Cyprinella venusta</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Cyprinodon variegatus</td>
<td>.</td>
<td>6</td>
<td>.</td>
</tr>
<tr>
<td>Dasyatis americana</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Dasyatis sabina</td>
<td>15</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Desyatis say</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Diplectrum bivittatum</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Diplectrum formosum</td>
<td>2</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Diplectrum sp.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Diploplus holbrookii</td>
<td>18</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Dorosoma cepedianum</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Dorosoma petenense</td>
<td>.</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Echeneis neucratoides</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Elassoma zonatum</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>3</td>
<td>.</td>
<td>8</td>
</tr>
<tr>
<td>Enneacanthus gloriosus</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Species</td>
<td>Gear and Strata</td>
<td>Zone</td>
<td>Totals</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-----------------</td>
<td>------</td>
<td>--------</td>
</tr>
<tr>
<td></td>
<td>21.3-m bay seine</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Veg</td>
<td>Unveg</td>
<td>Shore</td>
</tr>
<tr>
<td>Epinephelus morio</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Erinyzon sucetta</td>
<td>.</td>
<td>.</td>
<td>5</td>
</tr>
<tr>
<td>Esox niger</td>
<td>.</td>
<td>.</td>
<td>13</td>
</tr>
<tr>
<td>Etheostoma edwini</td>
<td>.</td>
<td>.</td>
<td>4</td>
</tr>
<tr>
<td>Etheostoma fusiforme</td>
<td>.</td>
<td>.</td>
<td>8</td>
</tr>
<tr>
<td>Etheostoma swaini</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Etropus crossotus</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Etropus cyclosquamus</td>
<td>.</td>
<td>.</td>
<td>33</td>
</tr>
<tr>
<td>Eucinostomus argenteus</td>
<td>2</td>
<td>.</td>
<td>9</td>
</tr>
<tr>
<td>Eucinostomus gula</td>
<td>14</td>
<td>9</td>
<td>60</td>
</tr>
<tr>
<td>Eucinostomus harenegulus</td>
<td>2</td>
<td>25</td>
<td>164</td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td>248</td>
<td>51</td>
<td>744</td>
</tr>
<tr>
<td>Farfantepenaes azteus</td>
<td>.</td>
<td>22</td>
<td>3</td>
</tr>
<tr>
<td>Farfantepenaes duorarum</td>
<td>22</td>
<td>.</td>
<td>15</td>
</tr>
<tr>
<td>Farfantepenaes spp.</td>
<td>543</td>
<td>51</td>
<td>508</td>
</tr>
<tr>
<td>Fundulus chrysotus</td>
<td>.</td>
<td>.</td>
<td>175</td>
</tr>
<tr>
<td>Fundulus confluentus</td>
<td>.</td>
<td>.</td>
<td>12</td>
</tr>
<tr>
<td>Fundulus grandis</td>
<td>1</td>
<td>19</td>
<td>10</td>
</tr>
<tr>
<td>Fundulus similis</td>
<td>.</td>
<td>100</td>
<td>.</td>
</tr>
<tr>
<td>Gambusia holbrooki</td>
<td>.</td>
<td>.</td>
<td>152</td>
</tr>
<tr>
<td>Gobiesox strumosus</td>
<td>.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Gobionellus oceanicus</td>
<td>.</td>
<td>.</td>
<td>7</td>
</tr>
<tr>
<td>Gobiosoma bosc</td>
<td>21</td>
<td>5</td>
<td>32</td>
</tr>
<tr>
<td>Gobiosoma longipala</td>
<td>1</td>
<td>.</td>
<td>7</td>
</tr>
<tr>
<td>Gobiosoma robustum</td>
<td>18</td>
<td>.</td>
<td>13</td>
</tr>
<tr>
<td>Gobiosoma spp.</td>
<td>21</td>
<td>14</td>
<td>48</td>
</tr>
<tr>
<td>Gymnura micura</td>
<td>.</td>
<td>1</td>
<td>56</td>
</tr>
<tr>
<td>Haemulon plumierii</td>
<td>2</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Halichoeres bivitatus</td>
<td>25</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Harengula jaguana</td>
<td>306</td>
<td>192</td>
<td>196</td>
</tr>
<tr>
<td>Hemicaranx amblyrhyynchus</td>
<td>.</td>
<td>.</td>
<td>17</td>
</tr>
<tr>
<td>Heterandria formosa</td>
<td>.</td>
<td>.</td>
<td>84</td>
</tr>
</tbody>
</table>
Appendix AP15-02. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Gear and Strata</th>
<th>Zone</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21.3-m bay seine</td>
<td>21.3-m river seine</td>
<td>183-m haul seine</td>
</tr>
<tr>
<td></td>
<td>Veg</td>
<td>Unveg</td>
<td>Shore</td>
</tr>
<tr>
<td>Hippocampus erectus</td>
<td>5</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Hippocampus zosterae</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Hypleurochilus caudovittatus</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Hypleurochilus sp.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Hyporhamphus meeki</td>
<td>1</td>
<td>5</td>
<td>.</td>
</tr>
<tr>
<td>Hyporhamphus sp.</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Hypsoblennius hentz</td>
<td>14</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Ictalurus furcatus</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ictalurus punctatus</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Kyphosus sp.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Labidesthes sicculus</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lachnolaimus maximus</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lagocephalus laevigatus</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>2,664</td>
<td>37</td>
<td>1,107</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>895</td>
<td>388</td>
<td>1,499</td>
</tr>
<tr>
<td>Lepisosteus oculatus</td>
<td>1</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Lepisosteus osseus</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Lepomis auritus</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lepomis gulosus</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lepomis macrochirus</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lepomis microlophus</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lepomis punctatus</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Lepomis spp.</td>
<td>1</td>
<td>.</td>
<td>4</td>
</tr>
<tr>
<td>Limulus polyphemus</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Litopenaeus setiferus</td>
<td>40</td>
<td>17</td>
<td>422</td>
</tr>
<tr>
<td>Lobotes surinamensis</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lucania goodei</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lucania parva</td>
<td>1,042</td>
<td>5</td>
<td>414</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>3</td>
<td>.</td>
<td>24</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>44</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Megalops atlanticus</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Membras martinica</td>
<td>35</td>
<td>190</td>
<td>408</td>
</tr>
</tbody>
</table>
### Appendix AP15-02. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Gear and Strata</th>
<th>Zone</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21.3-m bay seine</td>
<td>21.3-m river seine</td>
<td>183-m haul seine</td>
</tr>
<tr>
<td></td>
<td>Veg</td>
<td>Unveg</td>
<td>Shore</td>
</tr>
<tr>
<td>Menida spp.</td>
<td>1,137</td>
<td>247</td>
<td>4,336</td>
</tr>
<tr>
<td>Menippe spp.</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>2</td>
<td>2</td>
<td>103</td>
</tr>
<tr>
<td>Menticirrhus littoralis</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Menticirrhus saxatilis</td>
<td>1</td>
<td>9</td>
<td>13</td>
</tr>
<tr>
<td>Microgobius gulosus</td>
<td>49</td>
<td>4</td>
<td>117</td>
</tr>
<tr>
<td>Microgobius thalassinus</td>
<td>.</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>.</td>
<td>114</td>
<td>262</td>
</tr>
<tr>
<td>Micropterus salmoides</td>
<td>16</td>
<td>.</td>
<td>34</td>
</tr>
<tr>
<td>Minotrema melanops</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Monacanthus ciliatus</td>
<td>3</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Morone chrysops x saxatilis</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Morone saxatilis</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Moxostoma spp.</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>9</td>
<td>32</td>
<td>569</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>.</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Mycteroperca microlepis</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Myrophis punctatus</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Narcine bancroftii</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Nicholsina usta</td>
<td>9</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Notemigonus crysoleucas</td>
<td>2</td>
<td>.</td>
<td>15</td>
</tr>
<tr>
<td>Notropis maculatus</td>
<td>.</td>
<td>.</td>
<td>234</td>
</tr>
<tr>
<td>Notropis petersoni</td>
<td>.</td>
<td>.</td>
<td>42</td>
</tr>
<tr>
<td>Notropis texanus</td>
<td>.</td>
<td>.</td>
<td>9</td>
</tr>
<tr>
<td>Noturus gyninus</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Ogocephalus cubifrons</td>
<td>.</td>
<td>.</td>
<td>30</td>
</tr>
<tr>
<td>Oligoplites saurus</td>
<td>5</td>
<td>1</td>
<td>30</td>
</tr>
<tr>
<td>Orthopristis chrysoptera</td>
<td>1,227</td>
<td>11</td>
<td>144</td>
</tr>
</tbody>
</table>

AP-34
Appendix AP15-02. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Gear and Strata</th>
<th>Zone</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21.3-m bay seine</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Veg</td>
<td>Unveg</td>
<td>Shore</td>
</tr>
<tr>
<td>Pagrus pagrus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parablennius marmoratus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paralichthys lethostigma</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peprilus burti</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peprilus paru</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percina nigrofasciata</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poecilia latipinna</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pomoxis nigromaculatus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Porichthys plectrodon</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portunus spp.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prionotus longispinosus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prionotus rubio</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prionotus scitulus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prionotus tribulus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhinoptera bonasus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rimapenaeus constrictus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sardinella aventa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sciaenidae spp.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scorpaena brasiliensis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selene vomer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serranulus pumilio</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serranus subligarius</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sicyonia brevirostris</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sicyonia laevigata</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sicyonia parri</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sicyonia typica</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sparisoma radians</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

AP-35
## Appendix AP15-02. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Gear and Strata</th>
<th>Zone</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21.3-m bay seine</td>
<td>21.3-m river seine</td>
<td>183-m haul seine</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sparisoma rubripinne</td>
<td></td>
<td></td>
<td>21.3</td>
</tr>
<tr>
<td>Sphoeroides nephelus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sphoeroides parvus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sphoeroides sp.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sphyraena barracuda</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sphyraena borealis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sphyraena tiburo</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stegolepis lanceolatus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stephanolepis hispidus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stomopneustes meleagris</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongylura marina</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongylura notata</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongylura spp.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syacinum papillosum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symphurus plagiusa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syngnathus floridae</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syngnathus louisianae</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syngnathus scovelli</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Synodus foetens</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trichurus lepturus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trinectes maculatus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tylosurus acus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tylosurus crocodilis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tylosurus sp.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urophycis floridana</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urophycis regia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xiphopenaeus kroyeri</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>15,165</td>
<td>2,344</td>
<td>18,571</td>
</tr>
</tbody>
</table>
Southern Indian River Lagoon

Along the eastern central coast of Florida, the sampling area identified as the southern Indian River Lagoon (IRL) system is a narrow estuary that extends from Vero Beach south to the Jupiter Inlet. The southern IRL is connected to the Atlantic Ocean by three inlets (Ft. Pierce, St. Lucie, and Jupiter). Freshwater inflow comes primarily from the St. Lucie and Loxahatchee rivers. In addition, there is freshwater input from numerous creeks and canals along the western shoreline. Shoreline vegetation consists largely of fringing mangrove, Brazilian pepper, and marsh grasses. Bottom substrates are typically characterized as sand or mud mixed with shell hash and oysters. Seagrasses, primarily *Halodule wrightii*, are the dominant vegetative cover in the southern IRL (Sime 2005).

The Fisheries-Independent Monitoring (FIM) program has conducted intensive sampling of fish and selected invertebrates in the southern IRL since 1997. The area sampled was divided into two geographically-defined bay zones (I and J) and one riverine zone (T; Figure TQ15-01). Monthly stratified-random sampling (SRS) was conducted in all zones using the 183-m haul seine. All sampling methods were the same as those described in the Methods section of this report. This section summarizes data collected by the FIM program during 2015 in the southern IRL.

**Stratified-Random Sampling**

*183-m Haul Seines.* A total of 28,913 animals, which included 94 taxa of fishes and four taxa of selected invertebrates, were collected from 144 southern IRL samples in 2015 (Table TQ15-01, Appendices TQ15-01 and -02). *Diapterus auratus* (n=5,926), *Lagodon rhomboides* (n=5,260), and *Mugil curema* (n=3,666) were the most numerous taxa collected, representing 51.4% of the 183-m haul seine catch (Table TQ15-02). *Harengula jaguana* (n=2,557), *Brevoortia* spp. (n=1,367), and *Ariopsis felis* (n=1,231) were the next most abundant taxa collected, accounting for an additional 17.8% of the 183-m haul seine catch.

A total of 7,572 animals from 26 Selected Taxa were collected, representing 26.2% of the entire 183-m haul seine catch (Table TQ15-03). *Mugil curema* (n=3,666) and *A. probatocephalus* (n=997) were the most abundant Selected Taxa, accounting for 61.6% of the Selected Taxa collected with this gear. The taxa most frequently collected in the
183-m haul seine were *D. auratus* (86.1% occurrence), *Archosargus probatocephalus* (77.8% occurrence), *A. felis* and *M. curema* (both 70.1% occurrence). Collections in 2015 included three species new to the southern IRL FIM collection: *Balistes capriscus* (Gray Triggerfish), *Strongylura timucu* (Timucu), and *Syacium papillosum* (Dusky Flounder).
Reference

Figure TQ15-01. Map of southern Indian River Lagoon sampling area, separated into three geographic zones; I, J, and T.
Table TQ15-01. Summary of catch and effort data for southern Indian River Lagoon stratified-random sampling, 2015.

<table>
<thead>
<tr>
<th>Zone</th>
<th>183-m haul seine</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hauls</td>
<td>Animals</td>
</tr>
<tr>
<td>I</td>
<td>48</td>
<td>12,554</td>
</tr>
<tr>
<td>J</td>
<td>48</td>
<td>11,830</td>
</tr>
<tr>
<td>T</td>
<td>48</td>
<td>4,529</td>
</tr>
<tr>
<td>Totals</td>
<td>144</td>
<td>28,913</td>
</tr>
</tbody>
</table>
Table TQ15-02. Catch statistics for 10 dominant taxa collected in 144 183-m haul seine samples during southern Indian River Lagoon stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean catch-per-unit-effort.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Catch-per-unit-effort (animals/set)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Occur</td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Diapterus auratus</td>
<td>5,926</td>
<td>20.5</td>
<td>86.1</td>
<td>41.15</td>
<td>7.98</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>5,260</td>
<td>18.2</td>
<td>40.3</td>
<td>36.53</td>
<td>9.19</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>3,666</td>
<td>12.7</td>
<td>70.1</td>
<td>25.46</td>
<td>14.54</td>
</tr>
<tr>
<td>Harengula jaguana</td>
<td>2,557</td>
<td>8.8</td>
<td>9.7</td>
<td>17.76</td>
<td>14.13</td>
</tr>
<tr>
<td>Brevoortia spp.</td>
<td>1,367</td>
<td>4.7</td>
<td>4.9</td>
<td>9.49</td>
<td>9.18</td>
</tr>
<tr>
<td>Ariopsis felis</td>
<td>1,231</td>
<td>4.3</td>
<td>70.1</td>
<td>8.55</td>
<td>1.53</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>997</td>
<td>3.5</td>
<td>77.8</td>
<td>6.92</td>
<td>0.86</td>
</tr>
<tr>
<td>Eucinostomus gula</td>
<td>853</td>
<td>3.0</td>
<td>41.0</td>
<td>5.92</td>
<td>1.74</td>
</tr>
<tr>
<td>Archosargus rhomboidalis</td>
<td>686</td>
<td>2.4</td>
<td>30.6</td>
<td>4.76</td>
<td>1.16</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>677</td>
<td>2.3</td>
<td>54.9</td>
<td>4.70</td>
<td>0.97</td>
</tr>
<tr>
<td>Subtotal</td>
<td>23,220</td>
<td>80.3</td>
<td>80.3</td>
<td>80.3</td>
<td>80.3</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>28,913</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td><strong>200.78</strong></td>
<td><strong>28.66</strong></td>
</tr>
</tbody>
</table>
Table TQ15-03. Catch statistics for Selected Taxa collected in 144 183-m haul seine samples during southern Indian River Lagoon stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean catch-per-unit-effort.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Catch-per-unit-effort (animals/set)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td></td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>3,666</td>
<td>12.7</td>
<td>70.1</td>
<td>25.46</td>
<td>14.54</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>997</td>
<td>3.5</td>
<td>77.8</td>
<td>6.92</td>
<td>0.86</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>677</td>
<td>2.3</td>
<td>54.9</td>
<td>4.70</td>
<td>0.97</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>656</td>
<td>2.3</td>
<td>53.5</td>
<td>4.56</td>
<td>1.47</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>445</td>
<td>1.5</td>
<td>29.9</td>
<td>3.09</td>
<td>0.75</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>227</td>
<td>0.8</td>
<td>27.1</td>
<td>1.58</td>
<td>0.45</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>200</td>
<td>0.7</td>
<td>9.0</td>
<td>1.39</td>
<td>0.80</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>198</td>
<td>0.7</td>
<td>20.8</td>
<td>1.38</td>
<td>0.34</td>
</tr>
<tr>
<td>Lutjanus analis</td>
<td>118</td>
<td>0.4</td>
<td>23.6</td>
<td>0.82</td>
<td>0.17</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>106</td>
<td>0.4</td>
<td>14.6</td>
<td>0.74</td>
<td>0.35</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>105</td>
<td>0.4</td>
<td>9.0</td>
<td>0.73</td>
<td>0.55</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>39</td>
<td>0.1</td>
<td>13.9</td>
<td>0.27</td>
<td>0.08</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>37</td>
<td>0.1</td>
<td>14.6</td>
<td>0.26</td>
<td>0.06</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>32</td>
<td>0.1</td>
<td>7.6</td>
<td>0.22</td>
<td>0.09</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>15</td>
<td>0.1</td>
<td>9.0</td>
<td>0.10</td>
<td>0.03</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>15</td>
<td>0.1</td>
<td>3.5</td>
<td>0.10</td>
<td>0.07</td>
</tr>
<tr>
<td>Paralichthys lethostigma</td>
<td>11</td>
<td>&lt;0.1</td>
<td>6.9</td>
<td>0.08</td>
<td>0.02</td>
</tr>
</tbody>
</table>

TQ-7
### Table TQ15-03. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Number No.</th>
<th>%</th>
<th>% Occur</th>
<th>Catch-per-unit-effort (animals/set)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td>5</td>
<td>&lt;0.1</td>
<td>3.5</td>
<td>0.03</td>
<td>0.02</td>
</tr>
<tr>
<td>Albula vulpes</td>
<td>5</td>
<td>&lt;0.1</td>
<td>2.8</td>
<td>0.03</td>
<td>0.02</td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td>5</td>
<td>&lt;0.1</td>
<td>2.8</td>
<td>0.03</td>
<td>0.02</td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td>4</td>
<td>&lt;0.1</td>
<td>2.8</td>
<td>0.03</td>
<td>0.01</td>
</tr>
<tr>
<td>Megalops atlanticus</td>
<td>2</td>
<td>&lt;0.1</td>
<td>1.4</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Lutjanus jocu</td>
<td>2</td>
<td>&lt;0.1</td>
<td>1.4</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Mugil rubriculus</td>
<td>2</td>
<td>&lt;0.1</td>
<td>1.4</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Lutjanus apodus</td>
<td>2</td>
<td>&lt;0.1</td>
<td>0.7</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Mycteroperca microlepis</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.7</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>7,572</td>
<td>26.2</td>
<td>.</td>
<td>52.58</td>
<td>15.44</td>
</tr>
</tbody>
</table>
Appendix TQ15-01. Monthly summary of species collected during southern Indian River Lagoon stratified-random sampling, 2015. Effort, or total number of hauls, is labeled ‘E’. Taxa are arranged alphabetically.

<table>
<thead>
<tr>
<th>Species</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acanthostracion quadricornis</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Achirus lineatus</td>
<td>.</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>15</td>
<td>16</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>39</td>
</tr>
<tr>
<td>Aetobatus narinari</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Albula vulpes</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>5</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>44</td>
<td>99</td>
<td>87</td>
<td>91</td>
<td>27</td>
<td>137</td>
<td>138</td>
<td>73</td>
<td>120</td>
<td>56</td>
<td>58</td>
<td>67</td>
<td>997</td>
</tr>
<tr>
<td>Archosargus rhomboidealis</td>
<td>22</td>
<td>77</td>
<td>55</td>
<td>40</td>
<td>10</td>
<td>113</td>
<td>47</td>
<td>57</td>
<td>177</td>
<td>69</td>
<td>11</td>
<td>.</td>
<td>686</td>
</tr>
<tr>
<td>Archosargus spp.</td>
<td>4</td>
<td>2</td>
<td>6</td>
<td>8</td>
<td>.</td>
<td>2</td>
<td>1</td>
<td>.</td>
<td>2</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>27</td>
</tr>
<tr>
<td>Ariopsis felis</td>
<td>43</td>
<td>128</td>
<td>228</td>
<td>163</td>
<td>159</td>
<td>104</td>
<td>48</td>
<td>68</td>
<td>134</td>
<td>35</td>
<td>63</td>
<td>58</td>
<td>1,231</td>
</tr>
<tr>
<td>Bagre marinus</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>7</td>
<td>.</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>15</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>8</td>
<td>8</td>
<td>195</td>
<td>1</td>
<td>11</td>
<td>6</td>
<td>.</td>
<td>.</td>
<td>14</td>
<td>3</td>
<td>3</td>
<td>29</td>
<td>278</td>
</tr>
<tr>
<td>Balistes capriscus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Brevoortia spp.</td>
<td>38</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>.</td>
<td>1</td>
<td>322</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1,367</td>
</tr>
<tr>
<td>Callinectes ornatus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>.</td>
<td>3</td>
<td>9</td>
<td>5</td>
<td>2</td>
<td>9</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>39</td>
</tr>
<tr>
<td>Callinectes similis</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>28</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>29</td>
</tr>
<tr>
<td>Callinectes spp.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Canthidermis maculata</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Caranx bartholomaei</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Caranx cryos</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>10</td>
</tr>
<tr>
<td>Caranx hippos</td>
<td>19</td>
<td>18</td>
<td>39</td>
<td>7</td>
<td>23</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>6</td>
<td>37</td>
<td>28</td>
<td>189</td>
</tr>
<tr>
<td>Caranx latus</td>
<td>3</td>
<td>3</td>
<td>10</td>
<td>4</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>11</td>
<td>13</td>
<td>4</td>
<td>.</td>
<td>52</td>
</tr>
</tbody>
</table>

TQ-9
<table>
<thead>
<tr>
<th>Species</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centropomus undecimalis</td>
<td>19</td>
<td>24</td>
<td>56</td>
<td>106</td>
<td>41</td>
<td>26</td>
<td>160</td>
<td>102</td>
<td>27</td>
<td>27</td>
<td>39</td>
<td>50</td>
<td>677</td>
</tr>
<tr>
<td>Chaetodipterus faber</td>
<td>1</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>11</td>
<td>.</td>
<td>.</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>.</td>
<td>23</td>
</tr>
<tr>
<td>Chloromycerus schoepfii</td>
<td>.</td>
<td>7</td>
<td>1</td>
<td>7</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>3</td>
<td>4</td>
<td>8</td>
<td>11</td>
<td>.</td>
<td>59</td>
</tr>
<tr>
<td>Chloroscombrus chrysurus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Citharichthys spiopterus</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>3</td>
<td>11</td>
<td>8</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>.</td>
<td>37</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>10</td>
<td>1</td>
<td>3</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>8</td>
<td>5</td>
<td>1</td>
<td>32</td>
</tr>
<tr>
<td>Dasyatis sabina</td>
<td>13</td>
<td>15</td>
<td>23</td>
<td>24</td>
<td>15</td>
<td>25</td>
<td>15</td>
<td>13</td>
<td>13</td>
<td>25</td>
<td>26</td>
<td>18</td>
<td>225</td>
</tr>
<tr>
<td>Dasyatis say</td>
<td>3</td>
<td>2</td>
<td>6</td>
<td>6</td>
<td>10</td>
<td>16</td>
<td>3</td>
<td>6</td>
<td>2</td>
<td>7</td>
<td>11</td>
<td>5</td>
<td>77</td>
</tr>
<tr>
<td>Diapterus auratus</td>
<td>462</td>
<td>359</td>
<td>953</td>
<td>243</td>
<td>350</td>
<td>361</td>
<td>808</td>
<td>1,153</td>
<td>233</td>
<td>253</td>
<td>491</td>
<td>260</td>
<td>5,926</td>
</tr>
<tr>
<td>Diplodus holbrooki</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>76</td>
<td>52</td>
<td>45</td>
<td>43</td>
<td>138</td>
<td>.</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>5</td>
<td>35</td>
<td>24</td>
<td>445</td>
</tr>
<tr>
<td>Eucinostomus gula</td>
<td>58</td>
<td>136</td>
<td>62</td>
<td>39</td>
<td>30</td>
<td>51</td>
<td>20</td>
<td>368</td>
<td>10</td>
<td>3</td>
<td>71</td>
<td>5</td>
<td>853</td>
</tr>
<tr>
<td>Eucinostomus harengulus</td>
<td>33</td>
<td>96</td>
<td>16</td>
<td>73</td>
<td>22</td>
<td>16</td>
<td>1</td>
<td>34</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>.</td>
<td>295</td>
</tr>
<tr>
<td>Eucinostomus jonesii</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Eucinostomus melanopterus</td>
<td>4</td>
<td>1</td>
<td>22</td>
<td>1</td>
<td>3</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>16</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>50</td>
</tr>
<tr>
<td>Eugerres plumieri</td>
<td>.</td>
<td>.</td>
<td>24</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>3</td>
<td>1</td>
<td>70</td>
<td>.</td>
<td>102</td>
</tr>
<tr>
<td>Gerres cinereus</td>
<td>19</td>
<td>49</td>
<td>10</td>
<td>66</td>
<td>1</td>
<td>17</td>
<td>3</td>
<td>8</td>
<td>2</td>
<td>10</td>
<td>11</td>
<td>11</td>
<td>207</td>
</tr>
<tr>
<td>Gymnura micrura</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>Haemulon aurolineatum</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>3</td>
<td>.</td>
</tr>
<tr>
<td>Haemulon parra</td>
<td>3</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>.</td>
<td>6</td>
<td>.</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Haemulon plumieri</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>10</td>
<td>.</td>
<td>13</td>
</tr>
<tr>
<td>Haemulon sciurus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>2</td>
<td>8</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Species</td>
<td>Jan</td>
<td>Feb</td>
<td>Mar</td>
<td>Apr</td>
<td>May</td>
<td>Jun</td>
<td>Jul</td>
<td>Aug</td>
<td>Sep</td>
<td>Oct</td>
<td>Nov</td>
<td>Dec</td>
<td>Totals</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>--------</td>
</tr>
<tr>
<td>Harengula jaguana</td>
<td>.</td>
<td>29</td>
<td>97</td>
<td>38</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>362</td>
<td>2,028</td>
<td>1</td>
<td>2,557</td>
</tr>
<tr>
<td>Hippocampus erectus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Hyporhamphus meeki</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Hyporhamphus unifasciatus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Kyphosus saltatrix</td>
<td>.</td>
<td>.</td>
<td>16</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>17</td>
</tr>
<tr>
<td>Lachnolaimus maximus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>1</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>6</td>
</tr>
<tr>
<td>Lactophrys trigonus</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>892</td>
<td>234</td>
<td>371</td>
<td>42</td>
<td>327</td>
<td>196</td>
<td>1,028</td>
<td>643</td>
<td>186</td>
<td>687</td>
<td>579</td>
<td>75</td>
<td>5,260</td>
</tr>
<tr>
<td>Leioctomus xanthurus</td>
<td>.</td>
<td>15</td>
<td>63</td>
<td>4</td>
<td>99</td>
<td>3</td>
<td>4</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>10</td>
<td>.</td>
<td>200</td>
</tr>
<tr>
<td>Lepisosteus osseus</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Limulus polyphemus</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Lobotes surinamensis</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>5</td>
</tr>
<tr>
<td>Lutjanus analis</td>
<td>2</td>
<td>13</td>
<td>9</td>
<td>6</td>
<td>11</td>
<td>4</td>
<td>6</td>
<td>9</td>
<td>5</td>
<td>31</td>
<td>18</td>
<td>4</td>
<td>118</td>
</tr>
<tr>
<td>Lutjanus apodus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>3</td>
<td>2</td>
<td>42</td>
<td>10</td>
<td>21</td>
<td>29</td>
<td>11</td>
<td>27</td>
<td>13</td>
<td>19</td>
<td>43</td>
<td>7</td>
<td>227</td>
</tr>
<tr>
<td>Lutjanus jocu</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>.</td>
<td>2</td>
<td>1</td>
<td>.</td>
<td>5</td>
<td>84</td>
<td>4</td>
<td>.</td>
<td>6</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>105</td>
</tr>
<tr>
<td>Megalops atlanticus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>16</td>
<td>.</td>
<td>31</td>
<td>2</td>
<td>20</td>
<td>11</td>
<td>30</td>
<td>23</td>
<td>32</td>
<td>12</td>
<td>19</td>
<td>2</td>
<td>198</td>
</tr>
<tr>
<td>Monacanthus ciliatus</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>8</td>
<td>.</td>
<td>.</td>
<td>11</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>8</td>
<td>18</td>
<td>57</td>
<td>36</td>
<td>45</td>
<td>21</td>
<td>32</td>
<td>25</td>
<td>68</td>
<td>16</td>
<td>283</td>
<td>47</td>
<td>656</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>143</td>
<td>287</td>
<td>84</td>
<td>67</td>
<td>34</td>
<td>27</td>
<td>48</td>
<td>48</td>
<td>78</td>
<td>247</td>
<td>2,421</td>
<td>182</td>
<td>3,666</td>
</tr>
</tbody>
</table>

TQ-11
## Appendix TQ15-01. (Continued)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mugil rubrioculus</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Mycteroperca microlepis</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Narcine bancrotti</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>1</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Oligopiltes chrysurus</td>
<td>3</td>
<td>10</td>
<td>14</td>
<td>1</td>
<td>6</td>
<td></td>
<td></td>
<td>4</td>
<td>10</td>
<td>4</td>
<td>33</td>
<td>38</td>
<td>123</td>
</tr>
<tr>
<td>Ocyurus chrysurus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Opisthomena oglinum</td>
<td>1</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>120</td>
<td></td>
<td>1</td>
<td></td>
<td>132</td>
</tr>
<tr>
<td>Opsanus tau</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Orthopristis chrysoptera</td>
<td>17</td>
<td>10</td>
<td></td>
<td>1</td>
<td>4</td>
<td>48</td>
<td>7</td>
<td>28</td>
<td>36</td>
<td>10</td>
<td>2</td>
<td></td>
<td>163</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td>Paralichthys lethostigma</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>2</td>
<td>1</td>
<td>14</td>
<td>9</td>
<td>49</td>
<td></td>
<td></td>
<td>7</td>
<td>3</td>
<td>5</td>
<td>11</td>
<td></td>
<td>106</td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Prionotus tribulus</td>
<td>1</td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>5</td>
<td>2</td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
<td>5</td>
<td></td>
<td>5</td>
<td>2</td>
<td></td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Scorpaena grandicornis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Selene vomer</td>
<td>147</td>
<td>84</td>
<td>98</td>
<td>11</td>
<td>37</td>
<td>17</td>
<td>29</td>
<td>16</td>
<td>6</td>
<td>12</td>
<td>19</td>
<td>19</td>
<td>495</td>
</tr>
<tr>
<td>Sparisoma radians</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Sparisoma rubripinne</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Sphoeroides nephelus</td>
<td>4</td>
<td>6</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td>14</td>
<td>31</td>
<td>2</td>
<td>2</td>
<td>69</td>
</tr>
<tr>
<td>Sphoeroides spengleri</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Sphoeroides testudineus</td>
<td>4</td>
<td>44</td>
<td>9</td>
<td>34</td>
<td>18</td>
<td>15</td>
<td>61</td>
<td>54</td>
<td>1</td>
<td>7</td>
<td>11</td>
<td>3</td>
<td>261</td>
</tr>
</tbody>
</table>

TQ-12
<table>
<thead>
<tr>
<th>Species</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sphyraena barracuda</td>
<td>47</td>
<td>17</td>
<td>4</td>
<td>8</td>
<td>27</td>
<td>5</td>
<td>16</td>
<td>19</td>
<td>22</td>
<td>19</td>
<td>45</td>
<td>23</td>
<td>252</td>
</tr>
<tr>
<td>Sphyrna tiburo</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Stephanolepis hispidus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Strongylura marina</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Strongylura notata</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td></td>
<td>15</td>
<td>6</td>
<td>5</td>
<td>7</td>
<td>8</td>
<td>1</td>
<td>54</td>
</tr>
<tr>
<td>Strongylura timucu</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Syacium papillosum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Symphurus sp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Synodus foetens</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Trichiurus lepturus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Tylosurus crocodilus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Totals</td>
<td>2,187</td>
<td>1,886</td>
<td>2,761</td>
<td>1,253</td>
<td>1,632</td>
<td>1,286</td>
<td>2,657</td>
<td>2,825</td>
<td>2,453</td>
<td>2,295</td>
<td>6,649</td>
<td>1,029</td>
<td>28,913</td>
</tr>
</tbody>
</table>
Appendix TQ15-02. Summary by gear, stratum and zone of species collected during southern Indian River Lagoon stratified-random sampling, 2015. Sampling with 183-m haul seine was post-stratified by the presence or absence of overhanging vegetation ('Over' or 'Nonover'). Zones I and J were located in the Indian River, and Zone T encompassed the lower St. Lucie River. Effort, or the total number of hauls, is labeled 'E'. Taxa are arranged alphabetically.

<table>
<thead>
<tr>
<th>Species</th>
<th>Gear and Strata</th>
<th>Zone</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>183-m haul seine</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Over</td>
<td>Nonover</td>
<td>I</td>
</tr>
<tr>
<td>Acanthostracion quadricornis</td>
<td>1</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Aetobatus narinari</td>
<td>3</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Albula vulpes</td>
<td>5</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>600</td>
<td>397</td>
<td>278</td>
</tr>
<tr>
<td>Archosargus rhomboidalis</td>
<td>665</td>
<td>21</td>
<td>416</td>
</tr>
<tr>
<td>Archosargus spp.</td>
<td>25</td>
<td>2</td>
<td>27</td>
</tr>
<tr>
<td>Ariopsis felis</td>
<td>1,014</td>
<td>217</td>
<td>796</td>
</tr>
<tr>
<td>Bagre marinus</td>
<td>12</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>270</td>
<td>8</td>
<td>265</td>
</tr>
<tr>
<td>Balistes capriscus</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Brevoortia spp.</td>
<td>1,366</td>
<td>1</td>
<td>40</td>
</tr>
<tr>
<td>Callinectes ornatus</td>
<td>2</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>34</td>
<td>5</td>
<td>22</td>
</tr>
<tr>
<td>Callinectes similis</td>
<td>28</td>
<td>1</td>
<td>29</td>
</tr>
<tr>
<td>Callinectes spp.</td>
<td>2</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Canthidermis maculata</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Caranx bartholomaei</td>
<td>2</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Caranx crysos</td>
<td>9</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Caranx hippos</td>
<td>148</td>
<td>41</td>
<td>91</td>
</tr>
<tr>
<td>Caranx latus</td>
<td>42</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>559</td>
<td>118</td>
<td>468</td>
</tr>
<tr>
<td>Chaetodipterus faber</td>
<td>22</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>Chilomycterus schoepfii</td>
<td>54</td>
<td>5</td>
<td>26</td>
</tr>
<tr>
<td>Chloroscombrus chrysurus</td>
<td>2</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Citharichthys spilopterus</td>
<td>30</td>
<td>7</td>
<td>28</td>
</tr>
<tr>
<td>Species</td>
<td>Gear and Strata</td>
<td>Zone</td>
<td>Totals</td>
</tr>
<tr>
<td>------------------------------</td>
<td>----------------</td>
<td>------</td>
<td>--------</td>
</tr>
<tr>
<td></td>
<td>183-m haul seine</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Over E=113</td>
<td>Nonover E=31</td>
<td>I E=48</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>27</td>
<td>5</td>
<td>23</td>
</tr>
<tr>
<td>Dasyatis sabina</td>
<td>159</td>
<td>66</td>
<td>100</td>
</tr>
<tr>
<td>Dasyatis say</td>
<td>64</td>
<td>13</td>
<td>40</td>
</tr>
<tr>
<td>Diapterus auratus</td>
<td>3,849</td>
<td>2,077</td>
<td>1,539</td>
</tr>
<tr>
<td>Diplodus holbrooki</td>
<td>2</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>377</td>
<td>68</td>
<td>66</td>
</tr>
<tr>
<td>Eucinostomus gula</td>
<td>725</td>
<td>128</td>
<td>456</td>
</tr>
<tr>
<td>Eucinostomus harengulus</td>
<td>278</td>
<td>17</td>
<td>101</td>
</tr>
<tr>
<td>Eucinostomus jonesii</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Eucinostomus melanopterus</td>
<td>32</td>
<td>18</td>
<td>9</td>
</tr>
<tr>
<td>Eugerres plumieri</td>
<td>29</td>
<td>73</td>
<td>72</td>
</tr>
<tr>
<td>Gerres cinereus</td>
<td>196</td>
<td>11</td>
<td>47</td>
</tr>
<tr>
<td>Gymnura micrura</td>
<td>7</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Haemulon aurolineatum</td>
<td>5</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Haemulon parra</td>
<td>18</td>
<td>.</td>
<td>11</td>
</tr>
<tr>
<td>Haemulon plumieri</td>
<td>13</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Haemulon sciurus</td>
<td>15</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Harengula jaguana</td>
<td>551</td>
<td>2,006</td>
<td>133</td>
</tr>
<tr>
<td>Hippocampus erectus</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Hyporhamphus meeki</td>
<td>1</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Hyporhamphus unifasciatus</td>
<td>1</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Kyphosus saltatrix</td>
<td>17</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lachnolaimus maximus</td>
<td>6</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Lactophrys trigonus</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>5,133</td>
<td>127</td>
<td>3,232</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>192</td>
<td>8</td>
<td>194</td>
</tr>
<tr>
<td>Lepisosteus osseus</td>
<td>1</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Limulus polyphemus</td>
<td>3</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Lobotes surinamensis</td>
<td>4</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Lutjanus analis</td>
<td>105</td>
<td>13</td>
<td>49</td>
</tr>
<tr>
<td>Lutjanus apodus</td>
<td>2</td>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>
### Appendix TQ15-02.  (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Gear and Strata</th>
<th>Zone</th>
<th>totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>183-m haul seine</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Over E=113</td>
<td>Nonover E=31</td>
<td>I E=48</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>213</td>
<td>14</td>
<td>107</td>
</tr>
<tr>
<td>Lutjanus jocu</td>
<td>2</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>104</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>Megalops atlanticus</td>
<td>1</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>144</td>
<td>54</td>
<td>8</td>
</tr>
<tr>
<td>Monacanthus ciliatus</td>
<td>11</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>490</td>
<td>166</td>
<td>246</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>1,490</td>
<td>2,176</td>
<td>2,661</td>
</tr>
<tr>
<td>Mugil rubriculus</td>
<td>2</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Mycteroperca microlepis</td>
<td>1</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Narcine bancroftii</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Ocyurus chrysurus</td>
<td>3</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Oligoplites saurus</td>
<td>118</td>
<td>5</td>
<td>24</td>
</tr>
<tr>
<td>Opisthonema oglinum</td>
<td>131</td>
<td>1</td>
<td>107</td>
</tr>
<tr>
<td>Opsanus tau</td>
<td>6</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Orthopristis chrysoptera</td>
<td>159</td>
<td>4</td>
<td>105</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>12</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Paralichthys lethostigma</td>
<td>7</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>100</td>
<td>6</td>
<td>86</td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td>1</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Prionotus tribulus</td>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>34</td>
<td>3</td>
<td>27</td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Scorpaena grandicornis</td>
<td>5</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Selene vomer</td>
<td>461</td>
<td>34</td>
<td>162</td>
</tr>
<tr>
<td>Sparisoma radians</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sparisoma rubripinne</td>
<td>2</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sphoeroides nephelus</td>
<td>67</td>
<td>2</td>
<td>30</td>
</tr>
<tr>
<td>Sphoeroides spengleri</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Sphoeroides testudineus</td>
<td>123</td>
<td>138</td>
<td>107</td>
</tr>
</tbody>
</table>
### Appendix TQ15-02. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Gear and Strata</th>
<th>183-m haul seine</th>
<th>Zone</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Over 113</td>
<td>Nonover 31</td>
<td>I 48</td>
</tr>
<tr>
<td>Sphyraena barracuda</td>
<td>234</td>
<td>18</td>
<td>120 112</td>
<td>20</td>
</tr>
<tr>
<td>Sphyrna tiburo</td>
<td>8</td>
<td>.</td>
<td>8</td>
<td>.</td>
</tr>
<tr>
<td>Stephanolepis hispidus</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Strongylura marina</td>
<td>2</td>
<td>1</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Strongylura notata</td>
<td>53</td>
<td>1</td>
<td>39</td>
<td>12</td>
</tr>
<tr>
<td>Strongylura timucu</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Syacium papillosum</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Symphurus sp.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Synodus foetens</td>
<td>10</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>14</td>
<td>1</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Trichiurus lepturus</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Tylosurus crocodilus</td>
<td>3</td>
<td>.</td>
<td>3</td>
<td>.</td>
</tr>
<tr>
<td>Totals</td>
<td>20,782</td>
<td>8,131</td>
<td>12,554</td>
<td>11,830</td>
</tr>
</tbody>
</table>
Intentionally Left Blank
Northeast Florida

Northeast Florida encompasses three coastal plain estuaries; each defined by their respective lower river basins (St. Marys River, Nassau River, and St. Johns River) and interconnected via the Intracoastal Waterway (ICW; Figure JX15-01). Shoreline vegetation in the lower St. Marys and Nassau rivers is characterized by an expansive saltmarsh system, while the lower St. Johns River is characterized by marshes, hardwood forests, and hardwood swamps (St. Johns River Water Management District 1993; St. Johns River Water Management District 2000). Bottom substrates are typically characterized as mud, sand, and occasional oysters (Solomon et al. 2006). Bottom vegetation is only present in the oligohaline reaches of the St. Johns River upriver of downtown Jacksonville (Burns et al. 1997).

The Fisheries-Independent Monitoring (FIM) program has conducted intensive sampling of fish and selected invertebrates in northeast Florida since 2001. The area sampled was divided into six geographically-defined riverine zones (A-F; Figure JX15-01). Monthly stratified-random sampling (SRS) was conducted in Zones A-D using 21.3-m river seines, 183-m haul seines, and 6.1-m river otter trawls. Monthly SRS was conducted in Zone E and F with only 21.3-m river seines and 6.1-m river otter trawls. All methods were the same as those described in the Methods section of this report. This section summarizes data collected by the FIM program during 2015 in northeast Florida.

Stratified-Random Sampling

A total of 191,458 animals, which included 165 taxa of fishes and 16 taxa of selected invertebrates, were collected from 1,356 northeast Florida samples in 2015 (Table JX15-01; Appendices JX15-01 and -02). *Anchoa mitchilli* (n=58,036) was the most numerous species collected, representing 30.3% of the total catch. The next two most abundant taxa, *Leiostomus xanthurus* (n=20,479) and *Anchoa hepsetus* (n=14,005) accounted for an additional 18.0% of the total catch. Thirty-three Selected Taxa (n=57,932 animals) composed 30.3% of the total catch. *Leiostomus xanthurus* (n=20,479) was the most abundant Selected Taxon, representing 10.7% of the annual catch. *Litopenaeus setiferus* (n=13,743) and *Micropogonias undulatus* (n=9,215) were the next
two most abundant Selected Taxa, comprising 12.0% of the total catch. Collections in 2015 included two species new to the northeast Florida FIM collection: *Dasyatis americana* (Southern Stingray) and *Sicyonia laevigata* (Hardback Shrimp).

21.3-m River Seines. A total of 142,338 animals were collected in 576 21.3-m river seine samples, representing 74.3% of the overall SRS collections (Table JX15-01). *Anchoa mitchilli* (n=45,484) was the most abundant species, accounting for 32.0% of the 21.3-m river seine catch (Table JX15-02). *Leiostomus xanthurus* (n=16,243), *A. hepsetus* (n=12,922), and *L. setiferus* (n=10,302) were the next three most abundant species, accounting for an additional 27.7% of the 21.3-m river seine catch. The taxa most frequently caught in 21.3-m river seines were *Menidia* spp. (41.1% occurrence) and *A. mitchilli* (39.8% occurrence).

A total of 35,506 animals from 28 Selected Taxa were collected, representing 24.9% of the entire 21.3-m river seine catch (Table JX15-03). *Leiostomus xanthurus* (n=16,243), *L. setiferus* (n=10,302), *Mugil cephalus* (n=4,135), and *M. curema* (n=2,639) were the most abundant Selected Taxa, accounting for 93.8% of the Selected Taxa collected by this gear. The Selected Taxon most frequently caught in 21.3-m river seines was *L. xanthurus* (30.2% occurrence).

183-m Haul Seines. A total of 7,828 animals were collected in 192 183-m haul seines, representing 4.1% of the overall SRS catch (Table JX15-01). *Mugil cephalus* (n=1,202) was the most abundant species, accounting for 15.4% of the 183-m haul seine catch (Table JX15-04). *Bairdiella chrysoura* (n=1,081), *Lagodon rhomboides* (n=977), and *M. curema* (n=959) were the next most abundant species, accounting for an additional 38.5% of the 183-m haul seine catch. The taxa most frequently caught in the 183-m haul seines were *M. cephalus* (63.0% occurrence) and *Dasyatis sabina* (44.3% occurrence).

A total of 3,654 animals from 25 Selected Taxa were collected, representing 46.7% of the entire 183-m haul seine catch (Table JX15-05). *Mugil cephalus* (n=1,202), *M. curema* (n=959), and *L. xanthurus* (n=598) were the most abundant Selected Taxa, accounting for 75.5% of the Selected Taxa collected by this gear. The Selected Taxon most frequently caught in 183-m haul seines was *M. cephalus* (63.0% occurrence).
6.1-m River Otter Trawl. A total of 41,292 animals were collected in 588 6.1-m river otter trawl samples, representing 21.6% of the overall SRS catch (Table JX15-01). *Anchoa mitchilli* (n=12,549) was the most abundant species, accounting for 30.4% of the 6.1-m river otter trawl catch (Table JX15-06). *Micropogonias undulatus* (n=8,850), *L. xanthurus* (n=3,638), and *L. setiferus* (n=3,247) were the next most abundant species, accounting for an additional 38.1% of the 6.1-m river otter trawl catch (Table JX15-06). The taxa most frequently caught in 6.1-m river otter trawls were *M. undulatus* (57.3% occurrence), *A. mitchilli* (46.3% occurrence), and *L. setiferus* (42.0% occurrence).

A total of 18,772 animals from 22 Selected Taxa were collected, representing 45.5% of the entire 6.1-m river otter trawl catch (Table JX15-07). *Micropogonias undulatus* (n=8,850), *L. xanthurus* (n=3,638), and *L. setiferus* (n=3,247) were the most abundant Selected Taxa, accounting for 83.8% of the Selected Taxa collected by this gear. The Selected Taxa most frequently caught in the 6.1-m river otter trawls were *M. undulatus* (57.3% occurrence) and *L. setiferus* (42.0% occurrence).
References


Figure JX15-01. Map of northeast Florida sampling area. Zones are labeled A–F. ICW = Intracoastal Waterway.
Table JX15-01. Summary of catch and effort data for northeast Florida stratified-random sampling, 2015.

<table>
<thead>
<tr>
<th>Zone</th>
<th>21.3-m river seine</th>
<th>183-m haul seine</th>
<th>6.1-m otter trawl</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Animals</td>
<td>Hauls</td>
<td>Animals</td>
<td>Hauls</td>
</tr>
<tr>
<td>A</td>
<td>33,842</td>
<td>84</td>
<td>1,618</td>
<td>36</td>
</tr>
<tr>
<td>B</td>
<td>40,013</td>
<td>84</td>
<td>1,934</td>
<td>36</td>
</tr>
<tr>
<td>C</td>
<td>28,654</td>
<td>108</td>
<td>2,350</td>
<td>60</td>
</tr>
<tr>
<td>D</td>
<td>11,891</td>
<td>108</td>
<td>1,926</td>
<td>60</td>
</tr>
<tr>
<td>E</td>
<td>9,385</td>
<td>96</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>F</td>
<td>18,553</td>
<td>96</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Totals</td>
<td>142,338</td>
<td>576</td>
<td>7,828</td>
<td>192</td>
</tr>
</tbody>
</table>
Table JX15-02. Catch statistics for 10 dominant taxa collected in 576 21.3-m river seine samples during northeast Florida stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number No.</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>45,484</td>
<td>32.0</td>
<td>39.8</td>
<td>116.13</td>
<td>18.56</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>16,243</td>
<td>11.4</td>
<td>30.2</td>
<td>41.47</td>
<td>10.86</td>
</tr>
<tr>
<td>Anchoa hepsetus</td>
<td>12,922</td>
<td>9.1</td>
<td>15.8</td>
<td>32.99</td>
<td>11.34</td>
</tr>
<tr>
<td>Litopenaeus setiferus</td>
<td>10,302</td>
<td>7.2</td>
<td>23.4</td>
<td>26.30</td>
<td>5.20</td>
</tr>
<tr>
<td>Menidia menidia</td>
<td>9,448</td>
<td>6.6</td>
<td>31.1</td>
<td>24.12</td>
<td>4.72</td>
</tr>
<tr>
<td>Menidia spp.</td>
<td>7,000</td>
<td>4.9</td>
<td>41.1</td>
<td>17.87</td>
<td>3.75</td>
</tr>
<tr>
<td>Gambusia holbrooki</td>
<td>4,734</td>
<td>3.3</td>
<td>15.8</td>
<td>12.09</td>
<td>3.69</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>4,135</td>
<td>2.9</td>
<td>22.6</td>
<td>10.56</td>
<td>3.31</td>
</tr>
<tr>
<td>Lucania parva</td>
<td>2,841</td>
<td>2.0</td>
<td>25.0</td>
<td>7.25</td>
<td>1.22</td>
</tr>
<tr>
<td>Lepomis macrochirus</td>
<td>2,687</td>
<td>1.9</td>
<td>27.3</td>
<td>6.86</td>
<td>1.32</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>115,796</td>
<td>81.4</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>142,338</strong></td>
<td>100.0</td>
<td>363.40</td>
<td>31.43</td>
<td>207.56</td>
</tr>
</tbody>
</table>
Table JX15-03. Catch statistics for Selected Taxa collected in 576 21.3-m river seine samples during northeast Florida stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
<td>CV</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>16,243</td>
<td>11.4</td>
<td>30.2</td>
<td>41.47</td>
<td>10.86</td>
</tr>
<tr>
<td>Litopenaeus setiferus</td>
<td>10,302</td>
<td>7.2</td>
<td>23.4</td>
<td>26.30</td>
<td>5.20</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>4,135</td>
<td>2.9</td>
<td>22.6</td>
<td>10.56</td>
<td>3.31</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>2,639</td>
<td>1.9</td>
<td>16.7</td>
<td>6.74</td>
<td>4.84</td>
</tr>
<tr>
<td>Farfantepenaeus spp.</td>
<td>871</td>
<td>0.6</td>
<td>18.2</td>
<td>2.22</td>
<td>0.50</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>313</td>
<td>0.2</td>
<td>19.8</td>
<td>0.80</td>
<td>0.12</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>309</td>
<td>0.2</td>
<td>9.2</td>
<td>0.79</td>
<td>0.20</td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td>127</td>
<td>0.1</td>
<td>1.7</td>
<td>0.32</td>
<td>0.19</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>115</td>
<td>0.1</td>
<td>4.5</td>
<td>0.29</td>
<td>0.12</td>
</tr>
<tr>
<td>Paralichthys lethostigma</td>
<td>83</td>
<td>0.1</td>
<td>8.5</td>
<td>0.21</td>
<td>0.04</td>
</tr>
<tr>
<td>Farfantepenaeus aztecus</td>
<td>75</td>
<td>0.1</td>
<td>4.7</td>
<td>0.19</td>
<td>0.05</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>50</td>
<td>&lt;0.1</td>
<td>2.8</td>
<td>0.13</td>
<td>0.05</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>49</td>
<td>&lt;0.1</td>
<td>4.2</td>
<td>0.13</td>
<td>0.03</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>37</td>
<td>&lt;0.1</td>
<td>2.8</td>
<td>0.09</td>
<td>0.03</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>28</td>
<td>&lt;0.1</td>
<td>1.7</td>
<td>0.07</td>
<td>0.03</td>
</tr>
<tr>
<td>Paralichthys dentatus</td>
<td>25</td>
<td>&lt;0.1</td>
<td>2.3</td>
<td>0.06</td>
<td>0.03</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>21</td>
<td>&lt;0.1</td>
<td>2.1</td>
<td>0.05</td>
<td>0.02</td>
</tr>
</tbody>
</table>
Table JX15-03. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td>19</td>
<td>&lt;0.1</td>
<td>0.3</td>
<td>0.05</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>18</td>
<td>&lt;0.1</td>
<td>1.6</td>
<td>0.05</td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td>15</td>
<td>&lt;0.1</td>
<td>0.9</td>
<td>0.04</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>10</td>
<td>&lt;0.1</td>
<td>1.0</td>
<td>0.03</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>9</td>
<td>&lt;0.1</td>
<td>1.6</td>
<td>0.02</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>3</td>
<td>&lt;0.1</td>
<td>0.5</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Cynoscion complex</td>
<td>3</td>
<td>&lt;0.1</td>
<td>0.5</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Menticirrhus saxatilis</td>
<td>2</td>
<td>&lt;0.1</td>
<td>0.3</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Paralichthys squamilentus</td>
<td>2</td>
<td>&lt;0.1</td>
<td>0.3</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Albula vulpes</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.2</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.2</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Menticirrhus littoralis</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.2</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Totals</td>
<td>35,506</td>
<td>24.9</td>
<td>.</td>
<td>90.65</td>
</tr>
</tbody>
</table>
## Table JX15-04

Catch statistics for 10 dominant taxa collected in 192 183-m haul seine samples during northeast Florida stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean catch-per-unit-effort.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Catch-per-unit-effort (animals/set)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>1,202</td>
<td>15.4</td>
<td>63.0</td>
<td>6.26</td>
<td>0.89</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>1,081</td>
<td>13.8</td>
<td>21.4</td>
<td>5.63</td>
<td>2.22</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>977</td>
<td>12.5</td>
<td>40.1</td>
<td>5.09</td>
<td>1.39</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>959</td>
<td>12.3</td>
<td>40.1</td>
<td>4.99</td>
<td>1.10</td>
</tr>
<tr>
<td>Leioptomus xanthurus</td>
<td>598</td>
<td>7.6</td>
<td>42.7</td>
<td>3.11</td>
<td>0.49</td>
</tr>
<tr>
<td>Brevoortia spp.</td>
<td>335</td>
<td>4.3</td>
<td>14.6</td>
<td>1.74</td>
<td>0.76</td>
</tr>
<tr>
<td>Dasyatis sabina</td>
<td>292</td>
<td>3.7</td>
<td>44.3</td>
<td>1.52</td>
<td>0.30</td>
</tr>
<tr>
<td>Litopenaeus setiferus</td>
<td>194</td>
<td>2.5</td>
<td>16.1</td>
<td>1.01</td>
<td>0.27</td>
</tr>
<tr>
<td>Opisthonomas oglinum</td>
<td>134</td>
<td>1.7</td>
<td>4.7</td>
<td>0.70</td>
<td>0.43</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>132</td>
<td>1.7</td>
<td>20.8</td>
<td>0.69</td>
<td>0.15</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>5,904</td>
<td>75.4</td>
<td></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>7,828</td>
<td>100.0</td>
<td>40.77</td>
<td>3.69</td>
<td>125.38</td>
</tr>
</tbody>
</table>
Table JX15-05. Catch statistics for Selected Taxa collected in 192 183-m haul seine samples during northeast Florida stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean catch-per-unit-effort.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Catch-per-unit-effort (animals/set)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td></td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>1,202</td>
<td>15.4</td>
<td>63.0</td>
<td>6.26</td>
<td>0.89</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>959</td>
<td>12.3</td>
<td>40.1</td>
<td>4.99</td>
<td>1.10</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>598</td>
<td>7.6</td>
<td>42.7</td>
<td>3.11</td>
<td>0.49</td>
</tr>
<tr>
<td>Litopenaeus setiferus</td>
<td>194</td>
<td>2.5</td>
<td>16.1</td>
<td>1.01</td>
<td>0.27</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>132</td>
<td>1.7</td>
<td>20.8</td>
<td>0.69</td>
<td>0.15</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>100</td>
<td>1.3</td>
<td>19.8</td>
<td>0.52</td>
<td>0.11</td>
</tr>
<tr>
<td>Paralichthys lethostigma</td>
<td>80</td>
<td>1.0</td>
<td>16.7</td>
<td>0.42</td>
<td>0.12</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>67</td>
<td>0.9</td>
<td>20.8</td>
<td>0.35</td>
<td>0.07</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>65</td>
<td>0.8</td>
<td>18.8</td>
<td>0.34</td>
<td>0.07</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>56</td>
<td>0.7</td>
<td>18.8</td>
<td>0.29</td>
<td>0.05</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>56</td>
<td>0.7</td>
<td>11.5</td>
<td>0.29</td>
<td>0.08</td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td>39</td>
<td>0.5</td>
<td>8.3</td>
<td>0.20</td>
<td>0.06</td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td>24</td>
<td>0.3</td>
<td>4.7</td>
<td>0.13</td>
<td>0.06</td>
</tr>
<tr>
<td>Farfantepenaeus aztecs</td>
<td>18</td>
<td>0.2</td>
<td>4.7</td>
<td>0.09</td>
<td>0.03</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>16</td>
<td>0.2</td>
<td>5.2</td>
<td>0.08</td>
<td>0.03</td>
</tr>
</tbody>
</table>

JX-11
Table JX15. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>% Occur</th>
<th>Catch-per-unit-effort (animals/set)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Paralichthys dentatus</td>
<td>9</td>
<td>0.1</td>
<td>3.6</td>
<td>0.05</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>7</td>
<td>0.1</td>
<td>3.6</td>
<td>0.04</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>7</td>
<td>0.1</td>
<td>2.6</td>
<td>0.04</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>7</td>
<td>0.1</td>
<td>2.6</td>
<td>0.04</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>4</td>
<td>0.1</td>
<td>1.6</td>
<td>0.02</td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td>4</td>
<td>0.1</td>
<td>1.0</td>
<td>0.02</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>4</td>
<td>0.1</td>
<td>0.5</td>
<td>0.02</td>
</tr>
<tr>
<td>Farfantepenaeus spp.</td>
<td>2</td>
<td>&lt;0.1</td>
<td>1.0</td>
<td>0.01</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>2</td>
<td>&lt;0.1</td>
<td>0.5</td>
<td>0.01</td>
</tr>
<tr>
<td>Megalops atlanticus</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.5</td>
<td>0.01</td>
</tr>
<tr>
<td>Rachycentron canadum</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.5</td>
<td>0.01</td>
</tr>
<tr>
<td>Totals</td>
<td>3,654</td>
<td>46.7</td>
<td>19.03</td>
<td>1.90</td>
</tr>
</tbody>
</table>
Table JX15-06. Catch statistics for 10 dominant taxa collected in 588 6.1-m river otter trawl samples during northeast Florida stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td>12,549</td>
<td>30.4</td>
<td>46.3</td>
<td>2.88</td>
<td>0.67</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>8,850</td>
<td>21.4</td>
<td>57.3</td>
<td>2.02</td>
<td>0.26</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>3,638</td>
<td>8.8</td>
<td>29.9</td>
<td>0.81</td>
<td>0.20</td>
</tr>
<tr>
<td>Litopenaeus setiferus</td>
<td>3,247</td>
<td>7.9</td>
<td>42.0</td>
<td>0.76</td>
<td>0.10</td>
</tr>
<tr>
<td>Stellifer lanceolatus</td>
<td>2,145</td>
<td>5.2</td>
<td>7.8</td>
<td>0.50</td>
<td>0.17</td>
</tr>
<tr>
<td>Trinectes maculatus</td>
<td>1,040</td>
<td>2.5</td>
<td>35.5</td>
<td>0.25</td>
<td>0.03</td>
</tr>
<tr>
<td>Anchoa hepsetus</td>
<td>1,081</td>
<td>2.6</td>
<td>4.6</td>
<td>0.24</td>
<td>0.11</td>
</tr>
<tr>
<td>Rimapenaeus constrictus</td>
<td>879</td>
<td>2.1</td>
<td>8.8</td>
<td>0.21</td>
<td>0.09</td>
</tr>
<tr>
<td>Farfantepenaeus spp.</td>
<td>797</td>
<td>1.9</td>
<td>19.7</td>
<td>0.19</td>
<td>0.03</td>
</tr>
<tr>
<td>Ameiurus catus</td>
<td>784</td>
<td>1.9</td>
<td>27.0</td>
<td>0.19</td>
<td>0.05</td>
</tr>
<tr>
<td>Subtotal</td>
<td>35,010</td>
<td>84.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>41,292</td>
<td>100.0</td>
<td>9.55</td>
<td>0.84</td>
<td>213.03</td>
</tr>
</tbody>
</table>
Table JX15-07. Catch statistics for Selected Taxa collected in 588 6.1-m river otter trawl samples during northeast Florida stratified-random sampling, 2015. Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td></td>
<td></td>
<td>Mean</td>
<td>Stderr</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>8,850</td>
<td>21.4</td>
<td>57.3</td>
<td>2.02</td>
<td>0.26</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>3,638</td>
<td>8.8</td>
<td>29.9</td>
<td>0.81</td>
<td>0.20</td>
</tr>
<tr>
<td>Litopenaeus setiferus</td>
<td>3,247</td>
<td>7.9</td>
<td>42.0</td>
<td>0.76</td>
<td>0.10</td>
</tr>
<tr>
<td>Farfantepenaeus spp.</td>
<td>797</td>
<td>1.9</td>
<td>19.7</td>
<td>0.19</td>
<td>0.03</td>
</tr>
<tr>
<td>Cynoscion complex</td>
<td>623</td>
<td>1.5</td>
<td>17.3</td>
<td>0.15</td>
<td>0.04</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td>544</td>
<td>1.3</td>
<td>37.9</td>
<td>0.13</td>
<td>0.01</td>
</tr>
<tr>
<td>Farfantepenaeus aztecsus</td>
<td>373</td>
<td>0.9</td>
<td>9.2</td>
<td>0.09</td>
<td>0.04</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>302</td>
<td>0.7</td>
<td>12.4</td>
<td>0.07</td>
<td>0.02</td>
</tr>
<tr>
<td>Paralichthys lethostigma</td>
<td>173</td>
<td>0.4</td>
<td>20.7</td>
<td>0.04</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>99</td>
<td>0.2</td>
<td>2.6</td>
<td>0.02</td>
<td>0.01</td>
</tr>
<tr>
<td>Farfantepenaeus duorarum</td>
<td>33</td>
<td>0.1</td>
<td>2.6</td>
<td>0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Paralichthys dentatus</td>
<td>24</td>
<td>0.1</td>
<td>1.7</td>
<td>0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>15</td>
<td>&lt;0.1</td>
<td>1.4</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>12</td>
<td>&lt;0.1</td>
<td>1.5</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>12</td>
<td>&lt;0.1</td>
<td>1.5</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>8</td>
<td>&lt;0.1</td>
<td>1.4</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Menippe spp.</td>
<td>6</td>
<td>&lt;0.1</td>
<td>0.9</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>
### Table JX15-07. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>%</th>
<th>% Occur</th>
<th>Density Estimate (animals/100m²)</th>
<th>Standard Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>Mean</td>
<td>Stderr</td>
<td>CV</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>6</td>
<td>&lt;0.1</td>
<td>1.0</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>3</td>
<td>&lt;0.1</td>
<td>0.5</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Albula vulpes</td>
<td>3</td>
<td>&lt;0.1</td>
<td>0.3</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Menticirrhus saxatilis</td>
<td>2</td>
<td>&lt;0.1</td>
<td>0.3</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Cynoscion nothus</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.2</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>1</td>
<td>&lt;0.1</td>
<td>0.2</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>18,772</td>
<td>45.5</td>
<td>.</td>
<td>4.32</td>
<td>0.40</td>
</tr>
</tbody>
</table>

JX-15
Appendix JX15-01. Monthly summary of species collected during northeast Florida stratified-random sampling, 2015. Effort, or total number of hauls, is labeled ‘E’. Taxa are arranged alphabetically.

<table>
<thead>
<tr>
<th>Species</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Achirus lineatus</strong></td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>7</td>
<td>9</td>
<td>8</td>
<td>9</td>
<td>9</td>
<td>68</td>
</tr>
<tr>
<td><strong>Aetobatus narinari</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>Agonostomus monticola</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Albula vulpes</strong></td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td><strong>Aloidae</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>110</td>
</tr>
<tr>
<td><strong>Aloidae</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Alosa s.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
</tr>
<tr>
<td><strong>Ameiurus catus</strong></td>
<td>289</td>
<td>124</td>
<td>67</td>
<td>59</td>
<td>16</td>
<td>36</td>
<td>27</td>
<td>24</td>
<td>39</td>
<td>78</td>
<td>25</td>
<td>60</td>
<td>844</td>
</tr>
<tr>
<td><strong>Ameiurus nebulosus</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>Amia calva</strong></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Anchoa hepsetus</strong></td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>10,821</td>
<td>1,336</td>
<td>936</td>
<td>846</td>
<td>33</td>
<td>5</td>
<td>4</td>
<td>14</td>
<td>14,005</td>
</tr>
<tr>
<td><strong>Anchoa lyolepis</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>104</td>
<td>197</td>
<td>9</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td>314</td>
</tr>
<tr>
<td><strong>Anchoa mitchilli</strong></td>
<td>618</td>
<td>3,152</td>
<td>741</td>
<td>1,939</td>
<td>3,122</td>
<td>11,288</td>
<td>4,965</td>
<td>6,603</td>
<td>4,837</td>
<td>10,085</td>
<td>4,953</td>
<td>5,733</td>
<td>58,036</td>
</tr>
<tr>
<td><strong>Anchoa spp.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td><strong>Ancylopsetta quadrocellata</strong></td>
<td></td>
<td></td>
<td>13</td>
<td>13</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>32</td>
</tr>
<tr>
<td><strong>Anguilla rostrata</strong></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td><strong>Archosargus probatocephalus</strong></td>
<td>5</td>
<td>14</td>
<td>5</td>
<td>17</td>
<td>14</td>
<td>12</td>
<td>6</td>
<td>4</td>
<td>10</td>
<td>6</td>
<td>7</td>
<td>7</td>
<td>107</td>
</tr>
<tr>
<td><strong>Ariopsis felis</strong></td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>7</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>31</td>
<td>17</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>74</td>
</tr>
<tr>
<td><strong>Astroscopus y-graecum</strong></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td><strong>Atherinopsidea sp.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>Bagre marinus</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>26</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>29</td>
</tr>
</tbody>
</table>
### Appendix JX15-01. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bairdiella chrysoura</td>
<td>124</td>
<td>44</td>
<td>450</td>
<td>287</td>
<td>1,815</td>
<td>48</td>
<td>72</td>
<td>103</td>
<td>165</td>
<td>97</td>
<td>106</td>
<td></td>
<td>3,856</td>
</tr>
<tr>
<td>Bathygobius soporator</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Bothidae spp.</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Brevoortia spp.</td>
<td>17</td>
<td>25</td>
<td>1,274</td>
<td>383</td>
<td>85</td>
<td>12</td>
<td>49</td>
<td>27</td>
<td>45</td>
<td>26</td>
<td>136</td>
<td></td>
<td>2,079</td>
</tr>
<tr>
<td>Callinectes bocourtii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Callinectes ornatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>922</td>
</tr>
<tr>
<td>Callinectes similis</td>
<td>12</td>
<td>2</td>
<td>48</td>
<td>89</td>
<td>183</td>
<td>37</td>
<td>23</td>
<td>9</td>
<td>7</td>
<td>4</td>
<td>17</td>
<td></td>
<td>431</td>
</tr>
<tr>
<td>Caranx cryos</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Caranx hippos</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>66</td>
</tr>
<tr>
<td>Caranx latus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Carancharinus limbatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Centrarchidae spp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Centropristis philadelphia</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>16</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>55</td>
</tr>
<tr>
<td>Centropristis striata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Chaetodipterus faber</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Charybdis hellerii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Chasmodes bosquianus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Chasmodes saburrae</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Chilomycterus schoepfii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Chilomycterus sp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>
### Appendix JX15-01. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Month</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jan</td>
<td>Feb</td>
</tr>
<tr>
<td>Chloroscombus chrysurus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Citharichthys macrops</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Citharichthys spilopterus</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Clupeidae spp.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Ctenogobius boleosoma</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>Ctenogobius shufeldti</td>
<td>61</td>
<td>24</td>
</tr>
<tr>
<td>Ctenogobius smaragdus</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Ctenogobius spp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ctenogobius stigmaticus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ctenopharyngodon idella</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Cynoscion complex</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>8</td>
<td>30</td>
</tr>
<tr>
<td>Cynoscion nothus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Cyprinodon variegatus</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Dasyatis americana</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Dasyatis sabina</td>
<td>24</td>
<td>34</td>
</tr>
<tr>
<td>Dasyatis say</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Diapterus auratus</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Dormitator maculatus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Dorosoma cepedianum</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Dorosoma petenense</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Echeneis sp.</td>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>
## Appendix JX15-01. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Month</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jan</td>
<td>Feb</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Enneacanthus gloriosus</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Epinephelus sp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Erimyzon sucetta</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Erotelis smaragdus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Esox niger</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Ettheostoma fusiforme</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Ettheostoma sp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Etropus crossotus</td>
<td>40</td>
<td>2</td>
</tr>
<tr>
<td>Eucinostomus gula</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Eucinostomus harengulus</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td>26</td>
<td>.</td>
</tr>
<tr>
<td>Farfantenpenaeus aztecs</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Farfantenpenaeus duorarum</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Farfantenpenaeus spp.</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Fundulus chrysotus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Fundulus heteroclitus</td>
<td>277</td>
<td>1</td>
</tr>
<tr>
<td>Fundulus majalis</td>
<td>6</td>
<td>.</td>
</tr>
<tr>
<td>Fundulus seminolis</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>Fundulus sp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Gambusia holbrooki</td>
<td>241</td>
<td>13</td>
</tr>
<tr>
<td>Gobiesox strumosus</td>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>
### Appendix JX15-01. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Month</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jan</td>
<td>Feb</td>
</tr>
<tr>
<td>Gobioides broussonetii</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gobionellus oceanicus</td>
<td>6</td>
<td>.</td>
</tr>
<tr>
<td>Gobiosoma bosc</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Gobiosoma ginsburgi</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Gobiosoma spp.</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>Gymnura micrura</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Harengula jaguana</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Heterandria formosa</td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td>Hoplosternum littorale</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Hypleurochilus geminatus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Hypsoblennius hentz</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Hypsoblennius ionthas</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ictalurus punctatus</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>Labidesthes sicculus</td>
<td>42</td>
<td>11</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>37</td>
<td>17</td>
</tr>
<tr>
<td>Lepisosteus fasciatus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Leistostomus xanthurus</td>
<td>455</td>
<td>1,179</td>
</tr>
<tr>
<td>Lepisosteus osseus</td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td>Lepisosteus platyrhincus</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Lepomis auritus</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>Lepomis gulosus</td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td>Lepomis macrochirus</td>
<td>318</td>
<td>96</td>
</tr>
<tr>
<td>Species</td>
<td>Jan</td>
<td>Feb</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>Lepomis microlophus</td>
<td>38</td>
<td>28</td>
</tr>
<tr>
<td>Lepomis punctatus</td>
<td>192</td>
<td>5</td>
</tr>
<tr>
<td>Lepomis spp.</td>
<td>56</td>
<td>54</td>
</tr>
<tr>
<td>Limulus polyphemus</td>
<td>13</td>
<td>4</td>
</tr>
<tr>
<td>Litopenaeus setiferus</td>
<td>423</td>
<td>194</td>
</tr>
<tr>
<td>Lucania goodei</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Megalops atlanticus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Membras martinica</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Menidia menidia</td>
<td>404</td>
<td>465</td>
</tr>
<tr>
<td>Menippe spp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Menticirrhus littoralis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Menticirrhus saxatilis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Menticirrhus sp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Microgobius gulosus</td>
<td>42</td>
<td>20</td>
</tr>
<tr>
<td>Microgobius thalassinus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Microphis brachyurus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Species</td>
<td>Jan</td>
<td>Feb</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>725</td>
<td>860</td>
</tr>
<tr>
<td>Micropterus salmoides</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Morone saxatilis</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>397</td>
<td>1,444</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>11</td>
<td>22</td>
</tr>
<tr>
<td>Mugil spp.</td>
<td>.</td>
<td>7</td>
</tr>
<tr>
<td>Myrophis punctatus</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Negaprion brevirostris</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Notemigonus crysoleucas</td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td>Notropis maculatus</td>
<td>1</td>
<td>68</td>
</tr>
<tr>
<td>Oligoplites saurus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ophichthus gomesii</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Ophidion marginatum</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ophidion sp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Opisthodon oglinum</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Opsanus tau</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Oreochromis aureus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Oreochromis spp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Orthopristis chrysoptera</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Paralichthidae sp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Paralichthys dentatus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Species</td>
<td>Jan</td>
<td>Feb</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td></td>
<td>E=113</td>
<td>E=113</td>
</tr>
<tr>
<td>Paralichthys lethostigma</td>
<td>25</td>
<td>35</td>
</tr>
<tr>
<td>Paralichthys sp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Paralichthys squamilentus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Penaeus monodon</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>P. paru</td>
<td>.</td>
<td>20</td>
</tr>
<tr>
<td>Peprilus triacanthus</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Poecilia latipinna</td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td>.</td>
<td>4</td>
</tr>
<tr>
<td>Pomoxis nigromaculatus</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Portunus spp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Prionotus carolinus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Prionotus evolans</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Prionotus scitulus</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Prionotus tribulus</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td>Pterygoplichthys spp.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Rachycentron canadum</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Rhinoptera bonasus</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Rimapenaeus constrictus</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>Sardinella aurita</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sciaenidae spp.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>2</td>
<td>12</td>
</tr>
</tbody>
</table>
### Appendix JX15-01. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Scomberomorus maculatus</em></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>20</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>43</td>
</tr>
<tr>
<td><em>Scorpaena grandicornis</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Selene vomer</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td></td>
<td>2</td>
<td>26</td>
</tr>
<tr>
<td><em>Sicyonia laevigata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Sphyrooides nephelus</em></td>
<td></td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>6</td>
<td>11</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td></td>
<td>43</td>
</tr>
<tr>
<td><em>Sphyraena barracuda</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><em>Sphyraena borealis</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>19</td>
<td>1</td>
<td></td>
<td>22</td>
</tr>
<tr>
<td><em>Sphyraena guachancho</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><em>Sphyrna lewini</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>Sphyrna tiburo</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td><em>Stellifer lanceolatus</em></td>
<td>4</td>
<td>4</td>
<td>63</td>
<td>2</td>
<td>6</td>
<td>458</td>
<td>297</td>
<td>321</td>
<td>427</td>
<td>528</td>
<td>33</td>
<td></td>
<td>2,146</td>
</tr>
<tr>
<td><em>Stephanolepis hispidus</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td><em>Stomolophus meleagris</em></td>
<td>3</td>
<td>98</td>
<td>88</td>
<td>10</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><em>Strongylura marina</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11</td>
<td>13</td>
<td>8</td>
<td>6</td>
<td>2</td>
<td>7</td>
<td>5</td>
<td></td>
<td>52</td>
</tr>
<tr>
<td><em>Strongylura spp.</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11</td>
<td>13</td>
<td>8</td>
<td>6</td>
<td>2</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td><em>Symphurus plagiusa</em></td>
<td>9</td>
<td>5</td>
<td>45</td>
<td>43</td>
<td>11</td>
<td>94</td>
<td>60</td>
<td>30</td>
<td>51</td>
<td>49</td>
<td>29</td>
<td>62</td>
<td>488</td>
</tr>
<tr>
<td><em>Syngnathus louisianae</em></td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>10</td>
<td>2</td>
<td>9</td>
<td></td>
<td>2</td>
<td>8</td>
<td>12</td>
<td></td>
<td>55</td>
</tr>
<tr>
<td><em>Syngnathus scovelli</em></td>
<td>7</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>11</td>
<td>10</td>
<td>11</td>
<td>11</td>
<td>6</td>
<td></td>
<td></td>
<td>2</td>
<td>65</td>
</tr>
<tr>
<td><em>Synodus foetens</em></td>
<td>2</td>
<td></td>
<td>9</td>
<td>53</td>
<td>38</td>
<td>11</td>
<td>1</td>
<td>9</td>
<td>3</td>
<td>6</td>
<td></td>
<td>2</td>
<td>134</td>
</tr>
<tr>
<td><em>Trachinotus carolinus</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15</td>
<td>73</td>
<td>18</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td><em>Trachinotus falcatus</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>8</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><em>Trichiurus lepturus</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>
### Appendix JX15-01. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Month</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jan</td>
<td>Feb</td>
</tr>
<tr>
<td></td>
<td>E=113</td>
<td>E=113</td>
</tr>
<tr>
<td><em>Trinectes maculatus</em></td>
<td>48</td>
<td>90</td>
</tr>
<tr>
<td><em>Tylosurus crocodilus</em></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Unidentified taxa</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td><em>Urophycis floridana</em></td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td><em>Urophycis regia</em></td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><em>Xiphopenaeus kroyeri</em></td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>5,365</td>
<td>8,368</td>
</tr>
</tbody>
</table>
Appendix JX15-02. Summary by gear and zone of species collected during northeast Florida stratified-random sampling, 2015. Effort, or the total number of hauls, is labeled 'E'. Taxa are arranged alphabetically.

<table>
<thead>
<tr>
<th>Species</th>
<th>Gear and Strata</th>
<th>Zone</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21.3-m river</td>
<td>183-m haul</td>
<td>6.1-m otter trawl</td>
</tr>
<tr>
<td>Achirus lineatus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aetobatus narinari</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agonostomus monticola</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Albula vulpes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alosa aestivalis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alosa mediocris</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alosa sapidissima</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amelius catus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ameiurus nebulosus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amia calva</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anchoa hepsetus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anchoa lyolepis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anchoa mitchilli</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anchoa spp.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ancylopsetta quadrocellata</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anguilla rostrata</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ariopsis felis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Astroscopus y-graecum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atherinopsidae sp.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bagre marinus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bathygobius soporator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bothidae spp.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brevoortia spp.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Callinectes bocourti</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Callinectes ornatus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Callinectes sapidus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Callinectes similis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caranx crysos</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caranx hippos</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caranx latus</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Appendix JX15-02. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Gear and Strata</th>
<th>Zone</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21.3-m river</td>
<td>183-m</td>
<td>6.1-m</td>
</tr>
<tr>
<td></td>
<td>seine</td>
<td>haul</td>
<td>otter</td>
</tr>
<tr>
<td></td>
<td>E=576</td>
<td>E=192</td>
<td>E=588</td>
</tr>
<tr>
<td></td>
<td>E=204</td>
<td>E=204</td>
<td>E=276</td>
</tr>
<tr>
<td></td>
<td>E=288</td>
<td>E=192</td>
<td>E=192</td>
</tr>
<tr>
<td>Carcharhinus limbatus</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Centrarchidae spp.</td>
<td>3</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Centropristis philadelphica</td>
<td>14</td>
<td>3</td>
<td>38</td>
</tr>
<tr>
<td>Centropristis striata</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Chaetodipterus faber</td>
<td>4</td>
<td>27</td>
<td>55</td>
</tr>
<tr>
<td>Charybdis helleri</td>
<td>2</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Chasmodes bosquianus</td>
<td>3</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Chasmodes saburrae</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Chilomycterus schoepfii</td>
<td>26</td>
<td>23</td>
<td>16</td>
</tr>
<tr>
<td>Chilomycterus sp.</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Chloroscombrus chrysurus</td>
<td>1</td>
<td>55</td>
<td>9</td>
</tr>
<tr>
<td>Citharichthys macrops</td>
<td>1</td>
<td>6</td>
<td>.</td>
</tr>
<tr>
<td>Citharichthys spiopterus</td>
<td>201</td>
<td>130</td>
<td>420</td>
</tr>
<tr>
<td>Clupeidae spp.</td>
<td>3</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Ctenogobius boleosoma</td>
<td>577</td>
<td>.</td>
<td>108</td>
</tr>
<tr>
<td>Ctenogobius shufeldti</td>
<td>377</td>
<td>.</td>
<td>178</td>
</tr>
<tr>
<td>Ctenogobius smaragdus</td>
<td>8</td>
<td>.</td>
<td>10</td>
</tr>
<tr>
<td>Ctenogobius spp.</td>
<td>1</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Ctenogobius stigmaticus</td>
<td>.</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Ctenopharyngodon idella</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Cynoscion complex</td>
<td>3</td>
<td>.</td>
<td>623</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>115</td>
<td>132</td>
<td>15</td>
</tr>
<tr>
<td>Cynoscion nothus</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Cyprinodon variegatus</td>
<td>7</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Dasyatis americana</td>
<td>.</td>
<td>3</td>
<td>.</td>
</tr>
<tr>
<td>Dasyatis sabina</td>
<td>27</td>
<td>292</td>
<td>194</td>
</tr>
<tr>
<td>Dasyatis say</td>
<td>.</td>
<td>18</td>
<td>10</td>
</tr>
<tr>
<td>Diapterus auratus</td>
<td>24</td>
<td>60</td>
<td>3</td>
</tr>
<tr>
<td>Dormitator maculatus</td>
<td>46</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Dorosoma cepedianum</td>
<td>7</td>
<td>98</td>
<td>5</td>
</tr>
<tr>
<td>Dorosoma petenense</td>
<td>105</td>
<td>55</td>
<td>3</td>
</tr>
<tr>
<td>Echeneis sp.</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
</tbody>
</table>
### Appendix JX15-02. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Gear and Strata</th>
<th>Zone</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21.3-m river seine</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>E=576</td>
<td>E=192</td>
<td>E=588</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>37</td>
<td>100</td>
<td>99</td>
</tr>
<tr>
<td>Enneacanthus gloriosus</td>
<td>101</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Epinephelus sp.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Erimyzon sucetta</td>
<td>1</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Eretelis smaragdus</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Esox niger</td>
<td>23</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Etheostoma fusiforme</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Etheostoma sp.</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Etropus crosstus</td>
<td>119</td>
<td>43</td>
<td>378</td>
</tr>
<tr>
<td>Eucinostomus gua</td>
<td>47</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>Eucinostomus harengulus</td>
<td>346</td>
<td>82</td>
<td>114</td>
</tr>
<tr>
<td>Eucinostomus spp.</td>
<td>932</td>
<td>.</td>
<td>138</td>
</tr>
<tr>
<td>Farfantepenaeus aztecus</td>
<td>75</td>
<td>18</td>
<td>373</td>
</tr>
<tr>
<td>Farfantepenaeus duroram</td>
<td>10</td>
<td>4</td>
<td>33</td>
</tr>
<tr>
<td>Farfantepenaeus spp.</td>
<td>871</td>
<td>2</td>
<td>797</td>
</tr>
<tr>
<td>Fundulus chrysotus</td>
<td>13</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Fundulus heteroclitus</td>
<td>2,189</td>
<td>.</td>
<td>1,014</td>
</tr>
<tr>
<td>Fundulus majalis</td>
<td>179</td>
<td>.</td>
<td>42</td>
</tr>
<tr>
<td>Fundulus seminolis</td>
<td>728</td>
<td>3</td>
<td>.</td>
</tr>
<tr>
<td>Fundulus sp.</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Gambusia holbrooki</td>
<td>4,734</td>
<td>.</td>
<td>9</td>
</tr>
<tr>
<td>Gobiesox strumosus</td>
<td>1</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Gobioides broussonetii</td>
<td>.</td>
<td>.</td>
<td>5</td>
</tr>
<tr>
<td>Gobionellus oceanicus</td>
<td>46</td>
<td>.</td>
<td>47</td>
</tr>
<tr>
<td>Gobiosoma bosc</td>
<td>35</td>
<td>.</td>
<td>17</td>
</tr>
<tr>
<td>Gobiosoma ginsburgi</td>
<td>1</td>
<td>.</td>
<td>3</td>
</tr>
<tr>
<td>Gobiosoma spp.</td>
<td>74</td>
<td>.</td>
<td>10</td>
</tr>
<tr>
<td>Gymnura micrura</td>
<td>1</td>
<td>35</td>
<td>26</td>
</tr>
<tr>
<td>Harengula jaguana</td>
<td>.</td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td>Heterandria formosa</td>
<td>525</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Hoplosternum litorale</td>
<td>.</td>
<td>3</td>
<td>.</td>
</tr>
<tr>
<td>Hypleurochilus geminatus</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Hypsoblennius hentz</td>
<td>2</td>
<td>.</td>
<td>3</td>
</tr>
</tbody>
</table>

**Totals:**
- 28
- 2
- 3
- 2
- 1
- 3
- 2
- 3
- 3
- 5
<table>
<thead>
<tr>
<th>Species</th>
<th>Gear and Strata</th>
<th>Zone</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21.3-m river</td>
<td>183-m</td>
<td>6.1-m</td>
</tr>
<tr>
<td></td>
<td>seine</td>
<td>haul</td>
<td>otter</td>
</tr>
<tr>
<td></td>
<td>E=576</td>
<td>E=192</td>
<td>E=588</td>
</tr>
<tr>
<td></td>
<td>E=204</td>
<td>E=204</td>
<td>E=276</td>
</tr>
<tr>
<td></td>
<td>E=288</td>
<td>E=192</td>
<td>E=192</td>
</tr>
<tr>
<td></td>
<td>E=1,356</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypsoblennius ionthas</td>
<td>1</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Ictalurus punctatus</td>
<td>3</td>
<td>14</td>
<td>82</td>
</tr>
<tr>
<td>Labidesthes sicculus</td>
<td>376</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>716</td>
<td>977</td>
<td>43</td>
</tr>
<tr>
<td>Larimus fasciatus</td>
<td>.</td>
<td>.</td>
<td>5</td>
</tr>
<tr>
<td>Leiostomus xanthurus</td>
<td>16,243</td>
<td>598</td>
<td>3638</td>
</tr>
<tr>
<td>Lepisosteus osseus</td>
<td>4</td>
<td>19</td>
<td>5</td>
</tr>
<tr>
<td>Lepisosteus platyrhincus</td>
<td>27</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>Lepomis auritus</td>
<td>247</td>
<td>46</td>
<td>5</td>
</tr>
<tr>
<td>Lepomis gulosus</td>
<td>31</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Lepomis macrochirus</td>
<td>2,687</td>
<td>61</td>
<td>58</td>
</tr>
<tr>
<td>Lepomis microlophus</td>
<td>1,477</td>
<td>45</td>
<td>50</td>
</tr>
<tr>
<td>Lepomis punctatus</td>
<td>20</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Lepomis spp.</td>
<td>1,254</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Limulus polyphemus</td>
<td>.</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Litopenaeus setiferus</td>
<td>10,302</td>
<td>194</td>
<td>3247</td>
</tr>
<tr>
<td>Lobotes surinamensis</td>
<td>2</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Lucania goodei</td>
<td>1,562</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lucania parva</td>
<td>2,841</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Lutjanus griseus</td>
<td>21</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Lutjanus synagris</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Megalops atlanticus</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Membras martinica</td>
<td>249</td>
<td>.</td>
<td>177</td>
</tr>
<tr>
<td>Menidia menidia</td>
<td>9,448</td>
<td>.</td>
<td>3,207</td>
</tr>
<tr>
<td>Menidia spp.</td>
<td>7,000</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Menipep spp.</td>
<td>.</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Menticirrhus americanus</td>
<td>50</td>
<td>16</td>
<td>302</td>
</tr>
<tr>
<td>Menticirrhus littoralis</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Menticirrhus saxatilis</td>
<td>2</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Menticirrhus sp.</td>
<td>.</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Microgobius gulosus</td>
<td>161</td>
<td>.</td>
<td>342</td>
</tr>
<tr>
<td>Microgobius thalassinus</td>
<td>8</td>
<td>.</td>
<td>48</td>
</tr>
<tr>
<td>Microphis brachyrurus</td>
<td>3</td>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>
## Appendix JX15 (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Gear and Strata</th>
<th>Zone</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21.3-m river</td>
<td>183-m</td>
<td>6.1-m</td>
</tr>
<tr>
<td></td>
<td>seine</td>
<td>haul</td>
<td>trawl</td>
</tr>
<tr>
<td></td>
<td>E=576</td>
<td>E=192</td>
<td>E=588</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>309</td>
<td>56</td>
<td>8,850</td>
</tr>
<tr>
<td>Microurterus salmoides</td>
<td>1,389</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td>Morone saxatilis</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>4,135</td>
<td>1,202</td>
<td>1,179</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>2,639</td>
<td>959</td>
<td>2,102</td>
</tr>
<tr>
<td>Mugil spp.</td>
<td>7</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Myrophis punctatus</td>
<td>4</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Negaprion brevirostris</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Notemigonus crysoleucas</td>
<td>955</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Notropis maculatus</td>
<td>84</td>
<td>2</td>
<td>74</td>
</tr>
<tr>
<td>Oligoplites saurus</td>
<td>34</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>Ophichthus gomesii</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Ophidion marginatum</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Ophidion sp.</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Opisthonomia oglinum</td>
<td>41</td>
<td>134</td>
<td>137</td>
</tr>
<tr>
<td>Opsanus tau</td>
<td>3</td>
<td>36</td>
<td>8</td>
</tr>
<tr>
<td>Oreochromis aureus</td>
<td>49</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Oreochromis spp.</td>
<td>165</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>Orthopristis chrysoptera</td>
<td>143</td>
<td>9</td>
<td>13</td>
</tr>
<tr>
<td>Paralichthysidae sp.</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>9</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Paralichthys dentatus</td>
<td>25</td>
<td>9</td>
<td>41</td>
</tr>
<tr>
<td>Paralichthys lethostigma</td>
<td>83</td>
<td>80</td>
<td>51</td>
</tr>
<tr>
<td>Paralichthys sp.</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Paralichthys squamilentus</td>
<td>2</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Penaeus monodon</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Peprilus paru</td>
<td>.</td>
<td>44</td>
<td>3</td>
</tr>
<tr>
<td>Peprilus tricanthus</td>
<td>.</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>Poecilia latipinna</td>
<td>236</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>.</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td>15</td>
<td>39</td>
<td>32</td>
</tr>
<tr>
<td>Pomoxis nigromaculatus</td>
<td>11</td>
<td>32</td>
<td>17</td>
</tr>
<tr>
<td>Portunus spp.</td>
<td>42</td>
<td>2</td>
<td>60</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>E=1,356</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micropogonias undulatus</td>
<td>629</td>
<td>1,787</td>
<td>421</td>
<td>2,217</td>
<td>1,313</td>
<td>2,848</td>
<td>9,215</td>
</tr>
<tr>
<td>Microurterus salmoides</td>
<td>1,389</td>
<td>5</td>
<td>83</td>
<td>380</td>
<td>944</td>
<td>1,408</td>
<td></td>
</tr>
<tr>
<td>Morone saxatilis</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>4,135</td>
<td>716</td>
<td>2,085</td>
<td>1,179</td>
<td>5</td>
<td>69</td>
<td>5,337</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>2,639</td>
<td>327</td>
<td>2,102</td>
<td>867</td>
<td>293</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Mugil spp.</td>
<td>7</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>7</td>
<td>.</td>
<td>7</td>
</tr>
<tr>
<td>Myrophis punctatus</td>
<td>4</td>
<td>7</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Negaprion brevirostris</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Notemigonus crysoleucas</td>
<td>955</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>6</td>
<td>401</td>
<td>549</td>
</tr>
<tr>
<td>Notropis maculatus</td>
<td>84</td>
<td>2</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>74</td>
<td>9</td>
</tr>
<tr>
<td>Oligoplites saurus</td>
<td>34</td>
<td>2</td>
<td>17</td>
<td>7</td>
<td>11</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Ophichthus gomesii</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ophidion marginatum</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ophidion sp.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Opisthonomia oglinum</td>
<td>41</td>
<td>134</td>
<td>.</td>
<td>137</td>
<td>3</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Opsanus tau</td>
<td>3</td>
<td>.</td>
<td>36</td>
<td>11</td>
<td>8</td>
<td>18</td>
<td>2</td>
</tr>
<tr>
<td>Oreochromis aureus</td>
<td>49</td>
<td>5</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>Oreochromis spp.</td>
<td>165</td>
<td>5</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>20</td>
<td>21</td>
</tr>
<tr>
<td>Orthopristis chrysoptera</td>
<td>143</td>
<td>9</td>
<td>37</td>
<td>61</td>
<td>13</td>
<td>111</td>
<td>4</td>
</tr>
<tr>
<td>Paralichthysidae sp.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Paralichthys albigutta</td>
<td>9</td>
<td>7</td>
<td>12</td>
<td>3</td>
<td>4</td>
<td>21</td>
<td>.</td>
</tr>
<tr>
<td>Paralichthys dentatus</td>
<td>25</td>
<td>9</td>
<td>24</td>
<td>41</td>
<td>3</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>Paralichthys lethostigma</td>
<td>83</td>
<td>80</td>
<td>173</td>
<td>51</td>
<td>65</td>
<td>62</td>
<td>81</td>
</tr>
<tr>
<td>Paralichthys sp.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Paralichthys squamilentus</td>
<td>2</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Penaeus monodon</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Peprilus paru</td>
<td>.</td>
<td>44</td>
<td>3</td>
<td>31</td>
<td>13</td>
<td>3</td>
<td>.</td>
</tr>
<tr>
<td>Peprilus tricanthus</td>
<td>.</td>
<td>11</td>
<td>6</td>
<td>16</td>
<td>.</td>
<td>1</td>
<td>.</td>
</tr>
<tr>
<td>Poecilia latipinna</td>
<td>236</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>16</td>
<td>1</td>
<td>34</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>.</td>
<td>7</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Pomatomus saltatrix</td>
<td>15</td>
<td>39</td>
<td>.</td>
<td>32</td>
<td>17</td>
<td>5</td>
<td>.</td>
</tr>
<tr>
<td>Pomoxis nigromaculatus</td>
<td>11</td>
<td>.</td>
<td>16</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Portunus spp.</td>
<td>42</td>
<td>2</td>
<td>60</td>
<td>37</td>
<td>29</td>
<td>38</td>
<td>.</td>
</tr>
<tr>
<td>Species</td>
<td>21.3-m river seine</td>
<td>183-m haul seine</td>
<td>6.1-m otter trawl</td>
<td>Zone</td>
<td>Totals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------------------</td>
<td>------------------</td>
<td>-------------------</td>
<td>------</td>
<td>--------</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>E=576</td>
<td>E=192</td>
<td>E=588</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>Prionotus carolinus</td>
<td>1</td>
<td>.</td>
<td>13</td>
<td>8</td>
<td>2</td>
<td>4</td>
<td>.</td>
</tr>
<tr>
<td>Prionotus evolans</td>
<td>.</td>
<td>.</td>
<td>5</td>
<td>5</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Prionotus scitulus</td>
<td>9</td>
<td>2</td>
<td>38</td>
<td>19</td>
<td>10</td>
<td>20</td>
<td>.</td>
</tr>
<tr>
<td>Prionotus tribulus</td>
<td>22</td>
<td>16</td>
<td>78</td>
<td>27</td>
<td>37</td>
<td>45</td>
<td>7</td>
</tr>
<tr>
<td>Prionotus trilobus</td>
<td>576</td>
<td>192</td>
<td>588</td>
<td>204</td>
<td>204</td>
<td>276</td>
<td>288</td>
</tr>
<tr>
<td>Pterygoplichthys spp.</td>
<td>8</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
</tr>
<tr>
<td>Rachycentron canadum</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Rhinoptera bonasus</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Rimapenaeus constrictus</td>
<td>4</td>
<td>.</td>
<td>879</td>
<td>577</td>
<td>239</td>
<td>65</td>
<td>2</td>
</tr>
<tr>
<td>Sardinella aurita</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>3</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sciaenidae spp.</td>
<td>10</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>10</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>49</td>
<td>56</td>
<td>6</td>
<td>7</td>
<td>13</td>
<td>54</td>
<td>34</td>
</tr>
<tr>
<td>Scomberomorus maculatus</td>
<td>19</td>
<td>24</td>
<td>.</td>
<td>9</td>
<td>6</td>
<td>28</td>
<td>.</td>
</tr>
<tr>
<td>Scorpaena grandicornis</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Selene vomer</td>
<td>1</td>
<td>17</td>
<td>8</td>
<td>11</td>
<td>9</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Sicyonia laevigata</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sphoeroides niphelus</td>
<td>17</td>
<td>17</td>
<td>9</td>
<td>5</td>
<td>11</td>
<td>27</td>
<td>.</td>
</tr>
<tr>
<td>Sphyraena barracuda</td>
<td>2</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>2</td>
<td>.</td>
</tr>
<tr>
<td>Sphyraena borealis</td>
<td>22</td>
<td>.</td>
<td>1</td>
<td>12</td>
<td>9</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sphyraena guanaccho</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sphyra lewini</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Sphyra tiburo</td>
<td>.</td>
<td>4</td>
<td>.</td>
<td>1</td>
<td>3</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Stellifer lanceolatus</td>
<td>1</td>
<td>.</td>
<td>2,145</td>
<td>870</td>
<td>1,255</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>Stephanolepis hispidus</td>
<td>6</td>
<td>.</td>
<td>10</td>
<td>1</td>
<td>5</td>
<td>10</td>
<td>.</td>
</tr>
<tr>
<td>Stomolophus meleagris</td>
<td>5</td>
<td>65</td>
<td>142</td>
<td>11</td>
<td>4</td>
<td>105</td>
<td>92</td>
</tr>
<tr>
<td>Strongylura marina</td>
<td>47</td>
<td>57</td>
<td>.</td>
<td>3</td>
<td>6</td>
<td>60</td>
<td>10</td>
</tr>
<tr>
<td>Strongylura spp.</td>
<td>52</td>
<td>.</td>
<td>1</td>
<td>5</td>
<td>13</td>
<td>15</td>
<td>18</td>
</tr>
<tr>
<td>Symphurus plagiusa</td>
<td>225</td>
<td>.</td>
<td>263</td>
<td>151</td>
<td>214</td>
<td>106</td>
<td>17</td>
</tr>
<tr>
<td>Syngnathus louisianae</td>
<td>33</td>
<td>.</td>
<td>22</td>
<td>15</td>
<td>18</td>
<td>22</td>
<td>.</td>
</tr>
<tr>
<td>Syngnathus scovelli</td>
<td>56</td>
<td>.</td>
<td>9</td>
<td>4</td>
<td>1</td>
<td>9</td>
<td>30</td>
</tr>
<tr>
<td>Synodus foetens</td>
<td>50</td>
<td>3</td>
<td>81</td>
<td>31</td>
<td>48</td>
<td>55</td>
<td>.</td>
</tr>
<tr>
<td>Trachinotus carolinus</td>
<td>127</td>
<td>4</td>
<td>.</td>
<td>109</td>
<td>13</td>
<td>9</td>
<td>.</td>
</tr>
<tr>
<td>Trachinotus falcatus</td>
<td>18</td>
<td>2</td>
<td>.</td>
<td>1</td>
<td>2</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>Trichiurus lepturus</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>
Appendix JX15-02. (Continued)

<table>
<thead>
<tr>
<th>Species</th>
<th>Gear and Strata</th>
<th>Zone</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21.3-m river</td>
<td>183-m haul</td>
<td>6.1-m otter</td>
</tr>
<tr>
<td></td>
<td>seine</td>
<td>seine</td>
<td>trawl</td>
</tr>
<tr>
<td>Trinectes maculatus</td>
<td>95</td>
<td>19</td>
<td>1,040</td>
</tr>
<tr>
<td>Tylosurus crocodilus</td>
<td>.</td>
<td>5</td>
<td>.</td>
</tr>
<tr>
<td>Unidentified taxa</td>
<td>1</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td>Urophycis floridana</td>
<td>.</td>
<td>.</td>
<td>4</td>
</tr>
<tr>
<td>Urophycis regia</td>
<td>.</td>
<td>.</td>
<td>4</td>
</tr>
<tr>
<td>Xiphopenaeus kroyeri</td>
<td>.</td>
<td>.</td>
<td>5</td>
</tr>
<tr>
<td>Totals</td>
<td>142,338</td>
<td>7,828</td>
<td>41,292</td>
</tr>
</tbody>
</table>

JX-32
Fish Health Monitoring

Introduction

Long-term multi-gear and multi-habitat sampling programs, such as the Fisheries-Independent Monitoring (FIM) program, not only provide fish population information to fisheries managers, but also help to document changes and evaluate the effects of natural and anthropogenic disturbances to ecosystems (Wolfe et al. 1987). Increased urban development in coastal areas has made adjacent aquatic ecosystems (estuaries, bays, and tidal rivers) some of the most intensively fertilized environments on earth (Cloern et al. 1995). The influx of nutrients and other materials commonly associated with urban development and industry has led to concerns about the concomitant eutrophication and degradation of water quality in Florida’s coastal systems. Evidence of a correlation between environmental degradation and the occurrence of certain fish diseases continues to accumulate (Sinderman 1979). The incidence of gross external abnormalities (GEAs) in marine species, defined as those illnesses or deformations easily observed in the field, provide valuable information on the level of environmental stress placed upon species in estuarine and coastal waters (Fournie et al. 1996). Baseline information on the frequency of occurrence of GEAs is necessary to identify changes in the ecological health of Florida’s estuaries.

The Fish and Wildlife Research Institute’s (FWRI) FIM program began to document visually observed GEAs (including parasites) on fish and select invertebrates in Florida’s estuaries in April 1998. The main objectives of the fish health monitoring component of the FIM program are to categorize prominent types of GEAs observed, document which species are most susceptible, and document normal background levels of fish health problems. This report summarizes the occurrence of GEAs observed on larger fish (>75 mm SL) and selected invertebrates collected during routine stratified-random sampling (SRS) in select Florida estuaries in 2015.

Methods

Fish health monitoring was conducted in all Florida estuarine areas sampled by the FIM program. All fish (≥75 mm SL) and selected invertebrates were visually examined
for GEAs. Abnormalities that were opportunistically observed on specimens < 75 mm SL were also recorded; however, they are not presented in this report. Specimens with external abnormalities were assigned a “Health Code” in the field by FIM staff, packed on ice and returned to the lab. These specimens were sent to the FWRI’s Fish and Wildlife Health (FWH) group in St. Petersburg, Florida, for detailed diagnosis. Specimens collected from estuaries outside the Tampa Bay region were either fixed in 10% formalin or shipped on ice to the FWH group. After evaluating each specimen, the FWH group assigned a health code to each specimen and provided these data to the FIM program for input into a database. Health codes assigned by fish pathologists in the FWH group took priority over those assigned in the field. For specimens that were assigned a health code and released in the field (i.e., fish with scoliosis or gill isopods) the health codes were not changed. Nine health codes were used:

- **B** Red or bloody areas (no scale loss)
- **E** Erosion or scale loss (only epidermis or dermis involved, muscle tissue not affected)
- **F** Fin rot (inflamed or frayed fins)
- **S** Skeletal abnormalities (vertebral, opercular, or fin deformities)
- **T** Tumor, cyst (raised area)
- **U** Ulcer or lesion (muscle tissue affected)
- **P** Parasitic infestation
- **D** Dead prior to collection
- **O** Other (i.e., emaciated fish, healing wound, eye discoloration, missing parts, and mechanical damage)
Results and Discussion

Of the 264,515 fish (≥75 mm SL) and selected invertebrates that were collected during 2015 FIM SRS, 1,635 (36 taxa, 0.6%) were observed to have a GEA (Table FH15-01). The northern Indian River Lagoon had specimens with the highest incidence of GEAs (2.4%), followed by northeast Florida (0.4%). Tampa Bay (0.1%), the southern Indian River Lagoon (0.1%), Apalachicola Bay (<0.1%), Cedar Key (<0.1%), and Charlotte Harbor (<0.1%) all had very low incidence of specimens identified with GEAs. Statewide, seven of the nine types of GEAs were observed (E and D were not observed in 2015). The GEA identified most often was parasitic infestation (n=1,536; Table FH15-02) accounting for 94.0% of all GEAs observed from all estuaries. The next most common GEAs observed were other (n=36), ulcers or lesions (n=28) and fin rot (n=12; Table FH15-02). Five taxa of recreational or commercial importance (i.e., Selected Taxa) were among the top 10 taxa observed with a GEA (Table FH15-02). Ariopsis felis (n=485), Mugil cephalus (n=477) and Mugil curema (n=324) were the most common species collected with a GEA. The majority (97.9%) of the affected A. felis, M. cephalus and M. curema collected had parasitic infestation. Selected invertebrates that were collected with a GEA during routine monitoring in 2015 included four Callinectes sapidus with parasitic infestations.

Incidence by Lab

Apalachicola Bay: Apalachicola Bay staff examined 33,774 specimens for GEAs. Fifteen individuals (<0.1%) from eight taxa, four of which were Selected Taxa, had a GEA (Table FH15-03). Parasitic infestation (n=8) was the most common GEA observed and occurred on six taxa.

Cedar Key: Cedar Key staff examined 23,960 specimens for GEAs. Six individuals (<0.1%) from three taxa, two of which were Selected Taxa had a GEA (Table FH15-04). Parasitic infestation (n=5) and ulcers (n=1) were the only two GEAs observed.

Charlotte Harbor: Charlotte Harbor staff examined 51,969 specimens for GEA’s. Eight individuals (<0.1%) from two taxa, had a GEA (Table FH15-05). Parasitic infestation (n=7) and tumors or cysts (n=1) were the only two GEAs observed.
Northern Indian River Lagoon: Northern Indian River Lagoon staff examined 63,150 specimens for GEAs. One thousand four hundred eighty-one individuals (2.4%) from 24 taxa, 10 of which were Selected Taxa, had a GEA (Table FH15-06). Northern Indian River Lagoon had the highest occurrence of specimens with GEAs. Parasitic infestation (n=1,454) accounted for 98.2% of the affected specimens within the northern Indian River Lagoon system. Parasitic infestation was primarily observed on *A. felis* (n=478), *M. cephalus* (n=464) and *M. curema* (n=309).

Northeast Florida: Northeast Florida staff examined 13,453 specimens for GEAs. Forty-eight individuals (0.4%) from nine taxa, four of which were Selected Taxa, had a GEA (Table FH15-07). Fish observed with parasitic infestations (n=21) and ulcers/lesions (n=17) accounted for 79.2% of affected specimens within that system. *Brevoortia* spp. was observed to have the highest number of parasitic infestations (n=20) and ulcers/lesions (n=9).

Tampa Bay: Tampa Bay staff examined 50,305 specimens for GEAs. Sixty-two individuals (0.1%) from 10 taxa, five of which were Selected Taxa, had a GEA (Table FH15-08). Parasitic infestations (n=34) and other (n=22) were the most common GEA observed and comprised 90.3 % of the GEAs observed in Tampa Bay. *Strongylura notata* was the most common taxon with a GEA of parasitic infestation (n=29) and other (n=19).

Southern Indian River Lagoon: Southern Indian River Lagoon staff examined 27,904 specimens for GEAs. Fifteen individuals (0.1%) from six taxa, two of which were Selected Taxa, had a GEA (Table FH15-09). Parasitic infestation (n=7) and red/bloody areas (n=5) were the most common GEAs observed, accounting for 80.0% of the affected specimens within the southern Indian River Lagoon.
References


Table FH15-01. Incidence of external abnormalities in fish and selected invertebrates collected during stratified-random sampling at each FIM field lab during 2015. Data are based only on fish ≥75 mm SL and include total number collected, number affected by abnormalities, and percentage affected by abnormalities.

<table>
<thead>
<tr>
<th>Field Laboratory</th>
<th>Number Collected</th>
<th>Number Affected</th>
<th>Percent Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apalachicola Bay</td>
<td>33,774</td>
<td>15</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Cedar Key</td>
<td>23,960</td>
<td>6</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Charlotte Harbor</td>
<td>51,969</td>
<td>8</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>N. Indian River Lagoon</td>
<td>63,150</td>
<td>1,481</td>
<td>2.4</td>
</tr>
<tr>
<td>Northeast Florida</td>
<td>13,453</td>
<td>48</td>
<td>0.4</td>
</tr>
<tr>
<td>Tampa Bay</td>
<td>50,305</td>
<td>62</td>
<td>0.1</td>
</tr>
<tr>
<td>S. Indian River Lagoon</td>
<td>27,904</td>
<td>15</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>264,515</strong></td>
<td><strong>1,635</strong></td>
<td><strong>0.6</strong></td>
</tr>
</tbody>
</table>
Table FH15-02. Top 10 taxa having gross external abnormalities, sorted by Percent Affected, collected from all estuaries sampled by the Fisheries-Independent Monitoring program during stratified-random sampling, 2015. Number collected = total number of each species collected. Number affected = total number of individuals with abnormalities by health code. Percent affected = (number affected / number collected) * 100.

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Number Collected (≥ 75-mm SL)</th>
<th>Number Affected (≥ 75-mm SL)</th>
<th>P</th>
<th>B</th>
<th>F</th>
<th>U</th>
<th>E</th>
<th>S</th>
<th>T</th>
<th>O</th>
<th>D</th>
<th>Percent Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongylura marina</td>
<td>78</td>
<td>25</td>
<td>25</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>32.1</td>
</tr>
<tr>
<td>Ariopsis felis</td>
<td>5,257</td>
<td>485</td>
<td>481</td>
<td>3</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>9.2</td>
</tr>
<tr>
<td>Strongylura notata</td>
<td>1,566</td>
<td>144</td>
<td>124</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>19</td>
<td>.</td>
<td>.</td>
<td>9.2</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>5,440</td>
<td>477</td>
<td>466</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>1</td>
<td>.</td>
<td>8.8</td>
</tr>
<tr>
<td>Brevoortia spp.</td>
<td>489</td>
<td>30</td>
<td>21</td>
<td>.</td>
<td>.</td>
<td>9</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>6.1</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>8,015</td>
<td>324</td>
<td>312</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>4.0</td>
</tr>
<tr>
<td>Sphoeroides nephelus</td>
<td>2,268</td>
<td>45</td>
<td>33</td>
<td>4</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>7</td>
<td>.</td>
<td>.</td>
<td>2.0</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>751</td>
<td>13</td>
<td>11</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>1.7</td>
</tr>
<tr>
<td>Pogonias cromis</td>
<td>742</td>
<td>9</td>
<td>9</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1.2</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>2,071</td>
<td>9</td>
<td>5</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>0.4</td>
</tr>
<tr>
<td>Subtotal (top 10 taxa with GEAs)</td>
<td>26,677</td>
<td>1,561</td>
<td>1,487</td>
<td>10</td>
<td>6</td>
<td>23</td>
<td>.</td>
<td>4</td>
<td>31</td>
<td>.</td>
<td>5.9</td>
<td></td>
</tr>
<tr>
<td>Totals (all taxa)</td>
<td>264,515</td>
<td>1,635</td>
<td>1,536</td>
<td>16</td>
<td>12</td>
<td>28</td>
<td>.</td>
<td>2</td>
<td>5</td>
<td>36</td>
<td>.</td>
<td>0.6</td>
</tr>
</tbody>
</table>

P = parasitic infestation; B = red or bloody areas; F = fin rot; U = ulcer or lesion; E = erosion or scale loss; S = skeletal abnormalities; T = tumor/cysts; O = other; D = dead. **Bold species are Selected Taxa.**
List of taxa, sorted by Percent Affected, having gross external abnormalities collected in Apalachicola Bay during stratified-random sampling, 2015. Number collected = total number of each species collected. Number affected = total number of individuals with abnormalities by health code. Percent affected = (number affected / number collected) × 100.

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Number Collected (≥ 75-mm SL)</th>
<th>Number Affected (≥ 75-mm SL)</th>
<th>Health Code</th>
<th>Percent Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Archosargus probatocephalus</em></td>
<td>122</td>
<td>3</td>
<td>P B F U E S T O D</td>
<td>2.5</td>
</tr>
<tr>
<td><em>Rhinoptera bonasus</em></td>
<td>104</td>
<td>1</td>
<td></td>
<td>1.0</td>
</tr>
<tr>
<td><em>Lepomis microlophus</em></td>
<td>109</td>
<td>1</td>
<td></td>
<td>0.9</td>
</tr>
<tr>
<td><em>Mugil cephalus</em></td>
<td>1,548</td>
<td>4</td>
<td></td>
<td>0.3</td>
</tr>
<tr>
<td><em>Ariopsis felis</em></td>
<td>614</td>
<td>1</td>
<td></td>
<td>0.2</td>
</tr>
<tr>
<td><em>Leiostomus xanthurus</em></td>
<td>2,726</td>
<td>3</td>
<td></td>
<td>0.1</td>
</tr>
<tr>
<td><em>Dasyatis sabina</em></td>
<td>1,074</td>
<td>1</td>
<td></td>
<td>0.1</td>
</tr>
<tr>
<td><em>Micropogonias undulatus</em></td>
<td>2,153</td>
<td>1</td>
<td></td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Totals (all taxa)</strong></td>
<td>33,774</td>
<td>15</td>
<td></td>
<td>&lt;0.1</td>
</tr>
</tbody>
</table>

P = parasitic infestation; B = red or bloody areas; F = fin rot; U = ulcer or lesion; E = erosion or scale loss; S = skeletal abnormalities; T = tumor/cysts; O = other; D = dead. **Bold species are Selected Taxa.**
Table FH15-04. List of taxa, sorted by Percent Affected, having gross external abnormalities collected in Cedar Key during stratified-random sampling, 2015. Number collected = total number of each species collected. Number affected = total number of individuals with abnormalities by health code. Percent affected = (number affected / number collected) * 100.

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Number Collected (≥ 75-mm SL)</th>
<th>Number Affected (≥ 75-mm SL)</th>
<th>Health Code</th>
<th>Percent Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Callinectes sapidus</em></td>
<td>466</td>
<td>4</td>
<td>4</td>
<td>0.9</td>
</tr>
<tr>
<td><em>Ogcocephalus cubifrons</em></td>
<td>912</td>
<td>1</td>
<td>1</td>
<td>0.1</td>
</tr>
<tr>
<td><em>Leiostomus xanthurus</em></td>
<td>1,474</td>
<td>1</td>
<td>1</td>
<td>0.1</td>
</tr>
<tr>
<td>Totals (all taxa)</td>
<td>23,960</td>
<td>6</td>
<td>5</td>
<td>&lt;0.1</td>
</tr>
</tbody>
</table>

P = parasitic infestation; B = red or bloody areas; F = fin rot; U = ulcer or lesion; E = erosion or scale loss; S = skeletal abnormalities; T = tumor/cysts; O = other; D = dead. **Bold species are Selected Taxa.**
Table FH15-05. List of taxa, sorted by Percent Affected, having gross external abnormalities collected in Charlotte Harbor during stratified-random sampling, 2015. Number collected = total number of each species collected. Number affected = total number of individuals with abnormalities by health code. Percent affected = (number affected / number collected) * 100.

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Number Collected (≥ 75-mm SL)</th>
<th>Number Affected (≥ 75-mm SL)</th>
<th>Health Code</th>
<th>Percent Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ariopsis felis</td>
<td>912</td>
<td>1</td>
<td>. . . . .</td>
<td>1</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>33,374</td>
<td>7</td>
<td>7 . . . . .</td>
<td>.</td>
</tr>
<tr>
<td>Totals (all taxa)</td>
<td>51,969</td>
<td>8</td>
<td>7 . . . . .</td>
<td>1</td>
</tr>
</tbody>
</table>

P = parasitic infestation; B = red or bloody areas; F = fin rot; U = ulcer or lesion; E = erosion or scale loss; S = skeletal abnormalities; T = tumor/cysts; O = other; D = dead. **Bold species are Selected Taxa.**
Table FH15-06. List of taxa, sorted by Percent Affected, having gross external abnormalities collected in the northern Indian River Lagoon during stratified-random sampling, 2015. Number collected = total number of each species collected. Number affected = total number of individuals with abnormalities by health code. Percent affected = (number affected / number collected) * 100.

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Number Collected</th>
<th>Number Affected</th>
<th>Health Code</th>
<th>Percent Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongylura marina</td>
<td>78</td>
<td>25</td>
<td>P B F U E S T O D</td>
<td>32.1</td>
</tr>
<tr>
<td><em>Mugil cephalus</em></td>
<td>1,470</td>
<td>465</td>
<td>P B F U E S T O D</td>
<td>31.6</td>
</tr>
<tr>
<td>Ariopsis felis</td>
<td>2,466</td>
<td>481</td>
<td>P B F U E S T O D</td>
<td>19.5</td>
</tr>
<tr>
<td>Strongylura notata</td>
<td>513</td>
<td>95</td>
<td>P B F U E S T O D</td>
<td>18.5</td>
</tr>
<tr>
<td>Sphyrna tiburo</td>
<td>7</td>
<td>1</td>
<td>P B F U E S T O D</td>
<td>14.3</td>
</tr>
<tr>
<td><em>Pomatomus saltatrix</em></td>
<td>9</td>
<td>1</td>
<td>P B F U E S T O D</td>
<td>11.1</td>
</tr>
<tr>
<td><em>Mugil curema</em></td>
<td>3,162</td>
<td>310</td>
<td>P B F U E S T O D</td>
<td>9.8</td>
</tr>
<tr>
<td>Chilomycterus schoepfii</td>
<td>281</td>
<td>7</td>
<td>P B F U E S T O D</td>
<td>2.5</td>
</tr>
<tr>
<td><em>Sciaenops ocellatus</em></td>
<td>476</td>
<td>11</td>
<td>P B F U E S T O D</td>
<td>2.3</td>
</tr>
<tr>
<td><em>Spheeroides nephelus</em></td>
<td>2,268</td>
<td>45</td>
<td>P B F U E S T O D</td>
<td>2.0</td>
</tr>
<tr>
<td>Gymnura micrura</td>
<td>76</td>
<td>1</td>
<td>P B F U E S T O D</td>
<td>1.3</td>
</tr>
<tr>
<td><em>Pogonias cromis</em></td>
<td>742</td>
<td>9</td>
<td>P B F U E S T O D</td>
<td>1.2</td>
</tr>
<tr>
<td>Dasyatis say</td>
<td>315</td>
<td>2</td>
<td>P B F U E S T O D</td>
<td>0.6</td>
</tr>
<tr>
<td>Dasyatis sabina</td>
<td>1,148</td>
<td>5</td>
<td>P B F U E S T O D</td>
<td>0.4</td>
</tr>
<tr>
<td><em>Centropomus undecimalis</em></td>
<td>283</td>
<td>1</td>
<td>P B F U E S T O D</td>
<td>0.4</td>
</tr>
<tr>
<td>Archosargus probatocephalus</td>
<td>1,949</td>
<td>6</td>
<td>P B F U E S T O D</td>
<td>0.3</td>
</tr>
<tr>
<td>Elops saurus</td>
<td>531</td>
<td>1</td>
<td>P B F U E S T O D</td>
<td>0.2</td>
</tr>
</tbody>
</table>
Table FH15-06 (Continued).

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Number Collected</th>
<th>Number Affected</th>
<th>Health Code</th>
<th>Percent Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(≥ 75-mm SL)</td>
<td>(≥ 75-mm SL)</td>
<td>P B F U E S T O D</td>
<td></td>
</tr>
<tr>
<td>Eucinostomus gula</td>
<td>1,742</td>
<td>3</td>
<td>3 . . . . . . . .</td>
<td>0.2</td>
</tr>
<tr>
<td><strong>Leiostomus xanthurus</strong></td>
<td>1,452</td>
<td>2</td>
<td>2 . . . . . . . .</td>
<td>0.1</td>
</tr>
<tr>
<td>Micropogonias undulatus</td>
<td>752</td>
<td>1</td>
<td>1 . . . . . . . .</td>
<td>0.1</td>
</tr>
<tr>
<td>Orthopristis chrysoptera</td>
<td>974</td>
<td>1</td>
<td>1 . . . . . . . .</td>
<td>0.1</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>7,018</td>
<td>5</td>
<td>3 . 2 . . . . . .</td>
<td>0.1</td>
</tr>
<tr>
<td>Bairdiella chrysoura</td>
<td>4,615</td>
<td>2</td>
<td>2 . . . . . . . .</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Eucinostomus harengulus</td>
<td>2,559</td>
<td>1</td>
<td>1 . . . . . . . .</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td><strong>Totals (all taxa)</strong></td>
<td><strong>63,150</strong></td>
<td><strong>1,481</strong></td>
<td><strong>1,454</strong> 9 2 1 . 4 11 .</td>
<td><strong>2.4</strong></td>
</tr>
</tbody>
</table>

P = parasitic infestation; B = red or bloody areas; F = fin rot; U = ulcer or lesion; E = erosion or scale loss; S = skeletal abnormalities; T = tumor/cysts; O = other; D = dead. **Bold species are Selected Taxa.**
Table FH15-07. List of taxa, sorted by Percent Affected, having gross external abnormalities collected in northeast Florida during stratified-random sampling, 2015. Number collected = total number of each species collected. Number affected = total number of individuals with abnormalities by health code. Percent affected = (number affected / number collected) * 100.

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Number Collected (≥ 75-mm SL)</th>
<th>Number Affected (≥ 75-mm SL)</th>
<th>Health Code</th>
<th>Percent Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brevoortia spp.</td>
<td>357</td>
<td>29</td>
<td>20 . . 9 . . . . .</td>
<td>8.1</td>
</tr>
<tr>
<td><em>Sciaenops ocellatus</em></td>
<td>84</td>
<td>1</td>
<td>. . . . . . . . 1</td>
<td>1.2</td>
</tr>
<tr>
<td>Dorosoma cepedianum</td>
<td>102</td>
<td>1</td>
<td>. . . 1 . . . . .</td>
<td>1.0</td>
</tr>
<tr>
<td><em>Mugil curema</em></td>
<td>1,084</td>
<td>8</td>
<td>. . 3 4 . . . . 1</td>
<td>0.7</td>
</tr>
<tr>
<td><em>Mugil cephalus</em></td>
<td>1,311</td>
<td>4</td>
<td>. 1 1 2 . . . . .</td>
<td>0.3</td>
</tr>
<tr>
<td><em>Stellifer lanceolatus</em></td>
<td>362</td>
<td>1</td>
<td>. . 1 . . . . . .</td>
<td>0.3</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>961</td>
<td>2</td>
<td>1 . 1 . . . . .</td>
<td>0.2</td>
</tr>
<tr>
<td><em>Ameiurus catus</em></td>
<td>587</td>
<td>1</td>
<td>. . . . 1 . . . .</td>
<td>0.2</td>
</tr>
<tr>
<td><em>Leiostomus xanthurus</em></td>
<td>1,166</td>
<td>1</td>
<td>. . . 1 . . . . .</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Totals (all taxa)</strong></td>
<td>13,453</td>
<td>48</td>
<td>21 1 6 17 . 1 . 2</td>
<td>0.4</td>
</tr>
</tbody>
</table>

P = parasitic infestation; B = red or bloody areas; F = fin rot; U = ulcer or lesion; E = erosion or scale loss; S = skeletal abnormalities; T = tumor/cysts; O = other; D = dead. **Bold species are Selected Taxa.**
Table FH15-08. List of taxa, sorted by Percent Affected, having gross external abnormalities collected in Tampa Bay during stratified-random sampling, 2015. Number collected = total number of each species collected. Number affected = total number of individuals with abnormalities by health code. Percent affected = (number affected / number collected) * 100.

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Number Collected (≥ 75-mm SL)</th>
<th>Number Affected (≥ 75-mm SL)</th>
<th>Health Code</th>
<th>Percent Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongylura notata</td>
<td>1,001</td>
<td>48</td>
<td>29 P B F</td>
<td>19 4.8</td>
</tr>
<tr>
<td>Selene vomer</td>
<td>29</td>
<td>1</td>
<td>1</td>
<td>1 3.5</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>94</td>
<td>1</td>
<td>1</td>
<td>1 1.1</td>
</tr>
<tr>
<td>Cynoscion nebulosus</td>
<td>130</td>
<td>1</td>
<td>1</td>
<td>1 0.8</td>
</tr>
<tr>
<td>Brevoortia spp.</td>
<td>132</td>
<td>1</td>
<td>1</td>
<td>1 0.8</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>447</td>
<td>3</td>
<td>1</td>
<td>1 0.7</td>
</tr>
<tr>
<td>Sciaenops ocellatus</td>
<td>191</td>
<td>1</td>
<td>1</td>
<td>1 0.5</td>
</tr>
<tr>
<td>Eugerres plumieri</td>
<td>221</td>
<td>1</td>
<td>1</td>
<td>1 0.5</td>
</tr>
<tr>
<td>Centropomus undecimalis</td>
<td>1,883</td>
<td>3</td>
<td>1</td>
<td>1 0.2</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>24,985</td>
<td>2</td>
<td>1</td>
<td>1 &lt;0.1</td>
</tr>
<tr>
<td><strong>Totals (all taxa)</strong></td>
<td><strong>50,305</strong></td>
<td><strong>62</strong></td>
<td><strong>34 1 3 2 2</strong></td>
<td><strong>22 0.1</strong></td>
</tr>
</tbody>
</table>

P = parasitic infestation; B = red or bloody areas; F = fin rot; U = ulcer or lesion; E = erosion or scale loss; S = skeletal abnormalities; T = tumor/cysts; O = other; D = dead. **Bold species are Selected Taxa.**
Table FH15-09. List of taxa, sorted by Percent Affected, having gross external abnormalities collected in southern Indian River Lagoon during stratified-random sampling, 2015. Number collected = total number of each species collected. Number affected = total number of individuals with abnormalities by health code. Percent affected = (number affected / number collected) * 100.

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Number Collected (≥ 75-mm SL)</th>
<th>Number Affected (≥ 75-mm SL)</th>
<th>Health Code</th>
<th>Percent Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongylura notata</td>
<td>52</td>
<td>1</td>
<td>1</td>
<td>P</td>
</tr>
<tr>
<td>Ariopsis felis</td>
<td>1,265</td>
<td>2</td>
<td>2</td>
<td>B</td>
</tr>
<tr>
<td>Mugil cephalus</td>
<td>664</td>
<td>1</td>
<td>1</td>
<td>F</td>
</tr>
<tr>
<td>Mugil curema</td>
<td>3,675</td>
<td>5</td>
<td>3</td>
<td>F</td>
</tr>
<tr>
<td>Diapterus auratus</td>
<td>5,610</td>
<td>5</td>
<td>5</td>
<td>U</td>
</tr>
<tr>
<td>Lagodon rhomboides</td>
<td>4,834</td>
<td>1</td>
<td>1</td>
<td>D</td>
</tr>
<tr>
<td>Totals (all taxa)</td>
<td>27,904</td>
<td>15</td>
<td>7</td>
<td>O</td>
</tr>
</tbody>
</table>

P = parasitic infestation; B = red or bloody areas; F = fin rot; U = ulcer or lesion; E = erosion or scale loss; S = skeletal abnormalities; T = tumor/cysts; O = other; D = dead. **Bold species are Selected Taxa.**
Species Profiles

Introduction

An important use of Fisheries-Independent Monitoring (FIM) program data is to track the relative abundance of fish stocks and provide information for species management plans, including information on the abundance of juvenile fish. Juvenile indices of abundance (IOAs) measure the relative abundance of newly-recruited or young-of-the-year (YOY) fish and may be used to describe recruitment processes and forecast population trends. Adult IOAs measure the relative abundance of larger, older fish and may be used to describe the sexually mature portion of a population and also help forecast future population trends. When combined, these two pieces of information can provide a comprehensive picture of the relative condition of a fish population. This section provides profiles of species that are routinely collected in FIM program sampling and are of recreational or commercial importance in Florida (e.g., Red Drum, Spotted Seatrout, Sheepshead, Striped Mullet, Pinfish, Common Snook, and Blue Crab).

Similar analyses were used to develop recruitment indices for each species examined. Data from stratified-random sampling (SRS) were used to create IOAs for YOY and adults of target species. Starting in 2013, only monthly SRS data (1996 to present) were used for IOAs as opposed to previous reporting years that included seasonal sampling (1989-1995). Study areas (i.e., estuarine systems) included in the analyses were selected based upon adequate sample sizes of the target species or years of available data, and separate IOAs were calculated for each study area. The specific time periods and sizes of specimens included in the analyses varied among species based upon their individual patterns of recruitment and growth. In general, for each species only months of peak abundance were included in the analyses. Length-frequency histograms were examined to determine the time period and size at which the target species fully recruited to the sampling gears. Larger sizes of fish considered to be sub-adult or adult were analyzed separately from YOYs for select species.

The annual IOAs representing either juvenile recruitment (YOY IOAs) or the sub-adult or adult portion of the population (Adult IOAs) were computed using generalized linear models to reduce spatial and temporal variability between sets. The FIM program’s
SRS design generates count data, the distribution of which is bounded by zero. Often, the frequency distribution of these counts is highly non-normal. Therefore, a Poisson or negative binomial distribution was used to create IOAs instead of log-transformed counts as in years prior to 2009. Location, time, and environmental variables were treated as either classification variables (zone, year, month, gear, deployment technique, shore type, sediment type, and bottom vegetation type) or covariates (water temperature, salinity, and depth) in the analyses. The GLIMMIX procedure (SAS Institute Inc. 2006) was used to complete all analyses. In order to normalize the data, water temperature, salinity, and depth were natural log transformed [\ln (X+1)] prior to analysis. With the exception of year, all variables that were not significant (P>0.05) and did not improve the fit of the model were dropped and the analysis was repeated.

Relative abundance was calculated as the median annual number of fish per set. Median values were determined from the least-squares adjusted means by multiplying the standard error by a random normal deviate (\(\mu=0, \sigma=1\)) and adding it to the least-squares mean. These data were then back-transformed (\(e^x\)). The process was repeated 500 times for each year to create a sampling distribution of back-transformed values and summary statistics (25 and 75 percentiles) were then calculated and plotted to view annual trends in IOAs (Sokal and Rohlf 1981).
References


Red Drum, *Sciaenops ocellatus*

The Red Drum, *Sciaenops ocellatus*, is an estuarine-dependent species inhabiting coastal waters from Massachusetts to northern Mexico (Yokel 1966; Reagan 1985). This species supports important recreational fisheries throughout the U.S. south Atlantic and Gulf of Mexico coasts. In Florida, dramatic stock reductions in the mid-1980s resulted in a 1986 moratorium on commercial and recreational Red Drum fisheries. In 1989, the fishery was reopened with strict size and bag limits, as well as a no-sale provision that effectively eliminated the commercial Red Drum fishery in Florida. Since that time, Red Drum stocks have recovered significantly. The most recent model predictions for age-specific indices of Red Drum indicated that populations in Florida exceeded the Florida Fish and Wildlife Conservation Commission’s management target of at least a 40% escapement rate on both coasts, and Red Drum populations in all four statewide assessment regions are neither considered overfished or undergoing overfishing (Chagaris et al. 2015). In addition, continued improvement of escapement rates within the northeast and northwest management regions of the state led to an increase of the daily bag limit from one to two fish in early 2012 and a renewed interest in opening up coastal Red Drum to harvest in the Gulf. However, bag limits within the southern management areas of the state have remained at one fish per person per day.

In Florida, adult Red Drum spawn from mid-August through late November (Yokel 1966). Spawning occurs primarily near bay mouths, inlets, or over nearshore continental shelf waters (Mercer 1984; Murphy and Taylor 1990), and in some locations inside estuaries (Murphy and Taylor 1990; Johnson and Funicelli 1991). In Florida estuaries, recruitment of juveniles begins in September and continues through February, with peaks occurring in October and November (Reagan 1985; Peters and McMichael 1987; Daniel 1988). Settlement of young-of-the-year (YOY) Red Drum typically occurs in the middle to upper reaches of estuaries, away from ocean inlets or passes, and can be strongly influenced by the availability of low to moderate salinity habitats (FDEP-FMRI 1997). On both coasts, large juvenile Red Drum enter the fishery at approximately 15 – 18 months of age, and are fully recruited at the beginning of their third year (age-2) (FWC-FMRI 2004). The legal recreational slot limit (457-686 mm total length [TL]; 18-27 inch TL)
includes predominantly age-1 and age-2 fish. Red drum greater than 700 mm standard length (SL) are uncommon in the FIM program samples from west Florida estuaries, but are occasionally collected on the east coast in the Indian River Lagoon (IRL) (FWC-FMRI 2014).

In an effort to monitor year-class strength and to improve the ability to predict future adult Red Drum abundances, the FIM program developed indices of relative abundance (IOAs) of YOY recruitment into selected Florida estuaries. Abundance indices were calculated separately for bay and river habitats in each estuary. Abundance data for YOY Red Drum ≤ 40 mm SL that were collected in stratified-random 21.3-m seine samples were examined to assess recruitment into six Florida estuaries (in order of sampling inception): Tampa Bay, Charlotte Harbor, northern IRL, Cedar Key, Apalachicola Bay, and northeast Florida. Young-of-the-year Red Drum recruited to habitats sampled with our 21.3-m seines primarily from September through February; therefore, these months were used to define the respective recruitment seasons for each estuary in subsequent analyses. Indices of abundance for YOY Red Drum were not calculated for the southern IRL (21.3-m seines were not included as a sampling gear). In Northeast Florida YOY indices were only calculated for river habitats (no bay habitats were sampled), and in Apalachicola Bay only for bay habitats (insufficient sample size in river habitats). Annual IOAs were also developed for legal-size Red Drum that fall within the permitted recreational harvest size range (457-686 mm TL; 374-565 mm SL; Murphy and Taylor 1990) in each estuary, including the southern IRL. These IOAs included all legal-size Red Drum collected in stratified-random 183-m haul seines during each calendar year (January – December).

Indices of abundance for YOY Red Drum varied annually without trend on Florida’s northwest coast (Figure SP15-01). The IOAs for YOY Red Drum in Apalachicola Bay indicated strong year classes in 2002, 2013, and 2014; otherwise recruitment was relatively low, but stable year to year. The IOAs for legal-size Red Drum in Apalachicola Bay indicated a general increase in abundance over time with peaks in 2003, 2007-2009, and 2012-2013. Young-of-the-year IOAs in Cedar Key river habitats indicated relatively strong year classes in 1996 and 1997; otherwise, YOY Red Drum IOAs remained fairly low and stable. In Cedar Key bay habitats, YOY IOAs indicated the presence of relatively
strong year classes in 2003, 2013, and 2014. The IOAs for legal-size Red Drum in Cedar Key showed a peak in abundance in 1999 with a steady decline through 2002. Starting in 2004 through the present, abundance of legal-size Red Drum have been stable, but relatively low.

Annual IOAs for YOY Red Drum showed similar recruitment patterns in Tampa Bay and Charlotte Harbor (Figure SP15-02). Annual IOAs for YOY Red Drum in Tampa Bay indicated that recruitment was strong during 2002 and 2003 in riverine and bay habitats, but otherwise relatively stable over the time series. Annual IOAs for legal-size fish in Tampa Bay have varied without trend with peaks in abundance occurring in 2000, 2005, 2008, and 2013. The IOAs for YOY Red Drum in Charlotte Harbor riverine habitats have been relatively low, but relatively stable since 1996 with peaks of abundances in 2002, 2003, 2010, and 2013-2015. In Charlotte Harbor bay habitats, annual IOAs for YOY Red Drum have been relatively stable since 1996 with strong year classes evident in 2013 and 2014. In Charlotte Harbor, abundance of legal-size fish has varied since 1996 with the highest abundances occurring in 1998, 2003, 2007, and 2013. The similarity in the patterns of YOY abundance observed over the past 20 years in Florida’s Gulf of Mexico estuarine systems suggests that YOY Red Drum recruitment along Florida’s west coast may be influenced by factors which operate over regional scales.


Length-frequency data for Red Drum that were collected with 183-m haul seines provides valuable information on larger juveniles and adults (Figures SP15-04, SP15-05).
In most estuaries, the were multiple age classes observed in the length-frequency distributions with one cohort between ~100-200 mm SL (large YOY), a second cohort from ~300-400 mm SL (age-1), and a third from ~450-600 mm SL (age-2-3). In Tampa Bay, Charlotte Harbor (Figure SP15-04), and the northern IRL (Figure SP15-05), the length-frequency distributions showed abundances of individuals within the legal slot-limit were roughly equivalent to the abundance of individuals approaching the minimum slot-limit length. In contrast, in Apalachicola Bay, Cedar Key (Figure SP15-04), northeast Florida, and the southern IRL (Figure SP15-05), the abundances of Red Drum within the legal slot-limit dropped off sharply from the abundances of individuals approaching the legal harvestable size range. This disparity could have been a result of differential behavior of the fish (i.e., these fish leave the estuary system at smaller sizes in Apalachicola Bay, Cedar Key, northeast Florida, and southern IRL), as a result of angler behavior (i.e., more catch-and-release activities in Tampa Bay, Charlotte Harbor and the northern IRL), or recent changes in bag limits in the northeast and northwest. Legal-size Red Drum were likely age-1 and age-2 individuals, and the length-frequency distributions dropped off sharply in all estuaries examined after the upper slot limit. This may have been due to the fact that older Red Drum (age-4 and older), once sexually mature, typically leave the estuaries and move to coastal areas to join schools of other reproductively mature individuals and become unavailable to routine FIM sampling gears.
References


Figure SP15-01. Relative abundance of young-of-the-year Red Drum (≤ 40 mm SL) collected in 21.3-m seines and of legal-size Red Drum (374-565 mm SL) collected in 183-m haul seines between 1996 and 2015 during stratified-random sampling from Apalachicola Bay and Cedar Key. In Cedar Key, where sufficient numbers of individuals were captured, separate plots for river and bay sets were created to examine differences in YOY recruitment between the two habitats. Points represent the median estimate while the vertical bars represent the 25th – 75th percentiles. Note different scales of abundance among plots for different gears and estuaries.
Figure SP15-02. Relative abundance of young-of-the-year Red Drum (≤ 40 mm SL) collected in 21.3-m seines and of legal-size Red Drum (374–565 mm SL) collected in 183-m haul seines between 1996 and 2015 during stratified-random sampling from Tampa Bay and Charlotte Harbor. Separate plots for river and bay sets were created to examine differences in YOY recruitment between the two habitats. Points represent the median estimate while the vertical bars represent the 25th – 75th percentiles. Note different scales of abundance among plots for different gears and estuaries.
Relative abundance of young-of-the-year Red Drum (≤ 40 mm SL) collected in 21.3-m seines and of legal-size Red Drum (374-565 mm SL) collected in 183-m haul seines between 1996 and 2015 during stratified-random sampling from Northeast Florida and Indian River Lagoon. In the northern Indian River Lagoon, where sufficient numbers of individuals were captured, separate plots for river and bay sets were created to examine differences in YOY recruitment between the two habitats. Points represent the median estimate while the vertical bars represent the 25th – 75th percentiles. Note different scales of abundance among plots for different gears and estuaries.
Figure SP15-04. Length frequency diagrams of Red Drum collected in 183-m haul seines from four Florida Gulf coast estuarine systems. Area between dashed lines (- - -) indicates permitted recreational harvest size range (374-565 mm SL). All lengths are standard length (SL). Note different scales and years of collection among plots.
Figure SP15-05. Length frequency diagrams of Red Drum collected in 183-m haul seines from three Florida Atlantic coast estuarine systems. Area between dashed lines (- - -) indicates permitted recreational harvest size range (374-565 mm SL). All lengths are standard length (SL). Note different scales and years of collection among plots.
Intentionally Left Blank
Spotted Seatrout, *Cynoscion nebulosus*

Spotted Seatrout, *Cynoscion nebulosus*, occur in temperate to tropical estuarine and coastal waters on the Atlantic and Gulf of Mexico (Gulf) coasts of the United States (Bortone 2003). In Florida, Spotted Seatrout have historically supported economically-important recreational and commercial fisheries. Overall, annual commercial landings of Spotted Seatrout in Florida declined quite slowly during the period from 1950 through the 1970s. During the 1980s, the decline accelerated, especially in the Southwest region (Murphy et al. 2011). Statewide commercial landings never exceeded much more than 500,000 fish during the early 1990s and dropped drastically to fewer than 50,000 fish after implementation of the constitutional amendment banning the use of entangling gear in 1995 and the establishment of a 3-month open season in 1996 (Murphy et al. 2011). Declines in the number of commercial trips from the mid-1980s to more recent years were over 90% on the Atlantic coast and nearly 99% on the Gulf coast (Murphy et al. 2011). Commercial effort levels continue to be significantly less than the recreational sector (Murphy et al. 2011). Since the mid-1990s various commercial and recreational fishing regulations have been adopted in an effort to support the rebuilding of Spotted Seatrout stocks (Murphy et al. 1999). With these regulatory changes, the Spotted Seatrout fishery has moved from a mixed–sector fishery, with about 20% of the landings made by commercial fishers, to an almost exclusive recreational fishery (Chagaris et al. 2008). Total estimated landings for this species in Florida during 2009 were 1,589,030 fish, with 98% of this total from the recreational fishery (Murphy et al. 2011).

Adult Spotted Seatrout begin to spawn in March or April in southwest and west-central Florida estuaries (i.e., Tampa Bay and Charlotte Harbor; McMichael and Peters 1989) and in April or May in the more northerly Florida estuaries (i.e., northern Indian River Lagoon (IRL): Tabb 1961, Crabtree and Adams 1998; Cedar Key: Moody 1950; and Apalachicola Bay: Devries et al. 2002). Spotted Seatrout are generally reproductively mature at age 2 (males > 200 mm standard length [SL]; females > 235 mm SL; Murphy et al. 2006). Protracted spawning of Spotted Seatrout continues throughout the summer and into late September or October, depending upon location (Murphy et al. 1999). Spawning generally occurs during the evening hours in deep channels and depressions.
near grass flats in estuarine areas with water temperatures >21°C (Tabb 1966; Helser et al. 1993). Estuarine water temperatures below 20°C may reduce hatching success for Spotted Seatrout (Gray et al. 1991).

In an effort to monitor year-class strength and to improve the ability to predict future adult Spotted Seatrout abundances, relative indices of abundance (IOAs) were developed for young-of-the-year (YØY) Spotted Seatrout recruitment into selected Florida estuaries. Abundance data for YØY Spotted Seatrout (≤ 100 mm SL) collected from stratified-random 21.3-m seine samples were examined to assess recruitment in six Florida estuaries: (in order of inception) Tampa Bay, Charlotte Harbor, northern IRL, Cedar Key, Apalachicola Bay, and northeast Florida. Young-of-the-year Spotted Seatrout recruited to habitats sampled with 21.3-m seines primarily from April through October in Tampa Bay and Charlotte Harbor, and from May through November in the northern IRL, northeast Florida, and Cedar Key. In Apalachicola Bay, recruitment of YØY Spotted Seatrout was evident from June through October. These recruitment periods coincide with published recruitment and spawning periods of Spotted Seatrout throughout Florida (Moody 1950; Nelson and Leffler 2001; Devries et al. 2002; Walters et al. 2007). Therefore, these bay-specific months were used to define the respective recruitment seasons for each estuary in subsequent analyses. Indices of abundance for YØY Spotted Seatrout were not calculated for the southern IRL where 21.3-m seines were not included as a sampling gear. Data from stratified-random 183-m haul seines collected within these same Florida estuarine systems (including the southern IRL) were used to develop IOAs for adult Spotted Seatrout (≥200 mm SL). These IOAs were derived by including all Spotted Seatrout ≥200 mm SL collected between January and December from 1996 to 2015.

Indices of abundance for YØY Spotted Seatrout on Florida’s northwest coast have been variable with no obvious trend since 1996 (Figure SP15-06). The IOAs of YØY Spotted Seatrout in Apalachicola Bay varied without trend with relatively stronger year classes in 1998, 2001, 2005, 2010-2011 and 2014 (Figure SP15-06). In Cedar Key, strong year classes were evident in riverine habitats during 1996-1998 and 2002 and have otherwise remained relatively stable at lower abundances. In Cedar Key bay habitats, strong year classes were evident from 1999-2000 and have remained low, but stable through 2015. The IOAs for adult Spotted Seatrout in Apalachicola Bay indicated
a general increase in abundance from 2004-2010, followed by a general decrease during through 2015. In Cedar Key, a strong year class was observed in adult Spotted Seatrout in 1998 and subsequent abundances were stable, but low through 2015 (Figure SP15-06).

Trends in relative abundance of juvenile Spotted Seatrout in Tampa Bay have remained relatively stable since the mid-1990s, but do exhibit an overall downward trend (Figure SP15-07). With the exception of strong year classes evident in 1996 and 1997, recruitment of YOY Spotted Seatrout in riverine habitats has been stable, but low. In bay habitats, peaks in abundance were observed in 1996 and 2004; a noticeably lower, but stable trend has continued since 2005. Abundance of YOY Spotted Seatrout in Charlotte Harbor riverine habitats has remained stable since 1996, with one strong year class in 1998. In Charlotte Harbor bay habitats, after strong year classes in 1996 and 1997, abundance has remained stable, but low through 2015. Patterns of relative abundance for adult Spotted Seatrout in Tampa Bay and Charlotte Harbor have been relatively stable since 1996 (Figure SP15-07). Peaks in abundance occurred in 2003, 2008, and 2010-2011 in Tampa Bay, and in 2002 and 2004 in Charlotte Harbor. Overall, adult catches in these systems were relatively low and as such, the magnitude of changes in abundance was small.

Trends in YOY Spotted Seatrout abundance on Florida’s Atlantic coast have been relatively stable with small periodic fluctuations in recruitment (Figure SP15-08). In northeast Florida, IOAs for YOY Spotted Seatrout varied without trend. Indices of abundance for adult Spotted Seatrout in northeast Florida have been relatively stable since 2001, with the exception of noticeable decreases in 2004 and 2013 but has since increased through 2015. In the northern Indian River Lagoon, abundance indices for YOY Spotted Seatrout have remained relatively stable with peaks in abundance in 1996, 2005, and 2015. Adult Spotted Seatrout indices in the northern Indian River Lagoon have generally fluctuated without trend with the exception of one increase in abundance seen in 2011. In the southern Indian River Lagoon, relative abundance of adult Spotted Seatrout has remained extremely low, but stable since 1997; however, due to the comparatively small sample size in this area, results should be interpreted with caution.

The 183-m haul seines provides valuable length-frequency data on sub-adult and
adult Spotted Seatrout over 100 mm SL and up to 600 mm SL (Figures SP15-09 and SP15-10). Two or three distinct peaks in size frequency were evident from the 183-m haul seine data collected within the Gulf coast estuaries. The peak at smaller sizes primarily consisted of fish ~100-200 mm SL, while the peak(s) at larger sizes consisted of adults >200 mm SL. The size distributions of Spotted Seatrout collected with 183-m haul seines in the Atlantic coast estuaries indicated two distinct peaks in northeast Florida. In all sampling areas, abundance dropped off sharply as the permitted recreational harvest size (325 mm SL) was reached.
References


Figure SP15-06. Relative abundance of young-of-the-year Spotted Seatrout (≤ 100 mm SL) collected in 21.3-m seines and of reproductively mature Spotted Seatrout (> 200 mm SL) collected in 183-m haul seines between 1996 and 2015 during stratified-random sampling of Apalachicola Bay and Cedar Key. Points represent the median estimate while the vertical bars represent the 25th – 75th percentiles. Note different scales of abundance among plots for different gears and estuaries.
Figure SP15-07. Relative abundance of young-of-the-year Spotted Seatrout (≤ 100 mm SL) collected in 21.3-m seines and of reproductively mature Spotted Seatrout (> 200 mm SL) collected in 183-m haul seines between 1996 and 2015 during stratified-random sampling from Tampa Bay and Charlotte Harbor. Points represent the median estimate while the vertical bars represent the 25th – 75th percentiles. Note different scales for estimates from 21.3-m and 183-m seines.
Figure SP15-08. Relative abundance of young-of-the-year Spotted Seatrout (≤ 100 mm SL) collected in 21.3-m seines and of reproductively mature Spotted Seatrout (≥ 200 mm SL) collected in 183-m haul seines between 1996 and 2015 during stratified-random sampling from Northeast Florida and the Indian River Lagoon. Points represent the median estimate while the vertical bars represent the 25th – 75th percentiles. Note different scales for estimates from 21.3-m and 183-m seines.
Length frequency diagrams of Spotted Seatrout collected in 183-m haul seine from four Florida Gulf coast estuarine systems. Area between dashed lines (---) indicates permitted recreational harvest size range (325 to 434 mm SL). Current Florida regulations allow anglers to keep one fish greater than the maximum slot limit size. All lengths are standard length (SL). Note different scales and years of collection among plots.
Figure SP15-10. Length frequency diagrams of Spotted Seatrout collected in 183-m haul seines from three Florida estuarine systems. Area between dashed lines (---) indicates permitted recreational harvest size range (325 to 434 mm SL). Current Florida regulations allow anglers to keep one fish greater than the maximum slot limit size. All lengths are standard length (SL). Note different scales and years of collection among plots.
The sheepshead, *Archosargus probatocephalus*, occurs from Nova Scotia (Gilhen et al. 1976) to Brazil (Caldwell 1965) and is common in coastal waters from the Chesapeake Bay to Texas in the United States (Bigelow and Schroeder 1953). The combined recreational and commercial landings of sheepshead from Florida’s Gulf coast between 1990 and 2009 made up 19 to 44% of the total annual sheepshead landings for all U.S. Gulf states (NOAA 2014). Historically, more sheepshead have been landed by recreational fishers than by commercial fishers (70–95% of the combined annual landings during 1990–2009) along Florida’s Gulf coast (Munyandorero et al. 2011). Sheepshead in Florida waters are currently regulated by minimum size (305-mm total length [242 mm SL]) and a bag limit (15 fish/day). The most recent stock assessment for Sheepshead used Fisheries-Independent Monitoring (FIM) program data to derive annual indices of abundance (IOAs) during different life history stages to guide coast-specific catch-at-age models (Munyandorero et al. 2011). This stock assessment determined that Sheepshead stocks on the Gulf and Atlantic coasts appeared abundant enough to supply adequate numbers of new recruits while maintaining current harvest rates.

Adult Sheepshead reproduce between February and April in Florida waters and the newly recruited young-of-the-year (YOY) are most abundant in shallow estuarine areas between April and June. Young-of-the-year Sheepshead grow approximately 0.32 mm per day (FWC-FMRI 2001) and typically reach 40 mm standard length (SL) at two months and 130 mm SL at one year of age. Sheepshead in Florida waters enter the fishery at 242 mm SL, which typically corresponds to an age of 3 to 6 years (Dutka-Gianelli and Murie 2001).

To monitor year-class strength and improve the ability to predict future adult Sheepshead abundance, the FIM program developed annual IOAs for two life history stages: YOY and fully-recruited. Abundance data for YOY (<40 mm SL) collected in stratified-random 21.3-m seines were examined to assess recruitment in three Florida estuaries: (in order of FIM program inception) Tampa Bay, Charlotte Harbor, and the northern Indian River Lagoon (IRL). This life history stage was not examined for Apalachicola Bay, Cedar Key, or northeast Florida due to small sample sizes. Indices of abundance of YOY Sheepshead were not calculated for southern IRL where 21.3-m
seines were not included as a sampling gear. Young-of-the-year Sheepshead recruited to habitats sampled with 21.3-m seines primarily from April through June. These months were used to define the respective recruitment seasons for each estuary in subsequent analyses. Abundance indices were also calculated for Sheepshead fully recruited to the fishery (≥ 242 mm SL) for seven Florida estuarine areas: Tampa Bay, Charlotte Harbor, northern Indian River Lagoon, southern Indian River Lagoon, Cedar Key, Apalachicola Bay, and northeast Florida. Data from stratified-random 183-m haul seines were used to develop IOAs for fully-recruited Sheepshead from January through December of each year.

In the northwest Florida estuaries of Apalachicola Bay and Cedar Key, annual IOAs were calculated only for fully-recruited Sheepshead (Figure SP15-11). Annual IOAs for fully-recruited Sheepshead in Apalachicola Bay gradually increased from 1998-2002, exhibited a dropped in 2003, and have remained relatively consistent since 2004. Abundance of fully-recruited Sheepshead in Cedar Key exhibited a slight decreasing trend from 1997 through 2010. Abundance of fully-recruited Sheepshead have exhibited gradual increases since.

Annual trends in YOY Sheepshead IOAs were variable between the two southwest Florida estuaries, Tampa Bay and Charlotte Harbor. Young-of-the-year IOAs for both estuaries have been relatively stable since 1996 with infrequent strong year classes evident (Figure SP15-12). In Tampa Bay, stronger year classes occurred in 1997, 2000, and 2008 in the bay habitats, with slight abundance peaks in 2000, 2008, and 2012 in the river habitats. In Charlotte Harbor, YOY Sheepshead IOAs were relatively stable from 1996-2015, with a strong year class in 2008, similar to what was observed in Tampa Bay. Annual IOAs of fully-recruited Sheepshead in Tampa Bay have remained relatively stable through 2015. Abundance of fully-recruited Sheepshead in Charlotte Harbor varied only slightly from 1996-2015, with slight peaks in 1998, 2002, and 2008. The abundance of fully-recruited Sheepshead in Charlotte Harbor increased dramatically in 2013 but returned to pre-2013 levels in recent years.

Abundance estimates for fully recruited Sheepshead in northeast Florida increased from 2001-2004, followed by a slight decrease through 2006 and have remained stable since (Figure SP15-13). Young-of-the-year IOAs for northern IRL riverine habitats were variable with strong year classes evident in 2001, 2004, 2005, and 2009.
Abundances below one individual per set were observed in 2002, 2003, 2008, 2011, 2014, and 2015 (Figure SP15-13). Young-of-the-year IOAs in northern IRL bay habitats were stable at relatively low abundances from 1998-2003 and then varied with slight peaks in abundance occurring in 2004, 2007, 2009, and 2013. Annual IOAs of fully-recruited Sheepshead in the southern IRL have been relatively stable between 1997 and 2015, with slight peaks in 1998, 2004-2005, and 2007. Northern IRL IOAs of fully-recruited Sheepshead were lower than the southern IRL. Abundance estimates were relatively stable for both the northern and southern IRL between 1997 and 2015.

Length-frequency data collected with 183-m haul seines provides valuable information on multiple life stages of Sheepshead (Figures SP15-14, -15). Length frequency data generally indicated multiple cohorts captured with the 183-m seines. The smallest cohort captured with this gear include late YOY Sheepshead ranging from 60-100 mm. The presence of these juvenile sheepshead in the catch was more prevalent in the southerly estuaries (Tampa Bay, Charlotte Harbor, and the Indian River Lagoon). Pre-fishery sized Sheepshead (100-200 mm SL) were most prevalent in Tampa Bay, Charlotte Harbor, and the northern Indian River Lagoon. This ‘fully-recruited’ mode (cohort) was generally shifted to the right in the northern Florida estuaries (~325 mm SL; Apalachicola Bay, Cedar Key, northeast Florida, and northern IRL) and was slightly smaller in the southern Florida estuaries (~ 250 mm SL, Tampa Bay, Charlotte Harbor, and southern IRL). Modal peaks in length frequencies did not appear to be truncated above the legal minimum size.
References


Figure SP15-11. Relative abundance of fully-recruited Sheepshead (≥ 242 mm SL) collected in 183-m haul seines between 1997 and 2015 during stratified-random sampling in the Apalachicola and Cedar Key estuarine systems. Points represent the median estimate while the vertical bars represent the 25th – 75th percentiles. Note different scales of abundance among plots for different estuaries.
Figure SP15-12. Relative abundance of young-of-the-year Sheepshead (≤ 40 mm SL) collected in 21.3-m seines between 1996 and 2015 and fully-recruited Sheepshead (> 242mm SL) collected in 183-m haul seines between 1996 and 2015 during stratified-random sampling from Tampa Bay and Charlotte Harbor estuarine systems. Points represent the median estimate while the vertical bars represent the 25th – 75th percentiles. Note different scales of abundance among plots for different gears and estuaries.
Figure SP15-13. Relative abundance of young-of-the-year Sheepshead (≤ 40 mm SL) collected in 21.3-m seines between 1998 and 2015 and fully-recruited Sheepshead (≥ 242 mm SL) collected in 183-m haul seines between 1997 and 2015 during stratified-random sampling from Northeast Florida, Northern and Southern Indian River Lagoon estuarine systems. Points represent the median estimate while the vertical bars represent the 25th – 75th percentiles. Note different scales of abundance among plots for different gears and estuaries.
Figure SP15-14. Length frequency diagrams of Sheepshead collected in 183-m haul seines from Gulf coast Florida estuarine systems. Area after dashed line (---) indicates permitted recreational minimum harvest length (242 mm SL). All lengths are standard length (SL). Note different scales and years of collection among plots.
Figure SP15-15. Length frequency diagrams of Sheepshead collected in 183-m haul seines from Atlantic coast Florida estuarine systems. Area after dashed line (---) indicates permitted recreational minimum harvest length (242 mm SL). All lengths are standard length (SL). Note different scales and years of collection among plots.
Intentionally Left Blank
Striped Mullet, *Mugil cephalus*

Striped Mullet, *Mugil cephalus*, are one of Florida’s most abundant and widespread estuarine-dependent fishes (Odum 1970; Leard et al. 1995). Striped Mullet supported a valuable commercial fishery from the early 1960s through the late 1980s, with approximately 90% of all U.S. landings occurring in the Gulf of Mexico (Gulf) and over 80% of all commercial landings occurring in Florida waters (Rivas 1980; Leard et al. 1995). Changes were documented from 1991 to 1994 when commercial Striped Mullet landings in Florida severely declined from 79% to 46% of the total Gulf production (Leard et al. 1995). Following the implementation of the Florida net limitation referendum (July 1, 1995), which eliminated the use of entangling nets within three miles of the Atlantic coast and nine miles of the Gulf coast, Striped Mullet commercial landings were further reduced to about 5.1 million pounds (Mahmoudi 1997). After an initial decline in fishing effort and landings following the net limitation ban, fishing effort and landings have gradually increased to about 8.1 million pounds annually (Mahmoudi 2000; Mahmoudi 2005). Despite these increases, overall fishing mortality rates have declined substantially since the net limitation ban, resulting in a significant increase in overall stock size and spawning stock biomass in recent years. Stocks throughout the state of Florida are healthy, and current levels of fishing effort appear to be sustainable (Mahmoudi 2005). Currently, cast nets are used in the recreational and commercial fisheries.

Striped Mullet form large schools in estuarine and nearshore waters from October to December, prior to their migration offshore. These schools migrate to offshore spawning areas over the outer continental shelf and slope during the passage of weather fronts from October through February. Typically, young-of-the-year (YOY) Striped Mullet recruit to Florida’s estuaries at 20 to 35 mm standard length (Kilby 1949; Futch 1966). Recruitment usually begins in January and continues through April, with peaks in abundance during February and March; however, previous analyses of length-frequency data indicated that recruitment has occurred in Florida’s estuaries as early as the end of December.

In an effort to monitor year class strength and to improve the ability to predict future adult Striped Mullet abundances, relative indices of abundance (IOAs) were developed
for YOY Striped Mullet recruitment into selected Florida estuaries. Abundance data for YOY Striped Mullet ≤ 35 mm standard length (SL) that were collected in stratified-random 21.3-m seine samples were examined to assess recruitment into six Florida estuaries: (in order of sampling inception) Tampa Bay, Charlotte Harbor, northern Indian River Lagoon (IRL), Cedar Key, Apalachicola Bay, and northeast Florida. Young-of-the-year Striped Mullet recruited to habitats sampled with 21.3-m seines primarily from January to March. Therefore, these specific months were used to define the respective recruitment seasons for each estuary in subsequent analyses. Indices of abundance for YOY Striped Mullet were not calculated for the southern IRL where 21.3-m seines were not included as a sampling gear.

Indices of abundance for YOY Striped Mullet on Florida’s northwest coast were variable. In Apalachicola Bay, IOAs for YOY for Striped Mullet revealed strong year classes in 2001, 2006, and 2013 for riverine habitats and 2002 and 2006 for bay habitats (Figure SP15-16). In Cedar Key, IOAs for YOY Striped Mullet indicated two strong year classes in 2011 and 2015 for riverine habitats and strong year classes in 1998, 2006, and 2008 for bay habitats.

In Tampa Bay, IOAs for YOY Striped Mullet have varied without trend in both riverine and bay habitats. Increases in abundance were evident in 2001 and 2010 for riverine habitats and in 2010 for bay habitats (Figure SP15-17). In Charlotte Harbor, IOAs for YOY Striped Mullet have also varied without trend in riverine and bay habitats. In riverine habitats, increased abundance was evident in 2001, 2006, and 2010. In bay habitats, one distinct peak in IOAs for YOY for Striped Mullet were observed in 2009-2010.

Annual IOAs of YOY Striped Mullet in northeast Florida show highly variable catch rates with peaks in abundance in 2006, 2008, and 2010-2011 (Figure SP15-18). Lower abundances were seen in 2009 and from 2012-2014. Annual IOAs of YOY Striped Mullet in the northern IRL riverine habitats revealed strong year classes in 2001 and 2010. Northern IRL bay habitats followed a similar pattern as observed in riverine habitats – generally low abundances with the exceptions of the outstanding year classes evident in 2001 and 2010. An additional strong year class was evident in bay habitats during 2015.
References


Figure SP15-16. Relative abundance of young-of-the-year Striped Mullet ($\leq 35$ mm SL) collected in 21.3-m seines between 1997 and 2015 during stratified-random sampling from Apalachicola Bay and Cedar Key. Separate plots for river and bay sets were created to examine differences in recruitment between the two habitats. Points represent the median estimate while the vertical bars represent the 25th – 75th percentiles. Note different scales of abundance among plots for different gear deployment techniques and estuaries.
Relative abundance of young-of-the-year Striped Mullet ($\leq 35$ mm SL) collected in 21.3-m seines between 1996 and 2015 during stratified-random sampling from Tampa Bay and Charlotte Harbor. Separate plots for river and bay sets were created to examine differences in recruitment between the two habitats. Points represent the median estimate while the vertical bars represent the $25^{th} - 75^{th}$ percentiles. Note different scales of abundance among plots for different gear deployment techniques and estuaries.
Figure SP15-18. Relative abundance of young-of-the-year Striped Mullet (≤ 35 mm SL) collected in 21.3-m seines between 1996 and 2015 during stratified-random sampling from Northeast Florida and the northern Indian River Lagoon. Separate plots for river and bay sets were created to examine differences in recruitment between the two habitats. Points represent the median estimate while the vertical bars represent the 25th – 75th percentiles. Note different scales of abundance among plots for different gear deployment techniques and estuaries.
**Pinfish, Lagodon rhomboides**

Pinfish, *Lagodon rhomboides*, is an ecologically and recreationally important sparid found in marine and estuarine waters from Massachusetts to Texas (Bigelow and Schroeder 1953; Caldwell 1957). It is one of the most abundant resident species in estuaries of the northeastern Gulf of Mexico (Hoese and Jones 1963; Hansen 1970; Ogren and Brusher 1977). Densities of Pinfish have been found to be positively correlated to seagrass and drift algae cover (Rydene and Matheson 2003). Studies have shown that predation by Pinfish plays a role in the organization of seagrass macro benthic faunal assemblages (Young et al. 1976; Young and Young 1977). The Pinfish is also a major link between primary and secondary production as individuals >60 mm standard length (SL) consume and digest seagrasses and encrusting epiphytes (Stoner 1980; Weinstein et al. 1982; Montgomery and Targett 1992). Pinfish of all sizes are commonly targeted by anglers for use as bait when fishing for recreationally important species such as Sailfish (*Istiophorus platypterus*), Red Drum (*Sciaenops ocellatus*), Spotted Seatrout (*Cynoscion nebulosus*), Southern Flounder (*Paralichthys lethostigma*), Common Snook (*Centropomus undecimalis*), and Gag (*Mycteroperca microlepis*).

To monitor year-class strength and improve the ability to predict future Pinfish abundances, relative indices of abundance (IOAs) were developed for young-of-the-year (YOY) Pinfish recruitment into selected Florida estuaries. Abundance data for YOY Pinfish ≤ 80 mm SL that were collected in stratified-random 21.3-m seine samples were examined to assess recruitment into six Florida estuaries: (in order of sampling inception) Tampa Bay, Charlotte Harbor, northern Indian River Lagoon (IRL), Cedar Key, Apalachicola Bay, and northeast Florida. Young-of-the-year Pinfish recruited to habitats sampled with 21.3-m seines primarily from January through June and IOAs were calculated using catch data from these months only. This time period coincides with the published recruitment period for this species (Nelson 1998). The maximum size that individuals of YOY cohorts attain by June is 80 mm SL (Nelson 1998). Indices of abundance for YOY Pinfish were not calculated for the southern IRL where 21.3-m seines were not included as a sampling gear. The FIM program also monitored the abundance
of larger Pinfish within these same Florida estuarine systems (including the southern IRL). Data from stratified-random 183-m haul seines were used to develop IOAs for sub-adult and adult fish (≥100 mm SL) collected between January and December. Indices of abundance were calculated using estuary-specific data which varied by time period sampled, the earliest beginning in 1996.

Annual IOAs of Pinfish on the northwest coast of Florida (Apalachicola Bay and Cedar Key) were variable over time (Figure SP15-19). Annual IOAs of YOY Pinfish in bay habitats in Apalachicola Bay were low between 1998 and 1999 and have remained at higher but variable levels since. Relatively stronger year classes were evident in 2001 and more recently in 2014. In Cedar Key, annual IOAs in bay habitats were low in 1998 and 1999 followed by an increase in 2000. Subsequent to 2000, strong year classes were evident during a period of highly variable recruitment through 2007 followed by a general downward trend through 2013. Both 2014 and 2015 saw years of increased abundance. Young-of-year Pinfish in riverine habitats were lower in 1997-1999, higher in 2000-2002, then experienced a period of highly variable recruitment similar to bay habitats through 2011. Abundances YOY pinfish decreased in 2012 and have remained below 10 individuals per set. The trend of annual IOAs of sub-adult and adult Pinfish in Apalachicola Bay have remained below 15 individuals per set with notable exceptions that occurred in 2003, 2007, and 2010, when abundances exceeded 19 individuals per set. In Cedar Key, annual IOAs for sub-adult and adult Pinfish were variable, indicating an overall declining trend for the entire time series (1997-2015), however large abundances were observed in 2002 and 2004.

Annual IOAs of YOY Pinfish in Tampa Bay and Charlotte Harbor generally had similar trends, although relative abundance was higher in Charlotte Harbor (Figure SP15-20). In Tampa Bay, IOAs of YOY Pinfish in riverine and bay habitats indicated similar patterns of recruitment. In each habitat strong year classes occurred in 2001 and 2010 and poor year classes occurred in 2005, 2006, and 2012. In Charlotte Harbor, a pattern similar to what was observed in Tampa Bay was evident with stronger year classes in 2001, 2004, 2010, and 2011, and poor year classes during 2005, 2006, and 2012. In general, sub-adult and adult Pinfish in Tampa Bay were on an increasing trajectory through 2012. Beginning in 2013, abundance levels declined to levels seen prior to 2008.
A similar pattern was observed in sub-adult and adult Pinfish in Charlotte Harbor, although there was more year to year variability in the IOAs with higher abundances for 2008-2015.

Annual IOAs on the east coast of Florida differed by estuary (Figure SP15-21). Annual IOAs of YOY Pinfish in northeast Florida varied without trend from 2001-2009 followed by strong year classes in 2010-2011 and returned to previous levels for the remainder of the time series. Annual IOAs of sub-adult and adult Pinfish in northeast Florida have tracked well with YOY abundances since 2004, except for the most recent years IOA. In the northern IRL, annual IOAs of YOY Pinfish have remained stable at relatively low levels with the exception of strong year classes in 1998, 2004, and 2010. Annual IOAs of sub-adult and adult Pinfish in the northern IRL varied without trend throughout most of the time period with the exception of high abundance in 2002-2004 and 2010-2011. Annual IOAs of sub-adult and adult Pinfish in the southern IRL have remained stable at relatively low levels.

Length-frequency data collected across all years sampled with 183-m haul seines indicate that this gear provides valuable information on sub-adult and adult Pinfish (Figure SP15-22). Length-frequency distributions were generally unimodal in Tampa Bay, Charlotte Harbor, Cedar Key, northeast Florida, and the northern IRL and southern IRL distributions, while in Apalachicola Bay the distribution was bimodal. Sub-adult and adult Pinfish began to become susceptible to capture in 183-m haul seines at ~50 mm SL. The peak size in most of the length frequency histograms was ~75-80 mm SL, except in northern IRL where the largest proportion of fish captured were ~120-125 mm SL.
References


Figure SP15-19. Relative abundance of young-of-the-year Pinfish (≤ 80 mm SL) collected in 21.3-m seines and of reproductively mature Pinfish (≥ 100 mm SL) collected in 183-m haul seines between 1996 and 2015 during stratified-random sampling of Apalachicola Bay and Cedar Key. Points represent the median estimate while the vertical bars represent the 25th – 75th percentiles. Note different scales of abundance among plots for different gears and estuaries.
Tampa Bay

Charlotte Harbor

Figure SP15-20. Relative abundance of young-of-the-year Pinfish ($\leq 80$ mm SL) collected in 21.3-m seines and of reproductively mature Pinfish ($\geq 100$ mm SL) collected in 183-m haul seines between 1996 and 2015 during stratified-random sampling from Tampa Bay and Charlotte Harbor. Points represent the median estimate while the vertical bars represent the 25th – 75th percentiles. Note different scales for estimates from 21.3-m and 183-m seines.
Relative abundance of young-of-the-year Pinfish ($\leq 80$ mm SL) collected in 21.3-m seines and of reproductively mature Pinfish ($\geq 100$ mm SL) collected in 183-m haul seines between 1996 and 2015 during stratified-random sampling from Northeast Florida and the Indian River Lagoon. Points represent the median estimate while the vertical bars represent the 25th – 75th percentiles. Note different scales for estimates from 21.3-m and 183-m seines.

Figure SP15-21.
Figure SP15-22. Length frequency diagrams of Pinfish collected in 183-m haul seines. All lengths are standard length (SL). Note different scales and years of collection.
Intentionally Left Blank
Common Snook, *Centropomus undecimalis*

Common Snook, *Centropomus undecimalis*, are found in estuaries, adjacent rivers, and in nearshore waters of the tropical and subtropical western Atlantic and Gulf of Mexico (Gilmore et al. 1983; Rivas 1986; Winner et al. 2010). This species supports an important recreational fishery in Florida and is one of the most popular gamefish in state waters. There has been no legal commercial harvest of Common Snook in Florida since the State Legislature declared it a gamefish in 1957 and prohibited its sale. Fishing effort targeting Common Snook has increased consistently over the past 30 years on both coasts, but more so on Florida’s Gulf coast (Muller 2015). While the overall harvest of Snook has declined since the mid-1990s, the numbers of Common Snook caught and released has remained consistently high over the past 25 years (Muller 2015). Recent estimates of transitional spawning potential ratios were near the 40% objective on the Atlantic coast and far exceeded this objective (~60%) on the Gulf coast, therefore both stocks are currently meeting agency management objectives. In response to cold-weather fish kills that occurred statewide during 2010, the FWC issued executive orders that prohibited the harvest of Common Snook through August 31, 2010, and subsequent executive orders extended the closure through August 31, 2011 (State of Florida Executive Order No. E0 10-45). At the June 2011 Florida Fish and Wildlife Conservation Commission Meeting, Commissioners concluded that the Atlantic coast stock was less severely impacted by cold weather than the Gulf coast. Based on this information, the Commissioners ruled to reopen Common Snook harvest on September 1, 2011 in Atlantic waters, but Gulf coast waters remained closed through August 31, 2013.

In Florida, Common Snook populations from the Atlantic and Gulf coasts have been genetically identified as separate stocks and are managed separately (Taylor et al. 1993; Tringali and Bert 1996). Histological evidence shows that Common Snook are protandric hermaphrodites, i.e., they begin life as males and some become females after maturation (Taylor et al. 2000). Males typically become sexually mature at ~200 mm standard length (SL) and females at ~680 mm SL. The reproductive season for Common Snook extends at least six months; April through September on the Gulf coast and April through October on the Atlantic coast (Taylor et al. 1998).
In an effort to monitor year-class strength and to improve the ability to predict future adult Common Snook abundances, the FIM program developed relative indices of abundance (IOAs) of young-of-the-year (Y0Y) Common Snook recruitment into selected Florida estuaries. Indices were not calculated for estuaries where 21.3-m seines were not deployed or where limited data were available. Abundance data for Y0Y Common Snook \( \leq 50 \) mm SL collected in stratified-random 21.3-m seine samples were examined to assess recruitment into two Florida estuaries: Tampa Bay on the Gulf coast and the northern Indian River Lagoon (IRL) on the Atlantic coast. Although collected in limited numbers throughout the year, Y0Y Common Snook were primarily captured in riverine habitats sampled with 21.3-m seines from August through November in Tampa Bay and July through February in the northern IRL. Only data from this habitat and these primary time periods were used in developing IOAs for Y0Y Common Snook.

The FIM program also monitored the relative abundances of large juvenile and adult Common Snook in Florida estuaries within the range of this species. Individuals between 200 mm and 609 mm SL were included in the IOA since they are considered reproductively mature males and serve as a “pre-recruitment” indicator to the fishery. The upper limit of 609 mm SL used in this IOA corresponds to the lower regulatory minimum size of 711 mm total length (TL). Data from stratified-random 183-m haul seines were used to develop IOAs for reproductively mature Common Snook within Tampa Bay, Charlotte Harbor, northern IRL, and southern IRL. These IOAs were derived by including all Common Snook between 200-609 mm SL collected between January and December from 1996–2015.

Annual IOAs of Y0Y Common Snook in Tampa Bay have been fairly stable, albeit low, between 1996 and 2015 with strong year classes evident in 1999, 2012, and 2013 (Figure SP15-01). After two back-to-back years of peak juvenile recruitment (2012 and 2013) in Tampa Bay, IOAs of Y0Y Common Snook declined significantly to a level more consistent with previous years. Annual IOAs of pre-fishery adult Common Snook (200-609 mm SL) on Florida’s west coast varied within each estuary. In Tampa Bay, Common Snook relative abundance exhibited a steady increase through 2008. A decline in abundance was evident in 2009 with abundance remaining low through 2012 before increasing through 2015. Annual IOAs of pre-fishery adult Common Snook in Charlotte
Harbor remained stable from 1996 through 2009, with slight peaks in 2001 and 2005. After a decline in the IOAs of pre-fishery adult Common Snook in 2010, abundances increased from 2011 through 2015 (Figure SP15-01).

Annual IOAs of YOY Common Snook in northern IRL have fluctuated substantially since 2001 (Figure SP15-23). A sharp decline in abundance was observed in 2004, substantially lower than any years prior or since. This year of extremely low recruitment may have resulted from displacement due to multiple hurricanes and not an actual decrease in abundance in this estuarine system. Young-of-the-year recruitment increased after 2004 with a strong recruitment peak the following year, followed by three years of average abundance. In 2009 and 2010 there was another decline followed by increasing abundance through 2013. In the northern IRL, YOY recruitment decreased markedly in 2014 to a level more similar to average levels observed prior to 2011, however, 2015 showed a marked increase in YOY levels. Annual IOAs of pre-fishery adult Common Snook (200-609 mm SL) remained stable from 1997 through 2008 in the northern IRL with small peaks in 1998, 2004, and 2008. Abundance in the northern IRL declined sharply from 2009 through 2011 and has increased only slightly through 2015. Annual IOAs of pre-fishery adult Common Snook in the southern IRL were high from 1997-1999, began to decline in 2000, and remained fairly stable from 2002 through 2009; however, as was observed in the other estuaries analyzed, abundance decreased substantially in 2010 (e.g., cold kill event), remained low through 2011, and increased slightly through 2015 (Figure SP15-23).

Length-frequency data collected with 183-m haul seines indicate that this gear provides valuable information on larger juvenile and adult Common Snook (Figure SP15-24). Length-frequency distributions were unimodal with a peak in distribution at 380-500 mm SL. There was no indication that the number of individuals declined rapidly upon entering the legal slot-limit (609-699 mm SL on the Gulf coast and 609-677 mm SL on the Atlantic coast).
References


Figure SP15-23. Relative abundance of young-of-the-year Common Snook (≤ 50 mm SL) collected in 21.3-m seines and pre-fishery adult Common Snook (200 - 609 mm SL) collected in 183-m haul seines between 1996 and 2015 during stratified-random sampling from three Florida estuarine systems. Points represent the median estimate while the vertical bars represent the 25th – 75th percentiles. Note different scales of abundance among plots for different gears and estuaries.
Figure SP15-24. Length frequency diagrams of sub-adult and adult Common Snook collected in 183-m haul seines. All lengths are standard length (SL). Vertical dashed lines denote the recreational slot limit for this species (609 to 699 mm SL on the Gulf coast and 609 to 677 mm SL on the Atlantic coast). Note different scales and years of collection.
Blue Crab, *Callinectes sapidus*

Blue Crab, *Callinectes sapidus*, support valuable commercial and recreational fisheries along the Gulf of Mexico (Gulf) and Atlantic coasts of Florida. From 1996 to 2012, commercial landings on Florida’s Gulf and Atlantic coasts averaged 7.2 and 3.5 million pounds per year and were worth an estimated 6.3 and 3.9 million dollars, respectively (NMFS 2014). Florida legislation banned entanglement nets in 1995, raising the concern that Blue Crab populations might experience increased fishing pressure from former net fishers. Even though annual commercial landings in the Gulf peaked in 1998 at almost 13 million pounds, catch-per-unit effort was already beginning to decline (Steele and Bert 1998). Landings have decreased over the years, with the lowest commercial landings of Blue Crab occurring in 2008 for the Gulf coast and 2009 for the Atlantic coast (NMFS 2014). Commercial fishing effort for Blue Crab has been limited in recent years by restricted species permits although there are no quotas for Blue Crab landings. The annual recreational harvest of Blue Crab is not currently known or surveyed, so the total catch may be much higher than the recorded commercial landings. The most recent Blue Crab stock assessment for Florida shows an increase in abundance in recent years (2003-2005), indicating resiliency to fishing pressure (Murphy et al. 2007).

Blue Crabs are an integral part of estuarine ecosystems in Florida, by scavenging carrion or preying upon young-of-the-year (YOY) fishes, mollusks, and crustaceans. They play a valuable role in controlling populations of other estuarine species. In areas with depleted Blue Crab populations, mollusks that graze on *Spartina alterniflora* can become overpopulated and contribute to salt marsh die-offs (Sillman and Bertness 2002). Blue Crab are prey for important sportfish species such as Black Drum (Simmons and Breuer 1962), Red Drum (Gunter 1945; Scharf and Schlicht 2000), Common Snook (Blewett et al. 2006), and Cobia (Meyer and Franks 1996). In addition to predation and harvest by humans, Blue Crab populations are affected by a myriad of other factors such as freshwater inflows (Wilber 1994; Flaherty and Guenther 2011), pesticides, disease, and habitat alteration. Spawning in Florida generally occurs from March through October with some limited spawning reported during winter months (Steele and Bert 1994).
To monitor year-class strength and improve the ability to predict future adult Blue Crab abundances, relative indices of abundance (IOAs) were developed for YOY Blue Crab recruitment from selected Florida estuaries. Abundance data for YOY Blue Crab (≤ 80 mm carapace width [CW]; Archambault et al. 1990; Steele and Bert 1994) collected in stratified-random 21.3-m seine samples were examined to assess recruitment into six Florida estuaries: Apalachicola Bay, Cedar Key, Tampa Bay, Charlotte Harbor, Northeast Florida, and northern Indian River Lagoon (IRL). Young-of-the-year Blue Crabs were collected with 21.3-m seines during all months, but length-frequency histograms indicate they were primarily collected from August through March. These months were therefore used to define the respective recruitment seasons for each estuary in subsequent analyses. Data collected from August through December of each year were combined with data from January through March of the following year to create a biological year of data. The IOA for 2015 therefore only included data from August through December 2015. Separate analyses for river and bay sets were conducted when possible to examine differences in recruitment between the two habitats. Indices of abundance of YOY Blue Crab were not calculated for the southern IRL where 21.3-m seines were not included as a sampling gear. Although sampling with 21.3-m seines began earlier in northern IRL, YOY Blue Crab IOAs were only calculated for data after 1997 for bay seines and 2000 for river seines, at which time Zones H and F were added, respectively, and yielded adequate numbers of YOY Blue Crab for analyses.

The FIM program also monitored the abundance of adult Blue Crab (>80 mm CW) within these same Florida estuaries (including southern IRL) using stratified-random 183-m haul seines. It should be noted that some individuals classified as adults (>80 mm CW) may still have been reproductively immature because of individual variation in growth rates and timing of maturity (Archambault et al. 1990; Steele and Bert 1994).

The trends in annual IOAs of Blue Crab on Florida’s northwest coast varied between estuaries (Figure SP15-25). Annual IOAs of YOY Blue Crab in riverine habitats of Apalachicola Bay were relatively stable with peaks in abundance occurring in 2000 and 2006. While YOY IOAs from bay habitats in this system were consistently lower than those in riverine habits, bay habitats experienced higher abundances during time periods
between 2003-2006 and 2009-2010. In 2015, decreased YOY abundance was observed in both habitats, but as noted, the data does not represent the full biological year and therefore may change when those data become available. Annual IOAs of adult Blue Crab in Apalachicola Bay have remained relatively stable with peaks of abundance observed initially in 1998 and then in 2006 and 2009-2010. In Cedar Key, IOAs of YOY Blue Crab in riverine habitats increased from 1997 through 1999 and, after declining in 2000, have since remained at relatively low, but stable levels. Young-of-the-year indices from Cedar Key bay habitats increased until 1998, declined through 2000, and similar to riverine habitats, have remained at lower but stable levels with a slight elevation in abundance in 2006. Annual IOAs of adult Blue Crab in Cedar Key were relatively low (compared to other estuarine systems) with peaks in abundance in 1998, 2004-2007, 2010-2011, and 2014-2015.

Annual IOAs of YOY Blue Crab in riverine and bay habitats of Tampa Bay have been relatively stable since 1996 with a few pronounced strong year classes (Figure SP15-26). Within Tampa Bay riverine habitats, increases in abundance were evident from 1998-2000, 2006, and 2010. In bay habitats of Tampa Bay, IOAs of YOY Blue Crab were greatest in 1998, 2003, 2010, and 2012. Annual IOAs of adult Blue Crab in Tampa Bay peaked in 1996 and 1998 and relatively smaller increases between 2004-2006 and 2010-2011. Annual IOAs of YOY Blue Crab in Charlotte Harbor indicated an exceptional year class in 1998 for riverine habitats and strong year classes in 1998 and 2003 in bay habitats. Adult Blue Crab abundance in Charlotte Harbor follows a similar pattern with a large peak in 1998-1999 and increased abundance in 2006 and 2010-2011. Abundances in 2015 showed an increase compared to previous years observed in 2012-2014.

Annual IOAs of Blue Crab on Florida’s Atlantic coast varied by estuary and year (Figure SP15-27). Annual IOAs of YOY Blue Crab in Northeast Florida increased in 2003, declined through 2009, increased to a peak in 2011, and then decreased to lower levels from 2012-2015. Annual IOAs of adult Blue Crab were also variable with peak abundances occurring in 2007-2008 and to a lesser degree in 2011 where a steady decline has since been observed. Annual IOAs of YOY Blue Crab in riverine portions of the northern IRL generally exhibited an increasing trend in abundance from 2001-2011,
before declining to lower but steadier levels of abundance between 2012-2015. Young-of-the-year IOAs from bay habitats were relatively stable throughout the time series with elevated abundances in 1999, 2007, and 2015. Annual IOAs for adult Blue Crab in the southern and northern IRL were relatively low but stable with a peak in abundance occurring in 2005 in the northern IRL and in 2006 in the southern IRL. Trends in YOY abundance did not correlate well with adult abundance in the northern IRL.

Length-frequency data collected with 183-m haul seines indicate that this gear provides valuable information on adult Blue Crab in Florida estuaries (Figure SP15-28). Length-frequency distributions for Tampa Bay, Charlotte Harbor, and northern IRL were unimodal with the primary range of Blue Crab sizes between ~70-150 mm CW, while in Cedar Key, the distribution favored smaller Blue Crab (~50-70 mm CW). The size distributions for Apalachicola Bay, Northeast Florida, and southern IRL were similar with evidence of two age classes (occurring at ~50-70 mm CW and ~120-150 mm CW).
References


Figure SP15-25. Relative abundance of young-of-the-year Blue Crab (≤ 80 mm CW) collected in 21.3-m seines and of adult Blue Crab (> 80 mm CW) collected in 183-m haul seines between 1996 and 2015 during stratified-random sampling of Apalachicola Bay and Cedar Key. Points represent the median estimate while the vertical bars represent the 25th – 75th percentiles. Note different scales for estimates from 21.3-m and 183-m seines.
Figure SP15-26. Relative abundance of young-of-the-year Blue Crab (≤ 80 mm CW) collected in 21.3-m seines and of adult Blue Crab (> 80 mm CW) collected in 183-m haul seines between 1996 and 2015 during stratified-random sampling from Tampa Bay and Charlotte Harbor. Points represent the median estimate while the vertical bars represent the 25th – 75th percentiles. Note different scales for estimates from 21.3-m and 183-m seines.
Figure SP15-27. Relative abundance of young-of-the-year Blue Crab (≤ 80 mm CW) collected in 21.3-m seines and of adult Blue Crab (> 80 mm CW) collected in 183-m haul seines between 1997 and 2015 during stratified-random sampling from Northeast Florida and the Indian River Lagoon. Points represent the median estimate while the vertical bars represent the 25th – 75th percentiles. Note different scales for estimates from 21.3-m and 183-m seines.
Figure SP15-28. Length frequency diagrams of Blue Crab collected in 183-m haul seines. All lengths are carapace width (CW). Note different scales and years of collection.