

# Fyke Net Deployment and Retrieval



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Standards and Assessment Section

# FDEP Fyke Net Deployment - Apalachee Bay

## April 19, 2011



# FDEP Fyke Net Deployment - Apalachee Bay

## April 19, 2011



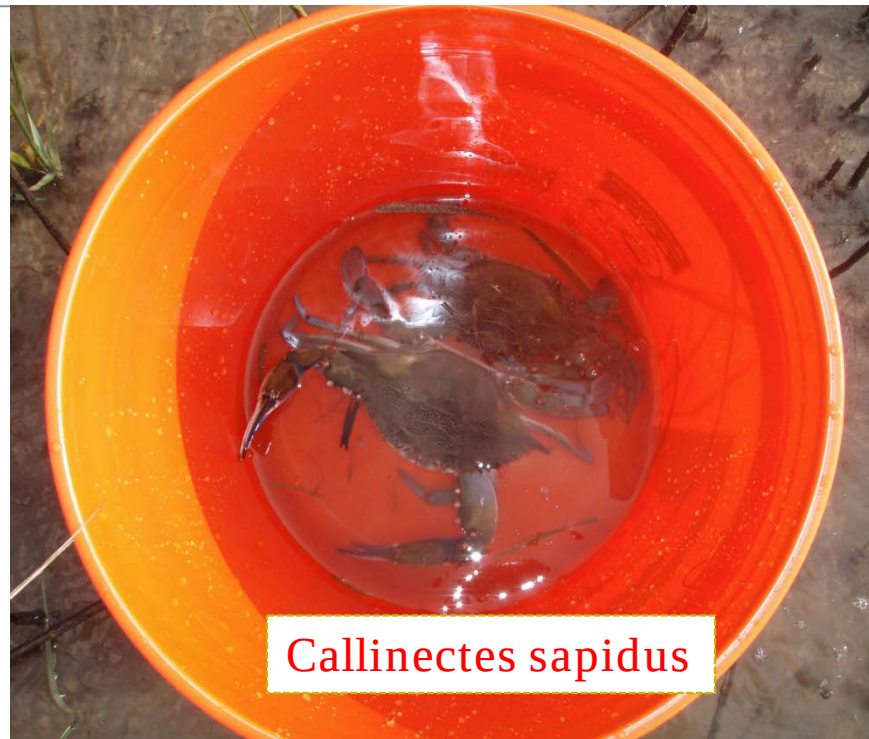


# FDEP Fyke Net Retrieval - Apalachee Bay

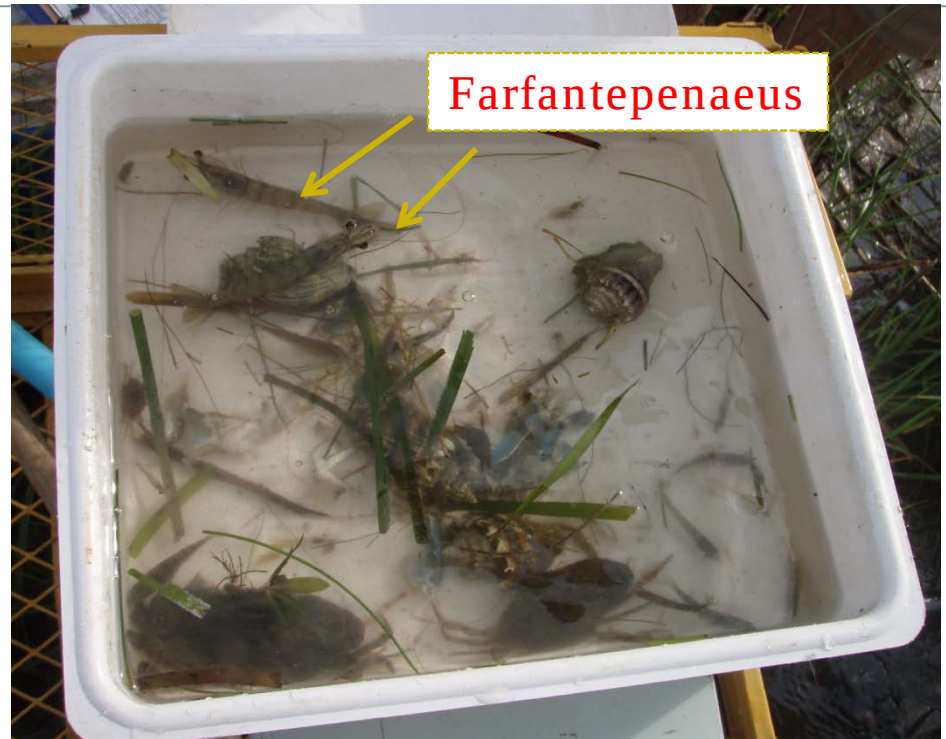
## April 20, 2011







*Callinectes sapidus*



*Farfantepenaeus*



*Melongena corona*



*Callinectes sapidus*



## APALACHEE BAY

| 4/20/2011                    | SM-1 | SM-2 | SM-3 | SM-4 | Grand Total | Percent of Total |
|------------------------------|------|------|------|------|-------------|------------------|
| <b>Alosa</b>                 |      |      |      | 1    | 1           | <1%              |
| <b>Amphipoda</b>             |      | 4    |      |      | 4           | <1%              |
| <b>Anchoa mitchilli</b>      |      |      |      | 2    | 2           | <1%              |
| <b>Balanus</b>               |      |      |      | 1    | 1           | <1%              |
| <b>Belonidae</b>             |      | 1    |      |      | 1           | <1%              |
| <b>Callinectes sapidus</b>   | 5    | 14   | 2    | 8    | 29          | 2%               |
| <b>Crassostrea virginica</b> |      |      |      | 1    | 1           | <1%              |
| <b>Crepidula</b>             |      | 1    |      | 1    | 2           | <1%              |
| <b>Farfantepenaeus</b>       | 2    | 4    | 2    | 15   | 23          | 2%               |
| <b>Fundulus</b>              |      |      |      | 4    | 4           | <1%              |
| <b>Fundulus heteroclitus</b> |      | 2    |      | 2    | 4           | <1%              |
| <b>Fundulus similis</b>      |      |      |      | 2    | 2           | <1%              |
| <b>Gastropoda</b>            |      |      | 1    |      | 1           | <1%              |
| <b>Gobiidae</b>              |      | 1    |      | 1    | 2           | <1%              |
| <b>Isopoda</b>               |      | 1    |      |      | 1           | <1%              |
| <b>Lagodon rhomboides</b>    | 10   |      | 141  | 19   | 170         | 12%              |
| <b>Leiostomus xanthurus</b>  | 1    | 5    |      |      | 6           | <1%              |
| <b>Lucania parva</b>         |      | 17   | 4    | 8    | 29          | 2%               |
| <b>Melongena corona</b>      | 3    | 2    | 1    | 2    | 8           | 1%               |
| <b>Menidia</b>               |      |      | 35   |      | 35          | 2%               |
| <b>Nassarius</b>             |      | 6    |      | 12   | 18          | 1%               |
| <b>Nassarius vibex</b>       | 12   |      | 6    |      | 18          | 1%               |
| <b>Paguroidea</b>            | 4    | 22   | 19   | 21   | 66          | 5%               |
| <b>Paleomonetes</b>          | 7    | 345  | 10   | 661  | 1023        | 70%              |
| <b>Sciaenidae</b>            |      |      | 1    |      | 1           | <1%              |
| <b>Total</b>                 | 44   | 425  | 222  | 761  | 1452        |                  |



# FDEP Fyke Net Deployment – Terra Ceia

July 11, 2011



# TERRA CEIA BAY

| 7/13/2011                       | TC1        | TC2         | Grand Total | Percent of Total |
|---------------------------------|------------|-------------|-------------|------------------|
| <b>Aequorea aequorea</b>        |            | <b>1</b>    | <b>1</b>    | <b>&lt;1%</b>    |
| <b>Alpheus</b>                  | <b>3</b>   |             | <b>3</b>    | <b>&lt;1%</b>    |
| <b>Bairdiella chrysoura</b>     | <b>2</b>   | <b>1</b>    | <b>3</b>    | <b>&lt;1%</b>    |
| <b>Callinectes sapidus</b>      | <b>3</b>   | <b>1</b>    | <b>4</b>    | <b>&lt;1%</b>    |
| <b>Carangidae</b>               |            | <b>1</b>    | <b>1</b>    | <b>&lt;1%</b>    |
| <b>Cynoscion nebulosus</b>      | <b>6</b>   | <b>3</b>    | <b>9</b>    | <b>&lt;1%</b>    |
| <b>Cyprinodon variegatus</b>    | <b>15</b>  |             | <b>15</b>   | <b>1%</b>        |
| <b>Eucinostomus</b>             | <b>6</b>   | <b>29</b>   | <b>35</b>   | <b>2%</b>        |
| <b>Eucinostomus gula</b>        |            | <b>5</b>    | <b>5</b>    | <b>&lt;1%</b>    |
| <b>Eucinostomus harengulus</b>  | <b>82</b>  | <b>23</b>   | <b>105</b>  | <b>5%</b>        |
| <b>Eugerres plumieri</b>        | <b>1</b>   |             | <b>1</b>    | <b>&lt;1%</b>    |
| <b>Farfantepenaeus</b>          |            | <b>56</b>   | <b>56</b>   | <b>3%</b>        |
| <b>Farfantepenaeus duorarum</b> | <b>77</b>  | <b>1</b>    | <b>78</b>   | <b>3%</b>        |
| <b>Floridichthys carpio</b>     | <b>3</b>   | <b>1</b>    | <b>4</b>    | <b>&lt;1%</b>    |
| <b>Fundulus grandis</b>         | <b>55</b>  | <b>5</b>    | <b>60</b>   | <b>3%</b>        |
| <b>Fundulus similis</b>         | <b>20</b>  |             | <b>20</b>   | <b>1%</b>        |
| <b>Gambusia holbrooki</b>       | <b>1</b>   | <b>4</b>    | <b>5</b>    | <b>&lt;1%</b>    |
| <b>Gobiosoma</b>                | <b>1</b>   | <b>3</b>    | <b>4</b>    | <b>&lt;1%</b>    |
| <b>Isopoda</b>                  |            | <b>1</b>    | <b>1</b>    | <b>&lt;1%</b>    |
| <b>Lagodon rhomboides</b>       |            | <b>7</b>    | <b>7</b>    | <b>&lt;1%</b>    |
| <b>Lucania parva</b>            | <b>3</b>   | <b>6</b>    | <b>9</b>    | <b>&lt;1%</b>    |
| <b>Melongena corona</b>         | <b>6</b>   | <b>1</b>    | <b>7</b>    | <b>&lt;1%</b>    |
| <b>Menidia</b>                  | <b>61</b>  | <b>12</b>   | <b>73</b>   | <b>3%</b>        |
| <b>Microgobius gulosus</b>      | <b>7</b>   | <b>3</b>    | <b>10</b>   | <b>&lt;1%</b>    |
| <b>Mnemiopsis mccradyi</b>      | <b>2</b>   | <b>299</b>  | <b>301</b>  | <b>14%</b>       |
| <b>Mugil cephalus</b>           | <b>1</b>   |             | <b>1</b>    | <b>&lt;1%</b>    |
| <b>Nassarius vibex</b>          |            | <b>13</b>   | <b>13</b>   | <b>1%</b>        |
| <b>Paleomonetes</b>             | <b>350</b> | <b>800</b>  | <b>1150</b> | <b>52%</b>       |
| <b>Paleomonetes pugio</b>       |            | <b>245</b>  | <b>245</b>  | <b>11%</b>       |
| <b>Poecilia latipinna</b>       |            | <b>3</b>    | <b>3</b>    | <b>&lt;1%</b>    |
| <b>Total</b>                    | <b>705</b> | <b>1524</b> | <b>2229</b> |                  |



# FDEP Fyke Net Retrieval – Terra Ceia

July 13, 2011



*Oligoplites saurus*



*Eucinostomus harengulus*



*Lutjanus griseus*



*Callinectes sapidus*

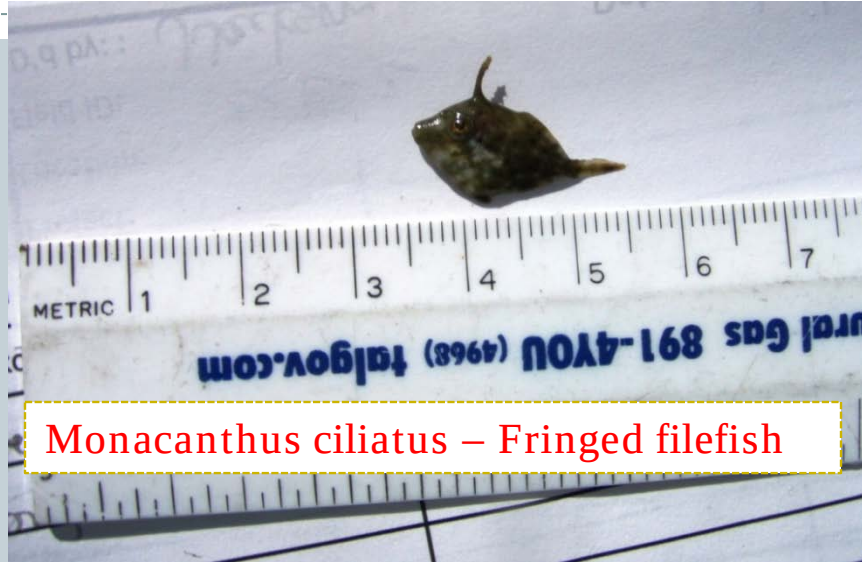


**FDEP FYKE NET DEPLOYMENT & RETRIEVAL -  
OCHLOCKONEE BAY  
OCTOBER 12, 2011**





# FDEP Fyke Net Deployment & Retrieval - Ochlockonee Bay October 12, 2011



*Monacanthus ciliatus* – Fringed filefish



*Litopenaeus setiferus* – White shrimp



*Menidia* sp. – Atlantic silverside



*Menticirrhus saxatilis* – Northern kingfish



## OCHLOCKONEE BAY

| 10/12/2011                    | OCB1 | OCB2 | OCB3 | OCB4 | Grand Total | Percent of Total |
|-------------------------------|------|------|------|------|-------------|------------------|
| <i>Bairdiella chrysoura</i>   |      | 1    | 1    |      | 2           | <1%              |
| <i>Callinectes sapidus</i>    | 2    | 2    | 2    | 11   | 17          | 1%               |
| <i>Chaetodipterus faber</i>   |      | 1    |      | 1    | 2           | <1%              |
| <i>Fundulus grandis</i>       |      |      | 4    |      | 4           | <1%              |
| <i>Fundulus similis</i>       |      |      | 1    |      | 1           | <1%              |
| <i>Lactoria cornuta</i>       |      |      |      | 1    | 1           | <1%              |
| <i>Libinia</i>                |      |      | 5    |      | 5           | <1%              |
| <i>Litopenaeus setiferus</i>  | 22   | 3    | 3    |      | 28          | 2%               |
| <i>Lolliguncula brevis</i>    |      |      | 1    |      | 1           | <1%              |
| <i>Lutjanus griseus</i>       | 1    | 1    |      |      | 2           | <1%              |
| <i>Menidia</i>                | 22   | 29   |      |      | 51          | 4%               |
| <i>Menticirrhus saxatilis</i> |      | 1    |      |      | 1           | <1%              |
| <i>Mnemiopsis mccraydi</i>    | 428  | 244  | 244  | 244  | 1160        | 84%              |
| <i>Monacanthus ciliatus</i>   |      | 1    | 2    |      | 3           | <1%              |
| <i>Mugil cephalus</i>         | 1    |      |      |      | 1           | <1%              |
| <i>Nassarius vibex</i>        |      | 27   | 3    | 16   | 46          | 3%               |
| <i>Oligoplites saurus</i>     | 5    | 2    | 2    |      | 9           | 1%               |
| Paguroidea                    |      | 2    | 1    | 5    | 8           | 1%               |
| <i>Paleomonetes</i>           |      |      |      | 27   | 27          | 2%               |
| <i>Paleomonetes pugio</i>     |      | 1    |      |      | 1           | <1%              |
| <i>Sphoeroides parvus</i>     |      | 1    |      |      | 1           | <1%              |
| Squillidae                    |      | 2    | 1    |      | 3           | <1%              |
| <i>Symphurus plagiusa</i>     |      |      | 1    |      | 1           | <1%              |
| <i>Syngonathus louisanae</i>  | 1    |      |      |      | 1           | <1%              |
| Total                         | 482  | 318  | 271  | 305  | 1376        |                  |



# FIM vs. FDEP Data



Table OV09-03. Top 10 numerically dominant taxa collected by FIM in the Tampa Bay area, 2009.

| Tampa Bay                      |                |
|--------------------------------|----------------|
| Scientific Name                | Number         |
| <i>Anchoa mitchilli</i>        | 239,989        |
| <i>Lagodon rhomboides</i>      | 73,433         |
| <i>Menidia</i> spp.            | 43,885         |
| <i>Eucinostomus</i> spp.       | 32,018         |
| <i>Anchoa cubana</i>           | 15,168         |
| <i>Eucinostomus gula</i>       | 9,049          |
| <i>Eucinostomus harengulus</i> | 8,680          |
| <i>Lucania parva</i>           | 8,059          |
| <i>Harengula jaguana</i>       | 7,866          |
| <i>Bairdiella chrysoura</i>    | 7,391          |
| <b>Σ =</b>                     | <b>445,538</b> |

Top 10 numerically dominant taxa collected by FDEP Fyke Nets in the Clam Bayou & Terra Ceia (Tampa Bay area), 2011

| Scientific Name                        | Number      |
|----------------------------------------|-------------|
| <b><i>Eucinostomus harengulus</i></b>  | <b>1249</b> |
| <b><i>Paleomonetes</i></b>             | <b>1180</b> |
| <b><i>Mnemiopsis mccraydi</i></b>      | <b>325</b>  |
| <b><i>Cyprinodon variegatus</i></b>    | <b>303</b>  |
| <b><i>Paleomonetes pugio</i></b>       | <b>245</b>  |
| <b><i>Fundulus grandis</i></b>         | <b>174</b>  |
| <b><i>Farfantepenaeus duorarum</i></b> | <b>162</b>  |
| <b><i>Paleomonetes vulgaris</i></b>    | <b>92</b>   |
| <b><i>Menidia</i></b>                  | <b>83</b>   |



Table OV09-03. (Continued)

| S. Indian River Lagoon                  |               | Apalachicola Bay                |                |
|-----------------------------------------|---------------|---------------------------------|----------------|
| Scientific Name                         | Number        | Scientific Name                 | Number         |
| <i>Lagodon rhomboides</i>               | 13,338        | <i>Anchoa mitchilli</i>         | 47,950         |
| <i>Diapterus auratus</i>                | 3,843         | <i>Lagodon rhomboides</i>       | 20,382         |
| <i>Eucinostomus gula</i>                | 1,946         | <i>Brevoortia</i> spp.          | 15,869         |
| <i>Harengula jaguana</i>                | 1,034         | <i>Leiostomus xanthurus</i>     | 12,371         |
| <i>Eucinostomus harengulus</i>          | 980           | <i>Micropogonias undulatus</i>  | 9,283          |
| <i>Mugil curema</i>                     | 676           | <i>Harengula jaguana</i>        | 7,791          |
| <i>Centropomus undecimalis</i>          | 642           | <i>Cynoscion arenarius</i>      | 7,490          |
| <i>Mugil cephalus</i>                   | 636           | <i>Mugil cephalus</i>           | 4,624          |
| <i>Opisthonema oglinum</i>              | 628           | <i>Orthopristis chrysoptera</i> | 4,291          |
| <i>Orthopristis chrysoptera</i>         | 574           | <i>Bairdiella chrysoura</i>     | 4,037          |
| <b><math>\Sigma</math> =</b>            | <b>24,297</b> |                                 | <b>134,088</b> |
| <b>Total (Selected Taxa)</b>            | <b>3,779</b>  |                                 | <b>45,898</b>  |
| <b>Grand Total of Animals Collected</b> | <b>29,360</b> |                                 | <b>177,435</b> |





Table OV09-03. Top 10 numerically dominant taxa collected in FIM program stratified-random sample areas, 2009.

| Tampa Bay                               |                | Charlotte Harbor                |                |
|-----------------------------------------|----------------|---------------------------------|----------------|
| Scientific Name                         | Number         | Scientific Name                 | Number         |
| <i>Anchoa mitchilli</i>                 | 239,989        | <i>Anchoa mitchilli</i>         | 98,365         |
| <i>Lagodon rhomboides</i>               | 73,433         | <i>Lagodon rhomboides</i>       | 87,942         |
| <i>Menidia</i> spp.                     | 43,885         | <i>Menidia</i> spp.             | 20,536         |
| <i>Eucinostomus</i> spp.                | 32,018         | <i>Eucinostomus</i> spp.        | 19,624         |
| <i>Anchoa cubana</i>                    | 15,168         | <i>Lucania parva</i>            | 14,337         |
| <i>Eucinostomus gula</i>                | 9,049          | <i>Eucinostomus gula</i>        | 6,140          |
| <i>Eucinostomus harengulus</i>          | 8,680          | <i>Harengula jaguana</i>        | 4,844          |
| <i>Lucania parva</i>                    | 8,059          | <i>Orthopristis chrysoptera</i> | 4,225          |
| <i>Harengula jaguana</i>                | 7,866          | <i>Bairdiella chrysoura</i>     | 3,657          |
| <i>Bairdiella chrysoura</i>             | 7,391          | <i>Farfantepenaeus duorarum</i> | 3,099          |
| <b><math>\Sigma</math> =</b>            | <b>445,538</b> |                                 | <b>262,767</b> |
| <b>Total (Selected Taxa)</b>            | <b>24,226</b>  |                                 | <b>12,033</b>  |
| <b>Grand Total of Animals Collected</b> | <b>506,776</b> |                                 | <b>293,663</b> |



Table OV09-03. (Continued)

| S. Indian River Lagoon                  |               | Apalachicola Bay                |                |
|-----------------------------------------|---------------|---------------------------------|----------------|
| Scientific Name                         | Number        | Scientific Name                 | Number         |
| <i>Lagodon rhomboides</i>               | 13,338        | <i>Anchoa mitchilli</i>         | 47,950         |
| <i>Diapterus auratus</i>                | 3,843         | <i>Lagodon rhomboides</i>       | 20,382         |
| <i>Eucinostomus gula</i>                | 1,946         | <i>Brevoortia</i> spp.          | 15,869         |
| <i>Harengula jaguana</i>                | 1,034         | <i>Leiostomus xanthurus</i>     | 12,371         |
| <i>Eucinostomus harengulus</i>          | 980           | <i>Micropogonias undulatus</i>  | 9,283          |
| <i>Mugil curema</i>                     | 676           | <i>Harengula jaguana</i>        | 7,791          |
| <i>Centropomus undecimalis</i>          | 642           | <i>Cynoscion arenarius</i>      | 7,490          |
| <i>Mugil cephalus</i>                   | 636           | <i>Mugil cephalus</i>           | 4,624          |
| <i>Opisthonema oglinum</i>              | 628           | <i>Orthopristis chrysoptera</i> | 4,291          |
| <i>Orthopristis chrysoptera</i>         | 574           | <i>Bairdiella chrysoura</i>     | 4,037          |
| <b><math>\Sigma</math> =</b>            | <b>24,297</b> |                                 | <b>134,088</b> |
| <b>Total (Selected Taxa)</b>            | <b>3,779</b>  |                                 | <b>45,898</b>  |
| <b>Grand Total of Animals Collected</b> | <b>29,360</b> |                                 | <b>177,435</b> |





| Northeast Florida                |         |
|----------------------------------|---------|
| Scientific Name                  | Number  |
| <i>Anchoa mitchilli</i>          | 56,222  |
| <i>Micropogonias undulatus</i>   | 14,435  |
| <i>Brevoortia</i> spp.           | 12,401  |
| <i>Litopenaeus setiferus</i>     | 12,206  |
| <i>Menidia menidia</i>           | 9,610   |
| <i>Leiostomus xanthurus</i>      | 7,741   |
| <i>Menidia</i> spp.              | 6,120   |
| <i>Mugil cephalus</i>            | 4,902   |
| <i>Anchoa hepsetus</i>           | 4,785   |
| <i>Fundulus heteroclitus</i>     | 3,444   |
| $\Sigma =$                       | 131,866 |
| Total (Selected Taxa)            | 48,682  |
| Grand Total of Animals Collected | 170,328 |

**Top 20 numerically dominant taxa across all areas sampled by FDEP in fyke nets, 2011**

**Scientific Name**

**Number**

|                          |      |
|--------------------------|------|
| Paleomonetes             | 2289 |
| Mnemiopsis mccradyi      | 1485 |
| Eucinostomus harengulus  | 1431 |
| Farfantepenaeus          | 335  |
| Cyprinodon variegatus    | 303  |
| Lagodon rhomboides       | 247  |
| Paleomonetes pugio       | 246  |
| Fundulus grandis         | 182  |
| Menidia                  | 171  |
| Farfantepenaeus duorarum | 162  |
| Paleomonetes vulgaris    | 121  |
| Callinectes sapidus      | 114  |
| Paguroidea               | 93   |
| Fundulus similis         | 84   |
| Nassarius vibex          | 81   |
| Oligoplites saurus       | 66   |
| Lucania parva            | 57   |
| Melongena corona         | 51   |
| Nassarius                | 44   |
| Eucinostomus             | 35   |

**Top 20 numerically dominant fishes across all areas sampled by FDEP in fyke nets, 2011**

**Scientific Name**

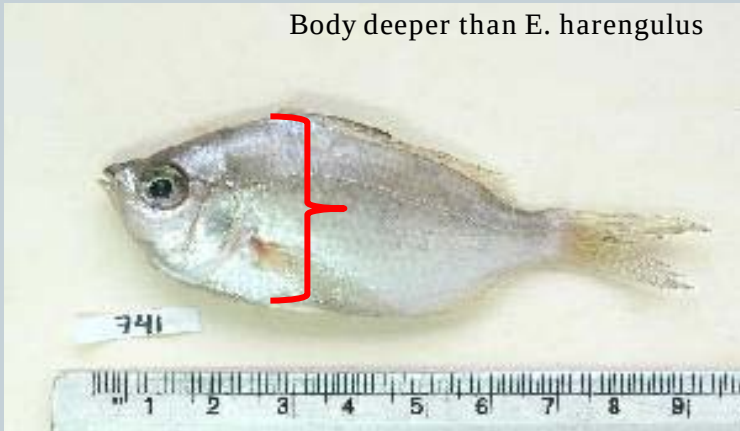
**Number**

|                          |      |
|--------------------------|------|
| Eucinostomus harengulus  | 1431 |
| Cyprinodon variegatus    | 303  |
| Lagodon rhomboides       | 247  |
| Fundulus grandis         | 182  |
| Menidia                  | 171  |
| Fundulus similis         | 84   |
| Oligoplites saurus       | 66   |
| Lucania parva            | 57   |
| Eucinostomus             | 35   |
| Cynoscion nebulosus      | 26   |
| Leiostomus xanthurus     | 24   |
| Bairdiella chrysoura     | 22   |
| Symphurus plagiusa       | 21   |
| Eucinostomus gula        | 17   |
| Poecilia latipinna       | 14   |
| Alosa alabamae           | 13   |
| Orthopristis chrysoptera | 11   |
| Hippocampus zosterae     | 10   |
| Microgobius gulosus      | 10   |
| Mugil cephalus           | 9    |

# Eucinostomus gula & E. harengulus



Body deeper than E. harengulus



Eucinostomus gula (silver jenny)

Body more slender than E. gula



Eucinostomus harengulus (tidewater mojarra)



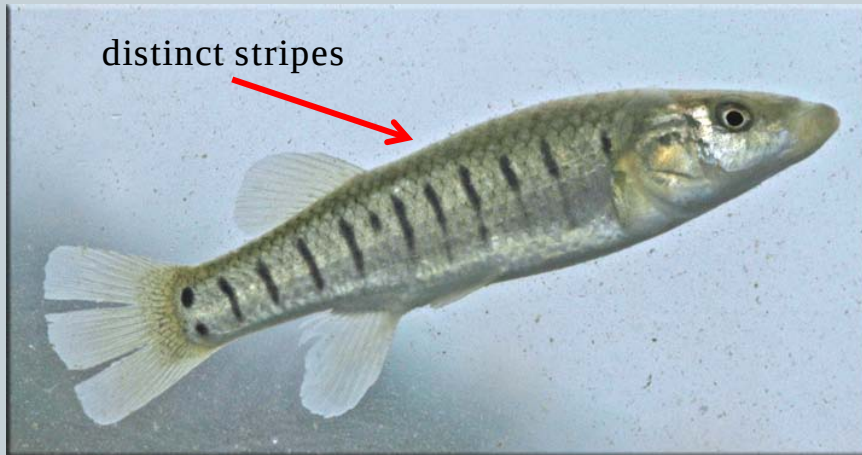
# Cyprinodon variegatus – Sheepshead minnow



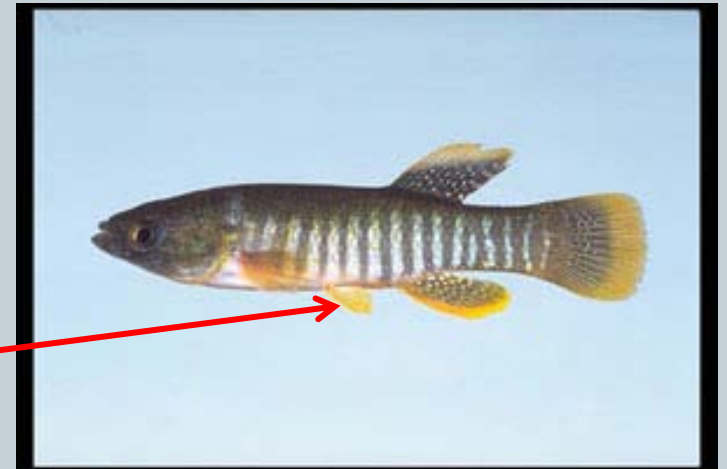
# Lagodon rhomboides – Pinfish



# Fundulus grandis & F. similis



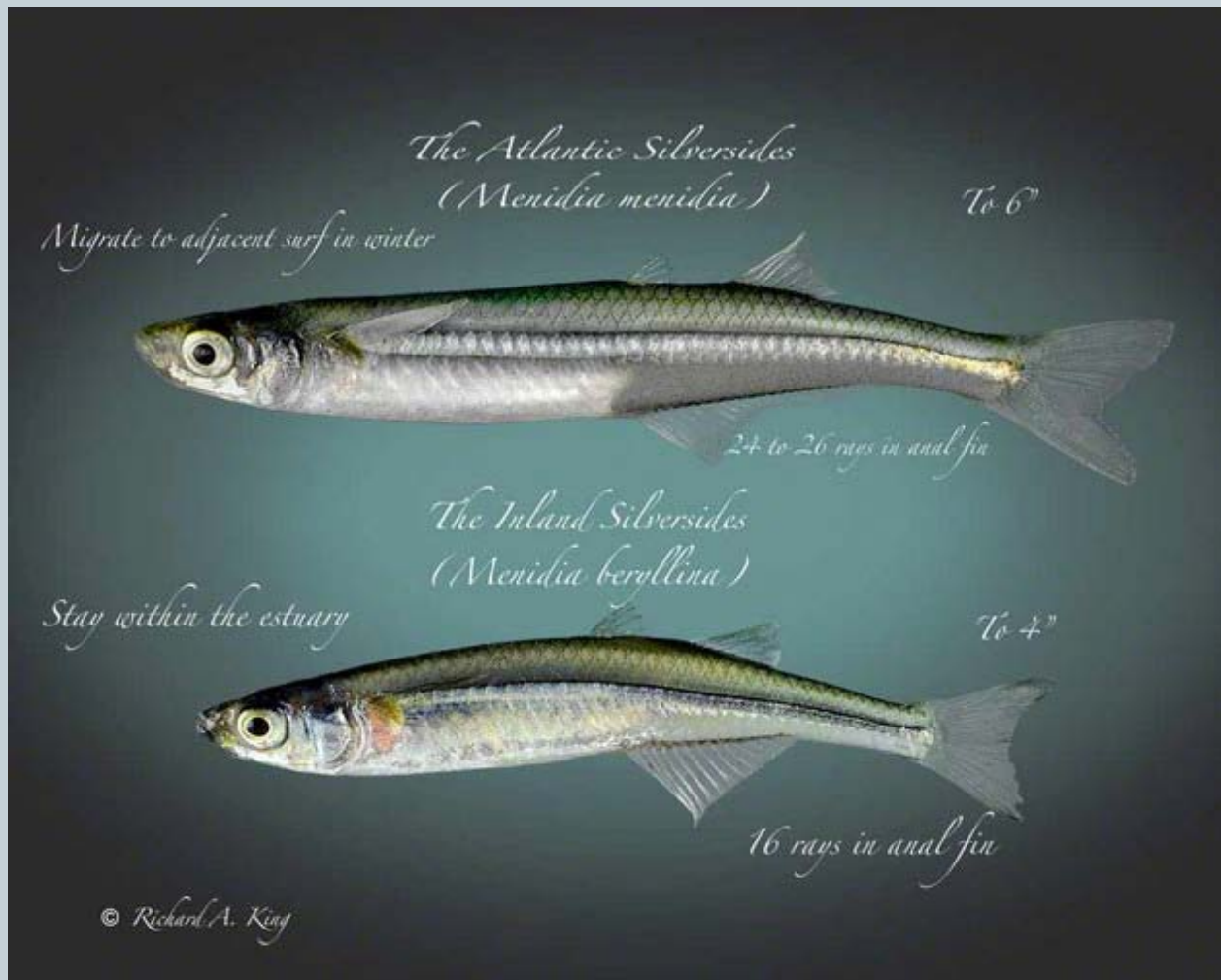
Fundulus similis (Longnose  
killifish)



Fundulus grandis (Gulf killifish)



# Menidia spp

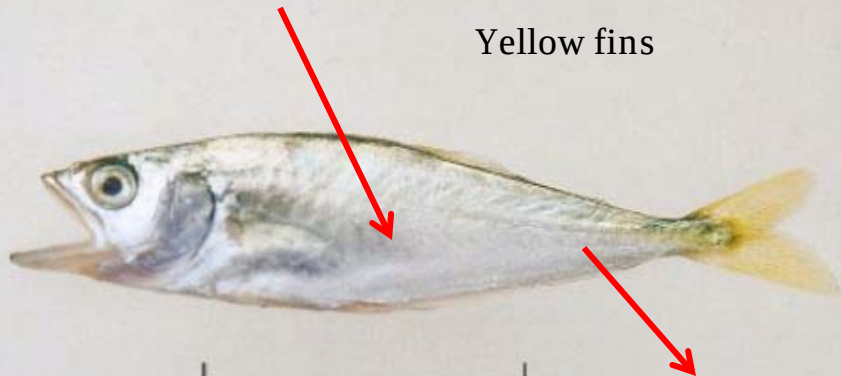


# Oligoplites saurus – Leatherjacket



Smooth, silver body

Yellow fins



1.0 inch

Oligoplites saurus (leatherjacket)



Oligoplites saurus (from Clam Bayou)

# Lucania parva – Rainwater killifish



*Rainwater Killie*  
(*Lucania parva*)



© Richard A. King

*Size to 1.5"*

*Occurance Moderate*



# Cynoscion nebulosus – Spotted seatrout



NOAA

# Leiostomus xanthurus - Spot



# Bairdiella chrysoura – Silver perch

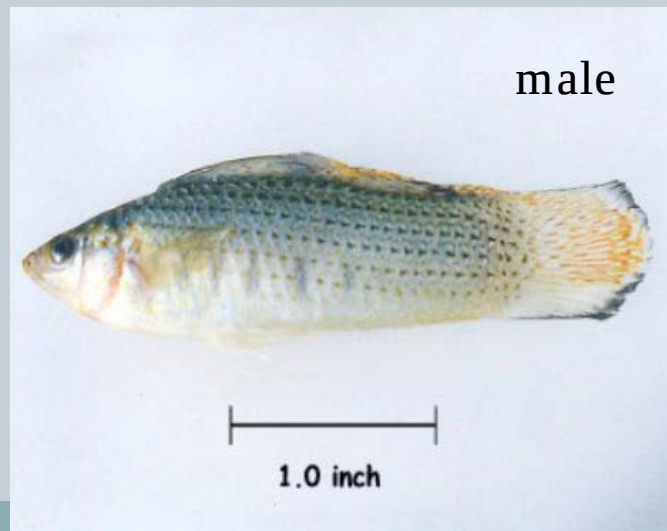
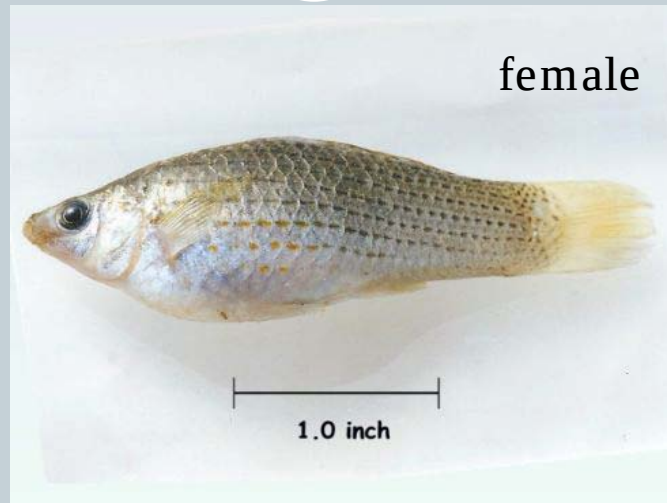




# Symphurus plagiusa – Blackcheek tonguefish



# Poecilia latipinna – Sailfin molly



# *Alosa alabamae* - Alabama shad





# Orthopristis chrysoptera - Pigfish



# Hippocampus zosterae – Dwarf seahorse



# Microgobius gulosus – Clown goby





# Mugil cephalus – Striped mullet





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