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J. V. Merriner
Virginia Institute of Marine Science

R. T. Doyle
Virginia Institute of Marine Science

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Pictorial Guide to some Common
Marine and Estuarine Fishes
of Commercial and Sport Importance

by

J. V. Merriner and R. T. Doyle

Virginia Institute of Marine Science
Department of Ichthyology
Gloucester Point, Virginia 23062

Pictorial Guide to some Common
Marine and Estuarine Fishes of
Commercial and Sport Importance

J. V. Merriner and R. T. Doyle

VIMS - Dept. Ichthyology
Gloucester Point, VA

The release of Kepone in the James River and its subsequent dispersal into the water, sediments and biota have resulted in considerable public health monitoring. Since some fishes have been shown to have body burdens of Kepone above the action level established by EPA and FDA, the Virginia Department of Agriculture food inspectors sample shipments of finfish for Kepone analysis. This market sampling practice is a standard procedure established to insure quality and wholesomeness of Virginia products reaching the market place.

The marine and estuarine finfishes of Virginia include approximately 400 species. Many species are migratory and/or spend only a portion of their life in Virginia waters. Others make repeated seasonal excursions into Virginia and some are full-time inhabitants of Virginia waters.

This pictorial guide has been compiled for use by Virginia Department of Agriculture Food Inspectors. It is to serve as a quick guide to species commonly found in Virginia markets to alleviate the problem of ambiguities and "common name" duplications. The inspectors could consult a picture, compare to sampled fish, and

record both common and scientific name. Thus results of analyses would be plainly and unambiguously identified to species.

Sources of more complete lists of fishes common to Virginia coastal waters include:

Wass, M. L. et al. 1972. A checklist of the biota of lower Chesapeake Bay. VIMS Spec. Sci. Rep. No. 65. Gloucester Point, VA 290 pp.

Hildebrand, S. F. and W. C. Schroeder. 1928. Fishes of Chesapeake Bay. U.S. Bur. Fisheries Bulletin Vol. 53, Pt. 1. 1972 reprint by T.F.H. Publications Inc., Neptune, N. J.

Bigelow, H. B. and W. C. Schroeder. 1953. Fishes of the Gulf of Maine. Fishery Bulletin. U.S. Fish and Wildl. Serv. Vol. 53. Wash. D. C. Reprinted by Museum Comp. Zool. Harvard Univ., Cambridge, MA.

LIST OF FIGURES

<u>FIGURE NUMBER</u>	<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>
1	Alewife	<u>Alosa pseudoharengus</u>
2	American Shad	<u>Alosa sapidissima</u>
3	Sea Herring	<u>Clupea harengus</u>
4	Blueback	<u>Alosa aestivalis</u>
5	Gizzard Shad	<u>Dorosoma cepedianum</u>
6	Hickory Shad	<u>Alosa mediocris</u>
7	Menhaden	<u>Brevoortia tyrannus</u>
8	Croaker	<u>Micropogon undulatus</u>
9	Drum, Black	<u>Pogonias cromis</u>
10	Drum, Red	<u>Sciaenops ocellatus</u>
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13	Spotted Seatrout	<u>Cynoscion nebulosus</u>
14	Weakfish	<u>Cynoscion regalis</u>
15	Bluefish	<u>Pomatomus saltatrix</u>
16	Cobia	<u>Rachycentron canadum</u>
17	Spanish Mackerel	<u>Scomberomorus maculatus</u>
18	Striped Bass	<u>Morone saxatilis</u>
19	Crappie	<u>Pomoxis sp.</u>
20	Yellow Perch	<u>Perca flavescens</u>
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22	Sunfish	<u>Lepomis sp.</u>
23	Butterfish	<u>Peprilus triacanthus</u>

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26	Scup	<u>Stenostomus chrysops</u>
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28	Tautog	<u>Tautoga onitis</u>
29	Black Sea Bass	<u>Centropristis striata</u>
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31	Striped mullet	<u>Mugil cephalus</u>
32	Summer Flounder	<u>Paralichthys dentatus</u>
33	Winter Flounder	<u>Pseudopleuronectes americanus</u>
34	Northern Puffer	<u>Sphoeroides maculatus</u>
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36	American Eel	<u>Anguilla rostrata</u>
37	Sturgeon	<u>Acepenser oxyrhynchus</u>
38	Longnosed Gar	<u>Lepisosteus osseus</u>

HERRING

The true herrings are soft-finned fishes wholly lacking spines, with one short dorsal fin, deeply forked tails. Teeth are small or lacking in the adult, deep bodies flattened sidewise and large scales that slip off at a touch.

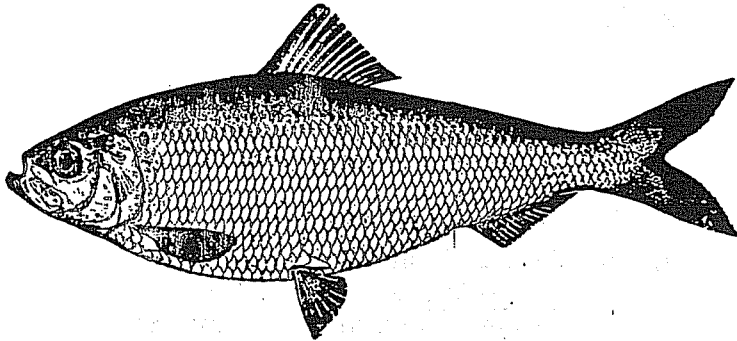


Fig. 1. Alewife Alosa pseudoharengus
Range - Florida to New England
Gear - Pound nets, gill nets, weirs, dip nets, haul seines, floating traps, fyke nets
Size - 10-11 inches average adult length

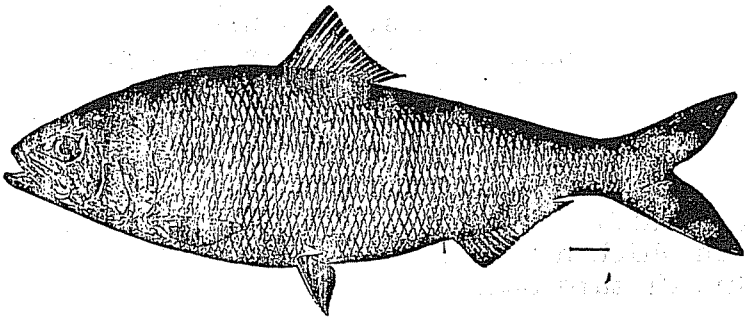


Fig. 2 American shad Alosa sapidissima
Range - Florida to New England
Gear - Gill nets, pound nets, fyke nets, haul seines
Size - Adult males weigh from 1.5-6 lbs; adult females weigh from 3.5-8 lbs

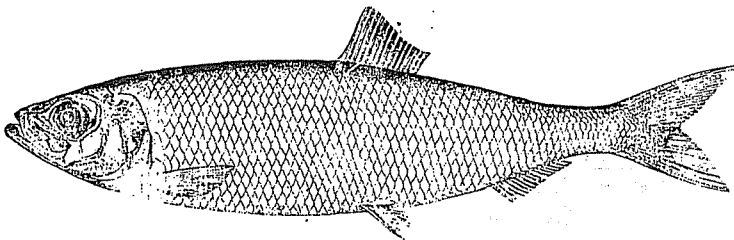


Fig. 3. Sea Herring Clupea harengus
Range - New Jersey to New England, Pacific Coast states and Alaska, Lower Chesapeake Bay
Early Spring
Gear - Purse seines, weirs, floating traps, stop seines, pound nets
Size - Up to 17 inches and 1.5 lbs

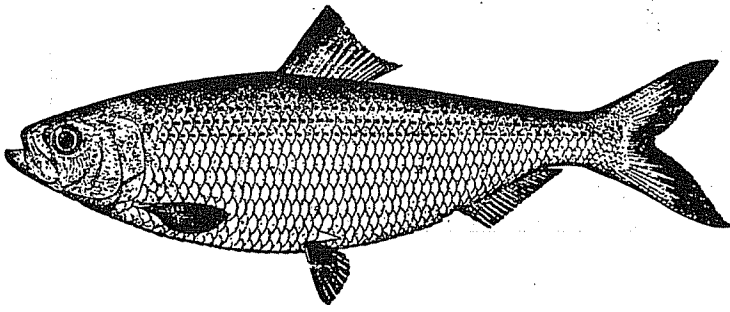


Fig. 4. Blueback Alosa aestivalis
Range - New England to Florida
Gear - Pound nets, gill nets,
weirs, dip nets, haul
seines, floating traps,
fyke nets
Size - 10-11 inches average
adult length

Note: Alewife and blueback appear identical at first glance. The alewife has a larger eye than the blueback and also a deeper body. The lining of the belly cavity is black in the blueback and light grey in the alewife.

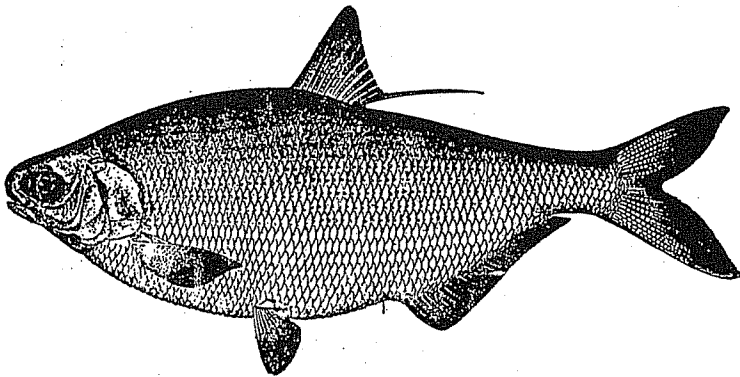


Fig. 5. Gizzard shad Dorosoma cepedianum
Range - North Carolina to
Maryland, Great
Lakes
Gear - Haul seines, pound
nets, gill nets
Size - 11-12 inches average
adult length

NOTE: Threadfin shad, which also have a long thread on the dorsal fin may be confused with gizzard shad. Threadfin, however, are smaller, non-commercial fish which have a head shape conspicuously different from the Gizzard Shad.

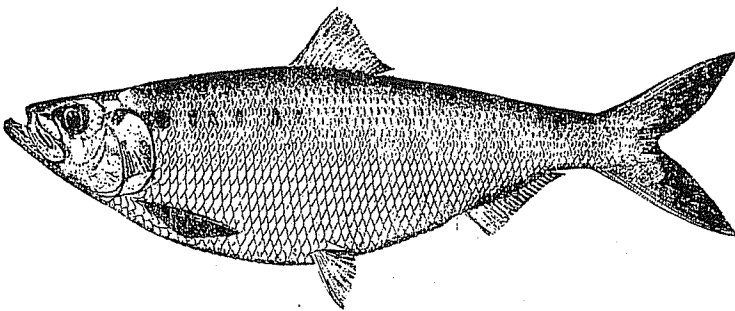


Fig. 6. Hickory shad Alosa mediocris
Range - Florida to Rhode
Island
Gear - Pound nets, haul
seines, gill nets,
floating traps
Size - 15 inch average
adult length

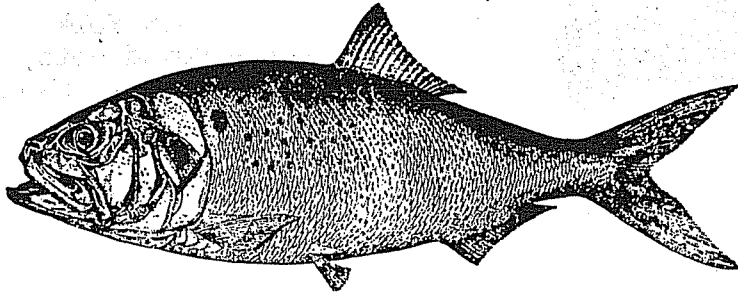


Fig. 7. Menhaden Brevoortia tyrannus

Range - Gulf of Mexico to
New England

Gear - Purse seines, pound
nets , haulseines

Size - 12-15 inches average
adult length

DRUMS AND DRUMLIKE FISH

The croakers, drums and weakfish. These fish have both spiny and soft portion of the dorsal fin. Lateral line goes onto tail

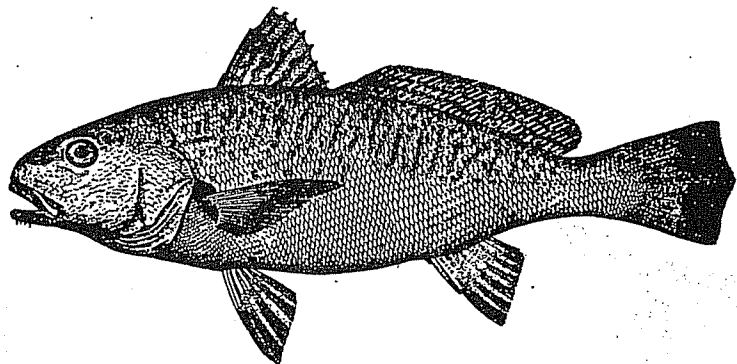


Fig. 8. Croaker Micropogon undulatus
Range - Gulf of Mexico to
New York
Gear - Pound nets, otter
trawls, haul seines,
gill nets
Size - 0.5-1.5 lbs average
market size

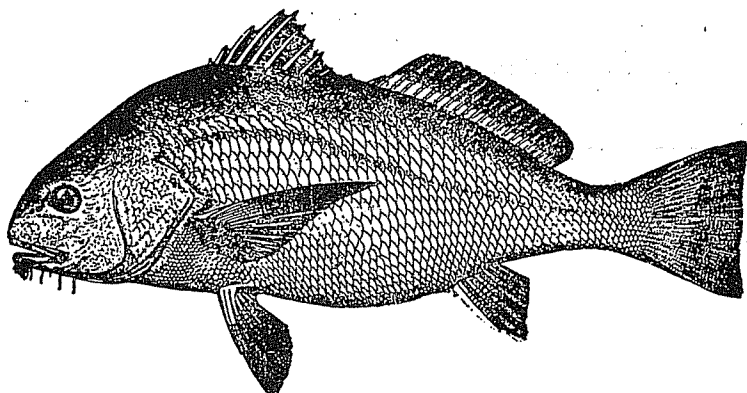


Fig. 9. Drum, black Pogonias cromis
Range - Texas to North
Carolina
Gear - Haul seines, pound
nets, lines
Size - 20-40 lbs with 60 lbs
not exceptional

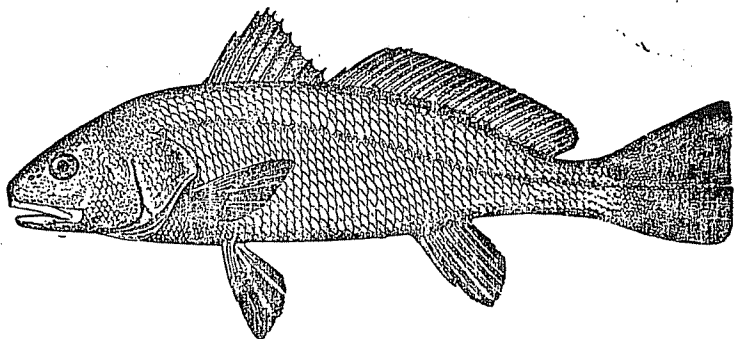


Fig. 10. Drum, red Sciaenops
ocellatus
Range - Texas to Maryland
Gear - Pound nets, haul
seines, gill nets,
lines
Size - Size of market fish
may vary from 0.5
lbs to 40 lbs

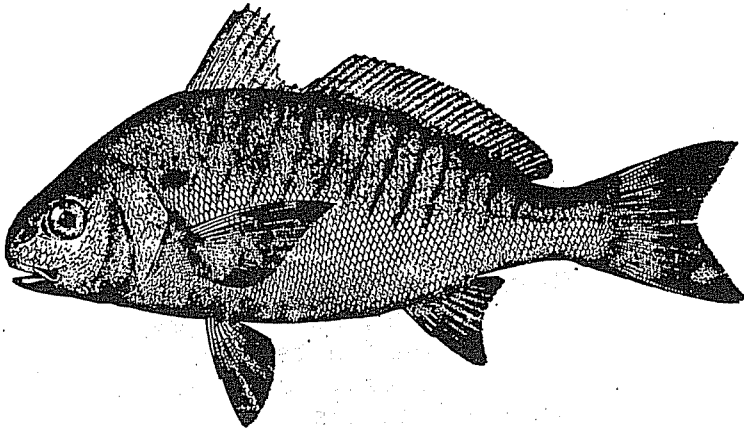


Fig. 11. Spot Leiostomus xanthurus
Range - Gulf of Mexico to
Middle Atlantic
States

Gear - Haul seines, gill
nets, pound nets,
otter trawls

Size - 10.0-10.5 inches
average adult
length

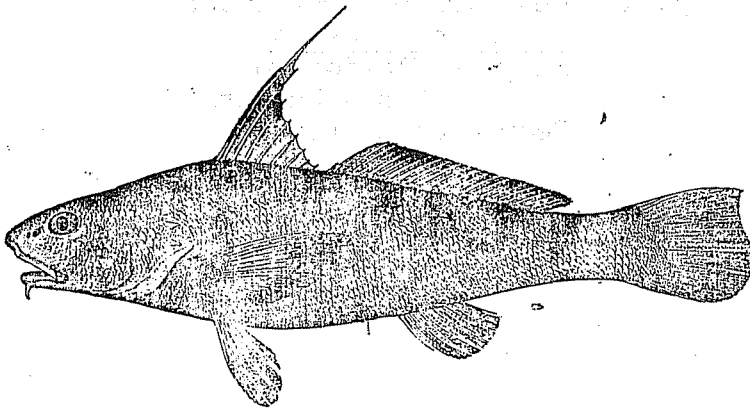


Fig. 12. Northern Kingfish
Menticirrhus saxatilis
Range - Texas to Massachu-
setts

Gear - Otter trawls, haul
seines, pound nets

Size - 10-14 inches
average adult length

NOTE: Menticirrhus americanus and M. littoralis are also found in these waters. M. americanus closely resembles M. saxatilis except for a shorter spinous dorsal fin. M. littoralis lacks the dark oblique bars on the sides.

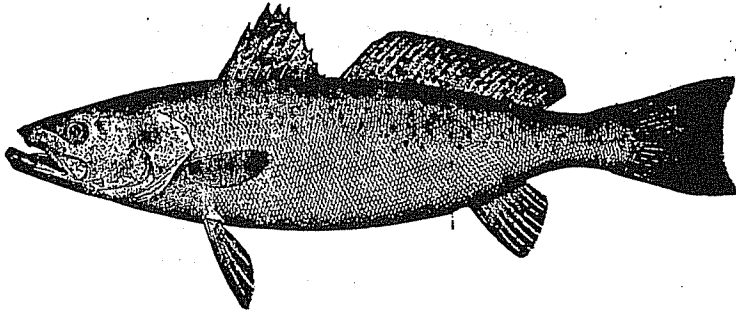


Fig. 13. Spotted seatrout Cynoscion nebulosus

Range - Maryland to Texas

Gear - Gill nets, trammel nets, haul seines, pound nets, otter trawls, handlines

Size - 6-12 lbs

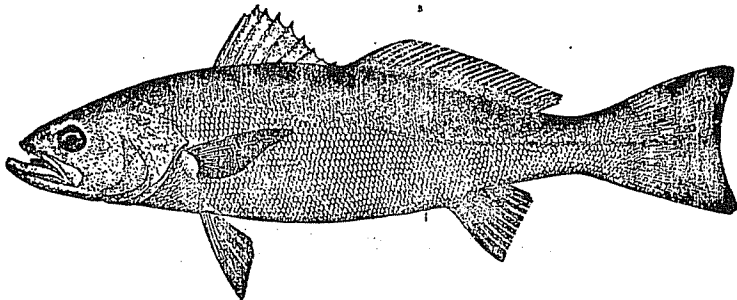


Fig. 14. Weakfish or Grey Trout Cynoscion regalis

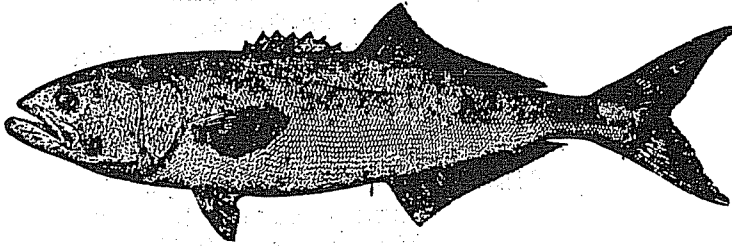
Range - Florida to Massachusetts

Gear - Otter trawls, pound nets, purse seines, gill nets, haul seines

Size - 12-24 inches average adult length

NOTE: The Sandtrout, Cynoscion nothus has been reported from these waters. It is usually not of commercial size. The sandtrout is distinguished from the weakfish and spotted seatrout by the lack of distinct spots on the body.

BLUEFISH, COBIA, SPANISH MACKEREL



NOTE: Also known as snapper, taylor blue or taylor.

Fig. 15. Bluefish Pomatomus saltatrix

Range - Gulf of Mexico to
New England

Gear - Haul seines, gill
nets, pound nets,
troll lines, purse
seines

Size - 1 lb fish is 14"
2 lb fish is 17"
3 lb fish is 20-21"
4 lb fish is 24"

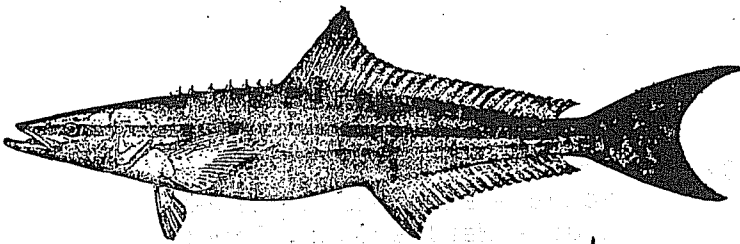


Fig. 16. Cobia Rachycentron canadum

Range - Florida to Virginia

Gear - Handlines, pound nets

Size - 10-50 lbs average
weight

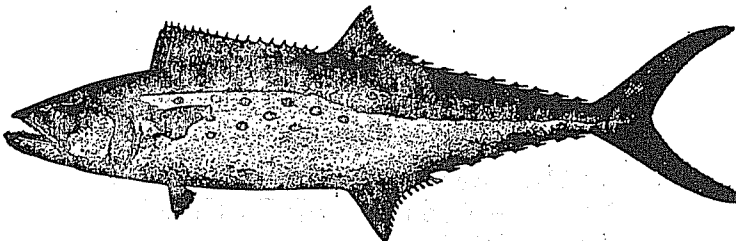


Fig. 17. Spanish mackerel

Scomberomorus maculatus

Range - Texas to Virginia

Gear - Gill nets, lines,
haul seines

Size - 1.5-4 lbs

PERCHLIKE FISHES

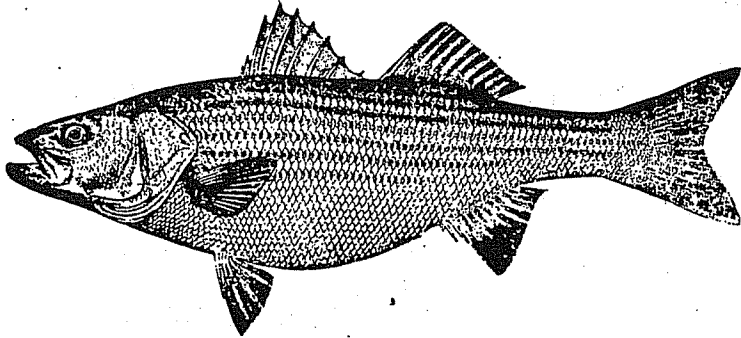


Fig. 18. Striped bass Morone saxatilis
Range - North Carolina to New England, California to Oregon
Gear - Haul seines, gill nets, pound nets, handlines, fyke nets
Size - 3-15 lbs average market size, larger fish up to 50 lbs +

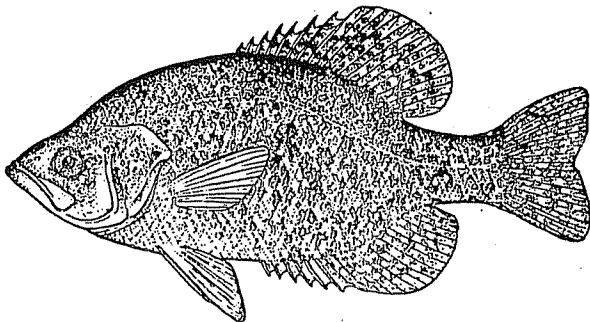


Fig. 19. Crappie Pomoxis sp.
Range - Fresh-water lakes
Gear - Haul seines, lines, pots
Size - up to 12 inches

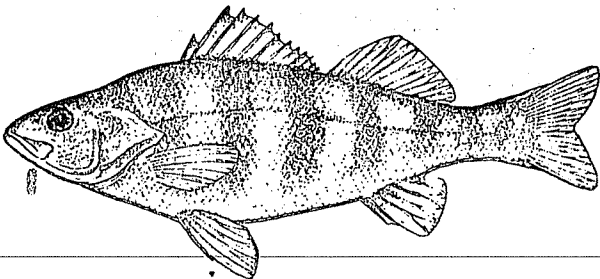


Fig. 20. Yellow perch Perca flavescens
Range - Great Lakes, other
Gear - Gill nets, trap nets, pound nets, fyke nets
Size - Averages less than 12 inches in length and 1 lb in weight

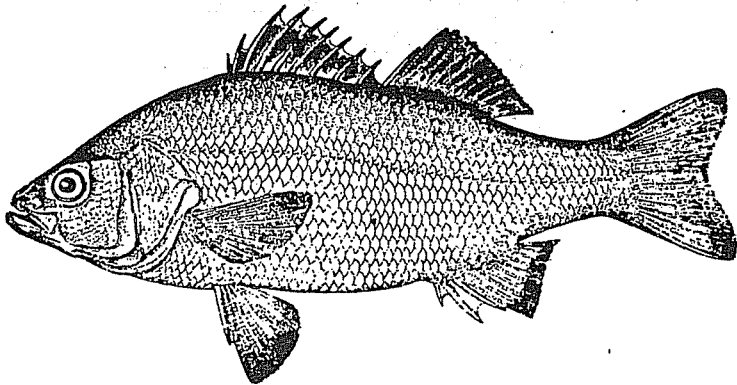


Fig. 21. White perch Morone americana
Range - North Carolina to
Maine
Gear - Pound nets, fyke nets,
haul seines
Size - Average weight less than
1 lb

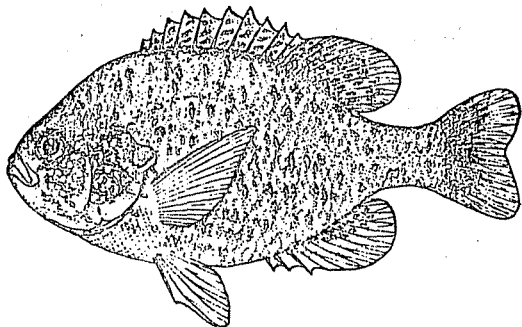


Fig. 22. Sunfish Lepomis sp.
Range - Fresh-water
Gear - Pots, seines,
trap nets
Size - up to 10 inches

BUTTERFISH-LIKE FISH

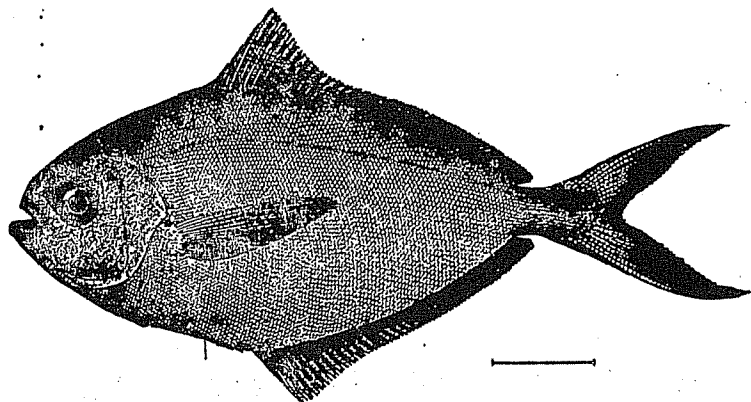


Fig. 23. Butterfish Peprilus triacanthus
Range - Florida to New England
Gear - Pound nets, haul seines, otter trawls
Size - 7-10 inches average market length

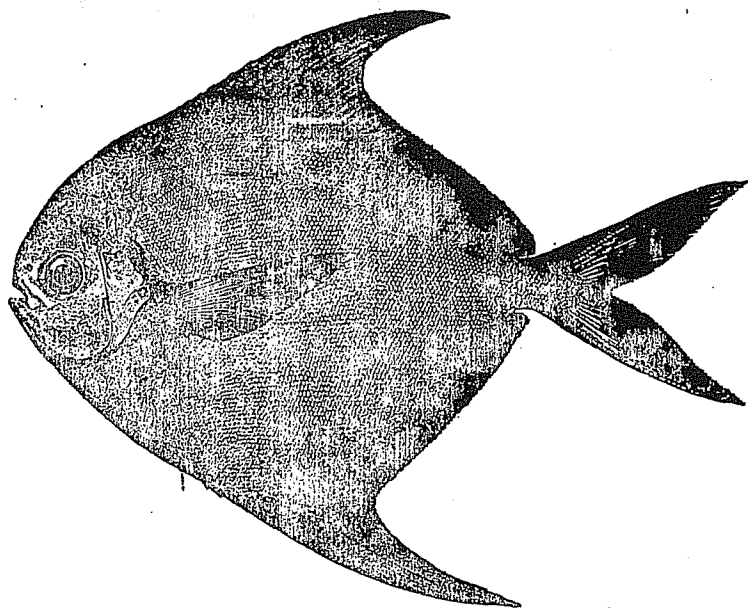


Fig. 24. Harvestfish Peprilus alepidotus
Range - North Carolina to Chesapeake Bay
Gear - Haul seines, pound nets trawlers
Size - 7-10 inches average market length

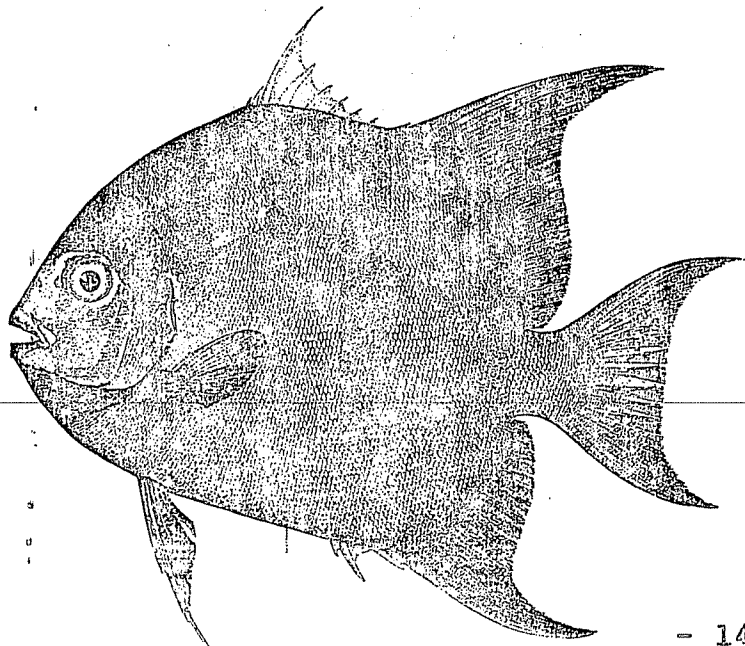


Fig. 25. Spadefish Chaetodipterus faber
Range - Florida - Mid-Atlantic
Gear - Gill nets, trammel nets, pound nets
Size - 3-5 lbs average market weight

PORGYLIKE FISHES

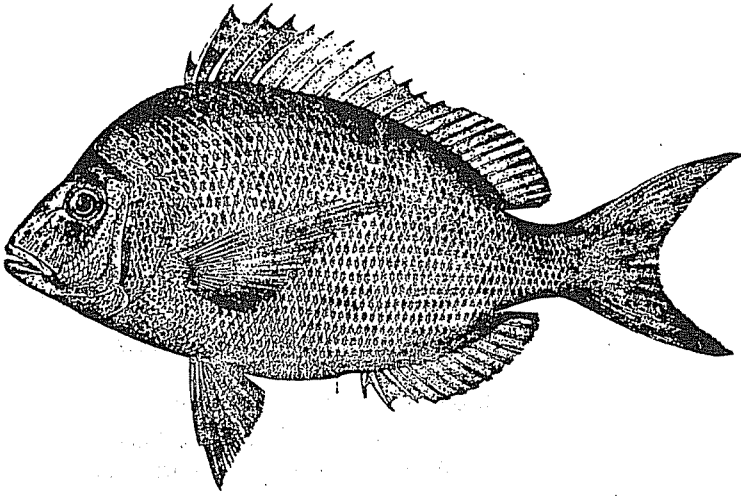


Fig. 26. Scup or porgy Stenostomus chrysops
Range - Florida to New England
Gear - Otter trawls, pound nets
Size - 0.5-2 lbs average market weight

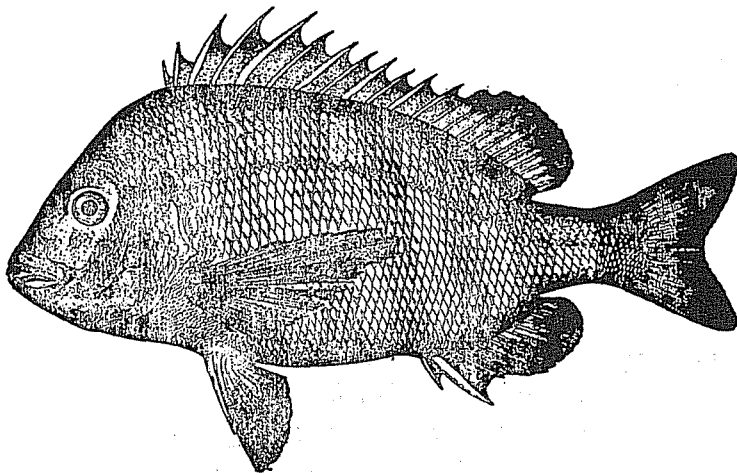


Fig. 27. Sheepshead Archosargus probatocephalus
Range - Texas to Chesapeake Bay
Gear - Handlines, pots pound net
Size - 5-15 lbs average weight

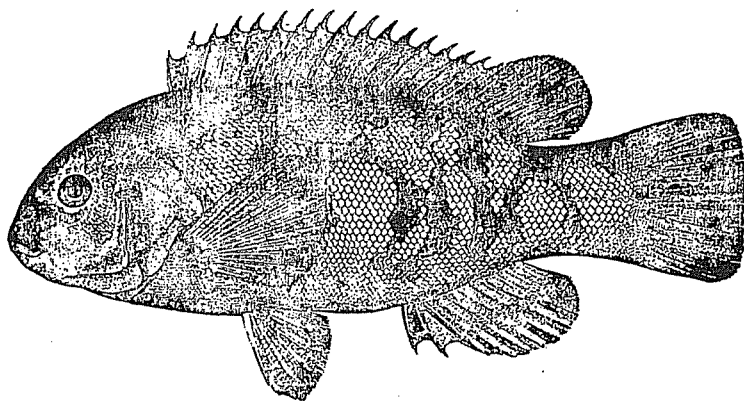


Fig. 28. Tautog Tautoga onitis
Range - Chesapeake Bay to New England
Gear - Pound nets, handlines, pots
Size - 2-4 lbs average market weight

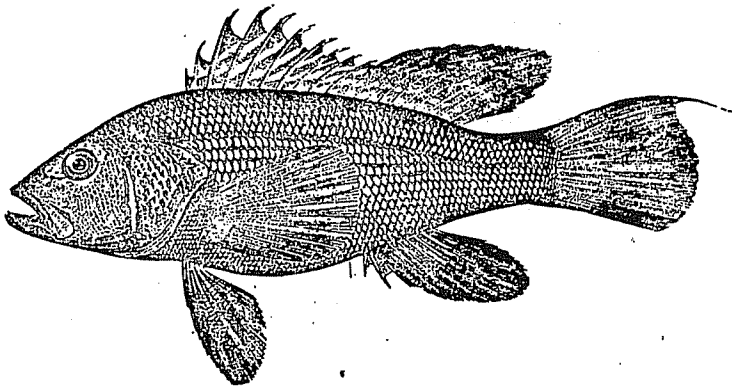


Fig. 29. Black sea bass Centropristis striata

Range - Florida to New
England

Gear - Otter trawls,
handlines, pots

Size - up to 0.5 lbs from
Chesapeake Bay

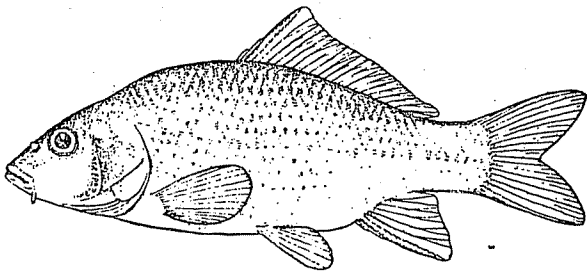


Fig. 30. Carp Cyprinus carpio

Range - Fresh-water

Gear - Haul seines, gill
nets, trap nets,
fyke nets, pound
nets, trotlines

Size - up to 30 inches

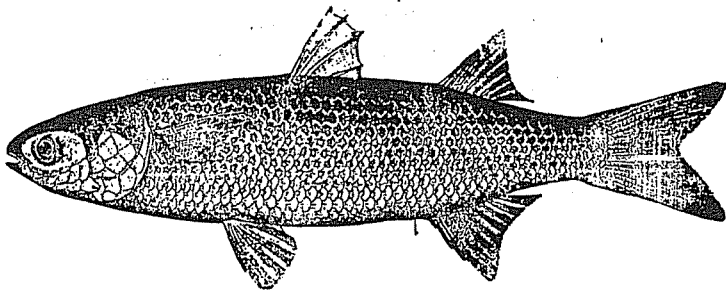


Fig. 31. Striped mullet Mugil cephalus
Range - Texas to New Jersey
Gear - Gill nets, haul seines,
pound nets, cast nets.
Size - 8-12 inches average
adult length, 15" maximum

NOTE: The white mullet, Mugil curema is also found in Chesapeake Bay area. It is distinguished from the striped mullet by its plain coloration, i.e. lack of stripes along the scale rows.

FLATFISHES

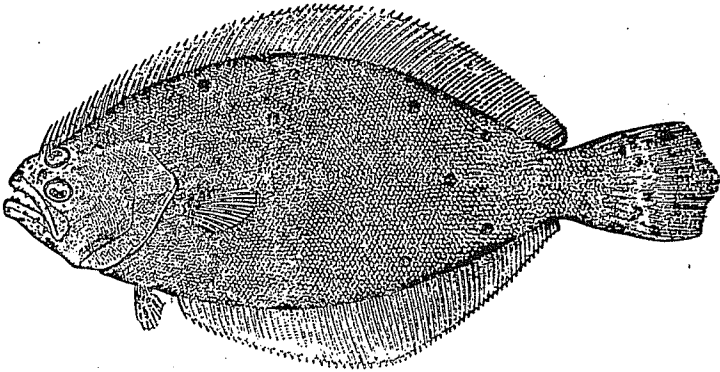


Fig. 32. Summer flounder
Paralichthys dentatus
Range - Texas to
 Massachusetts
Gear - Otter trawl,
 spears, lines
Size - 0.5-6 lbs average
 market weight

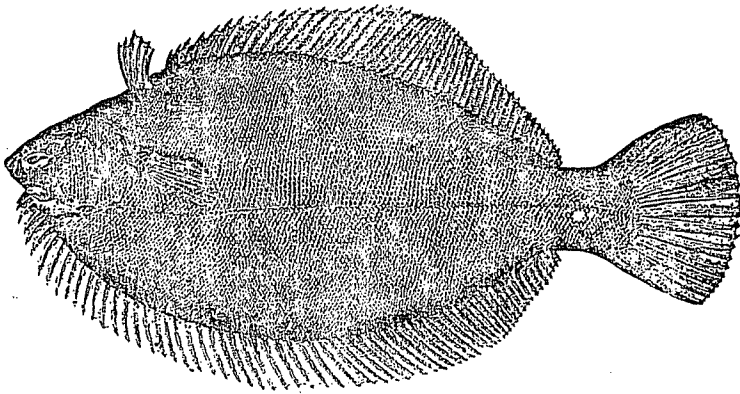


Fig. 33. Winter flounder
Pseudopleuronectes americanus
Range - North Carolina to
 Maine
Gear - Otter trawls, pound
 nets, fyke nets,
 spears, lines
Size - 0.5-2 lbs average
 market weight

NOTE: Other flatfish that are not normally found in the Virginia markets, but may occasionally be found include the four spot flounder and the windowpane flounder.

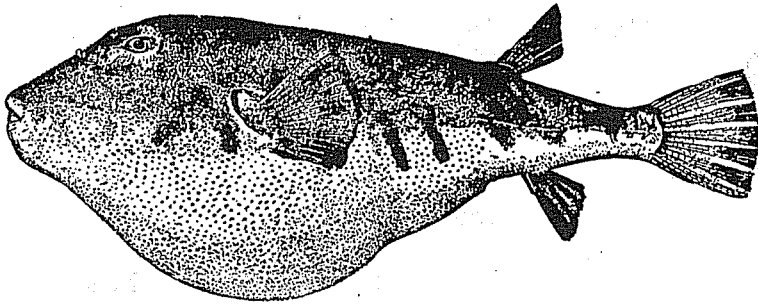


Fig. 34. Northern puffer
Sphoeroides maculatus
Range - Chesapeake Bay
to Middle Atlantic
Gear - Pound nets, haul
seines, otter trawls
Size - up to 10 inches

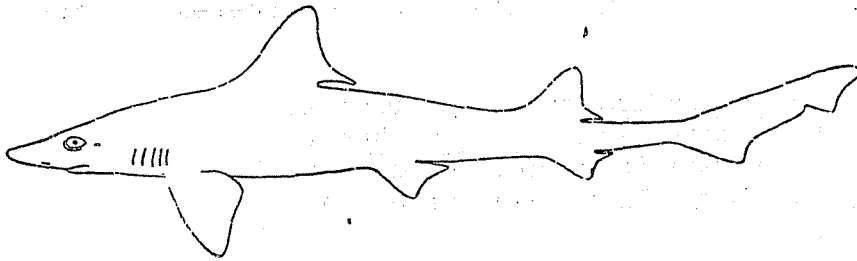


Fig. 35. Shark
Range - Atlantic coast,
Gulf, Pacific
coast states
Gear - longlines, gill
nets, otter trawls
Size - Variable

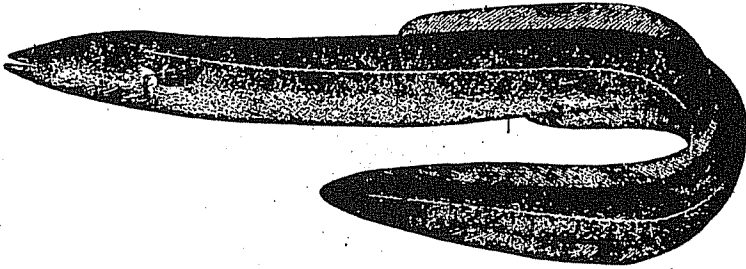


Fig. 36. American eel Anguilla rostrata
Range - Florida to New England and in Mississippi River, Lake Ontario
Gear - Pots, spears, pound nets
Size - From 12-36 inches



Fig. 37. Sturgeon Acipenser oxyrinchus
Range - Coastal and river areas
Gear - Gill nets, lines
Size - Up to 36 inches

Note: This is an endangered species

NOTE: The shortnosed sturgeon, Acipenser brevirostrum, not recently reported from the Chesapeake Bay resembles A. oxyrinchus to a great deal. The shortnosed sturgeon is generally smaller and much darker in color, being dirty olive-green or brown.

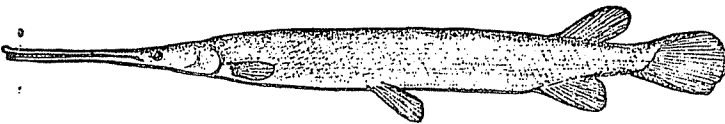


Fig. 38. Longnosed gar or garfish Lepisosteus osseus
Range - Fresh-water
Gear - Haul seines, lines
Size - Up to 6 feet

References.

Illustrations and data from:

Bigelow, H. B. and W. C. Schroeder. 1953. Fishes of the Gulf of Maine. Fishery Bulletin. U.S. Fish and Wildl. Serv. Vol. 53. Wash. D. C. Reprinted by Museum Comp. Zool. Harvard Univ., Cambridge, MA.

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Eddy, Samuel. 1957. How to Know the Freshwater Fish. Wm. C. Brown Company Publishers, Dubuque, Iowa.

COMMON NAME INDEX

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Flounder, winter	<u>Pseudopleuronectes americanus</u>	Fig. 33
Gizzard Shad	<u>Dorosoma cepedianum</u>	Fig. 5
Harvestfish	<u>Peprilus alepidotus</u>	Fig. 24
Hickory Shad	<u>Alosa mediocris</u>	Fig. 6
Longnosed gar	<u>Lepisosteus osseus</u>	Fig. 38
Menhaden	<u>Brevoortia tyrannus</u>	Fig. 7
Northern Kingfish	<u>Menticirrhus saxatilis</u>	Fig. 12
Northern puffer	<u>Sphoeroides maculatus</u>	Fig. 34
Seup	<u>Stenotomus chrysops</u>	Fig. 26
Sea Bass, Black	<u>Centropristis striata</u>	Fig. 29

COMMON NAME INDEX (cont'd)

<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>	<u>FIGURE NUMBER</u>
Sea Herring	<u>Clupea harengus</u>	Fig. 3
Shark		Fig. 35
Sheepshead	<u>Archosargus probatocephalus</u>	Fig. 27
Spanish mackerel	<u>Scomberomorus maculatus</u>	Fig. 17
Spot	<u>Leiostomus xanthurus</u>	Fig. 11
Spotted Seatrout	<u>Cynoscion nebulosus</u>	Fig. 13
Striped Bass	<u>Morone saxatilis</u>	Fig. 18
Striped mullet	<u>Mugil cephalus</u>	Fig. 31
Sturgeon	<u>Acepenser oxyrhynchus</u>	Fig. 37
Sunfish	<u>Lepomis sp.</u>	Fig. 22
Tautog	<u>Tautoga onitis</u>	Fig. 28
Weakfish	<u>Cynoscion regalis</u>	Fig. 14
White Perch	<u>Morone americana</u>	Fig. 21
Yellow Perch	<u>Perca flavescens</u>	Fig. 20

SCIENTIFIC NAME INDEX

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>FIGURE NUMBER</u>
<u>Acepenser oxyrhynchus</u>	Sturgeon	Fig. 37
<u>Alosa aestivalis</u>	Blueback	Fig. 4
<u>Alosa mediocris</u>	Hickory Shad	Fig. 6
<u>Alosa pseudoharengus</u>	Alewife	Fig. 1
<u>Alosa sapidissima</u>	American Shad	Fig. 2
<u>Anguilla rostrata</u>	American Eel	Fig. 36
<u>Archosargus probatocephalus</u>	Sheepshead	Fig. 27
<u>Brevoortia tyrannus</u>	Menhaden	Fig. 7
<u>Centropristis striata</u>	Black Sea Bass	Fig. 29
<u>Chaetodipterus faber</u>	Spadefish	Fig. 25
<u>Clupea harengus</u>	Sea Herring	Fig. 3
<u>Cynoscion nebulosus</u>	Spotted Seatrout	Fig. 13
<u>Cynoscion regalis</u>	Weakfish	Fig. 14
<u>Cyprinus carpos</u>	Carp	Fig. 30
<u>Dorosoma cepedianum</u>	Gizzard Shad	Fig. 5
<u>Leiostomus xanthurus</u>	Spot	Fig. 11
<u>Lepisosteus osseus</u>	Longnosed Gar	Fig. 38
<u>Lepomis sp.</u>	Sunfish	Fig. 22
<u>Menticirrhus saxatilis</u>	Northern Kingfish	Fig. 12
<u>Micropogon undulatus</u>	Croaker	Fig. 8
<u>Morone americana</u>	White Perch	Fig. 21
<u>Morone saxatilis</u>	Striped Bass	Fig. 18
<u>Mugil cephalus</u>	Striped Mullet	Fig. 31
<u>Paralichthys dentatus</u>	Summer Flounder	Fig. 32
<u>Peprilus alepidotus</u>	Harvestfish	Fig. 24

SCIENTIFIC NAME INDEX (cont'd)

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>FIGURE NUMBER</u>
<u>Peprilus triacanthus</u>	Butterfish	Fig. 23
<u>Perca flavescens</u>	Yellow Perch	Fig. 20
<u>Pogonias cromis</u>	Black Drum	Fig. 9
<u>Pomatomus saltatrix</u>	Bluefish	Fig. 15
<u>Pomoxis sp.</u>	Crappie	Fig. 19
<u>Pseudopleuronectes americanus</u>	Winter Flounder	Fig. 33
<u>Rachycentron canadum</u>	Cobia	Fig. 16
<u>Sciaenops ocellata</u>	Red Drum	Fig. 10
<u>Scomberomorus maculatus</u>	Spanish Mackerel	Fig. 17
<u>Sphoeroides maculatus</u>	Northern Puffer	Fig. 34
<u>Stenotomus chrysops</u>	Scup	Fig. 26
<u>Tautoga onitis</u>	Tautog	Fig. 28
	Shark	Fig. 35