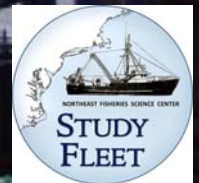


COMMERCIAL FISHERY SPECIES GUIDE



A Photo Guide to Commercially Encountered
Marine Fishes of the Northwest Atlantic
Second Edition



COMMERCIAL FISHERY SPECIES GUIDE

A Photo Guide to Commercially Encountered
Marine Fishes of the Northwest Atlantic

Second Edition



Michael Ball
National Oceanic and Atmospheric Administration
Northeast Fisheries Science Center
Cooperative Research Program
Study Fleet
166 Water Street
Woods Hole, MA 02543



TABLE OF CONTENTS

Introduction.....	4	Drums.....	78-87
References Cited.....	6	Porgies, Spadefish, Wrasses, &	
Glossary of Terms.....	7	Grunts.....	88-96
Diagrams of Select Terms.....	8	Basses.....	97-102
Rays & Skates.....	9-20	Laterally Compressed.....	103-108
Flatfish.....	21-31	Eel-Like Fish.....	109-117
Gadids & Hakes.....	32-42	Other Round Fish.....	118-136
Scorpionfish & Sea Robins.....	43-47	Crustaceans & Invertebrates.....	137-151
Sculpins.....	48-51	Sturgeon.....	152-153
Herring.....	52-58	Sharks.....	154-167
Mackerel.....	59-66	Index.....	168-170
Jacks.....	67-77		

INTRODUCTION

Study Fleet is a partner under the NOAA Fisheries Service Cooperative Research program that works with commercial fisherman to provide quality, fishery-dependent data. At the core of the project lies the fishermen's responsibility to enter haul by haul catch information on as detailed a species level as possible. While fishermen are extremely familiar with species of commercial value, as well as those impacted by regulations, they may not be as familiar with some of the unregulated, or more cryptic discard species. In these situations, without the proper resources, identification and subsequent accurate recording can be troublesome. Although there are many fish guides available to fishermen, the nature of commercial fisheries (along with regulations requiring the immediate disposition of discard species) does not allow enough time to browse large reference documents in order to accurately match up live specimens to sketches. The Study Fleet received a request from participant commercial fisherman to produce a picture guide of selected species to facilitate faster, easier identification, and accurate recording. This guide is a result of that request.

A list of species was initially created by compiling Study Fleet and Northeast Observer Program catch records in order to identify species that were frequently encountered in Southern New England, Georges Bank, and the Gulf of Maine. The resulting list was then cross-referenced with a list of species encountered by the Ecosystems Survey Branch on their bottom trawl surveys. As document length was an important factor, cryptic species inclusion was based more on species size, and likelihood of retention in certain fisheries, rather than strict geographical abundance. For example, a stray triggerfish has a higher chance of being retained in a 6.5" codend than a locally abundant sand lance. Other species in this guide may not be encountered in large mesh otter trawls,

yet were included since they may be more prevalent in certain deep water, small mesh, and longline fisheries in which our participant vessels operate. Factors such as water temperature and the northern seasonal migration of southern species also resulted in the inclusion of species that did not make the initial cut, as they may be encountered during the summer and fall fishing seasons. Although commonly retained species were originally omitted to minimize document length, the decision was made to include certain flatfish, skates, and gadids so that the guide may be used by groups that may not have as strong an understanding of retained species as commercial fishermen.

In addition to the inclusion of resident knowledge and certain easily identifiable visible characteristics, it was necessary to source published material to supplement species descriptions. As all of the species in this guide have been previously described, their key characteristics were gathered from a number of sources. The *guide to sharks, tunas & billfishes of the U.S. Atlantic & Gulf of Mexico* (Schulze-Haugen et al. 2003) was particularly helpful in describing certain mackerel and shark species. Characteristics regarding commonly encountered species in the Gulf of Maine were gathered primarily from *Bigelow and Schroeder's fishes of the Gulf of Maine* (Collette and Klein-MacPhee 2002), while *A field guide to Atlantic coast fishes of North America* (Robins et al. 1986) and *FishBase* (Froese and Pauly 2012) proved valuable in identifying characteristics for the more obscure and less frequently encountered species. The *integrated taxonomic information system on-line database* (2012) was used to provide accepted and up to date scientific names.

Special thanks to Nicholas Buchan, Pete Chase, Ian Conboy, John Galbraith, Brian Gervelis, Kevin Jackson, Sandra Mataronas, and Christopher Sarro for their feedback and contributions.

REFERENCES CITED

2012. Integrated taxonomic information system on-line database. [Internet]. [cited 2012 July 16]. Available from: www.itis.gov.
- Cohen DM, Inada T, Iwamoto T, Scialabba N. 1990. FAO species catalogue vol. 10 gadiform fishes of the world (order gadiformes). FAO Fisheries Synopsis 125(10):83-335.
- Collette BB, Klein-MacPhee G. Editors. 2002. *Bigelow and Schroeder's fishes of the Gulf of Maine*. 3rd ed. Washington and London: Smithsonian Institution Press.
- Froese R, Pauly D. Editors. 2012. *FishBase*. [Internet]. [cited 2012 August 15]. Available from: www.fishbase.org.
- Gosner KL. 1978. *A field guide to the Atlantic seashore from the Bay of Fundy to Cape Hatteras*. New York (NY): Houghton Mifflin Company.
- Nielsen JG, Cohen DM, Markle DF, Robins CR. 1999. FAO species catalogue vol. 18 ophidiiform fishes of the world (order ophidiiformes). FAO Fisheries Synopsis 125(18):34-37.
- Palomares MLD, Pauly D. Editors. 2012. *SeaLifeBase*. [Internet]. [cited 2012 August 15]. Available from: www.sealifebase.org.
- Robins CR, Ray GC, Douglass J, Freund R. 1986. *A field guide to Atlantic coast fishes of North America*. New York (NY): Houghton Mifflin Company.
- Schulze-Haugen M, Corey T, Kohler N. 2003. *Guide to sharks, tunas & billfishes of the U.S. Atlantic & Gulf of Mexico*. Jamestown (RI): Puffin Enterprises.

GLOSSARY OF TERMS

Adipose Fin: Soft, fleshy fin located behind the dorsal fin and in front of the caudal fin.

Anal Fin: Runs lengthwise on the underside of the fish; close to tail and anal opening.

Anterior: Front of a fish or crustacean; in front.

Caudal Fin: Rear most fin; tail.

Caudal Peduncle: Keel; area in front of the caudal fin.

Concave: Curving inwards.

Convex: Curving outwards.

Dorsal: Upper side of fish and crustaceans.

Gill Arch: Bony or cartilaginous support structure to which gill rakers are attached.

Gill Rakers: Bony or cartilaginous projections off the gill arch.

Lateral: Right (or left) side of fish and crustaceans.

Lateral Line: Sensory organ, visible as a faint line running down the lateral side of fish.

Opercle: Uppermost bone of the gill cover.

Operculum: Gill cover.

Pectoral Fin: Paired fins located on each side of the fish, typically immediately behind the operculum.

Pelvic Fin: Paired fins located on the underside of the fish; location may vary by species.

Posterior: Back of a fish or crustacean; behind.

Preopercular: Positioned in front of the operculum.

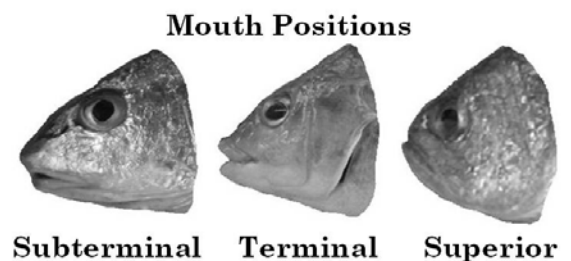
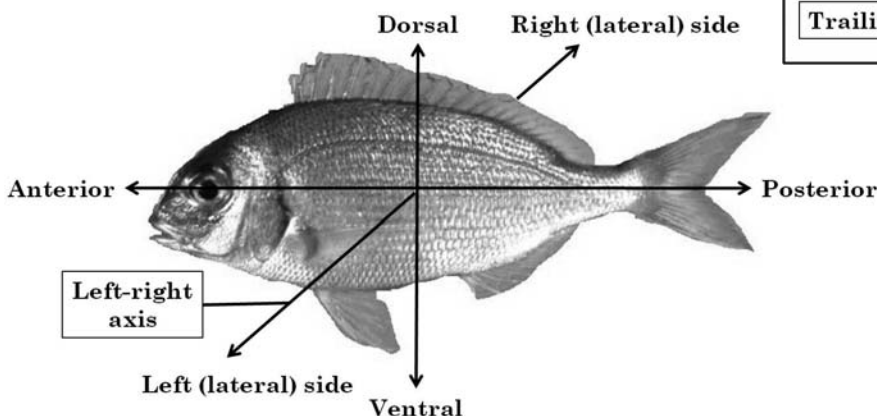
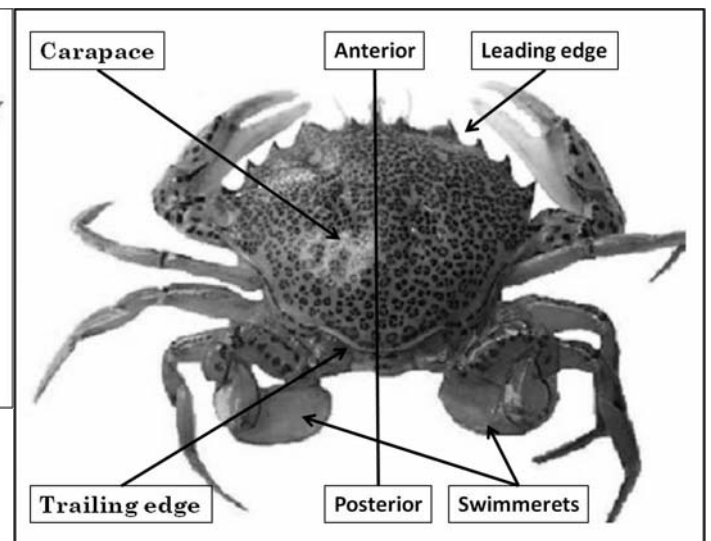
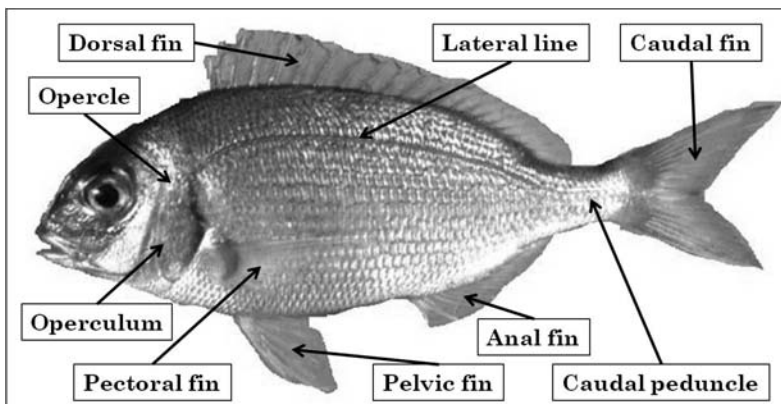
Scutes: Rough, protruding scales; typically on the caudal peduncle and/or along the lateral line.

Subterminal Mouth: Mouth located on the underside of the snout.

Superior Mouth: Uprturned mouth.

Terminal Mouth: Mouth located at the tip of the snout.

Ventral: Underside of fish and crustaceans.



BARNDOOR SKATE (*Dipturus laevis*)

COLOR: Brown with dark spots on dorsal surface. Dusky ventral surface.

BODY: Wing tips make sharp corners (Robins et al. 1986).

HEAD: Pointed snout; not clear.

SPINES: No mid-dorsal spines on disk (Robins et al. 1986). Mid-dorsal row of spines down tail with a row of lateral spines on either side.



PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

RAYS & SKATES

RAYS & SKATES

LITTLE SKATE (*Leucoraja erinacea*)

COLOR: Olive-brown with uniform dark spots on dorsal surface.

BODY: Concave anterior edge of disk. Max size approximately 24in (Collette and Klein-MacPhee 2002).

SPINES: 2 or more rows of dorsal and lateral spines on tail.

MATURITY: Sexually mature over approximately 14in (Collette and Klein-MacPhee 2002). Mature male's claspers extend beyond rear of disk. Mature females have rough patch either side of cloaca. Immature male's claspers do not extend beyond disk. Immature females lack rough patch near cloaca. Mid-dorsal spines present on disk in juveniles, but are lost with maturity (Robins et al. 1986).



MAY BE CONFUSED WITH: Winter skate (pg. 11).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

WINTER SKATE (*Leucoraja ocellata*)

COLOR: Olive-brown with uniform dark spots on dorsal surface.

BODY: Concave anterior edge of disk (Collette and Klein-MacPhee 2002).

SPINES: 2 or more rows of dorsal and lateral spines on tail.

MATURITY: Sexually mature over approximately 28in (Collette and Klein-MacPhee 2002). Mature male's claspers extend beyond rear of disk. Mature females have rough patch either side of cloaca. Immature male's claspers do not extend beyond disk. Immature females lack rough patch near cloaca. Mid-dorsal spines on disk present in juveniles, but are lost with maturity (Robins et al. 1986).



MAY BE CONFUSED WITH: Little skate (pg. 10).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

RAYS & SKATES

RAYS & SKATES

SMOOTH SKATE (*Malacoraja senta*)

COLOR: Gray-brown dorsal surface. White ventral surface. Yellow band at anterior portion of tail; particularly clear in juveniles.

BODY: Straight anterior edge of disk.

SPINES: Small row of mid-dorsal spines on disk; continuing down tail. Small spines posterior to eye. Rest of disk feels like sandpaper and large individuals may have small, sharp spines on edge of disk.



MAY BE CONFUSED WITH: Thorny skate (pg. 13).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

THORNY SKATE (*Amblyraja radiata*)

COLOR: Brown with some dark spots on dorsal surface (Robins et al. 1986). White ventral surface.

BODY: Shorter tail than other skates of comparable size.

SPINES: Large row of mid-dorsal spines on disk; continuing down tail. Scattered dorsal spines on disk.



MAY BE CONFUSED WITH: Rosette skate, (pg. 15), smooth skate (pg. 12).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

RAYS & SKATES

RAYS & SKATES

CLEARNOSE SKATE (*Raja eglanteria*)

COLOR: Olive-brown with dark bars dorsal surface. White ventral surface.

BODY: Pointed snout with slightly concave anterior edge of disk (Robins et al. 1986).

HEAD: Translucent nose.

SPINES: Single row of mid-dorsal spines. Large mid-dorsal and lateral spines on tail (Robins et al. 1986).

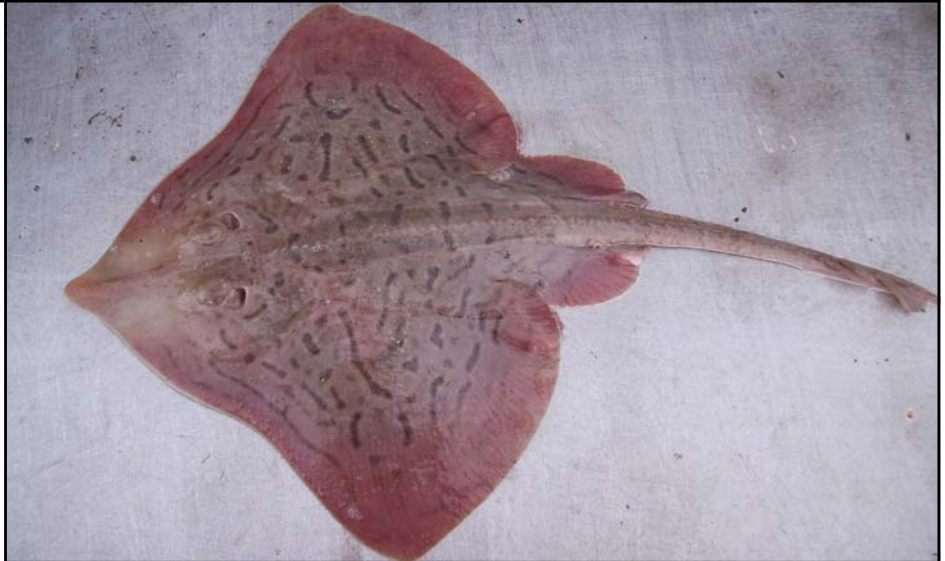


PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

ROSETTE SKATE (*Leucoraja garmani*)

COLOR: Red-brown with distinct rosette patterns on dorsal surface. White ventral surface.

BODY: Relatively straight anterior edge of disk. Long tail.

SPINES: Several rows of mid-dorsal spines on disk. Dorsal and lateral spines on tail.



MAY BE CONFUSED WITH: Thorny skate (pg. 13).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

RAYS & SKATES

RAYS & SKATES

BULLNOSE RAY (*Myliobatis freminvillii*)

COLOR: Olive-brown dorsal surface.

BODY: Wings long and pointed (Robins et al. 1986) with concave posterior edges.

HEAD: Broad, projecting snout (Robins et al. 1986).

SPINES: Spine near origin of tail. Few mid-dorsal spines on adults (Robins et al. 1986).



MAY BE CONFUSED WITH: Cownose ray (pg. 17).

PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

COWNOSE RAY (*Rhinoptera bonasus*)

COLOR: Olive-brown dorsal surface.

BODY: Wings long and pointed (Robins et al. 1986) with concave posterior edges.

HEAD: Projecting, squared snout with indentation between eyes (Robins et al. 1986).

SPINES: Spine near origin of tail.



MAY BE CONFUSED WITH: Bullnose ray (pg. 16).

PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

RAYS & SKATES

RAYS & SKATES

ATLANTIC TORPEDO (*Torpedo nobiliana*)

COLOR: Purple-gray dorsal surface. White ventral surface.

BODY: Broad disk with flat anterior edge. Robust tail with two dorsal fins.

SPINES: No spines on disk or tail.



PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

BUTTERFLY RAY (*Gymnura* sp.)

COLOR: Gray-brown dorsal surface with pale spots or blotches.

BODY: Disk much wider than it is long. Concave anterior edge of disk. Small tail.

SPINES: Smooth butterfly ray does not have a spine on the tail. Spiny butterfly ray has a spine near origin of the tail.



PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

RAYS & SKATES

RAYS & SKATES

ROUGHTAIL STINGRAY (*Dasyatis centroura*)

COLOR: Brown dorsal surface.

BODY: Rhombus shaped disk. One of the largest species of stingray.

SPINES: Irregularly arranged mid-dorsal spines. Scattered dorsal spines, with concentrations across shoulders. Rows of dorsal and lateral spines on tail (Robins et al. 1986).



PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

WINDOWPANE (SAND DAB) (*Scophthalmus aquosus*)

COLOR: Red-brown left lateral side, covered with brown and pale spots that continue onto dorsal, anal, and caudal fins.

BODY: Left-eyed. Thin body.

FINS: Convex caudal fin.

HEAD: Blunt head with large mouth and bony notch on chin.

LATERAL LINE: Lateral line arches significantly over pectoral fin.



PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

FLATFISH

FLATFISH

ATLANTIC HALIBUT (*Hippoglossus hippoglossus*)

COLOR: Variable olive-green right lateral side. White left lateral side.

BODY: Right-eyed. Robust body.

FINS: Concave caudal fin (Robins et al. 1986).

HEAD: Large jaw with teeth. Top eye has migrated completely to the right lateral side of fish.

LATERAL LINE: Lateral line arches significantly over pectoral fin.



MAY BE CONFUSED WITH: Greenland halibut (pg. 23).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

GREENLAND HALIBUT (*Reinhardtius hippoglossoides*)

COLOR: Gray-brown right lateral side. Dusky left lateral side.

BODY: Right-eyed.

FINS: Concave caudal fin (Robins et al. 1986).

HEAD: Large jaw with teeth. Top eye has not migrated completely to right lateral side of fish.

LATERAL LINE: Straight lateral line (Robins et al. 1986).



MAY BE CONFUSED WITH: Atlantic halibut (pg. 22).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

FLATFISH

FLATFISH

FOURSPOT FLOUNDER (*Hippoglossina oblonga*)

COLOR: Brown with four distinct spots on posterior half of body.

BODY: Left-eyed. Frail body.

FINS: Convex caudal fin.

HEAD: Large jaw with teeth.

LATERAL LINE: Lateral line arches significantly over pectoral fin (Collette and Klein-MacPhee 2002).



MAY BE CONFUSED WITH: Summer flounder (fluke) (pg. 25), witch flounder (pg. 29).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

SUMMER FLOUNDER (FLUKE) (*Paralichthys dentatus*)

COLOR: Variable brown-green left lateral side. White right lateral side.

BODY: Left-eyed. Robust body.

FINS: Convex caudal fin.

HEAD: Large jaw with teeth.

LATERAL LINE: Lateral line arches significantly over pectoral fin (Collette and Klein-MacPhee 2002).



MAY BE CONFUSED WITH: Fourspot flounder (pg. 24), winter flounder (pg. 26).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

FLATFISH

FLATFISH

WINTER FLOUNDER (*Pseudopleuronectes americanus*)

COLOR: Olive-green right lateral side. White left lateral side.

BODY: Right-eyed. Robust body.

FINS: Convex caudal fin.

HEAD: Small mouth.

LATERAL LINE: Straight lateral line (Robins et al. 1986).



MAY BE CONFUSED WITH: Summer flounder (pg. 25), yellowtail flounder (pg. 27).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

YELLOWTAIL FLOUNDER (*Limanda ferruginea*)

COLOR: Red-brown right lateral side with variable rust colored spots. White left lateral side with yellow caudal peduncle.

BODY: Right-eyed.

FINS: Convex caudal fin.

HEAD: Indented forehead. Projecting snout with small mouth.

LATERAL LINE: Lateral line arches significantly over pectoral fin (Collette and Klein-MacPhee 2002).



MAY BE CONFUSED WITH: American plaice (pg. 28), winter flounder (pg. 26).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

FLATFISH

FLATFISH

AMERICAN PLAICE (*Hippoglossoides platessoides*)

COLOR: Red-brown.

BODY: Right-eyed.

FINS: Convex caudal fin (Collette and Klein-MacPhee 2002).

HEAD: Pointed head with large mouth.

LATERAL LINE: Lateral line arches very slightly over pectoral fin.



MAY BE CONFUSED WITH: Witch flounder (pg. 29), yellowtail flounder (pg. 27).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

WITCH FLOUNDER (*Glyptocephalus cynoglossus*)

COLOR: Olive-brown right lateral side. Dusky left lateral side. Dark dorsal, anal, pectoral, and caudal fins.

BODY: Right-eyed. Thin body.

FINS: Convex caudal fin.

HEAD: Small head and mouth. Slime secreting pores on head. Large eyes.

LATERAL LINE: Straight lateral line (Robins et al. 1986).



MAY BE CONFUSED WITH: American plaice (pg. 28), fourspot flounder (pg. 24).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

FLATFISH

FLATFISH

GULF STREAM FLOUNDER (*Citharichthys arctifrons*)

COLOR: Light brown.

BODY: Left-eyed. Body more elongated than smallmouth flounder. Max size approximately 7in (Robins et al. 1986).

FINS: Convex caudal fin.

HEAD: Snout has small, hard, horn-like projection above mouth.

LATERAL LINE: Lateral line arches slightly over pectoral fin.



MAY BE CONFUSED WITH: Smallmouth flounder (pg. 31).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

SMALLMOUTH FLOUNDER (*Etropus microstomus*)

COLOR: Light brown.

BODY: Left-eyed. Body deeper than Gulf Stream flounder. Max size approximately 5in (Robins et al. 1986).

FINS: Convex caudal fin.

HEAD: Snout lacks horn-like projection above mouth.

LATERAL LINE: Straight lateral line (Collette and Klein-MacPhee 2002).



MAY BE CONFUSED WITH: Gulf Stream flounder (pg. 30).

PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

FLATFISH

GADIDS & HAKES

ATLANTIC COD (*Gadus morhua*)

COLOR: Red-green dorsal and lateral surfaces, covered with red-brown spots. White ventral surface. White lateral line (Robins et al. 1986).

FINS: Three dorsal fins (Collette and Klein-MacPhee 2002). Slightly forked caudal fin.

HEAD: Large chin barbel.



PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

HADDOCK (*Melanogrammus aeglefinus*)

COLOR: Purple-gray dorsal surface. Silver-white ventral surface. Dark lateral line with a dark blotch behind the pectoral fin.

FINS: Three dorsal fins (Collette and Klein-MacPhee 2002). Forked caudal fin.

HEAD: Small chin barbel (Collette and Klein-MacPhee 2002). Subterminal mouth.



MAY BE CONFUSED WITH: Pollock (pg. 34).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

GADIDS & HAKES

GADIDS & HAKES

POLLOCK (*Pollachius virens*)

COLOR: Olive-gray dorsal and lateral surfaces. White lateral line.

FINS: Three dorsal fins. Forked caudal fin.

HEAD: Very small chin barbel. Terminal mouth with lower jaw projecting (Robins et al. 1986).



MAY BE CONFUSED WITH: Haddock (pg. 33).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

CUSK (*Brosme brosme*)

COLOR: Light brown above pectoral fin. Pale ventral surface. Dorsal and anal fins are dark, but have white outer edge.

FINS: One dorsal and anal fin, partially connected to the caudal fin (Robins et al. 1986).

HEAD: One large chin barbel.



PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

GADIDS & HAKES

GADIDS & HAKES

FOURBEARD ROCKLING (*Enchelyopus cimbrius*)

COLOR: Olive-brown above pectoral fin. Pale ventral surface. Posterior tip of second dorsal fin and anal fin have prominent black areas, as does the ventral tip of the caudal fin.

FINS: Large leading ray of first dorsal fin. Second dorsal fin and anal fin extend down body.

HEAD: One large barbel under the mouth. Three additional barbels on the snout (Robins et al. 1986).



PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

SILVER HAKE (WHITING) (*Merluccius bilinearis*)

COLOR: Silver.

FINS: True pelvic and pectoral fins. No filament on first dorsal.

HEAD: Mouth dark with large teeth. Lower jaw projects (Collette and Klein-MacPhee 2002). No chin barbel. Head not as robust as offshore hake.

GILL RAKERS: 16-20 gill rakers on first gill arch (Cohen et al. 1990).



MAY BE CONFUSED WITH: Offshore hake (black whiting) (pg. 38).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

GADIDS & HAKES

GADIDS & HAKES

OFFSHORE HAKE (BLACK WHITING) (*Merluccius albidus*)

COLOR: Silver.

FINS: True pelvic and pectoral fins. No filament on first dorsal.

HEAD: Mouth dark with large teeth. Lower jaw projects. No chin barbel. Eyes a bit larger than silver hake. Head more robust and square between the eyes than silver hake.

GILL RAKERS: 8-11 gill rakers on first gill arch (Cohen et al. 1990).



MAY BE CONFUSED WITH: Silver hake (whiting) (pg. 37).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

RED HAKE (*Urophycis chuss*)

COLOR: Red-brown.

BODY: Larger scales than white hake, which frequently chafe off in gear. Max size 70cm.

FINS: Long filament extends from first dorsal fin. Pelvic filament reaches, or extends beyond, anal opening.

HEAD: Small chin barbel.

GILL RAKERS: 3 gill rakers on upper elbow of first gill arch (Cohen et al. 1990).



MAY BE CONFUSED WITH: Longfin hake (pg. 42), spotted hake (pg. 41), white hake (pg. 40).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

GADIDS & HAKES

GADIDS & HAKES

WHITE HAKE (*Urophycis tenuis*)

COLOR: Olive-brown.

BODY: Smaller scales than red hake; do not chafe easily in gear.

FINS: Short filament extends from first dorsal fin. Pelvic filament does not reach anal opening.

HEAD: Small chin barbel.

GILL RAKERS: 2 gill rakers on upper elbow of first gill arch (Cohen et al. 1990).



MAY BE CONFUSED WITH: Longfin hake (pg. 42), red hake (pg. 39), spotted hake (pg. 41).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

SPOTTED HAKE (*Urophycis regia*)

COLOR: Olive-brown above pectoral fin with black and white dashed lateral line. Black spot on first dorsal fin.

BODY: May chafe in gear.

FINS: No filament on first dorsal. Pelvic filaments.

HEAD: Small chin barbel.



MAY BE CONFUSED WITH: Longfin hake (pg. 42), red hake (pg. 39), white hake (pg. 40).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

GADIDS & HAKES

GADIDS & HAKES

LONGFIN HAKE (*Phycis chesteri*)

COLOR: Gray-brown. Dark edges on dorsal and anal fins (Robins et al. 1986).

FINS: Very long filaments extending from the first dorsal fin. Long pelvic filaments.

HEAD: Small chin barbel (Collette and Klein-MacPhee 2002).



MAY BE CONFUSED WITH: Red hake (pg. 39), spotted hake (pg. 41), white hake (pg. 40).

PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

ARMORED SEA ROBIN (*Peristedion* sp.)

COLOR: Red-orange.

BODY: Large boney plates over entire body (Collette and Klein-MacPhee 2002).

FINS: Long, broad pectoral fins. Lower parts of pectoral rays are free-floating and finger-like.

HEAD: Long barbels under chin. Two small spines protrude forward from snout.



PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

SCORPIONFISH & SEAROBINS

SCORPIONFISH & SEAROBINS

STRIPED SEA ROBIN (*Prionotus evolans*)

COLOR: Red-brown. Black blotch on dorsal fin. Two horizontal black stripes down body (Robins et al. 1986).

FINS: Long, broad pectoral fins. Lower parts of pectoral rays are free-floating and finger-like.



MAY BE CONFUSED WITH: Northern sea robin (pg. 45).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

NORTHERN SEA ROBIN (*Prionotus carolinus*)

COLOR: Brown-green. Black spot on dorsal fin. No dark horizontal stripes down body.

FINS: Long, broad pectoral fins. Lower parts of pectoral rays are free-floating and finger-like.



MAY BE CONFUSED WITH: Striped sea robin (pg. 44).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

SCORPIONFISH & SEAROBINS

SCORPIONFISH & SEAROBINS

ACADIAN REDFISH (OCEAN PERCH) (*Sebastes fasciatus*)

COLOR: Red. Gill cavity and inside of mouth pink-flesh colored.

FINS: Spiny dorsal, pectoral, pelvic, and anal fins.

HEAD: Bony notch present under chin.

SPINES: Spines present on operculum.



MAY BE CONFUSED WITH: Blackbelly rosefish (pg. 47).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

BLACKBELLY ROSEFISH (*Helicolenus dactylopterus*)

COLOR: Pink-white-orange mottled. Gill cavity and inside of mouth purple-black (Robins et al. 1986).

FINS: Spiny dorsal, pectoral, pelvic, and anal fins.

HEAD: No bony notch under chin.

SPINES: Spines present on operculum.



MAY BE CONFUSED WITH: Acadian redfish (ocean perch) (pg. 46).

PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

SCORPIONFISH & SEAROBINS

SCULPINS

LONGHORN SCULPIN (*Myoxocephalus octodecemspinosus*)

COLOR: Green-brown mottled.

BODY: May vibrate when held.

SPINES: Large preopercular spines.



MAY BE CONFUSED WITH: Shorthorn sculpin (pg. 49).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

SHORTHORN SCULPIN (*Myoxocephalus scorpius*)

COLOR: Brown mottled. Light spots on ventral surface.

BODY: May vibrate when held.

HEAD: Large head and mouth.

SPINES: Short preopercular spines (Robins et al. 1986).



MAY BE CONFUSED WITH: Longhorn sculpin (pg. 48), sea raven (pg. 51).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

SCULPINS

SCULPINS

MOUSTACHE SCULPIN (*Triglops murrayi*)

COLOR: Red-brown. Black bar on snout just above jaw and below eyes (Collette and Klein-MacPhee 2002).

BODY: Tapered body with plate like scales along lateral line. Long anal fin. Max size approximately 6in (Collette and Klein-MacPhee 2002).



PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

SEA RAVEN (*Hemitripterus americanus*)

COLOR: Variable body shading. Brown/orange/yellow.

BODY: Body rough to the touch. Many tabs of skin hang off head and spines. Inflates with water. Often comes up in gear in this state.



MAY BE CONFUSED WITH: Shorthorn sculpin (pg. 49).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

SCULPINS

HERRING

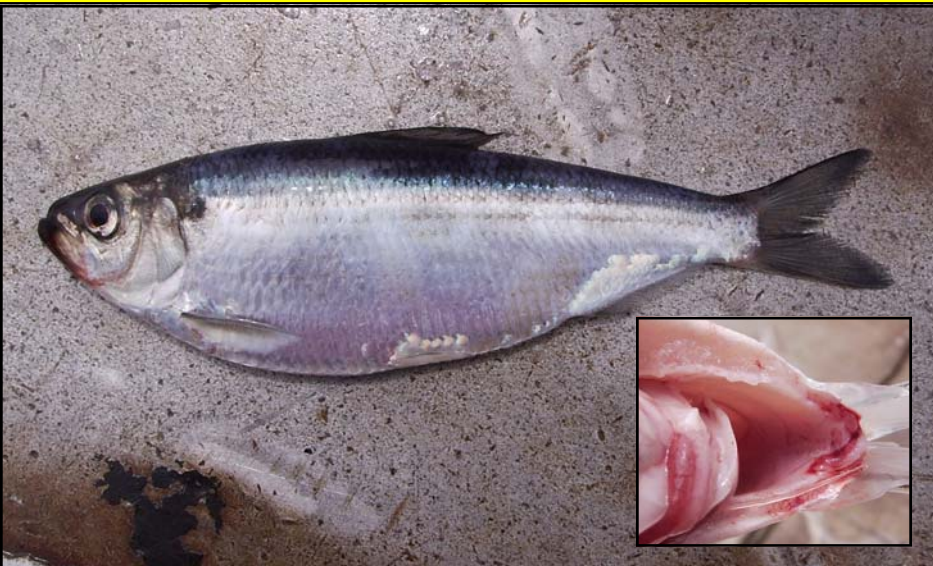
ALEWIFE (*Alosa pseudoharengus*)

COLOR: Blue-green dorsal surface. Dark spot behind opercle. Pink gut cavity lining.

BODY: Deep body (Collette and Klein-MacPhee 2002).

HEAD: Eye diameter greater than snout length. Lower jaw protrudes slightly when mouth is closed (Collette and Klein-MacPhee 2002).

SCUTES: Scutes along ventral surface; rough to the touch.



MAY BE CONFUSED WITH: American shad (pg. 54), Atlantic menhaden (pg. 58), Atlantic thread herring (pg. 55), blueback herring (pg. 53).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

BLUEBACK HERRING (*Alosa aestivalis*)

COLOR: Blue dorsal surface. Dark spot behind opercle. Dark gut cavity lining.

BODY: Deep body (Collette and Klein-MacPhee 2002).

HEAD: Eye diameter smaller than snout length. Lower jaw protrudes slightly when mouth is closed (Collette and Klein-MacPhee 2002).

SCUTES: Scutes along ventral surface; rough to the touch.



MAY BE CONFUSED WITH: Alewife (pg. 52), American shad (pg. 54), Atlantic menhaden (pg. 58), Atlantic thread herring (pg. 55).

PHOTO CREDIT: NOAA / NMFS / NEFSC / FSB

HERRING

HERRING

AMERICAN SHAD (*Alosa sapidissima*)

COLOR: Dark spot behind opercle. Line of round, dark spots begin behind operculum and continue along lateral line.

HEAD: Lower jaw does not protrude beyond upper jaw. Jaw originates under eye.

SCUTES: Scutes along ventral surface; rough to the touch.

GILL RAKERS: 59-73 gill rakers on lower limb of first gill arch (Robins et al. 1986).



MAY BE CONFUSED WITH: Alewife (pg. 52), Atlantic thread herring (pg. 55), Atlantic menhaden (pg. 58), blueback herring (pg. 53).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

ATLANTIC THREAD HERRING (*Opisthonema oglinum*)

COLOR: Green-blue dorsal surface. Dark spot behind opercle (Robins et al. 1986). Spots may continue down lateral line. Faint horizontal streaks above lateral line.

BODY: Deeply curved ventral surface (Robins et al. 1986).

FINS: Long 'thread' protrudes off posterior base of dorsal fin.

HEAD: Pointed head.

SCUTES: Scutes along ventral surface; rough to the touch.



MAY BE CONFUSED WITH: Alewife (pg. 52), American shad (pg. 54), blueback herring (pg. 53).

PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

HERRING

HERRING

ATLANTIC HERRING (*Clupea harengus*)

COLOR: Blue-green dorsal surface.

BODY: Long and slender.

FINS: Dorsal fin bisects body.

SCUTES: No scutes along ventral surface; smooth to the touch.



MAY BE CONFUSED WITH: Round herring (pg. 57).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

ROUND HERRING (*Etrumeus teres*)

COLOR: Blue-green dorsal surface.

BODY: Long and slender. Body rounded in cross section. Max size approximately 10in (Robins et al. 1986).

SCUTES: No scutes along ventral surface; smooth to the touch.



MAY BE CONFUSED WITH: Atlantic herring (pg. 56).

PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

HERRING

HERRING

ATLANTIC MENHADEN (*Brevoortia tyrannus*)

COLOR: Yellow tint. Variable dark spots on side; fade with age. Dark spot behind opercle.

BODY: Deep body.

HEAD: Head approximately 1/3 length of body.

SCUTES: Scutes along ventral surface; rough to the touch.



MAY BE CONFUSED WITH: Alewife (pg. 52), American shad (pg. 54), blueback herring (pg. 53).

PHOTO CREDIT: MBL / Flescher Collection

ATLANTIC BONITO (*Sarda sarda*)

COLOR: Blue-green dorsal surface with dark horizontal stripes. Juveniles may have obscure vertical bars (Robins et al. 1986). No spots below pectoral fin.

BODY: Undulating lateral line.

HEAD: Large mouth.



MAY BE CONFUSED WITH: Little tunny (false albacore) (pg. 64).

PHOTO CREDIT: MBL / Flescher Collection

MACKEREL

MACKEREL

ATLANTIC MACKEREL (*Scomber scombrus*)

COLOR: Blue-green above pectoral fin with vertical bars that terminate around the lateral line (Robins et al. 1986).

FINS: Anal fin origin directly under second dorsal fin origin.



MAY BE CONFUSED WITH: Atlantic chub mackerel (pg. 61).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

ATLANTIC CHUB MACKEREL (*Scomber colias*)

COLOR: Blue-green above pectoral fin with vertical bars that terminate around lateral line. Bars turn into spots below lateral line (Robins et al. 1986).



MAY BE CONFUSED WITH: Atlantic mackerel (pg. 60).

PHOTO CREDIT: NOAA / NMFS / NEFSC / FSB

MACKEREL

MACKEREL

KING MACKEREL (*Scomberomorus cavalla*)

COLOR: No markings on adults. Juveniles have dark spots on lateral surface (Robins et al. 1986).

LATERAL LINE: Lateral line turns downward quickly at second dorsal fin, drops down, and then curves back up to caudal fin.



MAY BE CONFUSED WITH: Spanish mackerel (pg. 63).

PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

SPANISH MACKEREL (*Scomberomorus maculatus*)

COLOR: Large brass colored spots on lateral surface. Dark first dorsal fin.

LATERAL LINE: Lateral line slopes evenly downward posterior to pectoral fin with no sudden drops or undulations (Robins et al. 1986).



MAY BE CONFUSED WITH: King mackerel (pg. 62).

PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

MACKEREL

MACKEREL

LITTLE TUNNY (FALSE ALBACORE) (*Euthynnus alletteratus*)

COLOR: Horizontal bars on dorsal surface. 4-8 dark spots between pectoral and pelvic fins (Schulze-Haugen et al. 2003).

FINS: Concave first dorsal fin. Short and broad pectoral fins.



MAY BE CONFUSED WITH: Atlantic bonito (pg. 59).

PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

SKIPJACK TUNA (*Katsuwonus pelamis*)

COLOR: Purple-blue dorsal surface. Silver lateral sides and ventral surface. 4-6 horizontal dark stripes below pectoral fin (Schulze-Haugen et al. 2003).

FINS: Concave first dorsal fin.



PHOTO CREDIT: University of Cape Verde / Rui M. Freitas

MACKEREL

MACKEREL

BLUEFIN TUNA (*Thunnus thynnus*)

COLOR: Dark iridescent-blue dorsal surface. Silver lateral sides and belly. Red-brown second dorsal fin stands taller than first dorsal fin (Schulze-Haugen et al. 2003).

FINS: Short pectoral fins end before origin of second dorsal fin (Schulze-Haugen et al. 2003). Yellow finlets with dark edges (Robins et al. 1986).



PHOTO CREDIT: NOAA / NMFS / NEFSC / FSB

PERMIT (*Trachinotus falcatus*)

COLOR: Silver. May have dark area posterior to pectoral fin. Dark pectoral fins (Robins et al. 1986). Dark anterior edges of dorsal and anal fins.

FINS: Long anterior lobes of dorsal and anal fins (Robins et al. 1986).

HEAD: Forehead turns downward above eye.



PHOTO CREDIT: NOAA / NMFS / SEFSC / Pascagoula Laboratory; Collection of Brandi Noble

JACKS

JACKS

BANDED RUDDERFISH (*Seriola zonata*)

COLOR: Dark band from corner of eye to top of head. Vertical bands on body present in juveniles, but fade with age (Collette and Klein-MacPhee 2002).

BODY: Fleshy keel anterior to caudal fin.



MAY BE CONFUSED WITH: Greater amberjack (pg. 70), pilotfish (pg. 69).

PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

PILOTFISH (*Naucrates ductor*)

COLOR: 5-7 vertical bars visible in all ages. No dark band from corner of eye to top of head. Bars extend onto dorsal, anal, and caudal fins. Caudal fin has white tips (Robins et al. 1986).

BODY: Fleshy keel anterior to caudal fin (Robins et al. 1986).



MAY BE CONFUSED WITH: Banded rudderfish (pg. 68), greater amberjack (pg. 70).

PHOTO CREDIT: Academia Sinica, Taiwan / Dr. Kwang-Tsao Shao

JACKS

JACKS

GREATER AMBERJACK (*Seriola dumerili*)

COLOR: Blue-brown with horizontal yellow stripe along lateral line. Olive-brown band from snout, through eye, to origin of first dorsal fin (Robins et al. 1986). No vertical bands on body.

BODY: Fleshy keel anterior to caudal fin.



MAY BE CONFUSED WITH: Banded rudderfish (pg. 68), pilotfish (pg. 69).

PHOTO CREDIT: Hawaii Biological Survey / Dr. John E. Randall

ROUGH SCAD (*Trachurus lathami*)

COLOR: Iridescent. Darker blue dorsal surface.

BODY: Body elongate and slightly laterally compressed (Robins et al. 1986).

FINS: No detached finlets.

HEAD: Eye diameter smaller than snout length (Robins et al. 1986).

SCUTES: Large scutes present along entire length of lateral line (Robins et al. 1986).



MAY BE CONFUSED WITH: Bigeye scad (pg. 72), round scad (pg. 73).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

JACKS

JACKS

BIGEYE SCAD (*Selar crumenophthalmus*)

COLOR: Yellow streak along lateral line.

FINS: No detached finlets (Robins et al. 1986).

HEAD: Large eye; diameter larger than snout length (Robins et al. 1986).

SCUTES: Scutes present on posterior half of lateral line (Robins et al. 1986).



MAY BE CONFUSED WITH: Rough scad (pg. 71), round scad (pg. 73).

PHOTO CREDIT: Pedro Niny Duarte © ImagDOP

ROUND SCAD (*Decapterus punctatus*)

COLOR: Black spot on tip of opercle. Row of black spots along anterior half of lateral line (Robins et al. 1986).

BODY: Long body.

FINS: Detached finlets.

SCUTES: Scutes present along caudal peduncle (Robins et al. 1986) and posterior half of lateral line.



MAY BE CONFUSED WITH: Bigeye scad (pg. 72), rough scad (pg. 71).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

JACKS

JACKS

ATLANTIC BUMPER (*Chloroscombrus chrysurus*)

COLOR: Black spot on opercle. Black saddle on caudal peduncle (Robins et al. 1986).

BODY: Body deepest at center.

FINS: Long sickle shaped pectoral fins (Collette and Klein-MacPhee 2002).

LATERAL LINE: Anterior half of lateral line arches over pectoral fin.



MAY BE CONFUSED WITH: Blue runner (pg. 75).

PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

BLUE RUNNER (*Caranx crysos*)

COLOR: Black spot on tip of opercle (Robins et al. 1986).

BODY: Laterally compressed body.

LATERAL LINE: Arched lateral line over pectoral fin.

SCUTES: Scutes present along caudal peduncle and posterior half of lateral line.



MAY BE CONFUSED WITH: Atlantic bumper (pg. 74).

PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

JACKS

JACKS

ATLANTIC MOONFISH (*Selene setapinnis*)

COLOR: Silver.

BODY: Laterally compressed body. Ventral surface curves down from mouth and gradually upwards towards caudal fin.

FINS: Dorsal and anal fins do not have lobes.

HEAD: Steep, concave forehead (Robins et al. 1986).



MAY BE CONFUSED WITH: Lookdown (pg. 77).

PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

LOOKDOWN (*Selene vomer*)

COLOR: Silver.

BODY: Laterally compressed body; extremely thin and plate-like (Robins et al. 1986). Ventral surface horizontal under head before angling upwards towards caudal fin.

FINS: Long lobes on front of dorsal and anal fins (Robins et al. 1986).

HEAD: Steep forehead.



MAY BE CONFUSED WITH: Atlantic moonfish (pg. 76).

PHOTO CREDIT: MBL / Flescher Collection

JACKS

DRUMS

ATLANTIC CROAKER (*Micropogonias undulatus*)

COLOR: Diagonal bar pattern comprised of small dark spots. Spotted dorsal fins (Robins et al. 1986).

HEAD: Subterminal mouth with small chin barbels.



MAY BE CONFUSED WITH: Banded drum (pg. 82), black drum (pg. 80), spot (pg. 79).

PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

SPOT (*Leiostomus xanthurus*)

COLOR: Distinct spot behind operculum. Diagonal bar pattern comprised of small dark spots.

FINS: Forked caudal fin (Robins et al. 1986).

HEAD: Subterminal mouth.



MAY BE CONFUSED WITH: Atlantic croaker (pg. 78), banded drum (pg. 82), black drum (pg. 80).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

DRUMS

DRUMS

BLACK DRUM (*Pogonias cromis*)

COLOR: Silver-gray with 4-5 vertical dark bars in juveniles (Collette and Klein-MacPhee 2002). Dark fins.

HEAD: Many chin barbels (Robins et al. 1986).



MAY BE CONFUSED WITH: Atlantic croaker (pg. 78), banded drum (pg. 82), red drum (pg. 81), spot (pg. 79).

PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

RED DRUM (*Sciaenops ocellatus*)

COLOR: Bronze. Obscure stripes. Black spot(s) near caudal fin (Robins et al. 1986).

HEAD: Terminal mouth.



MAY BE CONFUSED WITH: Black drum (pg. 80).

PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

DRUMS

DRUMS

BANDED DRUM (*Larimus fasciatus*)

COLOR: Olive-gray dorsal surface. Silver ventral surface. 7-9 vertical dark bands.

HEAD: Large, superior mouth. No barbels on chin.



MAY BE CONFUSED WITH: Atlantic croaker (pg. 78), black drum (pg. 80), spot (pg. 79).

PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

SPOTTED SEATROUT (*Cynoscion nebulosus*)

COLOR: Silver with many dark spots that extend onto dorsal and caudal fins. Broad dark stripe on lateral surface in juveniles (Robins et al. 1986).

HEAD: Large, superior mouth. Two large fangs on upper jaw. No chin barbels (Robins et al. 1986).



MAY BE CONFUSED WITH: Silver seatrout (pg. 85), weakfish (seatrout) (pg. 84).

PHOTO CREDIT: MBL / Flescher Collection

DRUMS

DRUMS

WEAKFISH (SEATROUT) (*Cynoscion regalis*)

COLOR: Dark olive-blue dorsal surface. Spots may form obscure diagonal lines.

HEAD: Large, superior mouth. Two large fangs on upper jaw. No chin barbels (Robins et al. 1986).



MAY BE CONFUSED WITH: Silver seatrout (pg. 85), spotted seatrout (pg. 83).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

SILVER SEATROUT (*Cynoscion nothus*)

COLOR: Silver-gray. Dorsal and lateral surfaces may have faint, irregular spots (Robins et al. 1986).

HEAD: Large, superior mouth. Two large fangs on upper jaw. No chin barbels (Robins et al. 1986).



MAY BE CONFUSED WITH: Spotted seatrout (pg. 83), weakfish (seatrout) (pg. 84).

PHOTO CREDIT: NOAA / NMFS / SEFSC / Pascagoula Laboratory; Collection of Brandi Noble

DRUMS

DRUMS

NORTHERN KINGFISH (*Menticirrhus saxatilis*)

COLOR: Dusky bands on body. Bands make V-shaped saddle beneath first dorsal fin.

FINS: Elongated leading rays of first dorsal fin. Undulated caudal fin.

HEAD: Subterminal mouth with barbel under chin. Considerably smaller teeth than southern kingfish.



MAY BE CONFUSED WITH: Southern kingfish (pg. 87).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

SOUTHERN KINGFISH (*Menticirrhus americanus*)

COLOR: Dusky bands or blotches on body. No V-shaped saddle beneath first dorsal fin (Robins et al. 1986).

FINS: Undulated caudal fin.

HEAD: Subterminal mouth with barbel under chin. Considerably larger teeth than northern kingfish.



MAY BE CONFUSED WITH: Northern kingfish (pg. 86).

PHOTO CREDIT: NOAA / NMFS / SEFSC / Pascagoula Laboratory; Collection of Brandi Noble

DRUMS

PORGIES, SPADEFISH, WRASSES, & GRUNTS

PINFISH (*Lagodon rhomboides*)

COLOR: Yellow horizontal lines run down body. Dark shoulder spot centered on lateral line (Robins et al. 1986). Dark vertical bars.



MAY BE CONFUSED WITH: Pigfish (pg. 92), red porgy (pg. 90), scup (pg. 91), sea bream (pg. 89).

PHOTO CREDIT: MBL / Flescher Collection

SEA BREAM (*Archosargus rhomboidalis*)

COLOR: Blue-silver. Narrow horizontal bronze stripes (Robins et al. 1986). Dark blotch behind operculum, immediately below lateral line; fades after death (darkened on photo to illustrate location).



MAY BE CONFUSED WITH: Pigfish (pg. 92), pinfish (pg. 88), red porgy (pg. 90), scup (pg. 91).

PHOTO CREDIT: NOAA / NMFS / SEFSC / Pascagoula Laboratory; Collection of Brandi Noble

PORGIES, SPADEFISH, WRASSES, & GRUNTS

PORGIES, SPADEFISH, WRASSES, & GRUNTS

RED PORGY (*Pagrus pagrus*)

COLOR: Head and body silver-red (Robins et al. 1986).

HEAD: Round rear nostril (Robins et al. 1986).



MAY BE CONFUSED WITH: Pigfish (pg. 92), pinfish (pg. 88), scup (pg. 91), sea bream (pg. 89).

PHOTO CREDIT: MBL / Flescher Collection

SCUP (*Stenotomus chrysops*)

COLOR: Silver. Faint, irregular vertical bars on body; fade after death.

FINS: First dorsal fin ray shortest. Followed immediately by tallest fin rays; decreasing in size towards caudal peduncle (Collette and Klein-MacPhee 2002).

HEAD: Steep forehead.



MAY BE CONFUSED WITH: Pigfish (pg. 92), pinfish (pg. 88), red porgy (pg. 90), sea bream (pg. 89).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

PORGIES, SPADEFISH, WRASSES, & GRUNTS

PORGIES, SPADEFISH, WRASSES, & GRUNTS

PIGFISH (*Orthopristis chrysoptera*)

COLOR: Gray with bronze and yellow markings (Robins et al. 1986).

FINS: First and second dorsal fin rays short. Slightly forked caudal fin.

HEAD: Pointed snout. Steep forehead.



MAY BE CONFUSED WITH: Pinfish (pg. 88), red porgy (pg. 90), scup (pg. 91), sea bream (pg. 89).

PHOTO CREDIT: MBL / Flescher Collection

ATLANTIC SPADEFISH (*Chaetodipterus faber*)

COLOR: Dark vertical bars; occasionally absent on large adults.

BODY: Disk shaped. Laterally compressed (Robins et al. 1986).

FINS: Anterior lobes of second dorsal and anal fin longest (Robins et al. 1986).



PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

PORGIES, SPADEFISH, WRASSES, & GRUNTS

PORGIES, SPADEFISH, WRASSES, & GRUNTS

CUNNER (*Tautoglabrus adspersus*)

COLOR: Gray-brown.

FINS: Dorsal fin terminates in soft lobe.

HEAD: Pointed head (Robins et al. 1986) with terminal mouth (Collette and Klein-MacPhee 2002). Sharp, protruding teeth.



MAY BE CONFUSED WITH: Tautog (pg. 95).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

TAUTOG (*Tautoga onitis*)

COLOR: Green-brown blotched. White chin (Robins et al. 1986).

FINS: Dorsal fin terminates in soft lobe.

HEAD: Blunt head with terminal mouth. Large fleshy lips with irregular and often broken teeth.



MAY BE CONFUSED WITH: Cunner (pg. 94).

PHOTO CREDIT: MBL / Flescher Collection

PORGIES, SPADEFISH, WRASSES, & GRUNTS

PORGIES, SPADEFISH, WRASSES, & GRUNTS

SHEEPSHEAD (*Archosargus probatocephalus*)

COLOR: Black and white alternating vertical bars. Black fins.

HEAD: Large incisor teeth protrude from mouth.



PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

BLACKMOUTH BASS (*Synagrops bellus*)

COLOR: Body, mouth, and gill cavity black (Robins et al. 1986).

BODY: Scales chafe easily in gear.

FINS: Two dorsal fins (Robins et al. 1986).

HEAD: Prominent fang-like teeth. Large eyes (Robins et al. 1986).



PHOTO CREDIT: MBL / Flescher Collection

BASSES

BASSES

SNOWY GROUPEL (*Epinephelus niveatus*)

COLOR: Gray-brown with white spots that continue onto dorsal fin. Dark saddle on caudal peduncle in juveniles (Robins et al. 1986).



MAY BE CONFUSED WITH: Warsaw grouper (pg. 99), wreckfish (pg. 100).

PHOTO CREDIT: NOAA / NMFS / SEFSC / Pascagoula Laboratory; Collection of Brandi Noble

WARSAW GROUPER (*Epinephelus nigritus*)

COLOR: Brown. Dark saddle on caudal peduncle in juveniles (Robins et al. 1986).



MAY BE CONFUSED WITH: Snowy grouper (pg. 98), wreckfish (pg. 100).

PHOTO CREDIT: NOAA / NMFS / SEFSC / Pascagoula Laboratory; Collection of Brandi Noble

BASSES

BASSES

WRECKFISH (*Polyprion americanus*)

COLOR: Gray-brown. White trailing edge on caudal fin.

FINS: Convex caudal fin.

HEAD: Rough head. Ridge on opercle (Robins et al. 1986).



MAY BE CONFUSED WITH: Snowy grouper (pg. 98), warsaw grouper (pg. 99).

PHOTO CREDIT: Pedro Niny Duarte © ImagDOP

BLACK SEA BASS (*Centropristis striata*)

COLOR: Variable black-blue coloration with white spots. Horizontal white bands on dorsal fin (Collette and Klein-MacPhee 2002).

FINS: Spiny dorsal fin. Three-lobed caudal fin (Collette and Klein-MacPhee 2002).

HEAD: Large mouth. Adult males have projecting forehead.



PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

BASSES

BASSES

STRIPED BASS (*Morone saxatilis*)

COLOR: Olive-gray dorsal surface. 7-8 dark horizontal stripes on lateral sides (Collette and Klein-MacPhee 2002).

FINS: Forked caudal fin.

HEAD: Large mouth.



PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

DEEPBODY BOARFISH (*Antigonia capros*)

COLOR: Pink-red.

BODY: Body deeper than it is long (Collette and Klein-MacPhee 2002).

FINS: Dorsal and anal fins with long anterior spines.

HEAD: Superior mouth.



PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

LATERALLY COMPRESSED

LATERALLY COMPRESSED

OPAHI (*Lampris guttatus*)

COLOR: Blue dorsal surface. Pink ventral surface. Many small white spots. Fins, lips, and eyes bright red (Robins et al. 1986).

HEAD: No teeth (Robins et al. 1986)



PHOTO CREDIT: NOAA / NMFS / PIRO

GRAY TRIGGERFISH (*Balistes capriscus*)

COLOR: Olive-gray.

FINS: Undulating dorsal and anal fins.

HEAD: One or more large scales behind operculum (Robins et al. 1986). Small mouth.



PHOTO CREDIT: NOAA / NMFS / NEFSC /
Cooperative Research

LATERALLY COMPRESSED

LATERALLY COMPRESSED

BUTTERFISH (*Peprilus triacanthus*)

COLOR: Gray dorsal surface. Silver lateral surface.

BODY: Row of pores below anterior base of dorsal fin (Robins et al. 1986).



MAY BE CONFUSED WITH: Harvestfish (pg. 107).

PHOTO CREDIT: NOAA / NMFS / NEFSC /
Cooperative Research

HARVESTFISH (*Peprilus paru*)

COLOR: Silver; iridescent.

BODY: No pores below dorsal fin (Robins et al. 1986).

FINS: Long dorsal and anal fin lobes.



MAY BE CONFUSED WITH: Butterfish (pg. 106).

PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

LATERALLY COMPRESSED

LATERALLY COMPRESSED

BUCKLER DORY (JOHN DORY) (*Zenopsis conchifera*)

COLOR: 12-24 obscure dark spots on juveniles (Robins et al. 1986). Obscure, dark mid lateral blotch posterior to operculum.

BODY: Deep body.

HEAD: Large, superior mouth.

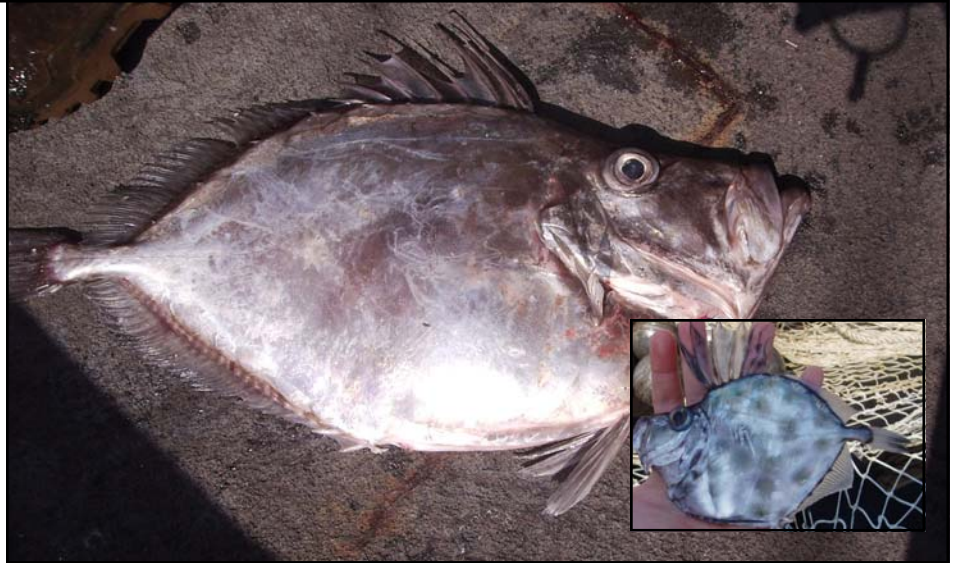


PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB, NOAA / NMFS / NEFSC / Cooperative Research

ATLANTIC WOLFFISH (*Anarhichas lupus*)

COLOR: Blue-gray. Vertical dark bars along body.

BODY: Body deepest near head (Collette and Klein-MacPhee 2002).

HEAD: Large teeth with muscular jaw.



PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

EEL-LIKE FISH

EEL-LIKE FISH

ATLANTIC CUTLASSFISH (*Trichiurus lepturus*)

COLOR: Silver; iridescent.

BODY: Body laterally compressed; long. Tail tapers to a point.

FINS: No pelvic fins.

HEAD: Lower jaw longer than upper jaw. Large, fang-like teeth (Robins et al. 1986).



PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

CONGER EEL (*Conger oceanicus*)

COLOR: Dark gray dorsal surface. Pale ventral surface. Dark edges on dorsal and anal fins (Robins et al. 1986).

HEAD: Lower jaw shorter than upper jaw (Robins et al. 1986).



PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

EEL-LIKE FISH

EEL-LIKE FISH

ATLANTIC HAGFISH (*Myxine glutinosa*)

COLOR: Purple.

BODY: Protein secretion pores on lateral surface; posterior to head.

HEAD: Barbels around mouth. No rasping plate.



MAY BE CONFUSED WITH: Sea lamprey (pg. 113).

PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

SEA LAMPREY (*Petromyzon marinus*)

COLOR: Gray-green mottled.

BODY: Cartilaginous skeleton.

FINS: Two dorsal fins.

HEAD: No barbels around mouth.
Round rasping plate.



MAY BE CONFUSED WITH: Atlantic hagfish (pg. 112).

PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

EEL-LIKE FISH

EEL-LIKE FISH

FAWN CUSK-EEL (*Lepophidium profundorum*)

COLOR: Light brown. Pale spots on lateral surface.

BODY: Body tapers to a point (Nielsen et al. 1999).

HEAD: Long rostral spine, reaching tip of snout (Nielsen et al. 1999).



PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

ROCK GUNNEL (*Pholis gunnellus*)

COLOR: Mottled brown-red. Dark bar slants from origin of dorsal fin to eye; and from eye down to origin of mouth. 10-14 black spots along base of dorsal fin (Robins et al. 1986).



PHOTO CREDIT: © Trevor Meyer

EEL-LIKE FISH

EEL-LIKE FISH

WRYMOUTH (*Cryptacanthodes maculatus*)

COLOR: Red-brown. Two or three horizontal rows of spots running down body (Robins et al. 1986).

BODY: Body tapers to a point.

FINS: Spiny dorsal fin that is continuous with anal fin.

HEAD: Superior mouth.



PHOTO CREDIT: NOAA / NMFS / NEFSC /
Cooperative Research

OCEAN POUT (*Zoarces americanus*)

COLOR: Yellow-brown mottled dorsal surface. Pale ventral surface. Dark, irregular vertical bars extend from dorsal fin to lateral sides (Collette and Klein-MacPhee 2002).

HEAD: Subterminal mouth.



PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

EEL-LIKE FISH

OTHER ROUND FISH

TILEFISH (*Lopholatilus chamaeleonticeps*)

COLOR: Blue dorsal surface with yellow spots.

FINS: Fleshy tab in front of dorsal fin (Collette and Klein-MacPhee 2002).

HEAD: Large head (Collette and Klein-MacPhee 2002). Mouth low on head.



MAY BE CONFUSED WITH: Blueline tilefish (pg. 119).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

BLUELINE TILEFISH (*Caulolatilus microps*)

COLOR: Gray-blue. Narrow blue stripe from underside of eye to tip of snout (Robins et al. 1986).

FINS: No fleshy tab in front of dorsal fin.



MAY BE CONFUSED WITH: Tilefish (pg. 118).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

OTHER ROUND FISH

OTHER ROUND FISH

BIGEYE (*Priacanthus arenatus*)

COLOR: Red-orange (Robins et al. 1986).

FINS: Rounded dorsal and anal fin (Robins et al. 1986).

HEAD: Large eye.



MAY BE CONFUSED WITH: Bulleye (pg. 121).

PHOTO CREDIT: MBL / Flescher Collection

BULLEYE (*Cookeolus japonicus*)

COLOR: Body and fins red (Robins et al. 1986).

BODY: Deep body.

FINS: Spiny dorsal fin. Pelvic fin long, reaching to soft part of anal fin. Soft parts of dorsal and anal fin pointed (Robins et al. 1986).

HEAD: Large eye. Superior mouth.



MAY BE CONFUSED WITH: Bigeye (pg. 120).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

OTHER ROUND FISH

OTHER ROUND FISH

BLUEFISH (*Pomatomus saltatrix*)

COLOR: Iridescent blue-green dorsal surface. Silver lateral sides and ventral surface.

FINS: Small, spiny first dorsal fin. Second dorsal fin larger. Forked caudal fin.

HEAD: Large mouth with prominent teeth (Collette and Klein-MacPhee 2002).



PHOTO CREDIT: NOAA / NMFS / NEFSC / FSB

BEARDFISH (*Polymixia lowei*)

COLOR: Silver.

FINS: Dorsal fin origin bisects body and extends towards caudal fin.

HEAD: Two long barbels under chin. Blunt snout.



PHOTO CREDIT: MBL / Flescher Collection

OTHER ROUND FISH

OTHER ROUND FISH

NORTHERN PUFFER (*Sphoeroides maculatus*)

COLOR: Olive-gray with many small dark spots (Robins et al. 1986). Vertical dark bars on lateral surface. White ventral surface. Dark spot immediately behind the pectoral fin.

BODY: Inflates with water. Often comes up in gear in this state.

HEAD: Small mouth.



PHOTO CREDIT: MBL / Flescher Collection

NORTHERN STARGAZER (*Astroscopus guttatus*)

COLOR: Olive-brown dorsal surface with small white spots that become larger towards lateral surface (Robins et al. 1986). Horizontal bars on caudal fin extend onto body.

HEAD: Superior mouth.



PHOTO CREDIT: NOAA / NMFS / NEFSC /
Cooperative Research

OTHER ROUND FISH

OTHER ROUND FISH

COBIA (*Rachycentron canadum*)

COLOR: Dark dorsal surface. Pale ventral surface. Two horizontal white stripes run to caudal fin on lateral surface; may fade with age.

FINS: Anterior dorsal fin consisting of 8 spines that can fold into body.

HEAD: Lower jaw protrudes past upper jaw; more prominent in adults (Robins et al. 1986).



PHOTO CREDIT: NOAA / NMFS / SEFSC /
Pascagoula Laboratory; Collection of Brandi Noble

LIZARDFISH (*Synodus sp.*)

COLOR: Green-brown. About 8 diamond shaped marks on lateral surface (Robins et al. 1986).

BODY: Body wider than it is tall.

FINS: Anal fin base the same length or longer than dorsal fin base.

HEAD: Pointed, triangular snout.



PHOTO CREDIT: UMASS / Dr. Joseph H. Kunkel

OTHER ROUND FISH

OTHER ROUND FISH

REDEYE GAPER (*Chaunax sp.*)

COLOR: Red-orange blotched.

BODY: Stitching pattern around head and on body.

HEAD: Superior mouth.



PHOTO CREDIT: NOAA / NMFS / NEFSC /
Cooperative Research

GOOSEFISH (MONKFISH) (*Lophius americanus*)

COLOR: Variable olive-brown dorsal surface with darker pectoral, dorsal, and caudal fins. White ventral surface.

FINS: First dorsal fin spine located immediately posterior to mouth, and has small flap of skin at its tip (lure for prey).

HEAD: Extremely large mouth with prominent teeth. Lower jaw projects significantly (Collette and Klein-MacPhee 2002). Two large shoulder spines immediately posterior to head.



PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

OTHER ROUND FISH

OTHER ROUND FISH

NORTHERN SENNET (*Sphyraena borealis*)

COLOR: Silver. Darker dorsal surface.

FINS: Pelvic fins begin below origin of dorsal fin (Robins et al. 1986).

HEAD: Lower jaw protrudes past upper jaw and has fleshy tip (Robins et al. 1986).



PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

ATLANTIC SAURY (*Scomberesox saurus*)

COLOR: Blue-green dorsal surface. Dark spot above pectoral fin (Robins et al. 1986).

FINS: Row of finlets behind dorsal and anal fins.

HEAD: Long, needle-like jaws. Lower jaw projects slightly past upper jaw (Collette and Klein-MacPhee 2002).



PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

OTHER ROUND FISH

OTHER ROUND FISH

LONGSPINE SNIPEFISH (*Macroramphosus scolopax*)

COLOR: Orange-red dorsal surface. Silver lateral surface.

BODY: Laterally compressed. Body deepest at middle. Ventral surface slopes up from center towards head and caudal fin (Robins et al. 1986).

HEAD: Long snout.

SPINES: Dorsal spine as long as snout. When depressed, dorsal spine reaches middle of caudal fin (Robins et al. 1986).



PHOTO CREDIT: NOAA / NMFS / NEFSC /
Cooperative Research

ATLANTIC ARGENTINE (*Argentina silus*)

COLOR: Silver. Adipose fin has yellow tint (Collette and Klein-MacPhee 2002).

BODY: Scales chafe easily in gear.

FINS: Adipose fin present anterior to caudal fin.

HEAD: Large eye.



PHOTO CREDIT: NOAA / NMFS / NEFSC /
Cooperative Research

OTHER ROUND FISH

OTHER ROUND FISH

ALLIGATORFISH (*Aspidophoroides monoptyerygius*)

COLOR: Green-brown.

BODY: Long body; smooth dorsal surface (Robins et al. 1986). Alligator-like scales.



PHOTO CREDIT: NOAA / NMFS / NEFSC /
Cooperative Research

LUMPFISH (*Cyclopterus lumpus*)

COLOR: Blue-gray.

BODY: Sucker on ventral surface. Rows of lumps on lateral surface, and on dorsal surface that run from head to caudal peduncle.

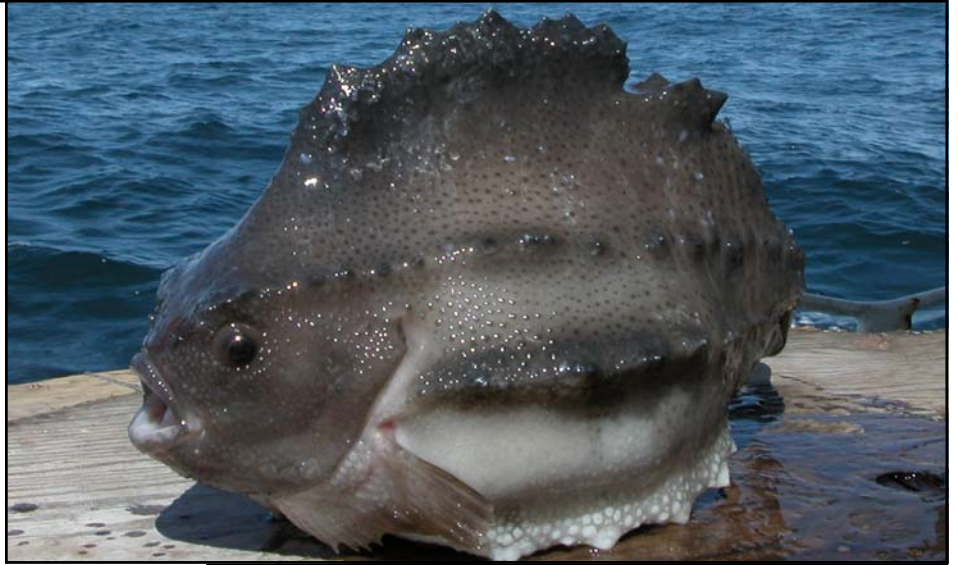


PHOTO CREDIT: UMASS / Dr. Joseph H. Kunkel

OTHER ROUND FISH

OTHER ROUND FISH

GRENADIER (Family Macrouridae)

COLOR: Blue-black.

BODY: Body tapers to a point.

FINS: No caudal fin. Tall first dorsal fin with spiny leading ray (Robins et al. 1986).

HEAD: Subterminal mouth.



PHOTO CREDIT: NOAA / NMFS / NEFSC /
Cooperative Research

BLUE CRAB (*Callinectes sapidus*)

COLOR: Blue.

CARAPACE: Long, horizontal spines protrude from each side of carapace.

APPENDAGES: Blue appendages. Swimmerets.



MAY BE CONFUSED WITH: Speckled crab (pg. 138).

PHOTO CREDIT: MBL / Flescher Collection

CRUSTACEANS & INVERTEBRATES

CRUSTACEANS & INVERTEBRATES

SPECKLED CRAB (*Arenaeus cribrarius*)

COLOR: Olive-brown. White spots cover carapace and claws.

CARAPACE: Long, horizontal spines protrude from each side of carapace.

APPENDAGES: Swimmerets.



MAY BE CONFUSED WITH: Blue crab (pg. 137), lady crab (139).

PHOTO CREDIT: MBL / Flescher Collection

LADY CRAB (*Ovalipes ocellatus*)

COLOR: Gray. Purple speckles cover carapace and claws.

CARAPACE: No horizontally protruding spines from sides of carapace.

APPENDAGES: Swimmerets.



MAY BE CONFUSED WITH: Speckled crab (pg. 138).

PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

CRUSTACEANS & INVERTEBRATES

CRUSTACEANS & INVERTEBRATES

JONAH CRAB (*Cancer borealis*)

COLOR: Olive-brown.

CARAPACE: Wide, oval carapace. Leading edge of carapace has jagged, undefined teeth.

APPENDAGES: No swimmerets.



MAY BE CONFUSED WITH: Rock crab (pg. 141).

PHOTO CREDIT: UMASS / Dr. Joseph H. Kunkel

ROCK CRAB (*Cancer irroratus*)

COLOR: Red-brown.

CARAPACE: Wide, oval carapace. Leading edge of carapace has smooth, defined teeth.

APPENDAGES: No swimmerets.



MAY BE CONFUSED WITH: Jonah crab (pg. 140).

PHOTO CREDIT: UMASS / Dr. Joseph H. Kunkel

CRUSTACEANS & INVERTEBRATES

CRUSTACEANS & INVERTEBRATES

SNOW CRAB (*Chionoecetes opilio*)

COLOR: Purple-brown.

CARAPACE: Smooth, rounded carapace with no prominent spines.

APPENDAGES: Long smooth appendages. No swimmerets.



MAY BE CONFUSED WITH: Inflated spiny crab (pg. 143).

PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

INFLATED SPINY CRAB (*Rochinia crassa*)

COLOR: Red-orange.

CARAPACE: Rounded carapace with two spines on rostrum.

APPENDAGES: Very long claws and appendages.



MAY BE CONFUSED WITH: Northern stone crab (pg. 144), snow crab (pg. 142).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

CRUSTACEANS & INVERTEBRATES

CRUSTACEANS & INVERTEBRATES

NORTHERN STONE CRAB (*Lithodes maja*)

COLOR: Orange-red dorsal surface. White ventral surface.

CARAPACE: Many large spines on carapace.

APPENDAGES: Spines on all appendages. No swimmerets.



MAY BE CONFUSED WITH: Inflated spiny crab (pg. 143).

PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

DEEP SEA RED CRAB (*Chaceon quinquedens*)

COLOR: Bright red.

CARAPACE: 5 spines on each side of carapace's leading edge.

APPENDAGES: No swimmerets. Thick appendages.



PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

CRUSTACEANS & INVERTEBRATES

CRUSTACEANS & INVERTEBRATES

SPIDER CRAB (*Libinia sp.*)

COLOR: Green-brown.

CARAPACE: Rounded carapace with pointed rostrum. Carapace covered with many small bumps. Hairs and algae grow on carapace.

APPENDAGES: Hairs and algae grow on appendages. No swimmerets.



PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

GLADIATOR BOX CRAB (*Acanthocarpus alexandri*)

COLOR: Red-brown.

CARAPACE: Rounded carapace with two spines that curve off trailing edge.

APPENDAGES: One large spine protruding horizontally off each claw.



PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

CRUSTACEANS & INVERTEBRATES

CRUSTACEANS & INVERTEBRATES

GALATHEID CRAB (*Munida* sp.)

COLOR: Red-orange.

CARAPACE: Shrimp-like carapace.

APPENDAGES: Very long claws.



PHOTO CREDIT: NOAA Office of Ocean Exploration; Operation Deep Scope 2005 Expedition

MANTIS SHRIMP (Order Stomatopoda)

COLOR: Brown.

CARAPACE: Flattened carapace.

APPENDAGES: Long pair of strong mantis-like claws.

*Commercial catch may include multiple species of different genera



PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

CRUSTACEANS & INVERTEBRATES

CRUSTACEANS & INVERTEBRATES

LOLIGO (LONGFIN) SQUID (*Loligo pealeii*)

COLOR: Olive-brown.

BODY: Skin chaffs easily in gear. Fin base approximately half the length of the mantle.



MAY BE CONFUSED WITH: Illex (shortfin) squid (pg. 151).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

ILLEX (SHORTFIN) SQUID (*Illex illecebrosus*)

COLOR: Orange-red.

BODY: Skin usually stays intact. Fin base approximately one third the length of mantle.



MAY BE CONFUSED WITH: Loligo (longfin) squid (pg. 150).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

CRUSTACEANS & INVERTEBRATES

STURGEON

ATLANTIC STURGEON (*Acipenser oxyrinchus*)

BODY: Max total length 427cm (Collette and Klein-MacPhee 2002) and are more likely to be found offshore.

HEAD: More elongated head than that of the shortnose sturgeon with mouth width less than 60% width of head at that point. Indentation on head between eyes.

SCUTES: Complex pattern of post anal ventral scutes. Scutes present between the anal fin and lateral scute row.



MAY BE CONFUSED WITH: Shortnose sturgeon (pg. 153).

PHOTO CREDIT: NOAA / NMFS / NEFSC / FSB

SHORTNOSE STURGEON (*Acipenser brevirostrum*)

BODY: Max total length 143cm (Collette and Klein-MacPhee 2002) and are less likely to be found offshore.

HEAD: Shorter head than that of the Atlantic sturgeon with mouth width greater than 60% width of head at that point. No indentation on head between eyes.

SCUTES: Simplified pattern of post anal ventral scutes. No scutes between the anal fin and lateral scute row.



MAY BE CONFUSED WITH: Atlantic sturgeon (pg. 152).

PHOTO CREDIT: NOAA / NMFS / NEFSC / FSB

STURGEON

SHARKS

ATLANTIC ANGEL SHARK (*Squatina dumeril*)

COLOR: Brown.

BODY: Dorso-ventrally compressed.

FINS: Broad pectoral fins. Two equally sized dorsal fins posterior to pelvic fins. Lower lobe of caudal fin slightly larger than upper lobe.

HEAD: Nasal barbels. Terminal mouth.

SPINES: Spines along back from head to dorsal fins.



PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

ATLANTIC SHARPNOSE SHARK (*Rhizoprionodon terraenovae*)

COLOR: Gray dorsal surface. Pale ventral surface. Faint white blotches scattered on lateral surface of adults (Schulze-Haugen et al. 2003).

BODY: Small; comparable in size to dogfish.

HEAD: Long, pointed snout. Real teeth.



MAY BE CONFUSED WITH: Smooth dogfish (pg. 156), spiny dogfish (pg. 157).

PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

SHARKS

SHARKS

SMOOTH DOGFISH (*Mustelus canis*)

COLOR: Uniformly gray.

FINS: No spines projecting from anterior base of dorsal fins.

HEAD: Several rows of functional, small teeth (Collette and Klein-MacPhee 2002).



MAY BE CONFUSED WITH: Atlantic sharpnose shark (pg. 155), spiny dogfish (pg. 157).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

SPINY DOGFISH (*Squalus acanthias*)

COLOR: Gray with variable pale spots.

FINS: Spine projecting from anterior base of both dorsal fins.

HEAD: Several rows of functional, small teeth (Collette and Klein-MacPhee 2002).



MAY BE CONFUSED WITH: Atlantic sharpnose shark (pg. 155), smooth dogfish (pg. 156).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

SHARKS

SHARKS

CHAIN DOGFISH (*Scyliorhinus retifer*)

COLOR: Light brown. Distinct chain-like pattern (Robins et al. 1986).



PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

THRESHER SHARK (*Alopias vulpinus*)

COLOR: Blue-brown. White ventral surface.

FINS: Long caudal fin; about half the total length of body.

HEAD: Small, curved teeth.



PHOTO CREDIT: NOAA / NMFS / NEFSC / ESB

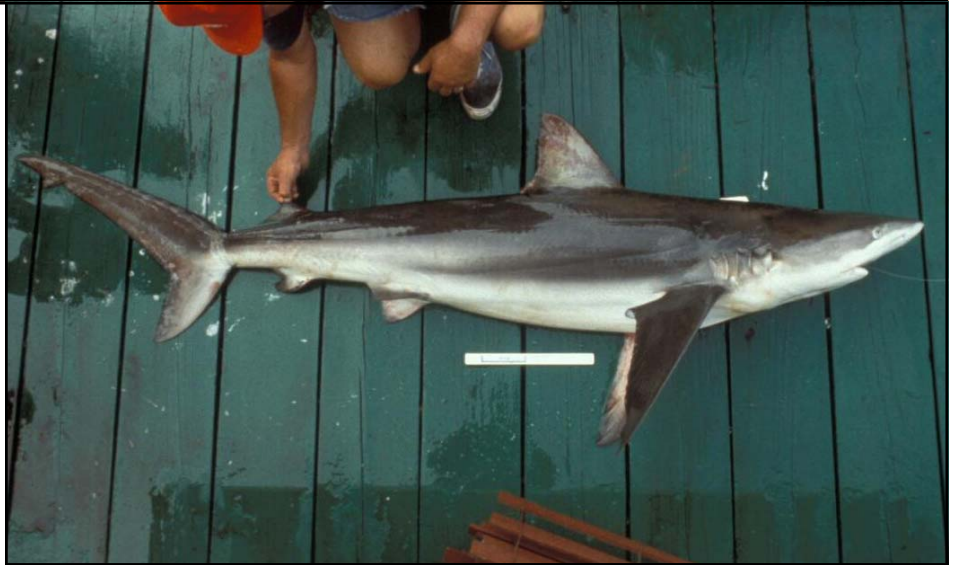
SHARKS

SHARKS

DUSKY SHARK (*Carcharhinus obscurus*)

COLOR: Blue-gray dorsal surface. White ventral surface (Schulze-Haugen et al. 2003).

FINS: First dorsal fin originates slightly anterior to free tips of pectoral fins (Schulze-Haugen et al. 2003).



MAY BE CONFUSED WITH: Sandbar (brown) shark (pg. 161).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Apex Predators

SANDBAR (BROWN) SHARK (*Carcharhinus plumbeus*)

COLOR: Brown.

FINS: Very large first dorsal and pectoral fins (Schulze-Haugen et al. 2003). First dorsal begins over mid-point of pectoral fins.

HEAD: Long, pointed snout.



MAY BE CONFUSED WITH: Dusky shark (pg. 160).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

SHARKS

SHARKS

PORBEAGLE (*Lamna nasus*)

COLOR: Blue-gray dorsal surface. White ventral surface (Schulze-Haugen et al. 2003). White lower posterior edge of first dorsal fin.

BODY: Stout body with large black eyes. Secondary smaller keel under posterior section of main lateral keel (Robins et al. 1986).

HEAD: Pointed snout. Lateral cusps on either side of each tooth.

HABITAT: Cold water shark; prefer water temperatures in the 50's to low 60's (degrees Fahrenheit).



MAY BE CONFUSED WITH: Blue shark (pg. 165), shortfin mako (bonito) shark (pg. 164), white shark (pg. 163).

PHOTO CREDIT: NOAA / NMFS / NEFSC / FSB

WHITE SHARK (*Carcharodon carcharias*)

COLOR: Blue-gray dorsal surface. White ventral surface.

BODY: Heavy, torpedo shaped body.

FINS: Crescent shaped caudal fin; both lobes about equal size, supported by thick keel.

HEAD: Conical snout. Triangular, serrated teeth (Schulze-Haugen et al. 2003).



MAY BE CONFUSED WITH: Basking shark (pg. 167), porbeagle (pg. 162), shortfin mako (bonito) shark (pg. 164).

PHOTO CREDIT: NOAA / NMFS / NEFSC / Cooperative Research

SHARKS

SHARKS

SHORTFIN MAKO (BONITO) (*Isurus oxyrinchus*)

COLOR: Indigo-purple dorsal surface. Silver lateral surface. White ventral surface.

BODY: Single keel on caudal peduncle. Torpedo shaped body.

HEAD: Large, well developed eye. Pronounced knife-like teeth.

HABITAT: Warm water shark; prefer water temperatures greater than 60 degrees Fahrenheit (Schulze-Haugen et al. 2003).



MAY BE CONFUSED WITH: Blue shark (pg. 165), porbeagle (pg. 162), white shark (pg. 163).

PHOTO CREDIT: NOAA / NMFS / PIRO

BLUE SHARK (*Prionace glauca*)

COLOR: Bright blue.

BODY: Sleek body.

FINS: Long pectoral fins (Schulze-Haugen et al. 2003).

HEAD: Long, pointed snout.
Large eyes.



MAY BE CONFUSED WITH: Porbeagle (pg. 162), shortfin mako (bonito) shark (pg. 164).

PHOTO CREDIT: NOAA / NMFS / PIRO

SHARKS

SHARKS

TIGER SHARK (*Galeocerdo cuvier*)

COLOR: Gray with vertical tiger-stripe markings; fade in larger individuals.

FINS: Upper lobe of caudal fin significantly longer than lower lobe.

HEAD: Wide, blunt snout. Sickle shaped teeth.



PHOTO CREDIT: NOAA / NMFS / NEFSC / FSB

BASKING SHARK (*Cetorhinus maximus*)

COLOR: Gray-blue.

BODY: Very large. Extremely large gill slits (Schulze-Haugen et al. 2003).

HEAD: Massive, conical snout (Schulze-Haugen et al. 2003).



MAY BE CONFUSED WITH: White shark (pg. 163).

PHOTO CREDIT: NOAA / NMFS / NEFSC / FSB

SHARKS

INDEX

OF

COMMON

NAMES

Alewife, 52
Alligatorfish, 134
Amberjack, Greater, 70
Argentine, Atlantic, 133

Bass
 Black Sea, 101
 Blackmouth, 97
 Striped, 102
Beardfish, 123

Bigeye, 120
Bluefish, 122
Boarfish, Deepbody, 103
Bonito, Atlantic, 59
Bream, Sea, 89
Bulleye, 121
Bumper, Atlantic, 74
Butterfish, 106

Cobia, 126
Cod, Atlantic, 32
Crab
 Blue, 137
 Deep Sea Red, 145
 Galatheid, 148
 Gladiator Box, 147
 Inflated Spiny, 143
 Jonah, 140
 Lady, 139
 Northern Stone, 144
 Rock, 141
 Snow, 142
 Speckled, 138
 Spider, 146
Croaker, Atlantic, 78
Cunner, 94
Cusk, 35

Cusk-Eel, Fawn, 114
Cutlassfish, Atlantic, 110

Dogfish
 Chain, 158
 Smooth, 156
 Spiny, 157
Dory, Buckler (John Dory), 108
Drum
 Banded, 82
 Black, 80
 Red, 81

Eel
 Conger, 111

Flounder
 Fourspot, 24
 Gulf Stream, 30
 Smallmouth, 31
 Summer (Fluke), 25
 Winter, 26
 Witch, 29
 Yellowtail, 27

Gaper, Redeye, 128
Goosefish (Monkfish), 129

- Grenadier, 136
 Grouper
 Snowy, 98
 Warsaw, 99
 Gunnel, Rock, 115
 Haddock, 33
 Hagfish, Atlantic, 112
 Hake
 Longfin, 42
 Offshore (Black Whiting), 38
 Red, 39
 Silver (Whiting), 37
 Spotted, 41
 White, 40
 Harvestfish, 107
 Halibut
 Atlantic, 22
 Greenland, 23
 Herring
 Atlantic, 56
 Atlantic Thread, 55
 Blueback, 53
 Round, 57
 Kingfish
 Northern, 86
 Kingfish (cont)
 Southern, 87
 Lamprey, Sea, 113
 Lizardfish, 127
 Lookdown, 77
 Lumpfish, 135
 Mackerel
 Atlantic, 60
 Atlantic Chub, 61
 King, 62
 Spanish, 63
 Mako, Shortfin (Bonito), 164
 Menhaden, Atlantic, 58
 Moonfish, Atlantic, 76
 Opah, 104
 Permit, 67
 Pigfish, 92
 Pilotfish, 69
 Pinfish, 88
 Plaice, American, 28
 Pollock, 34
 Porbeagle, 162
 Porgy, Red, 90
 Pout, Ocean, 117
 Puffer, Northern, 124
 Raven, Sea, 51
 Ray
 Bullnose, 16
 Cownose, 17
 Butterfly, 19
 Redfish, Acadian, 46
 Rockling, Fourbeard, 36
 Rosefish, Blackbelly, 47
 Rudderfish, Banded, 68
 Runner, Blue, 75
 Saury, Atlantic, 131
 Scad
 Bigeye, 72
 Rough, 71
 Round, 73
 Sculpin
 Longhorn, 48
 Moustache, 50
 Shorthorn, 49
 Scup, 91
 Sea Robin
 Armored, 43
 Northern, 45
 Searobin (cont)
 Striped, 44
 Seatrout
 Silver Sea, 85
 Spotted Sea, 83
 Sennet, Northern, 130
 Shad, American, 54
 Shark
 Atlantic Angel, 154
 Atlantic Sharpnose, 155
 Basking, 167
 Blue, 165
 Dusky, 160
 Sandbar (Brown), 161
 Thresher, 159
 Tiger, 166
 White, 163
 Sheepshead, 96
 Shrimp, Mantis, 149
 Skate
 Barndoor, 9
 Clearnose, 14
 Little, 10
 Rosette, 15
 Smooth, 12
 Thorny, 13
 Winter, 11
 Snipefish, Longspine, 132
 Spadefish, Atlantic, 93
 Spot, 79
 Squid
 Illex (Shortfin), 151
 Loligo (Longfin), 150
 Stargazer, Northern, 125
 Stingray, Roughtail, 20
 Sturgeon
 Atlantic, 152
 Shortnose, 153
 Tautog, 95
 Tilefish, 118
 Blueline, 119
 Torpedo, Atlantic, 18
 Triggerfish, Gray, 105
 Tuna
 Bluefin, 66
 Skipjack, 65
 Tunny, Little (False Albacore), 64
 Weakfish (Seatrout), 84
 Windowpane (Sand Dab), 21
 Wolffish, Atlantic, 109
 Wreckfish, 100
 Wrymouth, 116

