



# Marine Fishes Common To North Carolina

## Acknowledgements

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## Introduction

Man has always been fascinated by the sea and its contents. Usually he scans it from the shore or has roamed it in all sorts of crafts. Only recently has he taken on a full awareness of its potential and how it seeps into every facet of his life—from the rains it brings, the temperatures and climates it influences, the devastation it can inflict, the foods it yields, and how it is being rapidly destroyed by man himself.

Man's curiosity has taken him far and wide. Many new methods of capture, be they sport or commercial, continue to bring forth strange, exciting, and colorful fishes. Fishes, themselves, have been so prolific that their varied shapes, sizes, colors, and kinds have baffled and confused man as to their true identities. Men from all walks of life, sports fishermen, commercial fishermen, and the man in the street, have all been confused when trying to identify his catch. This confusion has been compounded by the creation of many common names for the same fish, so that what is a sea mullet to one person is a kingfish or true mackerel to another.

It is to these inhabitants and the confusion aspect to which we address ourselves in the limited space of this booklet.

Excluding freshwater fishes, the brackish and marine waters of North Carolina (to 1,000 fathoms) contain some 563+ known species of fishes. Man encounters but only a small fraction of these fishes in his catches. We present 82 species which are those most likely encountered by sports fishermen, commercial fishermen, or the layman. Identifications are enhanced by most species being discussed and lines on each drawing call attention to key recognition features. Italicized words in each description emphasize the items (lines on various parts of each drawing) that are key distinguishing features one should note for that species. Space limitations permit only line drawings of some species.

It is hoped that future editions can adequately treat each species in more detail and in color. All species discussed or pictured are listed, at the end, in such a way that one will be better aware of their family relationships. Progression within the list leads one from primitive fishes, such as sharks and their allies, to the more advanced or specialized fishes, burrfishes, etc.

Fishes, be they small or large, ugly or streamlined, drab or colorful, are constantly evolving and have filled all facets of the waters they inhabit. They are truly masters of their environment. May man seek better ways to harvest fishes as well as to insure their survival for all, whether it be as food, pleasure, a livelihood, or beauty.

## Sharks, Skates, and Rays

### ELASMOBRANCHS

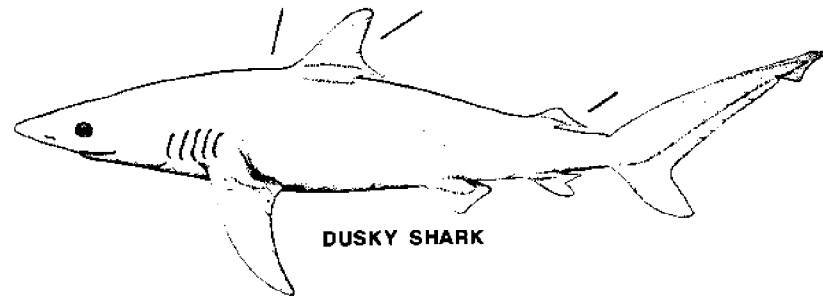
Cylindrically shaped fishes with 5-7 laterally positioned gill openings. Edges of the pectoral (side) fins are not attached to the sides of the head anterior to gill openings. Several rows of teeth are simply embedded in the gums. Skin composed of tooth-like scales (denticles). No true gill cover. Fertilization is internal. Skeleton cartilagenous (gristle), no true bones. Males with elongate intromittent organs.

**SHARKS**—Two main groups of sharks occupy North Carolina waters, those with a ridge between the two dorsal fins and those without. Shape, size, position, presence or absence of fins, as well as occurrence of a keel on one side of tail, head size and shape, number and size of teeth in each jaw are important field identification characters.

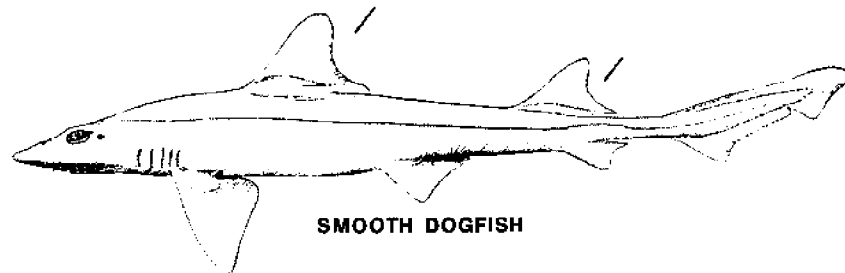
**DUSKY SHARK, *Carcharhinus obscurus***. One of several common ridge-backed sharks often confused with SILKY, SANDBAR (brown), BULL sharks, or SMOOTH dogfishes. Color grey dorsally, white ventrally. Similar colored bull, SPINNER, or BLACK TIP sharks lack dorsal ridges. Main distinguishing features are: *dorsal fin pointed* rather than round (silky). *Second dorsal fin small and lacks a long free rear extension*. Teeth 15 on each side of jaw symphysis (junction). *Dorsal fin positioned some distance behind pectoral fin not over* (as in sandbar) or of *equal side to second dorsal fin* (as in SMOOTH DOGFISH). Second dorsal free, tip short. Size to 11 ft, 3 ft at birth, and 450 pounds (maximum size).

**SKATES AND RAYS**—Dorso-ventrally flattened fishes with five gill openings confined to lower body surface, edges of pectoral fins attached to sides of head anterior to gill openings. Have spiracle (openings just behind eyes) as part of breathing system. Skates have two dorsal fins and no spines on tail. Body and tail often prickly, especially in males. Some edible. Rays usually smooth skinned, tail long whiplike and armored at base with 1-3 often poisonous barbs. Usually nonedible.

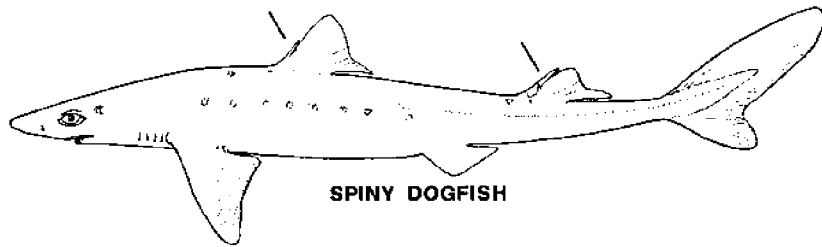
**STINGRAYS, *Dasyatis* sp.** Many species usually diamond shaped are encountered over mud or sand bottoms in which they often bury them-



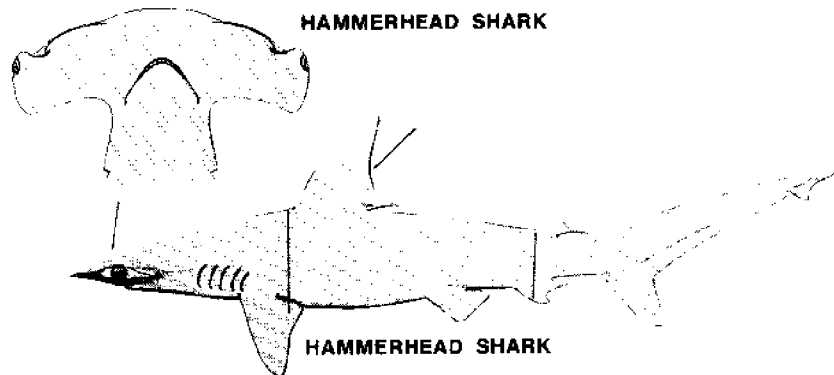
DUSKY SHARK



SMOOTH DOGFISH



SPINY DOGFISH

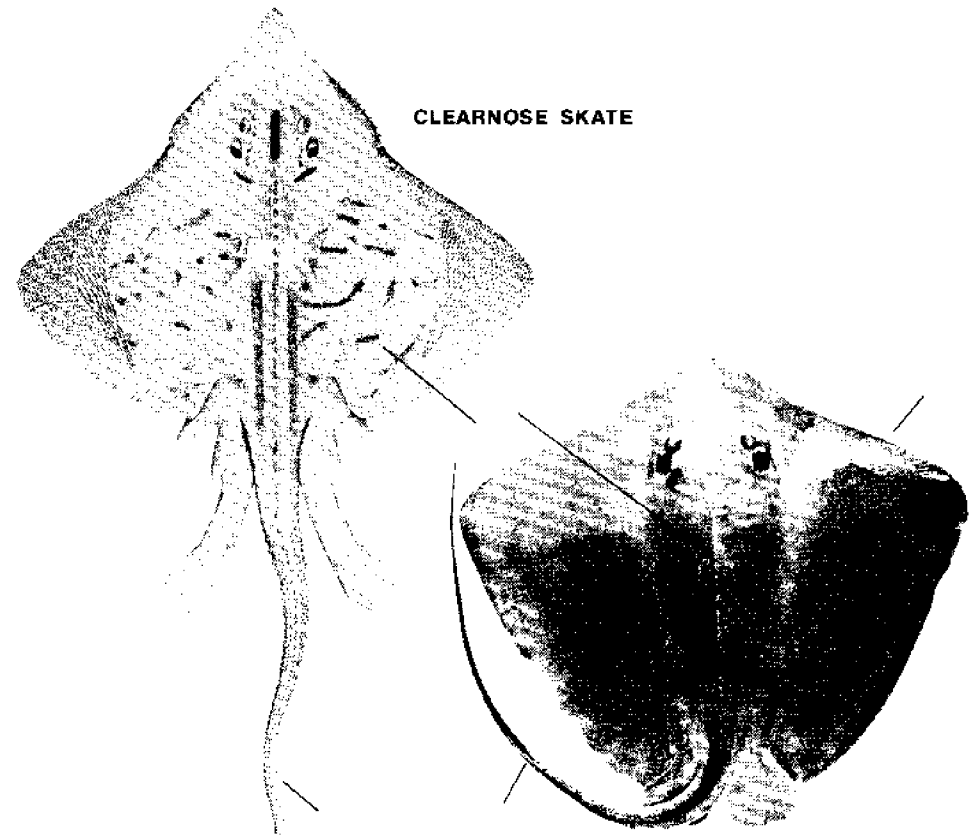


HAMMERHEAD SHARK

HAMMERHEAD SHARK

selves. Should be handled with care because of barbs at base of round whiplike tail. Bear young alive. Size to 6 ft wide and several hundred pounds. Non edible.

**CLEARNOSE SKATE, *Raja eglanteria*.** A diamond shaped fish (one of many species) with a *clear cartilaginous area of the snout*. Body marked dorsally with wavy *interrupted lines*. Possesses *two dorsal fins*, no barb on thick tail. Eggs develop externally in tough cases called mermaids purses. Size 3 feet wide, 6 pounds. Non edible.



CLEARNOSE SKATE

STINGRAY

A drawing illustrating fish parts mentioned in text is located on inside back cover.

## Bony Fishes

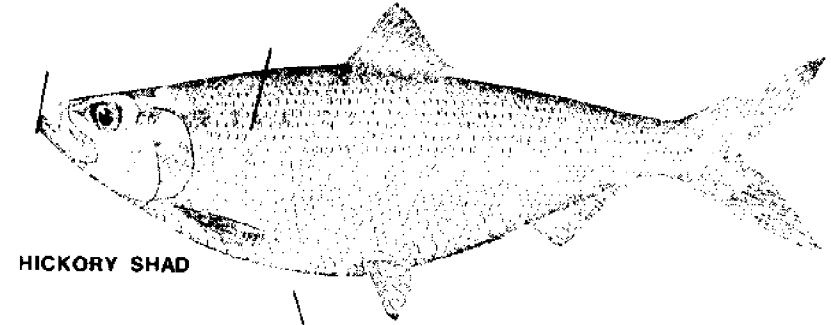
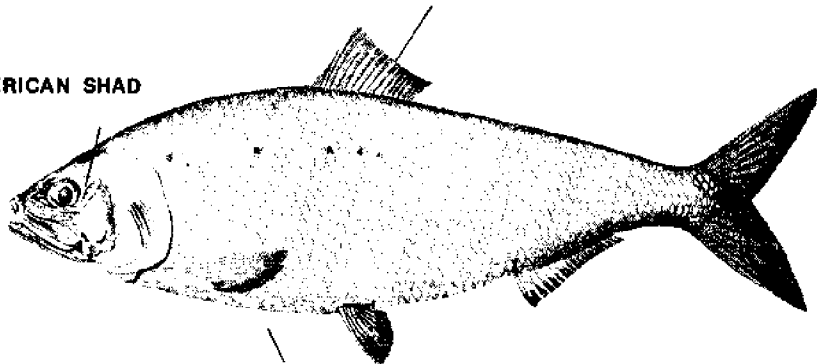
### OSTEICHTHYES

Most fishes of this assemblage possess bony skeletons, single lateral gill openings. Scales, when present, overlap and are either smooth and circular or spine edged. Some species have fins with spines and/or of soft segmented rays. Egg layers. Fertilization almost entirely external. Some species capable of producing sound. Composed of many families possessing many shapes, colors, and modifications. Teeth shape, fin configuration, or body shape usually modified to fit specific needs of fish. Some species have dissimilar colored males and females. Life span may be less than year to over 50 years.

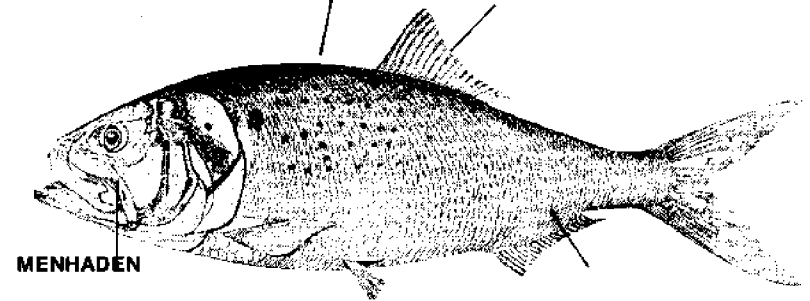
**AMERICAN SHAD, *Alosa sapidissima*.** Silvery slab-sided fishes with easily detached round scales. Belly with *sharp*, modified scales (*scutes*), mouth large, *false eyelids* present. Four gills, no lateral line evident (special line of scales along side of body). Upper or lower *jaw never projects*. Body with 5-7 *spots* on *sides*, greenish above, silvery otherwise. Fins pale. Dorsal (soft) and caudal fins dusky at tips. No teeth in adult jaws. Last *dorsal ray short, does not project* as in freshwater GIZZARD SHAD or MARINE TARPON. The related non edible MENHADEN (scales with scalloped edges) supports a vast commercial industry for oil and meal and is a prime food for many oceanic fishes; not usually caught by sport fishermen. Shad reach 2½ ft, 8 pounds, female heavier, bony but edible.

**HICKORY SHAD, *Alosa mediocris*.** Similar to American shad but easily distinguished from it or other herrings by *projecting lower jaw* and smaller eye. *Eye never larger than snout* as in alewife or BRANCH HERRING. Faint *stripes on sides*. Color like American shad except slightly more dusky. Tip lower jaw dusky. *Abdomen lining pale not black* as in GLUT HERRING. Attains 2 ft, 5 pounds weight. Bony but edible.

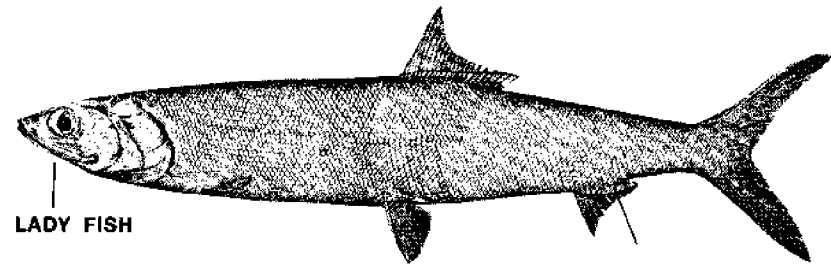
AMERICAN SHAD



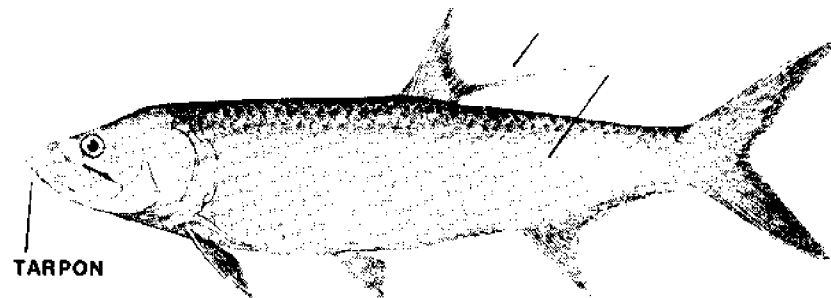
HICKORY SHAD



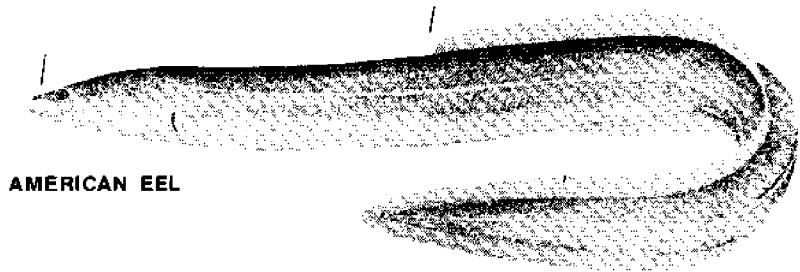
MENHADEN



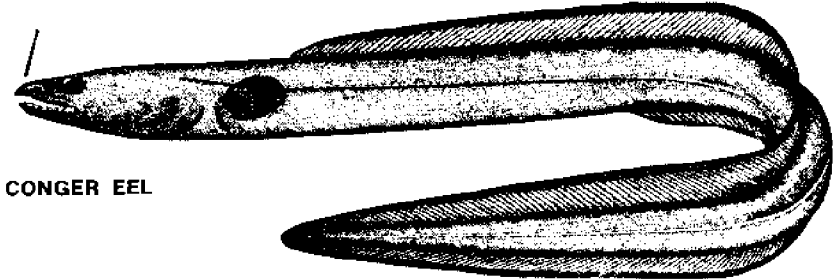
LADY FISH



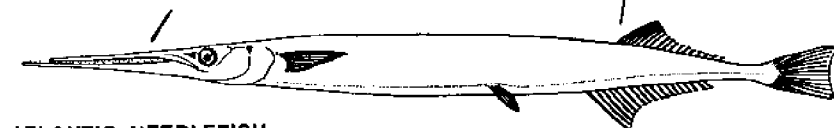
TARPON



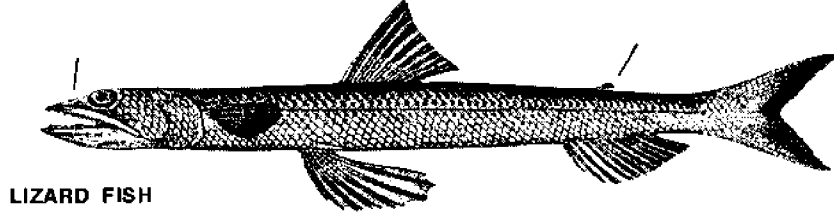
AMERICAN EEL



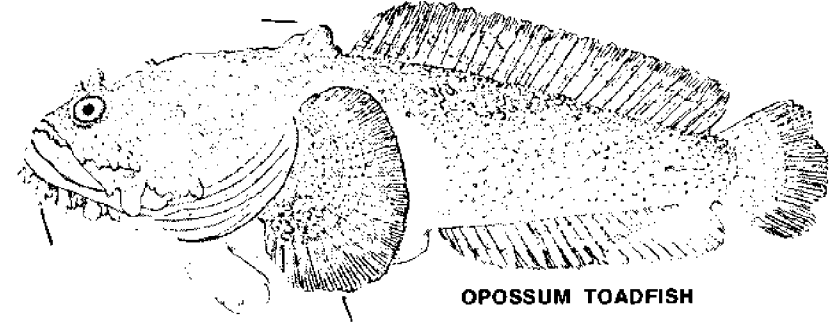
CONGER EEL



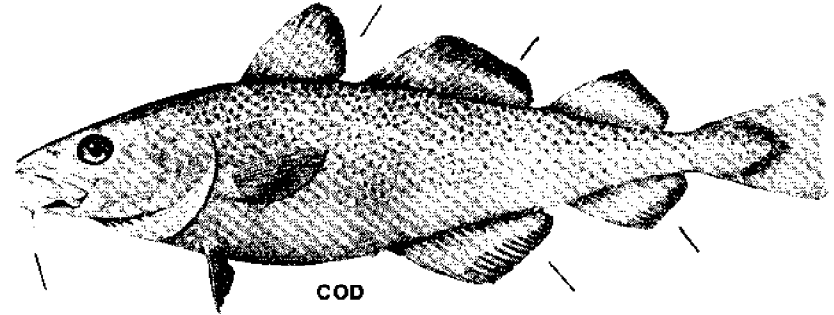
ATLANTIC NEEDLEFISH



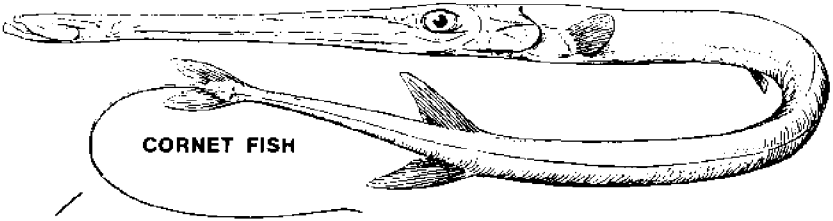
LIZARD FISH



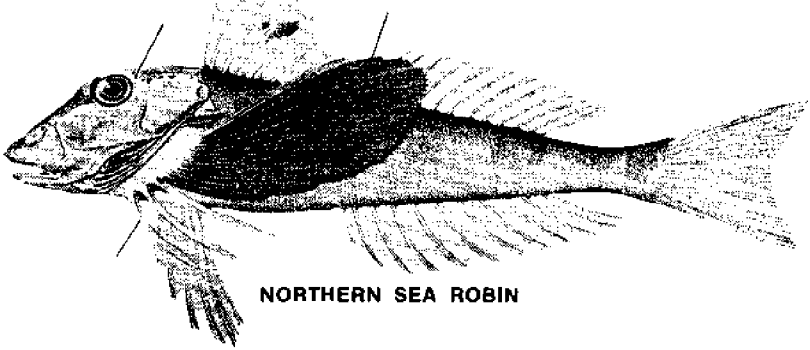
OPOSSUM TOADFISH



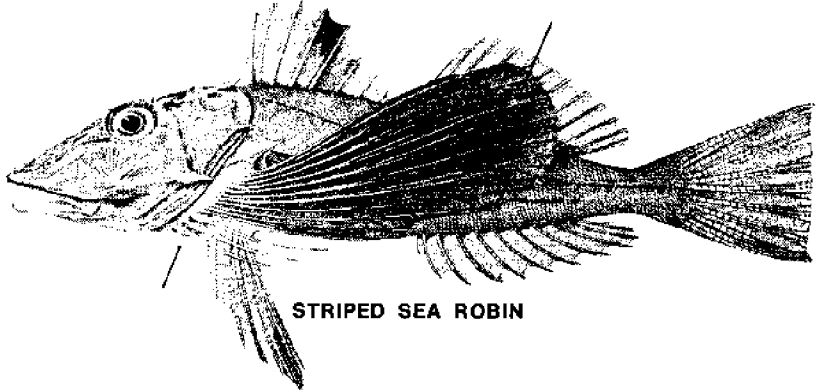
COD



CORNET FISH



NORTHERN SEA ROBIN



STRIPED SEA ROBIN

**STRIPED BASS, *Morone saxatilis*.** A robust olive-green above whitish below colored fish with series of *spots* on *sides* to give appearance of seven or eight lines along body. *Dorsal fins* well separated, first spinous. Lower jaw projects. Teeth in bands on jaws and tongue base. *Three anal spines*. Females larger, reach 6 ft, 90 pounds. Migratory. Excellent food quality.

**RED GROUPER, *Epinephalus morio*.** One of several grouper species. Two types of groupers occur over North Carolina offshore oceanic reefs; those with *less than nine anal rays* and those with *ten or more*. Red grouper *anal rays* number 9 or less. *Spinous dorsal fin* high, soft dorsal black-edged and high. No notch between dorsal fins. Body deep, color uniform, pectorals round and short, caudal edge nearly straight. Size, 7 ft, 450 pounds. Excellent eating.

**GAG, *Mycteroperca microlepis*.** This and several other species may be mottled in color, are elongate fishes. Pectorals long and rounded. *Nostrils* often of different sizes. Fins of some species may be one color in shallow water and another in deep waters. Eleven dorsal spines, 11 anal rays. *Lunate caudal fin*. Size 3 ft, 50 pounds, fair food value.

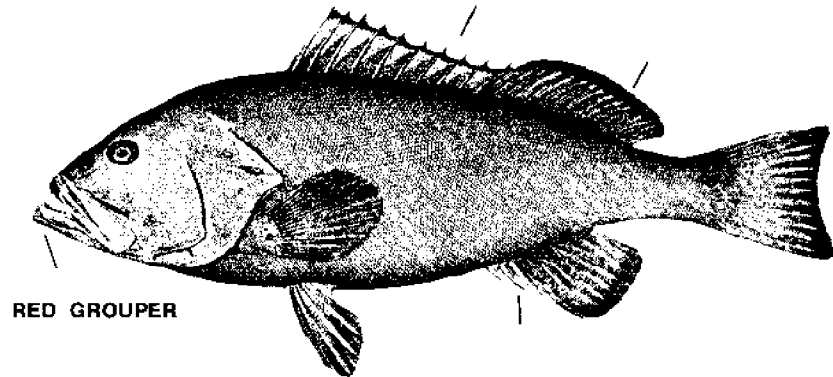
**SPECKLED HIND, *Epinephalus drummondhayi*.** A reddish fish profusely covered with conspicuous *whitish spots* on body and fins. *Eleven dorsal spines*, 9 anal rays. Size 20 inches, 30 pounds, edible.

**BLACK SEA BASS, *Centropristis straita*.** One of three species confused in the sport and commercial catch. Stout bodied fishes with *hump backs* and 10 dorsal spines which may have *filamentous projections*. Caudal is rounded or pointed but leading edges may project in some species. Blackish or brownish fishes often with suggestion of spots or longitudinal bands on body. Head may be purple ventrally, mouth orange-yellow internally. Fins may be clear or yellow (anal in one species is pale, another possesses a yellow bar). *Big broad pectoral* fins act as oars when swimming. Bottom fishes, seldom exceed 15 inches, 8 pounds, excellent food.

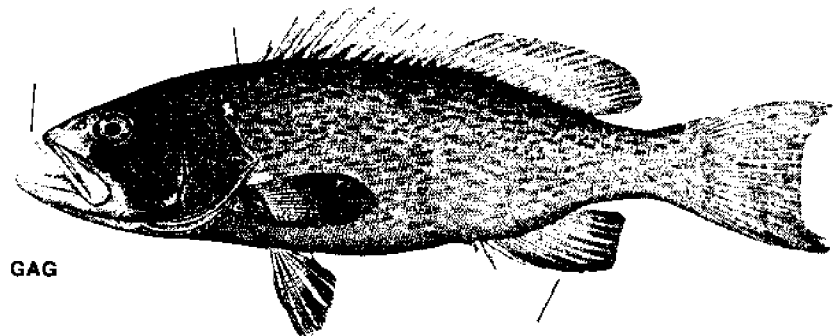
**BLUEFISH, *Pomatomus saltatrix*.** Flat sided, stout bodied fishes. Large oblique mouth with projecting lower jaw. Caudal broadly forked, dorsal spines 7-8. *Second dorsal* twice first in size. Blue-green to silvery-white color. Pectoral fins with blue-black blotch at base. *Two anal spines* free. Dorsal and anal fins scaly. *Voracious feeders*. Size 4 ft, 45 pounds. Highly esteemed but oily as food.



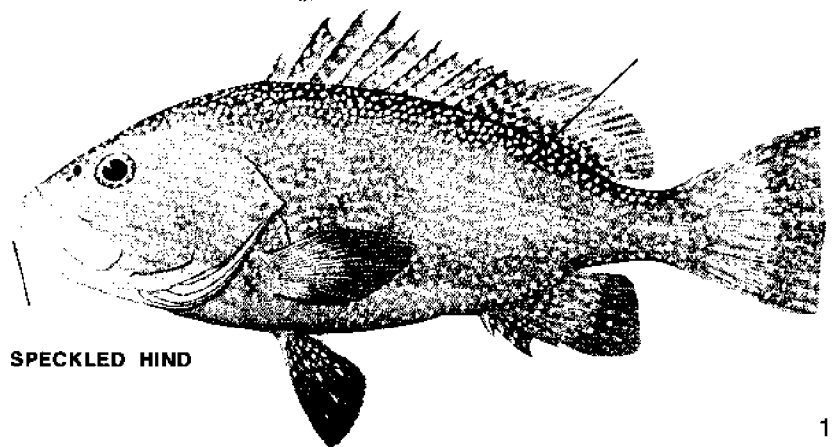
STRIPED BASS



RED GROUPER



GAG



SPECKLED HIND



BLACK SEA BASS



ROCK SEA BASS



WHITE PERCH



BLUEFISH



BLACKLINE TILEFISH



TILEFISH



COBIA

**BLACKLINE TILEFISH, *Caulolatilus cyanops*.** Elongate fishes, lips fleshy, no teeth on roof of mouth. *Dorsal fin long and continuous, not deeply notched. Green bar across cheek of head.* Inhabit deep waters over rocky and reef areas. The related **TILEFISH, *Lopholatilus chamaeleonticeps*,** possesses numerous blue, yellow, pink colors and has fleshy flap (adipose tissue) anterior to dorsal fin (see picture). *Blackline tilefish lack these characters.* Tilefish once abundant and have recovered from devastating fish kill of 1880. Both good eating qualities. Size: tilefish 3½ ft, 50 pounds; blackline 2½ ft, 15 pounds. blackline 2½ ft, 15 pounds.

**COBIA, *Rachycentron canadum*.** Lower jaw projects. Series of 8-10 separate dorsal spines precede a long dorsal fin. Head flattened. Body robust and cylindrical. Blackish to brownish color with brown-black band passing through eye from snout to caudal fin. Fins black, pectoral large, dorsal and anal high. Size 5 ft, 103 pounds. Excellent food.



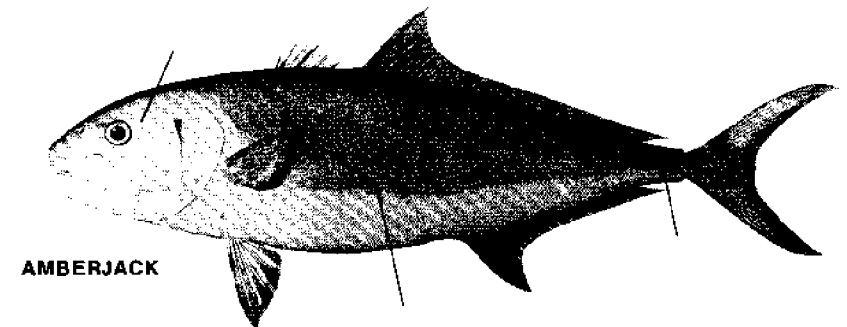
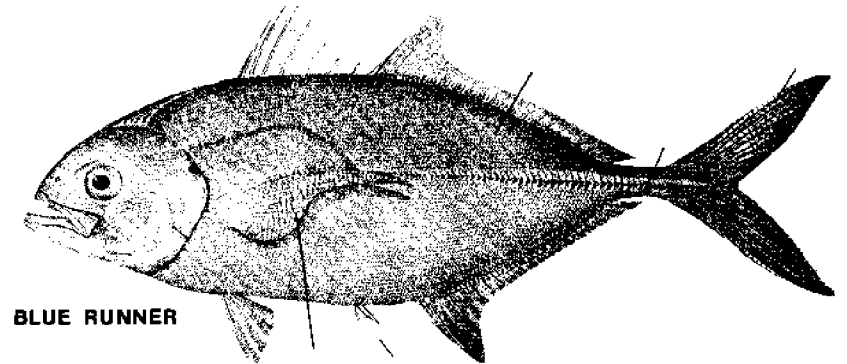
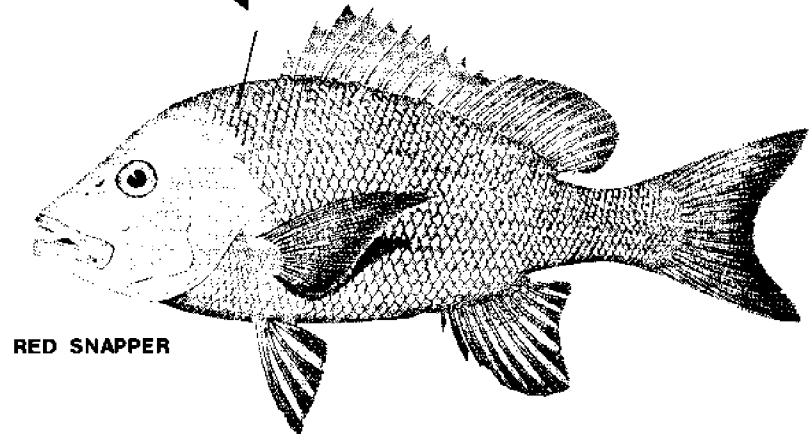
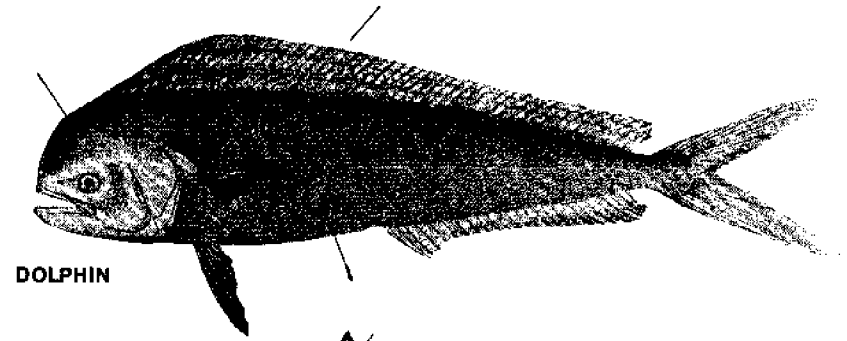
**DOLPHIN, *Coryphaena hippurus*.** Broad, slab-sided fishes, with tapering body, brightly colored with yellows and greens. *Long soft-rayed dorsal fin.* Males with "bull" blunt head. Females head more streamlined. Alive, fins spotted, but colors and spotting or barring disappear immediately on capture. Body with black spots ventrally. *Greatest body height just behind head.* Anal and caudal yellow. The blue-colored pompano dolphin, *C. equisetis* is rare fish of the open ocean; dolphin is usually encountered closer to shore. **POMPANO DOLPHIN** depth is greatest near middle of body. Size dolphin 5 ft, 76 pounds; pompano dolphin 2 ft, 5 pounds. Excellent eating.

**BLUE RUNNER (yellowtail) *Caranx fuscus*.** One of several species of fast swimming fishes characterized by the deep forked tail and the row of specialized lateral line scales (scutes) on each side of the narrow caudal peduncle. *Large pointed pectoral fins.* A yellowish fish which may have seven vertical bars on body. Bluish-green dorsally to golden yellow or silvery below. A small black spot at upper end of gill cover, streamlined shape, and no hump to head profile. Two detached anal spines. Chest completely scaled. Size 28 inches, 4 pounds. Good eating but should be bled by cutting tail on capture as meat is dark.

**AMBERJACK, *Seriola dumerili*.** Bronze hued fish. Not to be confused with **BARJACK, *C. rivoliana*.** Cheek may have a *bronze-yellow stripe extending along side of body,* disappears with age. *A diagonal black bar through eye to dorsal fin base.* Bar or almaco jack is flatter shaped, brown, and with high pointed soft dorsal and anal fins. Rarely exceed a few pounds. Size amberjack 5 ft, 177 pounds. Small edible, large edible but wormy.

**FLORIDA POMPANO, *Trachinotus carolinus*.** One of several diamond shaped species with slender slab-sided bodies. *Five to six spines precede high soft dorsal fin.* *No bars on body,* other pompanos have 4 or 5 vertical bars. Scutes weak. Generally bluish-green dorsally, with silvery sides which annually, by fall become brilliant metallic yellow. Often confused with PERMIT. Permit has higher dorsal and anal fins, dorsal rays 18-21 while pompano has 23-27, and fins tinted orange. Size, pompano 2 ft, 8 pounds. Highly esteemed as food.

**PIGFISH, *Orthopristes chrysoptera*.** Two species with this common name. Both slab-sided with oblong compressed high body shapes and stiff spines in fins. GRUNT mouth lining orange or red. *Orthopristes* has *mouth low on head.* Back strongly arched. Teeth pointed. Caudal



forked. Pectoral fin pointed. Light blue, uniform silvery or tan color. Edges of scales orange-brown forming *oblique stripes* above the *lateral line* and *straight below*. Snout and upper lips blue, orange spots on snout and head. Orange spots on dorsal fin. Anal with bronze bar and dusky edge. Caudal fin golden with dusky margin. Other fins yellowish. Abdomen lining black. Scales ctenoid (spined). *Base dorsal, anal fin with scaly sheath at base*. Size, 15 inches, 1 pound. Eating food quality fair.

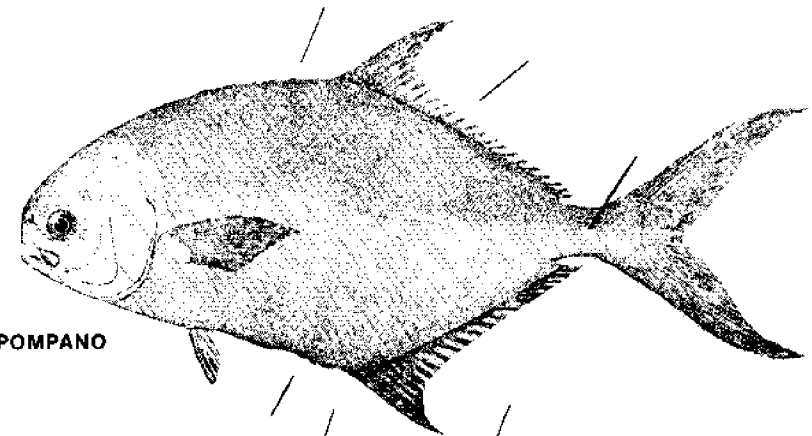
**PORGIES, *Stenotomus* sp., *Calamus* sp.** Several species with deep body shapes. Mostly offshore forms, called silver snappers (*Calamus*), haunting coral reefs and caught by head boats. Color silvery with brown or pinkish-blue tints. Head profile steep or high. Incisor teeth. Several species with blue-green on cheeks. Some with blue or yellow body spots. Pectorals long. Some to 2 ft and 8 pounds. Excellent food value.

**PINFISH, *Lagodon rhomboides*.** Bluish-silver, darker above with 4-6 bars on body varying in intensity. Numerous golden stripes on sides. *Dark shoulder spot*. Fins yellowish with aqua-blue edges. Stiff dorsal spines with first obscure but *projecting forward* instead of vertical. Prominent incisor teeth. Nuisance species. Size 10 inches, 1 pound. Little food value.

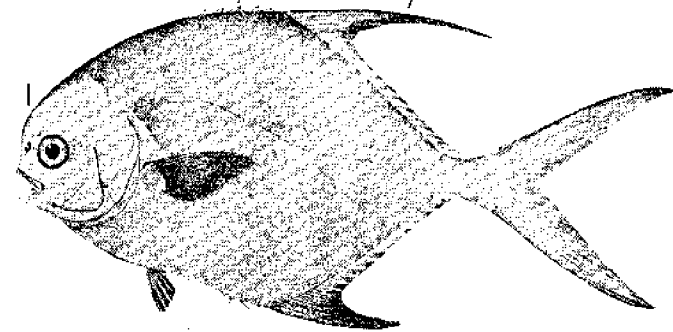
**SHEEPSHEAD, *Archosargus probatocephalus*.** A bulky fish with thick lips and dark head marked by alternate *black and white vertical body bands*. *Strong unnotched incisor teeth in front*, laterally positioned molars. Spinous dorsal twice length soft portion. Prefers to lurk near pilings or obstacles where can feed on barnacles, crabs, etc. Pectorals long. Confused with black drum but latter species has *chin barbels*, sheepshead does not. Size, 3 ft, 15 pounds. Excellent eating.

**SPOTTED SEA TROUT, *Cynoscion nebulosus*.** *Lateral line extends out onto and to the end of the tail*. Grey color above, sky blue spots on body, silver below. Blackish spots on soft dorsal and caudal fins. Dorsal fins deeply notched and divided into two fins. Young with broad lateral bands, base *caudal not forked*, black. Mouth oblique. *Lower jaw projecting*. Numerous teeth with *two fang-like teeth* present in upper jaw. Males produce sounds. Size 2 ft, 15 pounds. Highly prized as food but soft fleshed.

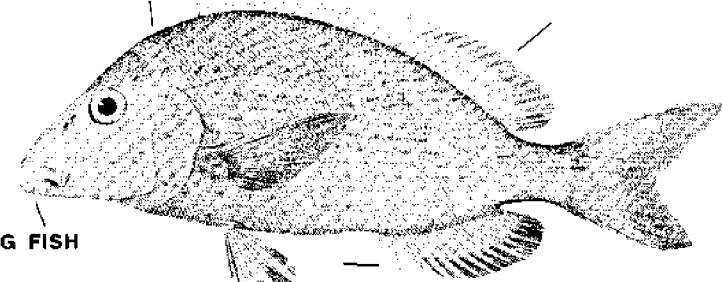
**GRAY SEA TROUT, *Cynoscion regalis*.** *Lateral line extends onto tail*. *Projecting lower jaw* easily torn when hooked. Dark olive to greenish-blue color. Scales with blue or green, purple, brown or yellow colors.



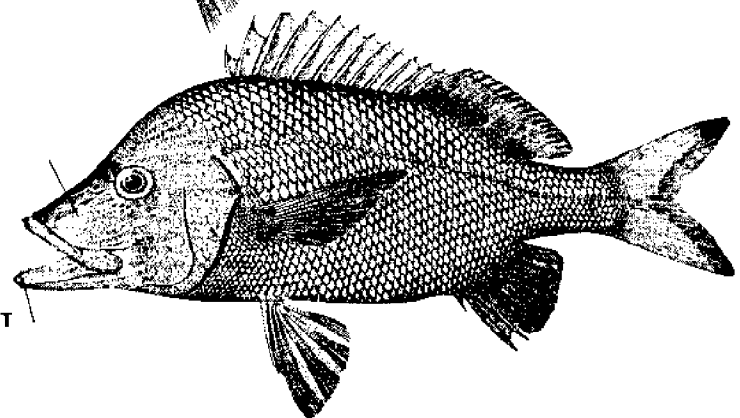
POMPANO



PERMIT



PIG FISH



GRUNT



NORTHERN  
PORGY



LONGSPINE PORGY



PINFISH



SHEEPSHEAD



SPOTTED SEA  
TROUT



GRAY SEA  
TROUT



CROAKER

Numerous *black spots* scattered over head, back, and body arranged to give impression of wavy *oblique bars*. Large terminal mouth with two fangs in upper jaws. Ventral fins yellowish. Slim, cylindrical shape. Size 27 inches, 6 pounds. Soft fleshed, highly esteemed.

**CROAKER, *Micropogon undulatus*.** Body silvery green-olive above with *vertical patterns of interrupted or oblique bars and spots*. Lower third of body whitish or bronze, often yellow. Iris green. Pectoral fin golden, black at base. Caudal fin yellow. Dorsal fins spotted. *Four barbels on each side of lower jaw*. No black lines along back. *Mouth inferior*. Long low body profile. *Lateral line extends onto tail*. Make drum noises. Size 26 inches, 8 pounds. Flesh firm and highly esteemed.

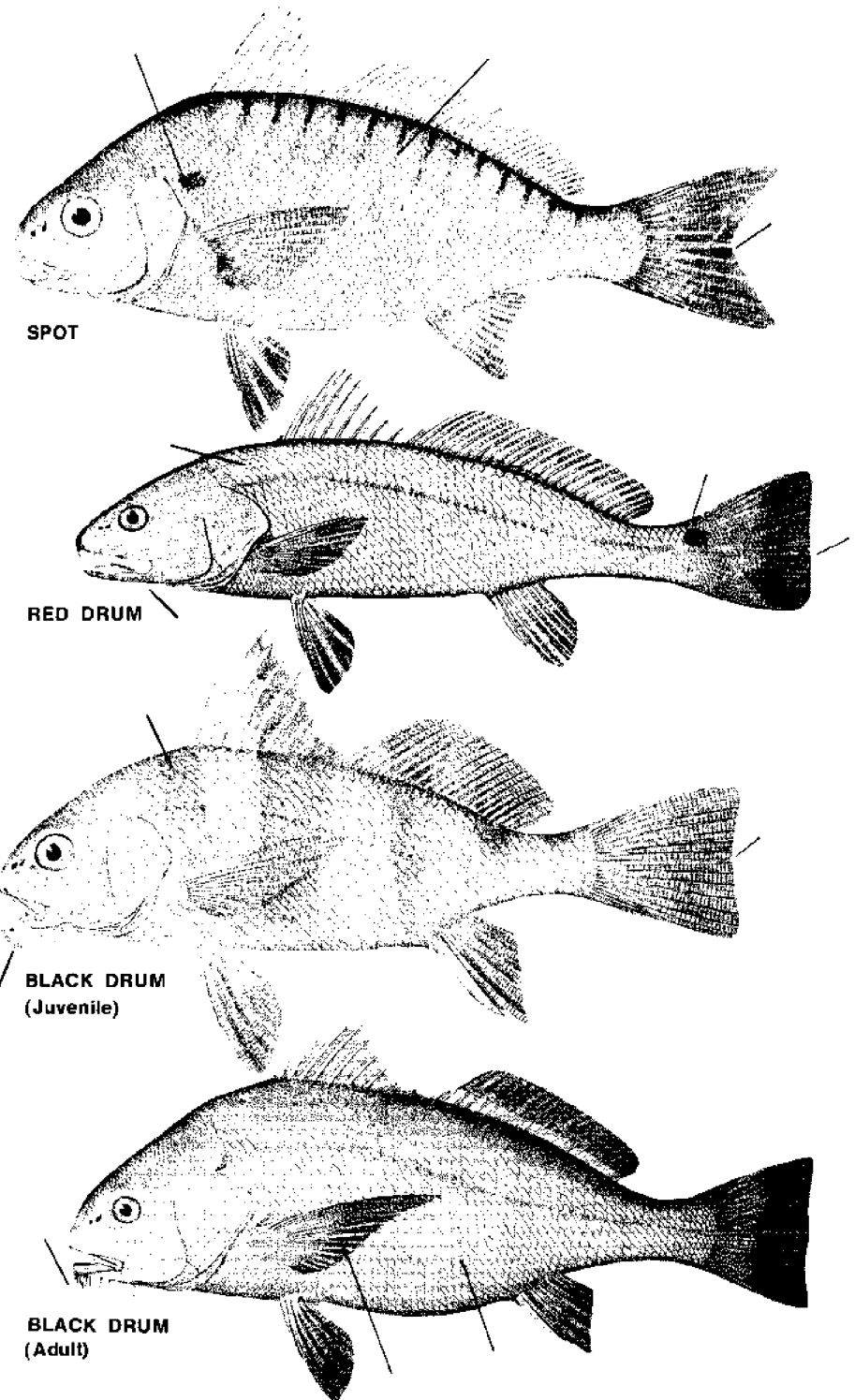
**SPOT, *Leiostomus xanthurus*.** Short, deep body, no barbels on lower jaw. Mouth small and horizontal. Teeth on lower jaw in young, lacking in adults. Gold-bronze body color. *Twelve to 15 oblique yellowish bronze bars on sides. Shoulder spot dusky bronze. Lateral line extends onto tail.* Size 14 inches, one pound. Excellent eating.

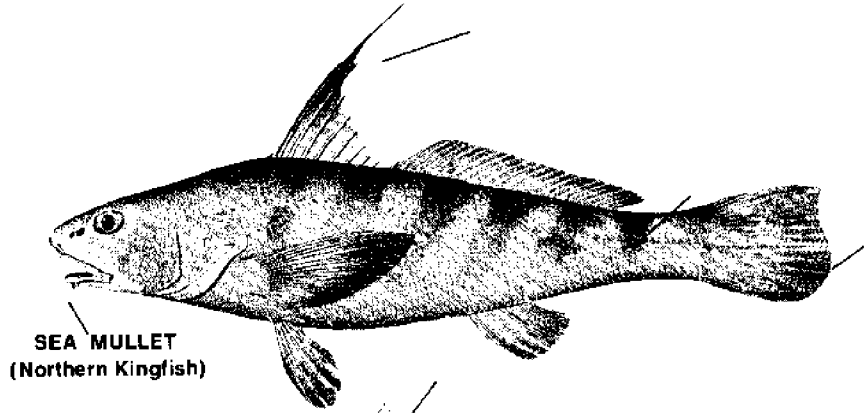
**RED DRUM, *Sciaenops ocellata*.** Two species usually referred to as drum. Red drum is a high shouldered fish of golden-bronze color with *one or up to 50 spots (ocelli) at base of caudal fin.* Scales large. Large mouth. *No chin barbels.* BLACK DRUM has bars when young like sheepshead, but becomes drab, dull uniformly silvery black colored as adult. *Has barbels on lower jaw and large inferior mouth.* Short stout body with a *high arched back.* Size, red drum, 4 ft, 103 pounds. Black drum 4½ ft, 98 pounds. Young of both species eaten, adults may be wormy.

**SEA MULLET, *Menticirrhus* sp.** Three species. Characterized by *single stout chin barbel* at union of lower jaw. Body of *long, sloping profile. Mouth inferior.* Teeth in bands in both jaws. *Asymmetrical caudal fin.* No air bladder as adult. First dorsal spine may be extended in one species (*Northern Kingfish*). Barred obliquely; although the Gulf Kingfish is usually a drab uniform color. Size, 18 inches, less than 2 pounds. Slightly oily but good eating.

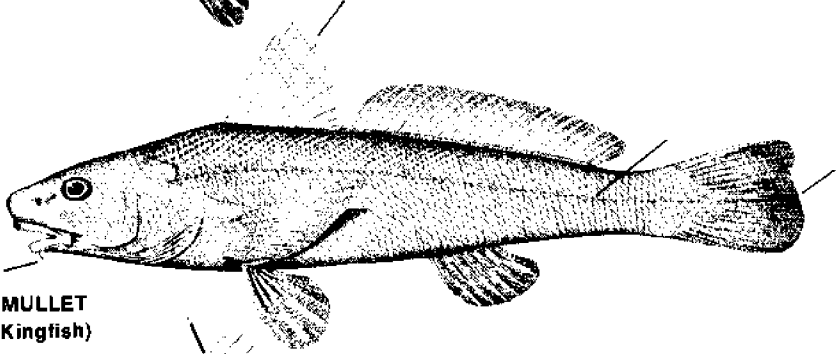
**JUMPING MULLET, *Mugil* sp.** Two species, white and striped. *Pectoral fin positioned high, with two separate dorsal fins.* Body torpedo-shaped. Confused with but not related to sea mullets (see above). Both olivaceous above, whitish below. One species appears striped because of dark areas on scales, gives impression of lines along body. Schooling fishes which love to jump out of water. Source of bait for other fishes. Size, 30 inches, 15 pounds. Excellent eating.

**BARRACUDA, *Sphryaena barracuda*.** One of three species, the great barracuda contributes primarily to the sport catch. A square-shaped elongate fish with *jutting lower jaws full of canine fang-like teeth.* *Head, duck-billed shape.* Five spines in first dorsal which is separated by space from second dorsal fin. Grey-black dorsally, silvery white on sides and belly. *Scattered black blotches on sides of body.* Size 6 ft, 106 pounds. The smaller SENNET and GUAGUANCHE barracudas caught occasionally in trawls in late summer. Size, 18 inches, 1 pound. Use caution as all species may be toxic as food.

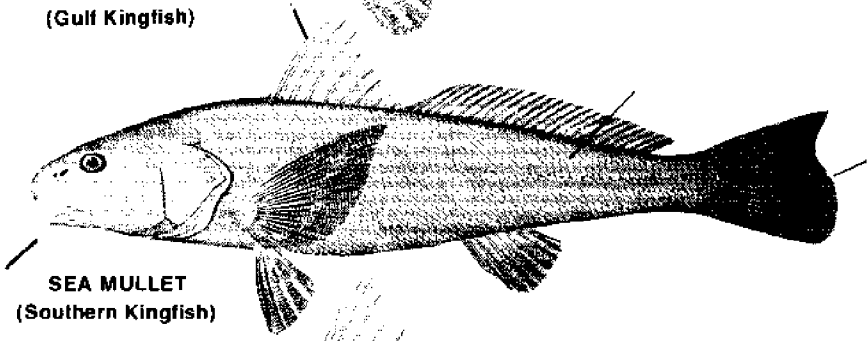




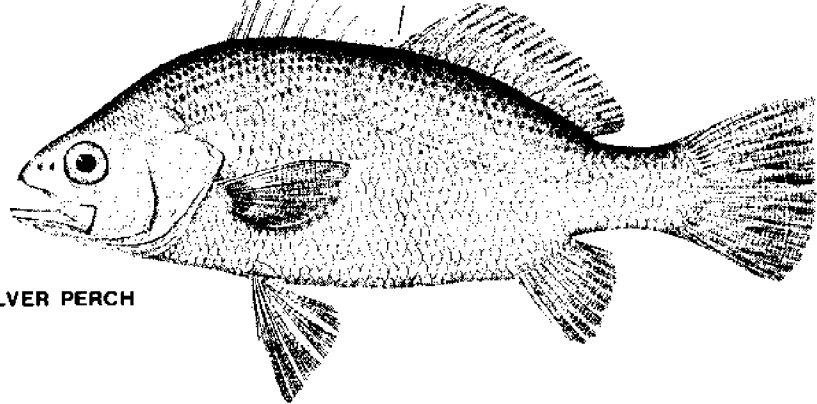
**SEA MULLET**  
(Northern Kingfish)



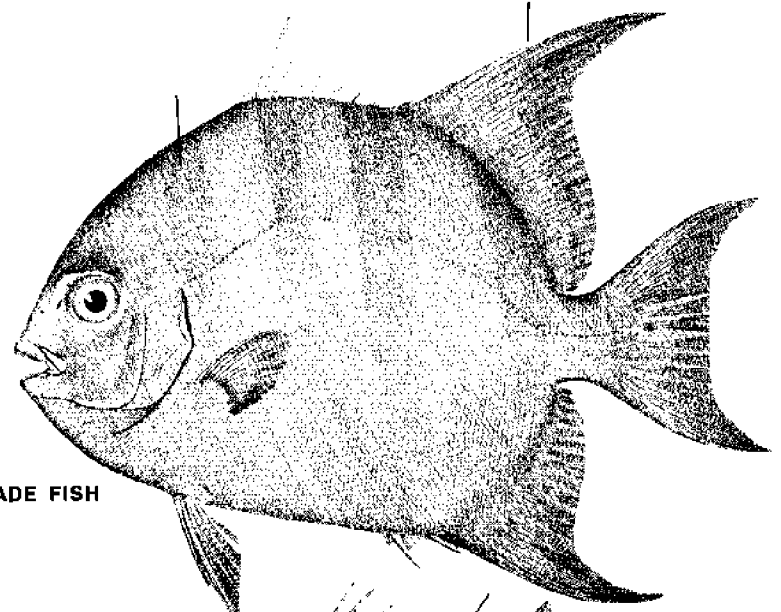
**SEA MULLET**  
(Gulf Kingfish)



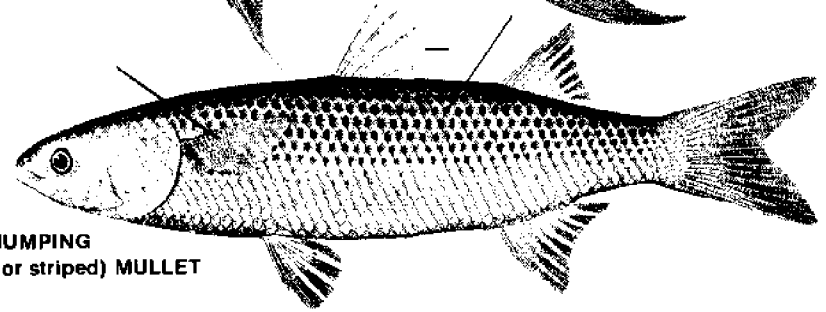
**SEA MULLET**  
(Southern Kingfish)



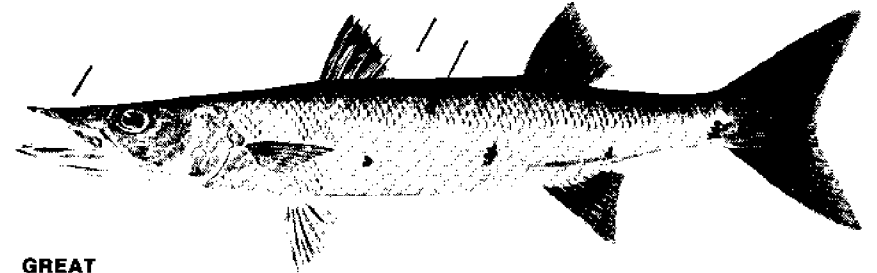
**SILVER PERCH**



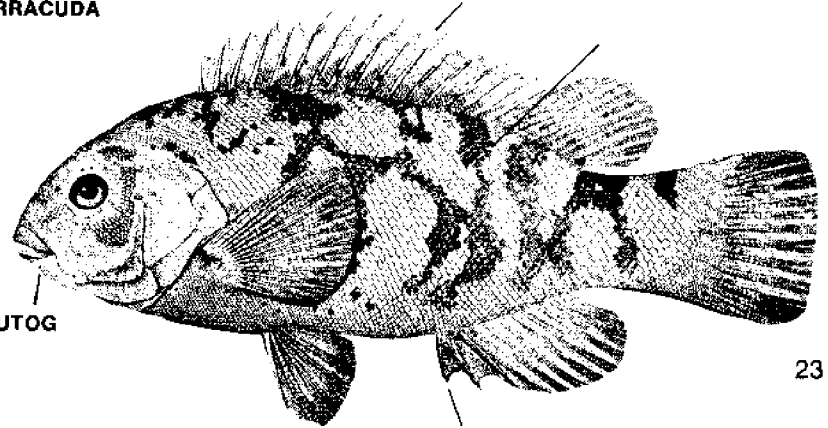
**SPADE FISH**



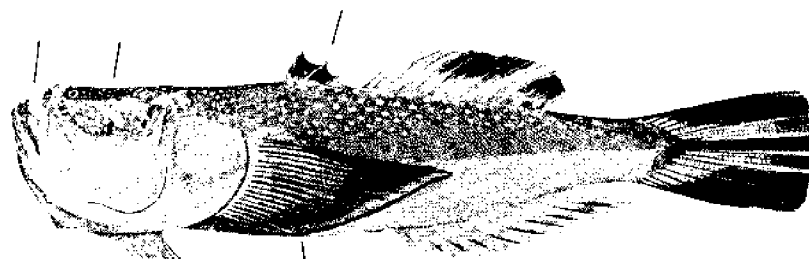
**JUMPING**  
(or striped) **MULLET**



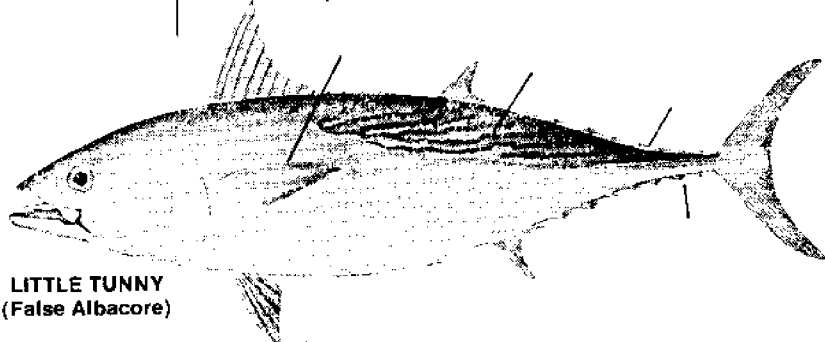
**GREAT**  
**BARRACUDA**



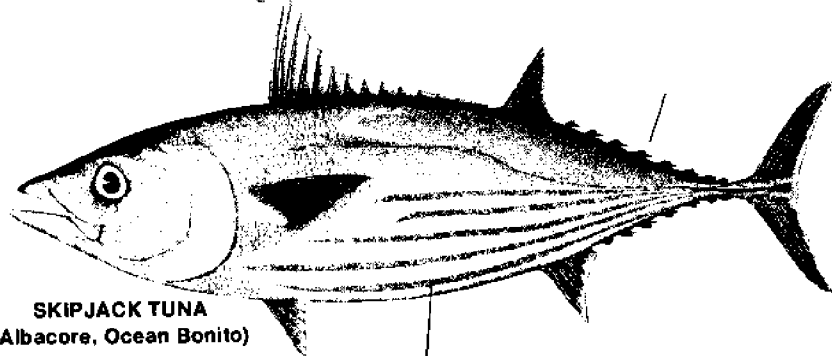
**TAUTOG**



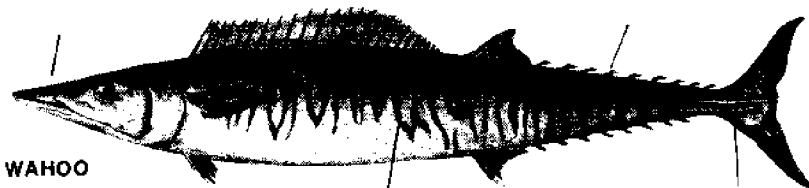
STAR GAZER



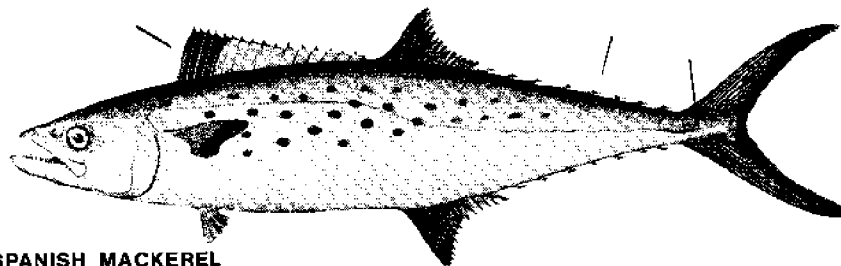
LITTLE TUNNY  
(False Albacore)



SKIPJACK TUNA  
(Albacore, Ocean Bonito)



WAHOO



SPANISH MACKEREL

**LITTLE TUNNY (false albacore), *Euthynnus alletteratus*.** Fish of the mackerel family with *deeply forked tails*. *Dorsal and anal fins followed by several small detached finlets*. *Caudal peduncle often with lateral keels*. Fins recess into grooves in body to enhance swimming speed. Little tuna possesses a *corselet of scales on anterior body*, rear part of body scaleless. Body blue-black above, blue-silvery below. Rear upper portion of *body with diagonal wavy lines* which never pass forward below lateral line or onto belly. Few scattered spots near *pectoral fin* on lower belly. Size, 2 ft, 20 pounds, meat dark, edible but not preferred. Other species more esteemed.

**Bluefin tuna, *Thunnus thynnus*,** has high falcate soft dorsal and anal ray fins. Fins often yellow colored. Size, 10 ft, 977 pounds.

**Blackfin tuna, *Thunnus atlanticus*,** has long pectoral fin reaching to base of second dorsal. Size, 2 ft, 35 pounds.

**Skipjack tuna (albacore), *Euthynnus pelamis*,** has long diagonal bands on body that project down and forward onto the belly. Size, 3 ft, 40 pounds. Excellent food.

**Bigeye tuna, *Thunnus obesus*,** has exceptionally big eye. Oceanic, confused with bluefin tuna. Pectorals greater than 80% length of head. Finlets yellow with black margins, no white margins to caudal. Size 7 ft, 435 pounds.

**Allison or yellowfin tuna, *Thunnus albacares*,** like bigeye or blackfin in characters but soft dorsal rays are elongate. Body with white spots and vertical streaks. Size, 7 ft, 275 pounds.

**WAHOO, *Acanthocybium solanderi*.** Similar shape to spanish and king mackerels. *Long tubular head*, snout with strong teeth. Body flattened laterally, 21-27 spines in *long dorsal*. *Sides with narrow vertical blue bars*. Size, 7 ft, 150 pounds. Excellent eating.

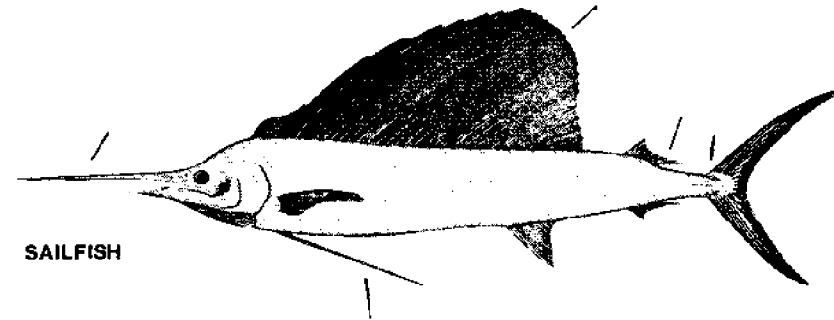
**SPANISH MACKEREL, *Scomberomorus maculatus*.** A golden-yellow spotted fish. No scales on pectoral fins. *Lateral line slopes gradually along side*. Confused with CERO mackerel which has spots and king mackerel (which does not). Cero mackerel has scales on pectoral fin, other mackerels do not. *Dorsal fin has a black vertical area on first six spines*. Silver blue to silvery ventrally. Finlets pale green. Caudal dusky green. Tips of caudal black. Pectoral greenish at base, dusky at tip. Caudal peduncle with keels, elongate flat body. Size, 3 ft, 10 pounds. Highly esteemed as food.

**KING MACKEREL, *Scomberomorus cavalla*.** Lacks pigment in spinous dorsal. Pectoral fin covered with scales. Lateral line bends sharply downward under soft dorsal. Grey silvery fishes with darkened fins and finlets. Size, 6 ft, 81 pounds. Highly esteemed as food.



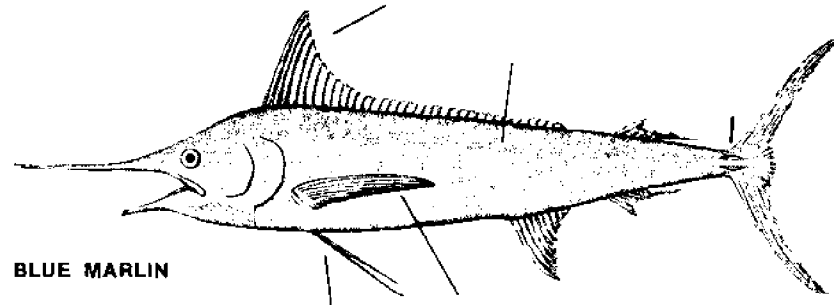
KING MACKEREL

**SAILFISH, *Istiophorus platypterus*.** Long billed fishes with forked tail. Possesses a large billowy dorsal fin. Pelvic fins reach anal fin. Speed increases as all fins can recess into body grooves. Slender bodied fish. Upper jaw twice lower. Steel-blue to silver below. Pale pectoral with broad membranes. Bars may be evident on sides. Cobalt-blue fins, dorsal may have blue spots which fade on capture. Body may have bronze tint. Size, 8 ft, 141 pounds. Not eaten locally.



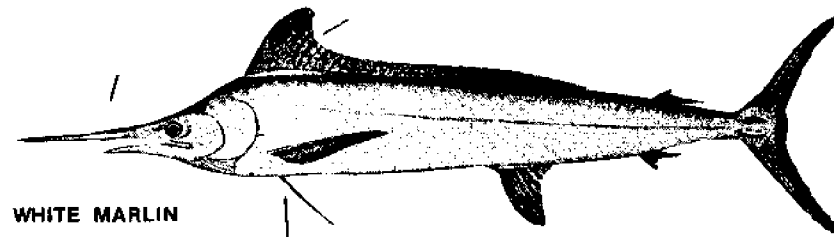
SAILFISH

**BLUE MARLIN, *Makaira nigricans*.** High pointed, long low dorsal and anal fins. Body nearly cylindrical. Heaviest forward or just under anterior edge dorsal fin. Spear shape oval. Upper jaw much larger than lower. Steel-blue color to silver below. When alive light colored vertical bars evident on sides. May be bronze when dead. Dorsal and anal cobalt-blue, sometimes with spots or blotches. Size, 13 ft, 845 pounds. Edible, rarely eaten locally.



BLUE MARLIN

**WHITE MARLIN, *Tetrapturus albidus*.** Tips of spinous dorsal and anal rounded rather than pointed. Pectoral long and rounded at tip. Body flat sided. Lateral line single and prominent. Upper jaw twice lower. Anterior height dorsal is higher than body depth. Greenish above to silver color below. Blue vertical bars on sides fade on death. Blue dorsal spotted with black on purple. Size, 9 ft, 161 pounds. Not eaten.

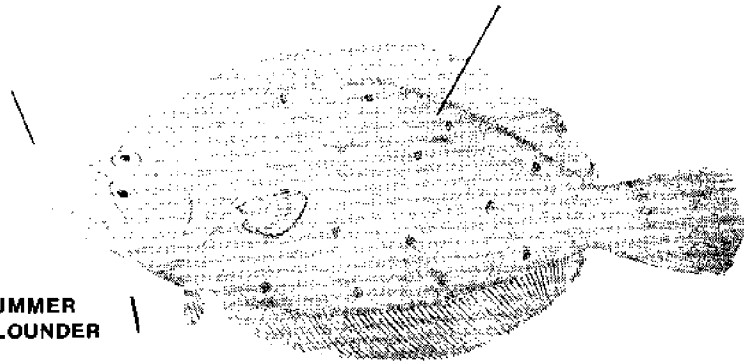


WHITE MARLIN

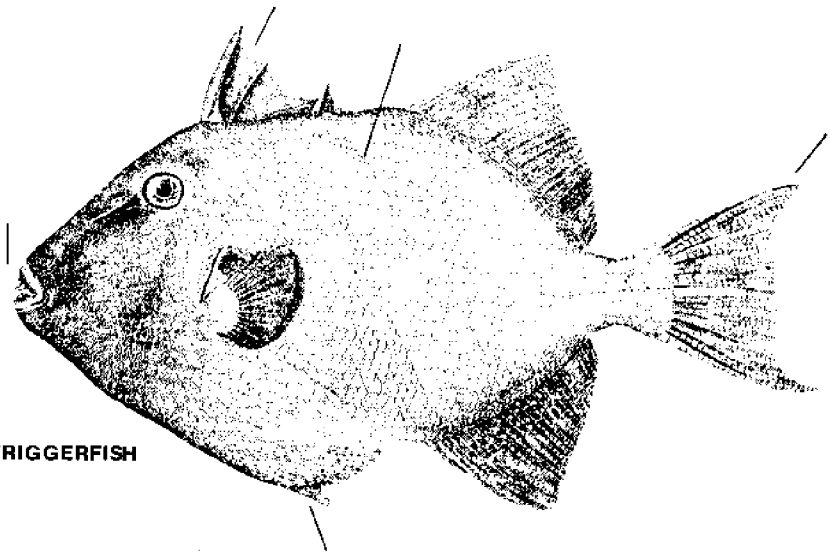
**FLOUNDERS, *Paralichthys* sp.** One of several confusing left sided fishes. Best identified by number and shape of gill rakers on anterior edge of gills. One species, broad flounder, has a highly arched lateral line, others not so. Eyes on brown left side, right side white. Teeth and jaws large. Body may be blackish colored brown with cream colored spots scattered over body. Size, 2 ft, 30 pounds. Excellent food.

**TRIGGERFISH, *Balistes capricus*.** Can be distinguished from FILE-FISHES by the interlocking arrangement at the base of the first of three dorsal spines (filefishes possess only one long dorsal spine). Depress the second spine to lower the first. Deep bodied, thick skinned, and scales plate-like. Mouth small with powerful projecting incisor teeth. Dorsal and anal fins elongated anteriorly. Gill opening small slit. Greyish blue or greenish body color, fins dark. Pelvic fin replaced by

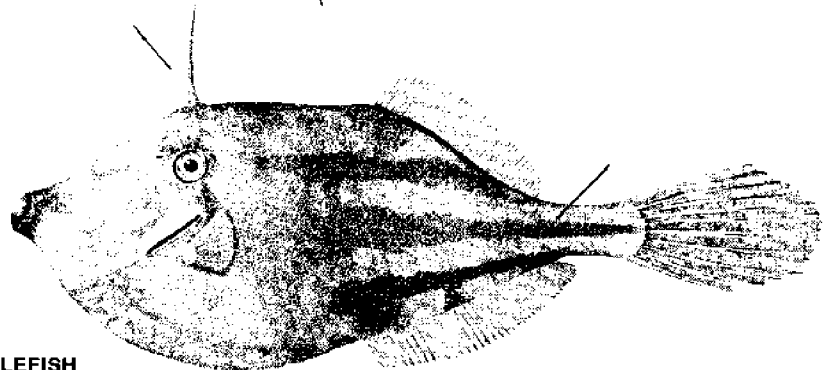
SUMMER  
FLOUNDER



TRIGGERFISH



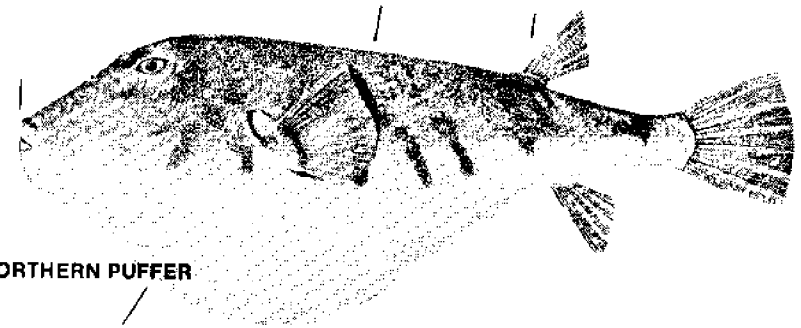
FILEFISH



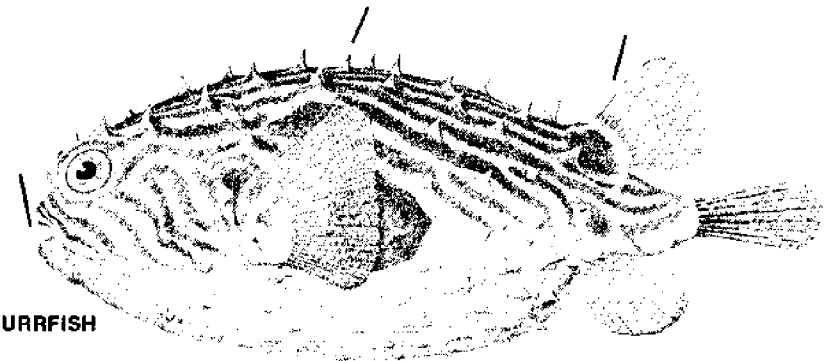
single small spinous knob. QUEEN TRIGGERFISH quite colorful but rarely seen in North Carolina. GREY TRIGGERFISH dull greenish-grey color. Light blue spots on upper half of body and median fins. Filefishes have *single long dorsal spine with posterior hooks*. Flat bodies, with little meat and vary in color from silvery to orange, brown, black or mottled. Size, triggerfish 1 ft, 5 pounds, edible; filefish, 14 inches, less than 2 pounds, unedible.

**NORTHERN PUFFER, *Sphoeriodes maculatus*.** One of several common inshore species with *warty to the touch skin*. Brownish-yellow dorsally to yellowish laterally with blotches scattered along lower lateral sides, belly white. Dorsal and anal yellowish-brown *fins soft and far back on body*. *Beak-like mouth*. Head and profile flat and broad. Eyes movable separately, often one blue, the other green. *Can swell with air or water as defense mechanism*. Size 14 inches, 2 pounds. Highly esteemed as food.

NORTHERN PUFFER



BURRFISH





## Index

List of fishes pictured and discussed (D), pictured only (P), or mentioned only (M) in the text arranged to relate their systematic position as well as family relationships. Those fishes near the beginning are considered more primitive than those further along the list. Each family (for example, Triakidae) is followed by a common name for the entire assemblage of fishes of that family. Accepted common names precede each species, listed alphabetically, treated in this volume.

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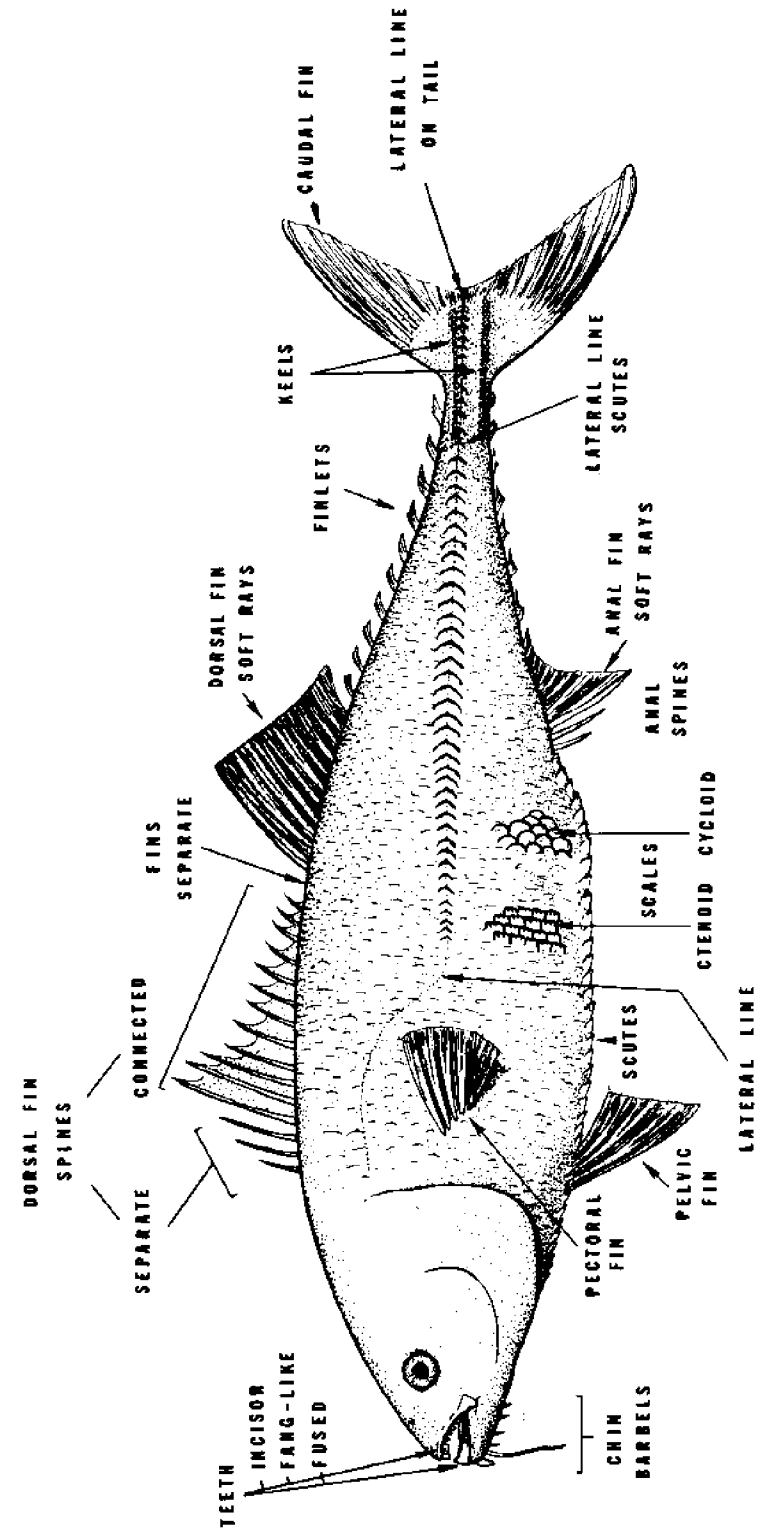
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HYPOTHETICAL FISH ILLUSTRATING FEATURES MENTIONED IN TEXT

