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A Guide to Flounder Fishing in South Carolina



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Flounder Fishing In South Carolina

Two flounders of the flatfish genus Paralichthys (pär a lik'-thes) occur in the inshore waters of South Carolina. Their relatively large size, fighting ability on light tackle and excellent flavor rank them among the most sought-after sportfishes in the state's coastal zone. The southern flounder, Paralichthys lethostigma, occurs almost continuously from the sounds of North Carolina south to the tip of Florida and around the Gulf Coast to southern Texas. The summer flounder, Paralichthys dentatus, inhabits coastal waters from Cape Cod to northern Florida although most abundant in the northern half of its range. Recent biological evidence indicates that there are separate populations of P. dentatus north and south of Cape Hatteras. This may explain why at smaller sizes, summer flounder are about as numerous as southern flounder, but the former don't reach as large a size in southern waters. South of Cape Hatteras, North Carolina where the ranges of the two species overlap, the southern flounder largely replaces the summer flounder in importance to coastal fishermen. Two additional species of paralichthid flounders, the gulf flounder, P. albigutta, and the broad flounder, P. squamilentus, also occur in South Carolina waters. However, members of these species are generally of small size (less than about 12 inches and only occasionally occur in waters less than about 40 feet (12 meters) deep). Hence, they rarely enter into the state's fisheries.

two flounders caught by recreational fishermen is probably about 1 to 2 pounds (about $\frac{1}{2}$ to 1 kilogram), although southern flounder up to 9 or 10 pounds (4 to 4.5 kg) are not uncommon. The current South Carolina hook and line record for this species is 17 pounds, 6 ounces (7.9 kg) and was taken in the South Santee in 1974. Summer flounder do not attain as large a maximum size in South Carolina as they do in the northern half of their range.

Flounders possess the unique ability to change the coloration of the upper surface of their bodies to match that of the bottom type



Distribution of P. dentatus and P. lethostigma along the Atlantic and Gulf coast.

upon which they live. This rapid color adjustment or camouflaging is accomplished by special color cells in the skin called chromatophores. By varying the amount of pigment reflected by the chromatophores, flounders can almost instantly

blend-in with the coloration of the bottom. One ichthyological text humorously notes that when a flounder is placed on an illuminated checkerboard background, after a short while, one could almost play a game of checkers on the fish!

Aids To Identification

All flatfishes have both eyes on one side of the body. Both the southern and summer flounder belong to the flatfish family Bothidae or the lefteye flounders. The reason for such terminology can be seen if one holds either of these flounders horizontally in the palm of the hand with the head of the fish pointed away from the holder. Now if the fish is rotated 90° counter-clockwise, the dark, pigmented, eyed-side of the body will be to the holder's left. The "blind" or eyeless side of the body which is immaculate white and is the surface that rests on the bottom will be to the holder's right - Hence, the term lefteye flounders.

Numerous other lefteye flatfish, such as the fringed and ocellated flounders, the bay whiffs, hogchokers, windowpanes and tonguefish, also occur in South Carolina waters, although members of these species generally do not exceed 8-10 inches (200-250 millimeters) in total length. Thus, the southern and summer flounders can usually be distinguished by their relatively elongate and thick bodies, as compared to the other flatfish in our waters. The mouth and jaws of the southern and summer flounder are large and the teeth are sharp and well-developed. The dorsal fin begins just before the eyes and continues along the upper margin of the body almost to the origin of the tail. The anal fin begins along the lower margin of the body below the pectoral fin and terminates below the terminal point of the dorsal fin. The tail

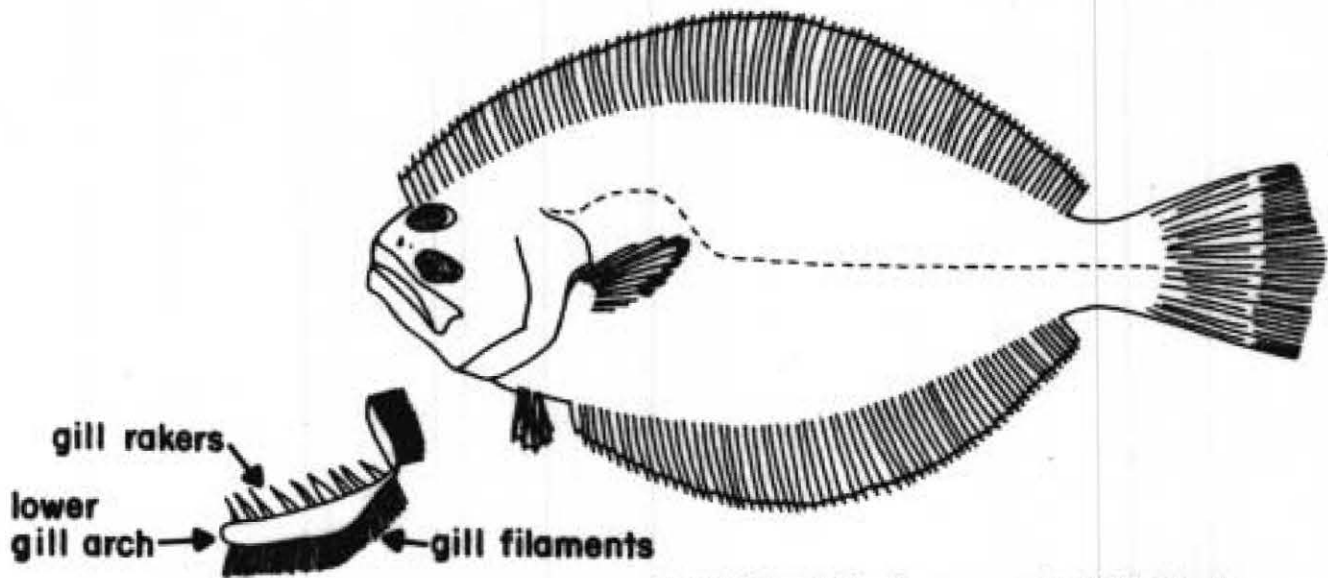
fin is well-developed and curved outwards with a distinctive "tip" at the center.

The distinction between the southern and summer flounder is somewhat finer, but can usually be determined based on coloration in fresh specimens. The pigmented side of the southern flounder is irregularly shaded with dark and light colored blotches. Small, dark circular black spots are sometimes evident (most noticeable on small specimens less than about 8 inches (200 mm)), but they are not ocellated, that is, they do not have a light "halo" or "corona" around the edge of the spots. The summer flounder possesses numerous well-ocellated dark spots on the irregularly shaded eyed-side of the body. A distinctive character of *P. dentatus* is that three of these ocellated spots are located just forward of the tail and form a small triangle whose apex is pointed towards the head.

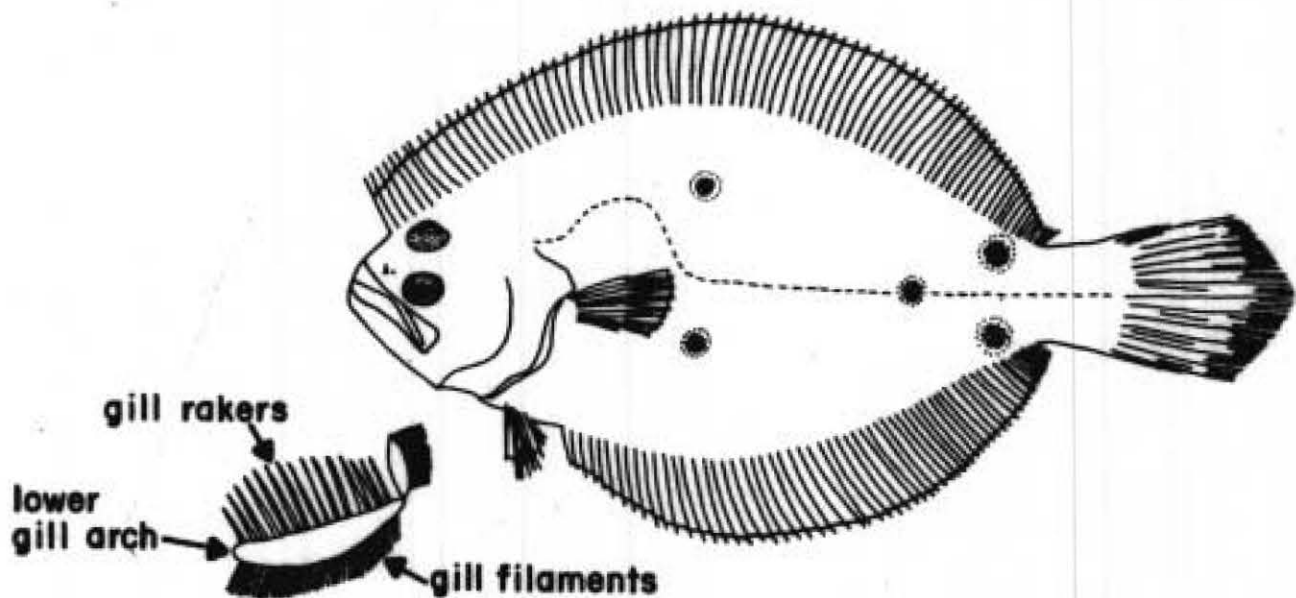
A more positive means of separating the two species is by counting the gill rakers on the first gill arch. By lifting the gill cover or gill flap on the eyed side, the first gill arch is exposed. The arch is composed of an upper and a lower limb and serves as a support for the blood-red gill filaments which are positioned on the rear (posterior) edge of the arch. The gill rakers are the long, white, finger-like structures on the forward (anterior) edge of the gill arch. The southern flounder has a total of 8 to 11 gill

rakers (usually 9 to 10) on the lower limb of the first gill arch, while the summer flounder has 14 to 18 gill rakers (usually 15 to 17) on the lower limb of the first arch. The shape of the gill rakers can also aid identification. The southern flounder has relatively short, blunt gill rakers while the summer flounder's are long and slender. Ideally, the observer should have both species side by side in order to evaluate this latter distinction. The relative shape of the body may also help one differentiate between the two

species. In fishes of equal size, the southern flounder appears to have slightly deeper and wider body proportions, that is, the distance between the dorsal (top) fin and the anal (bottom) fin and thickness or distance between the pigmented side to the white side of the body is slightly greater in *P. lethostigma*. Thus, inch for inch, the southern flounder is slightly "meatier" than the summer flounder. Some fish dealers in the Charleston area recognize this distinction and claim that the southern flounder is easier to fillet because of its thicker body.



Paralichthys lethostigma usually 9-10 gill rakers on Southern Flounder lower limb of arch.



Paralichthys dentatus usually 15 gill rakers on Summer Flounder lower limb or arch.

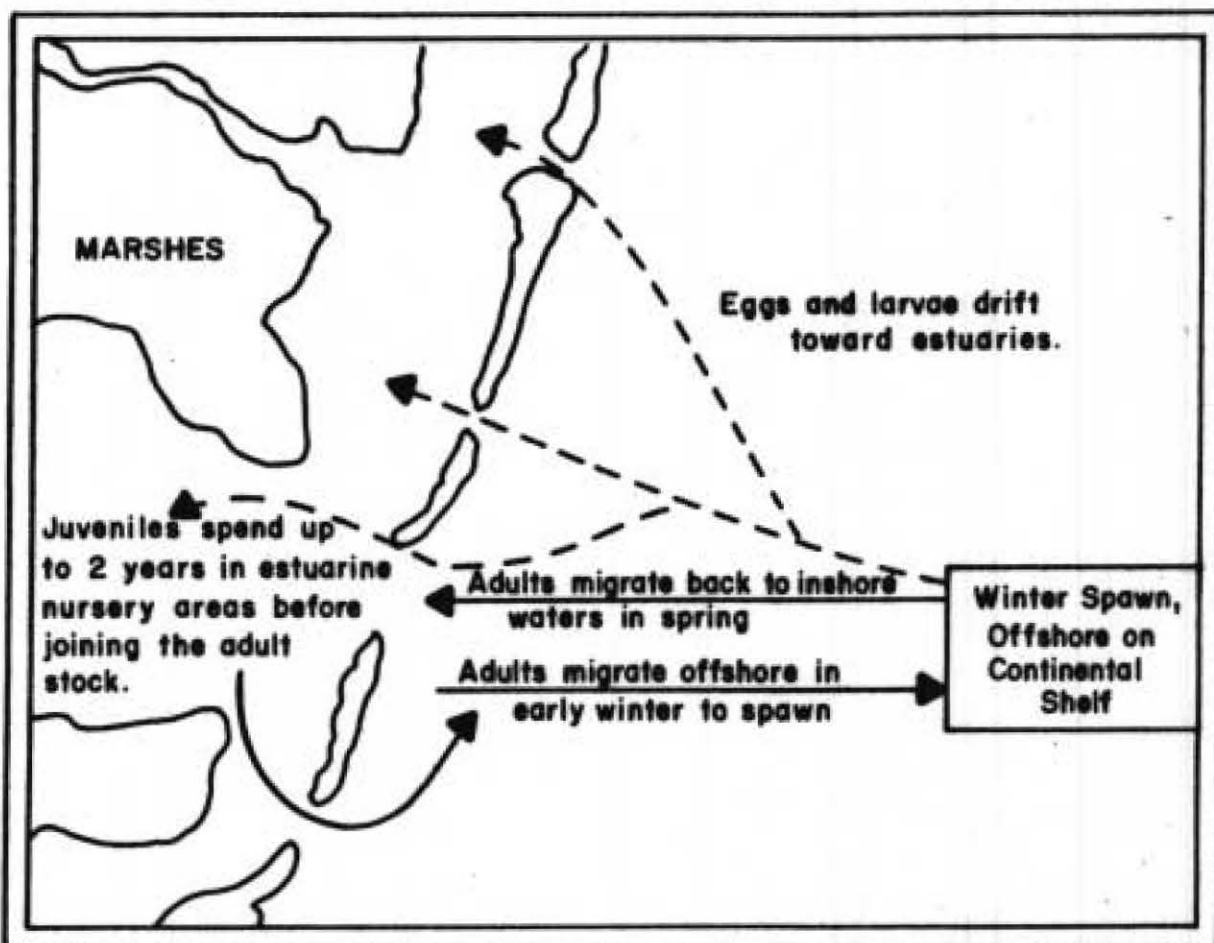
BIOLOGY

Migrations and Movements

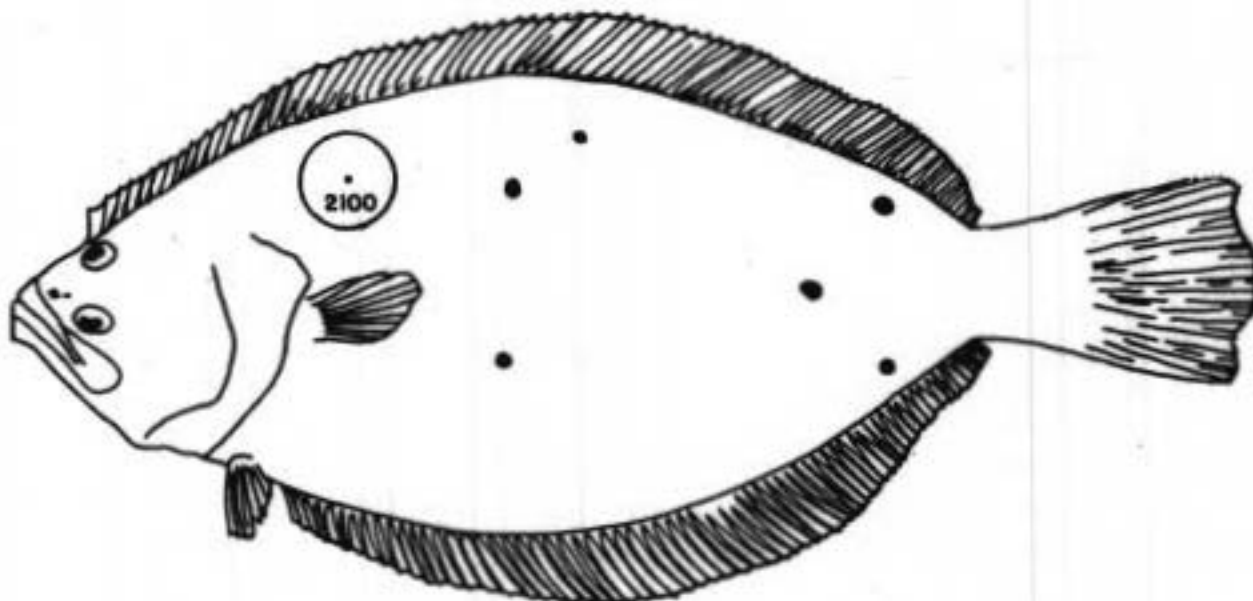
Both southern and summer flounders begin their lives offshore probably on the outer half of the continental shelf. Most spawning activity in the South Atlantic Bight (Cape Hatteras to Cape Canaveral) appears to occur in winter during December and January. The actual spawning act probably takes place on the seafloor but the eggs are buoyant and float to the surface. Larval flounders hatch out of the egg stage about 72 hours after fertilization. The eggs and early larval stages drift passively along with the prevailing currents. With growth, however, the small flounders probably pursue an active migration towards inshore waters and the estuaries. During the early stages of growth, larval flounders have symmetrical bodies, that is, like most other fish they have one

eye on each side of the head. However, when the larvae reach about $\frac{1}{4}$ inch in length, the right eye begins to migrate to the left side of the head. During the transition, the eyed-side of the body becomes pigmented and the blind side turns white. After this "metamorphosis" the small flounder, now about $\frac{3}{4}$ to 1 inch long, take to the bottom which is where they spend the remainder of their lives.

Young-of-the-year flounder enter our inshore coastal waters during late winter to early spring and utilize our estuaries as nursery grounds for up to their second year of life. Upon entry into the estuaries, the young of these two flounder species seek out different habitats. This segregation seems to be based primarily on salinity preference,



Hypothetical life cycles of the southern and summer flounders.



Several southeastern states have recently conducted tagging studies on flounders. Tags are of a disc type (shown) or a plastic tubing streamer type. Recapture information (date, location, gear and size of fish) is vital to the success of those studies.

although bottom-type may also influence the separation. Young southern flounder typically occupy areas of low to medium salinity (almost fresh to brackish waters) such as coastal rivers and creeks, large sounds, bays and harbors. Small summer flounder generally prefer the higher salinity waters of the lower regions of the estuaries, such as the inlets and high salinity creeks and bays adjacent to more "oceanic" (hence saltier) waters. This preference for different habitats persists through the adult life of both flounders. Southern flounder are generally taken in "inside" waters, although the largest individuals may often be found near inlets. Summer flounder are usually found near inlets, ocean jetties, along the ocean beaches and over natural or artificial offshore reefs.

Researchers in Texas have recently sought to exploit to the fullest the southern flounder's tolerance of low salinities. Techniques are being developed to spawn adult *P. lethostigma* and then rear their larvae in complete-

ly freshwater. The eventual goal of the project is to introduce young flounder into heated freshwater reservoirs. Hopefully, they will thrive and grow into a population of essentially marine sportfish in a freshwater environment. Although the inland population of flounder would be unable to reproduce itself, the possibility of catching flounder and largemouth bass in the same reservoir is an exciting one.

A somewhat similar situation exists in a few areas of coastal South Carolina where saltwater marshlands have been diked off from tidal water flow. The resultant saltwater impoundments, which may range in size from 10 to 100 acres, harbor large numbers of larval and juvenile marine sportfish. Barring prolonged cold winter temperatures and proliferation of harmful parasites, many marine species have been shown to grow at remarkable rates and in a few years provide unique and exciting sportfishing opportunities. Southern flounder have been shown to be among the most adaptable

species for this type of pond culture.

Recent tagging information suggests that during the spring and early summer there is little movement of flounders in the estuary from the site of tagging. Towards midsummer, a portion of the southern flounder population may move toward the inlets and beaches, possibly in response to peak in-shore summer water temperatures (up to 85° F). Localized movements of flounder are probably in tune with the tidal stage. Flounders move on and off shallow bars and flats with the rise and fall of the tide.

Young-of-the-year southern and summer flounder appear to spend their first full winter in their estuarine nursery areas, moving to deeper channels to avoid cold in-shore waters. At the end of their second summer a large portion of both flounder populations probably become sexually mature. With the onset of winter these fish, along with the older adults, move off-shore to spawn. The spawning areas of both species are not well-defined, but appear to be concentrated on the outer half of the continental shelf. Several states along the southeastern Atlantic coast of the United States are presently conducting or are planning to commence paralichthid flounder tagging studies. Results of these efforts should help to elucidate flounder migratory patterns in the South Atlantic Bight.

Age and Growth

As with most other fishes, flounders deposit varying layers of calcium on their hard parts (scales, bones, etc.) in response to environmental and/or physiological changes, such as water temperature and spawning season. The otoliths or earstones of flounders clearly show a change in the deposition of calcified material throughout the year. By "reading" the number of light and dark zones or "rings" on the

otoliths (much like reading the rings on tree trunks), biologists are able to estimate the approximate age of flounders. Most studies of this type seem to agree that in general summer flounder reach about 7 inches (180 millimeters) in total length by the end of their first full year and are approximately 12 inches (290 to 300 mm) by the end of their second year. Although comprehensive aging studies on the southern flounder are lacking, limited information from other aging methods suggest similar growth rates exist for *P. lethostigma*. Sizes of older age groups of flounder are less accurately known, however most studies agree that female flounder grow faster, attain a larger size and generally outlive male flounder.

Food Habits

A strong and active predator, flounders possess large jaws with numerous canine-like teeth. As one might expect with a flatfish that spends most of its time lying on or about the bottom, flounder feed primarily on fishes and crustaceans which are closely associated with the bottom. The flounder diet includes an array of small fishes, shrimps, crabs and squids. As flounder grow in size, fishes seem to become a more important component of their diet. Contrary to the popular belief that flounders "lie in wait" on the bottom for their victims, recent laboratory observations on summer flounder kept in large aquaria indicate that this species actually stalks its prey for a short distance before striking. During the daylight hours, the flounder would get a visual fix on its prey and begin to creep ever so slowly along the bottom towards the food item using rhythmical, wavy movement of its dorsal and anal fins. When within striking distance, about 2 to 4 inches, a rapid flexure of the tail would propel the flounder forward with its mouth wide open and the prey was ingested instantaneously.

FLOUNDER FISHERIES IN SOUTH CAROLINA

Despite the lack of a comprehensive survey of the state's salt-water anglers, it is generally believed that the recreational catch of coastal finfish in South Carolina far exceeds the commercial landings. This is thought to be due in part to the traditional orientation of the commercial fishermen in the state to the more lucrative shrimp, crab and shellfish fisheries. Thus, it seems that a majority of the flounder landed in the state are taken by recreational anglers.

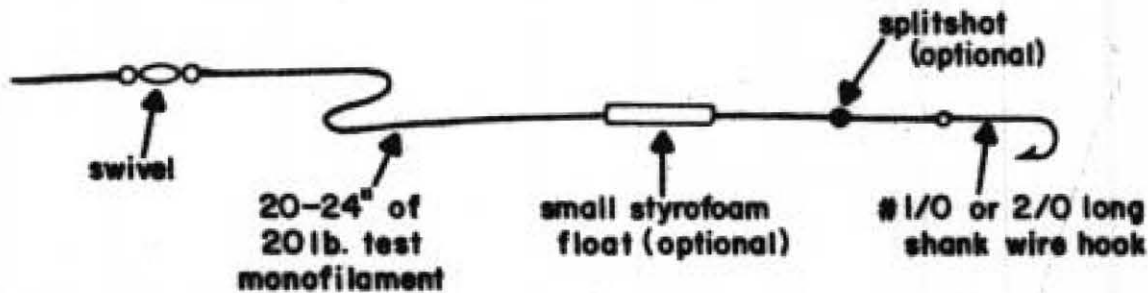
The recreational fishery for flounder in South Carolina consists primarily of hook and line anglers and gig fishermen. Additionally, the gill net fishery is also of a recreational nature. The incidental catch of the state's shrimp trawl fishery accounts for most of the commercial flounder landings. Large offshore commercial quantities of flounder, such as those found in the mid-Atlantic Bight (New York to Cape Hatteras), are lacking in South Carolina's offshore waters.

Angling For Flounder

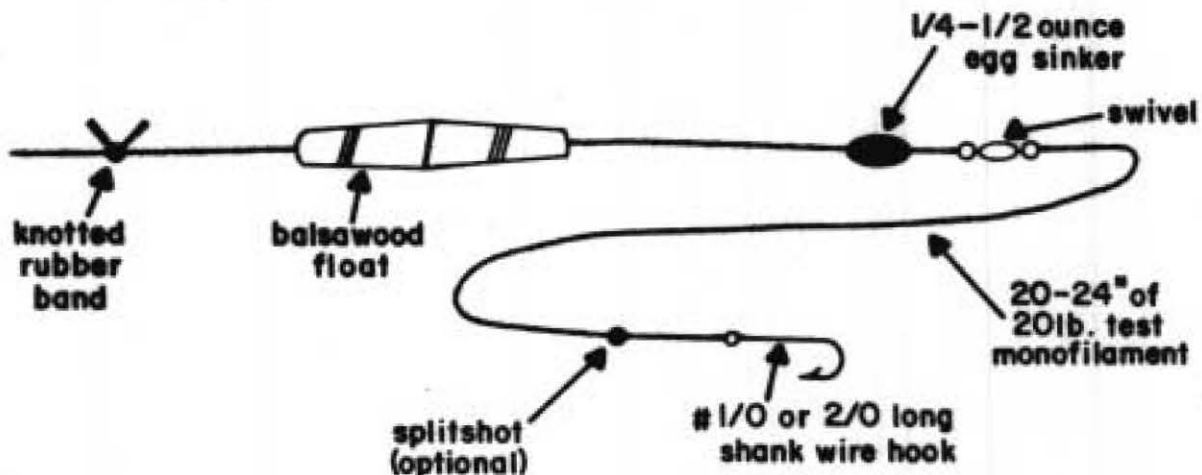
Flounder occur along the entire length of the South Carolina coast, however, sportfishing for these flatfish is most intensive in the northern part of our state, particularly in the Murrells Inlet area. The inshore small boat anglers no doubt account for a lion's share of the flounder taken on hook and line in the state, yet significant numbers of flaties are also taken by pier, bridge and surf fishermen. In inshore areas flounder seem to prefer hard, rather than muddy bottoms, and often congregate around rock areas such as breakwaters and stone jetties, pier and bridge pilings and shell banks and shell bars. Areas where moderate to strong tidal currents displace baitfish, shrimp and other food items are often the most productive flounder fishing sites. Fishing near the mouths of small feeder creeks or at the confluence of major creeks or



BASIC BOTTOM OR TROLLING RIG FOR FLOUNDER



BASIC LIVE BAIT FLOAT RIG FOR FLOUNDER



streams are also good locales. A poll of all "dyed-in-the-wool" flounder fishermen would probably indicate that the most profitable tides for flounder fishing are the last half of the ebb and the entire flood tide.

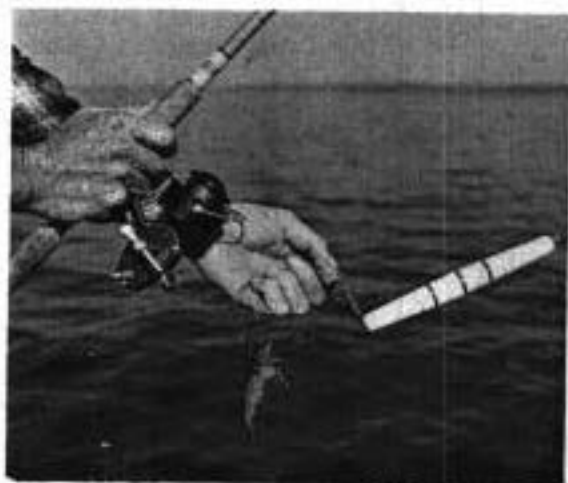
The most popular tackle for flounder fishing is light to intermediate saltwater spinning gear, using 10 to 20 pound class monofilament line. Terminal tackle is dependent upon the method which one chooses to fish for flounder. The two basic techniques of the inshore small boat fishery are float fishing and trolling or drifting with live bait. Tidal stage and wind conditions often dictate which method can be used at a specific fishing site. Float rigs are used most often when a boat is at anchor. The fishermen casts the rig toward the site and

allows the current to carry the bait passively across the area. The basic float rig consists of an adjustable wooden float, a light ($\frac{1}{4}$ to $\frac{1}{2}$ ounce) egg or slide sinker, a two-way swivel, 15 to 20 pound test leader material and a hook. The float is threaded on the line, followed by the egg sinker and the swivel is attached to the threading end. Next, 20 to 24 inches of the leader line is attached to the remaining eye of the swivel and a hook to the other end of the leader. Hook preference varies; some fishermen prefer the insured hooking qualities of a #4 to #6 treble hook, while others claim a #2/0 long shank wire hook provides ample hooking ability, protects the leader from the flounder's sharp teeth, and also "gives" somewhat if hung-up on the bottom. A lead split shot attached to the leader just above the hook will keep the bait close to the

bottom. Lastly, a short piece of rubber band is knotted ahead of the adjustable float so that the bait skims just above the bottom.

Trolling rigs have many variations, but the basic design consists of a three-way swivel attached to the line, a hook and leader similar to that described above, attached to the second eye of the swivel and a light sinker (1 to 2 ounces) attached to the third eye of the swivel by a short (3 to 5 inches) piece of light monofilament. The rig is designed to keep the bait moving just off the bottom as the boat trolls at near idle speeds along shell banks, the fringes of marsh grasses, etc.

In drift fishing the basic idea is that the bait is passively carried across the bottom by the prevailing currents. The basic rig consists of a hook and leader attached to a two-way swivel. A light egg sinker ($\frac{1}{4}$ to $\frac{1}{2}$ ounce) is threaded on the main line ahead of the swivel. If the boat is at anchor, the rig is cast toward the fishing hole and allowed to drift across the site. Alternately, both the rig and the boat may drift across the fishing site.



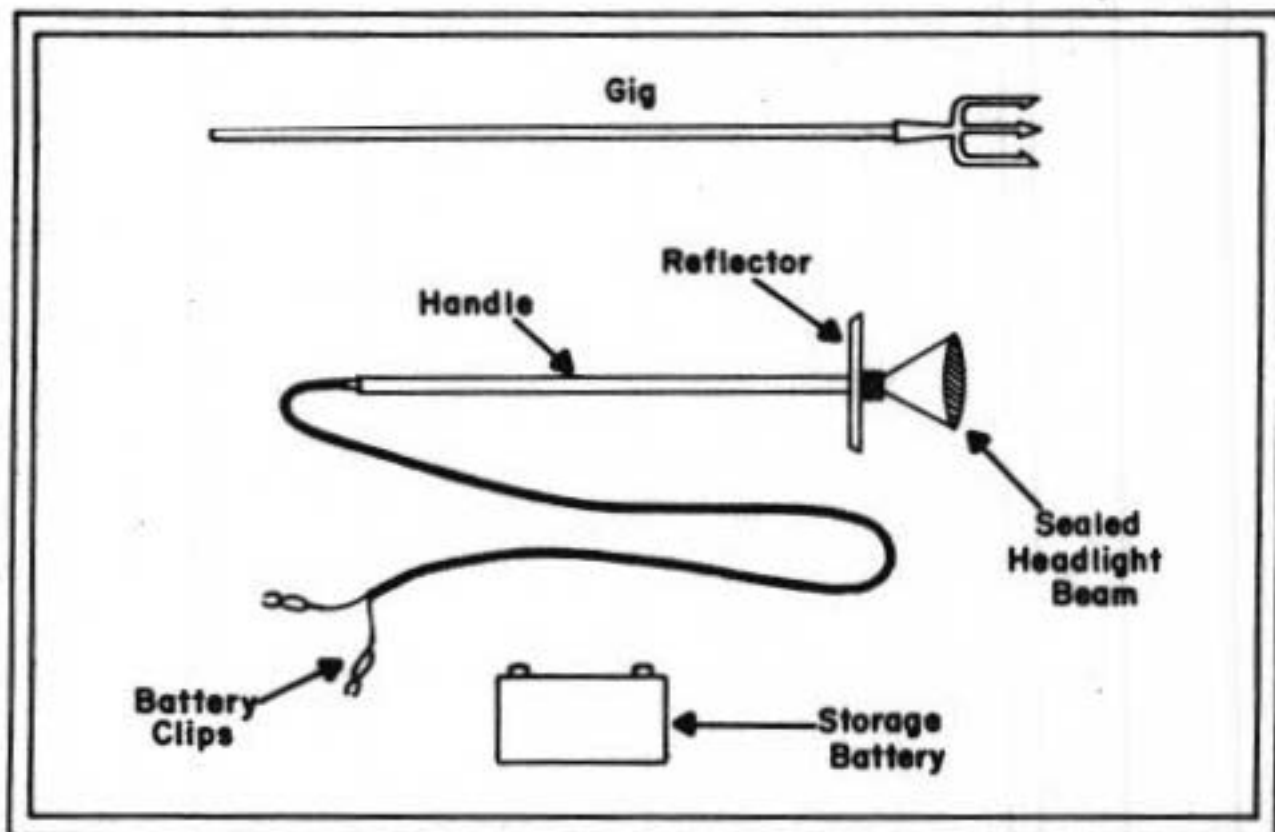
Premier live baits for flounder are mud minnows (*Fundulus* species), finger mullet, and shrimp. Minnows can be taken in wire minnow traps baited with a crushed blue crab, dough balls, etc. and set in a marshy area. Small mullet and shrimp are readily taken in cast nets. All must be kept in well-aerated bait buckets which are trailed over the side of the boat while anchored or drifting. Minnows can be hooked through the lips or the back just below the dorsal fin. Shrimp can be hooked in the head region just behind the eyes.

Gigging For Flounder

The gig fishery in South Carolina is primarily directed towards the bottom-dwelling flounders, although during the colder months of the year spotted seatrout and red drum are also taken in significant quantities. Gigging, locally referred to as graining or striking, is done at night as the fisherman wades in shallow to waist-deep water or poles a shallow draft boat along the shoreline. The essential gear consists of a metal gig or spear and an artificial light source. Flounder are located on the bottom with the light which is thought to have a mesmerizing or blinding effect on the fish. Once spotted the gig is thrust into the fish; the impaled fish is then carefully lifted from the bottom.

A simple gig consists of a metal rod, 4 to 5 feet (1.2 - 1.5 m) long, sharpened at the tip which

may be barbed or barbless. A stringer may be fastened to the opposite end of the gig and the fish threaded onto it as they are caught. A multi-pronged tip fastened to the end of a wooden shaft can also be used, but may unnecessarily damage the prey's flesh. Historically, small wood fires, oil lights and gasoline lanterns have been used in the past as illumination sources, but at present an electric light powered by a conventional storage battery is probably the most efficient lighting device. A typical light source is a waterproof, underwater light, attached to one end of a wooden shaft or plastic pipe about 4 to 5 feet long. The wiring is led up the pipe or shaft and clipped to the power source. The battery may be carried by the fisherman in a backpack or lodged in the skiff.



Basic flounder gigging equipment.

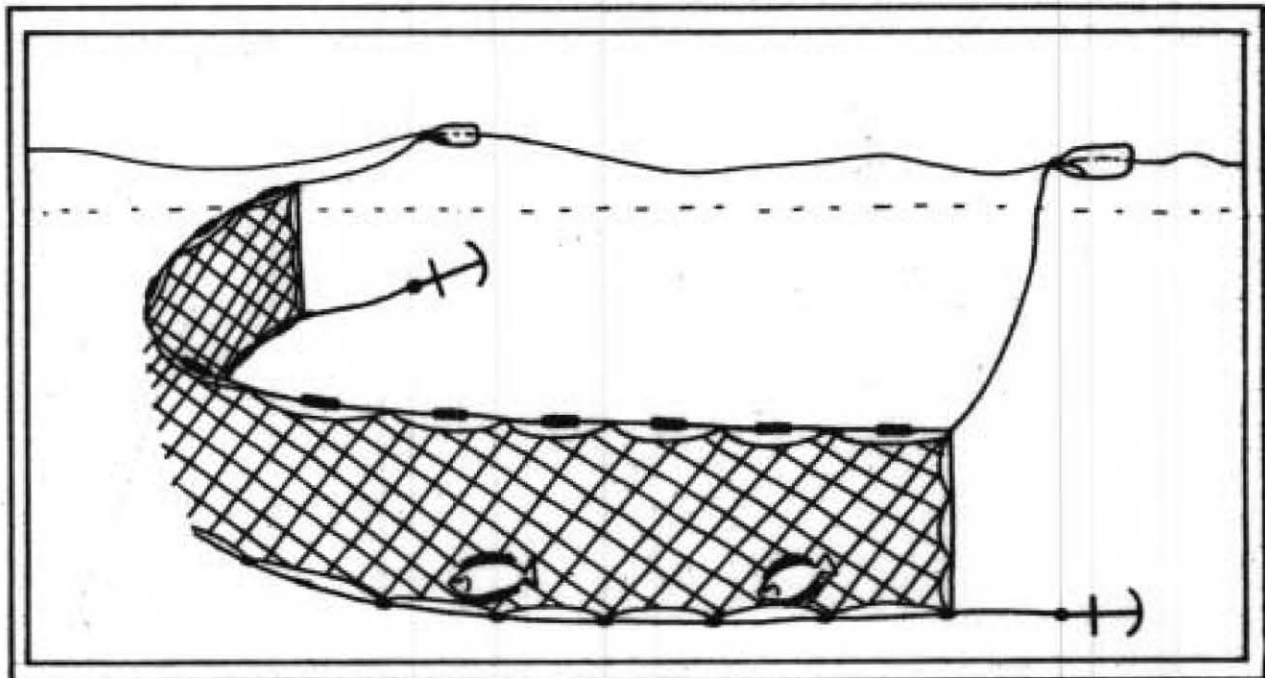
Clear, calm moonless nights are ideal conditions for graining. Wind blown wave action tend to be reduce visibility through the water, while flounders tend to be more wary of predators on moonlit nights. In the inlets, sounds, tidal rivers and creeks, graining is most productive in the shallow water close to the shoreline. Flounder tend to ascend and descend intertidal flats with the rising and falling tides, respectively. Areas with sand bottoms, shell banks and shell piles are reportedly the most productive sites.

Recently, the S.C. Marine Resources Department conducted a survey of coastal grain fishermen in an effort to find out more about their fishing habits and catches. Results indicated that a majority of the graining efforts in South Carolina are concentrated in the inshore areas, that is, harbors, bays, sounds, rivers and creeks, as opposed to the ocean beaches and inlets. Most graining was done May through October with the peak months being July and August. The respondents to the survey averaged 5 graining nights per year during 1978. As to be expected, the principal species group harvested was the flounders with minor quantities of red drum and seatrout also taken.

Gill Nets

Gill nets are generally constructed of a single wall of nylon monofilament webbing. A float or cork line along the top and a leaded line along the bottom keep the net vertical in the water column. Gill nets are designed to entangle fishes attempting to swim through the meshes of the net. Ideally, the fish's head may pass through the net, but the gill covers become caught in the webbing. Flounder though, are peculiar in that their heads are small relative to the greatest width of their horizontally flattened bodies. Usually flounders are not "gilled" in the net, but are "hung" by their teeth, the large maxillary bone of the jaw or one of the gill covers.

Gill nets may be fished in a run around, drift or stake net fashion. The nets are normally run out perpendicular to the shoreline or anchored (or staked) to the bottom at both ends. Normally after an hour or so, the fisherman moves from one end of the net to the other in his boat, picking up the section of net directly under the craft and removing the



entangled fish. Flounder however, are usually hung in the net more precariously than other fishes. One runs the risk of losing most of the flatfish in the net by picking it up vertically through the water column. Ideally, one wants to "bag" the flounder in the webbing between the float and lead lines. This is accomplished by using two persons to fish the net. One person tends the float line while the other tends the lead line. Both move simultaneously along the length of the net, hopefully "bagging" most of the flounder.

One of the most effective methods of setting a gill net specifically for flounder is what is sometimes called the stop set. The specific technique varies with the fisherman and the area. Generally, at high slack water one end of the net is staked to the shoreline. The trailing end of the net may eventually be secured to the shoreline. Once set, the net is allowed to stand until the tide ebbs completely. Portions of the catch are hung in the net, while some are concentrated in shallow pools. It should be noted however, that it is illegal in South Carolina to set a net more than half-way across a waterway, that is, any tidal creek, stream, channel or slough.

In a recent survey of licensed gill net fishermen in South Carolina, Marine Resources Department personnel determined that the state's gill net fishery is primarily of a recreational nature, most of the catch being destined for personal household consumption. Gill netting activity peaked during the month of October, while ocean beaches were the most frequently fished areas. The spot was by far the most frequently caught fish and flounders ranked a distant sixth in the overall species harvest.

Shrimpers By-Catch

The incidental catch of finfish by the South Carolina shrimp trawl fishery is often considerable, although most of the catch is discarded at sea. Shrimpers however, account for a majority of the commercial flounder landings in the state. This is probably due to the ease with which flounders are culled from the rest of the finfish in the trawl catch and their relatively high market value.

Traditionally, the state's shrimp season extends from May through December. Areas fished are generally from the ocean beaches seaward to about 5 to 6 miles offshore and in six major sounds and bays. Shrimp trawls of various sizes, up to 120 feet along the bottom line, are the principal gears used; the average mesh size is from 1½ to 2 inches. Most flounders landed as a by-catch are marketed locally to retail seafood markets or local restaurants. During the period 1960 to 1978, South Carolina commercial flounder landings averaged 50,000 pounds per year. The average annual value for flounder landings during the period 1975 to 1978 was \$17,000. The annual commercial harvest of flounder in the Palmetto State comprises only a minor portion of the total annual production of seafood.

Miscellaneous Gears

Flounders are often taken incidentally in several other types of fishing gears employed along the coastal areas of the state. Small flounders often find their way into the bottom of crab traps or pots. An occasional flounder is also taken in creeks by recreational shrimp seiners or washed into the bag of a channel net. A small haul seine fishery for spot and mullet exists along the Grand Strand area of the coast and harvests some flounder from the surf.

FLOUNDER RECIPES

Flounder are highly esteemed as table fare and lend themselves to a variety of cooking methods, such as, frying, baking and broiling. Small flounder (about a pound) can be pan-dressed (headed, scaled and gutted), while larger fish are usually filleted. Either way, the flesh remains white and delicate - a few tried and true recipes follow:

Pan Fried Flounder

3 lbs. pan dressed flounder or flounder fillets
1 cup white stone-ground corn meal (non-rising)
Shortening (to 1/4" depth)
3 tablespoons butter or margarine, melted
Lemon juice
Seasoned salt
Salt and pepper to taste

Thaw fish if frozen. Place corn meal in a bag. Place fish in bag a few at a time and shake bag to coat fish. Heat shortening in skillet until hot, but not smoking. Place fish in single layer in skillet. Turn fish when edges appear brown and crisp. Use spatula to avoid breaking fish. Remove when brown and crisp on both sides. Drain on paper towels. Remove fish to warm platter and brush melted butter over fish, sprinkle with seasons and lemon juice. Serves 6.

Spicy Broiled Flounder

1/2 lb. flounder fillets (skin can remain on one side) per person for four servings
1/2 cup (1/2 stick) margarine or butter
1/2 teaspoon prepared mustard
1/2 teaspoon salt
1/2 teaspoon seafood seasoning
1/8 teaspoon tarragon
1/8 teaspoon rosemary
1/2 cup dry white wine (or water)

Wash and dry fish thoroughly. Place in single layer, skin side down, on foil-lined shallow baking pan. Melt margarine or butter in

a small pan. Add rest of ingredients and cook over low heat until seasonings are blended and mixture is warm. Pour 1/2 of sauce over fish. Broil until fish flakes easily when tested with a fork, about 5 minutes more. Be careful not to overcook. Remove fish to serving platter and pour pan juices over fish.

Crab-stuffed Flounder

This elegant dish highlights the delicate and almost matching flavors of flounder and blue crab meat served together. The recipe requires a fresh fish or frozen fish that has been prepared for stuffing - e.g. Scale, head and gut a medium-size flounder (3-4 lbs.). Lay fish on flat cutting surface brown side up. Using a very sharp fillet knife, make a cut to the bone along lateral line (midline of fish), starting approximately 1 1/2" from front and continuing to within 2" of tail. Form a sizable pocket under this initial cut by running the tip of the knife along the ribs, both dorsally and ventrally. Take care to avoid puncturing the skin.

3-4 lb. flounder, prepared for stuffing (thaw if frozen)
1 1/2 cups picked crab meat
1/2 teaspoon seafood seasoning
1 teaspoon chopped parsley
2 lemons, thinly sliced
1 medium white onion, thinly sliced
1/2 teaspoon Worcestershire sauce
Salt and pepper to taste
1 teaspoon lemon juice
4 bacon slices
Butter or margarine

Combine crab meat, seasoning, parsley, Worcestershire sauce and lemon juice in mixing bowl. Toss until uniformly mixed. Spoon mixture into pocket in flounder, packing in firmly. Arrange onion and lemon slices over fish. Drape bacon slices across pocket opening. Dot fish with butter. Bake uncovered in preheated oven at 350° for 30 minutes or until fish flakes easily when tested with a fork. Serves 4-6.

Filleting Flounder

At first glance, filleting a flounder may seem like a major surgical operation to the novice. With a little practice, however, the skill can easily be mastered. A sharp fillet knife is paramount to the success of the filleting procedure.

The initial cut is made half-way through the body obliquely from just under the pectoral fin (on the side of the fish) to the back of the head a short distance behind the eyes. The second cut proceeds from the cut under the pectoral fin along the entire length of the body to the tail. Again, this cut is also made half-way through the body, following the vertebral column. The two uppermost fillets are now ready to be removed from the fish. Insert the knife under the junction of the cuts at the pectoral fin

and turn the knife sideways running the knife under the meat towards the dorsal (top) fin using the vertebral bones as a guide. Complete this action the length of the fish towards the tail. Repeat this action to remove the fillet along the lower half of the body. Turn the fish over and repeat the process on the underside of the body. The skin is removed from the fillets by inserting the knife between the skin and the meat starting at the tail end. After a small cut is made to separate these two pieces, the skin is pulled with the thumb and index finger towards the filleter, while guiding the knife along the inner surface of the skin. The fillets are then washed in cold water and are ready for preparation or freezing. Incidentally, the remaining flounder racks make excellent crab bait.



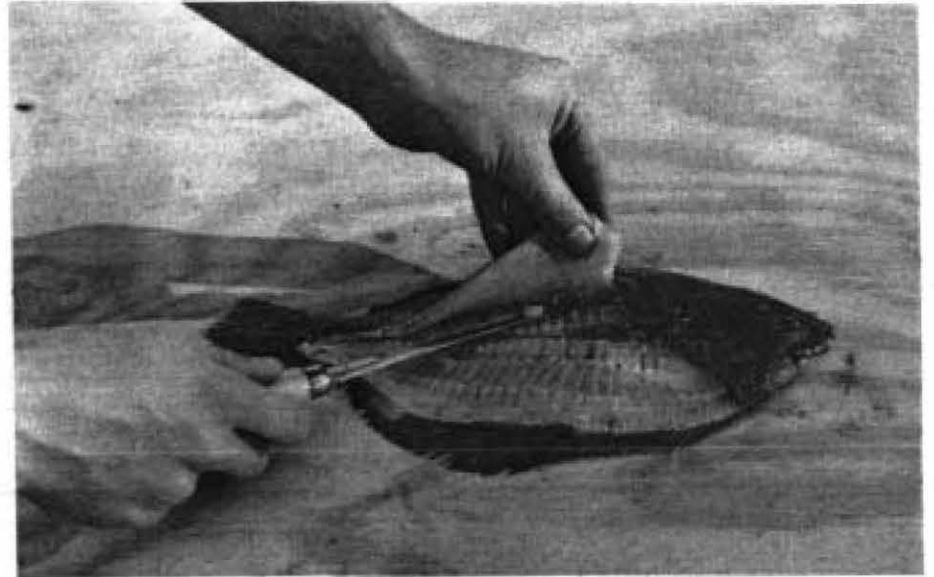
First cut, behind the head.



Second cut, along the midline of the body.



Lift top fillet from body by guiding knife along "rib" bones.



Do the same for bottom fillet from the upper side of the body.



Insert knife blade between the skin and the meat starting at the tail end of the fillet.



Pull skin towards oneself with the thumb and index finger while guiding the knife along the inside surface of the skin.

Additional Reading

Do you want to know more about flounders? Some additional references are listed below:

- Bearden, Charles M. 1960. Flounders and their cousins, unique fish. S.C. Wildlife, Educational release 1977, 6 p.
- Dennis, Rembert, Jr. 1973. Hook and Line Flounder. South Carolina Wildlife Magazine, Vol. 20, No. 4, p. 12-15.
- Floyd, Hilton M. 1966. Commercial flounder gigging. U.S. Fish & Wildlife Service, Fishery Leaflet 586, 5 p.
- Lux, Fred E., Paul E. Hamer and John C. Poole. 1966. Summer flounder... the Mid-Atlantic flatfish. Atlantic States Marine Fisheries Commission, Leaflet No. 6, 4 p.
- Millus, Donald. 1980. An alternative to trolling, flounder on a float. Saltwater Sportsman. July 1980, p. 46-48.
- Warlen, Stanley M. 1975. Night stalking flounder in the ocean surf. Marine Fisheries Review, Vol. 37, No. 9, Paper 1159, p. 27-30.



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