

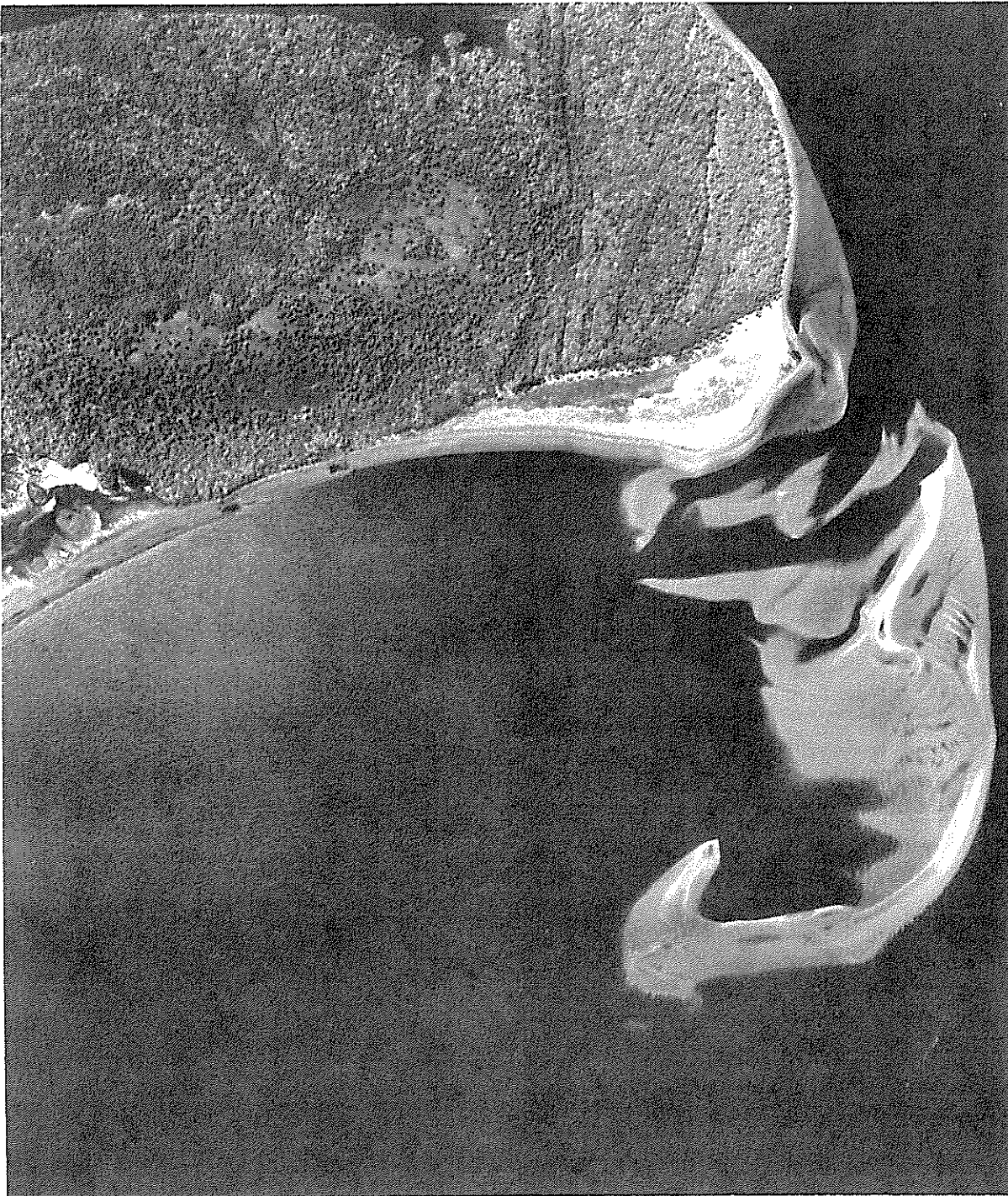
PAFFORD

September-October, 1980

Volume 3, No. 5

# Coastlines

GEORGIA





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**Dr. Robert J. Reimold, Director**  
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## About The Cover

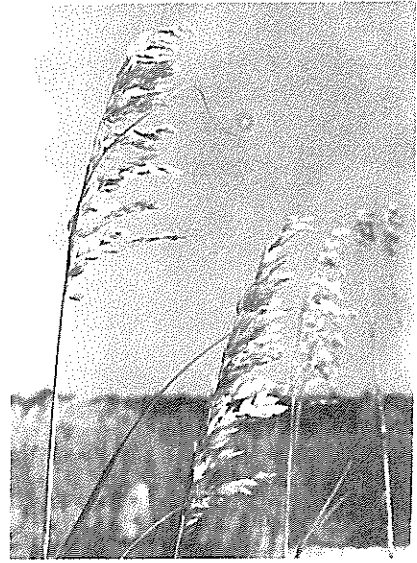
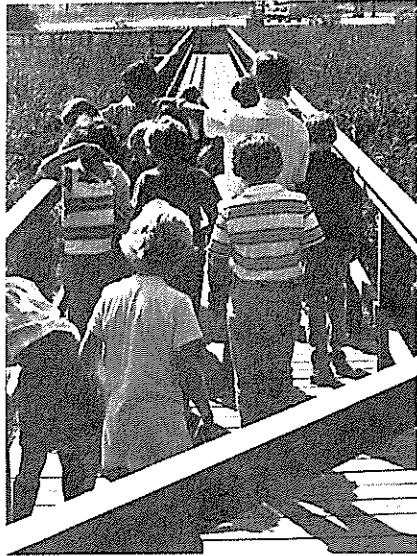
Whether viewed from land, sea or air, the sculpting forces of wind, waves and tides often create a dramatic picture. Taken on a crisp April day in 1976, the cover photo shows the effects of current movements and sand deposits at the north end of St. Catherines Island. Forming what is known as a "spit," this sand accumulation is found at the north ends of several of Georgia's barrier islands.

The aerial photo of St. Simons East Beach below again illustrates natural forces acting on barrier islands as well as the growing influence of man. Fortunately, traditional development along Georgia's coast has benefitted from these sand deposits buffering the uplands. However, man's encroachment into the fragile ecosystem of the coast requires careful planning to insure its protection.

These photographs, furnished by the Georgia Department of Transportation, enable coastal researchers and planners to better survey, assess and predict the constant changes of nature and plan for the future influences of man.



## Resource Demands And Coastal Management



Coastal Georgia is a special place, different from other areas of the state, and from most coastal stretches in neighboring states. Those of us who live here too often take for granted our seemingly boundless resources. The fact that our coast is so special is no accident. For many years, the State of Georgia, local governments and private individuals have worked toward this goal -- sometimes together, sometimes separately. Today we must recognize, more than ever, the need for coordinated and concerted action to continue and improve management of our coastal resources. Planning is the key.

One has only to look at the coastal areas of Florida or the developed beach areas of South Carolina to see what happens when planning is not done early enough to anticipate development. Only a small percentage of Georgia's residents live within fifty miles of the coast -- not half our population, as in most coastal states. It is likely that the coastal migration which has occurred elsewhere will increase here, changing the rural nature of most Georgia coastal counties -- perhaps dramatically -- as the region attracts more industry, more tourism, and more residential development. We have at hand two examples of rapid change and the stress it places on a community: Fort Stewart in Liberty County and Kings Bay in Camden County. These two

population explosions, plus the history of successes and failures of coastal development in other states, can teach us a great deal.

One lesson I hope we are all prepared to absorb is that it is never too soon to begin thinking about resource demands and how these demands will be met in the future. Planning for growth in a way that will prevent shortsighted decisions and maintain the high quality environment we now enjoy requires a great deal of time and innovative thinking. The longer we wait, the fewer the choices we will have in allocating the limited resources -- water, land, energy -- that are so important to the Georgia coast.

As I step down after two terms as Chairman of the Georgia Coastal Management Board, it is my belief that the Board can play a vital role in protecting the integrity of Georgia's coastal zone while providing for judicious development. Man is well-entrenched within the coastal ecosystem and must be considered when developing management strategies for the Georgia coast. However, I feel the Board can insure that responsible development addresses both environmental and economic concerns.

A critical need, both now and as demands increase, is a well-informed, concerned public. It is incumbent upon all of us to remain informed about decisions and actions that

affect our coastal area. Ultimately, the success or failure of coastal management in Georgia

depends on the wisdom we display in making management decisions.



Coastal Management Board Chairman J. Dewey Benefield (r), here with Coastal Resources Division Director Robert J. Reimold.

## HNRC Coastal Visit

Like other professionals, legislators must keep abreast of new developments in their fields. When a lawmaker's specialty is natural resources, his job includes making site visits and conferring with resource managers.

In order to gain some first hand knowledge of the particular problems and situations faced in managing the coastal area, eight members of the Georgia House Natural Resources Committee (HNRC), spent September 18-19, 1980 surveying two sites of special interest on Georgia's coast.

The Committee, which supported passage of the Shoreline Assistance Act of 1979, was particularly interested in observing implementation of the Act in shoreline construction and erosion control.

Upon their arrival, the group, consisting of Committee Chairman Pete Phillips, and Representatives Joe Battle, John Crawford,

Bobby Long, Jimmy Lord, Bob Patten, Henry Reaves and host, Dean Auten, was briefed on the status of Georgia's Coastal Management Program and activities of the Department of Natural Resources, Coastal Resources



HNRC members learn the function of *gobimat* covers on the Sea Island beach. The committee also surveyed other erosion damage to the island as well as various erosion control measures along the beach.



Division.

The Committee toured Sapelo Island Friday morning, September 17, and spent that afternoon surveying erosion and state permitted control measures on Sea Island Beach.

Host Representative Auten felt that "the Committee's direct experience in the marshes,

estuaries, nearshore waters and beaches should point out the need for continuous judicious and wise use of our coastal resources."

The Committee reviews all natural resource legislation proposed for the Georgia House of Representatives. Their work entails routine surveys of various resource areas around the state on a yearly basis.

## Coastal Management Board

Matters of budget and future direction were of primary concern to the Coastal Management Board at its September 8 meeting. Members attending were: Dewey Benefield, Glynn County; Carlton Gill, Liberty County; George Hannaford, Camden County; Kay Hoffman, Clark County; David Hornsby, Glynn County; Don Mendonsa, Chatham County; Hans Neuhauser, Chatham County; Tom Owen, Chatham County; Dan Williams, McIntosh County.

Dr. R. J. Reimold, Director of the Coastal Resources Division, reported that the budget request made by the Board at its last meeting has been reviewed by the DNR Board and is now in the hands of budget analysts in the Office of Planning and Budget. That request, part of the overall DNR budget proposal for fiscal year 82, called for the addition of two planners to Coastal Management staff at Coastal Resources Division, as well as \$150,000 in funds to be distributed as grants to local governments. These small grants would be aimed at helping coastal communities plan more effectively for their future needs. If approved, these staff and grant monies would become available July 1, 1981.

"Regardless of whether the requested package is funded or not," Reimold stated, "the next few months are critical to the success of the Coastal Management Program. The Board needs to determine how best to use its present resources to accomplish the tasks before it."

There was consensus among members that the Coastal Management Board should analyze coast-related projects, proposals, and issues in light of Coastal Management goals

and policies, to determine whether they are consistent with the program. Chairman Benefield warned the Board against becoming a "me too" body and simply echoing the opinions of other boards and committees. Board member Carlton Gill stressed the need for developing legislative support for the Board's efforts, so that their recommendations would be heard and heeded in Atlanta.

At the suggestion of Board member Don Mendonsa, the group authorized a subcommittee to work with Coastal Resources staff in reviewing and updating Georgia's Coastal Management Plan. Since the state is no longer participating in the federal Coastal Zone Management Program, Board members felt that some portions of the Plan should be revised to reflect the character of Georgia's own particular program. It was agreed that members Tom Owen and Don Mendonsa would work with CRD staff Robert J. Reimold and Jenny Phillips to recommend revisions to the Plan. The revised document will form the basis for future issue analysis and policy formulation by the Board.

Terms of Board members Benefield, Mendonsa, Goodman and Owen expire in October; appointment of replacements or reappointment of incumbent members now rests with the Governor. There was discussion of this matter, as well as the need to elect a new chairman, vice-chairman, and secretary-treasurer at the next session.

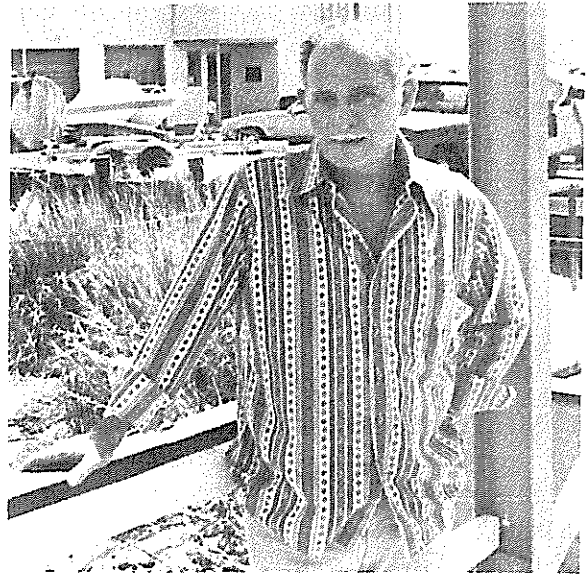
The Coastal Management Board is scheduled to meet again for a two-day meeting November 24-25. The session will be held at the Savannah Civic Center.

--Jenny Phillips

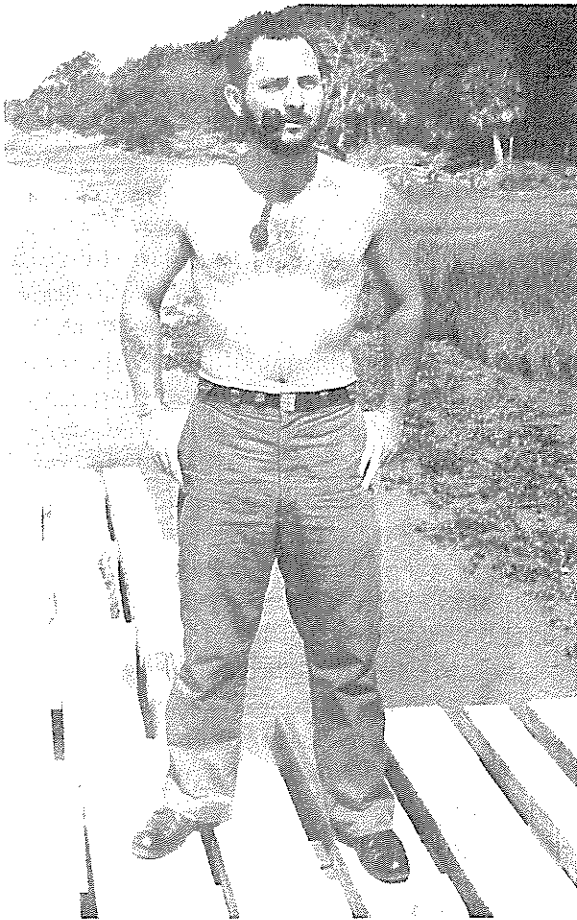
# David H. G. Gould

Quiet, passive and relatively unassuming, David Gould does not initially strike one as a man who has climbed nearly every rung of the state government ladder, who is largely responsible for the status of saltwater fisheries in Georgia today and who, at age 56, finds himself rather unexpectedly in the challenging position of executive director of the South Atlantic Fishery Management Council (SAFMC). His soft-spoken manner belies a career that has closely paralleled the growth and development of research, management, and enforcement in Georgia's coastal fisheries for the past thirty years.

Gould began his career in 1950 as a patrolman for the old Georgia Game and Fish Commission's Coastal Fisheries Program. Headquartered in his hometown of Brunswick, the Program consisted of only six people, a few small boats, and many of the same problems



**Growth and development in saltwater fisheries management has followed Gould's career. Upon retiring from thirty years of service to Georgia, he became Executive Director of the South Atlantic Fisheries Management Council.**



**A mid-fifties version of researcher, manager and law enforcer, David Gould.**

and predicaments fishery managers experience today. The majority of his work involved law enforcement, patrolling Georgia's waters inside sound limits, checking for violators in closed areas. Gould recalls that the issue of the opening and closing the sounds was as controversial then as it is now. He remembers one incident when, while enforcing the closing of a sound, he was welcomed aboard a violating boat -- with a monkey wrench. The wrench fortunately missed its mark as Gould, exiting, decided discretion was the better part of valor. Like the wrench, decisions regarding shrimping were also often hit and miss. "Our judgments were a little more tentative then," he says, "because we didn't have the extensive research and data to back up our decisions. Our decisions often relied heavily on input from those within the industry and research of neighboring states. Often times we would carry fishermen out with us to help make them a party to the decision process."

In May 1952, Gould became supervisor of the Coastal Fisheries Program. Realizing the need for extensive saltwater fishery research and better statistics with which to make management decisions, Gould pushed for increased funding for these studies and

advocated the concept of regional fishery management. He also worked with the Georgia legislature to "beef up" saltwater fishery laws to aid enforcement. In 1960, as executive assistant to Director of the Game and Fish Commission, Fulton Lovell, Gould was called upon to draft and implement motorboat registration legislation and a boating safety program for the state. Indirectly, this program helped provide personnel and funding to bolster some of the fledgling saltwater fishery research programs underway in Georgia at this time. During his two year term as executive assistant, David commuted weekly from Brunswick to Atlanta, testimony to his commitment to the coast, the town where he was born and raised and the people who worked there.

Gould returned to Brunswick in 1962 to resume his duties of Supervisor of the Coastal Fisheries Program. He also concurrently served as chief of the Coastal Law Enforce-

ment District until 1964. Saltwater fishery research here was still conducted on a relatively minor scale. Funding was minimal and the staff, as before, was small.

"Most of the natural resource related funds went into game management and freshwater fishery activities," says Gould. "However, I think the passage of the Comprehensive Fishery Research and Development Act in 1964 was instrumental. It was probably the most important step in implementing saltwater fishery research nationwide, as well as in Georgia. These funds enabled us to establish management and assessment programs for shrimp, crab, oysters and shad. We could finally put together some extensive catch effort data of our commercial fisheries and also establish a pilot program of shrimp statistics."

Gould believes the data collected during this time gave Georgia researchers a strong argument when they requested Federal Disaster Relief Funds after the harsh winters



Among attendees of Game and Fish Commission Ranger School, Athens, Ga. in 1951, Gould is second from left. Third from left is former DNR research vessel captain, "Doc" Jones.

of 1977 and 1978. "South Carolina and North Carolina didn't have the data base we did and hence did not have as good a case to make those funds available."

The fifties and sixties were important times not only for Gould but also for fishery management in Georgia. "All the information we gained in the past now serves as a data base for our current fishery management programs. Accumulating data, studying statistics, this takes an incredible amount of time. However, it makes management decisions much easier when you can put your finger on hard facts and say 'This is what we found out'."

While Gould continued as Supervisor of the Georgia Coastal Fisheries Program through 1977, he concurrently served the state as chief of the Coastal Law Enforcement District (1962-1964), Regional Manager for the Game and Fish Commission (1964-1967) and Deputy Chief of Law Enforcement (1967-1970).

In 1970, he served as executive secretary for the Georgia Coastal Marshland Protection Agency. Here, with a handful of other state officials, Gould helped set precedent in requiring permits for all construction, dredging or filling in Georgia's marshes. When not working with the agency in Atlanta, or conducting research or management activities on the coast, Gould was often monitoring, aerially or terrestrially, permitted projects in the marshlands. "I used to carry hip boots and a camera wherever I went just in case I needed to head into the marsh to do some inspecting."

Throughout his career, Gould has been



Gould, as exiting vice-chairman and entering chairman of the South Atlantic Fisheries Management Council, receives appreciation award from council member, Ben Hardesty.

active in regional and national fishery management forums such as the Coastal Plains Center for Marine Development, the Marine Resources Advisory Committee of the Coastal Plains Regional Commission, the Atlantic States Marine Fisheries Commission (past chairman), the South Atlantic State-Federal Fishery Management Board (past chairman) and the South Atlantic Fishery Management Council (SAFMC) of which he now is executive director. Chosen from approximately 85 applicants, David plans on staying with the Council for about five years or "however long they can stand me."

Gould's present position closely mirrors his views on the importance of regional fishery management. "I feel the council serves an important function in that it stresses the importance of state, federal and regional coordination in fishery management. Fish don't recognize state boundaries and fragmented state laws often don't recognize the migratory patterns of certain fish species." The Council was created in 1976 to manage domestic and foreign fishing with the 200-mile limit of U.S. territorial seas. It presently is developing management plans for commercially important fish stocks within this limit. The council also works as a liaison to help states develop laws and regulations that are consistent with those of neighboring states as well as the federal government.

If past patterns continue, David Gould should also influence the people and projects with which he will be working in Charleston, S.C., headquarters for SAFMC. The programs established under his guidance are now integral parts of the Department of Natural Resources facility in Brunswick. Indeed, it was Gould, who with others, realized the need for a separate division to address itself solely to Georgia's developing coastal region. Created in July 1978, the Coastal Resources Division now employs nearly 50 people -- a far cry from those six back in 1950.

Gould, however, does not lose sight of this. Throughout his rise through various levels of fishery management he has always been a gentleman -- dedicated to the fishermen, shrimpers and townspeople of the coast.

--Steve Olsson

Photos courtesy of David Gould

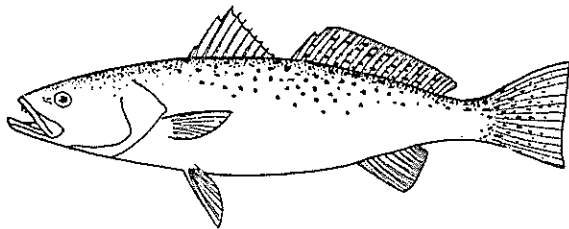




Although fall may mean the last of such offshore catches as king mackerel (above) for a while, the cold weather invariably brings excellent fishing to Georgia's "inside" waters.

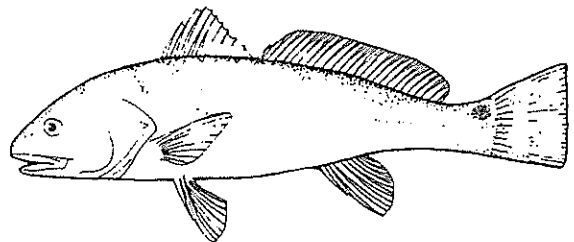
## Fall Fishing Outlook

As most fishermen along the coast are well aware, the fall months are the best all-around for saltwater angling. Nearly all native sport species are along our coast during the early fall.



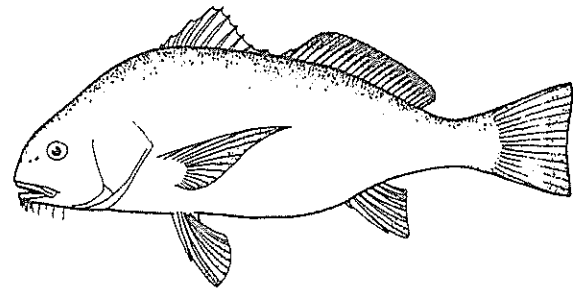
As water temperatures begin to cool in September and October, spotted sea trout start moving inward from the sounds and beaches to larger creeks and rivers. The spotted sea trout is most abundant and active during this time and will readily take live shimp. Some anglers

also do quite well in the fall by using large mummichogs or mudminnows as bait. Fall is also a good time to night fish under lights for trout.



Red drum are readily available in an assortment of size classes. The larger specimens can be found in areas such as in the surf along Sapelo Beach, Raccoon Key in

Ossabaw Sound, Pelican Spit in the Hampton River, the Altamaha breakers and McQueens Inlet on St. Catherines. These larger specimens are taken mainly on cut mullet. The smaller "school bass" or puppy red drum are found primarily around areas where shell beds and sparse marsh grasses line the banks of large creeks and rivers. These can be taken on both live and dead shimp. School bass are usually found close to shore, on bottoms that have submerged shell beds, or in the areas where the shell and marsh grass are mixed, such as the junction of a beach shoreline and river or a creek shell bank.



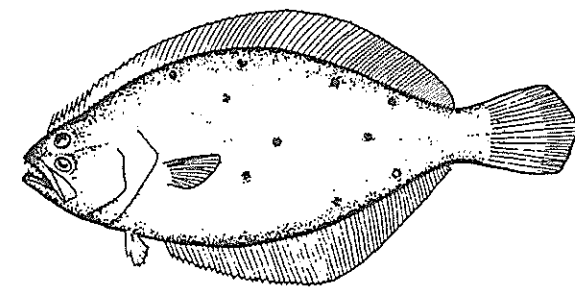
Although the main run of black drum occurs during the early spring (March and April), they may be taken throughout the fall as well. They can be found in the company of red drum and sheepshead around submerged structures, bridge pilings, rough bottoms and rocky shorelines. Your best bet will be to bottom fish with shrimp or small crabs such as fiddler crabs.

Croakers will be abundant until cold water temperatures initiate their movement to deeper waters. You should bottom fish for them in deep water where firm and/or rough bottom can be found.

Whiting are most abundant during the spring, but can be taken on the beaches and around the sounds throughout the fall as well.

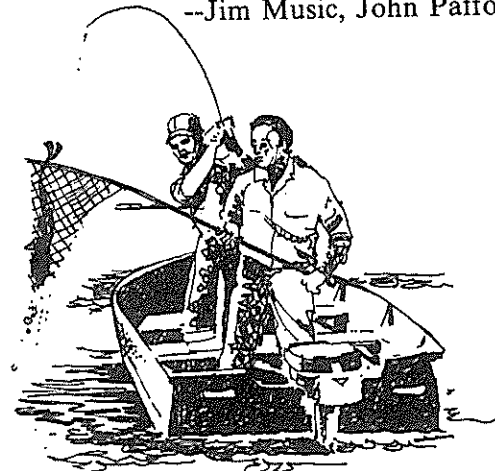
Information as to where and when to fish some of the better known fish drops can be found in the "Guide to Coastal Fishing in Georgia." This coastal fishing guide, published by the University of Georgia's Marine Extension Service, is very informative and can be obtained for Camden, Glynn, McIntosh, Bryan and Liberty counties. It can be stored handily in a tackle box and updated as the fisherman finds new drops.

--Jim Music, John Pafford



Flounder fishermen -- that elite group of fishermen who know just how and where to catch this elusive fish -- do as well in the fall as any other time of the year. Flounder fishermen often are successful fishing with large live shrimp or mummichog minnows along firm mud bottoms and hard sandy areas. Georgia's beaches also are good flounder fishing grounds during the fall. Most flounder anglers use a float rig with an extra long leader. This fall season is also a good time to gig for flounder, but you need a mild west wind on the beaches or no wind at all to do best. Look for this flatfish in the shallows on either sand or mud-sand bottoms.

Those fishermen who either don't have a boat or who want to catch a mess of fish with very little overhead expense, should give the sheepshead a try. They are very active during the fall around all pier and bridge pilings, jetties, shellbeds and other submerged structures. Bait is cheap: you can scoop up a number of fiddler crabs on almost any sandy tidal marsh flat. Carry plenty! Sheepshead are noted bait stealers and may try your patience as well as your supply of bait.



# League Hosts Media Workshop

In conjunction with Year of the Coast activities nationwide, the Georgia League of Women Voters sponsored a two-day media workshop on Jekyll Island on October 2-3, 1980.

The seminar was designed as an informal introduction to the coastal environment and featured a balanced program of indoor and outdoor discussion as well as a variety of viewpoints from coastal resource users.

Approximately twenty freelance, magazine and newspaper writers, delegates from three television stations, and members of the state and national League of Women Voters attended the conference. Among those present were representatives from Georgia Educational Television, WSB-TV of Atlanta, WSAV-TV of Savannah, *Brown's Guide to Georgia*, the *Athens Observer*, the *Macon Telegraph*, the *Georgia Gazette* and the *Savannah Morning News*.

On-site visits to the marshes and beaches of Jekyll Island, along with forum discussions featuring opinions from industrial, development and conservation related interests kept the two day project moving at a fast pace.

For those media representatives already familiar with coastal activities it was an

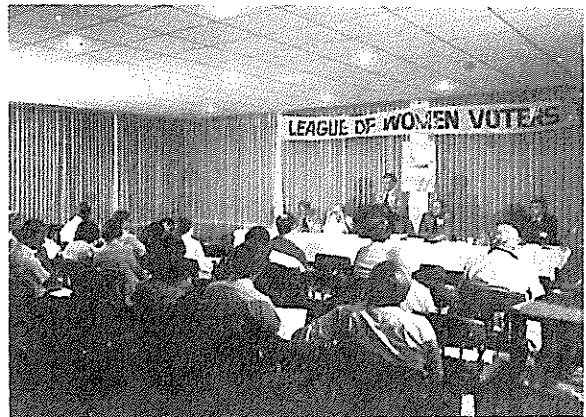


Dock owner and president of the Georgia Fishermen's Co-op, Mike Phillips, (center), explains some of the ins and outs and ups and downs of commercial shrimping to media representatives of the LWV conference.

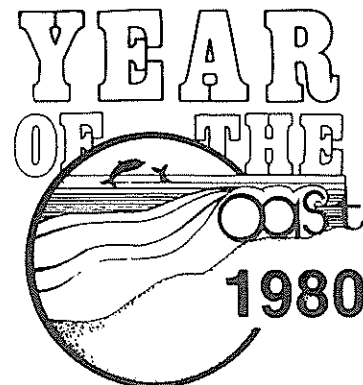
opportunity to broaden their interests. For others, it opened the door to a unique coastal environment and a better understanding of the problems and processes that exist there.



Discussion of Georgia's unique barrier island, beach and marsh ecosystems were highlights of the seminar. Here CRD staff member Rick Pariani (left) points out subtleties in the marsh.



Media representatives came in contact with a number of key figures influencing the growth and development of Georgia's coast. Panel discussions brought together viewpoints from industrial, economic, and environmental interests.



# Coastal Area Deer Hunts

The following is a list of scheduled deer hunts on Georgia Wildlife Management Areas (WMA) and Federal Wildlife Refuges in the coastal region. Further information is available from Georgia DNR Law Enforcement offices, 1200 Glynn Ave., Brunswick, GA 31523, (912) 264-7237.

## STATE MANAGEMENT AREAS

AREA	TYPE	SEASON	LIMIT
Brunswick Pulp & Paper Company Area Glynn, Camden, Wayne and Brantley Co.	Firearms, Buck Only	Oct. 25 - Nov. 29	2 Bucks
	Firearms, Either Sex	Dec. 4 - 6	2 Bucks or 1 Buck and 1 Doe
Hazzards Neck Area Camden Co.	Firearms	State Season	State Limits
Ossabaw Island (Computer Drawing)	Muzzle Loader, Either Sex	Nov. 6 - 8	2 Deer (only 1 of which can be antlered)
	Firearms, Either Sex	Nov. 27 - 29	2 Deer (only 1 of which can be antlered)
	Parent-Child, Firearms, Either Sex	Dec. 18 - 20	2 Deer (only 1 of which can be antlered)
Rayonier Area Wayne, Brantley Co.	Firearms, Buck Only	Oct. 30 - Nov. 1	2 Bucks
	Firearms, Either Sex	Dec. 20	2 Bucks or 1 Buck, 1 Doe
Sapelo Island (Computer Drawing)	Parent-Child, Firearms Either Sex	Nov. 27 - 29	1 Deer
		Dec. 18 - 20	1 Deer
	Firearms, Either Sex	Jan. 5 - 7	1 Deer

## FEDERAL REFUGES

AREA	TYPE	SEASON	LIMIT
Blackbeard Island National Wildlife Refuge (Federal Permit)	Archery, Either Sex	Nov. 3 - 5	2 Deer
	Archery, Either Sex	Dec. 28 - 30	2 Deer
Wassaw Island (Federal Permit, Public Drawing)	Archery, Either Sex	Nov. 14 - 16	2 Deer
	Firearms, Antlerless	Dec. 13	2 Deer
	Firearms, Either Sex	Dec. 14	2 Deer
Harris Neck National Wildlife Refuge (Federal Permit, Public Drawing)	Firearms, Antlerless	Jan. 10, 1981	2 Deer
Okefenokee National Wildlife Refuge	Archery, Either Sex	Thurs., Fri. & Sat. of State Season	1 Deer
Ft. Stewart/Hunter Army Airfield	Archery, Either Sex	State Season	2 Deer
	Primitive Weapons, Either Sex	Oct. 11 - 24	1 Deer
	Firearms, Buck Only	State Season	2 Deer
	Firearms, Either Sex	Dec. 21 - Jan. 11	1 Deer



Kings Bay Submarine Support Base	Archery, Either Sex	Oct. 25 - Jan. 11	1 Deer
	Primitive Weapons, Either Sex	Oct. 18 - 19	1 Deer
	Firearms, Buck Only	Sat., Sun. & Holidays	1 Deer
		Oct. 25 - Jan. 11	
	Firearms, Buck Only	Oct. 25 - Jan. 11	2 Deer
	Firearms, Either Sex	Jan. 10 - 11	1 Deer
Cumberland Island National Seashore (Computer Drawing)	Archery, Either Sex	Oct. 21 - 23	1 Deer
	Primitive Weapons, Either Sex	Nov. 18 - 20	1 Deer
	Parent-Child, Firearms Either Sex	Dec. 16 - 18	1 Deer
	Firearms, Either Sex	Jan. 6 - 8	1 Deer

## Waterfowl Hunting Regulations

### DUCKS:

—Open season; October 11 - October 15, November 27 - November 30 and December 11 - January 20, 1981

—Bag limit: five (5) daily, possession limit ten (10).

—These limits shall not include more than two (2) **wood ducks** daily or four (4) in possession, nor no more than one (1) **black duck** daily or two (2) in possession, nor no more than one **canvasback** or **redhead** daily or in possession.

—During the October 11 - 15 open season the limit on **wood ducks** shall be: five (5) daily and ten (10) in possession.

—An extra limit of two (2) **scaup** daily and four (4) in possession may be taken during the regular duck season on the east (seaward) side of the Intracoastal Waterway in Chatham, Bryan, Liberty, McIntosh, Glynn and Camden counties.

—An extra limit of two (2) **teal** daily and four in possession may be taken during the October 11 - 15 open season, but may not include more than two (2) **blue-winged teal** or two (2) **green-winged teal** or one (1) of each daily and no more than four (4) singly or in aggregate or in possession.

### OTHER WATERFOWL:

—Open season; October 11 - October 15, November 27 - November 30 and December 11 - January 20, 1981.

### OTHER WATERFOWL BAG LIMITS:

#### COOTS:

—Bag limit, fifteen (15) daily and thirty (30) in possession.

#### GALLINULES:

—Bag limit, fifteen (15) daily and thirty (30) in possession.

#### MERGANSERS:

—Bag limit, five (5) daily and ten (10) in possession. No more than one (1) **hooded merganser** may be taken daily or no more than two (2) possessed.

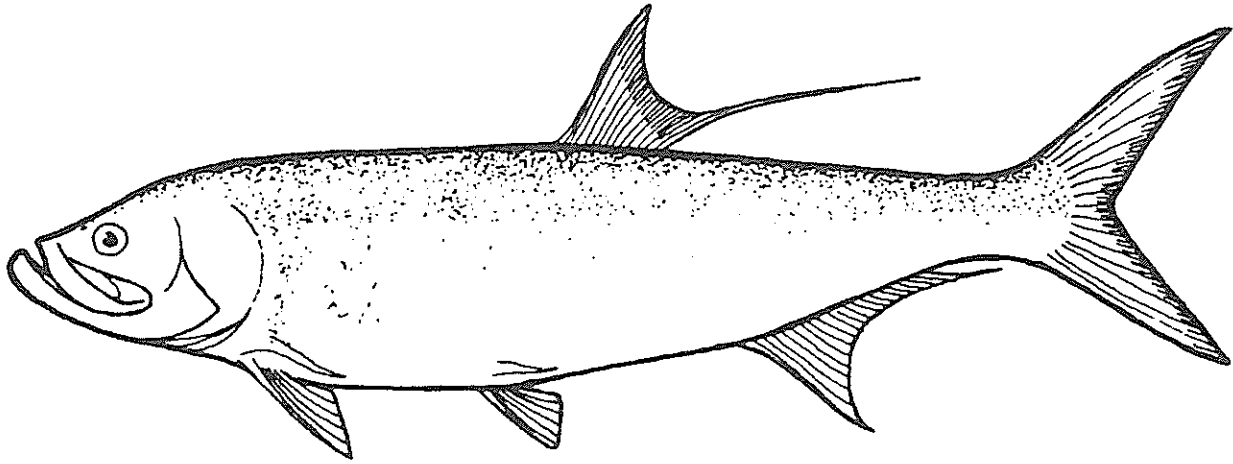
#### SEA DUCKS:

—(**Scooters, eiders, and old squaws**) Open season; November 27 - January 20, 1981

—Bag limit: seven (7) daily and fourteen (14) in possession singly or in the aggregate of these species.

Shooting hours for all days of the open waterfowl season shall be from one half ( $\frac{1}{2}$ ) hour before sunrise until sunset.

In addition to the required state licenses, each person 16 years of age or older who hunts waterfowl must possess a valid Federal Migratory Bird Hunting Stamp. These stamps are available from most post offices.



# Tarpon

One of the first fish actually declared a game fish, and considered by many anglers to be the king of game fishes, the tarpon is a premier fighter and a truly exciting catch. Catching one though, is most often the problem. Finding one usually is not.

Tarpon, *Megalops atlantica*, frequent Georgia waters from early June to possibly as late as the end of September. With the advent of warm weather, they will follow mullet and menhaden into the sounds of St. Andrews and St. Catherines, Wassaw and the Altamaha and also concentrate in areas along McQueen's Inlet and Rabbitt Island.

Jay Allen of Savannah, a self-professed tarpon "addict" has, on a few instances, seen as many as 100 to 125 tarpon feeding on literally acres of schooling menhaden in the Altamaha. Tarpon generally avoid cold water and will migrate from Georgia waters back to Florida with the coming of fall.

The tarpon is easily distinguished by its large scales, bright silver sides and the final whiplike ray on its dorsal fin. They are prolific breeders. The female may release as many as 12 million eggs, which hatch at sea and drift inshore. Like the eel and bonefish, tarpon undergo a metamorphosis, with the larva shrinking to one-half its size and then developing the features of the adult.

Tarpon reach a weight of 300 pounds, although most fish taken are less than 150 pounds and the most exciting catches are often those weighing 15 to 20 pounds. Their fighting

and jumping ability is legendary, with thrashing leaps of up to 20 feet. However, jumps of 5 to 10 feet over the water are more common, but no less spectacular.

In Georgia, tarpon prefer the shallow banks of sounds and low waters of tidal rivers. Unlike many other fish, they can tolerate these oxygen deficient, stagnant waters due to a phenomenon known as "rolling." On the surface, tarpon will actually roll and gulp large amounts of air into their lunglike gas bladder. This intake of oxygen enables them to exist in areas where oxygen levels are too low for most fish. These regions also provide an ideal refuge for young tarpons.

Fishing for tarpon is a dedicated man's venture. An average fisherman may boat only one out of every ten tarpon that strike. The tarpon's hard, bony mouth makes this fish extremely difficult to hook. As Jay Allen said, "It is not unlike trying to put a fishhook through a #2 washtub." Tarpon therefore are often hooked through the gill raker or throat. In contrast to its savage fighting acrobatics, a tarpon may take its initial strike on a bait or lure very casually. As the tarpon sucks the bait in, an angler may feel only a mild bump. However, the jaws clamp tight, the fish plunges downward and the fight begins. His shallow habitat forces the tarpon to make his fight an aerial one, leaping in fits above the surface.

Tarpon fishing in Georgia is dependent on tides and often on the area fished. The best fishing inside the sounds is from one-half flood

up to high tide then back down to one-quarter ebb. Outside the sounds, on the bars and in the surf, tarpon fishing is done from dead low to high tide.

Fishermen should also match their bait or lures to the waters they are fishing. Feeding habits of the tarpon appear to be very selective. Allen recommends cut mullet for surf and bottom fishing off Cumberland, St. Catherines, Tybee and Little Tybee; live mullet for stationary fishing in McQueens Inlet and inside Tybee or St. Catherines; and live mullet or menhaden (depending on what's schooling in the area) while trolling inside St. Andrews, St. Simons or Altamaha sounds.

The highly competitive tarpon can also be very dangerous. There have been numerous accidents caused by flying tackle, flailing tarpons and efforts to boat the fish before it is thoroughly played out. To help hook the tarpon and not your favorite fishing buddy,

Allen recommends pushing the rod towards the tarpon when the fish begins his leap. This actually helps keep tension on the line and prevents the fish from throwing out the hook. Attempt to boat the fish only when it has noticeably slowed down and begins "bubbling" at the surface.

Tarpon have little value as table fare, and are usually released after being landed. Those that are kept are usually trophy sized and find a stead over family room mantles or waiting room walls. The current Georgia men's record for tarpon, 137 lbs. 8 oz., was set in July of 1969 by C. Robert West of St. Simons. Karen Mead of Sea Island set the first record for women in July 1980 with a 93 lb. tarpon after a three hour fight. The record was short-lived as Ashley Mulherin of Savannah bettered it with a 128 lb. 8 oz. catch while fishing in St. Catherines Sound.

--Steve Olsson

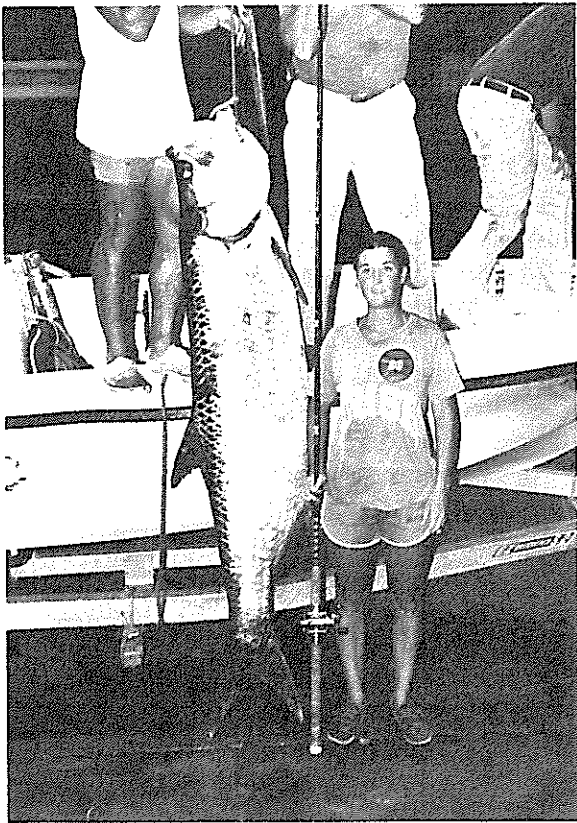
## Hang Log

The University of North Carolina Sea Grant College Program has compiled and published a guide to the underwater obstructions or "hangs" in the offshore waters of North Carolina, South Carolina and Georgia.

Referred to as a "hang log," this publication is designed to benefit commercial fishermen by saving them the costs of torn nets, damaged equipment, and the time required to free gear from shipwrecks, rocks, coral and other obstructions.

The new log is an updated version of the log published in 1975 by the Cooperative Projects Program of the Coastal Plains Marine Center. The information was gathered by interviewing trawl fishermen and combining their logs which recorded hang locations. The guide is designed to be used with Loran equipment and pinpoints these locations in both Loran A and Loran C coordinates.

A copy of **Hangs and Obstructions to Trawl Fishing** may be obtained by writing Hughes Tillett, Marine Advisory Services, North Carolina Marine Resources Center, P. O. Box 699, Manteo, North Carolina 27954.



This 128 lb. 8 oz. tarpon was landed by Ashley Mulherin of Savannah to establish a new women's record in Georgia. The catch breaks a previous record of 93 lbs. set only two months earlier by Karen Mead of Sea Island.

# Undersea Research

The University of North Carolina at Wilmington (UNC-W) has been awarded a \$600,000 grant by the National Oceanic and Atmospheric Administration (NOAA) to activate Phase I of a comprehensive underwater research, training and education program. The project will serve North Carolina, South Carolina, Georgia, Virginia and Florida.

The program, the Southeastern Undersea Research Facility (SURF) will be administered by the Southeastern Consortium for Undersea Research (SECURE) which is composed of representatives from the five southeastern states involved.

The research efforts of SURF will address such national concerns as fisheries management, ocean waste disposal, coastal geological processes, potential impact from offshore oil operations, submerged cultural resources, oceanographic data management, and safety and technology for "man in the sea" projects.

The project will involve underwater research beyond the normal limitations of SCUBA diving. SCUBA allows practical diving up to 130 feet, breathing compressed air. However, at this depth only ten minutes may be spent underwater to avoid decompression. The SURF grant will provide equipment and training for saturation diving. In saturation diving, the diver breaths an oxygen and helium mixture which does not produce the narcotic effect that breathing compressed air produces at depths over 100 feet. However, saturation diving does require the diver to spend long periods of time undergoing decompression.

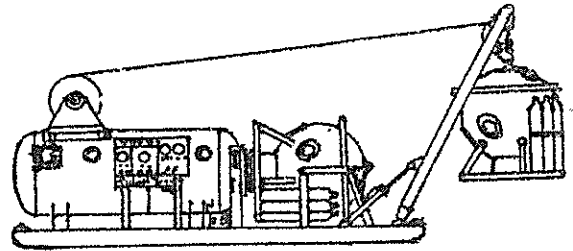
UNC-W's Research Vessel SEAHAWK, an 80 foot converted trawler, will be the diving base for the program. The SEAHAWK will be equipped with decompression chamber and a complete NOAA approved dive locker, and will be capable of delivering an air or gas mixture to divers at depths up to 250 feet.

Phase I of SURF will also include acquisition of a "wet" (open at the bottom to water) diving bell, a facility which will allow two divers to descend to depths of 300 feet for

up to one hour. The wet bell allows diver decompression during the ascent in relative comfort. Divers are seated with the upper parts of their bodies out of the water inside the gas bubble or bell.

The next phase of the project, to be funded later, calls for the acquisition of a closed, or dry, diving bell. The bell will be able to take divers to depths of 700 feet, return them to the ship inside the bell, and transfer them under pressure to the deck chamber where they will undergo several days of decompression.

The final stage of the program will feature an



**An on-deck recompression chamber and closed diving bell will enable SURF project divers to study offshore marine resources at depths up to 700 ft.**

underwater habitat that can be towed to the research site and allow aquanauts to remain saturated for the duration of their underwater mission.

In addition to the initial \$600,000 and continual funding for research, NOAA will provide technical assistance through a close cooperative working arrangement with the SURF project team and the Consortium.

Duane Harris, Assistant Chief of Coastal Fisheries, Coastal Resources Division, has been elected to serve on the Executive Board of SURF. Harris believes that through the SURF program, research divers will make important discoveries in the field of fisheries management. Deep water fisheries resources off the Georgia coast are presently underutilized by commercial fishermen. Underwater research aimed at answering important questions concerning these





Marine biologist Duane Harris (left, with R/V ANNA first mate, Jack Evans) will serve on the executive board of the SURF program. Harris has also recently received instructor certification from the National Association of Underwater Instructors (NAUI).

resources may allow additional utilization in the future.

Harris commented, "This program will allow marine researchers to dive safely in depths where we have not been able to dive using conventional SCUBA gear. SURF will allow us to investigate fisheries resources in areas that are significantly different from areas found further inshore. It has long been recognized that marine research conducted by divers who actually function as a part of the environment they are studying can gather much more meaningful information than can be obtained by remote methods. SURF provides that opportunity."

--Lisa Gibby

## Tagged Shrimp Discovered In Shanghai, China

A female white shrimp found on June 4 has set the "record" for distance traveled in the Coastal Resources Division (CRD) shrimp tagging studies. However, the journey was not solely water-borne, but involved considerable travel via land and air also. The shrimp, released in St. Andrews sound during October, 1979, was discovered in Shanghai, China by Ms. Susan Cassaro, a second cook in the stewards department aboard the NOAA research vessel **Oceanographer** on June 4, 1980.

Ms. Cassaro found the tagged shrimp while peeling other shrimp in preparation for two receptions held aboard the **Oceanographer** for six hundred Chinese and American scientists.

H. P. Mefford of the National Marine Fisheries Service, (NMFS), Fisheries Development Division was also peeling shrimp for the reception. Upon returning to Washington, D.C., he reported the discovery to CRD biologists. Mr. Mefford also contacted Mr. Richard Cobb, of Cobb Products Incorporated, in Arlington, Virginia, who explained that the shrimp was most likely caught in October or November 1979 offshore Brunswick, Georgia. It is believed the shrimp

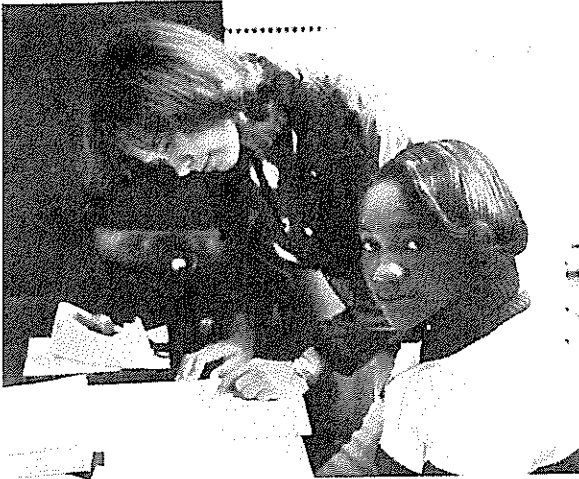
was purchased and packed by Sea Harvest Packing Company, of Brunswick. The lot containing the shrimp was then sold to Safeway Stores, Inc., and transported to Kansas City, where it remained underground in a refrigerated cave. Later the shrimp was sold to the NMFS Fishery Development Division by the Safeway Division in Seattle and air shipped from Seattle to Manila.

Once aboard the **Oceanographer**, this tagged shrimp was the lone survivor out of some 5,000 boiled shrimp that were served on an impressive buffet along with smoked salmon, broiled rock shrimp, tuna dip, and pasteurized crab fingers.

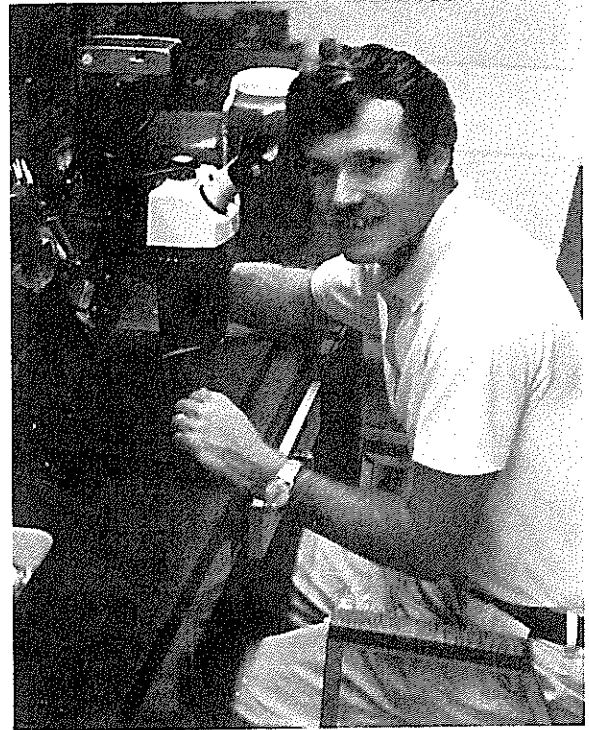
The well traveled shrimp (tail only) was returned to CRD biologists in Brunswick, who remeasured the shrimp to obtain growth data. It was found that this shrimp, bearing tag number 018467, was released off Cumberland Island High Point on October 2, 1979, and had grown 1 mm by the time of recapture.

For further information concerning the shrimp tagging program and some of the more domestic travels of Georgia's shrimp population, contact Susan Shipman at CRD's Brunswick headquarters. --Susan Shipman

## Et Cetera . . .



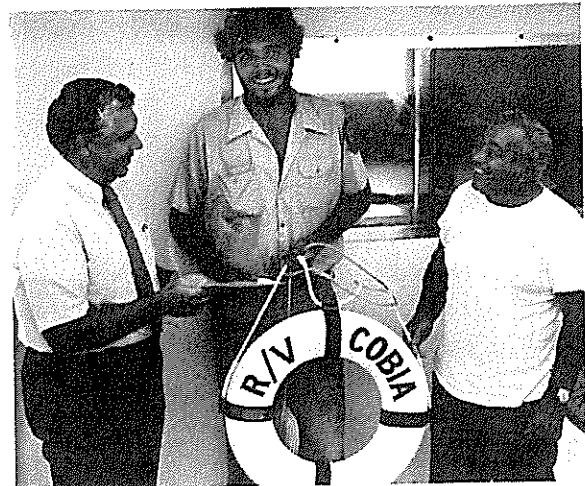
Intern Bernice Mungin will aid Jenny Phillips with various coastal management projects. A native of Metter, Ga., Bernice will receive her masters in public administration from Georgia Southern College after her six month stay with the Coastal Resources Division.



After serving the Smithsonian Institute for two years, Bill Boothe will now supervise CRD's Offshore Marine Assessment project. Bill has a masters in marine biology from the University of South Carolina.



Angler Eric Norman of Jekyll Island with his new state record sailfish. The 59 lb., 7 ft. 10 in. catch was landed while trolling at Buoy WR2.



R/V COBIA first mate Joe Vickery (c) receives congratulations from CRD Director Robert J. Reimold (l) and COBIA Captain Pard Andreu (r). An employee of the Division for three years, Vickery recently completed requirements to receive his Motorboat Operator's License.

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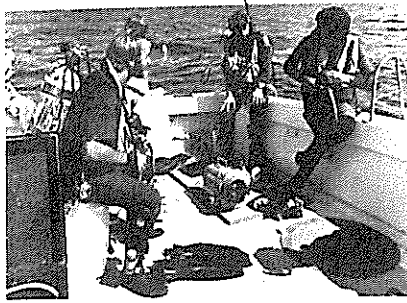
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Gray's Reef and the proposal to make it a National Marine Sanctuary will be the subject of a three-part documentary to be aired on Atlanta's WXIA-TV on October 29-31. Before actually diving on the reef, Cameraman Bill Mills (right, second photo) and announcer Scott Newell (left, first photo) interviewed various user groups -- researchers, fishermen, divers -- to discuss the value and utilization of the reef. Mills and Newell also videotaped CRD diver activity while topside on the R/V GEORGE T. BAGBY. While underwater, Mills filmed CRD research activity as well as the reef habitat and the fish activity there. Divers had to share the spotlight with a nine-foot nurse shark and several schools of amberjack.

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