

COAST WATCH

Meet the Crew



November 1986: (seated left to right) Spencer Rogers, Wayne Wescott, Skip Kemp, Lundie Spence; (standing, left to right) Bob Hines, David Green, Jim Murray, Walter Clark, Jim Bahen, Joyce Taylor and Randy Rouse

IT'S ALL IN A

DAY'S WORK

You have a question about shedding blue crabs.

You try the library, friends, neighbors. But you get only bits and pieces of information, not a complete picture.

Then someone mentions Sea Grant's Marine Advisory Service. You call 473-3937, and at the end of the line is a man with all the answers.

He's Wayne Wescott — one of 12 marine advisers helping the public answer questions about the coast and its use.

These marine advisers make Sea Grant more than research.

They're extension agents who translate scientific and technical information into layman's terms. Then they make sure that information gets put to use.

That may mean helping a beach-front homeowner make his house more storm-resistant or showing a farmer how to raise striped bass hybrids.

Every day is different. No two questions are the same.

That's why we want to introduce you to our team of experts.

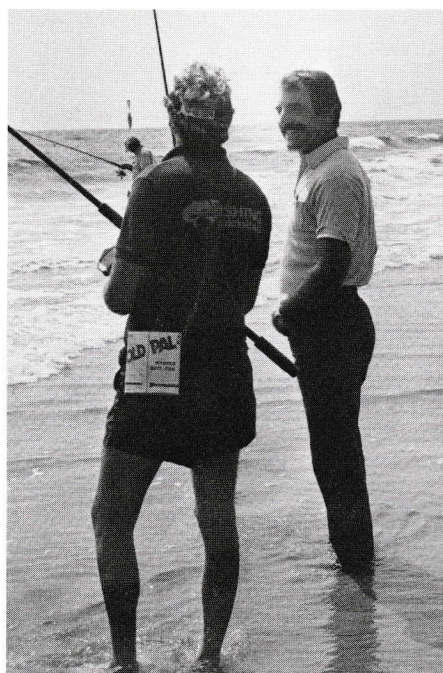
8 a.m. The Sea Grant offices in Manteo, Aurora, Pine Knoll Shores, Morehead City, Raleigh and Ft. Fisher open their doors. Rich Novak in Manteo and Jim Bahen in Wrightsville Beach have already been at work for two hours.

Novak and Bahen start the day at their respective diners, collecting local news and brainstorming ideas.

Novak, the marine recreation specialist, works closely with local businesses and organizations to promote tourism in the area.

Breakfast is business for him.

8:30 a.m. Novak heads his four-wheel drive for Hatteras. A surf fishing tournament has lured more than 50 teams to the Outer Banks for the prom-



Rich Novak (right)

ise of a catch. Novak conducts informal interviews to see how the tournament affects the economy.

He tabulates preliminary figures in his head and comes up with good results. The tournament created significant incomes for motels, restaurants, tackle shops and grocers in the area.

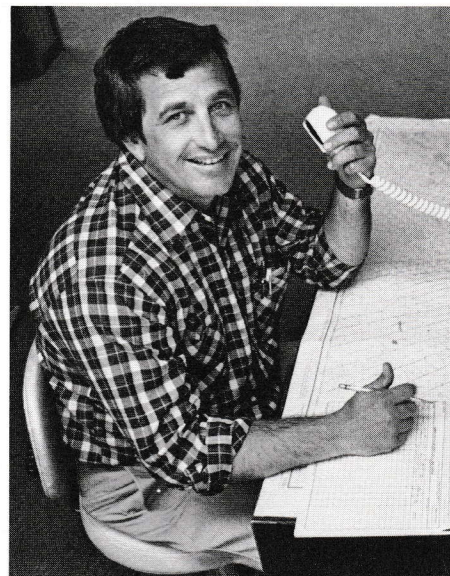
9 a.m. A bell jingles overhead as Jim Bahen steps through the door of a Wrightsville Beach marine supply store.

"Frog, are you ready for the tour-

nament?" the store's owner asks.

Bahen nods. His raspy voice has earned him his nickname, but his knowledge of the fisheries has gained him respect.

He's stopped by to see how many anglers are expected for the Wrightsville Beach King Mackerel Tournament that begins the next day.

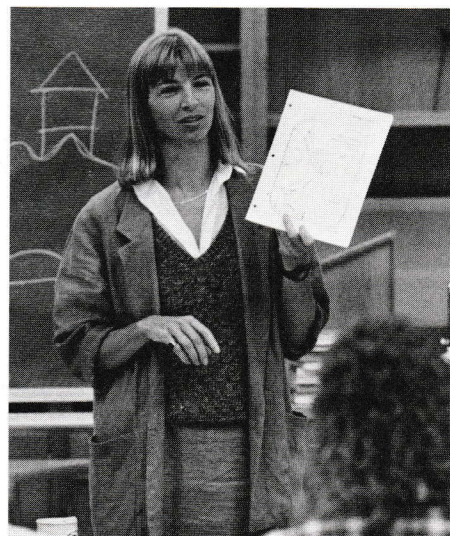


Jim Bahen

Bahen makes plans to distribute boards for measuring the kings and recording catch data. The National Marine Fisheries Service will use the information to assess fisheries stocks.

9:30 a.m. Lundie Spence prepares for class.

She packs her materials, enthusiasm and ideas and dashes off to a classroom of student teachers in Wake County.



Lundie Spence

In less than an hour, Sea Grant's exuberant marine education specialist has 26 future educators painting fish, imitating crabs and measuring simulated ocean depths.

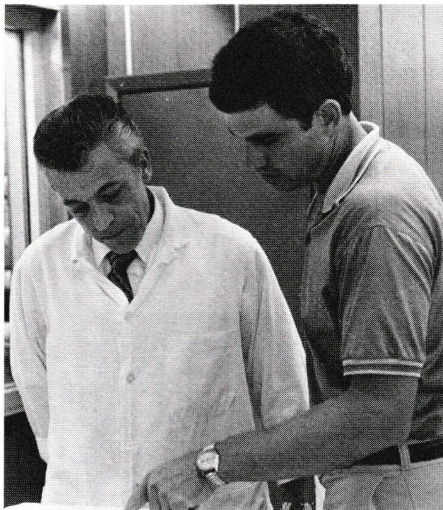
It's all practice.

These teachers are learning marine exercises they can use later in their classrooms.

10 a.m. Skip Kemp dodges piles of fish and knots of fishermen in a Morehead City fish house as he makes his way to the office.

Kemp, a seafood marketing specialist, is here to introduce himself. Three weeks on the job and Kemp is trying to spread his name around local fish houses.

After a few words of introduction, the owner unloads some of his problems about marketing croaker.



Skip Kemp (right)

He suggests to Kemp that croaker should be divided into standardized weight classes. Now, today's medium croaker may be labeled "small" next week at the retail market, and that means a potential loss to the dealer.

Kemp takes notes and promises to speak with other fish dealers about the problem.

10:30 a.m. It's a busy morning. Joyce Taylor, Sea Grant's seafood education specialist, is besieged with requests.

One caller quizzes Taylor about the special fatty acids in most seafoods. A writer asks for recipe suggestions for cooking seafood outdoors.

The phone rings again. This time a woman needs to know how to trans-



Joyce Taylor (left)

port live eels. Another caller wants a recipe for shrimp soup.

With the requests taken care of, Taylor heads for the kitchen. There she'll work with six nutrition leaders from Carteret County's Extension Homemakers. They're trying to eliminate salt from their seafood dishes.

Today they'll test recipes that substitute herbs, spices, citrus juices and wine for salt.

Taylor samples a flounder dish. "It needs something else," she says. "It needs salt."

But she resists the temptation to reach for the salt shaker. Instead, she sprinkles garlic powder on it. Now the flounder passes her taste test.



Randy Rouse

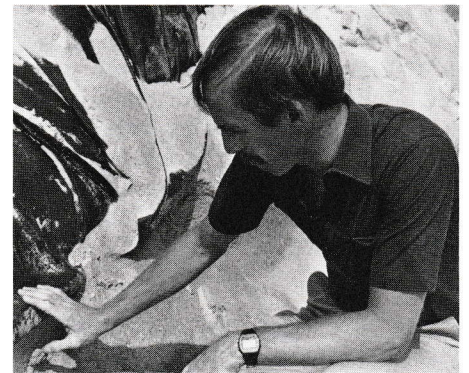
11:30 a.m. Most of the time Randy Rouse is waist-deep in pond water, monitoring the growth of striped bass hybrids at the aquaculture lab in Aurora. But today phone calls and visitors are keeping him out of the muck.

Sea Grant's aquaculture research has ignited interest in the fledgling industry. Rouse's job is to spread the fire.

An opportunity comes when a farmer from Hyde County drops by the lab. He's interested in raising hybrids in a small pond. It sounds like a good prospect to Rouse. Rouse will visit the site later to assess the potential.

A Sea Grant scientist calls. She needs a supply of striped bass hybrids for her research on a nutritional feed for the fish. Rouse will supply her with 240 hybrid fingerlings.

Another researcher tells Rouse he's bringing a Nova Scotian businessman and prospective aquaculturist to visit the Aurora lab.



Spencer Rogers

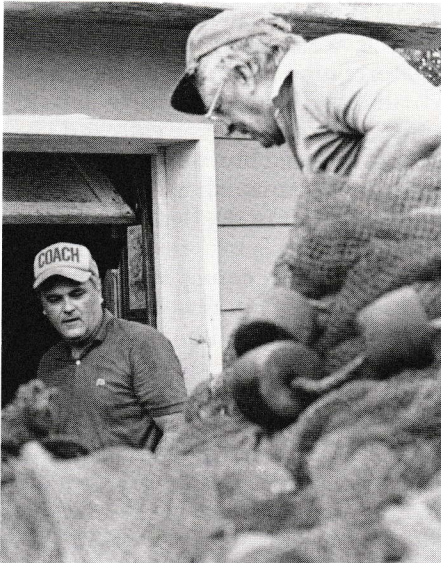
1 p.m. After lunch, coastal engineer Spencer Rogers stops by a Carolina Beach condominium to check some beachfront erosion problems. He looks to see if the sand bags in front of the condo are holding off the ocean waves.

So far, so good. But Rogers is skeptical about the bags' holding ability.

Back in his Ft. Fisher office, Rogers prepares for the next day's meeting of the N.C. Coastal Resources Commission. He will be updating the commission on the federal flood insurance program — its strengths, limits and impacts on coastal management.

1:30 p.m. Fisheries agent Bob Hines works up a sweat as he and several local fishermen haul over 100 pounds of net into the back of his pickup.

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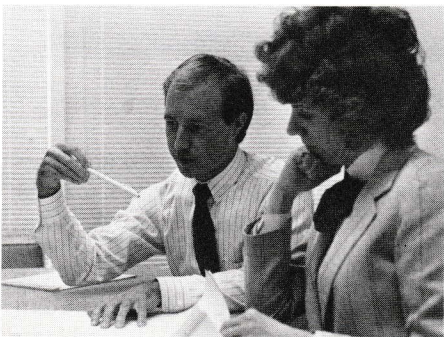


Bob Hines (left)

After a short ride to a vacant lot in Morehead City, Hines and the fishermen pull out this newfangled net and spread it on the ground.

It's a floating pound net. Commercial fishermen use the nets in New England sounds. Hines will test this one to see if it will catch schooling fish such as bluefish and spot offshore here.

Today Hines checks the net for torn spots, floats and leads. It will take days of work before the net is ready.



Walter Clark (left)

2 p.m. Walter Clark greets a packed class of N.C. State University students. Sea Grant's coastal law specialist gives a legal perspective to a marine resources class taught with cohort Lundie Spence.

Today's topic is the Law of the Sea. Clark carefully explains the Law of the Sea Treaty, territorial rights and resource exploitation.

Then he adds a touch of reality.

The scene: a mock Law of the Sea Conference. The players: seven students representing seven nations. The

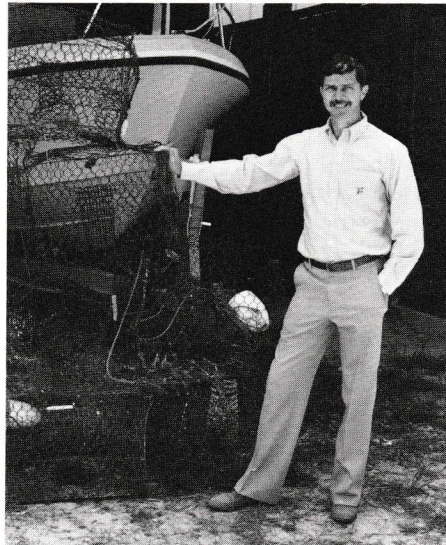
goal: to determine who profits from deep-sea mining.

In the end, the students learned that negotiating is tough, that the issues are real, and that they can make a difference.

3 p.m. Helping commercial fishermen comes natural to Wayne Wescott. A coastal native, Wescott started crabbing when he was 9 years old. His father was a commercial fisherman and owned a fish house in Manteo.

You can tell Wescott likes his job when he talks to Moon Tillett, a successful fisherman from Wanchese. This afternoon, Wescott checks on some gear Tillett's been testing.

The gear is stashed away, but out in front is the fisherman's latest beef — the low prices the catch is bringing. Wescott hears him out and offers some advice.



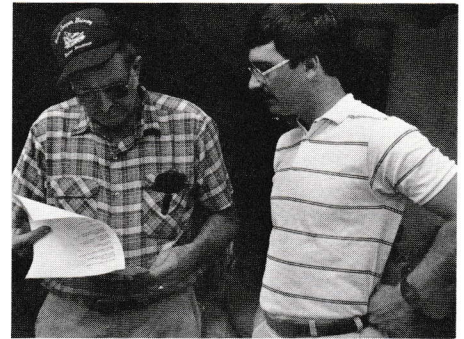
Wayne Wescott

Murray Bridges of Colington knows the story, too. He's a crab shedder who fishes in the off-season. The flounder he's been catching aren't bringing the prices expected.

Bridges looks ahead to crab season. And Wescott can help. His assignment: check on a chemical that may spur crabs to molt and find out something about raising crabs from eggs.

3:30 p.m. David Green steps inside a warehouse-sized freezer at a Beaufort fish processing plant. The freezer is empty now, but it may eventually hold thousands of pounds of menhaden for use as bait or perhaps even as a food fish.

Menhaden, the most-caught fish in the state, is used mainly for fish meal and oil. Recently the industry has hit hard times. David Green is working to change that.

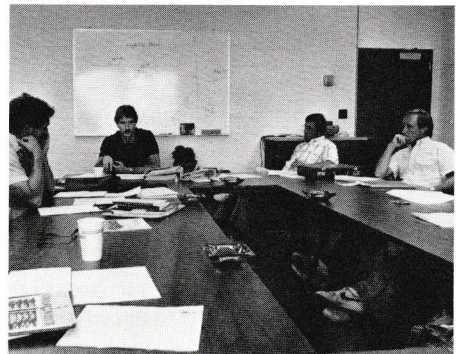


David Green (right)

"The industry has realized it can't live on meal and oil. But if it can diversify, it might be able to stay afloat," says Green.

He is working with local processors to improve onboard handling of menhaden so that a food-grade product reaches the docks.

4 p.m. In the past few hours, Marine Advisory Director Jim Murray has had eight phone calls.



Jim Murray (center)

Log them in: a researcher, three MAS directors from other states, two MAS agents, a graduate student at NCSU, and an enthusiastic entrepreneur who wants to grow snails.

From his office in Raleigh, Murray steers the MAS crew like the pilot of an oceanliner. It takes a lot of phone calls to guide 12 agents and their activities.

"A lot of what I do when I'm in the office is to coordinate things, pull things together," says Murray.

With open lines of communication, Murray keeps atop the news and events affecting the MAS.

BRINGING YOU INFORMATION

When Roberta Naimark survived a rip current, she wrote Sea Grant's communicators to thank them for her life.

You see, the day before Naimark went for that swim, she read a Sea Grant poster that advised her about what to do if she were ever caught in a rip current.

"I read the poster never thinking that the very next day I would put the information to use," says Naimark.

As Sea Grant's communicators, information is our job.

We're liaisons between coastal North Carolina and you — tourists, fishermen, scientists, businessmen. Our main goal is to give you a better understanding of the marsh where you dig for clams, the dunes you cross on your way to the beach, and even the seafood you eat.

How do we do it?

Well, you already know about *Coastwatch*. In fact, you're one of about 15,000 subscribers who receive the newsletter 10 times a year.

The three of us, editor Kathy Hart and writers Nancy Davis and Sarah Friday, focus on a single coastal topic in each issue.

First we act as reporters, conducting interviews, gathering information and taking photographs. Then we settle down in front of our computers to write the articles that keep you informed.

Our other monthly task is "Seascope," a series of four 60-second public service announcements. "Seascope" takes to the airwaves of 40 coastal stations, bringing residents and visitors up-to-date on what's up at the coast.

By blanketing the state's mails with bundles of news releases, we inform you about the latest Sea Grant research and advisory service activities.

That's not all. We take the work of our scientists and marine agents and dot the i's, cross the t's, add the commas and mark out the unneces-



(Left to right) Nancy Davis, Sarah Friday and Kathy Hart inspect *Coastwatch* as it rolls off the press

sary to make their writing more understandable.

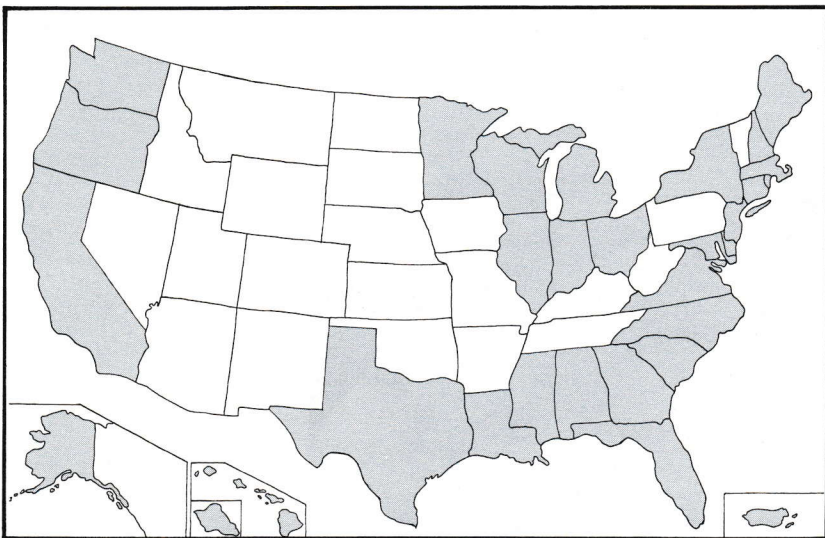
Then we work with designers and printers to package the information into pamphlets, booklets, posters or reports you can use.

And we know you're using these publications. Sea Grant receives hundreds of requests a week—over 60,000 requests a year—for everything from *Seashells Common to North Carolina* to *A Guide to Soft Shell Crabbing*.

We probably have some publications that will help you work or play in coastal North Carolina. For a publications brochure, write UNC Sea Grant, Box 8605, N.C. State University, Raleigh, N.C. 27695.

SEA GRANT

A NETWORK OF KNOWLEDGE



There's a Sea Grant program in every coastal state and Puerto Rico

UNC Sea Grant is not alone. Twenty-nine similar programs can be found in every coastal and Great Lakes state in the United States, plus Puerto Rico.

Sea Grant is a network.

The programs work to solve the problems particular to our nation's coastal and Great Lakes regions.

Problems like declining fish stocks, contaminants in coastal waters, waste disposal and corrosion have Sea Grant scientists standing long hours over microscopes and sampling fish stocks in ice-cold waters.

Other times Sea Grant gives a research boost to budding marine industries such as the calico scallop fishery, hybrid striped bass aquaculture and the cultivation of crawfish.

Since many marine problems know no state boundaries, Sea Grant research can be shared

from state to state or region to region.

Or programs can tackle problems together.

A few examples are:

- The North Carolina, Virginia, Maryland and Delaware Sea Grant programs investigated the reasons behind declining stocks of striped bass.

- Sea Grant researchers from New York, Virginia, Rhode Island, Massachusetts and North Carolina are helping processors turn underutilized fish species into pseudo seafood products.

- The Marine Advisory Service programs in the Southeast — from North Carolina to Texas — funded a shrimp trawl film that has shown hundreds of shrimpers more about the catching ability of various nets.

And the Sea Grant network shares its marine advisory experts and their knowledge.

Fisheries agent Wayne Wescott visited Texas to show marine advisory agents and local fishermen the basics of shedding soft shell crabs.

In South Carolina, coastal engineer Spencer Rogers explained the benefits of hurricane-resistant construction techniques to the state's building code council.

As recipients of knowledge and expertise, North Carolina fishermen are wiser after instruction about longlining from Texas agent Gary Graham and about the shrimp gear from Georgia agent Jack Rivers.

All of this sharing among programs makes each Sea Grant program more knowledgeable and the network a reliable, ever-expanding source of marine information.

Call Sea Grant if you want to plug into a network of marine research and expertise.

THE BACK PAGE

"The Back Page" is an update on Sea Grant activities — on research, marine education and advisory services. It's also a good place to find out about meetings, workshops and new publications. For more information on any of the projects described, contact the Sea Grant offices in Raleigh (919/737-2454). For copies of publications, write UNC Sea Grant, NCSU, Box 8605, Raleigh, N.C. 27695-8605.



Shrimp trawls often sweep up more than just shrimp. Loggerhead and ridley sea turtles also fall victim to the nets.

Unfortunately, the air-breathing sea turtles frequently drown before the nets are pulled aboard the trawler and emptied.

The loss of these endangered species concerns environmentalists and the U.S. Fish and Wildlife Service. They want the National Marine Fisheries Service to take steps to stop the deaths.

NMFS could close turtle-prone areas of the Gulf and South Atlantic coasts to trawling, or they could require TEDs — trawling efficiency devices.

Sewn into the body of a shrimp trawl, the TED is a large galvanized pipe or fiberglass frame. Inside the frame are slanted deflector bars that force large objects — sea turtles, cannonball jellyfish and horseshoe crabs — out of a trap door.

Four different types of TEDs are on the market. One was developed by the National Marine Fisheries Service. The others were developed by fishermen in Texas, Louisiana and Georgia.

NMFS wanted to test the four devices to see how well they worked.

The evaluation was set for the waters off Cape Canaveral, Fla., an area with a high abundance of ridley turtles. Sea Grant agents from the Southeast, including Jim Bahen and Skip Kemp from North Carolina, helped conduct the tests aboard Georgia Sea Grant's 72-foot trawler, the *Georgia Bulldog*.

Also observing were representatives from the U.S. Fish and Wildlife Service and conservationists from organizations such as Greenpeace and the National Audubon Society.

The *Bulldog* pulled two identical 45-foot, two-seam trawls. One had a TED in it; the other didn't. Ten 45-minute tows were made with each TED design.

"All of the TED designs worked," Bahen says. "We never saw a turtle in the tailbag of a net with a TED installed."

Without the TED, the other net caught eight to nine turtles a day, he says.

Although all the TEDs excluded turtles, Bahen says the NMFS design also excluded other bycatch such as spot and croaker.

Georgia Sea Grant will test the Texas, Louisiana and Georgia TEDs later to see if the devices affect shrimp catch rates.



There was something special about Buddy Swain's 1985 coastal biology students at New Bern Senior High School. They did more than study their coastal environment.

They wrote a book about it.

The Influence of Man's Existence is a 78-page book that focuses on the impact man has had on the Trent and Neuse rivers. The book describes how the rivers were formed and how they were affected by the Indians, early settlers and modern man. And, the students offer a look into the future of the rivers.

Swain's students spent nearly a year researching, writing and editing the book. Civic organizations donated money for the book's printing.

At the end of the school year, proceeds from sales of the book were divided as scholarships among the authors. Future profits will buy supplies for the coastal biology class.

For a copy of *The Influence of Man's Existence*, write New Bern Senior

High School, in care of Coastal Biology, 2000 Clarendon Boulevard, New Bern, N.C. 28560. Enclose a check for \$5.50 made out to the New Bern Senior High School Coastal Biology Class.



No, Sea Grant's new four-color poster, *The Hardbottom Distribution Map*, doesn't pinpoint the firmest derrieres on North Carolina's beaches.

What it does identify are firm surfaces that form underwater mesas called hardbottoms.

Hardbottoms dot the continental shelf. Their edges, or scarps, are prime fishing and diving spots.

The scarps are alive with worms, mollusks, corals and sponges that attract small bait fish. The bait fish, in turn, attract larger reef fish such as snapper, grouper and sea bass.

The location of hardbottoms in Onslow Bay — an area between Cape Lookout and Cape Fear — are pinpointed on a map on one side of the poster. The map distinguishes between low-, medium-, and high-relief hardbottoms. Taller hardbottoms generally have more scarp area to attract more fish.

On the other side of the poster are five detailed paintings that realistically depict life on the ocean floor. This side of the poster makes an excellent educational tool for teachers.

The map and the information for the paintings were developed by Sea Grant researchers Stan Riggs, Scott Snyder and Albert Hine. The drawings were painted by Whiting Toler.

For a copy, write Sea Grant. Ask for UNC-SG-86-25. The cost is \$5.

The so-called crisis in insurance affects everyone—including fishermen. But what can be done about it?

That will be the topic of a national workshop on fishing vessel insurance and safety in Washington, D.C., Feb. 4 to 6.

Continued on next page

Insurance representatives, fishermen, charter boat operators, congressional staff members and safety experts will discuss ideas for possible solutions to the problem.

The workshop is sponsored by the Sea Grant College Program Network, the National Council of Fishing Vessel Safety and Insurance, and the University of Alaska Sea Grant Program.

For more information on the workshop, contact Brenda Melteff at the University of Alaska Sea Grant Program, 590 University Avenue, #102, Fairbanks, Alaska 99709-1046. Or call 907/474-7088.



Before you toss aside that amberjack, triggerfish or shark, order Sea Grant's latest publication. *Recipes with a New Catch* will supply you with 64 delicious ways of

cooking nontraditional fish.

You'll learn how to prepare 18 species of saltwater fish commonly caught in South Atlantic and Gulf waters. And

you'll also find out how to clean and prepare your catch.

This 40-page recipe book was written by Jim Murray, Sea Grant's Marine Advisory Service director. Sea Grant's seafood education specialist Joyce Taylor provided many of the recipes.

Recipes with a New Catch is part of a NMFS project designed to promote the use of nontraditional fish.

Write Sea Grant for a copy of the book. Ask for UNC-SG-86-06. The cost is \$2.

From classes in vessel safety to columns in *National Fisherman* about electronics, Duncan Amos has taught fishermen about most anything you can name.

Now, as a regional fisheries specialist for Sea Grant, he's helping fishermen in the Southeast.

Amos comes from the University of Rhode Island where he was the Marine Advisory Service director and fisheries specialist.

His new position is funded by a grant from the Gulf and South Atlantic

Fisheries Development Foundation. Amos is based at the University of Georgia in Brunswick, but he'll be traveling throughout the Southeast to share his knowledge of fishing.

Sea Grant's marine advisory agents are compiling a list of possible seminar topics for Amos to present to North Carolina fishermen. If you have suggestions, contact your local agent. Call Wayne Wescott in Manteo (919/473-3937); Bob Hines or Skip Kemp at Pine Knoll Shores (919/247-4007); or Jim Bahen at Ft. Fisher (919/458-5498).

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