



# COAST WATCH



*Our seafood platters  
are brimming  
with imports.*

*Are there other ways to meet  
the demand? Experts say we may  
have to learn to eat a wider variety and  
raise more fish down on the farm.*



# Serving up imports

By Nancy Davis

If you think the shrimp you had on that Captain's Platter last night was fresh from U.S. waters, think again.

In fact, if you've had shrimp at a restaurant lately, there's a good chance it didn't come from anywhere near here.

About 70 percent of the shrimp we eat comes from fishermen and shrimp farmers from around the world.

And so it is with most of our seafood.

At New York's Fulton Fish Market, the country's largest seafood market, much of what passes through there in a day is imported.

Richard Lord, the market's information officer, can't predict how much of the average 400,000 pounds of seafood a day comes from foreign shores. But if Fulton serves as a microcosm of the U.S. seafood industry, more than 70 percent of that fish and shellfish is imported, he says.

We simply can't supply our demand for fish and shellfish.

According to National Marine Fisheries Service statistics, Americans are eating more seafood than ever. On average, each of us ate 15.4 pounds of seafood last year. And that's 4.8 percent more than we ate in 1986.

To satiate our appetites for food from the sea, we must buy from other nations.

Last year the United States imported a record \$5.7 billion of edible fish and shellfish—\$897.7 million more than the record value set the year before.

"I don't think there's a country in the world that produces seafood that hasn't exported to the United States," Lord says.

The news comes at a time when import has a negative ring to our ears. We've come to look for that "Made in the U.S.A." label on our clothes, and we expect the same of our seafood.

In October the U.S. Commerce Department reported that the nation's trade deficit for August was \$12.2 billion.

And seafood is a big part of that deficit.

In 1987 the United States imported \$8.7 billion in seafood products. But its total exports amounted to only \$1.6 billion.

Those figures place fishery products second only to oil as the largest factor in the U.S. trade deficit.

But Lord says seafood imports are a necessary evil.

Americans are finicky about the seafood they eat, he says. Despite the wide variety of seafood that could be harvested from our nation's long coastline, we're partial to a few white-fleshed fish such as cod, haddock and flounder. And there's just not enough of it to go around.

"Imports supplement domestic local production of fish in high demand," Lord says.

Imports also help maintain our seafood supply in the winter months when

fishing is often curtailed by the weather.

And for consumers, imports mean we have a steady supply of seafood.

But the American fisherman may have a different view.

For him, imports mean that the guy in the boat docked next to him isn't his only competition.

Instead, he may be up against a fisherman in Japan, a shrimp farmer in Ecuador, a trout grower in France.

"The seafood market is a global market now," says Lord. "Our fishermen are competing in the market with everyone."

But Tar Heel fishermen complain that imports sometimes dictate the prices they get for the catches locally.

And they're right.

Lord explains the economics of imports with the help of the old laws of supply and demand.

If demand for seafood is high, but supplies are low, then prices will be high.

Imports help to stabilize prices by increasing the supply of seafood, Lord says.

"Without imports, the price would be so high on some species that they'd only be available for the very exclusive. Therefore, imports reduce the price for domestic fish," Lord says.

For example, suppose seafood markets offer domestic supplies of gray sole for \$10 per pound. But if the markets can import gray sole at cheaper prices, they can offer it for just \$8 per pound.

Without that \$8-per-pound fish, the domestic \$10-per-pound fish would cost consumers even more.

"Prices are market-driven," Lord says. "A lot of people wouldn't be in business without imports. If we only had domestic fish to sell, the prices would be so high that nobody could afford them."

But even so, some American fishermen believe they end up competing with foreign fishermen whose operating costs are lower and whose governments sometimes subsidize their fleets.

## 1987 Top Ten Suppliers of U.S. Seafood

	Value	Tons
<b>1. Canada</b>	\$1,241	374.8
<b>2. Mexico</b>	\$476	79.7
<b>3. Ecuador</b>	\$415	73.6
<b>4. Taiwan</b>	\$352	103.9
<b>5. Japan</b>	\$278	75.2
<b>6. Korea</b>	\$248	87.7
<b>7. Thailand</b>	\$245	106.9
<b>8. Iceland</b>	\$234	62.3
<b>9. Norway</b>	\$197	41.9
<b>10. New Zealand</b>	\$140	20.8

Figures are in millions of dollars and thousands of tons for edible fishery products. Source: National Marine Fisheries Service.



Tim Parsons, operations manager with Wanchese Fish Company in Hampton, Va., says that his company won't import seafood.

"Imports hurt us because we're a U.S. commercial fishing fleet. We do not import products because we feel that's in direct conflict," Parsons says.

"Importing is a necessity," says Cliff Lynch, manager of the N.C. Department of Agriculture's seafood marketing program. "But at the same time, it hurts our fishermen."

In some cases, imports have actually taken over a domestic market. Lord cites the Norwegian salmon as an example.

Initially our supply of West Coast salmon was available only in the summer months. But with Norwegian imports, salmon became available to consumers year-round. And even though West Coast salmon still holds the edge with consumers in the West, folks on the East Coast now opt for the Norwegian variety.

Seafood imports are here to stay, Lord says. Without them, consumers would have to go without some of their 15.4 pounds of seafood a year and pay more for it.

But Lord believes we could reduce the level of imports by farming more species and by using a wider variety of the seafoods available in our waters. (See stories, pages 4 and 6.)

And we could offset imports by exporting more of our catches.

Lynch believes North Carolina fishermen should investigate foreign markets, particularly Japan, as possible outlets for their catches.

"The Japanese are just like kids in a candy store," he says. "They have the money, and they're going to import fish because they're such a fish-eating nation."

Jerry Schill, executive director of the N.C. Fisheries Association, thinks consumers can help reduce imports, too.

"Most consumers don't know if they're eating domestic or imported

shrimp, and many don't care," Schill says. "If the consumer doesn't care where his fish comes from, the restaurant owner doesn't care. They'll just go with the lower price."

And more often than not, the imports will cost less.

But will the quality be as good as our domestic supplies?

Schill doesn't think so.

"We have excellent quality products here," he says. "When you go into a restaurant, just don't say you want a shrimp dinner. Say you want a North Carolina shrimp dinner." ■

## Menu

### *Poached Salmon with Dill Sauce*

*A succulent salmon steak smothered in a tasty dill sauce.  
Salmon fresh from Norway.*

### *Steamed Shrimp*

*Large Ecuadoran shrimp steamed to perfection.  
Served with our chef's famous cocktail sauce.*

### *Baked Orange Roughy*

*A thick fillet of orange roughy  
straight from the waters of New Zealand.*

### *Stuffed Flounder*

*A flaky fillet of flounder stuffed with crabmeat.  
Fresh as the cold waters of Canada.*

### *Lobster Tails*

*Spiny lobster from the Caribbean  
topped with a creamy cheese sauce.*



# Casting for a new catch

By Sarah Friday Peters

Sea robins get no respect.

You might say they're the Rodney Dangerfield of fish.

And you might as well add triggerfish, amberjack, pigfish and rays to the category, too.

All it takes is one barbed stinger, a spiny fin or an odd-looking shape for a fisherman to shun a fish.

The National Marine Fisheries Service estimates that recreational fishermen catch more than 33 million of these less favored fish each year. But of the 78 species that they reel in in the Southeast, they only keep about 10 or 12, says Jim Murray, Sea Grant's Marine Advisory Service director.

Anglers reject most of the other 66 species for more popular fish like grouper, redfish, snapper and mackerel.

Commercial fishermen, too, often ignore certain species, calling them "trash fish," "garbage fish," and "odd-ball species."

The image problem comes at a time when consumers want more seafood than ever. And pressures on marine resources are increasing to meet these demands.

Now a fledgling campaign hopes to gain new respect for the Dangerfields of fish. With education, supporters say, fishermen may see these ugly ducklings as beautiful swans.

NMFS, the Gulf and South Atlantic Fisheries Development Foundation, Sea Grant and other fisheries and research organizations began working toward the transformation about four years ago.

Their projects target commercial and recreational interests, but fisheries managers agree that changes in the commercial industry will have the biggest impact.

U.S. fishermen have netted about the same number of pounds of traditional food fish for 45 years, Murray says. Now most of these species are being fished to capacity.

To satisfy our hunger, we import 70 percent of our seafood, says Richard Lord, information specialist with the Fulton Fish Market in New York City.

"We don't have the fishery resources to supply the white-fleshed fish most consumers here require," Lord says. "If we could develop markets for some of the lesser-known seafoods, we'd be able to offset some of our imports," he adds.

The irony is, Lord says, that the U.S. coastline stretches from the Arctic to the tropics and allows for a huge variety of seafood. But European countries with much smaller coasts have a bigger variety of seafood products.

"The point is," Murray says, "we need to use some of that protein we're throwing away."

Take squid, butterfish, dogfish and herring, for instance. These four species occur in large numbers in U.S. waters, but demand in domestic markets has been small, Murray says. A limited market means low value to the states' commercial fishermen.





Nearly four years ago, NMFS recognized the potential for butterfish, squid, shark, and some tuna and herring fisheries in the Gulf of Mexico and the Southeast.

The Gulf and South Atlantic Fisheries Development Foundation also began a push for underutilized species, touting the virtues of species such as mullet, butterfish and soft-shell crab.

Getting the message across is tough, but there have been successes, says Andy Kemmerer, director of NMFS's Mississippi lab in Pascagoula. So far, the lowly butterfish takes the prize.

These shallow water fish, sometimes called "silver dollars," held no market value for U.S. fishermen in the Gulf five years ago. Mostly Japanese fishermen harvested them there for export.

When large concentrations of bigger fish were found further offshore, NMFS and GSAFDF helped develop markets. By 1986, domestic catches of butterfish reached 1 million pounds per year, Kemmerer says. Now figures range from 5 to 10 million pounds, says Tom Murray of GSAFDF.

To duplicate success with other underutilized species, fisheries managers recommend more research on stocks and improvements in production, processing and marketing techniques.

But commercial fishermen say it will take something else for them to abandon their traditional fisheries—proof that profits can be made.

Shrimpers won't start fishing for amberjack, and crabbers won't convert to crawfish unless they have a money-back guarantee.

"It's a hard thing to bend them away from something they've always done," admits lifetime fisherman "Pinky" Lewis of Beaufort, N.C.

For more than 40 years, he and other Downeast fishermen have made a living pulling in shrimp, spot, croaker, flounder and other traditional species.

When other fish land in the nets, he sells them.

"You might not get much for them,"

he says. "But for some of these odd characters you can get a right good price."

In fact, Lewis began fishing for shark some this year because it was a profitable daytime fishery.

Profits don't concern Bob Emanuel so much. The Raleigh lawyer is a weekend fisherman who likes to catch just about anything running off Core Banks and Cape Lookout.

But Emanuel and the rest of the country's recreational fishermen reel in one third of all the finfish harvested for food in the United States.

"Sportfishermen do have an impact on the fisheries," Jim Murray says.

That's why he and Sea Grant researchers Jeff Johnson and David Griffith of East Carolina University began spreading the word on 16 underutilized species to Southeastern anglers.

Their study of the region's anglers showed that if a fish didn't look "normal," it usually didn't make it to the cooler. Lumps, wings, stingers, skin like salamanders, spines or whiskers like porcupines disqualified a fish, Murray says. So did puffing up and grunting.

But one taste of triggerfish and a bite of bluefish convinced fishermen that beauty was in the eye of the beholder.

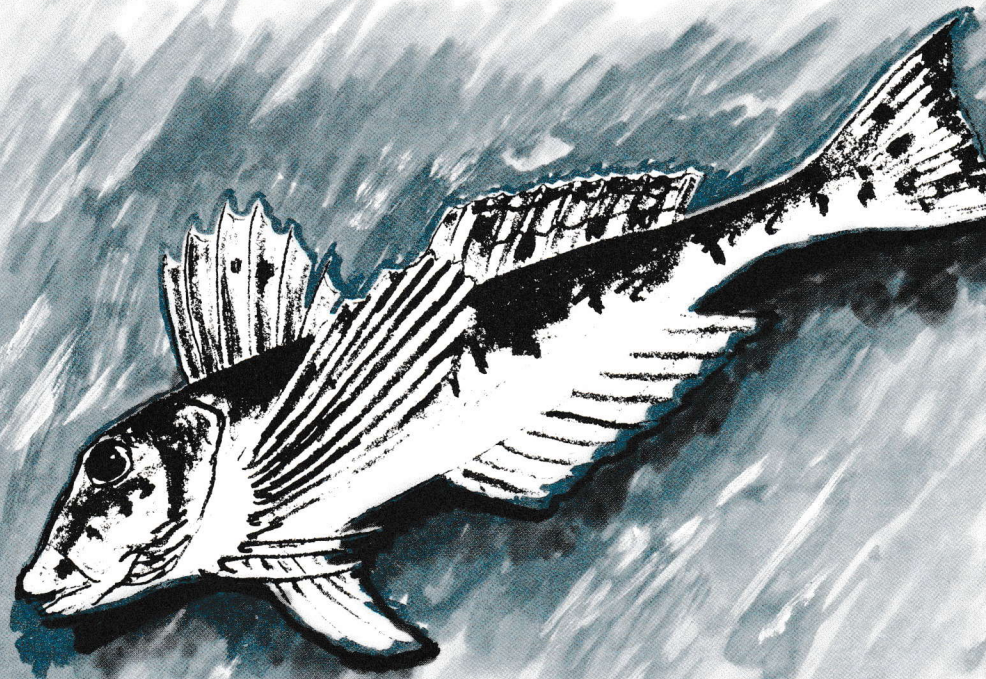
To dispel the myths and the bad reputations, the team tapped the anglers'

grapevine—pier and marina owners, outdoor editors, tournament leaders and opinion makers. And they developed a set of brochures and posters showing how to catch, clean and cook species like sea robin, mullet, pigfish and ladyfish. A tournament director's guide, a recipe booklet and a slide program reached other audiences.

After four years, Murray is pleased with Sea Grant's efforts. A survey showed more than 90 percent of the people who received the materials said they would keep the less popular fish on their next fishing trip.

"We won't turn a blue marlin fisherman into a skate fisherman," Murray says. "But we just want to increase the demand for and the use of some of the underutilized species." ■

*For more information on these Sea Grant publications, see The Back Page.*





# Fish from the farm

By Nancy Davis

Americans are on a feeding frenzy.

When it comes to seafood, we're cleaning our plates and begging for more.

But as our appetites for fish and shellfish grow more voracious, our harvest is remaining about the same.

Does that mean we're destined to import even more seafood than we do now?

Maybe not.

Last year, farm-raised fish and shellfish accounted for 14 percent of our seafood supply. And some experts predict that by the turn of the century, fish farmers will supply 25 percent of the world supply.

Ron Hodson, Sea Grant's associate director and head of the program's aquaculture research, agrees that everything points to aquaculture playing a big part in meeting future demand for seafood.

He says, "The demand for seafood is one of the major driving forces behind the interest in aquaculture in the United States."

The aquaculture industry is already supplying us with about 400 million pounds of seafood a year, Hodson says. That includes an estimated 25 million pounds of salmon, 280 million pounds of catfish, 40 percent of our oysters and nearly 100 percent of our freshwater trout.

Other species he believes show promise are shrimp, redfish, clams and the hybrid striped bass.

In North Carolina, fish farmers have already established a flourishing industry with mountain trout and catfish.

In a survey of the industry here, North Carolina State University zoologist Jim Rice found that over 230 growers were producing a wide variety of aquaculture products.

But even for all the talk of aquaculture saving us from imports, Hodson tempers his enthusiasm with concern over some obstacles that must be overcome.

Aquaculture has met with some opposition, he says.

Frequently, fish farmers face legal and regulatory constraints. Often the laws were intended to regulate wild catches, but end up inhibiting the sale of farm-raised species.

And in one state, opposition by fish-

ermen has led to a moratorium on aquaculture.

The reason?

Some fishermen fear that farm-raised fish and shellfish will compete with their catches.

In Alaska, opposition from fishermen reached such proportions that this spring the state banned aquaculture for two years.

The controversy arose over salmon net-pen culture. Salmon fishermen were afraid that the commercial culture of salmon would lead to an over-supply and a resulting drop in the prices they receive for their harvest of wild fish.

Ironically, U.S. researchers developed much of the technology for salmon culture.

But because of legal constraints that have hampered the industry here, cultured salmon from Norway, Canada, the United Kingdom and Japan dominate our market.

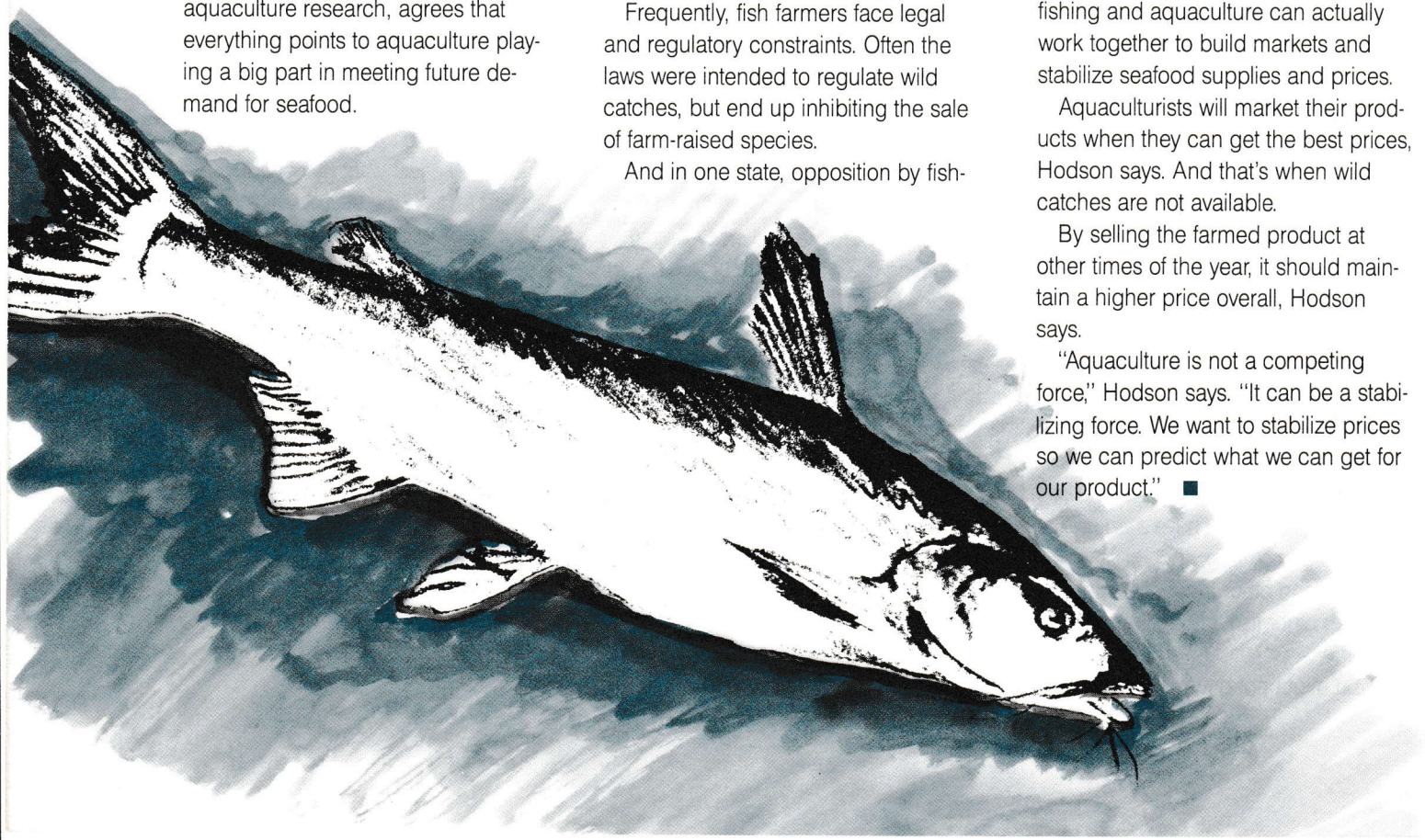
The result is that the Alaskan fishermen are already competing with fish farmers, Hodson says. But the competition is coming from foreign imports of farm-raised salmon.

Hodson believes that commercial fishing and aquaculture can actually work together to build markets and stabilize seafood supplies and prices.

Aquaculturists will market their products when they can get the best prices, Hodson says. And that's when wild catches are not available.

By selling the farmed product at other times of the year, it should maintain a higher price overall, Hodson says.

"Aquaculture is not a competing force," Hodson says. "It can be a stabilizing force. We want to stabilize prices so we can predict what we can get for our product." ■





# 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.

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**The staff of *Coastwatch* appreciates your continued support.**



riches of another kind there.

Geologists Stan Riggs, Scott Snyder and Al Hine have been searching the bottomlands called "hardgrounds" for phosphate deposits and other minerals.

Phosphates, shell and quartz gravels, gold and uranium are important resource minerals for the United States. But the extent and potential value of these minerals, especially phosphate, on the continental shelf has been unknown.

Recently the Sea Grant team discovered eight units of phosphate reserves in Onslow Bay that they estimate hold 20,752.5 million tons of phosphate concentrate. The approximate worth is \$1 billion, says Sea Grant Director B.J. Copeland.

Riggs and Snyder mapped the hardgrounds and determined their depositional history. And the U.S. Minerals Management Service evaluated the deposit's economic potential and approved of mining it if necessary.

Until then, fishermen can reach these underwater fish havens with the help of a map devised by Sea Grant's researchers. The large, four-color map charts

low, medium- and high-relief reefs on a Loran grid. And it depicts the small plants and animals that attract gamefish such as snapper, grouper and sea bass.

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



**T**ry out a new taste in fish by catching Sea Grant's 16 non-traditional fish brochures. These colorful pamphlets feature underutilized species from Gulf and South Atlantic waters. And they describe how to catch, clean and prepare the fish. Recipes are also included.

Series 1 includes: UNC-SG-85-09 to UNC-SG-85-18 (amberjack, sea robin, skates and rays, triggerfish, panfish, jack crevalle, shark, sheepshead, bonito and croaker); Series 2 includes: UNC-SG-86-13 to UNC-SG-86-18 (black drum, bluefish, ladyfish, mullet, pigfish and sea catfish). Each series costs \$1.

*Recipes with a New Catch* is a 40-page cookbook chocked full of delicious recipes for cooking underutilized fish. Shark creole, buttermilk-fried croaker fillets and grilled triggerfish with wine sauce are just three of the 56 dishes included. For a copy, send \$2 to Sea Grant. Ask for UNC-SG-86-06.

For a new twist in fishing tournaments, directors may want to scan *Using Nontraditional Fish in Saltwater Sportfishing Tournaments*. The 20-page booklet tells how amberjack and other species can be used for tournaments and demonstrates some of the alternatives available to organizers. For a free copy, write Sea Grant, and ask for UNC-SG-86-05.

**F**or the fifth straight year, Americans ate more fish and shellfish than ever before. On average, we consumed 15.4 pounds of seafood in 1987—4.8 percent more than in 1986. In the past five years, U.S. seafood consumption has increased 25 percent. By comparison, poultry consumption was up 23 percent for the same period. Pork consumption only grew by

.5 percent, and beef and veal consumption declined 1.8 percent.



**B**etween North Carolina's mainland and the Outer Banks lies one of the nation's largest estuarine systems. Once it teemed with healthy grasses, young fish and other types of marine life.

Now that productivity is threatened—so much so that the Albemarle-Pamlico sound system was the first officially designated "Estuary of National Concern."

To combat declining fish populations, pollution and other symptoms, the N.C. Department of Natural Resources and Community Development and the Environmental Protection Agency began a five-year Albemarle-Pamlico Estuarine Study.

Sea Grant recently received \$230,079 from EPA to fund four projects in the second year of the study.

Researchers R.W. Skaggs and J.W. Gilliam of N.C. State University will be investigating land use in the watershed and how it affects estuarine water quality.

NCSU oceanographer Len Pietrafesa plans to study the links between the Albemarle and the Pamlico and other bodies of water that surround them for a better understanding of the estuary's productivity and water quality.

Ed Noga of NCSU's School of Veterinary Science is taking a look at a disease that's caused a four-year decline of blue crab in the Albemarle-Pamlico and its relation to the environment.

And Walter Clark, Sea Grant's coastal law specialist, will develop a pilot program, using a county surrounding the Albemarle-Pamlico estuary, that will help in managing multiple uses of public trust waters.

**A**PES announced its third Call for Proposals on Nov. 18. It is seeking research and public involvement projects that will lead to an effective conservation management plan for the

*Continued on next page*



Albemarle-Pamlico region.

Robert E. Holman expects funds from NRCD and EPA to total about \$1.2 million for the third year of the study.

Deadline for proposals is 5 p.m., Jan. 13, 1989. No proposals will be accepted after this date.

For more information, write Holman at NRCD/Albemarle-Pamlico Estuarine Study, 512 N. Salisbury Street, P.O. Box 27687, Raleigh, N.C. 27611.

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*Coastwatch* is a free newsletter. If you'd like to be added to the mailing list, fill out this form and send it to Sea Grant, Box 8605, NCSU, Raleigh, N.C. 27695-8605.

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I am in the following line of work:

- Boatbuilding/repair
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- Commercial fishing
- Educator
- Farming
- Homemaker
- Lawyer
- Marina operator
- Marine recreation
- Mass media
- Seafood processing/marketing
- State government
- University professor/researcher
- Other \_\_\_\_\_

Coastal property owner:  yes  no    Boat owner  yes  no

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