

COAST WATCH

Seafood Hooks America

**New respect
at restaurants
and supermarkets**

**Health food
for the heart**

**Advice from
a seafood expert**



Waitress from Morehead City's Charter Restaurant is all smiles over seafood

(Photo by Scott Taylor)

SEAFOOD

From coast to coast, more Americans are filling their plates with the fisherman's catch

By Kathy Hart

Photo by Kathy Hart



Rick Madden of Wellspring Grocery promotes his product

Like Cajun food, VCRs and BMWs, seafood is "in."

And it should be. Everyone from the American Heart Association to the local grocery store is promoting the ocean's bounty.

The public is bombarded with information about seafood—how good it tastes, how nutritional it is, how much variety it offers and how easy it is to prepare and cook.

The results?

Salmon steaks, orange roughy fillets and grouper nuggets increasingly fill the plates of young urban professionals. Per capita consumption in the United States increased from 13.6 pounds in 1984 to 14.5 pounds in 1986.

Seafood retailers say this is just the beginning. Rural, central and mid-western U.S. markets are yet to be fully developed.

But fish and shellfish may need the promotional boost.

Not long ago, most Americans shunned

seafood, particularly for cooking at home. They remembered their mothers frying flounder or perch to a crisp, then burning incense to mask the odor.

It was enough to leave a bad taste in anybody's mouth, especially when the fish was less than fresh.

But the seafood business is changing.

From the fisherman to the retailer, fish and shellfish receive better treatment. More care and better handling have improved the condition in which the fisherman's catch arrives at retailers and restaurants. Air freighting allows today's catch of West Coast salmon to be served on East Coast tables tomorrow.

Once the product is improved, the key is getting the consumer to taste the difference.

The public will sample the catch if it comes from a restaurant kitchen. Surveys show that about 75 percent of the seafood eaten in America today is consumed in restaurants.

From the independent operation to the large chain, restaurants are including more seafood on the menu. And they are turning away from fried fish, french fries and coleslaw, says Carol Stigelman, seafood development specialist with the N.C. Division of Marine Fisheries.

Diners are tempted by barbecued shrimp, blackened redfish, grilled swordfish steaks and steamed king crab fresh from Alaska.

Many supermarkets bank on the consumer's growing hunger for fish and shellfish. Surveys show that 17 percent of the nation's retail food stores have installed seafood service counters.

Clearly, seafood has moved out of the meat counter. Supermarkets that are serious about seafood sell it at attractive full-service counters.

Larry Poos, seafood specialist with Harris Teeter, says his company is experimenting with an updated look for its seafood counters. In a test store, retailers are fashioning the counter into an undersea world, placing the commodity on shaved ice around an ice sculpture.

The payoff: a doubling of seafood sales.

Who's Eating Seafood?

Female over 35. Has college education. Lives in Northeast. Income of \$34,000. Seeks a tasteful relationship. Respondents should have clear eyes and firm bodies. For a sizzling evening, write Box.....

What's the catch?

Flounder, grouper, sole or tilefish.

The woman in this fictitious ad is angling for dinner. And she represents the typical seafood consumer in America.

As grocery stores and restaurants make more effort to promote fish and shellfish, they want to know who eats the catch and what species the public likes the best.

The National Marine Fisheries Service and the Food Marketing Institute surveyed Americans to find some answers.

The NMFS survey, completed in 1984, showed that the typical seafood consumer:

* possesses a high school education or above,

* resides along the East coast,

* Lives in a metropolitan area of 500,000 or more people,

* earns a yearly income between \$25,000 and \$35,000, and

* is white non-Hispanic.

In a survey of supermarket seafood shoppers, the Food Marketing Institute found that 40 percent of the buyers earn over \$35,000 a year, and 52 percent are between the ages of 25 and 44.

What seafood is America's favorite?

Shrimp.

It fills more plates than any other fish or shellfish. Second choice is fresh and frozen white meat fillets, such as scrod, cod, flounder and haddock.

Consumers do favor a few red- or pink-meat fish, such a salmon and mackerel. And cheaper, surimi-based products are becoming palate pleasers.

"Fifty percent of the sale is in the presentation," says Sea Grant researcher Tyre Lanier. "The seafood can't drip or smell. It has to look good."

Education is another key factor in selling the public on fish and shellfish, says Joyce Taylor, Sea Grant's seafood education specialist.

"Most consumers aren't comfortable with seafood," she says. "They don't know how to buy it, and they don't know what to do with it when they get it home."

To help shoppers, Taylor has written several seafood consumer guides (A North Carolina seafood seasonality poster, UNC-SG-84-04; Hooked on Fresh Fish, UNC-SG-85-08; and Dressing Finfish, UNC-SG-86-10). And she has more planned.

But Taylor can't educate the public alone. The person behind the service counter has to know his seafood.

Rick Madden buys and markets the products he stocks in his seafood counter in Durham's Wellspring Grocery, a store specializing in natural food.

"I find that my customers want to add more seafood to their menus, but they know next to nothing about it," he says.

So, Madden supplies the missing ingredient—information.

Drawing on the fish and shellfish reference books and cookbooks behind the counter, Madden tells people about the attributes

of golden tilefish, gray trout, orange roughy, and king mackerel. And he provides recipes to go along with the purchase.

"I tell people how fast and easy it is to prepare seafood. On the average it takes about 10 minutes to cook, and it should be the last thing you cook before you sit down at the table," he says.

"It's not like beef or poultry. When you buy different cuts of these meats, you're still getting beef and poultry. But every fish is different, and there are so many more things you can do with fish."

Photo by Kathy Hart



Grocers are improving display counters





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EART FOOD

By Nancy Davis

Old wisdom held that seafood was brain food. Then nutritionists discovered that it beat beef as a mainstay in the American diet. Now doctors tell us that a good thing is even better.

Seafood is heart food.

So says *The New England Journal of Medicine* in its May 9, 1985, edition.

New evidence shows a link between seafood consumption and a low death rate from heart disease. For years, doctors have known that seafood is low in fat, calories and cholesterol and high in protein and minerals. But they warned against seafoods with a high fat content such as salmon, tuna and mackerel.

Now they say these fish are not only safe to eat, they're urging us to replace meat and poultry with fish and shellfish at least twice a week.

The report made the front pages of the country's major newspapers, and television network news covered the story. Eat fish to your heart's content was the message, and the nation's seafood lovers took the advice to heart.

In 1984, per capita consumption of seafood in America was 13.6 pounds. By 1985, it had risen to 14.5 pounds.

Oils in the seafoods contain fatty acids that can lower harmful fats and cholesterol in the blood and reduce blood clots. The ultimate benefit may be a lower risk of heart disease and stroke, says Sea Grant's Joyce Taylor.

Doctors had suspected the relationship between seafood consumption and coronary health. In societies such as the Greenland Eskimos, in which seafood composed most of the diet, heart attacks were virtually unknown.

With this in mind, a group of doctors set out to find the link. They studied 852 middle-age men without heart disease in the Netherlands. The researchers collected dietary information on their subjects in 1960 and studied them for 20 years. In the two decades, 78 men died from heart disease.

The clincher: "Mortality from coronary heart disease was more than 50 percent lower among those who consumed at least 30 grams of fish per day than among those who did not eat fish," the doctors say in the *Journal* article.

"We conclude that the consumption of as little as one or two fish dishes per week may be of preventive value in relation to coronary heart disease."

The study discovered the unique character of fats in seafoods, says Taylor. Fish and shellfish contain high levels of polyunsaturated fats, those capable of lowering cholesterol levels. Saturated fats found in red meat increase cholesterol levels in the blood.

For example, 4 ounces of boiled cod contain .1 to .2 grams of saturated fat. The same amount of ground beef contains about 11 grams.

Studies show that for every 1 percent reduction in cholesterol level, we get a 2 percent reduction in the risk of heart attack, Taylor says.

Oils made from corn, cottonseed, safflower, sesame seed, soybean and sunflower also are high in polyunsaturated fats. But seafoods contain a special class of the fats, called omega-3 fatty acids.

The omega-3's help to reduce the chance of heart attack by reducing fatty deposits that collect on artery walls. Omega-3's occur only in the oils of fish or marine animals. Oily, fatty fish are the richest sources. Of course, eating fattier fish may mean consuming a few extra calories.

But Taylor says, "Even the fattiest fish contain less fat than red meat."

With the new evidence, fish oils are touted as a cure-all for everything from high blood pressure to migraine headaches.

Taylor says, "I get scared when people say, 'If I eat fish twice a week, I'm not going to have a heart attack.'"

Smokers, for example, still run a greater risk of heart attack.

The best approach is to improve your diet, increase exercise and stop smoking. The benefit of fish oil comes from substituting it for the foods that promote heart disease, Taylor says.

JOYCE TAYLOR

Takes seafood out of the deep fat

By Nancy Davis

Ounce for ounce, in the quest for good health, seafood beats red meat hands down.

But sprinkled with salt, dipped in batter, fried in deep fat, the sea's bounty loses its edge.

You've just turned a healthy meal into one full of fat and calories, says Joyce Taylor, Sea Grant's seafood education specialist.

Taylor's message: Seafood can be a delight to the palate without becoming a disaster to good health.

All you have to do is change the way you cook it. You're bound to make a few mistakes at first, so Taylor has some tips that may help.

"If it smells fishy, avoid it. Anyway you cook it is OK, except for frying. And don't overcook it."

And rule one is that seafood must be fresh. A fish that isn't fresh won't taste good, no matter what you do to it.

"Have you found a way to cook fish to make it not taste like fish?" someone asked her once in a workshop.

"Have you found a way to cook turkey so that it doesn't taste like turkey?" Taylor responded. Most people who don't like the taste of fish have never had fresh fish, she says.

Use your nose to determine freshness, Taylor says. Fish and shellfish should smell as though they were just pulled from the water. A "fishy" odor is a sign that seafood is old.

After you've chosen a fresh product, don't ruin it when you cook it, Taylor says.

The most common cooking mistakes? Oversalting, breading or battering, frying in oil and overcooking.

According to Taylor's rules of seafood cookery, deep frying is culinary blasphemy and no way to treat a fish.

"I meet a lot of people who tell me they're on a diet, so they eat a lot of fish. When I ask them how they prepare it, they say they roll it in cornmeal and fry it up. Now that's not a low-calorie food," Taylor says.

With the drop of a fish into deep fat, you can add as much as 12 percent more fat to the fish, Taylor says. And the extra fat means more calories and cholesterol.

Instead of deep-frying or pan-frying, Taylor recommends poaching, steaming, baking, broiling, barbecuing, stir-frying or oven-frying.

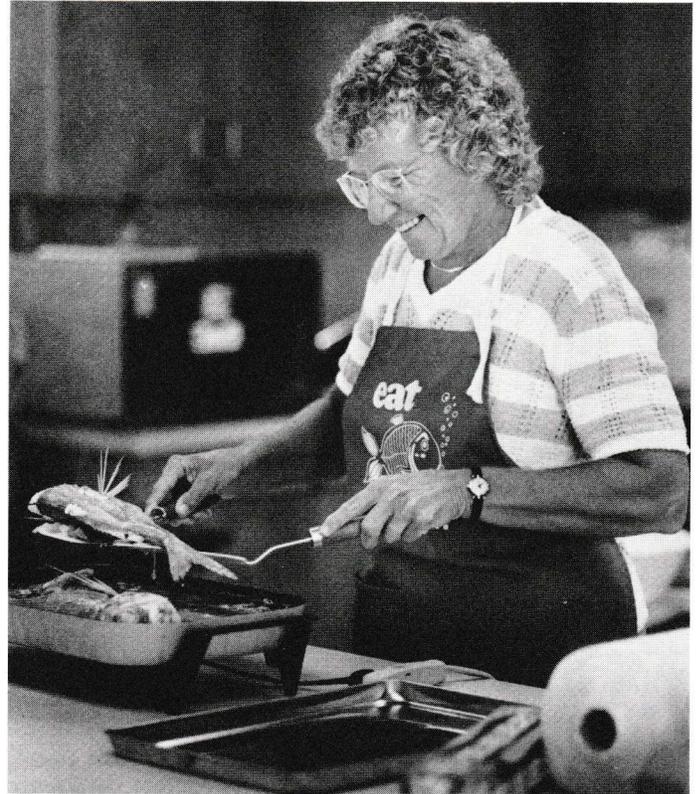
And instead of topping fish with a cream or butter sauce, try herbs and spices. They won't disturb the delicate taste of the seafood.

Avoid oils that are animal fats, Taylor says. That includes butter.

"There's nothing better together than butter and seafoods," says Taylor. But she recommends a low-calorie, polyunsaturated margarine or vegetable oil.

Oversalting seafood is another common cooking mistake.

Photo from The Charlotte Observer



Usually you can do without it, Taylor says.

"First I cut the amount of salt in a recipe in half, and nobody noticed it. So I cut it in half again, and still nobody noticed it," she says.

As alternatives to salt, Taylor uses herbs and spices and white wine as a broth. A celery sprig with a leaf attached will release a salty flavor.

The worst offense committed against seafood is overcooking.

Fish cooks quickly, and overcooked fish becomes dried out. Taylor advises checking the fish frequently.

The fish is done the instant it flakes easily with a fork or when it turns opaque. Cooking time varies according to the temperature and method of cooking.

Side dishes need improvement, too. Baked corn bread is lower in fats and calories than hush puppies fried in deep fat. You can use low-calorie mayonnaise or just vinegar to make slaw. Instead of french fries, try a baked potato or wild rice.

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.



UNC Sea Grant's monthly newsletter *Coastwatch* was awarded a silver medal for excellence in writing, editing, design, photography and printing.

Coastwatch was among 60 entries nationwide in the competition sponsored by the Council for the Advancement and Support of Education.

Judges honored the newsletter for its in-depth coverage of coastal topics. *Coastwatch* writers explored the geologic history of the state's coastal plain. They updated their readers on new seafood products. And, they reported the findings of a Sea Grant research project on clam harvesting methods.

Other Sea Grant publications were honored in a technical art competition sponsored by the Carolina Chapter of the Society for Technical Communication. They included: 1) *Amberjack*, a poster promoting the underutilized fish—award of excellence, 2) *Sea Grant in North Carolina 1983-1984*, an annual report cover—award of excellence, 3) *Hooked on Fresh Fish and Shellfish*, a consumer's guide to seafood—award of merit, and 4) *Sheepshead*, a brochure promoting another underutilized fish—award of merit.

Shrimp is America's favorite seafood. But how can you fill your freezer with this tasty crustacean and not empty your pockets?

Catch your own.

Sea Grant's new booklet, *A Guide to Recreational Shrimping*, will tell you how. Written by advisory agent

Wayne Wescott, the booklet covers everything from regulations to culling the catch.

Using step-by-step descriptions and diagrams, learn to build and outfit trawl doors, to rig a trawl and to construct a mast. Wescott describes how to spot problems with your nets, lines and doors. And he reveals what times of the day are best for trawling.

Wescott provides tips backed by years of his own shrimping experience and that of other recreational shrimpers. For instance, he takes the hassle out of figuring door sizes, tickler chain lengths and towing times.

For a copy of this 36-page illustrated booklet, write Sea Grant. Ask for UNC-SG-86-07. The cost is \$4.



Take a cup of tradition. Add some of coastal Carolina's most colorful personalities. Mix in their favorite recipes. Bake for a few years, and you have a cookbook called *Coastal Carolina Cooking*.

Coastal Carolina Cooking, which was published by the University of North Carolina Press in Chapel Hill, was written by Sea Grant writers Nancy Davis and Kathy Hart.

In its pages, you will meet 34 cooks from Currituck County to Brunswick County and everywhere in between. They shared the dishes you won't find on restaurant menus or in the pages of fancy cookbooks. The recipes start with the basics and almost never call for ready-made ingredients.

Taste the goodness of clam chowder with cornmeal dumplings, flounder stuffed with crab dressing, fried okra and blueberry dumplings.

And meet Frances Drane Inglis of Edenton, Letha Henderson of Hubert and Mitchell Morris of Smyrna. They shared not only their recipes, but the family history and tradition that surrounded food preparation and eating.

For a copy of *Coastal Carolina Cooking*, check your local bookstore or write the UNC Press, P.O. Box 2288,

Chapel Hill, N.C. 27514. Prices are \$14.95 for the hardback and \$8.95 for the paperback. Add \$1.50 for postage for the first copy and 75 cents for each additional copy. North Carolinians must add 3 percent sales tax. Mail orders must be prepaid by check, VISA or Mastercard.



The winds have reached 50 mph and the water has risen 2 feet above its norm. Your \$60,000 boat thrashes in its slip like a wild horse in a stall.

The wind unleashes, clocking 100 mph. The water rises. But your boat lines are tied too tightly, and the wild horse wants to cut loose.

Instead, the taut reins pull the dock pilings over. Your boat ricochets off the boats nearby. Before long your boat and several others have huge gashes in their sides. They sink.

Whether you own a catamaran or a 60-foot yacht, a hurricane can destroy your boat. But a few simple steps can safeguard your vessel if you meet a storm eye-to-eye.

Sea Grant has a new poster to help recreational boat owners prepare for a hurricane. It offers tips for checking your gear, removing equipment, securing the boat and more. The poster, which was developed by Sea Grant marine agent Jim Bahen, has a checklist for small-boat owners and for sailboat and large-boat owners.

Hang a copy of this graphic 17-by-24 inch poster in your garage or marina. It could make a difference the next time a hurricane strikes.

Single copies are free. To obtain, write UNC Sea Grant and ask for UNC-SG-86-08.

Aquatic weeds can choke a pond. Each year, the nuisance vegetation takes over more of the state's ponds and reservoirs. Thick mats of vegetation obstruct the paths of fishermen, boaters and swimmers. Withdrawing

Continued on next page

water for irrigation, drinking or industrial use is hampered by pipes clogged with the weeds.

The solution?

Associate Sea Grant Director Ron Hodson believes the answer may be a fish that will eat the vegetation. And he's written a Blueprint, *Using Grass Carp to Control Aquatic Weed Vegetation*, that outlines the use of carp to reduce vegetation in ponds.

Hodson says grass carp eat a variety of aquatic plants, including hydrilla, widgeon grass, coontail and duckweed. In some cases, there is a noticeable reduction in vegetation within four months.

In the Blueprint, Hodson describes the biology of the grass carp and its effectiveness against some aquatic weeds. He recommends stocking sizes and rates and offers tips for getting started and for obtaining the necessary permits.

For a copy of the four-page publication, write Sea Grant. Ask for UNC-SG-BP-86-1.



Every summer there's a mystery at the beach. The clues are hidden in the surf. And if you don't watch out, they may get under your skin.

The mystery begins when you dive in the ocean. Tiny needles seem to make an attack. Pink spots appear on your chest and belly. Then the itching begins.

The culprits?

Microscopic blue crab larvae.

These larvae, which look like tiny shrimp, have two sharp spines on their heads. When your hand or swimsuit presses against them, the spines prick your skin.

"It feels like stinging nettles almost, but it's not," says Lundie Spence, Sea Grant's education specialist. It's more like a small pinprick; then salt gets into it, too.

The larvae concentrate in the Carolina surf during June and July, Spence says.

Early in the year, blue crabs lay eggs nearshore and in the inlets. The eggs mature into larvae that migrate inshore in the summer.

If you have allergies or sensitive skin, Spence suggests avoiding the water when the larvae are concentrated.

For other beachgoers, she recommends rinsing after swimming and applying anti-sting cream if a rash appears. Over-the-counter creams with cortizone are best.

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