



COAST WATCH



For seafood,
it's quality that counts

A fresh

Seafood Quality

Photo by Scott Taylor



Skip Kemp preparing a fresh catch

When the total on the cash register reads more for tuna or mackerel than it does for fillet mignon, you want the best.

That means a fish that looks good, smells good and above all tastes good.

You don't buy marginally fresh fish anymore.

You've read the magazines, food columns and cookbooks, and you've learned to sniff the catch and check behind the gills.

You, the almighty consumer, are demanding, not asking, for the same quality and freshness from your oysters and halibut as you do from your chicken, pork and beef.

Seafood distributors, retailers and restaurateurs are getting the message. And the government is listening too.

Congress has allocated \$400,000 to the National Marine Fisheries Service to explore options for fishery production inspection.

Unlike beef, pork and poultry, seafood is not continuously inspected by U.S. Department of Agriculture Food and Drug officials.

But Steve Otwell, Florida Sea Grant seafood specialist, says that doesn't mean seafood evades government scrutiny.

Seafood processors and retailers are subject to periodic inspection by county, state and federal agencies, he says.

And the National Marine Fisheries Service does conduct a voluntary inspection program. Processors pay to participate, and they receive a product grade.

Generally, Clark Calloway of Clark's Seafood Co. Inc. in Beaufort believes the quality of seafood has improved during the last five years. Retailers and distributors are demanding better quality fish and shellfish from their suppliers—fishermen and fish houses.

Calloway prefers to buy fish and shellfish that were iced immediately after being hauled from the water. He knows that an hour off ice will shorten the shelf life of any fish by days.

But fishermen don't always take the extra time or go to the expense to carry ice.

The reason?

Fish houses can't always pay them for their trouble.

Frequently market supplies, demands and prices prevent buyers from paying extra.

But some fish houses and processors add in a few extra cents for well-handled, properly iced seafood. And with everyone becoming more quality conscious, it may be a trend that is growing.

But quality goes beyond fishermen. Processors and distributors must take some responsibility, too.

Calloway says with the use of better and more refrigeration in

awareness

By Kathy Hart

processing plants and delivery trucks, suppliers are doing a better job of keeping the catch cool.

Even air transportation figures into the quality quotient.

Consumers are craving salmon from Alaska, crawfish from Louisiana and mussels from Maine.

Consequently, Calloway knows the airline schedules from Miami and Boston to Raleigh as well as he knows today's market price for shrimp and swordfish.

Air freighting allows distributors to transport fresh seafood across country in hours. The seafood is packed with gel refrigerants to ensure its freshness and quality.

No matter how seafood arrives at the grocery store or fish market, it's up to the retailer to be the final quality control checkpoint in seafood's path to the consumer.

"I check the gills, eyes and run my thumb up the scales of the fish," says Stephen Taylor of Jack's Seafood Market in Raleigh. "If the fish is gutted, I look at the blood in the body cavity to see how dried and dark it is.

"I send it back if it doesn't look fresh," Taylor says.

Gary Bass of Fishmonger's Seafood Market in Durham says he has rejected shipments, too. But to eliminate the problems of unacceptable products, Bass buys directly from fishermen and fish houses.

No middle-man distributors for him.

Bass sends a truck to coastal North Carolina once a week to pick up fish and shellfish. He says the extra effort is worth it.

"If I know that a fisherman has taken care of his catch, I have no trouble holding it for as long as a week before it's sold," Bass says. "Good fish that is properly refrigerated will hold a week."

Skip Kemp, Sea Grant's seafood marketing specialist, agrees. But he cautions that seafood must be kept between 30° F and 32° F.

And he suggests that retailers date their product. Then they'll know when their seafood is too old for sale.

At Jack's Seafood Market, Taylor keeps his tuna, mackerel and dolphin on ice.

He packs ice along the bottom of a display case that he keeps well drained.

Filletts are placed on perforated trays and covered with plastic wrap to keep them moist. Whole fish are laid directly on the ice bed.

By taking good care of his fish and shellfish, Taylor lets his customers know his commitment to quality and keeps them coming back.

"People are a lot smarter about buying seafood now," Taylor says. "They're looking for better quality. Prices are higher, and they want to get the most for their money."

Photo by Kathy Hart



Consumers are asking more questions about the catch

Follow your nose

When it comes to choosing seafood, it pays to be nosy. "If you can't do anything else when you're buying fish and shellfish, smell it," says Joyce Taylor, Sea Grant's seafood education specialist. "Your nose is always the best indicator of freshness."

If a retailer is hesitant to let you sniff his product, you should be hesitant to buy it, Taylor says.

"My philosophy is, 'If they don't want you to smell it, there's a reason for that, and you should go somewhere else for your seafood.'"

"In any ingredient, freshness is the most important thing," Taylor says. "You certainly wouldn't buy a steak with an off-color to it."

Taylor recommends buying seafood the day you plan to use it. And don't just toss it in the refrigerator. Keep it on ice.

If it's going to be several days before you cook it, Taylor recommends freezing to maintain quality.

To help consumers choose seafood, Taylor has written a brochure, "Hooked on Fresh Fish and Shellfish." The following tips are from that publication.

Fresh fish should have:

- eyes that are bright, clear and protruding. As a fish deteriorates, the eyes become cloudy, pink and sunken.
- gills that are bright red or pink and free from slime. Avoid fish with gills that are dull pink, gray, brown or green.
- flesh that is firm and elastic and springs back when pressed gently. As fish ages, the flesh becomes soft and slimy and slips away from the bone. The flesh of fillets should be firm and elastic and have a translucent, moist look.
- skin that is shiny and not faded, with scales that adhere tightly.
- an intestinal cavity that is pink with a bright red blood streak. The streak should not be dark or brown.
- an odor that is fresh and mild. Fish fresh from the water have no "fishy" smell.

Fresh shrimp have

- a mild odor and firm meat.

Cooked shrimp have

- red shells and meat with a red tint. They should have no disagreeable odor.

Live crabs and lobsters

- show movement of the legs. The tail of a lobster should curl under the body and not hang down when the lobster is picked up.

Cooked crabs and lobsters

- should have a bright red color and no disagreeable odor.

Clams and oysters in the shell

- should be alive. Shells should be tightly closed or should close tightly when tapped.

Shucked oysters

- should be plump with a natural creamy color and clear or slightly opalescent liquid. They should not contain more than 10 percent liquid, and should have a mild odor.

Fresh scallops

- have a sweet odor and are free of excess liquid. The meat of bay and calico scallops is typically creamy white but may be light tan or slightly pink. Sea scallop meat is typically creamy white but may be slightly orange or pink.

Frozen seafood

- should be solidly frozen with no discoloration or drying (freezer burn) on the flesh. It should be wrapped with moisture-proof and vapor-proof material that fits closely and is undamaged.

For more information on buying fresh seafood, write Sea Grant for a free copy of "Hooked on Fresh Fish and Shellfish." Ask for UNC-SG-85-08.

Lessons in handling

By Nancy Davis

A seafood dealer pulled a glistening bluefish from an ice-filled box and raised it high in the air.

"You can't find any better quality than this," he said.

He was right.

Earlier that day, a fisherman had caught several hundred pounds of bluefish off the coast of Cape Hatteras. As soon as the fish were netted, they were iced down in the boat's hold. Within a few hours, the fish were delivered to a dealer where they were rinsed and packed in fresh ice.

The next day, bluefish was featured on the menu of a Morehead City restaurant. And more than likely, it tasted as though it had just been pulled from the water.

"That fish had all the characteristics of what I think is quality," says David Green, Sea Grant's seafood extension specialist.

It was kept at the proper temperature, rushed to its destination and handled properly on the way, he says.

Such freshness is no accident. From the time seafood skims the water until it reaches your table, every step counts.

So before you take a bite, stop and think. Why does that fish or shrimp look, smell and taste the way it does?

Green and Sea Grant food scientist Frank Thomas say that seafood quality is determined by a variety of factors. Their story begins while the fish and shellfish are still in the water.

BIOLOGY. Even before seafood is harvested its quality has already been affected by biological factors.

At certain times of the year, a particular seafood may not be at its best, Green says. During spawning, for example, fish and shellfish may have watery, soft flesh that contains less fat and protein than at other times of the year.

The species size, sex, maturity and habitat also can affect its quality.

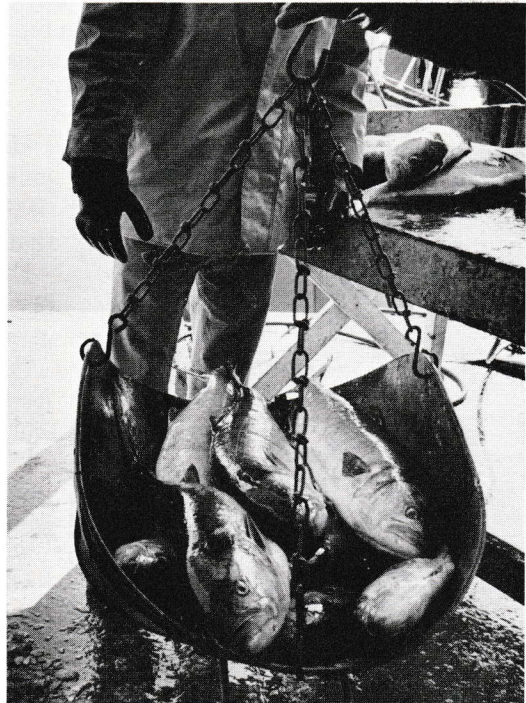


Photo by Scott Taylor

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Lessons in handling *continued*

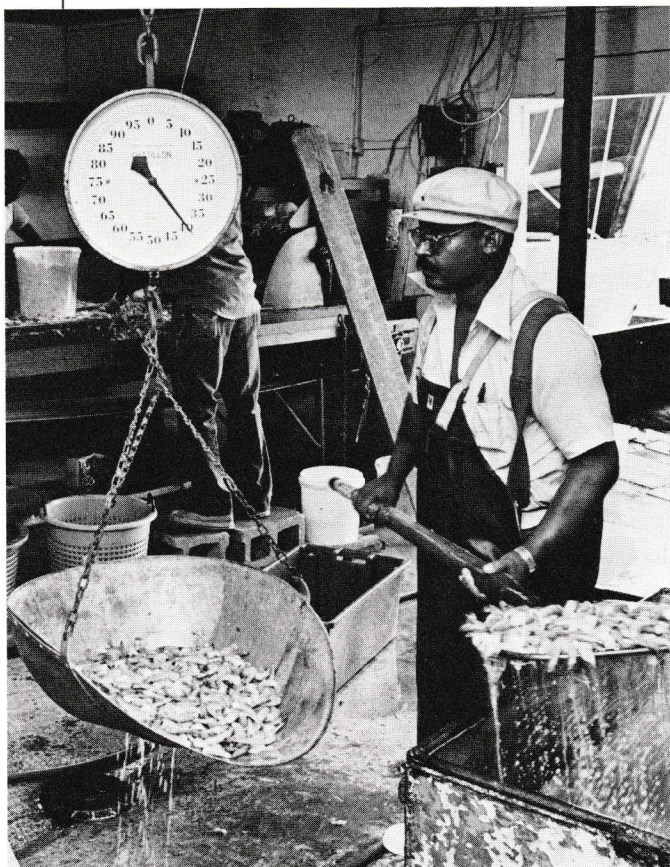
HARVESTING METHODS. A quality control program begins with the fisherman, Thomas says.

Towing nets too long produces catches that are too large. As a result, the fish die before they're landed. The fish's flesh may be punctured and their bodies de-scaled.

"When dead, badly bruised or exhausted fish are landed, they will have a relatively short period of time in which they are considered fresh or in top quality," Green says.

Thomas adds, "You're degrading the product even before you bring it on board."

Photo by Scott Taylor



HANDLING. Seafood is at its freshest the moment it is pulled from the water, Green says. After that, it's up to the fisherman, the dealer, the processor and the retailer to see that the seafood retains as much of that quality as possible.

Exposure to sun, wind and high temperatures for even brief periods shortens the time in which seafoods remain in good quality.

Careless handling can shorten seafood's shelf life by days. And once the fish has begun to deteriorate, nothing you do will reverse that process.

"Seafood has a built-in memory," Thomas says. "Every time it's mishandled, it remembers. All these things are cumulative."

COMPOSITION. All foods have to be handled carefully, but seafoods require extra attention because of the delicate nature of the meat, Thomas says.

Notice how fish flakes when it's cooked. Fish lack the strong connective tissues found in the firmer flesh of red meats. As a result, fish are more susceptible to the rigors of handling than red meats.

For beef, a little natural deterioration is desirable, Green says, because it help tenderize the meat. But deterioration in seafoods usually produces an off-flavor.

TEMPERATURE. The special proteins in seafoods make them more susceptible to high temperatures than red meats, Green says.

For example, at a constant 32° F, some lean fish can remain fresh for up to 14 days. But raise the temperature one degree to 33° F, and the shelf life drops to only 11 days.

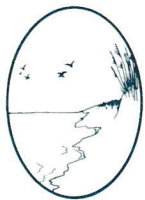
"If the temperature goes above 40, that fish isn't going to last long," Green says.

TIME. "When you get fresh fish, it ain't going to be fresh for long," says Wanchese seafood dealer Willie Etheridge III. "You gotta sell it because every day it's another day older."

At every step from the fisherman to your table, seafood should be moved as quickly as possible, Green says. If a dealer realizes there is no market for his product, he should freeze it immediately. But remember, freezing only locks in the quality that was present then. It doesn't improve quality.

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.



The sun is out, the sand is hot, and you're headed for the surf. But before you dive in, heed this warning. Shallow-water dives can cause severe injuries.

In a study of diving accidents on California beaches, researchers found that injuries often occurred when swimmers jogged toward the water, then dived into a wave.

Their heads often struck the gently sloping sea floor or a sandbar. And the impact was sometimes enough to cause paralysis and even death.

Robert Osborne, a University of Southern California Sea Grant researcher, spent the last year analyzing the locations and frequencies of shallow-water diving accidents along Southern California beaches. He found that most victims are young males.

"Nine times out of 10, women will duck down and get themselves wet before walking further, up to their waist, to swim," Osborne says. "Teenage and adult males are more likely to enter the water by making shallow dives under oncoming waves."

To avoid injury, Osborne advises swimmers to walk into the surf until it is deep enough to swim. Never dive until you know how deep the water is, he says.

Hundreds of volunteers are hoping to make a clean sweep of North Carolina's beaches Sept. 19.

This coastwide cleanup, known as "Beach Sweep," will take place on our

inland and coastal shorelines. Volunteers will pick up marine debris at various sites, then record the amount and sources of plastics found.

"Beach Sweep" is being coordinated by UNC Sea Grant, the N.C. Division of Parks and Recreation and the N.C. Division of Coastal Management. Several coastal states such as Texas and Louisiana will conduct similar programs on this date as part of Coastweeks '87, a national celebration of coastal resources and heritage.

If you or your civic group would like to take part in North Carolina's beach cleanup, call Kathy Henderson of the Division of Coastal Management at 919/733-2293.



You've always dreamed of owning a place at the beach. But if you're not informed, your dream could become a nightmare. Erosion, flooding and hurricanes create added risks for coastal property owners.

Whether you're buying a vacant lot, cottage, condominium or time share, you could probably use some expert advice.

To help you through the maze of considerations, Sea Grant and the N.C. Real Estate Commission have published *Your Place at the Beach: A Buyer's Guide to Vacation Real Estate*.

The 28-page booklet addresses the environmental hazards, ownership options and costs associated with coastal real estate. And it can help you know what questions to ask sellers, real estate agents, government personnel and attorneys.

For a copy, write Sea Grant. The cost for postage and handling is \$1.

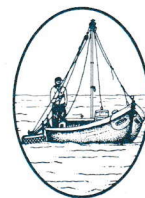
The North Carolina State University Industrial Extension Service is sponsoring a series of workshops on hazardous waste management.

The workshops will focus on the waste disposal problems of marinas, small boat manufacturers, vehicle ser-

vice facilities, educational institutions and hospitals.

Workshops will be held Sept. 9 in Elizabeth City at the College of the Albemarle and Sept. 10 in Manteo at the N.C. Aquarium.

For more information, write the Industrial Extension Service, NCSU, Box 7902, Raleigh, N.C. 27695-7902. Or call 919/737-2303.



Whether you own a 30-foot cabin cruiser or a 60-foot shrimp boat, a hurricane means trouble. Strong winds and rising waters can send a boat ricocheting off other boats, docks or piers like a cue ball on a pool table.

Ultimately, the boat can be severely damaged or destroyed.

The North Carolina and South Carolina Sea Grant College Programs have put together two publications that can help recreational boaters and commercial fishermen ready their boats for hurricanes.

North Carolina Sea Grant has developed a 17-by-24 inch poster, *Hurricane Preparedness Checklist for Recreational Boaters*, that provides a pre-hurricane checklist of dos and don'ts for small-boat, large-boat and sailboat owners. It offers pointers on removing equipment, checking gear, securing the boat and more.

For a copy of this graphic poster, write North Carolina Sea Grant, Box 8605, North Carolina State University, Raleigh, N.C. 27695-8605. Enclose \$1 for postage and handling.

For information on protecting a commercial investment, send for South Carolina Sea Grant's new 16-page booklet, *Hurricane Preparedness for Commercial Fishing Vessels, Docks and Fish Houses*. It provides a step-by-step preparation guide and checklist for what to do as a hurricane approaches. And it offers suggestions for choosing a mooring location and preparing docks or fish houses for these ferocious storms.

Continued on next page

To receive a free copy, write Communications, South Carolina Sea Grant College Program, 287 Meeting St. Charleston, S.C. 29401.

Sea Grant has a limited supply of waterproof fishing maps for the waters around Roanoke Island and Oregon Inlet. The chart, which doubles as an attractive nautical place mat, includes Loran headings and is designed as a navigation aid to the area's prime fishing locations.

The cost is \$1 per chart. For your copy, write Sea Grant. Ask for the Roanoke Island fishing map.

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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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