

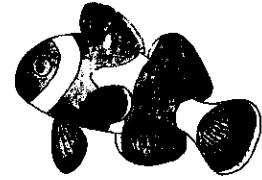
Lagniappe



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ANTHROPOMORPHISM

The Merriam Webster's Collegiate Dictionary defines anthropomorphism as "an interpretation of what is not human or personal in terms of human or personal characteristics." To be anthropomorphic is to give "human form or personality to things not human." Anyone who has seen the enormously popular movie, **Finding Nemo**, would agree that the movies' creators did a first class job of anthropomorphizing. Both Nemo and his father, Marlin, have endearing human qualities. Neurotic Marlin even frets and fusses to protect his one and only offspring, Nemo. Early in the movie, Nemo's mother and the rest of the unhatched eggs that would have been Nemo's sisters and brothers are eaten by a rather evil-looking barracuda. The ultimate drama occurs when an insensitive doofus human scuba diver slurps up Nemo for his aquarium. In the aquarium, Nemo suffers the trauma of imprisonment.



Cute?—yes; entertaining?—yes; accurate?—no; dangerous?—possibly. The biological truth is that clownfish do not have the "mom, pop and the kids" lifestyle portrayed in the movie; in fact it's kind of kinky. Clownfish, are protandrous hermaphrodites. This means, that they all start life as males and later, some of them change into females. Typically, a large female, a smaller male, and one or more even smaller, non-spawning fish live in a group, usually associated with a sea anemone. If the large female dies, the male develops into a female and one of the smaller fish becomes a functioning male. So, when Nemo's mother was eaten by the barracuda, if they had been a little patient, Marlin would have turned into Nemo's mom.

Anthropomorphism is one of the biggest "no-nos" for scientists. Crediting animals with human qualities can interfere with a scientist's analysis of data. Anthropomorphism can also strongly affect public opinion and policy. No hunter or wildlife manager will deny that the movie **Bambi** has influenced much of the public to be hostile to hunting.

Still today, after many advances in captive-spawning, a large number of tropical fish, especially marine ones, are captured from the wild. Like recreational or commercial



food-fishing, these are valuable fisheries that can be properly managed to be self-sustaining. Depicting fish to have the human qualities of anguish upon confinement or "family-breakup" may prompt prohibition of fisheries based upon emotion, rather than sound management of fisheries with science.

ALL OUT WARFARE

The battle between the domestic shrimp industry and shrimp-importing interests has reached new heights of bitterness. Imports of farm-raised shrimp are worth nearly \$3.8 billion, substantially higher than steel imports at \$3 billion. The Southern Shrimp Alliance (SSA), a coalition of domestic shrimp dealers and fishermen has filed an antidumping petition against six of the largest shrimp exporting nations. In reaction, shrimp importers formed the American Seafood Distributors Association (ASDA) to counter the threat to imports.



The latest round of conflict is over winning the hearts and minds of U.S. consumers. The current battle began on April 20, when the Public Citizen, a Ralph Nader-founded public interest organization announced a campaign aimed at educating "U.S. consumers about the myriad environmental, health and economic problems surrounding farm-raised shrimp." They claim that shrimp have become industrial food, meaning that profits are being placed ahead of consumer benefits.



They went on to say that farmers raise shrimp in large, polluted coastal ponds, continuously pumping sea and groundwater to keep the ponds cleaner. Because diseases run rampant, these farms depend on staggering amounts of antibiotics, fungicides, and pesticides. The continual, long-term use of antibiotics breeds disease-resistant bacteria, which can later be spread to humans.

"Shrimp farms produce a wretched cocktail of chemicals, shrimp feed and shrimp feces," said Andrianna Natsoulas, Field Director for Public Citizen's new shrimp campaign. "We want consumers to understand the real cost of shrimp and what it's doing to their health."

First to reply was the National Fisheries Institute (NFI), which calls itself the nation's leading trade association for the fish and seafood industry. "Seafood, whether imported or domestic, wild-caught or farm-grown, is subject to the same demanding Food and Drug Administration (FDA) inspection and testing standards," NFI President John Connelly said in a press release. "False statements regarding farm-raised shrimp safety could potentially damage the entire shrimp industry by undermining consumer confidence in all shrimp products."

In an interview with Thewaveonline editor John Fiorillo, Natsoulas was asked what her group hoped to achieve. She replied "Well, we see two results. One is that

we're able to educate consumers to such an extent that they're able to pressure the U.S. Food and Drug Administration to inspect, let's say, 80 percent — ideally it would be 100 percent — of the farm-raised shrimp that is imported into the United States. We also would see this as a success if we're able to raise public awareness to the extent that the public is able to pressure the World Bank and other international lending institutions to stop funding the expansion of shrimp aquaculture."

She added that her group's campaign parallels efforts by U.S. shrimpers fighting imports through an antidumping case. "We're telling consumers to buy U.S. shrimp or wild-caught shrimp and so, to that extent, we are coordinating campaigns. We are in communication with the Southern Shrimp Alliance."

Natsoulas added, "The thing is that 10 to 15 years ago there was not this appetite, consumers did not need to eat shrimp with every meal and every salad that they had. And at one time shrimp was an actual delicacy; it was something that was eaten on special occasions. U.S. consumers are going to have to revere shrimp as a delicacy once again rather than a common food they pick up at McDonald's. The inland markets are the ones that have really contributed to the expansion of shrimp aquaculture. And that is where, at one time, it was a delicacy, that is where a lot of consumers didn't even like the taste of shrimp but because of the good marketing abilities of these family-style restaurants they have made inland consumers love shrimp. And that's just not part of the regional diet for those individuals."

When asked if she thought that her campaign could reduce shrimp consumption in the U.S. she replied, "I think it can decrease, especially with all of the public awareness associated with the health risks of farmed-raised shrimp," she said. "If wild-caught shrimp just simply can not meet the demand and consumers are aware of the health risks then the demand will decrease."

"A lot of shrimp farms in Central America and in Southeast Asia have been funded and still are funded by the various international lending institutions including the World Bank, the InterAmerica Development Bank, the Asia Development Bank, and they have got to stop funding the expansion of shrimp aquaculture," she said.

"It's an incredibly destructive industry," continues Natsoulas. "It's ruined coastlines, it destroys mangrove ecosystems, it impacts the amount of wild fish in the ocean, it prevents coastal communities from fishing, it polluted their water and groundwater because of the amount of antibiotics and algacides and fungicides used in the shrimp ponds. Fishermen have been killed in protests to stop the expansion of shrimp aquaculture. It's a really devastating industry. And that has got to stop."

The accusations became more heated when ASDA President Wally Stevens appeared as a guest columnist on Thewaveonline. He openly accused SSA of "attempting to bring down the entire shrimp industry." Stevens went further, "Indeed, SSA has decided to 'make a deal with the devil' by signing on to a completely false campaign to scare consumers about the health and safety of the shrimp they eat."

"It is suicidal for SSA to endorse these health-safety scare tactics – all in the name of winning antidumping taxes," added Stevens.

The accusations spurred a response from Eddie Gordon, President of SSA. Also appearing as a guest columnist on Thewaveonline, he said that SSA and Public Citizen do not have a partnership, alliance or shared support beyond the two goals of increased testing of imports and stopping the funding of shrimp aquaculture by international institutions such as World Bank and USAID. "Subsidies and lack of strong enforcement of U.S. health standards have contributed to the flood of low-priced imports that threaten U.S. jobs."

Concerning funding for aquaculture, Gordon says, "Shrimp aquaculture has been overstimulated due to investments from international funding institutions and foreign governments. Subsidies are non-market forces that distort shrimp production. Such international funding and government subsidies also make it more difficult for U.S. shrimpers to compete against imports because the cost of production for foreign competitors is reduced."

Gordon also addressed seafood inspections. "In March 2004, the GAO (Government Accounting Office) issued a report that found that only 1.2 percent of all seafood imports is tested, compared to 100 percent in the EU (European Union) for problem countries (10 percent average for all others), and 17 percent for Japan. Without proper enforcement of U.S. health standards, the United States remains a dumping ground for countries that cannot sell their shrimp into other major markets."

Finally he says, "Our concerns over how media messages will be received will not stop this informational campaign, especially when importers have spent months telling the public that imported farm-raised shrimp is higher quality than U.S. shrimp."

The public has been given conflicting information about shrimp prices. SSA cites a Wall Street Journal article that said that consumers have not benefited from the extremely low shrimp prices paid to shrimpers. The article said that their survey showed that prices for shrimp dishes in restaurants had increased by 28%, while prices to shrimpers were plummeting.

An April article in Crain's New York Business said that in New York, shrimp markets have raised the price as much as \$2 a pound (for 16-20 count) above where it should be because of the anti-dumping petition. The article said that the price hikes have come "on fears that a duty will be approved."

The National Restaurant Association (NRA) has made their position clear. They are urging the Bush Administration to reject the anti-dumping petition. They have joined with ASDA in forming the Shrimp Task Force to oppose the petition.

They take the position that a tariff on imports coming in from six countries will stop shrimp from coming into the country, rather than raise their price. Steve Grover, NRA Vice-president of Health and Safety Regulatory Affairs says, "If the petitioners win,

nearly three-quarters of the shrimp now available through imports will be removed from the market, hitting moderate and low-priced family restaurants the hardest."

Another heavyweight, the Global Aquaculture Alliance (GAA) joined the group opposing the anti-dumping petition, saying that shrimp aquaculture provides needed jobs and economic development, while efficiently delivering healthy seafood to the expanding global population. GAA takes special exception to Public Citizen's claims, saying that modern shrimp ponds are now seldom located directly on coasts and that mangroves are not being "hacked down to make room for shrimp farms". They add that shrimp farmers no longer continuously pump seawater or ground water, and that they recognize that shrimp diseases cannot be controlled by antibiotics or chemicals.

Concerning Public Citizen's material on Honduras, GAA says, "A review of the water quality data by Auburn University stated, 'Although shrimp farm area has grown substantially since 1993, and production has grown some, no increase in eutrophication of estuaries in southern Honduras has been found over this period.' Shrimp farming in Honduras is simply not the great polluter Public Citizen frames it as."

Finally GAA says, "Despite the misinformation from Public Citizen, the 'real cost of shrimp' is declining and consumers are the beneficiaries. For they can now purchase more sustainably produced seafood of higher quality at lower prices."

In May, the Consuming Industries Trade Action Coalition (CITAC) called on the United States to repeal or modify the Continued Dumping and Subsidy Offset Act, also known as the Byrd Amendment. The Byrd Amendment requires that money collected from tariffs on imported products be distributed to the companies that petitioned for trade protection, rather than being deposited in the U.S. Treasury.

CITAC president, Jon Jenson stated, "American consuming industries and their customers are the ones who pay the enormous windfall from Byrd amendment payouts. The economics are simple: If you place an import tax on a product, the price of the product is likely to increase and those who buy the product take the hit. In this case, it is U.S. consuming industries and the American consumer who pays the tax which, thanks to the Byrd Amendment, goes directly to the petitioners."

The next legal step on the anti-dumping petition will come on July 2 when a preliminary injury determination should be issued for China and Vietnam, followed by a July 28 another determination for Thailand, Ecuador, India, and Brazil.

Sources: *New Campaign Aims to Drive Down U.S. Shrimp Consumption.* www.thewaveonline.com. April 22, 2004. *Public Citizen Launches New Campaign to Warn Consumers of Health Effects and Social Concerns of Farmed Shrimp.* www.citizen.org. April 20, 2004. *Counterpunch: NFI Defends Farm-raised Shrimp.* www.thewaveonline.com. April 22, 2004. *Public Citizen is Out to Destroy the Shrimp Industry — and the SSA is Helping Them.* www.thewaveonline.com. April 29, 2004. *Shrimp Prices*

Boil Over During Import Dispute. Crain's New York Business. April 26, 2004. *NRA Opposes Proposed Shrimp Tariff.* www.restaurant.org. April 9, 2004. *GAA Responds to Activists' Attack on Shrimp Farming.* Suzi Frazer. www.aquafeed.com. April 30, 2004. *Time to End Trade-distorting Byrd Amendment Payouts.* Consuming Industries Trade Action Coalition. May 7, 2004.

OCEAN POLICY REPORT

The U.S. Commission on Ocean Policy has released its report on the state of the oceans. To the surprise of some, it has more points of agreement than disagreement with the earlier-released Pew Oceans Commission report, **America's Living Oceans: Charting a Course for Sea Changes**. The Pew report received much criticism as having been produced by an environmental organization and therefore not being neutral.

The two oceans reports are the first since Stratton Commission report, **Our Nation and the Sea**, in 1969. That report resulted in major changes, including the adoption of 200-mile fishery conservation zones, and the creation of the National Oceanic and Atmospheric Administration (NOAA), the Sea Grant Program, and the nine fisheries management councils. The newly released Commission on Ocean Policy report is likely to result in even more changes. The 450-page report makes nearly 200 recommendations to President Bush, U.S. Congress, and various federal agencies. Some of the recommendations are as follows:

- Establish a National Ocean Council, chaired by an Assistant to the President to bring order to 20 agencies that administer 140 federal laws that are "a byzantine patchwork of laws and regulations that don't really work," according to commission chairman James Watkins.
- Create a Presidential Council of Advisors on Ocean Policy in the Executive Office of the President.
- Strip the federal fisheries management councils of their authority to decide how many fish can be caught and rely more on federal scientists.
- Congress should ratify the United Nations "Law of the Sea" so that the U.S. can participate in international discussions on fishing, mining, free navigation, and other subjects.
- Transponders should be placed on commercial fishing vessels so that satellites can make sure that boats are not fishing in closed areas.
- NOAA should be made the lead agency in overseeing the development and regulation of offshore fish farms to prevent the spread of pollution, disease and escaped fish.

- Relax the rule that restricts some industrial activities, such as using sonar to map the ocean floor, unless the activities actually do disrupt the survival and reproduction of marine mammals.
- Give coastal commissions and other government agencies more authority to plan for growth and the power to push development away from sensitive areas such as wetlands, and hazardous stretches of shorelines.
- Increase education to improve elected and appointed officials' understanding of the ocean, to develop a sense of public stewardship for ocean resources, and to prepare a new generation of leaders.
- Double the budget for ocean research, which has fallen to about half of what it was during the Cold War.
- Strengthen the link between coastal and watershed management.
- Create measurable water pollution reduction goals.
- Create an Ocean Policy Trust Fund using royalties from offshore oil and gas drilling and other industrial uses of the sea to fund the recommendations of the commission.

The commission's recommendations didn't go far enough for some interests. Noticeably missing were recommendations for the creation of marine reserves (marine protected areas) and ways to end global overfishing. The bill to enact the commission's recommendations would come to an estimated \$3 billion.

Sources: *Preliminary Report*. The U.S. Commission on Ocean Policy. *The Nation*; *Panel Presses New Ocean Safeguards; a Grim Report Urges the U.S. to Take Steps to save its Ailing Waters, Including Curbing Pollution and Checking Development*. Kenneth R. Weiss. Los Angeles Times. April 21 2004.

NEW FISH I.D. BOOK

Some groups of fish are a challenge to identify, including jacks, groupers and tuna/mackerels, but sharks have to be the most difficult. Many species of sharks exist and just about all of them make good table-

fare. Unfortunately shark regulations are complex. Nineteen species in the Gulf and Atlantic are completely off limits to both recreational and commercial fishermen: Atlantic angel, basking, bigeye sand tiger, bigeye sixgill, bigeye thresher, bignose, Caribbean reef, Caribbean sharpnose, dusky, Galapagos, longfin mako, narrowtooth, night, sand tiger, sevengill, sixgill, smalltail, whale, and white.



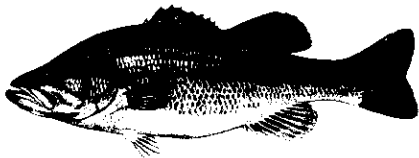
For recreational fishermen, a possession limit of one per person exists for Atlantic sharpnose and bonnethead. The limit for all the other species legal to take is one per boat. For commercial fishermen, all species not on the prohibited list are placed in 3 groups—large coastal, small coastal and pelagic—each with different regulations.

The complex rules, stiff penalties, and difficulty in species identification mean that many sharks are tossed overboard. A new book, *Guide to Sharks, Tunas & Billfishes of the U.S. Atlantic and Gulf of Mexico* should help greatly with identification of not only sharks, but tunas and billfish as well. The 118-page book, published by Rhode Island Sea Grant and NOAA Fisheries is loaded with color and black and white photographs for each species. Size, distribution, habitat, and similar species are also given. Of great use are the book's comparison pages, where photos of similar species are placed together for identification purposes. The pages are waterproof.

The book costs \$28, including handling and shipping, and may be ordered from Jessica Schexnayder, 105 Sea Grant Building, Louisiana State University, Baton Rouge, LA 70803-7507. Make checks payable to **Louisiana Sea Grant College Program**.

VIRGINIA TROPHY BASS MANAGEMENT RESEARCH

With the growth in competitive angling (tournament fishing), most fish, and game agencies in the southeastern United States have been asked by largemouth bass fishermen about managing for larger fish. Many states have responded by specially managing some lakes to produce larger fish. While each reservoir is different and therefore requires different management, looking at the results of a particular effort is interesting.



In 1996, the Virginia Department Game and Inland Fisheries (VDGIF) began work in creating the first trophy management bass fishery in the state in Briery Creek Lake. The newly flooded reservoir was stocked in 1986 and 1987 with a 3 to 1 ratio of Florida largemouth bass to northern largemouth bass. Fishing in the 845-acre lake was opened in 1989 with an 18-inch minimum size limit. Between 1993 and 2000, 24 of the 25 heaviest largemouth bass entered into the Virginia Angler Recognition Program came from Briery Creek Lake.

VDGIF biologists intensively studied the lake from 1999 to 2001. Using two different study methods, they electrofished (shocked) certain areas for bass, marked them, released them. Then they soon electrofished the area again. The ratio of marked to unmarked bass gave them an estimate of the number of bass in the lake above 8 inches long, and also the number of trophy bass (those 22 inches or larger) present in the lake. The two methods produced similar estimates. One method showed 109 eight-inch fish per acre (15,126 total) and the other method estimated 106 eight-inch bass per acre (total 14,706). The first method estimated the number of trophy fish the lake at 319 and the other showed 397.

The biologists also conducted creel surveys (interviews) of fishermen at the end of their fishing trips during the whole fishing season of 1999 and the spring (March-May) of 2002. Data collected in 1999 indicated that 56% of the bass fishing pressure, 37% of the catch, and 33% of the harvest (fish kept) took place in the spring. For trophy-sized bass, 78% of the catch and 50% of the harvest occurred in the spring.

During 1999, 252 bass were caught per acre and 20 per acre were kept. Since the population estimates showed 106-109 bass per acre, many of the fish were caught and released several times. The estimates for 2000 were 220 caught per acre, and 17 bass per acre kept by anglers. Size regulations in place at this time were a 12 to 15-inch slot limit. Only bass under 12 inches or over 15 inches long could be kept.

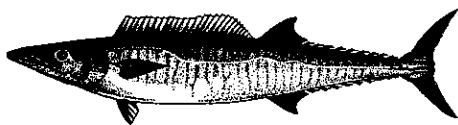
The number of hours required to catch a trophy largemouth bass averaged 142 for both years on an annual basis, but was only 103 hours in the spring. For both years combined, about 34% of the trophy fish caught were kept.

Finally, the biologists compared the 12 to 15-inch slot limit to what could be expected under a 14 to 24-inch protected slot limit. The biological model that they used predicted that 2.6 times more trophy largemouth bass would be produced with the 14 to 24-inch slot than with the 12 to 15-inch slot. The larger slot limit regulation was put into the effect on January 1, 2001.

Source: *Trophy Largemouth Bass Abundance and Harvest in a Central Virginia Impoundment: Implications for Restrictive Slot Limits*. Victor J. DiCenzo and Daniel A. Garren. Proceedings of the Fifty-fifth Annual Conference, Southeastern Association of Fish and Wildlife Agencies. 2001.

WAHOO BIOLOGY SUMMARY

The wahoo is a biological mystery fish. This sleek, speedy fish-eater is found worldwide in tropical and subtropical waters, but nowhere in great concentrations. Because of its scattered distribution and traveling nature, it is a difficult fish to target. In spite of this, both recreational and commercial landings in the Gulf of Mexico, south Atlantic and Caribbean have shown steady increases for over 20 years. The wahoo is not managed with quotas, size limits or creel limits.



As noted above, very little research has been conducted on this fish. Until very recently, it was even speculated that wahoo may be more closely related to billfish than to mackerel and tuna. Research that is more recent confirms that it is a member of mackerel and tuna family. Little tagging of wahoo has been done, only one tagged fish has ever been recovered. General agreement exists, however, that the fish does move seasonally, moving into cooler waters during the warmer months. Wahoo tend to be found near floating objects and seaweeds such as *Sargassum*.

Wahoo seem to be fast-growing, early-maturing fish. Male fish in the Gulf of Mexico mature in one year at an average length of 37 inches (fork length). Although some females mature at one-year-old, most are two years old and average 41 inches long (fork length). Only a few females have been examined for how many eggs they produce and the estimates vary widely. Three females from the northern Gulf were found to produce a little over 26 thousand eggs per pound of body weight. They are thought to have a 4-month summer spawning season with a peak in June, when the fish is estimated to spawn every 2 to 6 days.

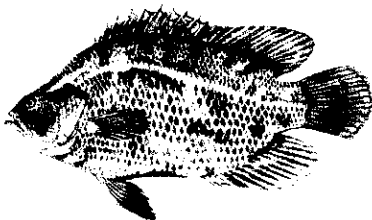
Aging wahoo is tricky. Growth rings in the scales are unreadable and the growth rings in their bones are undependable. Otolith (ear bone) growth rings are the most accurate part to read for age on most fish, but even otoliths are hard to read for wahoo. Most studies agree, however, that wahoo probably have a life span of 5 to 6 and maybe even 10 years. The single tagged fish that was recovered grew from 11 pounds to 30 pounds in the 10 months between tagging and recapture.

Wahoo are strong finfish predators, with fish making up 70% of the number of food items that they eat and over 90% of the volume. In the Gulf and south Atlantic, the most important food items are tunas/mackerels, jacks, butterfishes, and puffers, with squid coming in at fifth in importance. Also eaten are herrings, and flying fishes. Wahoo are fast-swimming, reaching bursts of speed up to 45 mph and feed upon open-water species, as well as those found around floating material. While other members of the mackerel/tuna family are the most important food item in their diet, no cases of wahoo feeding on other wahoo have been found.

Source: *The Biology of Wahoo (Acanthocybium solandri) in the Western Central Atlantic*. Hazel A. Oxenford, Peter A. Murray and Brian E. Luckhurst. Gulf and Caribbean Research. Volume 15, July 2003.

TRIPLETAIL FOOD HABITS

The tripletail *Lobotes surinamensis* is an open-water fish, but is also often found nearshore in tropical and subtropical waters worldwide, except the eastern Pacific. Wherever it is found, it is prized for its excellent flesh. Tripletails migrate into the northern Gulf of Mexico in April and leave for warmer waters in October.



Tripletail are something of a mystery fish and not well researched. The only studies done on tripletail diets in the Gulf of Mexico were in the 1940s in Texas. To gain more information on the fish, researchers from Mississippi conducted another food habits study on the fish in the late 1990s. They removed the stomachs from 178 tripletail caught by sportfishermen from Mississippi Sound and the waters near the offshore barrier islands. The fish ranged in size from 7 to 31 inches and 0.3 to 23 pounds. Of the 178 stomachs, 136 had food in them.

Crustaceans (shrimp and crabs) and fishes were present in almost equal numbers and volume in the stomachs. The crabs were all in the blue (swimming) crab family. Shrimp made up 18.5% by number and 33.4% of volume of their diet. Crabs were 31.8% by number and 16% by volume of the tripletail diet. Obviously, most of the crabs eaten were quite small.

In the finfish group, menhaden (pogies) were the most important identifiable food item. Overall, only brown shrimp were more important than menhaden. Menhaden were followed in importance by Atlantic bumper. Thirteen species of finfish were identified, but over half of the fish remains in the stomachs were unidentifiable. Tripletails seem to feed mostly by sucking food into their mouth, rather than by biting it, in spite of the fact that they have sharp teeth.

Source: *Diet of Tripletail, Lobotes surinamensis, from Mississippi Coastal Waters.* James E. Franks, Katherine E. Vanderkooy, and Nikola M. Garber. Gulf and Caribbean Research. Volume 15, July 2003.

THE GUMBO POT

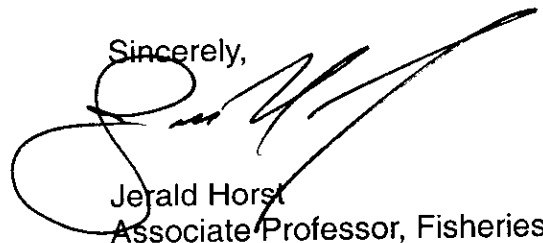
Fillets with Capered Lemon Sauce

This recipe is for caper-lovers, but use the small ones, not those big scoaffers that are so good in salads. Any mild-tasting, white-fleshed fish is fine in this recipe. I used red snapper. White pepper looks better on the fillets, but black pepper is perfectly acceptable.

4	tblsp olive oil	1½	tblsp capers
4	6-oz fish fillets, flour	½	cup white wine
4	tblsp green onions, chopped	½	cup lemon juice
4	oz (1 stick) butter		salt and pepper to taste
		½	cup finely chopped parsley

Add olive oil to a pan and heat until very hot. Lightly flour fish fillets while oil is heating. Melt butter in separate saucepan and add capers, white wine and lemon juice. Sear fillets on one side. Turn after 3 to 4 minutes and add green onions. When onions soften, add butter mixture. Salt and pepper to taste. Reduce heat to medium and cook until sauce slightly thickens, no more than 5 minutes. Add parsley. Serves 4 (modestly).

Sincerely,



Jerald Horst
Associate Professor, Fisheries