IT'S MY LIFE, IT'S NOW OR NEVER, I AIN'T GONNA WAIT FOREVER

THE OPINIONS EXPRESSED BELOW ARE MY OWN AND DO NOT REFLECT THOSE OF MY EMPLOYER. ENJOY!

SATURDAY, NOVEMBER 11, 2006

Yummy crabcakes

I love crab, trout, salmon, shrimp, sea bass, halibut, tuna, scallops, and pretty much any other type of seafood you throw on my plate. It is scary, but there are some pretty honest, credible scientists out there who say that we won't have a viable seafood industry as early as 2050. Its mostly caused by humans: pollution, climate change, and over-consumption. We've got huge trawlers with nets that scrape the bottom of the sea floor and pick up everything in its path. We have the capability to reach fish stocks in mass quantities that we never could have before. And we're losing them. Luckily both the link above and the article I'm posting below have some cause for optimism. We have no idea what the baseline was for some of these species, but we at least can measure accurately today, and we have governments that, at times, work well together to establish limits. We need more.

I read this article in a class last year, and I thought it was worth saving. It is quite long, so I've trimmed it down a little for your enjoyment:

> **October 23, 2005**
> **The Catch**
> **By PAUL GREENBERG**
> On a dank, cold morning this past March, full of wind and the gloom of the sub-Antarctic autumn, I stepped off the customs pier in the Falkland Islands port of Stanley and tried to board a pirate ship. The Elqui, a rusted-out heap flying the Guinean flag, sat impounded at the dock, her captain

awaiting charges from the British territorial government of South Georgia Island. What had brought the Elqui and its 30-odd Indonesian, African and South American crew members to this remote harbor at the bottom of the world were Chilean sea bass, 13 tons of which now lay frozen below the ship's deck.

After a knock on the door, Capt. Christian Vargas emerged, stressed out and exhausted and stinking of tobacco, sweat and bait.

"I can't talk until the hearing," he said.

"Who are the owners of the ship?"

"I can't talk about it."

And with that he slipped back into the pilothouse and struck up a conversation with his Spanish fishing master.

Despite an American-led "Take a Pass on Chilean Sea Bass" campaign, boycotts from celebrity chefs and strict legal quotas on the catch, Chilean sea bass still sells briskly in the United States for as much as $20 a pound - nearly five times what it cost when it first appeared in U.S. markets in the 1980's. A whole animal may go for more than $1,000. In short, the Chilean sea bass is today one of the most valuable fish in the sea. It is therefore of little surprise that Captain Vargas and his crew were drawn to ply the skyscraper-size waves and mile-deep trenches of the South Atlantic for a little bit of booty. What is surprising is that they were caught red-handed and that a serious attempt was being made to punish them.

And the Elqui was not the only boat feeling the heat from sea-bass defenders that week. While Captain Vargas awaited his hearing, naval frigates on the other side of Antarctica were scrambling to confront a squadron of pirate vessels at the edge of Australian territorial waters. In fact, the Elqui's apprehension is just the latest clash in what may be the most ambitious crusade ever mounted to save a species of fish. From Chile to Argentina to the British-controlled islands of the South Atlantic and east to Africa and Australia, hundreds of scientists, undercover investigators and government agencies have joined forces to protect the last viable stocks of this slow-growing deep-water predator.

It may seem strange that so much effort is being focused on an animal that 25 years ago was known to only a handful of Antarctic scientists and that went by the ungainly name of Patagonian toothfish. But Chilean sea bass today have become the signature species in a battle of global proportions. Put in very blunt terms, the world is running out of fish. According to a study published in July in Science, marine species diversity has declined by 10 to 50 percent in the last half-century, and a 2003 report found that up to 90 percent of the populations of the ocean's major predators are gone. It is the thick-fleshed "major predators" - cod, tuna and Chilean sea bass, to name a few - that humans crave most. And though these collapsed fish stocks are increasingly being replaced on the market by aquacultured product, fish farming is still highly problematic and so far cannot come close to matching what the ocean produces on its own. What we are seeing now are the last desperate calculations over the undomesticated fish that remain. On one side of the equation, fisheries managers in places like the Falklands are trying to wall in their piece of the ocean, building ramparts of regulations to keep enough fish in the water to maintain a sustainable harvest. On the other side, "illegal, unreported and unregulated" - or "I.U.U." - fishing boats like the Elqui are laying siege to those same waters and stealing the fish out from under their protectors. In some fisheries, the pirate haul may be four times the legal catch. The Chilean sea bass is the unlikely Helen in this undersea Trojan War. What happens to it as the siege plays out will inform what can be done to manage marine life. Ultimately it may determine whether we can keep on eating ocean fish, the last truly wild food on earth.

Those on the fisheries-management side of the war insist that things are starting to go their way. They claim that a combination of satellite monitoring of fishing boats, tighter import controls and high-profile arrests have greatly reduced the pirate catch in the last three years. Indeed, just as the Elqui was being brought to dock, a corporate-nonprofit partnership called the Marine Stewardship Council was completing a study of the same waters where the Elqui was

caught poaching and was on the verge of declaring the Chilean-sea-bass fishery of South Georgia Island "sustainable."

But even after watching the impressive international marine-conservation machine in action and meeting with the scientists and regulators who had engineered the South Georgia success story, the question that had been bothering me all the way down the Chilean coast to the Falklands remained: Is this fish managed well enough to eat?

The idea of managing the sea is a relatively new one, largely because for most of fishing history, the difference between what humans needed and what the ocean could provide was so great that the concept seemed absurd. For fishers of days past the closest thing to a management policy consisted of finding a fish, learning how to catch it and then catching all of it. Daniel Pauly, the director of the Fisheries Center at the University of British Columbia and a noted expert on global fishing trends, cites the example of the earliest anglers, Stone Age peoples in Africa who eradicated a six-foot-long catfish 90,000 years ago and then moved on to another animal. "This pattern," Pauly says, of fishermen "exterminating the population upon which they originally relied, and then moving on to other species, has continued ever since."

For most of fishing history, this species trade-in scheme was not particularly problematic. The lost fish of the past, like the sheepshead (for which Sheepshead Bay in Brooklyn is named), are easily forgotten when another fish can take its place. But the loss that brought the Chilean sea bass to our plates in the 1980's was of a magnitude never seen before.

With the slight lilt of his native France in his voice tinged by a quiver of indignity, Pauly points out that the sea bass's white, flaky, easy-to-cook flesh makes it an excellent substitute for what was once the most common table fish in the world. "What it substitutes for," says Pauly, "and what it is, is cod." As has been well documented in Mark Kurlansky's best seller "Cod," the cod stocks of the North Atlantic fed the

world for hundreds of years. International fleets plied the Grand Banks off Canada, procuring enough cod to support the slave economy of the Americas and the working classes of Europe alike. Fish populations held up through the First and Second World Wars. But in the 1970's the North Atlantic cod catches started declining, sending shock waves through the world's fishing nations. And in the 1980's, after North American and European countries tried to address the cod crash with sweeping, protectionist regulations, a new era of search-and-destroy fishing began - one in which ships would travel to the farthest corners of the globe to find something else to catch.

Thanks to the free-market policies of the dictator Augusto Pinochet, southern Chile would end up being one of the first new territories to bear the brunt of the displaced international fleets. As part of what the Pinochet junta called the Apertura, or "Opening," foreign trawlers were granted cheap access to the fertile waters of the Chilean continental shelf. Within a few years they began wiping out stocks of hake and other codlike fish, pushing local Chilean fisherman, known as los artesanales, off their traditional fishing grounds. With nowhere else to go but farther out to sea, los artesanales moved onto the abyssal waters of the continental slope. Bobbing around in small, brightly colored boats, they let their lines down farther and farther, all the way down into the Humboldt current, a frigid shunt of water that moves along the base of the Chilean continental slope at depths exceeding 5,000 feet. It was then that they began to haul out a strange fish they had never seen before.

About the size of a German shepherd, the animal had an air of the prehistoric to it. Thick scales covered its body. It had large eyes, mounted near the top of its head. Those, combined with a set of sharp teeth jutting from an underslung jaw, gave it a kind of cross-eyed, Alfred E. Neuman grin. When the fishermen gutted them, they found their innards were as cold as the polar seas. Toothfish, it seemed, were using the Humboldt current to make their way from Antarctica up the Chilean coast.
And there were lots of them. So many that by working the

Humboldt in the early 1980's, los artesanales carved out a unique niche for themselves. Unlike cumbersome international trawlers, los artesanales used simple chains of baited hooks that allowed them to fish extreme depths cheaply. At one point they even opened up an export market with traders in Southern California. In fact, the name "Chilean" sea bass hails from this period when toothfish were used as a replacement species for collapsed American fish like a West Coast favorite called California white sea bass. Consumers barely noticed the switch.

But eventually the factory ships retooled for toothfish, and today, as is evidenced by the ramshackle barrios that ring port towns along the Patagonian coast, los artesanales can scrape only a meager living from the sea. Whereas local fishermen once caught close to two and a quarter pounds of toothfish per baited hook, now they get just three and a half ounces. And while los artesanales have played a significant part in overfishing toothfish, they understandably focus their blame on the industrial fleets. Particularly galling to them was the government auction of the especially productive toothfish waters south of the 47th parallel to the highest bidder, i.e., the international fishing consortia that drove los artesanales to toothfish in the first place.

"Everyone has taken advantage of the local fishermen," says Raul Gonzales, an extremely vocal artesanale I met in the port of Valdivia. "This was an opportunity for the local fishermen to help themselves to create a real business. Because we were the ones who deserve the possibility. Not the people who got involved later."

But the cascading decline of fish species in the last quarter-century created a hunger for toothfish much greater than could ever be sated by Chile's artisinal fishermen. Striped bass, Atlantic halibut, redfish and others joined the codfish in a massive American marine population crash, and by the 90's all had sunk to new lows. And just as fish were tanking, desire for fish was soaring. The discovery of the omega-3 fatty acid and other health benefits of fish compelled new consumers to eat them. And today, as Daniel Pauly notes,

"there are far more people with enough money to buy seafood. And so in Europe, in America and in Asia, the demand is not traditional." Ultimately it has taken nontraditional foreign fish, like the toothfish, to meet this nontraditional demand.

The toothfish, however, possesses one specific quality that has made it the nontraditional fish of choice. Most fish we eat are equipped with an airtight organ called a swim bladder. By filling its swim bladder with air, a fish saves energy, letting the rising effect of gasses do the work of swimming up. The ancestors of the toothfish, however, were benthic fishes - dedicated deep-water bottom feeders that never moved more than a few feet above the sea floor. As such, they lost the need for a swim bladder long ago, and it was soon crowded out by other organs in the fish's gut.

But eventually the direct predecessors of the Patagonian toothfish found it advantageous to rise off the bottom and hunt for prey in shallower water. Without a swim bladder to work from, the ur-toothfish needed to develop an alternate buoyancy device. Over time, glands developed under the fish's skin that secreted fats directly into its muscle tissue. Fats, being lighter than water, performed the same function as a swim bladder, lightening the animal and allowing it to rise from depths of 6,000 feet to as shallow as 200 feet with little effort.

This trait made the toothfish a very effective predator for millions of years. But when the modern human seafood diner evolved a taste for fish, the fat-as-flotation scheme made the toothfish into very desirable prey. Because when you secrete fat directly into your body, you are in effect giving yourself a deep-tissue marinade for your whole life.

All that fatty marinating, says the chef Rick Moonen (formerly of Manhattan's famed restaurants Oceana and the Water Club and one of the first to take Chilean sea bass off his menu, in 1999), made the fish "great for a restaurant situation. Because of the margin of error you can overcook this fish by five minutes and it's still delicious." Recalling the

days when he served it with abandon, Moonen calls toothfish a "no brainer.. . .You can sauté it, grill it, broil it, steam it, roast it - you can do whatever you want to do with it." Indeed, throughout the booming 1990's, everyone - hotel chefs, cruise-line caterers, trendy home cooks - sought it out. (Even the elusive giant squid seems to have caught the toothfish craze - recently a 12-footer attacked a haul of toothfish in the Ross Sea.) In 2001, Bon Appétit magazine declared it "dish of the year."

This attention caused a worldwide toothfishing free-for-all. And though regulations have gradually come online in waters controlled by the different nations of the Southern Hemisphere, a large swath of the South Atlantic is still technically owned by no one, administered only by the voluntary Commission for the Conservation of Antarctic Marine Living Resources. For a pirate vessel, the temptation to dip back and forth between international and national waters to get as much toothfish as possible is large: in the wild waters of the Antarctic, the odds of getting caught are still quite low.

The ownership and identity of fishing boats is a key issue that has been on the minds of everyone who has taken up the toothfish cause in recent years. For ever since toothfishing moved from a small-scale endeavor to an international enterprise worth millions of dollars, the fishing nations have been trying either to lay claim to the different populations of toothfish that ring Antarctica or at least to deny responsibility for the theft of them.

...The chaotic situation of fish piracy has, however, caught the attention of environmentalists. Initially drawn to the toothfish by the large number of albatrosses and other seabirds that are often accidentally killed during pirate fishing, marine conservationists later came to see the toothfish as an ideal symbol for publicizing the larger problem of overfishing. Efforts began modestly with the Australian Isofish initiative, which ran campaigns against pirates in their hometown newspapers. Soon the movement spread to the United States, where the National

Environmental Trust inaugurated its "Take a Pass on Chilean Sea Bass" campaign. Realizing that most toothfish were being served in "white tablecloth" restaurants, the trust infiltrated the U.S.'s top dining markets. "What we would do," says Gerald Leape, a vice president of the trust, "is we'd go in with organizers three months ahead of time and quietly talk to chefs and say: 'Listen, will you join us on this? Would you be willing to take it off your menu and not serve it for at least five years or until greater protections were in place?' " And while Americans still eat a lot of toothfish, to Leape that is somewhat beside the point. "We've at least raised the profile of it," he says, "and now we want to use that profile and the people who agree with us to stress the larger problem of illegal fishing."

...While fisheries management still ranks as one of the more imprecise sciences on earth, it is now possible to estimate the overall "fishing effort" being applied against a given species and to predict what toll that effort will take on a population. Regulators can then work backward to determine the number of vessels that should be permitted into the fishery and the total allowable catch (TAC) for a given season.

Licenses sometimes costing hundreds of thousands of dollars are issued to specific vessels for a portion of that TAC, with the goal of eventually keeping 40 percent of the historical fish population in the water. This 40 percent is the holy grail of fisheries management, for in most cases scientists have found that a population that is at 40 percent of its pre-exploitation biomass will remain stable over time. Pirate fishing ruins the whole equation, because when boats like the Elqui take fish out of an area like South Georgia without buying into the licensing system, they potentially eat into the 40 percent that is necessary to sustain the population in years to come.

For the British of the South Atlantic, arriving at a sustainable population is critical because of their goal of creating a recognizable, environmentally friendly "brand" of toothfish. In aid of this, a team of scientists has been deployed around

South Georgia in recent years to conduct genetic testing and other research. After comparative analysis, the team determined that South Georgia toothfish are indeed a distinct, soundly managed stock. The Marine Stewardship Council, which was initially set up with financing from the international food conglomerate Unilever and the nonprofit World Wildlife Fund, accepted the South Georgian data and certified the fishery as sustainable. Harriet Hall sees this development as essential to building consumer confidence. "One of the key ways to help prevent I.U.U. fishing is for consumers to be aware of the problem," Hall told me. "Not for consumers to eat just all toothfish but to ensure that the toothfish is from sustainably managed stocks." This philosophy now pervades the legal toothfish trade. Nearly every legitimate toothfishing company I spoke with belongs to a group called the Coalition of Legal Toothfish Operators, which arrests pirate fisherman and sets standards for the industry. And as a result of pressure brought about by efforts like the Take a Pass on Chilean Sea Bass campaign, imports of Chilean sea bass to the United States must now carry certification indicating where, when and how each particular toothfish was caught. Several seafood importers I spoke with said that toothfish is now one of the hardest fish in the world to get past U.S. Customs.

But seen against the background of historical overfishing, there is plenty of room for skepticism. The examples of fish populations being sustainably managed or restored are extremely rare. The New Zealand hoki fishery, another deep-water population certified by the Marine Stewardship Council, declined significantly last year, and the North Atlantic cod stocks are not recovering. And as some fisheries experts have pointed out, the goal of managing to achieve 40 percent of a fish population's historical biomass is based in part on speculation. In most fisheries, stocks have been subject to substantial fishing pressure before scientists get to study them. The estimation of "historical biomass" is therefore something of an educated guess.

...As for the toothfish, Dr. Pauly sees a fate for it similar to nearly every large marine predator that has come up against

mankind. The toothfish "will have spent a few years in the sun of the Marine Stewardship Council, and then it will go back to obscurity as a collapsed stock, and then we'll find something else." The only chance Pauly sees for the survival of fish stocks is to go beyond the framework of "sustainable management" and adopt a kind of crop-rotation system, where portions of the ocean would be allowed to lie fallow for long periods of time without any fishing at all.

If things continue as they are, Pauly foresees a future in which humans will gradually eat their way down the food chain or "trophic levels" of the ocean, taking out the higher predators like toothfish, white sea bass, halibut, cod and striped bass first, then moving on to smaller midlevel predators and eventually down to invertebrates like jellyfish and plankton. By some arguments this is already happening on the collapsed grounds of the Grand Banks. Whereas the Banks once supported the largest cod fishery in the world, it is now producing record numbers of snow crabs and other bottom-scavenging invertebrates.

Look at the menus of today's top seafood restaurants, and it's clear, as Pauly predicted, that we have indeed found something else. Seldom will you see Chilean sea bass claiming the most elaborate sauce on the carte du jour. That spot is now reserved for the new fish of the moment - branzino, orata, tilapia. But there is a critical difference between these fish and the toothfish that your waiter will not likely reveal. All of them are grown on fish farms. Seafood importers I spoke with say that an ever-increasing percentage of the fish they deal in are aquacultured. As we reach the end of the big natural predators, farmed fish will replace wild, just as beef cattle replaced buffalo.

Nowhere is this more evident than in Chile. Looking out the window of my flight back to Santiago, I could see the phenomenon taking place literally before my eyes. The Patagonian fjords, once pristine, now sparkle here and there with metal cages laid out in grids in the sapphire-blue water. Chile is now one of the largest producers of aquacultured salmon. So successful have the Chileans been that they are

expanding their species repertory. The most recent aquaculture experiment happening is an attempt to breed toothfish in captivity. My calls to Fundación Chile, the backer of this project, were not returned, but Chile's leading toothfish expert, Carlos Moreno, indicated there are significant hurdles. "It needs a higher investment," Moreno says. "It's impossible to find a male and a female ready to spawn at the same time."

Meanwhile, los artesanales, the local fishermen that continue to make their living from the Chilean coast, pursue the big predators like toothfish less and less frequently. Instead they are catching inch-long forage fish and other marine animals that are ground up and fed to farmed salmon.

A consumer at this point might shrug and say: "So what? Maybe it's better to eat farmed fish and let the wild fish roam free?" The only problem with this argument is that every pound of aquacultured fish brought to market needs at least three pounds of wild little fish for forage.

"Which means that Pauly's thesis is actually being pre-empted," says Isofish's founder, Alistair Graham. "While one bunch of fishers is going down the trophic chain catching the bigger fish, there's another bunch of fishers that are taking out the food resource for the higher trophic orders." In other words, humans are figuring out a way to consume not only all of the ocean's predators, but all of its prey too.

And yet Felipe Sandoval, Chile's current under secretary of fisheries, is brimming with optimism. Looking out on a country whose economy is now the tiger of South America, roaring with an engine of aquacultured salmon, he sees the problem of feeding Chile's fish farms as a technicality that will be solved with human ingenuity. "In a discussion with some ecologists some time ago, they gave me a tragic view of humanity in the future," the under secretary said on a sunny fall morning in Santiago. "And I asked if they knew a man called Malthus. Malthus made a very tragic estimation about what would happen with this whole process. And yet,

now, here we are. Technology and knowledge help to solve problems. And with fish the same thing will happen as with the earlier food debates. The amount of fish meal we have is not sufficient, but we will find something."

POSTED BY ALDEMAN AT 2:54 AM

3 COMMENTS:

sushil yadav said...

The link between Mind and Social / Environmental-Issues.

The fast-paced, consumerist lifestyle of Industrial Society is causing exponential rise in psychological problems besides destroying the environment. All issues are interlinked. Our Minds cannot be peaceful when attention-spans are down to nanoseconds, microseconds and milliseconds. Our Minds cannot be peaceful if we destroy Nature.

Industrial Society Destroys Mind and Environment.

Subject : In a fast society slow emotions become extinct.
Subject : A thinking mind cannot feel.
Subject : Scientific/ Industrial/ Financial thinking destroys the planet.
Subject : Environment can never be saved as long as cities exist.

Emotion is what we experience during gaps in our thinking.

If there are no gaps there is no emotion.

Today people are thinking all the time and are mistaking thought (words/ language) for emotion.

When society switches-over from physical work (agriculture) to mental work (scientific/ industrial/ financial/ fast visuals/ fast words) the speed of thinking keeps on accelerating and the gaps between thinking go on decreasing.

There comes a time when there are almost no gaps.

People become incapable of experiencing/ tolerating gaps.

Emotion ends.

Man becomes machine.

A society that speeds up mentally experiences every mental slowing-down as Depression / Anxiety.

A (travelling)society that speeds up physically experiences every physical slowing-down as Depression / Anxiety.

A society that entertains itself daily experiences every non-entertaining moment as Depression / Anxiety.

FAST VISUALS /WORDS MAKE SLOW EMOTIONS EXTINCT.

SCIENTIFIC /INDUSTRIAL /FINANCIAL THINKING DESTROYS EMOTIONAL CIRCUITS.

A FAST (LARGE) SOCIETY CANNOT FEEL PAIN / REMORSE / EMPATHY.

A FAST (LARGE) SOCIETY WILL ALWAYS BE CRUEL TO ANIMALS/ TREES/ AIR/ WATER/ LAND AND TO ITSELF.

To read the complete article please follow either of these links :

PlanetSave

EarthNewsWire

sushil_yadav

3:38 AM

Mike Davis said...

Fukk fish. Them shits are the anti-proletarian food of the bourgeoisie. Long live the workers. Extinct the fish to hell!!

8:57 PM

JBA II said...

Maybe with the Democrats controlling the House and Senate there will be some real attention to environmental issues and global warming. We can only hope!

10:36 PM

POST A COMMENT

<< Home