Flotsam and Jetsam

Wikipedia defines *"flotsam and jetsam"* as *"goods of potential value that have been thrown into the ocean. There is a technical difference between the two: jetsam has been voluntarily cast into the sea (jettisoned) by the crew of a ship, usually in order to lighten it in an emergency; while flotsam describes goods that are floating on the water without having been thrown in deliberately, often after a shipwreck"*. (http://en.wikipedia.org/wiki/Flotsam)

This seems an apt title for periodic FishNets in which we address several issues that should be of value to anyone with an interest in oceans and fisheries in a somewhat abbreviated manner.

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Let's hear it for selenium.

If you read FishNet you're undoubtedly familiar with the "don't eat the fish 'cause it's loaded with mercury" hysteria periodically flogged by various envirorgs when they're looking for some media attention. The basis for this hysteria, as is easily determined with a little research, is a few extremely unfortunate instances of severe mercury poisoning (as in Minimata disease) caused by industrial releases, and a study of residents of the Faroe Islands. (see http://www.papageorgetuna.blogspot.com/2004_02_01_papageorgetuna_archive.html). A conflicting study, this one looking for, and not finding any, negatives effects of mercury, was done in the Seychelles Islands.

It's important to note that the source of mercury in the Faroe Islands was identified as pilot whale, a marine mammal and a mainstay of the Faroese diet, while that in the Seychelles was fish.

Below is the abstract of a paper by University of North Dakota researchers Laura Raymond and Nicholas Ralston **(Mercury: selenium interactions and health implications**, Seychelles Medical and Dental Journal, Special Issue, Vol 7, No 1, November 2004 - http://www.seychelles.net/smdj/SECIIIC.pdf) which puts the selenium/mercury issue into perspective:

> *Measuring the amount of mercury present in the environment or food sources may provide an inadequate reflection of the potential for health risks if the protective effects of selenium are not also considered. Selenium's involvement is apparent throughout the mercury cycle, influencing its transport, biogeochemical exposure, bioavailability, toxicological consequences, and remediation. Likewise, numerous studies indicate that the selenium, present in many foods (including fish), protects against mercury exposure. Studies have also shown mercury exposure reduces the activity of selenium dependent enzymes. While seemingly distinct, these concepts may actually be complementary perspectives of the mercury-selenium binding interaction. Owing to the extremely high affinity between mercury and selenium, selenium sequesters mercury and reduces its biological availability. It is obvious that the converse is also true; as a result of the high affinity complexes formed, mercury sequesters selenium. This is important because selenium is required for normal activity of numerous selenium dependent enzymes. Through diversion of selenium into formation of insoluble mercury-selenides, mercury may inhibit the formation of selenium dependent enzymes while supplemental selenium supports their continued synthesis. Further research into mercury-selenium interactions will help us understand the consequences of mercury exposure and identify populations which may be protected or at greater risk to mercury's toxic effects.*

According to the US Department of Agriculture's Nutritional Database (Release 17) for the selenium content of selected foods, fish and shellfish are among those with the highest selenium content (and most interestingly, among the fish with the highest levels of selenium are swordfish and tuna, two of the very species that the envirorg crisis machine would have the public forego because of the supposed "dangerous" levels of mercury (http://www.nal.usda.gov/fnic/foodcomp/Data/SR17/wtrank/sr17a317.pdf).

For more information on mercury/selenium interactions, see the conference report "AAAS: Kids Do Okay After Pregnant Moms Eat Mercury-Laden Fish" at Medpage Today (http://www.medpagetoday.com/OBGYN/Pregnancy/tb/2704) and "Mercury-Fighting Mineral in Fish Overlooked in Heated Debate" in the December 7 Vital Choices Newsletter (http://newsletter.vitalchoice.com/e_article000709707.cfm?x=b8wQMPW,b67kwpM8,w).

With this in mind, and considering the many proven beneficial effects of fish, particularly those high in omega 3s, in the diet, we have to question the motives of any groups or individuals who use the threat of mercury "poisoning" as a reason for stirring this pot any more than has been done in the past. The anti-fishing groups are continuing, or trying to continue, their campaign because it's a significant part of their over-arching political agenda, but the consuming public deserves much better from them, and from the so-called charitable foundations that support them.

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Save our dogfish?

> *"Having a school of dogfish hanging around seems like the marine equivalent of having the Donner Party spending the winter camped in your back yard"*.

We've written extensively on the situation concerning the overabundance of spiny dogfish in the waters off the US East coast and the negative impacts of this abnormally high biomass of these voracious predators on other, far more valuable (both in terms of recreational/commercial fishing economics, and the maintenance of a balanced ecosystem) species of fish (see The Dogfish Follies at http://www.fishnet-usa.com/dogfishfollies.html). In spite of this, supposedly concerned environmental activists are still using the spiny dogfish as the "poster fish" to continue their ongoing anti-fishing campaigns.

In a recent AP article (**Conservationists Rally to Support Sharks**, January 20, 2007), Tara Godvin closed with *"British fish and chips and German beer garden snacks have used the meat of spiny dog fish, which takes up to two years to develop inside its mother before being born,* (Sonja) *Fordham* (policy director of the Belgium-based Shark Alliance and director of the shark conservation program of the Washington-based Ocean Conservancy) *said."*

As has been pointed out many times before, the long gestation period of spiny dogfish allows the fish to be "born" as highly efficient predators, complete with a full complement of teeth and the voracious appetite that allows them to eat just about anything their size or smaller that they come across. While this characteristic of the species is always used as an anti-fishing argument by the save-the-sharks zealots, it's what has allowed dogfish to reach their present dominant position in our coastal waters in recent years, and from an evolutionary perspective is obviously much more a strength than a weakness. We shouldn't be involved in protecting spiny dogfish from fishermen, but in protecting other fish species from spiny dogfish.

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Magnuson amendments - what do we really need and when do we need it?

> *"The nation must continue working to protect and restore fisheries, but not without weighing the human factor and how excessive restrictions can hurt our fishermen*." New Jersey Congressman Jim Saxton in the Asbury Park (New Jersey) Press on December 28, 2006.

During the final hours of the 109th Congress the Magnuson-Stevens Act - which governs fisheries management in federal, international and to a limited but increasing extent, state waters – was reauthorized. Along with the predictable

increase in responsibilities and decrease in funding for the National Marine Fisheries Service (or NOAA Fisheries), a number of significant changes were included in the final version of the Bill.

Foremost among these, at least from the mid-Atlantic perspective, was a provision that exempted the summer flounder stocks from the rigid 10 years rebuilding requirement, allowing the stocks in this particular fishery another three years to reach target levels (see http://www.fishnet-usa.com/reauthor_one.html). It's obvious that this was recognition of the importance of this fishery to both recreational and commercial anglers and dependent businesses from South Carolina to Massachusetts and of the job their constituents did in making their representatives in Washington aware of this.

Unfortunately, this "fix" applies only to the summer flounder fishery, and not to the many others that are going to end up in the same place in the next few years. In fishery after fishery, restrictions have been put in place and the stocks have responded positively. This is always accomplished at great expense to the fishermen, and to the businesses that depend on their efforts. Quotas have been reduced, seasons have been shortened, gear modifications have been mandated and areas have been closed to fishing, and the fish have invariably responded. But as has been so compellingly demonstrated in the summer flounder fishery, these measures won't necessarily be adequate to returning particular stocks to their so-called "target" levels; that is, levels based on some previous, and always calculated, levels of abundance.

We can't overemphasize how important this three-year extension of the rebuilding period is going to be to the summer flounder-dependent recreational and commercial fishing industries in the mid-Atlantic. While all of the involved businesses are going to be hurt economically, the extension will allow most of them to remain viable. And what's the cost? Instead of being at a particular level immediately, the summer flounder stocks will be at that level three years later. Is the benefit worth the cost? If you're income is partially or wholly dependent on the fluke fishery it is. If you put any value on maintaining the character of our coastal communities, it is. If you take pleasure in catching one or several meals worth of summer flounder as a recreational angler, it is. If you look forward to an ocean-fresh flounder dinner at any of thousands of shore restaurants, it is. But if you're a foundation-funded "advocate" whose interest apparently begins and ends with the fish (or with bedeviling the fishermen that catch them), it seems that it doesn't.

Congressman Saxton hit the rebuilding nail squarely on the head when he wrote "w*ith three more years added to the rebuilding time frame, the compromise helps lessen the extreme socioeconomic impacts of steep cuts. They ensure Jersey Shore fishermen will enjoy more summer flounder in the short term, while also working toward an abundance for the long term."* Not at all surprisingly, however, this wasn't good enough for Michael Hirschfield, chief scientist for Oceana, the so-called "ocean advocacy" group that has achieved unprecedented unpopularity in the fishing industry. Mr. Hirschfield said of the several compromises engineered by Congressman Saxton and a handful of other Representatives and Senators who saw preserving the economic integrity of the many involved fishing businesses as important as meeting any arbitrary rebuilding schedules *"we're disappointed because we really do see this as an opportunity missed"* (J. Eilperin, **House Approves Overhaul of Rules for Fisheries**, Washington Post, December 10, 2006). While we can't be certain exactly what opportunity Mr. Hirschfield was disappointed in missing, it's hard to imagine it being anything other than the opportunity to ruin more fishing businesses and inflict more pain and suffering on fishing communities. And for what? To reach an arbitrarily determined summer flounder population level a few years earlier.

In the past the Magnuson-Stevens Act has undergone major amendments at roughly a ten-year interval. Unless we wish another ten years of seeking special exemptions in fishery after fishery when each comes up against totally unrealistic requirements such as the one that Congressman Saxton and a handful of his colleagues helped us to circumvent in the summer flounder fishery, we can't wait that long. Unless the "public be damned" attitudes of a handful of "ocean advocates" with seemingly unlimited budgets for public outreach are to hold sway, the flexibility that was just allowed in summer flounder management must be extended to all of our fisheries, both recreational and commercial.

When it comes to balancing the viability of fishing businesses with being at a particular point on a population rebuilding curve this year, next year or the year after, the fishing businesses are being accorded nowhere near adequate

importance. It's as simple as instituting massive cuts in a fishery immediately, and irrevocably damaging the businesses that depend on it, or phasing them in over several years and saving the businesses. Along with anyone who depends on either commercial or recreational fishing, that would have to be a no-brainer to anyone who has to really work for a living. Obviously, for those people who are dependent on the foundation grant cycle, it's irrelevant.

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New York Times – this is reporting?

On January 17 the New York Times ran "**Sea Sends Distress Call in One-Note Chowders**" by food writer Molly O'Neill. In the article, focusing on the preparation of fish chowder by several commercial fishermen in Stonington, Maine, Ms. O'Neill claimed that a truly successful Stonington chowder contained a number of different species of fish and shellfish, writing *"cod, haddock, white hake, halibut, cusk and dozens of other groundfish, fish that live near the ocean bottom, mingled with clams, shrimp, lobster and mussels under the creamy surface of the stew."* She then continued that this variety is no longer available to the Stonington fishermen, and that the local chowders, and the local chowder aficionados, have suffered in recent years due to the inability of the local fishermen to catch anything but lobster.

And of course this is due to overfishing and habitat degradation, particularly caused by large, corporate-owned vessels.

Ms. O'Neill quoted Ted Hoskins, retired "boat minister" with the Maine Sea Coast Mission, *"many of the older watermen retired and sold their days-at-sea or their quotas to large corporate fishing concerns that operate monster boats that can pull up to a million pounds in a single six-hour tow, denuding a swath of ocean about 600 feet long and up to 10 miles wide. The ocean floor can take 20 years to recover.*

We wouldn't dream of questioning Ms. O'Neill's contention that, at least in Maine, chowders were traditionally "*as diverse and densely packed as the local waters."* However, at the very beginning of her article she seems to set her stage with Herman Mellville having Ismael and Queequeg in his classic novel **Moby Dick** feasting on *"steaming bowls of the stuff*" that *"changed very little for nearly 200 years."* In the novel, two chowders were discussed; clam chowder and cod chowder. While bringing the crew of the *Pequod* into it certainly adds a certain flavor to the article, the flavors in the chowders that Ismael and Queequeg enjoyed in Nantucket had nothing to do with Ms. O'Neill's *"dozens of other groundfish".*

But we will definitely question Ms. O'Neill's and Mr. Hoskin's inference that there are corporate-owned *"monster boats"* at work in the New England groundfish fishery capable of catching a million pounds of fish in a single tow… or in any number of tows, for that matter. While it's true that there are boats in the herring/mackerel fishery that might be able to carry a million pounds of fish in their fish holds, they don't participate in the groundfish fishery, it's beyond comprehension that they'd be able to fill up with one six hour tow, and if they did, they'd end up with a million pounds of reduced quality fish rather than the high quality product that today's domestic and export markets demand. And other than a small and stringently monitored amount of bycatch, the herring/mackerel fishery has nothing to do with the groundfish fishery. The former is for relatively low-value fish that must – and can sustainably – be caught in the large amounts necessary to supply mostly export markets for processed/frozen product. It is stringently regulated. The latter is for high-value fish that are landed in much lesser amounts to mostly supply domestic fresh markets. It is stringently regulated as well.

"Denuding a swath of ocean about 600 feet wide and 10 miles long (we assume that's what Ms. O'Neill and/or Mr. Hoskins meant)*?"*In the first place, there isn't a net in use by commercial fishermen anywhere that's going to

"denude" a swath of ocean, no matter the size. Contrary to popular opinion – popular opinion misinformed by inaccurate and inflammatory statements like these – nets don't "denude" either the sea floor or the water column. Strictly regulated mesh sizes allow fish below a certain size to pass through, and nets are designed to have minimal interaction with the bottom. While it might be different in Stonington, casual discussions with fishermen with local roots going back several generations will disclose there are many areas that have been trawled intensively and continuously for several generations that are still productive. While trawling can change the character of some types of bottom others are unaffected, and any method of cost effectively harvesting commercial quantities of fish is going to have attendant impacts on the ocean ecosystem. Obviously no-impact fishing is as impossible as no-impact farming (for more on trawling/dredging impacts, see http://www.fishingnj.org/netusa9.htm and http://www.fishingnj.org/netusa1.htm). Whether from aquaculture, from trawling, from dredging or from hook-and-lining, fish in the diet means impacts on the environment, and our collective job is, and has always been, to minimize them.

It's extremely unfortunate that such misleading information can make its way into print, particularly in what is considered to be one of the very few national newspapers of record like the New York Times. Folks who are unfamiliar with the world of commercial fishing, or the world of chowder creation outside of Stonington, Maine, were undoubtedly left with a number of off-target impressions, and those impressions were in all likelihood reinforced because of their source.

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Doom and gloom in fisheries - the media and the (distorted) message

> *"Two journals with the highest profile, Science and Nature, clearly publish articles on fisheries not for their scientific merit, but for their publicity value. Beginning in at least 1993 with an article I co-authored (Ludwig et al. 1993), Science and Nature have published a long string of papers on the decline and collapse of fisheries that have attracted considerable public attention, and occasionally gaining coverage in the New York Times and the Washington Post. I assert that the peer review process has now totally failed and many of these papers are being published only because the editors and selected reviewers believe in the message, or because of their potential newsworthiness*." (R. Hilborn, Fisheries, Vol 31, #11, November, 2006 http://www.soest.hawaii.edu/PFRP/large_pelagics/Hilborn_2006(faith).pdf)

If there is one thing that distinguishes – or is supposed to distinguish – scientific publications, it's their objectivity, and that objectivity is guaranteed – or is supposed to be guaranteed – by a rigorous system of peer review. Before being published in legitimate scientific journals, articles are reviewed – or are supposed to be reviewed - by a panel of respected scientists from the same or related disciplines to ensure that the conclusions presented were arrived at through a rigorous application of the accepted principals of scientific research.

It won't be any surprise that we at FishNet have long accepted the discouraging fact that many "scientific" publications dealing with fisheries issues, particularly those written from the Chicken Little perspective, don't deserve that distinction. Even more discouraging is the fact that these publications are the ones that, thanks to effective and expensive media handling that most researchers can't avail themselves of, get almost all of the attention from the mainstream media.

In a recent edition of **Fisheries** magazine, a publication of the American Fisheries Society, Ray Hilborn, well-respected* professor of Fisheries Management at the University of Washington, used four examples of what we would only describe as shoddy research to illustrate the fact that what is published as fisheries science today is, instead, advocacy. In the column, titled **Faith Based Fisheries,** he wrote *"a community of belief has arisen whose credo has become 'fisheries management has failed, we need to abandon the old approaches and use marine protected areas and ecosystem-based management.' I fear that this belief has shaded the peer review process so badly that almost any paper showing a significant decline in fish abundance or benefits of marine protected areas has a high probability of getting favorable reviews in some journals regardless of the quality of the analysis. Critical peer review has been replaced by faith-based support for ideas and too many scientists have become advocates."*

As even a casual examination of domestic fish and shellfish landings will illustrate, fisheries management in the US hasn't failed. Some stocks are up and some stocks are down, just as was the case in the past and will be in the future. But overall, domestic seafood production has remained surprisingly stable for as long as records have been kept (see previous FishNet **Full of Sound and Fury** at http://www.fishnet-usa.com/then_now.html).

As we've written repeatedly, fisheries issues are exceedingly complex, proving at best difficult and at worst impossible for even people who are educated and experienced in the field to fully understand. Hence, when the results of supposedly acceptable science are presented with all of the foundation-funded hoopla and fanfare that accompanies the release of the latest "research" demonstrating that fishing is ruining the world's oceans, technically unsophisticated reporters can't be blamed for accepting it at face value. Or can they? It seems it wouldn't take too much extra effort to dig into the issues a little more deeply, but far too little of that is being done at present.

*Dr. Hilborn was one of three recipients in 2006 of the Volvo Environment Prize, *"awarded to internationally renowned experts and researchers. The Volvo Environment Prize Foundation was established in 1988 to support and recognize environmental research and development. Since then it has gained the status of being one of the world's most prestigious environment prizes."* University of British Columbia researcher Daniel Pauly, one of the most prominent and vocal members of the Pew-funded "doom and gloom in the world's fisheries" claque, was another recipient in 2006.

See also *Re-interpreting the Fisheries Crisis*, a one hour video presentation by Dr. Hilborn with the following introduction: "*Popular literature and the pages of Science and Nature have reported on the collapse of the world's fisheries. While there are many problems, most of these fisheries are producing at near maximum potential, and the loss of potential harvest from overfishing is small. In this program, Ray Hilborn discusses changes in objectives of fisheries management, ones with more concern about ecosystems and profitable fishing industries, and how there are many successful sustainable fisheries in the world from which we can learn.*" It's available in several formats at http://www.uwtv.org/programs/displayevent.aspx?rID=2515.

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North Carolina to address loss of commercial fishing infrastructure

> *"There's a rhythm to coastal life, entwined with the weather and the tides. For the fishermen, there's shrimp season, and months when crab and flounder are more likely to be pulled from the sea. That rhythm is being interfered with in many communities by a flood of development along coastal rivers and streams. It is encouraging that the legislature is taking a serious look at the problem.*
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> *Developers are in a mad dash to buy up North Carolina waterfront property, to build new homes, condos and shopping areas. A News & Observer series last year noted that more than 34,000 new homes were planned in coastal communities. Those new units have a ripple effect, including crowding out fish houses and crab processing businesses."* ("**Brakes near the breakers**," Raleigh News and Observer editorial, January 20, 2007)

The serious look that the News and Observer editorial is referring to is the Waterfront Access Study Committee, which has "*21 members, including representatives of the commercial and recreational fishing industries, marine trades, environmentalists, state agencies and local governments*." ("**Panel working on waterfront access**," Jay Price, News and Observer, September 27, 2006, and available at http://www.newsobserver.com/1233/story/491276.html).

One of the options being considered is a state-mandated waterfront property tax valuation based on current use rather than speculative value. Such schemes have proven effective in preserving small farms and would certainly help North Carolina's commercial fishing industry, because without the necessary onshore infrastructure there can't be a commercial – or recreational – fishery.

But above and beyond that, it's necessary for the Committee to also consider the impact of inflexible fisheries management requirements, particularly at the federal level. It takes fish to run a fish house, and it takes a continuous supply of fish to maintain a fish business. Severely reducing – or eliminating – the availability of one or several particular species, even if the reduction is only temporary, means lost revenues, lost markets and lost infrastructure, and when the losses reach a certain point the business is going to close, regardless of tax incentives or the good will of government.

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The Oilslick

> *In an article published in the Jan. 5 edition of Science magazine, scientists from the Argentine Fundación Patagonia and the U.S. University of Washington warned that fishing for anchoita (Engraulis anchoita) in the South Atlantic threatens endemic species that sustain ecotourism in the region*. (M. Valente, Alarm Sounded for Patagonian Seas, Environment-Argentina/Tierramérica network.)

The scientists are Elizabeth Skewgar and P. Dee Boersma from the University of Washington and Graham Harris and Guillermo Caille from the Fundación Patagonia Natural in Argentina. From Ms. Valente's reporting, it would seem to be yet another instance, "discovered" by independent scientists from two continents, of commercial fish harvesting leading to the ruination of yet another ocean ecosystem. To her credit, and unlike a spate of environmental journalists who accepted the Science story as gospel, Ms. Valente did a credible job of balancing the "blame it all on fishing" perspective of Claudio Campagna, an Argentine researcher from the National Patagonia Centre, and the "what's the fuss about" point of view of Ernesto Godelman, president of the non-governmental Centre for the Defence of National Fishing.

As we've become accustomed to doing in recent years, we did a little internet researching to determine exactly how "independent" the four listed authors and the quoted experts actually are.

Needless to say, we weren't awfully surprised to discover that Mr. Campagna, the expert opposed to the new commercial fishery, was a Pew Scholar, nor that his Pew project involved establishing marine protected areas off Argentina's coast. We also found that he was one of the founders of the Fundación Patagonia Natural, where two of the four authors of the Science report are employed. Author Graham Harris was a co-founder and is now the President of the Fundación (http://www.pewoceanscience.org/fellows/ccampagna/index.php?pfID=9931).

Nor were we surprised to learn that author Boersma was also a Pew Fellow, or that her Pew focus was on developing *"marine reserves and zoning arrangements to protect penguins and declining fish stocks"* (http://161.58.251.199/pewFellowsDirectoryTemplate.php?PEWSerialInt=3664).

Just as she should have done, Ms. Valente made it obvious that Mr. Godelman was connected with, and an advocate for, commercial fishing.. But once again we are being presented with the Pew Trust's perspective (assuming, of course, that Pew uses it's funding to carry out it's own agenda – see http://www.pewtrusts.com/pdf/environment_forum_josh.pdf), but with no indication that's what it is. We would strongly suggest that whenever an anti-fishing study comes to light, particularly if it does so with the amount of media attention that almost always accompanies the release of reports of Pew- underwritten projects, Google or a similar search engine be used to show who or what might be in the way of influencing the involved researchers. As we showed in **The Pew Commission – a basis for national ocean policy?** (http://www.fishingnj.org/netusa23.htm), the connections are very often there, it just takes a little effort to dig them out.