

Requiem for 'iconic bluefin' extinction myth

This is the first installment of a multipart guest column by industry advocate Rich Ruais written in response to repeated attempts by environmental groups and others to have bluefin tuna declared a threatened or endangered species.

In these columns, Ruais will discuss the history of the fishery, as well as bluefin science and management, and argue that this history supports putting to rest once and for all the idea that Atlantic bluefin tuna are on the verge of extinction.

—Editor

ince 1974, there have been six major efforts – five in the US and one in Canada – to list Atlantic bluefin tuna as a species that is threatened or endangered with being fished to extinction.

Yet, during the last 37 years of extinction talk, annual Atlantic-wide bluefin tuna landings have varied from approximately 25,000 metric tons (mt) to more than an estimated 60,000 mt.

The July 2011 Commercial Fisheries News ably reported the main facts and latest peer-reviewed science used by the National Oceanic and Atmospheric Administration to reject the most recent assault on the bluefin fishery – a

GUEST COLUMN

by Rich Ruais

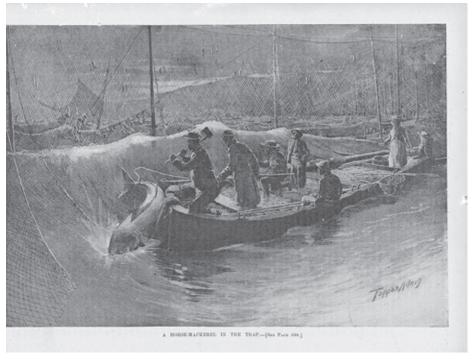
petition from the Center for Biological Diversity to list bluefin as threatened or endangered (see CFN July 2011, "ESA report details up-to-date bluefin science").

Given the histories of both the eastern and western fisheries, major scientific advancements, a debunking of the critically flawed 1981 decision to arbitrarily establish a management boundary line between east and west stocks, and the consistent rejection of these repeated attempts to mischaracterize the status of the resource, most fishermen are wondering this:

Why all the fuss and wasting of precious resources on silly extinction listings when that time, energy, and money could have been spent improving our understanding of the fish?

Who's behind it?

Both national fishery agencies and environmental nongovernmental organizations (ENGOs) have initiated these threatened/endangered status efforts, citing overfishing or, most



Scan courtesy of Rich Ruais

It was common for "horse mackerel," or "tunny" as giant tuna were called, to invade mackerel traps along the coast of Maine looking for an easy meal, only to be axed by the trappers.

recently, the combined effects of overfishing and the 2010 British Petroleum oil spill in the Gulf of Mexico.

No doubt, some of the proposed listings came from individuals and organizations sincerely concerned about the resource. However, others have

engaged in these pursuits to exploit the economic prosperity that comes from "extinction campaigns" or for the notoriety and fame that comes from worldwide media attention or out of sheer ignorance. Some were motivated by all of the above.

As a result of these relentless campaigns, the "magnificent" bluefin tuna has evolved into the "charismatic" giant bluefin and now into the "iconic" giant bluefin. This increasingly lofty labeling also has helped to support and define the lucrative careers of several high-profile scientists, doomsday book authors, and ENGO leaders.

The US government, too, has used "extinction proposals" as leverage when seeking support for questionable unilateral western Atlantic conservation measures or as justification for illegitimate domestic objectives such as limiting commercial utilization or

instituting regional shifts in major fisheries.

We'll look at each of the six extinction proposals in more detail in later installments of this "requiem for the 'iconic bluefin' extinction myth," but first, some background to put those developments in perspective.

Information gaps

The 9,000-year history of Atlantic bluefin tuna fishing is well established on both sides of the Atlantic and Mediterranean Sea. Although there are huge time gaps where detailed descriptions are unavailable and will likely never be known, we do know that the fisheries were sustained and the species survived.

Interestingly, these gaps in the history of the fisheries are equally matched or surpassed by what remains unknown about the biology and ecology of bluefin.

We still do not understand stock structure, the usefulness of applying classic stock concepts to bluefin tuna, the full range of migration patterns and spawning areas, the basics of natural mortality, the reality of apparent differences in age and size of sexual maturity in various populations, and much more.

These crucial information gaps

continue to hinder effective and efficient conservation and management plans despite intensive research efforts involving millions of dollars, euros, and yen over the last 40 years, particularly over the last two decades.

Ironically, our limited critical scientific understanding is the driving force for overzealous campaigns for exotic protection regimes. In the end, it is also what makes the "extinction" drives look foolish and appear to be motivated by groups and individuals that despise commercial and even recreational fishing.

This is especially true in light of the fundamental, longstanding understandings about bluefin that we *do* have:

- There are multiple bluefin tuna populations and spawning grounds;
- The female bluefin is highly fecund;
- Bluefin productivity can be high; and
- The Atlantic-wide distribution range of these fish is massive.

All of these confirmed factors combined make the possibility of bluefin tuna extinction remote and miniscule.

Eastern, Med

Fisheries for bluefin tuna in the Mediterranean Sea and Eastern Atlantic have existed since at least 7,000 BC with the primary harvest method being fixed traps, although artisanal handgears such as harpoons, handlines, and crude-to-sophisticated longlines have been employed.

Aristotle pondered on the origin and migration of bluefin tuna and his writings on the subject are referenced in many scientific publications.

Early writings and archaeological and epigraphic findings indicate that, beginning around 300 BC, Roman Empire army provisions included dried and salted "tunny fish," as well as oysters, mussels, and cod. As Napoleon once noted, "An army marches on its stomach."

Roman gold coins featured raised tunas on one side. In her book "Mattanza: Love and Death in the Sea of Sicily," author Theresa Maggio

reported that a 4,000-year-old cave painting of a giant bluefin is the earliest evidence of giant tuna fishing near Sicily.

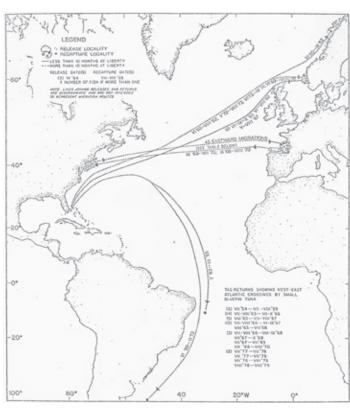
For those who find fishing on

spawning aggregations of fish an unconscionably unwise practice under any circumstances, the Mediterranean fishery serves as the longest case history of sustainability of this practice – at least when the primary fishing gear is passive, fixed-trap gear.

Indeed, there is little doubt that, for many years, the bluefin tuna

Courtesy of Rich Ruais

Early writings and archaeological findings provide evidence that fisheries for bluefin tuna in the Mediterranean Sea and eastern Atlantic have existed since at least 7,000 BC. The Roman coin at left, which could be more than 2,000 years old, has a raised tuna on one side.



Courtesy of Rich Rua

Transatlantic and transequatorial movements of bluefin tuna as documented by Frank Mather from tag returns obtained through 1979.

fishery in the Mediterranean was as important for the production of "bottarga" from the roe of the giant tuna (see story next page) as it was for the flesh or oils.

Western Atlantic

Although the history of fisheries for bluefin in the western Atlantic cannot match the longevity of the Mediterranean fisheries, it is well documented that Native Americans were fond of bluefin flesh, especially smoked.

One method of capture along the shores of Maine included locating giants stranded by outgoing tides in tidal pools, making them available for dispatch by tomahawk, an effective if somewhat messy technique.

It was also common for "horse mackerel," or "tunny" as giant tuna were called, to invade mackerel traps along the coast of Maine looking for an easy meal, only to be axed by the trappers.

Early uses of bluefin caught by US commercial fishermen included gathering the oil behind the head and abdomen for lamp lights, canning and smoking the flesh for food, and grinding up the remains for pet food and fertilizer.

It is difficult to imagine either Indians or early Colonial fishermen fishing for cod on Stellwagen Bank in August with handlines and not occasionally having their live cod catch swallowed up by a giant.

Codfishing began along the coastal US and on Georges Bank and the Grand Banks in the 1600s or possibly earlier. Mark Kurlansky reports in his famous book "Cod" of five trips by the Vikings between 985 and 1011 to the "Woodland" in search of new codfishing grounds. If, as theorized, these trips actually were to Gulf of Maine waters, then western Atlantic interactions with bluefin tuna might have begun 500 years earlier than currently thought.

Harpoon-and-keg gear fishing by small boats from Maine, New Hampshire, and Massachusetts for surface-swimming bluefin tuna began sometime during the 1930s, combining both limited but important commercial value and a summer seasonal sporting activity.

Purse seine fishing began sporadically during the 1930s but significant catches – 179 mt – were made in 1958 by the Provincetown, MA-based F/V Silver Mink. This same vessel set a record East Coast seine catch of 750 mt in a-56-day season in 1959.

Recreational use of "The World's Top Big Game Fish" started in the 1930s with tournaments such as Nova Scotia's Sharp Tournament Cup, which ran through the 1960s, the US Tuna Tournament out of Block Island, RI, and, more recently, the Sturdivant Island tournament, which started in 1998.

Since the end of the World Wars, dozens if not hundreds of tournaments from Texas to Maine have offered considerable cash prizes for the largest bluefin tuna or highest number of bluefin caught. Even a partial list of famous bluefin tuna anglers is impressive, including such notables as Ernest Hemingway, Roy Merritt, Frank Schaefer of the prestigious New York Athletic Club, and Don Slater, a Galilee, RI bluefin record holder.

The predecessor agency of the National Marine Fisheries Service, the Bureau of Commercial Fisheries, began exploring the possibility of a US commercial longline fishery for bluefin tuna in 1951. We'll pick up the "modern era" story in the September CFN with the failure of the bureau to encourage a directed longline bluefin fishery and the successful development of the purse seine fishery, which began in 1961.

Rich Ruais

Rich Ruais, executive director of the American Bluefin Tuna Association, has been working with the bluefin tuna industry since 1991.



Photo courtesy of Rich Ruais

Pulling the roe sacs, which will be used to make bottarga, out of a bluefin tuna. The small size of the carcass is evidence, as scientists say, that bluefin in the east are sexually mature at much younger ages than in the west.

Sardinian delicacy 'bottarga' made from bluefin tuna roe

Bottarga is salted-and-cured fish roe traditionally made in Sardinia from bluefin tuna in full-spawn condition caught in traps. Roe sacs are placed in cloth bags, salted, and then lined up on planks, covered with additional planks, and weighed down with large stones. Finally, the sacs are hung from lines for a period of time.

The result is a semisolid bottarga that is traditionally sliced thin or ground and sprinkled on seafood pasta dishes all across Italy and the nearby islands. Many who have tried bottarga report the flavor "is the essence of the sea, fishy, but not in a bad way, and very briny from the salt." Sprinkled over spaghetti and clam sauce, it is said "to instantly transport you to the seaside."

During the 1980s and '90s, then Boston-based fish dealer Jerry Abrams, an early US pioneer of the fresh giant export market to Japan, set up an operation to process and market trap fish in Sardinia.

Abrams and his longtime friend and colleague, Gloucester waterfront historian Mark Godfried, have shared many stories of regular pasta dinners with Sardinian locals, during which they all would "easily sprinkle the entire western bluefin tuna quota of 2,660 metric tons over each evening's pasta meal."

Their stories are in vivid contrast with strict implementation of the limited western quota and prohibition on fishing in the spawning grounds.

Rich Ruais



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Bluefin extinction myth Part 2: Development of the commercial fisheries

In this guest column series, industry advocate Rich Ruais is documenting the history of North Atlantic bluefin tuna fisheries and management, which, he argues, underscores the folly of repeated attempts to list bluefin under the Endangered Species Act (ESA).

Part 1 of the series was published in the August CFN. Part 2 picks up with the beginning of the commercial bluefin fishery in the western Atlantic when the Japanese longline fleet began expanding its operations and the genesis of concern about fishing impacts on the resource.

-Editor

It didn't take long for the Japanese to create a fishing pattern once they moved into the western Atlantic in 1956.

Vessels would begin fishing in October around the equator, move northwesterly into the Gulf of Mexico, work their way up through coastal US and Canadian waters, and then sail across the North Atlantic to eastern Atlantic bluefin fishing grounds. By May, many Japanese vessels would enter the Mediterranean Sea to target bluefin that had schooled up to spawn. These concentrations made for efficient fishing.

There was little interruption in this cycle of harvest for a number of years, with one exception.

While the normal catch off Brazil was made up of tropical tunas such as yellowfin and bigeye, bluefin became a focus species for the Japanese from 1962 to 1966 when there was a sharp increase in bluefin catches of between 5,000 metric tons (mt) and 12,000 mt annually.

This period of plenty was followed by a complete cessation of bluefin catches. The utter lack of bluefin actually forced the fleet to move early onto Caribbean and Gulf of Mexico fishing grounds.

Scientists are still confounded by the

GUEST COLUMN



abrupt end of catches off Brazil, but theories include possible overfishing of an "isolated"

population of bluefin or a shift in migration patterns caused by environmental changes, including possibly diminished forage availability.

Meanwhile, in the US, the Bureau of Commercial Fisheries, under the leadership of J.J. Murray and Pete Wilson, began exploring the possibility of a commercial coastal and offshore longline fishery for bluefin. Between

1951 and 1953, the agency conducted cruises on several vessels – the schooner Marjorie Parker, the bureau's exploratory vessel Delaware, and the Gloucester, MA trawler Golden Eagle.

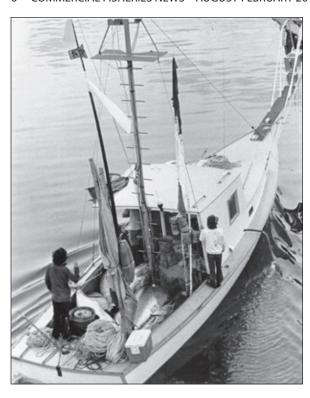
With catch rates averaging 12.8 tuna per 100 hooks to as high as 46 tuna per 100 hooks using purchased Japanese longline gear, these cruises were considered hugely successful. They took place offshore in the Gulf of Maine, on Stellwagen Bank, and up to 100 miles offshore down to New Jersey.

Pete Wilson also enlisted small, 35'-to-40' Gloucester boats such as the Julie Ann, Here We Go, and Aries to try



Photo courtesy of Rich Ruai

The purse seiner Connie Jean at work in northern Baja California on Pacific bluefin. The vessel is engaged in a harvest and transfer process similar to that used on the East Coast in the 1990s to gather fish for the New England Aquarium's early bluefin research program. Photo courtesy of Rich Ruais



Photos courtesy of the Weiner family

These photos are from about 1970. Sonny McIntire is running his father Carl McIntire's boat, the Priscilla Cameron. Sonny is fishing here with his young sons Bobby (maybe 11 years old) and Billy (10 years). They caught the fish off Biddeford Pool, ME. The McIntires were the first commercial harpoon boat in Maine to install an aluminum mast for spotting. They eventually put steering and controls in the mast, too. Carl was very innovative.



the fishery. The Julie Ann achieved a phenomenal catch rate of 57.1 tuna with 100 hooks in a 3-1/2-hour set. The other two boats averaged 30-to-40 fish per 100 hooks. Both study reports encouraged the pursuit of tuna longline fisheries, noting the "positive advantages of these operations" and the fact that "potentially valuable tuna grounds, producing excellent individual catches, were found within 30 miles of land."

Despite encouragement from the bureau, US longline catches of bluefin were minimal for more than two decades, producing an average of only about 18 mt per year over the 23-year period from 1960 to 1982. Swordfish longline catches, however, soared from 287 mt in 1970 to 5,410 mt by 1982.

Then, in 1983, the longline catch of bluefin increased to 114 mt and averaged about 300 mt per year until 1990.

Purse seiners

The picture was quite different for the harpoon, purse seine, and commercial and recreational rod-and-reel bluefin fisheries. Catches rocketed for these groups beginning in the early 1960s. With the exception of the decline of purse seine catches over the last several years, these fisheries continue today at a sustainable level.

The eruption of small-scale US bluefin fisheries can be traced back to 1961, when word of the bureau's exploratory

research reached spotter pilot Roger Hillhouse and West Coast seiner Leonard Ingrande.

In late May of 1962, Ingrande left San Diego, CA, bringing the F/V North Queen through the Panama Canal and on up to New Bedford where he docked on June 26. Two other San Pedro, CA seiners, the A.A. Ferrante and the Western Star, followed shortly after to fish for a new cannery company – Cape Cod Tuna – in Eastport, ME.

By the end of the 1962 US tuna purse seine season, 3,768 mt of bluefin tuna had been landed. For the 20-year period 1962 to 1981, the annual catch averaged 1,978 mt with peak catches of 5,447 mt and 4,571 mt in 1963 and 1964 respectively. Several other domestic seine boats and captains, including the late Frank Cyganowski, joined the new fishery during the 1960s. US seine boats were small, with carrying capacities under 200 mt.

This was in stark contrast to Canada's "super seiners," with 1,000-mt holding capacities. During their annual return from the Pacific, these vessels often joined East Coast seiners to "top off" with bluefin from 1963 to 1965. Their modest "reported" catches were around 500 mt each year.

Following a period of no seine landings by Canada from 1966 to 1969, the vessels resumed fishing in 1970 and 1971 with much larger catches of 1,161 mt and 935 mt respectively. Canada reported lower, 300-mt average seine landings from 1972 to 1983.

Handgear fisheries

Catches by rod and reel, harpoon, and handlines also increased dramatically in the 1960s, especially with the value of bluefin now jumping from pennies to 10 cents per pound to 50 cents and higher in the late 1960s and then to 75 cents and more once the export market began in earnest in the early 1970s.

The fisheries began to take on a much more significant commercial face with the participation of renowned, experienced New England fishing families, including the McIntires, Gerrys, Gilliams, and Weiners, as well as Henry Strater, Bobby Woods, Dana Kangas, Herbie Randall, Charlie Mayo, and too many others to mention here.

Handgear landings climbed from 24 mt in 1960 to 340 mt in 1962 to 1,072 mt in 1963, and averaged 941 mt from 1962 to 1972. US handgear catches peaked in 1966 at an amazing 3,615 mt.

Canada's handgear fishery also increased from 5 mt in 1960 to an annual average of 115 mt from 1962 to 1972. From 1973 to 1981, Canada's handgear fishery more than doubled to an average of 273 mt per year.

Growing concerns

In a "Living on Earth" radio interview

aired on July 15 titled "Can the Bluefin Bounce Back?" Andre Boustany of Duke University said, "In the past decade or so, we've learned more about bluefin tuna than we did in maybe 100 years before that."

This true statement is likely to be repeated in another 30 or 40 years by a new generation of bright scientists working with vastly improved research tools. Bluefin are not giving up their secrets either quickly or cheaply. What was known about bluefin tuna from the 1960s through the 1990s was pitifully inadequate to support attempts at regional or complex international management.

Before the 1970s, there were no formal stock assessments of Atlantic bluefin. Instead, only fragmented catch data, including limited size- and gear-specific catch data, was available on developing and historical fisheries, along with some very limited tagging data.

There also were a number of research papers on bluefin life history and fairly extensive historical catch data from the Norwegian seine and Italian trap fisheries. The Norwegian catch fell dramatically and quickly in the 1960s. And, following significant increases in

Mediterranean purse seine effort on small fish in the 1960s, the Italian trap fisheries also saw a dramatic decline of larger fish by the early 1970s.

This rapid development of the fishery on both sides of the Atlantic and in the Mediterranean Sea by Japanese longline boats, coupled with continuing US and Canadian purse seine fisheries and new purse seine development in the Mediterranean and Atlantic for small bluefin by the Italians and Moroccans, alarmed many observers.

Strong concerns about the resource were voiced, primarily by US scientists, wealthy US gamefish anglers, and tagging expert Frank Mather of the Woods Hole Oceanographic Institution.

These concerns included:

- Expansion of the Japanese longline fishery into the Gulf of Mexico and Atlantic with substantial billfish bycatch and into the Mediterranean Sea:
- The end of historical Nordic and Brazilian fisheries;
- Drastic reductions in total catches for some Mediterranean trap fisheries and other fisheries, including the US recreational fishery on small bluefin; and
- Imbalances and gaps in the size

composition of bluefin populations in certain areas, such as the absence of medium-sized fish in the US fishery.

These concerns accelerated development of the International Convention for the Conservation of Atlantic Tunas, which was signed in Rio de Janeiro, Brazil in May 1966, ratified by the US on April 24, 1967, and entered into force by presidential proclamation in October 1969. This convention gave rise to ICCAT, the International Commission for the Conservation of Atlantic Tunas.

In the October CFN, we'll look at the first ESA listing proposals for bluefin, the influence of the sportfishing lobby on US negotiating strategies at ICCAT, and the terrible decision by the National Marine Fisheries Service in 1981 to politicize ICCAT science, which led to the arbitrary management dividing line at 45°W longitude and the imposition of unilateral conservation regimes on the western Atlantic for the next 25 years.

Rich Ruais

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Bluefin extinction myth Part 3: Evolution of the two-stock hypothesis

In this guest column series, industry advocate Rich Ruais is documenting the history of North Atlantic bluefin tuna fisheries and management, which, he argues, underscores the folly of repeated attempts to list bluefin under the Endangered Species Act (ESA).

Parts 1 and 2 of the series were published in the August and September 2011 CFNs. Part 3 picks up with the filing of the first ESA petition and an examination of the influence high-profile sportfishing organizations had on the early years of the US's participation in ICCAT, the International Commission for the Conservation of Atlantic Tunas.

 $-\!Editor$

Atlantic bluefin tuna was the first major species of serious attention at the initial few meetings of the International Commission for the Conservation of Atlantic Tunas (ICCAT) in the early 1970s and the subject of the first reports from ICCAT's Standing Committee on Research and Statistics (SCRS). From the beginning, the US and Canada pressed ICCAT for immediate conservation agreements on bluefin.

In 1973 and 1974, the US demanded a 25% reduction in catches from the 1968-to-1971 average for large fish, a 50% reduction in the harvest of smaller, less-than-seven-year-old fish, and a minimum size of 14 pounds, but to no avail.

ICCAT finally agreed in 1975 to a more modest two-part proposal: a prohibition on the taking and landing of Atlantic bluefin tuna less than 6.4 kilograms with a tolerance; and a limit on fishing mortality Atlantic-wide to recent levels without defining what measures were necessary to achieve the latter measure.

However, not willing to wait for implementation of domestic legislation allowing regulation of US fishermen

GUEST COLUMN



under ICCAT agreements – recall that the original 200mile limit law of 1976 specifically

excluded authority to regulate tunas – the Sport Fishing Institute (SFI) petitioned the secretary of commerce on May 24, 1974 to declare "the northern bluefin tuna of the Atlantic Ocean to be a 'threatened species' under Section 4 of the Endangered Species Act (ESA) of 1973."

Thus, the first petition for an ESA listing for bluefin was submitted

and the Fish and Wildlife Service and the National Marine Fisheries Service (NMFS) proceeded on March 25, 1975 with "a notice of proposed determination ... that Atlantic bluefin tuna ... is a threatened species."

The SFI petition and NMFS fear mongering even convinced *National Fisherman* magazine Editor William Walker

to write a bluefin story in the June 1974 issue sub-titled "Biologists See Extinction As Real Threat."

The proposed SFI ESA petition was eventually "abrogated," meaning made unnecessary, when President Ford signed the Atlantic Tunas Convention Act of 1975 (ATCA) into law on Aug. 5 and when the "voluntary" 1974 and 1975 tuna industry restrictions became federal regulations upon publication on Aug. 13, 1975 (visit <www.theabta.com> for a summary of the "volunteer" program).

While the US, Canada, and Japan immediately responded to the ICCAT action, the evidence is abundantly clear that no eastern Atlantic fishing country actively fishing for bluefin at the time took any effective conservation measures.

It was business as usual for the next

25 years for the Italians, Moroccans, Spanish, French, and other governments and fishing industries from the artisanal level up to the industrialized fisheries by purse seiners, driftnetters, and longliners, especially on small, nowillegal, undersized bluefin in the eastern Atlantic and Mediterranean Sea.

In fact, exactly 20 years after the SFI ESA petition and the passage of at least one generation of bluefin, catches for the eastern Atlantic and Mediterranean Sea, far from being reduced, had steadily risen to approximately 50,000 metric tons (mt) in 1995 and 1996 – more than double the level of catches purported to be

threatening the stock in 1974 and 1975.

Clearly, the first ESA petition seeking "threatened or endangered with extinction" status was sheer nonsense given the reality of continuing catches.

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Rising catches

Interestingly, reported catch from the eastern Atlantic

and Mediterranean Sea during the fouryear period 1970-1973 was less than 11,000 mt annually. After the ICCAT discussion and eventual passage of the recommendation to limit mortality to "recent levels," reported catches for the next four years, 1974-1977, nearly doubled to 20,350 mt.

A similar "phenomenon" occurred and was recognized in ICCAT scientific reports when eastern quota and quotashare discussions began to get more frequent around 1994. The average reported catch from 1990 to 1993 of 28,948 mt jumped to an average catch of 47,930 mt for the four-year period 1994-1997.

ICCAT'S SCRS suggested that the spikes in reported catch were strategic responses to provide a basis for claims Manorandum for: Commerce Department Officials

From:

Helen Runnells, Fisheries Coordinator, National Fish and Wildlife Foundation 202-208-3040

Subject:

Participants in Wednesday's meetings at the Department of Commerce

I am forwarding a list of the INTERCOM committee members. nan forwarding a list of the individuals formed this group affire the 1988 election to promote better management of our lished resources. Their name is derived from the two departments which major responsibility for marine and inland fisheries, Interior and Commerce. These individuals all contribute their time and expenses to the organization and have no staff.

They will have met with Roger Porter at the White House to discuss the bluefin tune and advocate a more conservative approach to the management of that fishery.

Their visit to Commerce will focus on broader issues suc. Acre support for Bill Fox, the Director of the National Marine Fisheries Servic al for NMFS as an agency within Commerce.

George day served on the Florida Fisheries Commission with Fox in the early eighties and has been one of his strongest supportars. Barley has raised considerable funds for the Republican party and hails from Orlando.

George Hommel takes the President bone fishing every year off the coast of Florida and is president of World Wide Sportsman, Inc.

They will also be accompanied by John L. Morris, the founder of Bass Pro Shops, the leading supplier of premium quality fishing tackle which is headquartered in Springfield, Missouri. Morris currently serves as the Chairman of the National Fish and Wildlife Foundation's Board of Directors.

I will be escorting them to their various meetings in the Commerce Department on Wednesday afternoon.

if you need additional Please don't hesitate to call me information.

This National Fish and Wildlife Foundation (NFWF) memo, secured in 1992 by the East Coast Tuna Association, provides evidence of the high-level access and influence wealthy, well-connected individuals can have to achieve their objectives. In this case, the objective was to build support for NMFS SEFC Director Bill Fox's insistence that the US bluefin quota be reduced an additional 50% from the 65% reduction level achieved starting in 1983.

In addition to the personal fishing friends of President George H. W. Bush listed in the memo, INTERCOM Committee members included Curt Gowdy, star TV sports announcer, and Perry Bass, patriarch of a famous Texas oil family, who had a Forbes-estimated fortune in excess of \$9 billion when he died in 2006.

Created by Congress in 1984, NFWF is a nonprofit foundation run by a board of directors - all confirmed by the White House - that partners with the federal government, private corporations, foundations, natural resource agencies, and conservation organizations to secure funds, which it then distributes through natural resource-oriented grant programs. In 2010, combined federal grant and private contributions totaled about \$102 million, with just under 50% coming from the federal government.

Rich Ruais

of higher shares of any eventual quotas should they come to pass.

US stakeholder influence

With the onset of domestic and international management for the western Atlantic, East Coast commercial tuna fishermen found themselves without effective organizational representation in the new and evolving though somewhat remote ATCA process.

Filling the vacuum from the East Coast were well-financed elite recreational billfish groups, including the National Coalition for Maine Conservation led by Savannah, GA surgeon Dr. Frank Carlton and attorney Chris Weld, a partner in the prestigious Boston law firm of Sullivan and Worcester. The International Game Fish Association (IGFA) was another elite group exerting influence beginning in the early 1970s.

SFI, the Sport Fishing Institute led by Gil Radonski, was especially involved over the next 20 years, propelled by its members' and Radonski's bitter reaction to the rejection of their ESA petition.

The driving motivation behind most of these groups was their concern over the increase in billfish bycatch in the Japanese pelagic longline fishery in the Gulf of Mexico and off the East Coast.

Representing Gulf of Mexico big-game interests was attorney Maumus Claverie Jr. of the New Orleans Big Game Fishing Club. Before 1982, Claverie had arranged a voluntary agreement with Japanese interests whereby Japanese fishing operations would not transfer effort to yellowfin tuna in the Gulf. An expanded yellowfin fishery would have interfered more with billfish than the existing fishery targeted on bluefin.

Speaking for the US commercial fishery in the 1970s were representatives of the West Coast tuna canning industry from Van Camp, Star-Kist, Bumblebee, Chicken of the Sea, and other companies. They were joined by leaders of the West Coast tuna "clipper fleet" from San Diego, also known as the "Tuna Capital of the World," first from the American Tunaboat Association and later from the US Tuna Foundation, which was formed in July 1977.

Prior to 1982, there was little or no effective US East Coast commercial influence on bluefin government actions. The first US ICCAT commercial commissioners were West Coast cannery representatives.

Filling the East Coast commercial industry representation vacuum was easy and justified given the San Diego clipper fleet's production of tropical tunas in the Atlantic off the west coast of Africa. In some years – coinciding with the beginning of US involvement in ICCAT - that production was significant, with catches of over 21,000 mt of skipjack in 1974, over 14,000 mt of Atlantic yellowfin tuna in 1975, and almost 900 mt of Atlantic bigeye in 1974.

Some of this Atlantic effort was exerted, no doubt, to escape the soon-toexplode controversy over purse seiner bycatch of Pacific dolphins, which swam above desirable yellowfin tuna schools. The tuna/dolphin conflict led, in large part, to the passage of the Marine Mammal Protection Act in 1972.

Science shift

Not only was San Diego the tunafishing capital of the world in the 1970s, it also was the capital of tuna scientific expertise. Within 30 miles of San Diego, the top world tuna scientists were pursuing tuna research at the Scripps Institution of Oceanography, Inter-American Tropical Tuna Commission, and the NMFS Southwest Fisheries Center (SWFC) in La Jolla, CA. Therefore, it was logical that the SWFC was the leading US contributor to ICCAT in the 1970s.

The first chairman of the US ICCAT Advisory Committee was Gordon

Prior to 1982, there

was little or no

effective US East

Coast commercial

influence on bluefin

government actions.

Broadhead, who was originally a scientist for Van Camp Canneries and then founder of the well-respected fishery analysis consulting company, Living Marine Resources Inc. in La Jolla.

In 1975, aware that the Atlantic tuna issues were going to be complicated and would require additional talent, NMFS leadership appointed Dr. Brian Rothschild the new director of the SWFC. He immediately initiated a reorganization. One of the new departments Rothschild created was the Oceanic Fisheries Resource Division and, in 1976, he appointed a new

scientist, Dr. William J. Fox, to head up the division with Atlantic responsibilities.

From the beginning, it was clear that Fox had a mission for bluefin, one that might be more difficult to achieve operating in the West Coast shadow of the world's top tuna population assessment talent such as Dr.

Jim Joseph, arguably the 20th century's most renowned tuna expert, Dr. Gary Sakagawa, Rothschild, and many more.

The SWFC scientists were known for demanding well-grounded scientific analysis to support management recommendations and, thus, were characterized by early environmental groups as being "too close to the cannery industry" and reluctant to support aggressive conservation efforts.

At the age of 33, Fox cornered the appointment as director of the NMFS Southeast Fisheries Center (SEFC) in Miami, FL. The move to Miami occurred in 1978.

At least until 1976, the official US scientific "hypothesis" was that "North Atlantic bluefin tuna may constitute a single stock to which recruitment is contributed by older spawners in the Gulf of Mexico and younger ones in the Mediterranean Sea" (J. Tyler, R. Baglin, F. Berry, W. Parks, and L. Rivas, ICCAT Working Document SCRS/1976 with all authors from the NMFS SEFC).

Given the refusal of eastern ICCAT nations to implement even the minor 1974 action on minimum size and cap on effort, the single stock hypothesis was seen by Bill Fox and others as a political impediment to getting more serious restrictions in place on western commercial fisheries. The notion of unilateral western action, lacking scientific justification of some probability

of success on an Atlantic-wide resource, was not yet generally accepted, except among the most radical anglers and environmental groups.

A new "hypothesis"

"There is one great difficulty with a good hypothesis. When it is completed and rounded ... it is likely to become a thing in itself, a work of art. ... Even if subsequent information should shoot a hole in it, one hates to tear it down. ... When a hypothesis is deeply accepted, it becomes a growth, which only a kind of surgery can amputate." — "The Log

from the Sea of Cortez," 1941.

This quote by John Steinbeck, author of "The Grapes of Wrath," "Of Mice and Men," and "Cannery Row," is a remarkable summation of the situation and what happened next.

The single-stock working hypothesis had to be changed so the argument could be that

the west could protect itself even without conservation in the larger eastern fisheries.

It didn't help this cause when Chris Weld returned from the 1975 ICCAT meeting and reported in a memorandum to the National Coalition for Maine Conservation Frank Mather's conviction that the real concern was the severe pressure on every age group in the eastern stock and on the more important spawning grounds.

In his memo, Weld suggested that Mather was warning ICCAT that without eastern reductions, "an irreversible wipeout of the eastern Atlantic tuna stocks is in the making."

Not to be deterred, Fox ordered up a new hypothesis – "two stocks with limiting mixing" at levels assumed to be insignificant to affect the other stock. Even though Fox personally had been a member of the US scientific delegation to ICCAT since 1972, he hired Mike Parrack in 1979 to introduce a new management and stock hypothesis. In his 1995 book "Giant Bluefin," Douglas Whynott summarized an interview with Mike Parrack as follows:

"Parrack was told to devise two assessments – one for the entire Atlantic and a two-stock assessment for east and west. Though he complained that there was no proof of separate stocks, Parrack was told to follow orders and complete the assessments" (page 147).

These assessments were to be presented at the 1981 ICCAT SCRS meeting. The one-stock assessment showed a severe decline Atlantic-wide, requiring immediate drastic reductions in the east and west. The two-stock assessment showed the east could continue at current levels but the west required catch levels to be set as "near zero as possible."

At first, the Japanese and eastern scientists reacted violently to the US dropping such a radical new hypothesis and completed assessment at the meeting without any prior notice or adequate time to review. In short fashion, the eastern scientists backed off from their protest of the US's flawed science since the results meant good news for the eastern fisheries.

The controversial SCRS recommendation was conditionally accepted by ICCAT at its Seventh Regular Meeting held on Tenerife Island in the Canary Islands Nov. 11-17, 1981. The second major condition imposed by the ICCAT Plenary was an additional meeting by the Contracting Parties actively fishing in the western Atlantic prior to Feb. 15, 1982 to develop conditions under which a monitoring quota not to exceed 800 mt for the western Atlantic for two years would be shared.

The next installment of this series will review the inconsistency or illegality of the mini-ICCAT meeting held on Jan. 19, 1982 in Washington, DC and the multiple critiques of the flawed US 1981 two-stock assessment, which led to an additional five counterproductive and wasteful CITES or ESA listing proposals.

Rich Ruais

Rich Ruais, executive director of the American Bluefin Tuna Association, has been working with the bluefin tuna industry since 1991.

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Bluefin extinction myth Part 4: US industry responds to the two-stock theory

In this guest column series, industry advocate Rich Ruais is documenting the history of North Atlantic bluefin tuna fisheries and management, which, he argues, underscores the folly of repeated attempts to list bluefin under the Endangered Species Act (ESA).

Parts 1, 2, and 3 of the series were published in the August, September, and October 2011 CFNs. Part 4 picks up after the dramatic 1981 meeting of ICCAT, the International Commission for the Conservation of Atlantic Tunas, which took place on the Canary Island of Tenerife. It was during this meeting that the controversial two-stock working hypothesis introduced by the US was adopted, leading to huge cuts in the

western Atlantic quota that persist to this day.

-Editor

US commercial fishermen exploded in shock and anger when word reached home that the US had secretively sponsored a proposal at the **1981 ICCAT** meeting at Tenerife to switch from an Atlanticwide management plan to a twostock "working hypothesis." The strategy change set the stage for a

moratorium on western Atlantic catches under a scientific monitoring quota not to exceed 800 metric tons (mt).

One of the first people to react was Jerry Abrams, a Boston-based fish dealer who played a large role in pioneering the fresh giant export market to Japan. Abrams quickly organized a meeting of **GUEST COLUMN**



by Rich Ruais

tuna fishermen at the New England Aquarium, which resulted in the formation of the East Coast Tuna

Association (ECTA) to fight the unilateral program. ECTA would go on to become a powerful representative of the US bluefin industry for the next three decades.

No one – not domestic fishermen or even state fisheries agencies – had any advance notice of the National Marine Fisheries Service's (NMFS) radical plan to devastate the US commercial bluefin

industry.

The situation caused such outrage within the Massachusetts Division of Marine Fisheries that the agency's attorney, David Hoover, wrote an article titled "A Case Against International Management of Highly Migratory Marine Fishery Resources: The Atlantic Bluefin Tuna," which was published in 1983 in the Boston College EnvironmentalAffairs Law Review.

In the article, Hoover notes how even during the

Oct. 15-16, 1981 meeting of the US ICCAT Advisory Committee (IAC), NMFS scientists acknowledged that "single stock assessments were more accurate and reliable than the two-stock assessments" and that two-stock assessments "might yield erroneous conclusions."

Given NMFS's strong indication that it would seek no significant changes at the upcoming ICCAT Tenerife meeting, the IAC recommended "that the US delegation continue with the present ICCAT measure to limit mortality of bluefin tuna," Hoover wrote.

All of the evidence of the importance of mixing was ignored by NMFS. The plan to unilaterally conserve bluefin went forward.

But Bill Fox, then-director of the NMFS Southeast Fisheries Center, had other plans. With the aid of then-federal ICCAT Commissioner Carmen Blondin, director of the NMFS Office of International Fisheries Affairs, the goal was to achieve the western bluefin moratorium in time to preclude the 1982 fishing season.

Even though the Japanese were furious when the US plan was revealed at the Tenerife meeting, they could not stop this demand from the US delegation. It is not clear whether Japan was aware that it had the option of formally objecting to the agreement and freeing itself from having to comply.

The US-proposed Tenerife agreement created an arbitrary east/west stock dividing line of 45°W longitude. In order to secure the eastern votes needed to adopt it, a clause was added to prevent any western fishing effort transferring back to eastern fishing grounds. This sealed the deal for eastern Atlantic and Mediterranean fishing nations to be totally exempt from any requirement to conserve bluefin.



CFN file photo

Carmen Blondin, pictured here in 1993, the year he was transferred out of the post of ICCAT commissioner and head of the US delegation after serving in that capacity for more than 14 years. The only part of the mission left for NMFS was to develop, by Feb. 15, 1982, a "scientific monitoring plan" to split the 800 mt scientific monitoring quota among the five countries that had a history of harvesting western Atlantic bluefin.

Shocking consensus

But first, NMFS had to explain and sell the new plan to the US ICCAT Advisory Committee and the public. It attempted to do so during a meeting held at the State Department in Washington, DC on Jan. 19, 1982.

As noted, prior to the Tenerife meeting, the IAC was expecting US commissioners to take a "status quo" position at the November 1981 ICCAT meeting given that NMFS had apparently accepted its advice and published it in a Nov. 3, 1981 public position paper.

However, Blondin explained to the

IAC that a "consensus" to accept the "western moratorium" had developed among the US delegation in Tenerife after hearing the advice of ICCAT's Standing Committee on Research and Statistics (SCRS).

That advice was based on what was later revealed to be a controversial

and flawed analysis by NMFS scientist Michael Parrack (see CFN October 2011, "Bluefin extinction myth Part 3: Evolution of the two-stock hypothesis"), but, at the time of the 1981 meeting, it was the only completed stock assessment available for consideration.

The action by the US to deliver to ICCAT a completed stock assessment, normally done by the SCRS or the Bluefin Working Group, was unprecedented and, after the 1981 event, ICCAT accepted a policy prohibiting unilaterally conducted stock assessments to prevent future debacles like the one that occurred in Tenerife.

Attorney Hoover's law review article discusses how Blondin might have achieved the US delegation's "consensus." In brief, Hoover explains that Blondin only had to point out to the delegates that if the "two-stock hypothesis" were not accepted, he would be forced to tell ICCAT the US was ready to exercise US "Coastal State Preference," an option that was under active consideration and that could be used by the US to implement a unilateral bluefin program within the US



Rich Ruais photo

Even though the 1982

damage had been done

auota was raised

conservatively, the

because the science

had been politicized.

Bill Fox at the 1992 CITES meeting in Kyoto, Japan from March 2-13. The smiling woman is Attorney Margaret Hayes, NOAA General Counsel.

EEZ to keep vessels from foreign nations – Japan, for example – out.

Hoover suggests that the West Coast tuna industry feared the adoption of a policy favoring "Coastal State Preference" would jeopardize Pacific operations, in particular, the Fishermen's Protective Act provision that paid the fines of US tuna

vessels charged with illegal fishing in foreign waters.

Not surprisingly, West Coast individuals present in Tenerife preferred to support an ICCAT-sponsored program to avoid the threat of "Coastal State Preference." Unfortunately, East Coast fishermen had to pay the price.

Tagging contradiction

Parrack's two-stock assessment was based on a "key assumption ... that the separation of eastern and western stocks existed and was absolute," according to Gordon Broadhead, the first IAC chairman and founder of a fishery analysis consulting company called Living Marine Resources Inc. in La Jolla, CA.

But Parrack's decision to base an assessment on the two-stock hypothesis when there already was conventional tagging data showing the importance of mixing among east and west bluefin stunned US fishermen and IAC members.

As early as 1974, respected Woods Hole Oceanographic Institution scientist Frank Mather published a summary of his bluefin tagging work (see CFN August 2011 for chart detailing early tagging results).

Mather noted, "There are indications that the migrations may affect the fisheries in the respective areas. Tag returns indicate an important west-east migration between the 1965 and 1966 seasons – 12 returns, with five others in 1965-67, and one in 1965-1968."

According to Mather, a scientist using tagging data to study migration effects on the status of the Norwegian fishery also "suggested ... that the year class of 1952 in the eastern Atlantic might well have been heavily reinforced by emigrations from the western Atlantic."

Mather later concludes that high fishing mortality rates in the Bay of Biscay could have been responsible for "the failure of recruitment to the western Atlantic spawning stock."

All of this evidence of the importance of mixing was ignored by NMFS. The plan to unilaterally conserve bluefin went forward.

Attorney Hoover further notes that during a congressional hearing held on Dec. 7, 1981, then-US Rep. John Breaux (D-LA) remarked in his opening statement, "As everyone is probably aware, the ICCAT Convention proposed and adopted a radically different measure" than the one developed domestically and supposedly carried to Tenerife by US delegates.

The obvious question was what happened between Nov. 3 and Nov. 11, the start of the ICCAT meeting?

According to Hoover, the actual proposal by the US was taken from the conclusions section of the Parrack assessment. This document, titled

"NMFS, Atlantic Bluefin Tuna Resource Update, ICCAT Working Document 81/55," contained language never before seen by members of the IAC or the East Coast fishing industry, including a statement that "current evidence supported a theory of two separate eastern and western stocks."

The report concluded that the western stock appeared severely depleted and that catches needed to be reduced to as near zero as possible while the eastern stock was stable.

Flawed assessment

At the 1981 SCRS meeting, both Dr. Alan Fonteneau of France and Dr. Ziro Suzuki of Japan objected strenuously to the Parrack assessment, based on concerns including recruitment estimates and many other issues. The errors in the assessment were so numerous that Dr. Fonteneau made a list, which was, for unexplained reasons, not "entered into the record," according to IAC Chairman Gordon Broadhead.

Both the commonwealth of Massachusetts and the East Coast Tuna Association requested data from NMFS in order to conduct independent reviews of the Parrack assessment. Both of these requests were initially denied by NMFS, although some incomplete information was provided to Massachusetts officials. Not until Rep. John Breaux and his staff intervened did NMFS provide most of the data requested.

ECTA retained Dr. Frank Hester, a former NMFS science center director, and Dr. Dan Goodman, a professor of mathematics at the Scripps Institution of Oceanography, to conduct a thorough review, which they presented to the IAC at its Jan. 19, 1982 meeting.

Both reviews found critical flaws and deficiencies in the Parrack assessment. Goodman noted that "the techniques were so wrong" that he could not determine "if the yield estimates were too high or too low." He also pointed out that the assessment used improper mathematical methods to "calibrate" and determine the present population.

The reviews were debated by Fox and then ignored by NMFS.

Monitoring plan

Prior to the IAC review of the ICCAT Tenerife agreement, Bill Fox assigned



Dr. Joe Powers, Dr. Ray Conser, and Mike Parrack to develop a seven-page "West Atlantic Bluefin Monitoring Plan Involving Catches from the Stock." The plan, dated Dec. 21, 1981, was needed for a meeting of the western parties required by ICCAT to split up the scientific monitoring quota. The meeting was scheduled to take place on Feb. 8-12, 1982 in Miami, FL.

The NMFS scientific monitoring plan called for a total catch of 669 mt $-131\,$ mt less than allowed under the ICCAT agreement. The 669 mt was to be divided between 406 mt of large fish and 263 mt of small fish.

For large fish, Canada and the US rod-and-reel fishery would share 400 mt. Two metric tons would be allocated to cover US swordfish bycatch, while 4 mt would be allocated for Canadian bycatch. For small and medium fish, the US recreational fishery would get 140 mt, US purse seiners would get 42 mt for bycatch, and Japan would get 81 mt for bycatch. Cuba and Brazil were exempted from the plan so as not to hinder their developing artisanal fisheries.

The authors stated that the plan was designed to provide timely catch and effort data and be broadly representative of each age group in the stock. Bill Fox

transferred the Southeast Fisheries Center plan to Carmen Blondin with the statement, "I fully concur with it."

Mini-ICCAT meeting

The governments of Brazil, Canada, Cuba, Japan and the US were invited to the February 1982 western parties meeting. All attended with the exception of Cuba. Japan submitted five papers by three distinguished scientists critical of Parrack's "ICCAT Working Document 81/55."

Each government had an opportunity to present its views on the matter of a scientific monitoring quota and offer its proposal for appropriate sharing of the limited take.

Blondin suggested basing the allocations on average country catch for the five-year period 1970 to 1974. This would result in shares of 64% to the US, 21% to Canada, and 15% to Japan. The average catch for these five years in the western Atlantic was 4,787 mt.

None of the parties present were satisfied with the US proposal. The meeting was recessed and closed sessions were held among the heads of delegations.

When the meeting resumed, the western parties agreed to the following sharing arrangement: Canada, 250 mt; Japan, 305 mt; and US, 605 mt.

The total accepted scientific monitoring quota was 1,160 mt, which was 360 mt higher than the scientific monitoring quota contained in the 1981 agreement reached in Tenerife and 491 mt higher than the scientific monitoring quota proposed by NMFS scientific monitoring plan. Canada came away with a quota significantly higher than its five-year average catch over the 1970-to-1974 period.

1982 Madeira Island

On Nov.10-16, 1982, ICCAT met on Madeira Island, Portugal and considered the new SCRS advice on western bluefin tuna. In early 1982, Parrack agreed with advice from other NMFS scientists to return to graduate school to get his doctorate degree and better assessment methodology training. Dr. Joe Powers and Dr. Ray Conser took over for Parrack and made slight changes to his 1981 methodology for the 1982 meeting.

Dr. Frank Hester presented a paper on behalf of ECTA that demonstrated serious flaws in the method used to estimate stock size. Japan's Dr. Ziro Suzuki also was fully prepared to challenge the Parrack assessment.

Both Powers and Conser found

themselves unable to answer the hard questions repeatedly posed by Suzuki, Hester, and others. In his 1995 book, "Giant Bluefin," Douglas Whynott said that NMFS called Parrack at the University of Washington and "ordered" him to get on a plane to Madeira to answer the questions regarding his methodology and data. When Parrack arrived, even he couldn't justify his own analysis. It was an embarrassing position for the US scientific delegation to be in.

The formal reviews of the 1981 Parrack assessment resulted in that assessment being rejected by the SCRS as a basis for management. Then-SCRS Chairman Dr. Jim Beckett reported to the commission that the SCRS was "unable to determine whether a 6,000 mt catch will cause a decline or whether a decline will occur regardless of any catch. It was not possible to find agreement within this range."

He further noted that the SCRS believed the 1982 catch levels were insufficient to monitor the stock but advised the commission to settle on a conservative quota.

The Japanese commissioner took pride in noting after the SCRS report that, "As we have now learned, the truth cannot be hidden even though it may temporarily be hidden by political clouds." Canada made a proposal – agreed to by the commission – to increase the western quota to 2,660 mt using the same sharing percentages as agreed to in Miami for the 1982 season.

Before the US ICCAT delegation returned home from Madeira, Bill Fox resigned as director of the Southeast Fisheries Center, took a teaching position with the University of Miami, and began serving as a member of the Florida Marine Fisheries Commission. Mike Parrack returned to graduate school.

Damage done

Even though the quota was raised conservatively, the damage had been done because the science had been politicized. For the next 25 years, western Atlantic fishermen were

effectively confined to a unilateral "hamster wheel" conservation program with an impossible task of rebuilding the west while fishermen in the east continued totally without regulation, increasing their catches to over 60,000 mt, according to some sources.

In Part 5, the final installment of this series, we will review: the 1990 return of Bill Fox and his bluefin agenda to NMFS; the campaign of Carl Safina, with his self-confessed search "to find a charismatic megafauna" to rescue in order to help revamp the sagging image of the National Audubon Society; and the explosion in the number of environmental groups staking out a claim to "save" the "iconic" bluefin tuna.

Rich Ruais

Rich Ruais, executive director of the American Bluefin Tuna Association (ABTA), has been working with the bluefin tuna industry since 1991. For nearly two decades, he was the executive director of the East Coast Tuna Association, which now is a part of the ABTA.



American Bluefin Tuna Association www.theabta.com

This seven-part series on the history of domestic and international bluefin tuna management, politics, and science was made possible with funding by the American Bluefin Tuna Association. ABTA's mission includes "ongoing support of the best science available on knowledge of the fishery and resource" and educating the public with accurate information on the status of the Atlantic-wide resource and the domestic program for U.S. fisheries under the Artisanal General Category permit and the Artisanal Harpoon Category permits.

U.S. caught bluefin are landed in strict compliance with conservation regulations implemented by the National Marine Fisheries Service and are hand-caught using the most environmentally friendly methods possible – one at a time, carefully handled, and chilled by professionally trained fish dealers for worldwide and domestic sashimi markets.



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Bluefin extinction myth Part 5: Six failed attempts at ESA/CITES listings

In this guest column series, industry advocate Rich Ruais is documenting the history of North Atlantic bluefin tuna fisheries and management, which, he argues, underscores the folly of repeated attempts to have bluefin declared as an endangered species.

Parts 1, 2, 3, and 4 of the series were published in the August, September, October, and November 2011 CFNs. Part 5 details the petitions and proposals that have been filed since 1974 under the Endangered Species Act (ESA) or the Convention on International Trade in Endangered Species (CITES) to curtail fishing for bluefin in the western Atlantic.

Part 5 was to end the series. However, due to space constraints, it will instead lay the foundation for Ruais' conclusion, which will be published as Part 6 in the January 2012 CFN.

—Editor

The US bluefin tuna industry has been forced time and again to expend tremendous time, effort, and money to defend itself against repeated and illegitimate attempts to crush the western Atlantic fishery.

Several high-profile environmental groups have petitioned the US government to list bluefin under the Endangered Species Act (ESA) or put forward proposals for listing through the Convention on International Trade in Endangered Species (CITES), and they have sometimes resorted to questionable strategies for going about it.

Here is a summary of the six failed attempts at ESA/CITES listings that have occurred to date.

• 1974 – The Sport Fishing Institute (SFI) filed a petition with the secretary of commerce to declare bluefin tuna a "threatened species" under the ESA.

The petition was "abrogated," which basically means done away with, by the National Marine Fisheries Service (NMFS) and the US Fish and Wildlife Service (FWS) once the Atlantic Tunas Convention Act of 1975 was signed into law.

Since that ESA filing 37 years ago,

GUEST COLUMN



by Rich Ruais

about two-and-a-half generations of bluefin

have flourished by Canadian scientists' estimates. Western catches alone have produced 113,692 metric tons (mt) or an average of 3,158 mt per year.

This sustained production was achieved under heavy fishing restrictions, including closed seasons and areas, bag limits, and increased size restrictions imposed on the three major western Atlantic fishing nations.

• 1991/1992 – FWS issued a request for proposals (RFP) to be submitted by the US to CITES during its March 2-13, 1992 meeting in Kyoto, Japan.

Carl Safina of the National Audubon Society responded to the RFP with a petition requesting that the US nominate western Atlantic bluefin tuna for an Appendix 1 listing.

CITES has two major categories of listings: Appendix 1, which implements a worldwide ban on international trade of the listed species, including "look alike" species; and Appendix 2, which allows international trade but requires strict monitoring and trade documentation procedures.

On July 5, 1991, Dr. Nancy Foster, director of the NMFS Office of Protected Resources, informed FWS that NMFS was "considering" proposing an Appendix 2 listing for western Atlantic bluefin tuna, but not an Appendix 1 listing.

Safina and his associates, who were working with NMFS and FWS, were well aware of the agencies' intentions regarding bluefin and had a backup plan. In his book, "Song for the Blue Ocean," Safina recalled, "The National Audubon Society and World Wildlife Fund had already initiated discussions with Sweden."

They relied on Dr. Lennart Nyman of the National Swedish Board of Fisheries

In the last 37 years, bluefin have flourished, with western catches alone producing 113,692 metric tons (mt) or an average of 3,158 mt per year.

to submit essentially what was Safina's Appendix 1 proposed listing.

The 1992 petition by Sweden to list western bluefin tuna under Appendix 1 was withdrawn after Sweden received commitments from the US, Canada, Japan, and Morocco that ICCAT would continue its initiatives, "with particular emphasis on quota reductions, to restore ... Atlantic bluefin tuna populations, underlining the importance of monitoring trade and restricting commerce." ICCAT is the International Commission for the Conservation of Atlantic Tunas.

John Turner, FWS head of the US CITES delegation, stated in a March 11, 1992 letter to National Oceanic and Atmospheric Administration Administrator (NOAA) John Knauss that the commitment contained "no promise of achieving the 50% quota reduction" but rather a "perception" that the US would press for and support a 50% reduction.

• 1994 – Mike Sutton, WWF fisheries campaign director, arranged for the CITES Management Authority of Kenya to submit another proposal for a western Atlantic bluefin tuna listing.

The government of Kenya withdrew the proposal very shortly afterwards, noting that officials at the Kenya CITES Management Authority submitted the bluefin proposal for WWF without notifying the proper Kenya government authorities.

The 1994 CITES Kenya experience is a noteworthy illustration of the ease with which an environmental nongovernmental organization was able to secure consideration of an unjustified proposal that had profound economic and social consequences involving billions of dollars and an untold number of jobs for several countries for potentially many decades.

• 2010 – The Prince of Monaco submitted a proposal for an Appendix 1 listing for Atlantic bluefin tuna during the March 13-25, 2010 CITES meeting held in Doha, Qatar.

According to ICCAT catch records, Monaco has not reported a single pound of bluefin tuna catch since 1950, if ever, and the country's only connections to bluefin tuna are generous grants to WWF campaigns from the Prince of Monaco Foundation.

The Pew Charitable Trusts hired former FWS Division of Scientific Authority Chief Sue Lieberman to head up a massive domestic and worldwide campaign to secure the votes for a bluefin Appendix 1 listing.

The Prince of Monaco, with encouragement and assistance from WWF and Pew, personally appealed for US co-sponsorship in an effort to provide legitimacy for the proposal. NOAA and FWS disagreed over whether to co-sponsor

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the Monaco proposal, with NOAA opposing co-sponsorship and FWS supporting it. NOAA prevailed and the US did not co-sponsor. In the end, however, FWS agreed to support the listing if it came to a vote at the meeting.

The Monaco proposal was rejected on Day 9 of the CITES meeting, and Monaco withdrew the document.

The western Atlantic

bluefin stock 'has not

been overfished since

1970 and overfishing has

not been occurring since

• 2010 – The Center for Biological Diversity submitted a petition to list Atlantic bluefin

tuna as an endangered species under the ESA in May 2010. NMFS accepted the petition in September 2010 for further consideration.

The NMFS
Office of Protected
Resources agreed to
an American Bluefin
Tuna Association
request to hold five

listening sessions from the Gulf of Mexico to New England after the agency held only one poorly prepared public hearing in Silver Spring, MD.

1983.

The added comment time and field venues allowed thousands of people to tell NMFS they were against the listing and to explain why. One of those reasons was that an ESA listing would penalize only US fishermen, who are the most compliant and restricted fishermen in the world. Furthermore, a US ESA listing would result in no reduction in bluefin mortality because ICCAT would simply transfer uncaught US quota to other harvesting countries.

NMFS conducted an exhaustive scientific review into the Center for Biological Diversity petition. A nineperson "status review team" took more than six months to complete it. On May 27, NMFS announced it had "concerns" about the status of bluefin tuna, especially in light of the Deepwater Horizon BP oil spill in the Gulf of Mexico, but that it had determined "Atlantic bluefin tuna do not warrant species protection under the ESA."

As part of its review, the status review team presented the positive findings of the most recent stock assessment conducted by ICCAT's Standing Committee on Research and Statistics (SCRS).

This assessment included the finding that, under one "equally plausible" recruitment alternative, the western Atlantic bluefin stock "has not been overfished since 1970 and overfishing has not been occurring since 1983."

The status review team also cited the SCRS finding that the total allowable catch (TAC) of 1,800 mt "should allow the standing stock biomass to continue to increase under both recruitment scenarios and should offer some protection to the 2003 year class."

• 2011 – In Canada, a quasigovernmental environmental group

called Committee
on the Status
of Endangered
Wildlife in Canada
(COSEWIC) has
been around since
1977. In June
2003, the Canadian
"Species at Risk
Act" designated
COSEWIC as
an advisory
body whose
recommendations
are considered

by the government when establishing the legal list of wildlife species at risk. COSEWIC completed its assessment of bluefin tuna in May 2011 with a finding of "endangered."

-ICCAT SCRS

During the Canadian Science Advisory Secretariat regional advisory meeting held July 13-15, 2011, a "Science Advisory Report on the Recovery Potential for Western Atlantic Bluefin Tuna" was discussed.

The report summarized key findings of the 2010 ICCAT SCRS bluefin assessment, indicating, among other findings, that, under the low recruitment scenario, western bluefin tuna is not overfished.

The report also noted that a total allowable catch of up to 2,250~mt-500~mt higher than the current TAC of 1,750~mt-would achieve the recovery target set by ICCAT.

The Canadian Science Advisory Secretariat report was consistent with the Canada Department of Fisheries and Oceans' position at ICCAT, which advocated an increase in the western Atlantic bluefin tuna quota to 2,250 mt for the 2011 and 2012 fishing years.

Rich Ruais

Rich Ruais, executive director of the American Bluefin Tuna Association (ABTA), has been working with the bluefin tuna industry since 1991. For nearly two decades, he was the executive director of the East Coast Tuna Association, which now is a part of the ABTA.

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Bluefin extinction myth Part 6: Science revolution proves east-west mixing

In this guest column series, industry advocate Rich Ruais is documenting the history of North Atlantic bluefin

tuna fisheries and management, which, he argues, reveals how enormous resources have been wasted in order to deal with repeated unjustified attempts to list bluefin as threatened or endangered.

GUEST COLUMN

by Rich Ruais

Parts 1, 2, 3, 4, and 5 of the series were published in the August, September, October, November, and December 2011 CFNs. Part 6 picks up with the effects of the 1981 moratorium on fishing for bluefin in the western Atlantic, the advent of the 2,660-metric-ton quota for western fisheries, and the scientific revolution over the last 20 years that has enhanced our understanding of the complexities of bluefin migration patterns, stock structure, and spawning areas.

Once again, due to space limitations, the series is being extended. Part 7 will appear in the February 2012 CFN.

-Editor

In 1982, the International Commission for the Conservation of Atlantic Tunas (ICCAT) rejected the controversial twostock assessment and moratorium on bluefin fishing in the western Atlantic. Both of these ideas were based on the hypothesis promoted by the National Marine Fisheries Service (NMFS) that mixing of the stocks between east and west was so minimal that it did not affect either stock or fishery.

What followed was a period of relative stability for the next eight years, in spite of a total lack of conservation by eastern Atlantic fishing nations, which even ignored ICCAT's 1974 cap on effort and minimum size recommendations.

But the US had little basis for complaining about the ever increasing eastern catch because of its support for the basic premise that eastern fisheries had no effect on the efforts by western Atlantic fishing nations to conserve bluefin by restricting quotas.

> Yet beyond the rising total catch level, the dismal reality was that more than 50% of the eastern catch often was comprised of fish smaller than 15

pounds. ICCAT's Standing Committee on Research and Statistics (SCRS) deplored this fact repeatedly over two decades in numerous biannual stock assessments under the heading, "Effects of Current Regulations."

Beginning in 1989 and 1990, two major events took place that once again rattled the bluefin world of politics, the western Atlantic tuna industry, and the science.

The first was an explosion of catches in the east, particularly in the central Atlantic from 1989 to 1994. The second was the return of Bill Fox to the scene. this time as NMFS director under President George H. W. Bush.

For some time now, there has been universal agreement on one fact about North Atlantic bluefin: The eastern spawning population in the

Mediterranean is estimated to be between six and 10 times larger than the spawning biomass of western fish from the Gulf of Mexico.

West and east catch data from 1950 to the present strongly suggest that when eastern catches are low, western catches can be high. Also clear from longterm catch data is that when eastern catches are high, western catches are low and western recruitment appears to be low. That's likely because higher eastern catches mean fewer eastern fish are available to emigrate to the west, particularly younger fish ages 1-5.

All of this could be part of the reason that eastern catches averaged 31,046 metric tons (mt) for the 12-year period 1950 to 1961 before significant western fishing began. During that same 12-year period, western catches averaged only 950 mt.

With serious purse seining and Japanese longlining fisheries ramping up in the western Atlantic from 1962 to 1974, average western catches spiked at 7,359 mt, while the eastern catches plummeted to 15,850 mt per year, a 50% decline.

Once conservation restrictions were put in place in the west, the average

> CFN file photo David



Borden, left, and Carl Safina in 1991. Borden was the chairman of the New England council's large pelagics committee just before management authority for highly migratory species was shifted to the commerce

secretary.



NMFS photo

Bill Fox, pictured here at the time he was named director of NMFS in February 1990.

western catch declined to 5,892 mt for the seven-year period 1975 to 1981, a 20% decrease. At the same time, eastern catches rose to an average of 20,955 mt, a 132% increase.

It only got worse from there.

Under the "two-stock hypothesis" strategy, western catches were restricted by a 2,660-mt quota starting in 1982. That allowed for an average catch of 2,456 mt – a decrease of 58.3% from the prior period.

Eastern catches for the same period -1982 to 1996 – grew to an average of 31,384 mt, a 149% increase. Eastern catches reportedly peaked in 1996 at the phenomenal level of 53,320 mt with some groups suggesting real catches exceeded 60,000 mt.

Not surprisingly, after western catches were restricted to below 2,500 mt during the 1980s, catches in the central Atlantic – between 45°W longitude and 30°W longitude – increased dramatically.

Beginning seven years after the 1982 western quota reduction, central Atlantic catches went from less than 50 mt from 1966 to 1988 to 157 mt in 1989, increasing steadily to 2,281 mt in 1992.

It took repeated protests from western fishermen to get ICCAT to recognize the especially heavy mixing of western and eastern fish in this area and for ICCAT to put a cap in place on central Atlantic catches.

The cap was not very effective. Central Atlantic catches still reached 1,429 mt in 1996.

Return of Fox

In 1990, Bill Fox returned to NMFS with the help of his friends on the INTERCOM Committee (see Part 3, CFN October 2011), and this time, Fox had bullet-proof political backing for a specific mission.

On July 3, 1991 a prominent member of INTERCOM wrote the following to President Bush:

"As a result of our conversation in the White House June 18th ... I have spoken with members of your INTERCOM (Fisheries Advisory)
Committee, including George Hommell, George Barley, Perry Bass, and Billy Ray and they strongly support my recommendation to you.

"Action Requested: I urge you to request the Secretary of Commerce, in consultation with the Secretary of State, to direct the US Commissioners to ICCAT" ... that "the US position should be to reduce fishing mortality to as near zero as possible."

Pursuing this additional unilateral reduction was the political marching order given to US ICCAT Commissioner Carmen Blondin prior to the 1991 ICCAT meeting in Madrid, Spain. Blondin went on to achieve a substantially reduced four-year quota for the west of only 1,862 mt per year at that meeting. No serious proposals were made for eastern fishery restrictions.

Soon after the 1991 ICCAT meeting, the East Coast Tuna Association (ECTA) board of directors recognized that we would not be able to compete with the level of political access and support Fox could achieve.

The timing was near perfect for Fox to enlist Carl Safina of the National Audubon Society given his now-famous search for a "charismatic megafauna," to find "a flipper with gills" (see Part 4, CFN November 2011).

Safina obviously wanted to mimic the success of West Coast extremist groups that managed to eliminate the San Diego, CA-based tuna purse seine fishery by continuously publicizing seine/porpoise interactions in graphic, bloody media presentations and creating a public outcry.

NMFS Director Fox saw to it that Safina was named to the Mid-Atlantic Fishery Management Council from 1991 to 1994, giving Safina even more visibility and financial independence.

Enviros draw funds

Safina was successful in getting funds from multiple sources, including securing

Pew, MacArthur, and Guggenheim fellowships. This enabled him to focus full-time on first developing the "Ocean Wildlife Campaign" (OWC), which attracted substantial funds from: the National Audubon Society; the National Coalition for Marine Conservation; the Natural Resources Defense Council, where the Obama Administration's new Secretary of Commerce John Bryson was then employed; the New England Aquarium; the Wildlife Conservation Society; and the World Wildlife Fund.

OWC was followed by the creation of "ICCAT Watch," a group that enlisted the Center for Marine Conservation and the services of David Wilmot, who soon became the point man as Safina focused more on his personal pursuits, which included writing five doom-and-gloom books and engaging in lecture and book signing tours.

Safina's growing success quickly attracted Greenpeace, Oceana, and many more groups, including, in more recent years, Paul Watson and the Sea Shepard Conservation Society, whose penchant for violent activities on the high seas has been documented by the commercial TV reality series "Whale Wars."

Safina teamed up with Gil Radonski of the Sport Fishing Institute to enlist the support of the ordinarily sciencebased and politically neutral American Fisheries Society (AFS), which later said it was "mislead" into supporting Audubon's 1992 petition for an Appendix 1 listing through the Convention on International Trade in Endangered Species (CITES).

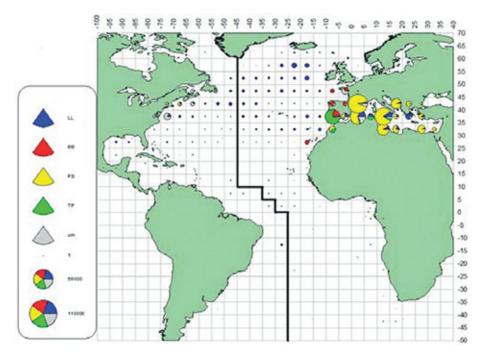
Stan Moberly, chairman of AFS's External Affairs Committee, issued an embarrassed retraction of that support in an Oct. 24, 1991 letter on AFS letterhead to Dr. Charles Dane of the US Fish and Wildlife Service's Division of Scientific Authority.

"I now realize I was mislead and reacted before finding out all the information," Moberly wrote. "Please withdraw my support for listing the species under CITES Appendix 1." (See Part 5, CFN December 2011, for details on the 1991 petition.)

Science revolution

While forced to battle continuous efforts to obtain CITES and Endangered Species Act listings and additional 50% quota cuts at ICCAT, the East Coast Tuna Association decided it was critical to focus as much of our resources as possible on improving the science.

In 1993, the association worked with



This chart shows the geographic distribution of bluefin tuna catches from 2000 to 2009 in $5^{\circ}x5^{\circ}$ squares by gear type. Yellow circles signify purse seine catches, while blue circles indicate longline gear, red circles indicate bait boats, and gray circles represent all other gears such as rod and reels and other handgear.

The significance of the graph is that longline catches (blue circles) are continuous across the Atlantic. They can be seen in every 5° square from about 25°N latitude, which spans from Florida in the west to southern Morocco in Africa in the east, to about 55°N latitude – north of Newfoundland to Ireland.

This is further evidence that there is no biological basis for the 45°W longitude line ICCAT has used to divide east from west or any other populations/assemblages of bluefin tuna in the Atlantic. Japanese longliners have demonstrated this continuous catch across the Atlantic since 1960.

Rich Ruais

the New England Aquarium to recruit Dr. Molly Lutcavage to develop and conduct an aerial survey with the help of ECTA funds.

Soon after initiating the aerial survey, Lutcavage and Massachusetts Division of Marine Fisheries scientists Brad Chase and Dr. Greg Skomal began working with ECTA-member harpooners Bill Chaprales and Jeff Tutein to place sonic tags on 10 bluefin to track school movements. This was a difficult task in that it required staying within a half-mile of the fish to detect the pinger tag, not to mention going without sleep for two days.

This was the first effort to follow bluefin movement in New England waters using electronic technology. It was followed soon after by Dr. Barbara Block, who placed even more sophisticated "pop-up" satellite tags on fish with the help of North Carolina charter boats.

With ECTA funding, Lutcavage soon was able to put out a limited number of new generation pop-up tags in New England. Lutcavage and her team were the first to make public the tracks of giant bluefin tuna that demonstrated the significant movement of fish across the

arbitrary ICCAT 45° management line.

As of 2010, at least 1,300 pop-up or implantable tags have been deployed and the data they have generated demonstrate the complex migration patterns of both small and large bluefin tuna and the possibility of other spawning areas.

In 1993, ECTA also enlisted support from then-US Sen. Paul Tsongas (D-MA) to urge the National Academy of Sciences to conduct an independent review of ICCAT's bluefin stock assessment to determine why it wasn't showing the improving availability of fish to US fisheries.

In one of ECTA's first major victories, the academy's report found "that there is no evidence of decline in the bluefin population in the western Atlantic between 1988 and 1992."

The academy's report further stated that its study committee came to a "startlingly different conclusion" than the ICCAT stock assessment "after adjusting for errors in US rod-and-reel data management and calculations and after factoring in the extent of movement between western and eastern populations of fish."

The National Academy of Sciences confirmed the US tuna industry's major complaint for 22 years: Mixing of fish from east and west was more important than the number of stocks, and what was happening in the east – no conservation – was affecting the west.

In a defensive reaction, NMFS scientists defiantly called for an SCRS review of the US academy report. This resulted in the SCRS, which was clearly dominated by the US, effectively ignoring the academy's findings for the next several years.

Rich Ruais

Rich Ruais, executive director of the American Bluefin Tuna Association (ABTA), has been working with the bluefin tuna industry since 1991. For nearly two decades, he was the executive director of the East Coast Tuna Association, which now is a part of the ABTA.

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Bluefin extinction myth Part 7 Solid science critical to a better future

In this guest column series, industry advocate Rich Ruais is documenting the history of North Atlantic bluefin tuna fisheries and management, which, he argues, reveals how enormous resources have been wasted in order to deal with repeated unjustified attempts to list bluefin as threatened or endangered.

Parts 1, 2, 3, 4, 5, and 6 of the series were published in the August, September, October, November, and December 2011 CFNs and the January 2012 CFN.

In Part 7, Ruais concludes the series with the final repudiation of the "two-stock/arbitrary line" hypothesis that for years rendered bluefin management ineffectual. He calls on environmental groups to drop their counter-productive, "doom-and-gloom" campaigns and boycotts and instead step up to help fund the vital scientific work needed to truly effectively manage the bluefin tuna resource Atlantic-wide. —Editor

Tith US domination of the Standing Committee on Research and Statistics (SCRS) of the International Commission for the Conservation of Atlantic Tunas (ICCAT), it was no surprise that the SCRS effectively ignored a 1993 National Academy of Sciences study that found "no evidence of decline in the bluefin population between 1988 and 1992."

Recognizing the need to broaden scientific input into the process, the East Coast Tuna Association (ECTA) went all out to raise money to support the participation of independent scientists in the ICCAT stock assessment in the early 1990s. Within a few years, these independent contributions began allowing ICCAT to make progress by acknowledging the very real possibility that a "regime shift" affecting bluefin recruitment may have occurred in the western Atlantic.

The idea of a regime shift suggested that limited western recruitment

GUEST COLUMN



by Rich Ruais

was an ecosystem-based phenomenon and that the longstanding objective of getting back to the high

ENGOs with a true concern

for the magnificent – not

iconic – bluefin tuna

have an obligation to

direct their resources

constructively toward

supporting basic science.

levels of recruitment believed to have occurred in the early 1970s was no longer achievable.

It is clearer now that one of the possible causes of this shift to lower recruitment was a reduction in the emigration of younger bluefin from the larger eastern stock that historically

subsidized the western stock and fisheries. Because of escalating overfishing in the Mediterranean and eastern Atlantic, these younger fish simply were no longer available to travel west.

By 1998,

the SCRS began issuing conservation advice under both a "low recruitment" and a "high recruitment" scenario. Both scenarios were adopted by the SCRS as "equally plausible" and as "reasonable, but not extreme, lower and upper bounds on rebuilding potential."

Dr. Saul Saila, then-professor at the University of Rhode Island's Graduate School of Oceanography, submitted a paper to an ICCAT tuna symposium held in the Azores in 1998. In this paper, Saila recognized the National Academy of Sciences findings of no evidence of decline and the academy's challenge to ICCAT's "definition and size of the management units" pertaining to bluefin management.

Saila noted that the classic stock concept, as explained by Dr. John Gulland in 1983, assumed that "a group of organisms can be treated as a stock" but only if "ignoring" the differences within the group and its exchanges with other groups "does not invalidate the conclusions."

He further observed that the tagging data for bluefin east and west did not meet those criteria and that this was especially notable given that realistic stock assessments are only possible when the facts related to the biology of the species – such as spawning areas and migration paths – are well established.

Saila's challenge appears to have

been one of the first to ICCAT's longheld position that considered east and west bluefin populations as classic "stocks" for management purposes.

Twin nails

In the late 1990s, the complexities of bluefin migration patterns were

becoming abundantly clear based on the data generated by serious numbers of electronic tags deployed primarily by Dr. Molly Lutcavage and Dr. Barbara Block.

Tag-return data demonstrated double-digit levels of annual mixing patterns beyond the arbitrary 45° dividing line. Finally, after years of repeated requests by US fishermen, ICCAT held a Sept. 3-7, 2001 "Workshop on Bluefin Mixing."

Discussed during the workshop was a report on a joint, three-year US/Canadian satellite pop-up tag program titled "SCRS01/53" that looked at 86 fish tagged during 1997-1999. The report indicated that 100% of the tags popped-up in the north central Atlantic



CFN file phot

From left, Bill Hogarth and Rich Ruais at ICCAT in November 2006.

with 30%-to-58% annually located in the eastern management zone.

Another paper, titled "SCRS/00/110," reported only on fish tagged in the east. An analysis of tagged bluefin at liberty for more than 12 months found that the interchange with the west was as high as 21%.

A critical conclusion of the ICCAT mixing workshop report was that, "under the current management scheme, the catch of western-origin fish in the east Atlantic management area generates a higher proportion of the fishing mortality rate on the western-origin fish than is the case for the converse scenario."

The second nail was delivered by microconstituent and chemical analysis studies conducted by Dr. Dave Secor of the University of Maryland and Dr. Rebecca Dickhut of the Virginia Institute of Marine Science.

Secor's analysis of the otoliths (ear bones) of bluefin harvested in the western fishery revealed substantial numbers of eastern fish in the Gulf of Maine. His extensive research led him to conclude in one paper that a "metapopulation framework" or "contingent structure" for bluefin management would present a "less rigid alternative to the current two-stock concept."

The term "metapopulation" basically suggests that the bluefin resource may be divided among not two but many different groups or assemblages of bluefin scattered across the Atlantic and adjacent seas and that these groups interact on some currently unknown level.

This new understanding made clear

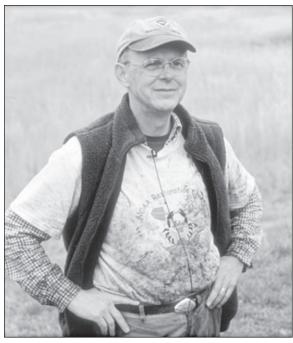
the critical importance of locating any additional age- and size-structured spawning grounds that might explain the differences in size at sexual maturity scientists have observed between bluefin that spawn in the Gulf of Mexico and Mediterranean Sea. It is plausible that some of these spawning subpopulations make infrequent or only periodic migrations to coastal area fishing grounds.

Dickhut's organachlorine study of unique pollutants found in bluefin from the Mediterranean Sea compared to the Gulf of Mexico produced stunning evidence of mixing with 83% of bluefin samples from the Mid-Atlantic Bight, suggesting they were of eastern origin. Larger samples are required to substantiate the range of possible effects on conservation and management.

Final stake

Finally, highly regarded bluefin experts Dr. Jean-Marc Fromentin and Dr. Joseph Powers, a former ICCAT SCRS chairman and National Marine Fisheries Service (NMFS) Southeast Fisheries Science Center Miami Lab director, published "Atlantic bluefin tuna: Population dynamics, ecology, fisheries, and management" in 2005.

In this paper, they reached the startling conclusion that, after managing bluefin as two stocks for over 25 years, "We question, from both a scientific and management perspective, the usefulness of the classical stock concept and suggest other approaches, such as Clark's contingent and metapopulation theories."



NOAA photo

Rollie Schmitten.

The authors went on to say, "Current biological information confirms that a substantial amount of uncertainty still exists in the understanding of reproduction and growth. We focus on intriguing issues such as the difference in age-at-maturity between west Atlantic and Mediterranean bluefin."

The Powers/Fromentin conclusion was the final stake through the heart of Bill Fox's terribly flawed political and science judgment to first demand and then press for the continuation of the arbitrary 45° stock-dividing line and two-stock management regime.

Fox's unwavering commitment to this unilateral policy delayed any significant bluefin science by a decade and allowed complete and reckless nonregulation of the critically important and much larger eastern Atlantic bluefin biomass for more than 25 years.

The 1981 political decision in this regard is likely to go down in the history of fishery management as the costliest mistake ever made, affecting not only a critical marine resource but tens of thousands of jobs and billions of dollars of economic activity in coastal areas from Maine to Texas.

And this harm does not include the further sacrifices now necessary to rebuild eastern Atlantic populations of bluefin in hopes of fostering higher levels of recruitment and higher sustainable yields in the western Atlantic.

Further confirming western economic losses is the latest 2010 change to

the stock assessment for the western Atlantic, which incorporates a new bluefin growth curve discovered by NMFS.

As modified by the new growth

curve, the "equally plausible" low recruitment scenario indicates that western bluefin have never been overfished, overfishing is not occurring, the western spawning

The low recruitment scenario now indicates that western bluefin have never been overfished.

biomass is beyond the biomass necessary to produce maximum sustainable yield, and a western Atlantic quota of 2,565 metric tons since 1981 over this time period was fully justified.

This further demonstrates the wisdom of the rebuilding policy promoted by US ICCAT Commissioner Rollie Schmitten and Dr. Bill Hogarth from 1998 through 2008 that included a sustainable western quota of around 2,500 mt.

Support science

At this point, the biggest threat to bluefin tuna Atlantic-wide is that we don't understand basic bluefin stock structure or biology well enough to implement long-term, effective, efficient, and equitable management plans.

There has been dramatic progress at ICCAT in the last four years toward reining in eastern catches so they are now *below* the scientific recommended quota as opposed to many times above it.

This was made possible only by a change in environmental leadership within the European Community (EC). But because it has finally come about, sustainability of the resource is assured,

barring unforeseen significant environmental influences.

Another serious step in the right direction is the commitment of the US, EC, and Japan to eliminate

the remaining vestiges of illegal, unregulated, and unreported fishing.

According to the latest SCRS stock assessments and recent NMFS analyses, the evidence is overwhelming that the bluefin tuna resource is on a recovery course. It is time for the environmental nongovernmental groups – ENGOs – to stop forcing governments, industry people, and other stakeholders to waste limited financial resources on defending themselves in the ICCAT, CITES (Convention on International Trade in Endangered Species), and other arenas.

ENGOs with a true concern for the magnificent – not iconic – bluefin tuna have an obligation to make a positive contribution to the resource, future generations of consumers, and fishermen and direct their resources constructively by financing some of the basic science necessary to resolve fundamental obstacles to maximum Atlantic-wide sustainability.

Recent studies have demonstrated that there are at least four genetically diverse subpopulations of bluefin – two in the Mediterranean and two in the Gulf of Mexico. Researchers and fishermen also strongly suspect there are more Atlantic spawning grounds, including east of Puerto Rico and east of the Yucatan Peninsula towards the south of Cuba. These areas need to be investigated, defined, and protected.

Finally, bluefin fishermen in the 1990s were not using nonregulation of eastern fisheries as a "smokescreen" to avoid taking an additional 50% cut in their quota, as anti-fishermen, anti-ICCAT ENGOs sarcastically and savagely alleged year after year.

Our "anecdotal" evidence, repeatedly dismissed by NMFS and ENGOs, that mixing could not be ignored has been proven correct with the passage of time and the improvement in understanding of this complex resource.

Only strong and united western and eastern leadership can bring us into a new era of science-based fisheries conservation, one that encompasses the entire resource, with the burden shared fairly by all fishing nations.

Rich Ruais

Rich Ruais, executive director of the American Bluefin Tuna Association (ABTA), has been working with the bluefin tuna industry since 1991. For nearly two decades, he was the executive director of the East Coast Tuna Association, which now is a part of the ABTA.

ABTA WELCOMES YOUR MEMBERSHIP.

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