Four Fishermen

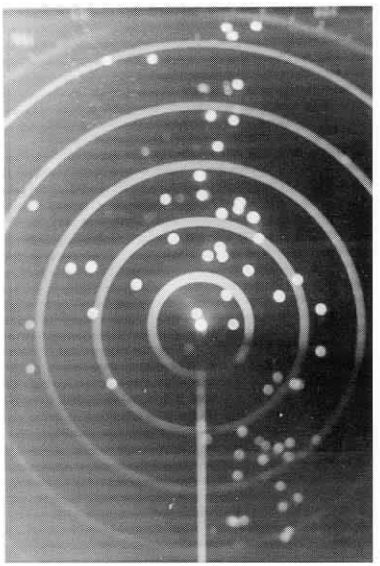
Martin R. Bartlett

The Gulf of Maine is a unique body of water. Nestled between the coast of Maine, Cape Cod and Nova Scotia, its counter clockwise circulation is set in motion by cold, fresh water runoff from rivers St. John, Penobscot and Kennebec. This circulation is augmented by St. Lawrence river discharge that makes its way down the coast of Nova Scotia crossing Brown's Bank. Relatively warm continental shelf water, heavy with salt, makes its way into the deep basins of the Gulf through the northeast or Fundian channel between Georges and Browns Banks. Finally the southern edge of Georges Bank is being continually brushed by Gulf stream eddies moving slowly southwest with the shelf water in which they are embedded. Continual mixing of these components is provided by tidal currents as they flood and ebb the offshore banks and inshore shoals encouraging rapid growth of plankton. Waters in the Gulf rotate once every three months providing young and adult fish an endless food supply.

School bluefin tuna brailed aboard off New Jersey, 1963.
Photo by Martin R. Bartlett

An environment so kind to fish is sure to be kind to fishermen. When Samoset greeted the Pilgrims, he addressed them in English he had learned from the fishermen who had preceded them. The New England climate forced the colonists to rely on the ocean for survival. New settlements prospered where fisheries could be pursued. The native Americans had taken only enough for consumption and crop fertilizer, but fish was the settlers' only surplus and thus became their currency in trade. They started by paying their debts due in England and later developed the triangular trade comprised of fish to Europe, slaves to the West Indies then sugar, molasses and rum back to New England. This pattern of fisheries exploitation accelerated until the 1960s. Then domestic offshore groundfish draggers that had replaced tub trawling schooners came under severe pressure from foreign fleets of factory trawlers equipped with technology developed during the second world war.

New England fisheries resources were in trouble long before the first Russian trawler arrived. Catches of the noble halibut had been on the decline since 1879 but took a real nosedive with the coming of the otter trawl to Georges Bank in 1905. In 1887 the catch of cod was over 200 million pounds, all on hook and line mind you, but seldom approached half of that in subsequent years. The delicate flesh of the haddock had avoided exploitation by the



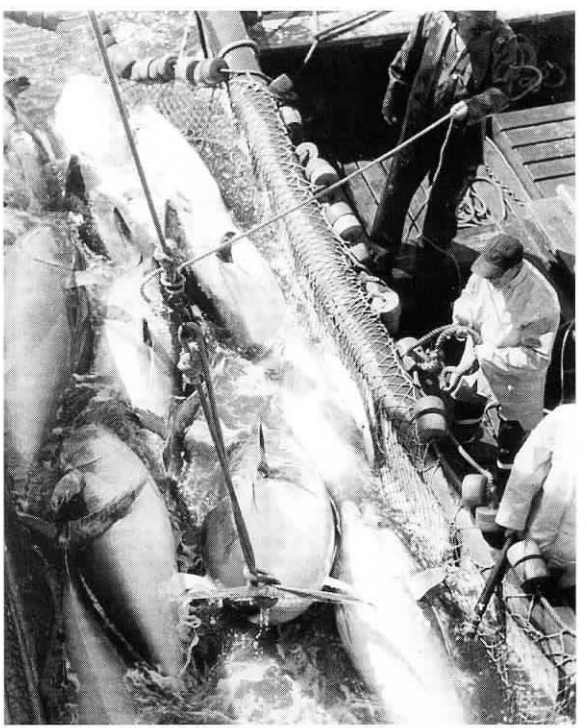
Radar image Russian fleet, 1970.
Photo by Martin Bartlett

"saltbankers." However, with the arrival of ice and the otter trawl, haddock broke the fateful 200 million pound landing threshold for three years from 1928 to 1930, before starting a decline which continued for forty years. Between 1948 and '51 the slow growing ocean perch or red fish set the record for the most number of years that one resource supported catches of over 200 million pounds. Their numbers dwindled for the next forty years until only 1.4 million pounds were landed in 1989.

Since the end of World War II, industrial fish including whiting, hake and herring for processing into meal, oil and animal food became an increasingly important part of the otter trawl catch. As luck would have it, users of fish meal products experienced depressed conditions the same year the first Russians were sighted in August 1960, 100 miles east of Highland light. Industrial inventories rose and prices fell as one hundred Russian vessels were joined by Polish, German, Bulgarian, Japanese, Spanish and Italian until the fleet numbered over 230 by 1975.

There were few encouraging developments for the traditional New England fisheries until the 1976 advent of the Magnuson Act's 200 mile limit made investment in groundfishing a profitable pursuit. A few exploratory projects that had been initiated as "pure" research at the Oceanographic Institution in the '50s, were applied commercially in the '60s by observant Woods Hole fishermen keeping at least a few segments of the fleet solvent.

Deep water otter trawling by William Schroeder resulted in the early commercial landings of lobsters by Capt. Warren Vincent. Exploratory longlining by Frank Mather prompted Capt. Henry Klimm to initiate the winter fishery for swordfish. These developments were inevitably shared with the industry as a whole with the predictable overkill that has eluded management designed into the Magnuson Act. Mather devised a fishery tool that enabled him



Giant bluefin hoisted aboard in Cape Cod Bay, 1964.
Photo by Martin Bartlett

to demonstrate how an overfished resource can be rescued singlehanded.

William C. Schroeder

William C. Schroeder was born on Staten Island in 1895. He quit school at age 14 to support his mother after his parents separated and became a professional musician playing various stringed instruments at concerts that included an appearance at Carnegie Hall. He married Adah Jensen when he was twenty-one and enrolled at George Washington University six years later. Schroeder transferred to Harvard in 1924. He remained there until 1931, but started leading the dual existence common at the time as he was identified as an assistant Aquatic Biologist, U.S. Bureau of Fisheries in 1928 when he coauthored "Fishes of the Chesapeake Bay" with Samuel F. Hildebrand. This pattern continued when he took the position of business manager at WHOI in 1932. During the twenty years he maintained that position, he collaborated with Henry B. Bigelow to publish volumes one and two on the sharks and skates for Yale's Sears Foundation "Fishes of the Western North Atlantic," a new edition of "Fishes of the Gulf of Maine" and five other papers on lampreys, hagfish, sharks, rays and chimaeras.

Dr. Benjamin Leavitt with red crab: Geryon quinquidens, 1952.
Photo by Jan Hahn. Courtesy WHOI.

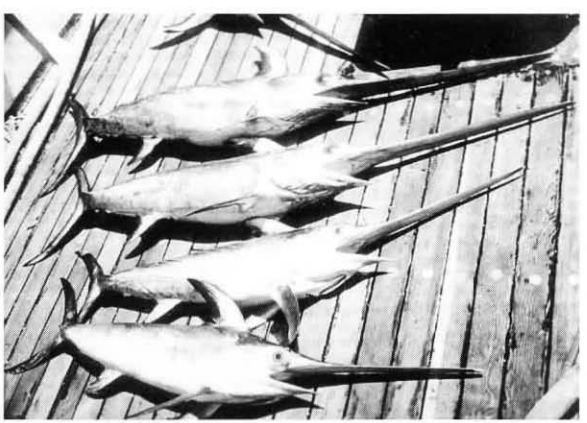
Bill Schroeder with Harriotta raleighana, 1952.
Photo by Jan Hahn. Courtesy Dick Backus.

By 1948 Schroeder was running out of fish to write about. He wanted to get to the edge of the shelf and seek the "little known bottom dwellers" that had not been sampled since the Fish Commission's *Fish Hawk* dragged a small beam trawl from 50 to 600 fathoms in 1880. He tried trips on the *R/V Caryn* and *Atlantis* with tantalizing results but he craved a little more power and a little more wire. In the summers of 1952-3 Schroeder chartered Henry Klimm's 83 foot *Cap'n Bill II.* One hundred and ninety three successful tows from 50 to 730 fathoms between LaHave Bank and Cape Charles produced 75 species of sharks, skates and chimaeras. One major setback was the implosion of the standard aluminum head rope floats that had to be replaced with glass floats. Another difficulty arose when the net would get plugged

with big lobsters, ocean perch or red crabs. Bill Schroeder shrugged off these obstacles and brought home a lobster claw to Mary Sears. It fed sixteen people.

Warren Vincent

Warren Vincent's father had been a lifelong fisherman out of Edgartown but Warren knew that having four siblings meant not everyone could go "sternman." As soon as he finished school he set off on his own, pulling lobster pots from a dory out of Naushon Inland. He did well enough to join the Woods Hole yellowtail fleet a few years later with the gas powered 38 foot western rigged *Halberd.* His next boat was the diesel powered *Anna* that he pushed hard enough to pay off his partner, C.E. Beckman of New Bedford. By 1944 he was ready to enter into a partnership with George Fisher of Oak Bluffs to build a 74 foot eastern rig at the Casey Boatbuilding yard in Fairhaven. A year later the *R.W. Griffin* was christened and launched. A day-long open house followed at the Re house on MBL street where the Vincents made their home with their children Sam and Martha.



Small swordfish from the Carolinas, 1960.
Photo by Martin Bartlett

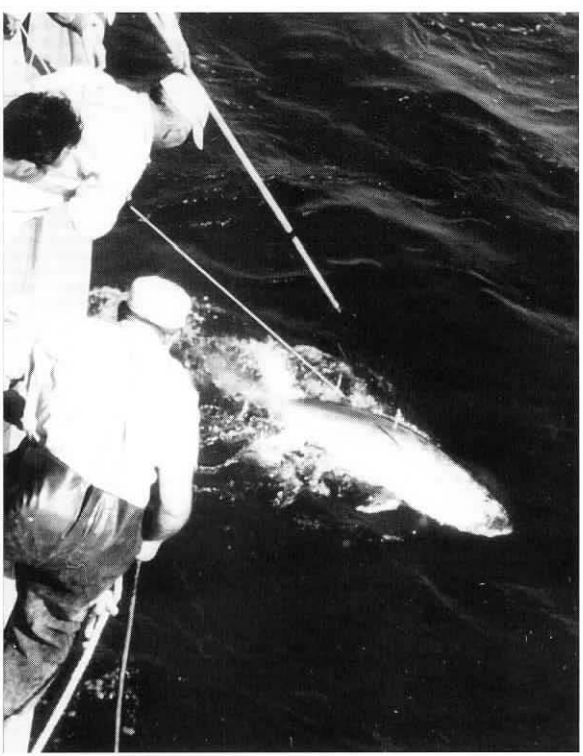
Cap'n Bill II, 1952. *Photo by Jan Hahn. Courtesy WHOI.*

A bigger boat meant longer trips and a six or seven man crew with whom to share up. Designed to carry 85,000 pounds, Warren often found himself driving the *Griffin* to Sable Island in the summer and "the gully" south of Long Island in the winter. Young Sam was fishing with him by the early fifties. A Naushon turkey hunting companion named David Casiles took him aside one day. His hunting companion had become a mate on the *R/V Caryn.* After asking Bill Schroeder's permission, Casiles passed the word to Sam. There were trawlable lobsters in Veatch Canyon thirty miles south of Nantucket lightship.

The elder Vincent didn't jump at the fishery immediately but he must have been thinking about it as he made a port call in Halifax for fuel, food and water in September of '53. He was headed off to Banquereau Bank, 90 miles east of Sable on a tip that there were "plenty of yellowtail there." His log-

book noted: "I wonder if I need my head examined? 600 miles for yellowtail." And after arriving: "I'm going to pass a drink of Scotch around just for luck." The scotch worked but this was the fall Vincent played tag with hurricanes along the Nova Scotia banks on three consecutive trips. There had to an easier way.

In the summer of '54 Warren finally set the gear on a smooth piece of bottom near Veatch Canyon. They filled the fish wash box on the first tow. With no other watertight container available, they lowered the dories from atop the wheelhouse and filled them with lobsters and headed for Woods Hole. They were in a new fishery.



Frank Mather cuts leader holding tagged giant bluefin tuna, 1960.
Photo by Martin Bartlett

Frank Mather

If ever there was any doubt about the survival gene in the Mather clan it evaporated at Lakehurst, New Jersey in the conflagration created by the combustion of 7 million cubic feet of hydrogen surrounded by many gallons of airplane dope. When Aunt Margaret walked out of what remained of the zeppelin named after Count Hindenburg, with her fur over her shoulder, she expected to be met! But her welcoming committee had driven away from the scene of the disaster in shock, knowing full well nothing could live through such a disaster. They were halfway home before hearing of survivors on the radio. They must have wished at times that they had kept driving, because by the time they returned, Aunt Margaret was exhibiting full blown symptoms of what is now referred to as "postraumatic stress syndrome." Simply put, she was madder than hell.

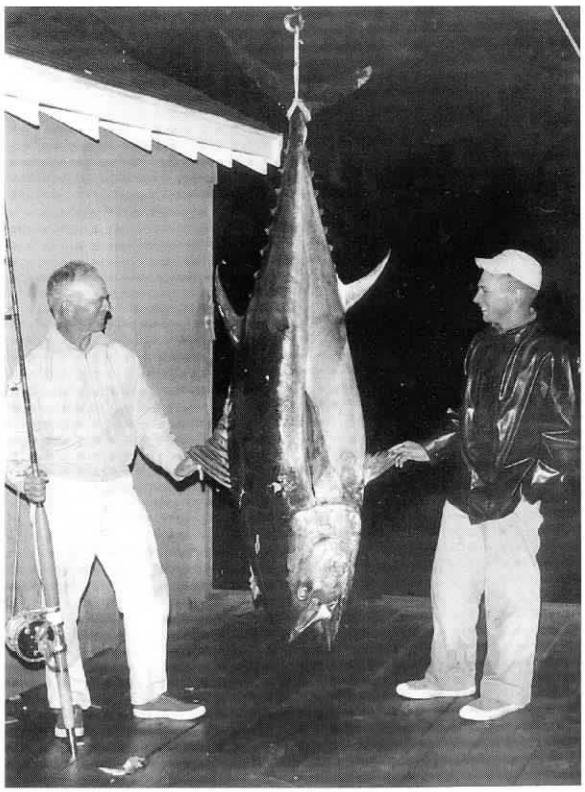
Frank Mather was at a safe distance attending MIT at the time but Aunt Margaret Mather's "O ye of little faith" sermon, which went on as long as she could draw a breath, left an indelible impression. In retrospect, it seems only natural that when Frank joined the war effort as a naval architect with Gibbs and Cox in New York, he got the job of designing landing craft. The landing craft is a vessel that loaded or empty, had to successfully collide with any kind of beach in any kind of weather and, hopefully, extricate itself to repeat the punishing maneuver again and again: the quintessential survivor.

After the war there were more than enough surplus ships around and Frank was looking for a way to shorten his weekend commute to the fishing grounds. When offered a job at WHOI, he took it, pay cut and all. While assisting various programs on numerous research cruises, he could not resist trolling lead headed feathers in offshore waters that had

previously been thought to be barren wastes. Some of the catches, including blue marlin, yellowfin tuna and wahoo, were spectacular and strongly suggested that there was enough food in the open ocean to support a considerable population of fish. Having written up his trolling results with Gus Day, Mather's love affair with the bluefin tuna deepened to the point where he began to wonder where they were from September to April after leaving their summer haunts between Bimini and Labrador and whether they mixed with the eastern Atlantic population.

Exploratory longline fishing expeditions with the Fish and Wildlife Service on vessels out of Gloucester and Pascagoula, Mississippi, started to fill some gaps. Looking ahead, Frank realized he would have to find a way to permanently mark these tuna if he ever hoped to get a handle on their growth and migrations. Marked hooks had been used and recovered in Europe but their durability was short. Dorsal loop tags had been used on small fish in California but could not be attached to a healthy bluefin of thirty pounds or more. After much twisting, bending and drilling of small pieces of stainless steel, a tiny harpoon head the size of a little finger nail was fashioned. With a tab on one side to crimp around the end of a six inch length of yellow plastic spaghetti on which a legend and number were inscribed, the loop tag had become a dart tag. A small slot in the dart fit a steel applicator rod that could be driven into a pole of appropriate length. The tag went through many modifications but the concept made tagging possible for cooperating recreational and commercial fisherman.

Dramatic results were not long in coming. In 1954, the first year of the program, young bluefin tagged south of Long Island made the trip to the Bay of Biscay. In the early sixties, giant bluefin tagged off Bimini in the Bahamas were captured off Norway.



Frank J. Mather and Martin R. Bartlett with giant bluefin tuna from Cape Cod Bay, 1958. *Photo by Florence E. Young*

As stunning as these results were, they paled in comparison to the role the tagging program would play in the development of the east coast purse seine fishery.

Purse seining was accepted slowly in the northwest Atlantic because it was a method most traditionally practiced in eastern oceans where the thermocline is shallow enough to discourage the escape of schools of fish under the net before it is pursed. It was soon realized that the fish off New England were in such shallow water that there was more danger in hanging up the net on the bottom than having the fish escape. The fleet of seiners grew from one boat catch-

Arthur "Swede" Nelson sets longline with Frank Vadala, 1962.
Photo by Martin R. Bartlett

ing 150 tons in 1958 to 18 boats landing 10 million pounds in 1963. Tag recoveries that had hovered around 1% in the fifties shot up to 44% by 1968.

By 1974, Mather noted that few fish from the year classes that passed through this seine fishery were found among the catches of larger bluefin. To compound the situation, high prices offered by Japanese markets intensified the fishery for giant bluefin and seining for the young of the year had increased off Italy, Spain and Morocco.

The messenger with such news is never greeted with anything but resentment, ridicule and scorn from the people who have the most at stake in the fishery. He can also expect a generous ration of patronizing condescension from the industry's scientific network. But tuna experts with the Food and Agriculture Organization agreed with Mather. With the support of the International Game Fish Association, the National Coalition for Marine Conservation and the Sport Fishing Institute, the US delegation to the International Commission for the Conservation of Atlantic Tunas proposed conservation measures for Atlantic bluefin tuna. ICCAT enacted these measures in 1975. The bluefin were survivors, thanks to Frank Mather.

Henry Klimm

If one ever has to leave Woods Hole, he can rest assured that on his return two things will have remained the same: Candle House and Henry Klimm. Klimm gravitated from Hyannis to Woods Hole in the thirties with a small dragger named *Eleanor K* to join the yellowtail fleet that called Sam Cahoon's home. Sam was the kind of man who left the fuel pump unlocked so the boats wouldn't have to wait around to gas up. Cahoon worked closely with John Nagle of Boston. Nagle is known for ignoring the Boston fish pier auction prices and giving the boat the price for which he sold the fish minus 7%. With fuel for six cents a gallon and ice for $4 a ton, one might wonder why everyone didn't go fishing.

With ten feet additional hold space spliced into the middle of the *Eleanor K,* she was ready to catch fish, but the cruel reality of a totally fresh market is that prices paid fluctuated wildly from a low of as little as half a cent a pound to perhaps 20 cents if you were hove to for a gale or two. More than a few trips were simply shoveled over the side by fishermen rather than see a dealer make more for selling the fish than he was going to make for catching it. Some times the mere penny saved by unloading in Boston

Some halibut avoid otter trawls, 1982. *Photo by Martin R. Bartlett*

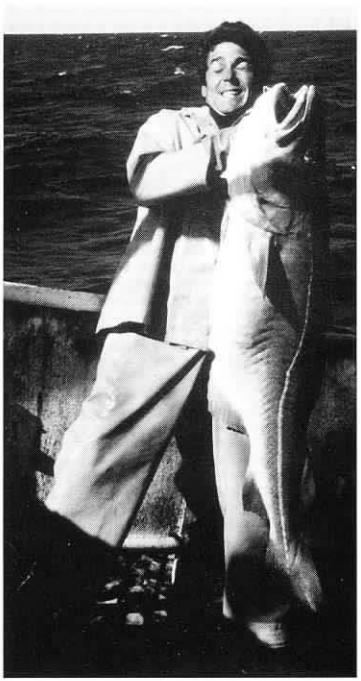
instead of shipping from Woods Hole would mean the difference between a paycheck and a "broker." These conditions prompted owners to increase hold capacity whenever possible so there was something left after expenses were paid during periods of depressed markets. Henry Klimm started his building career to increase carrying capability but somewhere along the line a love of ship rebuilding took over and resulted in a string of boats, some new, some sunk, some abandoned, all of which have been made productive with the help of his restorative hand. We sat for a spell last winter trying to complete a list. This work is still in progress.

New fisheries and technology, while desperately needed, were a rare phenomena, the pursuit of which was often resisted by competition within the industry. One fishery that spun off Mather's exploratory work resulted from running out of tags on a *R/V Crawford* trip in November 1960. Mather took the *Crawford* to the Great South Channel to meet Bobby Weeks who was to drop a new supply from WHOI's heliocourier. Frank decided to set 200 hooks to make sure the bluefin had all left the channel. The tuna were gone; the catch instead was 65 porbeagle sharks. The summer of '61 saw a commercial vessel from Norway take 2500 porbeagles between Georges and St. Pierre Bank.

A fishery of more immediate value to U.S. fishermen resulted from the nocturnal longline sets made by some of Mather's assistants in the course of looking for lost gear or utilizing hours of darkness during troll tagging trips. The Japanese word "Yonawa" means "night longline" or "the fishery for broadbill swordfish."

One such incident occurred in June 1960 off Charleston, SC, when Chief Engineer Cyril Backus was taken ashore after losing some fingers in an air conditioner. The longline set that morning took off to the northeast in the Gulf Stream. At dusk *Crawford* returned to the position where the lost set had been put in the water and set what gear they had left to determine the speed of the current overnight. The next day they hauled their gear and

Swordfish, "Swede" Nelson, Charlie Murphy and Henry Klimm, 1962. *Photo by Martin R. Bartlett*



Given half a chance, whale cod like this Parker Ridge specimen, held by Spaulding Bartlett, can rebuild a resource, 1984.
Photo by Martin R. Bartlett

steamed in the direction of the drift of the previous night reproducing the bathythermograph (depth vs. temperature) trace of the fateful morning as closely as possible. Fishing nights and looking days they caught up to the lost gear off Cape Lookout, N.C., 240 miles downstream. Three hundred and seventy of the 530 hooks set were recovered and swordfish were caught every night the gear was fished.

In early October 1962, Dick Backus chartered Henry Klimm's Blount built *Cap'n Bill III* to sample with mid-water trawls the elusive scattering layer in 1000 fathoms southeast of Hudson Canyon. To identify the predators associated with this layer, he brought along 250 hooks of longline. Set in 1000 fathoms, the catch included albacore, yellowfin, bigeye tuna and one swordfish. On the way home, two sets in Block Canyon, near the "fish tail," produced 27 tuna and 16 swordfish.

Henry Klimm had seen all he needed to see. Shipping 500 hooks of Bureau of Fisheries gear, he fished nine nights before the end of the month and returned to Woods Hole with 104 swordfish, 135 bluefin and 13 bigeye tuna. In November, he fished seven nights for 131 swordfish and 55 tuna. In December, ten nights fishing produced 20 tuna and 413 swordfish. A fleet of 37 boats would switch to this fishery in the next year. Year round swordfishing was a reality in New England.

Effective management of swordfish and lobster stocks has been slow in coming. Henry Klimm is happy filling the insatiable demand for squid at the MBL. He's running his eleventh boat, *Loligo,* or is it the twelfth?

Martin R. Bartlett spent eleven years at WHOI running boats and tagging tuna. Another six years were spent exploring a potential swordfishery in the Gulf of Mexico and the U.S. southeast coast. Starting in 1973, he fished the Penobscot Gulf between Nova Scotia and Texas longlining swordfish and tuna; groundfished in the Gulf of Maine and sponged in the Gulf of Mexico. He is presently trying to retire.

Spritsail lessons in the Wellfleet oyster skiff *Eliza.* Martin R. Bartlett, Christopher Worthington, George H. Bartlett, 1939. *Photo by S. S. Bartlett*

Acknowledgments

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