

From the Archivists

Jennifer Stone Gaines, Curator

Woods Hole Historical Collection and Museum

While we were looking at rooftops, thanks to Townsend Hornor and his time ball investigation, I thought that we should also look at weathervanes, so I have collected the following details of three of Woods Hole's weathervanes...

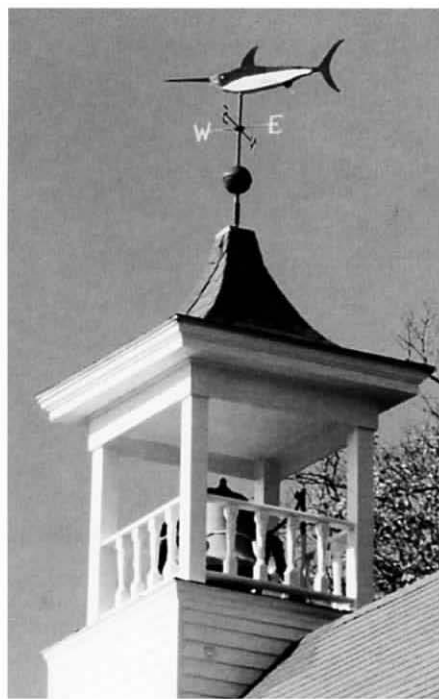
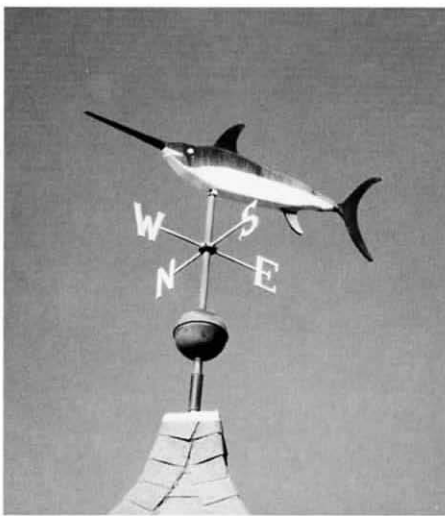
Weathervane on Top of Endeavour House, The Old Methodist Church

I had some very sparse notes in a file naming Dr. Bill von Arx as the creator of this delightful fish. After checking with the Woods Hole Oceanographic Institution archives for documentation but finding no information, I just called Bill. What fun! He remembers the whole story very clearly, starting in 1949 soon after the church was moved to its new site at the corner of School Street and Maury Lane, just downhill from the Redfield's house. Dr. Alfred Redfield had been looking down on the roof of the church from his study and said "That roof needs a weathervane."

Dr. von Arx then recounts his efforts in great detail. At Dr. Redfield's command, he consulted Lionel Walford's book on fishes of the North Atlantic, recommended for its superior swordfish drawings, to make sure that

not only would his swordfish be anatomically correct (especially including the tilted up bill), but also accurate in every color and shading. As Bill says "Remember, I am a physicist," implying that he is neither a biologist nor an artist, "so I blew up Walford's drawing by the method of squares," enlarging the lines to the size of the weathervane.

Then he was helped by Stanley Eldredge and Scotty Morrison, W.H.O.I. carpenters, who donated several pieces of carefully aged wood they had on the storage racks in the wood shop. It was tough stuff, a beautiful
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Swordfish Weathervane on top of Endeavour House, Old Methodist Church.

Photos by Arthur G. Gaines, Jr.

wood. Bill carved the shape ever-so-carefully, always checking back to Walford's book for accuracy. He fashioned the whole body rather like a sandwich, the sides of the fish made out of the South American wood holding the "filling" of the head and tail pieces.

For the swordfish head and bill, Dr. von Arx used a one inch thick slab of brass. Cleverly, the eyes are the head and nut of the bolt that attach the brass slab to the two outer wooden sides of the fish. At the tail end, Bill carved a slab of tough wood that Scotty Morrison said "ought to last forever" into the central section of the fish including the dorsal and pectoral fins, as well as the tail. This inner wooden piece was glued and pegged to the outer wood.

His next big effort involved the pivot that allows the fish to swing freely in the wind. Once he had figured out the balance point, he drilled up into the bottom of the brass head, ending in a conical hollow. The vertical brass supporting rod coming up from beneath is topped with a conical depression holding a steel ball bearing, all well greased, so the whole fish can turn freely with very little friction.

The brass letters showing the compass points were also created by Bill von Arx. In the W.H.O.I. shop, he used a band saw "under the direction and solici-

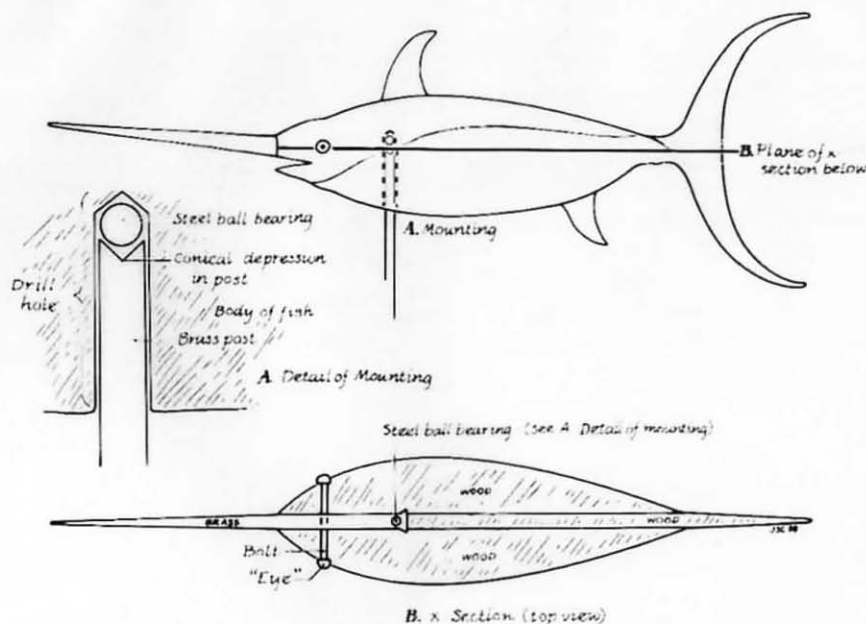


Diagram of Swordfish Weathervane

By Julia S. Child, after a sketch by William von Arx

tous care of Chuck Bodman" to cut out the four letters, then mounted them on brass rods. Farther down the vertical rod is a decorative hollow steel sphere, from, delightfully, an old net from one of Sam Cahoon's fishing boats. It had been used as a float tied onto the top edge of the net from a shallow water otter trawl.

So the whole vane was assembled: the carefully carved and painted wooden fish, the vertical rod with its ball-bearing top, the ordinals on their horizontal rods, and the sphere. Then came the final test: the official viewing. The vane passed with flying colors. Dr. Redfield was enormously pleased, noting with approval that the sword tilted up. Mrs. Redfield was also delighted: "That turned-up bill gives him a saucy look!" Bill was gratified by the approval because "Dr. Redfield could be difficult to please. If you man-

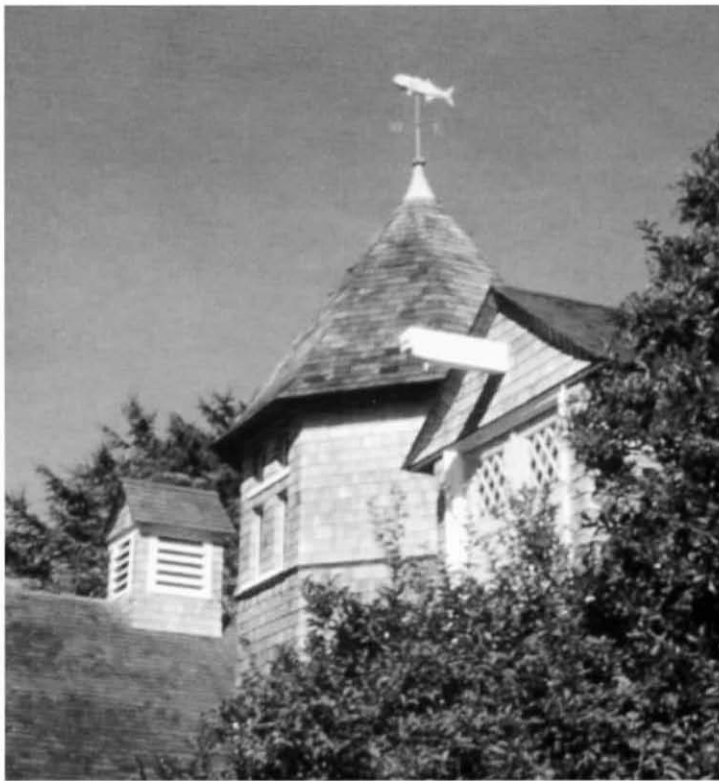
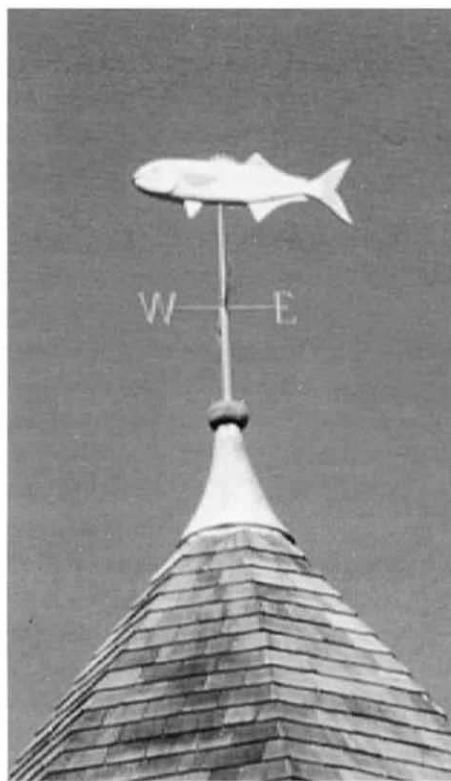
aged to please him, you had accomplished a great deal." In his files, Bill has a photograph of this day: Dr. Redfield, with a happy smile on his face, stands proudly beside the fish.

All that remained was for "another of W.H.O.I.'s beloved carpenters" to help Bill mount and install the weathervane atop the cupola roof. This was done with some effort. There it has remained except for one unscheduled trip down in a gale. The tail was broken. It was repaired by other W.H.O.I. carpenters. Unfortunately the new tail did not please Martha Redfield, and the paint job did not please Dr. von Arx. But for those of us not lucky enough to have known this weathervane in its original in-

carnation, we can still be delighted by its saucy look as it spins to the wind.

Weathervane Atop Norman's House, Church Street

Here again is a weathervane whose genesis lies in a man looking at the rooftop and saying "This roof needs a weathervane." Although one might guess that the graceful weathered bluefish had been there for decades, these words were spoken in the autumn of 1993. The speaker was Jim Akens, one of Woods Hole's very talented, modest, and supra-educated workmen, who was shingling the roof with Tom Renshaw, master carpenter, and his assistant, Todd



Bluefish Weathervane on top of Norman's House, Church Street.

Photos by Paul Ferris Smith

Johnson. So Todd and Tom undertook this project. Tom created the brass-work of the ordinals and their supporting rods, while Todd created the fish and its pivot.

Todd also consulted a book for a drawing of his fish, a bluefish. The book was *McClane's Standard Fishing Encyclopedia*. He drew his fish freehand onto paper, then onto plywood patterns, finally onto two pieces of spruce which he then carved into the longitudinal halves of the fish. "It is not meant to be an anatomically correct fish, but it's quite accurate." The fins, gill covers, lips, mouth, and eyes are all carved in bas relief. Todd has caught a lot of bluefish over the years, so he is intimately aware of all these features. He even added spines sticking up out of the dorsal fin, made out of eight-penny copper nails. He also hollowed out the spruce so that the whole vane would be light-weight and responsive to the wind.

To create the pivot, he chose a hollow stainless steel pipe about one and one quarter inch in diameter that would eventually go inside the fish and over the bronze upright rod from the roof. To make a low friction "bearing," he poured an epoxy and graphite combination into the stainless steel pipe, immediately inserting the bronze rod which had first been coated with plastic. When the epoxy was dry, he was able to melt the plastic and release the bond. The top of the bronze rod had been milled to a conical point, so when they were all put together again, the fish balanced on the end of that point with nary a wobble, thanks to the narrowness of the epoxy encasement. Todd was relieved that the balance point of the fish was forward of the center of lateral resistance, so it would spin head-first into the wind. Then Todd began to be "very concerned that the shape of the fish would create a lift in a high wind" and would float right up and off its base. To counteract its up-

ward tendencies, he inserted a set screw just below its lateral line, screwing it in till it touched the bronze upright just at a milled groove.

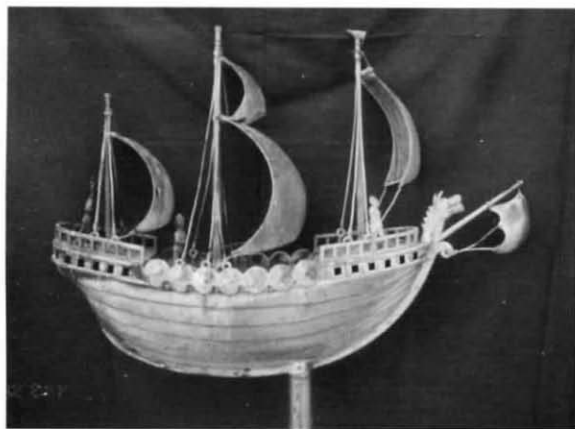
To seal and color the fish, Todd used epoxy, with a resin based pigment to cut ultraviolet rays, adding some graphite dust to darken the gray for the fish's dorsal side. At the beginning, the epoxy made the fish "glossy, as if it had just jumped out of the water," but Todd "knew, that in time, the sun would knock the brightness down." So, now the fish floats above the roof, a dusky smooth gray matching the shingles, looking as if it had been there forever.

At the junction of the bronze upright and the roof, is an orb made of good hard locust that Tom and Todd turned on a lathe, oiled with linseed, and installed. On the roof itself, they placed "conical copper flashing that impersonates the first course of shingles."

Todd adds that "It was a lot of fun...a fun project. It's real gratifying to see it up there. ...It's pretty special for me to be able to work on a house like that."

Not surprisingly, these fellows had even more ideas than actually came to fruition. The most elaborate involved a scheme in which the vertical support rod would go down through the roof to the living space below, where its ball bearing would be on the floor of the bedroom. Then they planned another carved fish to attach to the bronze rod part way up to the ceiling, so one could tell which way the wind was blowing without even getting out of bed. Of course this smaller lower fish would have to be a menhaden, the favored food of the bluefish on the roof.

When the weathervane project was well underway, the three carpenters investigated the peak of the roof



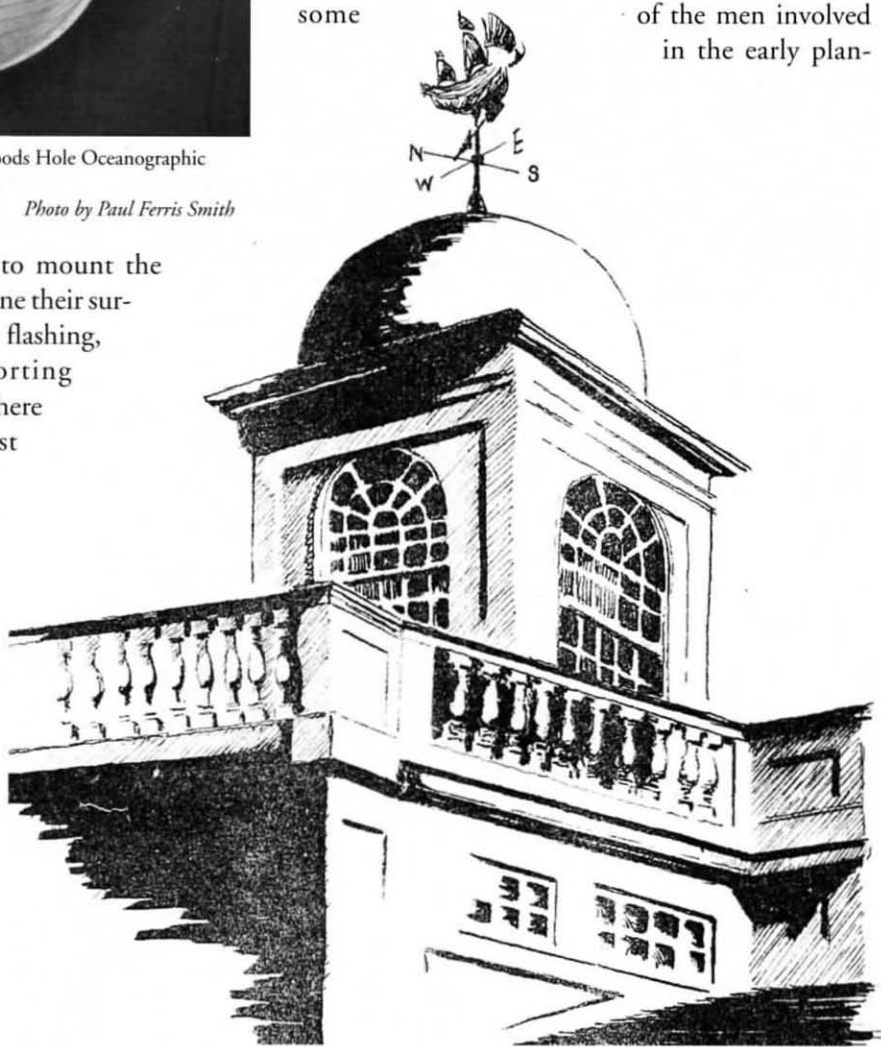
Weathervane on Bigelow Building, Woods Hole Oceanographic Institution, Water Street, Woods Hole.

Photo by Paul Ferris Smith

Bigelow Building Weathervane, Woods Hole Oceanographic Institution Water Street

This weathervane is the oldest of the three. It was built in 1930 as part of the construction of the Bigelow Building, the first laboratory built for the new Institution. One can imagine some of the men involved in the early plan-

to figure out the best way to mount the bronze supporting rod. Imagine their surprise to find a hole under the flashing, and farther down, supporting trusses, proof that long ago there had been a long pole, most likely supporting a weathervane, on this very spot. My curiosity aroused, I turned to the photographs in our archives. Sure enough, in an 1890's photograph of the building, there it is: a weathervane! It had come down so long ago that no one remembered it. Little did Akens guess that he was echoing a voice of one hundred years ago when he said, "This roof needs a weathervane."



Architect's Sketch of Bigelow Building's Cupola.

Courtesy Woods Hole Oceanographic Institution's Archives



Close-up of weathervane on Bigelow Building, Woods Hole Oceanographic Institution, Water Street, Woods Hole.

Photo by Paul Ferris Smith

ning, say, perhaps, Frank R. Lillie, Henry Bryant Bigelow, and maybe even Columbus Iselin, looking at the architects' plans of the cupola and saying "This roof needs a weathervane."

In the Oceanographic's archives is a sketch from the architects showing the cupola and weathervane. It is quite stunning. There do not seem to be any records or memories left of its exact origins or symbolism (but we would be happy to stand corrected and receive more details) but we can surmise. It seems to be a Viking ship. Perhaps the Vikings were chosen as the first explorers of the Atlantic, a role the Oceanographic planned to continue in a scientific fashion. We can also presume that the architects sent their rough sketch out to a sculptor who crafted this large vane of heavy copper sheeting. Handsome as it is, the locals are quick to note that it seems to be sailing downwind, sails flying full before the mast. But, as all good weathervanes should, its bow is heading straight into the wind. Obviously the sculptor was not a sailor!



Old Stone Dock in Falmouth, originally built in 1801, destroyed in The Great Storm of 1815 and rebuilt in 1817. Painting by Franklin Lewis Gifford in the 1930s. Courtesy Falmouth Historical Society. Photo by Paul Ferris Smith.