USS SCULPIN (SSN 590)

UNITED STATES SHIP SCULPIN

(SSN 590)

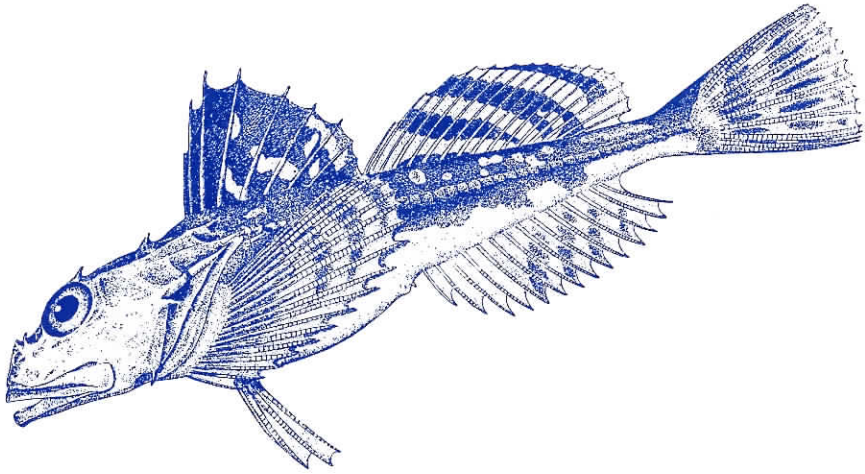
Keel Laid	3 February 1958
Launched	31 March 1960
Commissioned	1 June 1961

SPONSOR

Mrs. Fred Connaway

BUILT BY

Ingalls Shipbuilding Corporation
Pascagoula, Mississippi



SCULPIN'S NAME

U.S.S. SCULPIN is named for the great family of Sculpins, or **Cottidae,** which is especially characteristic of northern seas. Sculpins are arctic or subarctic being found around the world north of Italy, Virginia, California, and Japan.

The Sculpins are grotesque fish with large, depressed, spiny or armored heads and short tapering bodies. The eyes are placed high in the head and the space between them is narrow. The pectoral fins are large and fanlike and are used by some fresh water species to hang onto stones. The majority of Sculpins are small, ranging up to one foot in length and one pound in weight, but a few attain larger sizes.

Most Sculpins inhabit tide pools and shallow shore waters, living on the bottom and feeding on crabs and small fish. A few inhabit waters of considerable depth. The flesh of Sculpins is edible but because of their small size and unattractive form they are seldom eaten.

SCULPIN'S HERITAGE

SCULPIN is the second ship to bear the name. The first U.S.S. SCULPIN (SS 191) was built by the Portsmouth Naval Shipyard in New Hampshire. Shortly after being commissioned on 16 January 1939 SCULPIN, departing Portsmouth on her shakedown training cruise, was ordered to search the area near the Isle of Shoals for her sister ship SQUALUS who was overdue from a practice dive. SCULPIN sighted SQUALUS' distress signals and located the stricken ship resting partly flooded in water 240 feet deep. SCULPIN stood by until the arrival of the rescue ship FALCON and rendered valuable assistance in the ensuing rescue of the 33 survivors of SQUALUS.

In 1940 SCULPIN was deployed to the Pacific and was based at Cavite in the Philippines when war broke out with Japan. During the first two years of the war SCULPIN earned eight battle stars and the Philippine Republic Presidential Unit Citation for war patrols and other operations.

On her last fateful patrol in November 1943 SCULPIN, under the command of Commander Fred Connaway, was assigned to an area northwest of Truk. Aboard was Captain John P. Cromwell who was to direct "wolf pack" operations when ordered to do so. On 16 November 1943 while pressing home an attack on a convoy SCULPIN was severely damaged by depth charges from a counter attacking destroyer. Realizing that SCULPIN was doomed Commander Connaway decided to surface and give the crew a chance to escape. SCULPIN surfaced and put up a furious battle with her deck guns but the destroyer soon found the range. A succession of hits killed Commander Connaway and the gun crews topside. Lieutenant George E. Brown, USNR, the senior surviving officer made preparations to scuttle the ship and so informed Captain Cromwell. Captain Cromwell, in possession of vital war plans information, elected to safeguard this information at the cost of his life rather than risk having it extracted by the enemy's use of torture or drugs.

Captain Cromwell was posthumously awarded the Congressional Medal of Honor for this act of devotion and heroism. Cromwell Hall, which houses the Nuclear Power Department of the Submarine School at New London, Connecticut, is dedicated to his memory.

Forty two of SCULPIN's men were picked up by a Japanese destroyer and taken to Truk for interrogation. About ten days later they were embarked in two aircraft carriers for transportation to Japan. On 2 December twenty of the SCULPIN survivors perished with the carrier CHUYO when it was sunk by the U. S. submarine SAILFISH. The CHUYO had been one of Japan's busiest carriers and her destruction was a blow to the enemy. But it was a final irony that she was sunk by SAILFISH, the old SQUALUS raised and refitted, in whose rescue SCULPIN had assisted in 1939.

U.S.S. SCULPIN (SSN590)

SCULPIN is one of a radically different and faster class of submarines. Her blunt nose, "football" shaped hull, devoid of superstructure, makes SCULPIN and her sister ships hydrodynamically superior to other submarines. The adoption of this hull form in conjunction with a powerful nuclear reactor plant makes possible the highest submerged speeds yet attained and an extremely long submerged endurance. SCULPIN's keel was laid down at the Ingalls Shipbuilding Corporation in Pascagoula, Mississippi, on 3 February 1958 and she was launched two years later on 31 March 1960, the first nuclear submarine constructed on the Gulf Coast.

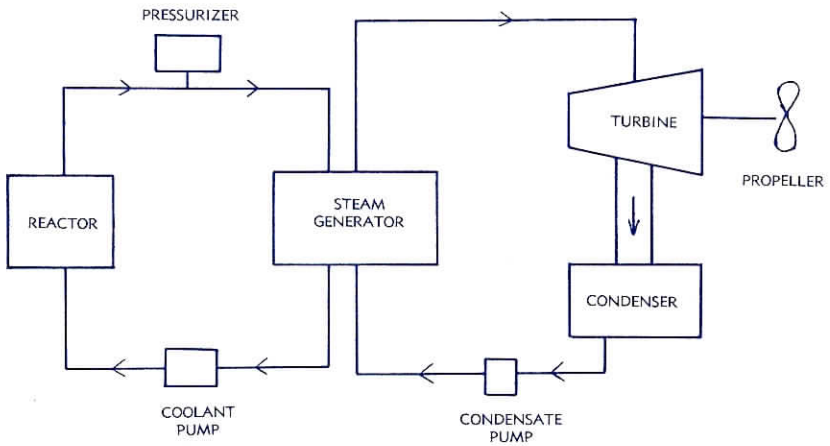
True submarines like SCULPIN can remain fully submerged on station for long periods of time. When submerged they are invisible and virtually undetectable. Fitted with the most modern detection equipment and weapons systems they are the most effective single force available to combat other submarines. Together with our nuclear powered submarines fitted to fire ballistic missiles they present a strong deterrent to any potential enemy.

ENGINEERING PLANT

Primary System

The primary coolant water is kept pressurized to insure that boiling is forced through the steam generator tubes where it gives up heat to form steam on the shell or secondary, side of the boiler. The primary coolant is then pumped back into the reactor where it is heated again.

The reactor gives up heat to the primary coolant water which then will not take place in the reactor.



Secondary System

The secondary system is the steam system. It is completely isolated from the primary system since the primary water goes through the tubes of the steam generator while the secondary water, which is boiling to make steam, is on the shell side. Steam then flows back to the engine room where it drives ship's service turbo generator sets and the main propulsion turbines.

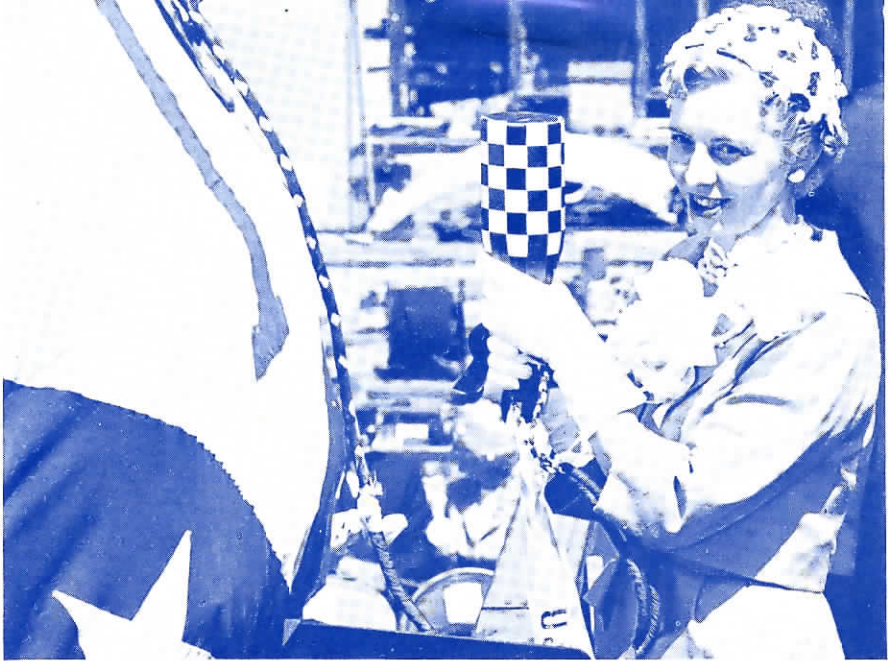
Reliability

SCULPIN's nuclear propulsion plant is built to conform to exacting engineering standards. The shock resisting and strength characteristics of the reactor virtually rule out physical damage. Every control feature of the power plant and of the ship has at least one backup method of operation in addition to the normal mode. The propeller is made to the same standards of strength as are ice breaker propellers.

Radiation

When the reactor is in operation the lower level of the reactor compartment is kept isolated and personnel cannot enter this space. Within a few minutes after shutdown the lower level reactor compartment can be entered to perform maintenance work.

The shield of the SCULPIN reactor reduces the radiation to a level such that, during a cruise lasting the life of the reactor, the average crew member will receive less radiation than he would during a lifetime of x-rays and cosmic rays and natural radioactivity in the sea, air, drinking water and ground. In one year of operation the average crew member will receive less than the Bureau of Standards allowable radiation dosage for one week.



SCULPIN'S SPONSOR

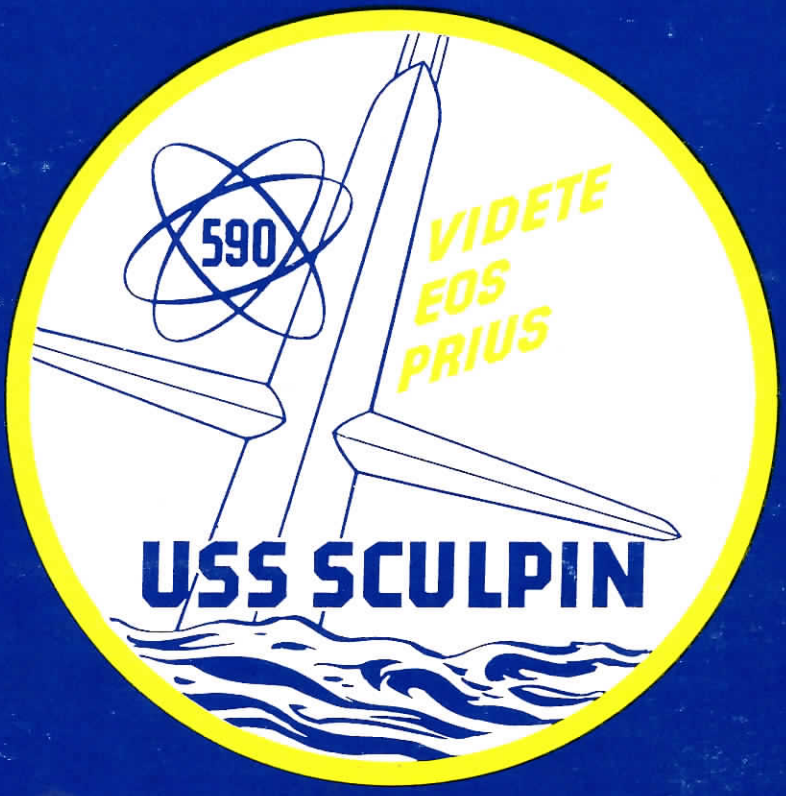
SCULPIN's lovely sponsor, Mrs. Fred Connaway, is the widow of Commander Fred Connaway who was lost in action with the first U.S.S. SCULPIN (SS 191). Mrs. Connaway resides in Helena, Arkansas, and has two children—John Connaway and Mrs. Joe D. Pope, whose husband is an officer in the United States Air Force.

Mrs. Connaway is pictured above as she prepared to break the traditional bottle of champagne on the bow of SCULPIN at the launching ceremony on 31 March 1960. Her continuing interest and close contact with SCULPIN is a source of inspiration and a constant reminder of the gallant traditions of the naval service so highly exemplified by her husband and the heroic men of his command.

SCULPIN'S BUILDERS

The Ingalls Shipbuilding Corporation has been in the shipbuilding business for over twenty years. During that period Ingalls has launched over 200 vessels and has grown in size until its shipyard is the third largest in the nation. In addition to its Pascagoula plant, which boasts ten large building ways, Ingalls mantains a shipyard at Decatur, Alabama, the largest yard on the Tennessee River. Ever since its earliest days when Ingalls built the world's first all welded dry cargo ship, this company has been a pioneer in the business, continually striving for better and more efficient methods. This spirit is typified by the enthusiastic entry of the company into the field of building submarines. Besides SCULPIN, its first nuclear powered submarine, Ingalls has delivered one conventional submarine and upon SCULPIN's commissioning had four other nuclear powered submarines under construction at various stages of completion.

Ingalls-built ships serve with distinction in virtually every major steamship company in North and South America. During World War II Ingalls began building for the Navy. Since then they have supplied the Fleet with destroyers, escort carriers, various auxiliary and amphibious type ships, and the free world's largest icebreaker.



SCULPIN's motto "Videte eos prius" is Latin for "See 'em first" which was the motto of the first USS SCULPIN (SS 191).