

Welcome Aboard



**THE ATTACK SUBMARINE
USS WHALE (SSN 638)**

HISTORY OF USS WHALE (SSN 638)

USS WHALE (SSN 638) was named in commemoration of the submarine USS WHALE (SS 239), one of the first fleet-type submarines of World War II. The old WHALE participated in eleven successful war patrols, sank 57,716 tons of enemy shipping, and rescued fifteen aviators from the sea.

The keel for the present WHALE was laid on 27 May 1964, at the Quincy Division of General Dynamics Corporation, Quincy, Massachusetts. She was launched on 14 October 1966, and commissioned on 12 October 1968. Her sponsor was Mrs. Russell B. Long wife of Senator Long of Louisiana. Her first commanding officer was CDR William M. WOLFE, Jr., USN.

WHALE's first homeport was Charleston, South Carolina, arriving there in November 1968. After successfully shooting her first SUBROC missile in January 1969, she participated in the Arctic exercise SUBICEX 1-69. WHALE surfaced at the North Pole on 6 April 1969, 60 years to the day and hour after Admiral Perry had arrived there. The ship was awarded the Navy Unit Commendation for this operation.

In January 1970, CDR Thomas MAYBERRY, Jr., USN, relieved as Commanding Officer. During February 1970, the ship conducted a Summer 1970 deployment for which she was awarded the Meritorious Unit Commendation. WHALE was deployed to the Mediterranean Sea to support the US SIXTH Fleet during the Jordanian Conflict. She was awarded a second Meritorious Unit Commendation for the operation.

WHALE again deployed in the Summer of 1971, concluding with a port visit to Bremerhaven, Germany. The ship was awarded a third Meritorious Unit Commendation for this 1971 deployment. She returned to Charleston but again deployed in the Spring of 1972, concluding with a port visit to Holy Loch, Scotland, in May 1972.

CDR Guy H. CURTISS III, USN, relieved as Commanding Officer in July 1972, after which the ship changed homeport to Groton, Connecticut. WHALE entered the Electric Boat Division of General Dynamics Corporation, Groton, Connecticut, in August 1972, for a non-refueling overhaul. During her first cycle of operation, WHALE remained at sea approximately 46 percent of the time, the highest average of any Atlantic Fleet submarine.

In October 1973, WHALE completed its overhaul and commenced post overhaul shakedown and refresher training. She then was certified to shoot MK 48 torpedoes.

In May 1974, WHALE commenced a six month deployment to the Mediterranean Sea, concluding with port visits to Naples and La Spezia, Italy. WHALE received her fourth Meritorious Unit Commendation during this deployment. Upon return to Groton, WHALE received the Submarine Squadron TWO Battle Efficiency "E" Award for fiscal year 1974. In February 1975, WHALE conducted her fourth successful operation test of the SUBROC missile system. During May and June WHALE provided services to the Naval Base Guantanamo Bay, Cuba, and successfully demonstrated the capability of the SSN 637 Class Submarine to conduct UDT operations before returning to Groton in July 1975.

CDR Linton F. BROOKS, USN, relieved as Commanding Officer in July 1975, after which the ship commenced preparations for the forthcoming deployment. WHALE was again presented the Submarine Squadron TWO Battle Efficiency "E" for fiscal year 1975.

In September 1975, WHALE commenced a six month Winter deployment to the Mediterranean Sea, participating in various U.S. and NATO exercises during the deployment.

WHALE returned from deployment in March 1976 and in June conducted MK 48 recertification and visited Fort Lauderdale, Florida.

WHALE conducted a 22 month refueling overhaul in Portsmouth Naval Shipyard during September 1976-July 1978. In August 1978 CDR Clayton K. MORSE assumed command and the ship commenced a period of post overhaul weapons and sonar system Certifications.

During the fall of 1978, WHALE became certified to carry the Harpoon missile and completed MK 48 Torpedo Recertification. During April-September 1979 she conducted a five month deployment to the Mediterranean, contributing significantly to the readiness of the U.S. SIXTH Fleet. From October 1979 through June 1980 WHALE participated in six different SUBLANT, LANTFLEET, and/or NATO exercises, making extensive contributions to ASW tactical development. During this period she visited Port Canaveral, Florida, Bermuda, and Halifax, Nova Scotia. In July through September 1980 WHALE underwent the first Selected Restricted Availability to be conducted at a remote site from the shipyard. In October 1980 she was awarded the Supply "E" for outstanding achievement in Supply operations during the previous fiscal year.

HISTORY OF WHALE (SS 239)

The present USS WHALE (SSN 638) is named in commemoration of the submarine WHALE (SS 239), one of the first fleet-type diesel submarines of World War II.

The keel for the SS 239 was laid on 28 June 1941 at the Navy Yard, Mare Island, California. She joined the Navy on 1 June 1942, with LCDR J. B. AZER, USN, as her first commanding officer.

In October 1942, WHALE departed Pearl Harbor on her first war patrol to plant mines in the Kii Suido, the eastern entrance to the Inland Sea of Japan. Three minefields were planted successfully, and WHALE spent several days in these dangerous waters attacking targets of opportunity and obtaining periscope photographs of military installations along the coast, at times raising her scope only 500 yards offshore. In leaving the area, WHALE encountered a Chidori patrol craft and received her first severe depth-charging, which flooded the inductions, opened sea valves and sent her plunging toward the bottom with a 20° up angle. After several hours the enemy was evaded and WHALE headed home.

By January 1943 the damage received on the first patrol was repaired and WHALE departed Pearl Harbor for her second patrol, off the Marshall Islands. During this patrol a freighter and two troopships were sunk and a tanker was damaged. Four freighters were sunk and a seaplane tender damaged by WHALE on her third and fourth patrols off Saipan, Marianas Islands. In August 1943 WHALE conducted her fifth patrol, again in the Marianas area, and sank the 7149-ton aircraft ferry MARUTO MARU.

WHALE sailed for her sixth patrol in the forward area, off the Bonin Islands. Night attacks on a convoy netted WHALE two more freighters. On her seventh, eighth and ninth patrols, SS 239 continued to inflict heavy damage on the Japanese Merchant fleet. On completion of her tenth patrol, a photo reconnaissance of Okinawa was conducted in preparation for the forthcoming invasion, and WHALE was then routed to the Navy Yard at Mare Island for her second major overhaul.

WHALE completed overhaul in the spring of 1945 and after a training workup departed Guam in July to conduct lifeguard services off Japan in support of carrier and B-29 strikes against the Japanese home islands. Fifteen aviators were rescued and WHALE was still at sea when the war ended.

A few days later she departed for New York, by way of Saipan and Pearl Harbor, with the enviable record of eleven successful war patrols and 57,716 tons of Japanese shipping sunk.

In January 1947 WHALE was placed out of commission in the Atlantic Reserve Fleet, berthed at the Submarine Base, New London. On 1 March 1960 she was struck from the Navy list and sold for scrap.



**COMMANDER CLAYTON K. MORSE, USN
COMMANDING OFFICER
USS WHALE (SSN 638)**

THE COMMANDING OFFICER

Growing up in a service family, Commander MORSE traveled extensively although his principal childhood home was Corvallis, Oregon. He attended high school in Webster Groves, Missouri. After completing one year at the University of Oregon, he entered the United States Naval Academy, from which he graduated in 1963 with a Bachelor of Science Degree.

Following nuclear power training and basic submarine school, Commander MORSE served on USS TENCH (SS417), where he qualified in submarines in April 1966. Subsequently, he was assigned to USS WHALE (SSN 638) on which he served during the new construction and shakedown periods; he also participated in the ship's under ice operation at the North Pole in April 1969. As Engineer Officer of USS PUFFER (SSN 652) in Pearl Harbor from 1970-1973, Commander MORSE took part in two deployments to the Western Pacific. In 1973-1974 he was a tactics and fire control system instructor at Naval Submarine School. He then became Executive Officer of USS GREENLING (SSN 614) and participated in one Mediterranean deployment.

Commander MORSE has been awarded the Navy Commendation Medal for service while on PUFFER and the Navy Achievement Medal with two gold stars for service on PUFFER, at Naval Submarine School, and on GREENLING. He received the degree of Master of Business Administration from the University of New Haven in June 1978.

Commander MORSE is married to the former Jane Anderson of Marblehead, Massachusetts, and has two children Sarah and Benjamin. They reside in Waterford, Connecticut.

USS WHALE (SSN 638)

BUILT BY

GENERAL DYNAMICS CORPORATION QUINCY DIVISION

Keel laid	27 May 1964
Launched	14 October 1966
Sponsored by	Mrs. Russell Long
Length	292 feet
Beam	32 feet
Displacement surfaced	4060 tons
Speed	Over 20 knots
Diving depth	Over 400 feet
Assignment	Submarine Development Squadron Twelve, Groton, Connecticut





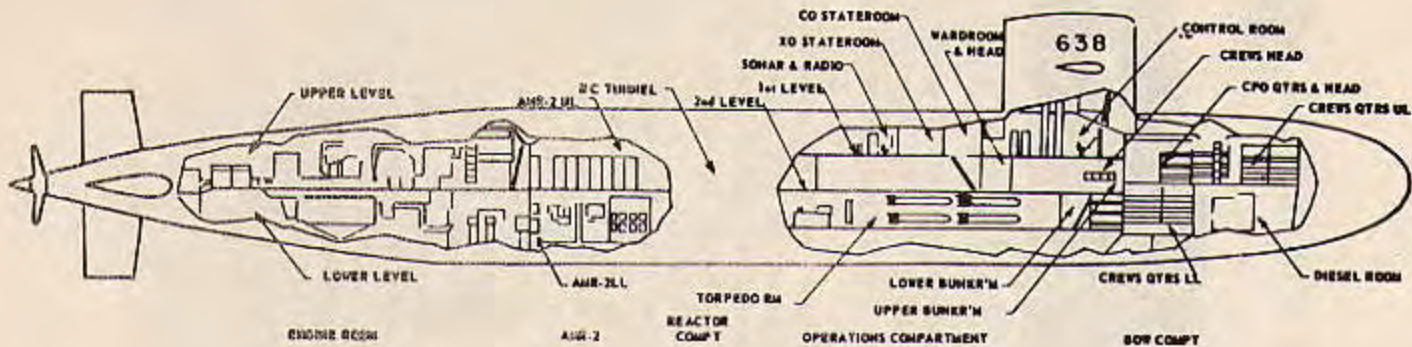
WHALES

WHALE is an appropriate name for a submarine since the modern submarine has a smooth rounded hull with few appendages, giving it a remarkable resemblance to a large whale.

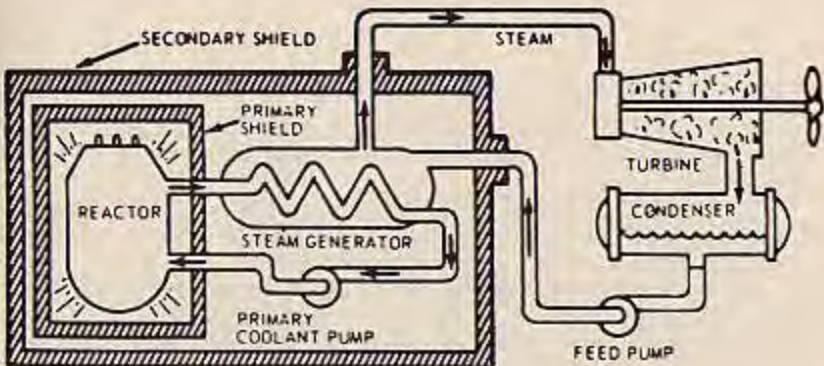
Whales are cetaceans (aquatic mammals) and are the largest creatures the world has ever seen. The largest of the dinosaurs is estimated to have weighed 50 tons, but a blue whale may scale 160 tons — bigger than three dinosaurs or the equivalent of 20 bull elephants.

The sperm whale, used as our emblem, is the best-known of the whale species. Moby Dick was a sperm whale. The adult males are 65-70 feet in length, black, and have a narrow lower jaw with 44 large conical teeth. There are no upper teeth. The sperm whale is found in all seas except the Arctic and Antarctic, but principally in the tropics, and travels in schools of 400 or more. In contrast to other species of whale, which feed by straining colonies of crustaceans through the mouth, the sperm whale feeds on giant squid at the bottom of the sea. The squid grows to enormous dimensions (over 30 feet) and terrific battles often occur between sperm whales and squid, the squid inflicting long gashes in the whale with its tentacles. However, the superior strength and large teeth of the whale usually prevail.

The sperm whale is limited to slow speeds of less than 12 knots on the surface, spouting 30 or 40 times before diving. Once submerged the sperm whale may reach speeds in excess of 20 knots, diving to depths greater than 6000 feet.



SHIP'S DIAGRAM



THE POWER PLANT

WHALE is powered by a nuclear power plant which consists of a nuclear reactor with its associated circulating water, steam cycles, and auxiliary machinery.

The primary system is a circulating water cycle and consists of the reactor, identical port and starboard loops of piping, primary coolant pumps, and the tubes of the steam generators. Heat is produced in the reactor by nuclear fission and is transferred to the circulating primary coolant water which is pressurized to prevent boiling. This water is then pumped through the steam generator tubes, where it transfers its heat to the shell, or the secondary side of the steam generators, where it boils water to form steam. It is then pumped back to the reactor by the primary coolant pumps where it is heated for the next cycle.

The secondary system is the steam-producing cycle and is made up of the shell side of the steam generators, turbines, condensers, and steam generator feed pumps. It is completely isolated from the primary system since the primary water goes through the tubes of the steam generator while the water which is boiling to make steam is on the shell side of the steam generator. Steam rises from the steam generators and then flows to the engine room, where it drives the ship service turbogenerators, which supply the ship with electricity, and the main propulsion turbines, which drive the propeller. After passing through the turbines, the steam is condensed and the water is fed back to the steam generators by the feed pumps. There is no step in the generation of this power, which requires the presence of air or oxygen. This fact alone allows the ship to operate completely divorced from the earth's atmosphere for extended periods of time.



USS WHALE AT SEA



SHIP'S MISSION

USS WHALE (SSN 638) is a fast-attack nuclear submarine of the SSN 637 Class. Her primary mission is to seek out and destroy enemy ships of any type. She is equipped with the most advanced sonar and fire control system.

The USS WHALE has been specially designed to operate quietly and indefinitely at high speeds while completely submerged. This gives her great advantage in offensive and defensive action.

USS WHALE



SSN 638