

Project Experience

National Register Nomination
NPS Maritime Heritage Program, Historic Ship Inventory
HA-8 Midget and X-1 Midget Submarines
Submarine Force Museum, Groton, Connecticut

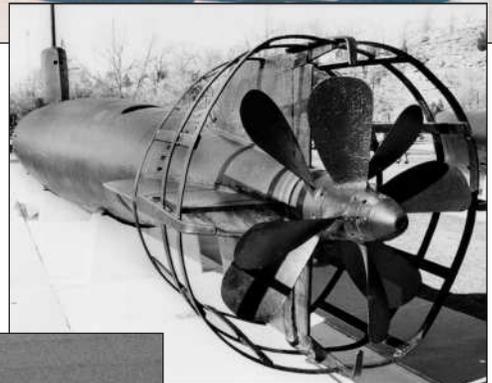
The *HA-8* is a *Ko-Gata* (Type A) class two-man midget submarine of the Imperial Japanese Navy built in 1939. The vessel is 78.5 feet in length overall, with a 6.1-foot beam and a submerged displacement of 46 tons. The Type-A's were built to fight in major naval battles and were used in the attack on Pearl Harbor. Launched from a mother submarine or seaplane tender, return or recovery for reuse was a rare. The US Navy salvaged the *HA-8* near Guadalcanal May 7, 1943. It was intentionally scuttled after firing its two torpedoes without a hit during the Battle of Esperance. The *HA-8* is intact and one of the few Type-A's in existence.

The X-1 was built by Fairchild Engine & Airplane Co. and launched 7 September 1955: length 49'-7", beam 7'-0" and submerged displacement 36.3 tons. It was originally equipped with dual cycle diesel-hydrogen peroxide engine, modeled after the German's disaster prone WWII invention, later perfected by the British. In 1949 the U.S. Navy began to study "small submarines and sneak craft," recognizing their successes during WWII. The British lent the Navy

their *XE-9* midget sub and the resulting design of the *USS X-1* closely resembles it. After a peroxide explosion in 1957 the sub was refitted with a standard diesel-electric propulsion system. Its active duty was as a research vessel for Naval Research Laboratory. The *X-1* was stricken from the Naval Vessel Register in 1973 and thereafter used as a historical exhibit. It was moved to the Submarine Force Museum in 2001. Richard Casella, Architectural Historian with the Louis Berger Group, Inc., prepared the nomination for the U.S. Navy.



USS X-1 Experimental Midget Submarine [1955]



HA-8 Japanese Midget Submarine [1938]

