

WELCOME ABOARD



U.S.S. RAZORBACK (SS-394)

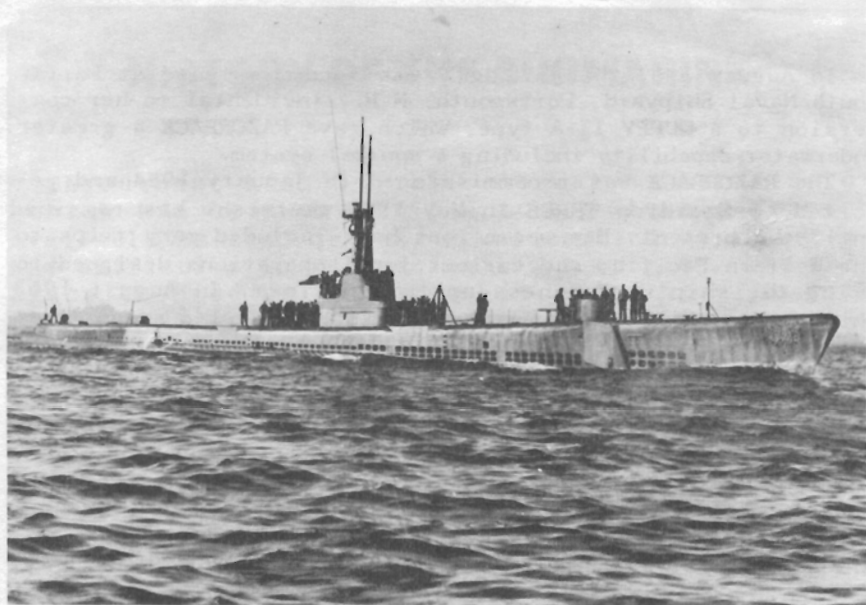
COMMANDER WILLIAM BIGGAR, USN
COMMANDING OFFICER



Commander William BIGGAR, USN, was born on August 24, 1928, and is a native of Amesbury, Massachusetts. After four years of enlisted service in the Navy, Commander BIGGAR entered the U.S. Naval Academy. Following graduation from the Naval Academy in June of 1954, he served in the destroyer U.S.S. DEHAVEN (DD-727) until he entered the Submarine Service in June of 1955. Upon graduation from Submarine School, he served in U.S.S. RATON (SSR-270) and was in the commissioning crew of U.S.S. BONEFISH (SS-582). This duty was followed by a tour as Assistant Operations Officer of the Staff of Commander Submarine Flotilla SEVEN at Yokosuka, Japan. Commander BIGGAR then served in Pearl Harbor as Executive Officer of U.S.S. GREENFISH (SS-351), and remained in Hawaii to serve as Assistant Operations Officer, Staff of Commander Submarine Force, U.S. Pacific Fleet. On May 10, 1968, Commander BIGGAR relieved as Commanding Officer, U.S.S. RAZORBACK (SS-394) at San Diego.

Commander BIGGAR is married to the former Ann GOODMANSON of Los Angeles, California. They have three children: Brian, Alexandra, and Margaret.





U.S.S. RAZORBACK SS-394

USS RAZORBACK (SS-394) was launched in January 1944 at Portsmouth Naval Shipyard, Portsmouth, New Hampshire.

In April 1944 RAZORBACK was commissioned and reported for duty to Commander Submarine Force, U.S. Pacific Fleet in July 1944.

During her wartime service, RAZORBACK completed five successful war patrols, claiming her share of Japanese shipping, capturing three Japanese prisoners, and rescuing five downed American pilots.

RAZORBACK was privileged to share in the making of Naval History when she was present in Tokyo Bay for the signing of the unconditional surrender by the Japanese aboard the battleship MISSOURI.

With the world at peace RAZORBACK returned to Submarine Squadron ONE at Pearl Harbor. She participated in various fleet exercises and simulated war patrols before being transferred to Submarine Squadron SIX at Norfolk, Virginia, in April 1950 for similar duty.

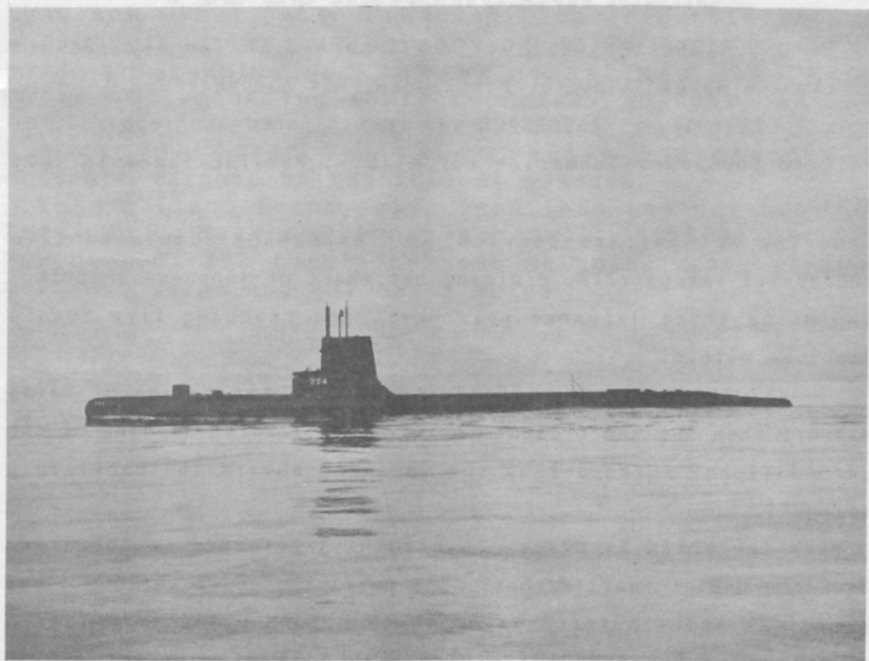
In August 1952 the RAZORBACK was decommissioned at Portsmouth Naval Shipyard, Portsmouth, N.H., incidental to her conversion to a GUPPY II-A type, which gave RAZORBACK a greater underwater capability including a snorkel system.

The RAZORBACK was recommissioned in January 1954 and reported to Squadron THREE in May 1954 where she has remained until the present. Her operations have included many trips to the Western Pacific, and various local operations designed to bring the ship's readiness up to a maximum. In August 1963 while returning from the Western Pacific, she saved seven lives as she picked up Vice Admiral BOGEN, USN (Ret), and other crew members from the sinking yacht FREEDOM II.

In August 1967 while conducting ASW exercises in Southern California operating areas, two members of a downed exercise aircraft were rescued and safely returned to San Diego.

On 10 May 1968, Commander William BIGGAR relieved as Commanding Officer.

RAZORBACK deployed on 6 August 1968 to the Western Pacific where she participated in exercises with the SEVENTH Fleet, returning to San Diego in March 1969.



HISTORY OF THE SUBMARINE

Throughout history, the element of surprise or ambush has been one of the most valuable weapons available to land armies. Naval commanders, however, had difficulty in surprising their enemies. The only place to hide on the ocean is under it. For this reason military leaders have long been interested in a vessel which could operate under the water. The history of the development of this type of vessel is a true story that reads like fiction.

The American Revolution saw the first big step in the development of the submarine. David Bushnell of Connecticut, while a student at Yale College, devised a means of exploding gunpowder underwater. To provide a method of getting his underwater bomb attached to warships of the enemy, he built a submarine, solving in a few months a problem that had troubled some of the world's best minds for centuries. He called his little one-man craft which was completed in 1776--the "Turtle".

A submarine built by the Confederate forces during the American Civil War, became the first undersea vessel to sink an enemy warship under combat conditions. Named the "Hunley", after the firm which built her, the little vessel attacked the Union corvette USS HOUSATONIC in the harbor of Charlestown, South Carolina on February 17, 1864. The submarine was propelled by eight men turning cranks connected to the propeller shaft and was armed only with a gunpowder torpedo at the end of a fifteen foot pole. When this crude bomb exploded, it blew a hole in the side of the Union vessel, which sank immediately--but also pulled the "Hunley" down with it.

Use of the submarine by the Confederates came to the attention of John Phillip Holland, a school-teacher in Cork, Ireland, who was to conceive the design of the first submarine commissioned by the U.S. Navy. In the early 1860's, Holland came to the United States determined to create a workable submarine boat. After designing and building several submarines which went unsold, he succeeded in interesting the Secretary of the Navy in the submarine idea. On three occasions (1888, 1889, and 1895) the Navy Department appropriated funds for a submarine

and opened bidding. No action was taken on the first two bids but on the third, Holland's design was chosen in preference to seven others submitted and he was contracted to build the submarine "Plunger". Holland foresaw her failure due to specifications and restrictions imposed by Navy authorities. Immediately he started building another boat based on his own design and under his own supervision. This ship the "Holland" was completed in 1898. On April 11, 1900, the USS HOLLAND was accepted by the Navy and became the first submarine unit of the United States Navy.

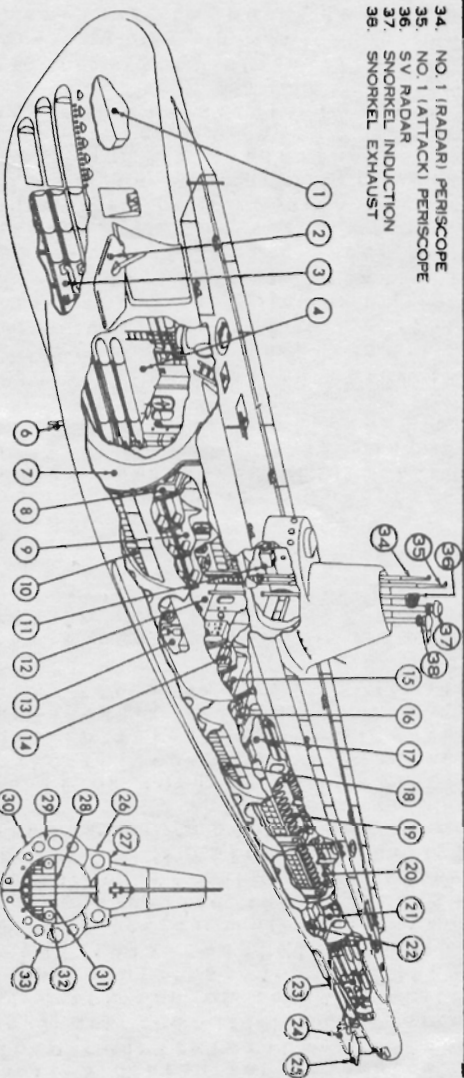
Since that time, steady progress has been made in improvements in submarines. From a crude gasoline-powered vessel, only 53 feet long, displacing about 75 tons and carrying a crew of six, the submarine has progressed to atomic-powered giants, bringing reality to the dreams of Jules Verne.

Germany showed the rest of the world what could be done with an efficient submarine force during the First World War; she made greater use of them than any other nation. Germany repeated this lesson again during the early years of World War Two when, with a beginning of but 57 submarines, she came close to strangling world commerce. However, it was the U.S. Submarine Service in the Pacific Ocean during World War Two which really exploited the undersea warship to the fullest measure.

This gallant force, with less than two per cent of total U.S. Navy personnel strength, sank almost 60 per cent of the total Japanese shipping sunk (1,200-merchant ships and 201 naval ships.)

STANDARD SUBMARINE COMPARTMENTATION

- 34. NO. 1 (RADAR) PERISCOPE
- 35. NO. 1 (ATTACK) PERISCOPE
- 36. SV RADAR
- 37. SNORKEL INDUCTION
- 38. SNORKEL EXHAUST



Disp.

Submerged -- 2425 tons
Surfaced -- 1816 tons

Overall Length -- 306'
Extreme Beam -- 27' 4"

Shaft H.P. -- 5400 H.P.

Complement -- 63 Enlisted & 6 Officers

- 1. BOW BUOYANCY TANK
- 2. BOW PLANE
- 3. SIX TORPEDO TUBES
- 4. FORWARD TORPEDO ROOM
- 6. PITOMETER LOG
- 7. MAIN BALLAST TANK NO. 1
- 8. PANTRY
- 9. OFFICERS' QUARTERS
- 10. FORWARD BATTERY
- 11. CONNING TOWER
- 12. CONTROL ROOM

- 13. PUMP ROOM
- 14. RADIO ROOM
- 15. GALLEY
- 16. CREW'S MESS
- 17. CREW'S QUARTERS
- 18. AFTER BATTERY
- 19. FORWARD ENGINE ROOM (NO. 1 AND NO. 2 MAIN ENGINES)
- 20. AFTER ENGINE ROOM (NO. 3 AND NO. 4 MAIN ENGINES)
- 21. MANEUVERING ROOM
- 22. MOTOR ROOM (4 MAIN MOTORS)

CROSS SECTION

- 23. (FOUR TORPEDO TUBES)
- 24. RUDDER
- 25. STERN PLANE
- 26. SUPERSTRUCTURE
- 27. MAIN DECK
- 28. PLATFORM DECK
- 29. BALLAST TANKS
- 30. BICE KEELS
- 31. BATTERIES
- 32. INNER HULL
- 33. OUTER HULL

HISTORY OF THE DOLPHINS

In the early 1920's the Navy, searching for a distinctive insignia to be worn by submariners, requested the firm of Bailey, Banks and Biddle of Philadelphia, Pennsylvania, to submit a design for an emblem.

This firm took into consideration the fact that dolphins or porpoises, are the traditional attendants to Poseidon, mythical Greek God of the sea (later called Neptune by the Romans). Poseidon was the patron diety of sailors, and this coupled with the fact that dolphins have been, since ancient times, symbolic of a calm sea, and sometimes called the sailor's friend, made them a natural choice for submariner's insignia.

After approving the design submitted by Baily, Banks and Biddle, the Navy made "Change No. 1 to Navy Uniform Regulations of 1924" which read in part: "A gold dolphin pin, shall be worn by all officers certified to be qualified for command of a submarine." On the same date, all enlisted personnel considered qualified for submarine duty were ordered to sew an embroidered replica of "dolphins" to their sleeves.

On November 16th, 1931, just seven years later, the privilege of wearing the gold dolphin pin was extended to include all officers who were qualified for general submarine duty. Originally all of these dolphin devices were to be worn only while on duty in, or in connection with a submarine.

During World War Two a dolphin pin made of silver came into existence and denoted that an officer that wore it had qualified in submarines while an enlisted man. Later, the enlisted men wore this pin, replacing the embroidered emblem which they had worn on their sleeve.

Although never officially recognized prior to 1924, there is reason to believe that the dolphin symbol was used informally for some time prior to that date. Why, is not known, but making an educated guess, it is assumed that dolphins were chosen because of the similarity between the manner in which these fish swam and a submarine operates. In the early days of submarines, when periscopes had not yet come into general use, boats were forced to surface frequently in order to take bearings and maintain their courses. This movement was often referred to as "propoisng". Porpoise and Dolphins, of course are roughly synonymous.

Today, dolphins are the symbol of qualification worn by submarine personnel. Before an officer or enlisted man may wear this emblem, he must demonstrate a thorough knowledge of all compartments, systems, machinery and equipment of the entire ship. He must then be examined by an officer, or board of officers to prove his knowledge. Upon successful completion of this examination he is designated "Qualified in Submarines" and is eligible to wear the dolphins.