



BASE OFFICERS

Commander:
 David Hamish
 6509 W. Devonshire.
 Phoenix, AZ 85033-3350
 623-846-9245
 dhamish@qwest.net

Vice Commander:
 Glenn Herold
 839 North Rogers
 Mesa, AZ 85201-3849
 480-962-6115
 duke7@home.com

Secretary:
 Edgar Brooks
 517 Eagle Crest Dr.
 Prescott, AZ 86301-5424
 928-778-4069
 EdgarB5352@aol.com

Treasurer & Memorial Chair:
 Bob May
 1902 East Karen Dr.
 Phoenix, AZ 85022-3915
 602-867-1445

COB:
 Jim Nelson
 5609 North 71st Avenue
 Glendale, AZ 85303-5310
 623-846-5576
 subvet@worldnet.att.net

Storekeeper:
 Garry L. Shumann
 824 North Rogers St.
 Mesa, AZ 85201-3849
 480-464-5263
 garry1@home.com

Membership/Webmaster:
 Ramon Samson
 9324 W Briarwood Cir
 Sun City, AZ 85351-1425
 623-815-9247
 rsamson@bnswest.net

Chaplain:
 Warner H Doyle
 13600 W. Roanoke Ave.
 Goodyear, AZ 85338-2236
 623-935-3830
 d-hdoyle@worldnet.att.net

Public Relations:
 Ben Acosta
 12914 W. Alvarado Rd.
 Avondale, AZ 85323-7142
 602-935-7752
 Benvirg@juno.com

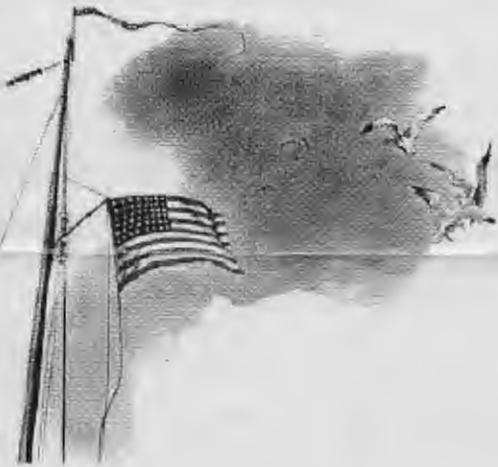
Midwatch Editor/Publisher:
 John Wilson
 PO Box 31056
 Flagstaff, AZ 86003
 520-773-4946
 john.wilson@nau.edu

Historian:
 James W Newman
 3422 North 51st Place
 Phoenix, AZ 85018-6120
 602-840-7788
 jimnewman@qwest.net

<http://perch-base.org>

USSVI Convention Schedule
 DULUTH —2002 Sept. 17 —22
 Reno —2003 - August 31 - Sept. 7
 Two bases bidding for 2004, no decision yet
 Kansas City MO —2005 - Aug 30 - Sept. 4

December 2001
 Volume 7 – Issue 12



Lest We Forget Those Still On Patrol

December Eternal Patrol Days

USS CAPELIN (SS289)	Dec. 02, 1943	78 Men lost.
USS S48 (SS159)	Dec. 07, 1921	0 Men lost.
USS SEALION (SS195)	Dec. 10, 1941	4 Men lost.
USS F1 (SS20)	Dec. 16, 1917	19 Men lost.
USS S4 (SS109)	Dec. 17, 1927	40 Men lost.

Meeting for January 12th
 Will be at American Legion Post 62
 11001 North 99th Avenue
 This is North of West Peoria Avenue, in the city of Peoria.
 Meeting Starts at 1200 Hours

From the Wardroom:

What a time we have had leading us into the holiday season. We have had our first meeting at our new digs, American Legion Post 62, in Peoria. We had the first outing of our new float in Phoenix's Veteran's Day parade and even got third place for our efforts. We had the most impressive showing, thanks to many of our crew. Ben Acosta for driving to San Diego to pick up the flags of the commissioned submarines and to also have one of our new shipmates from the USS Salt Lake City being able to make it to town and carry that flag was very special. Don Wannamaker's donation of the stereo system and the use of a part of his plaque collection set the float off just perfect. We also had a group of our veterans tow the float to the Ruth Fisher School out by Palo Verde and joined with some of the veterans from Palo Verde in an assembly for Veterans Day. This was most rewarding as we got to sign autographs and field some interesting questions. We are on a roll and can just get better at doing these things. We are planning to become involved with American Legion Post 62 and their school speaking programs in which we hope to be able to use the float to draw more attention to the silent service. The month of December has gotten off to a roaring start with our annual holiday party at the NCO Club Luke Air Force Base. In a decision by the Board of Directors Tom "Tug Boat" Tilley was awarded our first "Sailor of The Year" honors. This was a very tough decision as there have been many very deserving shipmates of this honor. During the year we will be having a "Sailor of the Quarter" voted on by the members. At the end of the year one of these deserving shipmates will be honored as our "Sailor of the Year". Here is another area that someone looking to get a little more involved can jump in and take on the monitoring of this very important program. Special Thanks are in order for Nancy Nelson for her donation of some really outstanding door prizes. Don Wannamaker just continues to out do himself with setting up for our annual party and his wife Judy with her gift for table settings and again this year doing the programs was outstanding. To those that volunteered to man the gate and assist with the security a special thanks. This job was most important and as we all know it was not the warmest evening of the year. The fellowship and good times was the order of the evening as well as good food which was the greatest. We even had the good fortune of a visit by Santa at this busy time of the year for him. Dancing and visiting went right up to closing time so will have to say that this was a well attended and enjoyed event. We are still getting our Scholarship program off the ground and Associate member Larry Rankin is setting up a meeting with an individual that he feels maybe able to help us get this program going. Also we are in serious need of an indoor storage area for the float. This is a very critical need of ours, as we need to

house the float in order to keep it in good condition. If you have any leads that we could check out please contact the COB or any of the wardroom and we will take it from there. We also have adopted some goals for the coming year to help us to continue to grow and provide a very valuable service to our communities. Would like to close this column by passing to all, wishes for a most joyous holiday season and a prosperous new year. *Dave Hamish*, Commander

Minutes from Novembers Meeting:

The regular monthly meeting of the members of Arizona Submarine Veterans —Perch Base was convened at the American Legion Post #62; Peoria, AZ at 1305 hours, 10 November 2001. The meeting was called to order by the Base Commander - Dave Hamish. The members were led in the "pledge of allegiance"; followed by the dedication, moment of silence for our departed shipmates, "tolling of the boats" and invocation. There were 26 members and two guests attending the meeting according to the sailing list. The Base welcomed new members Robert Andrews and Ted Asbelt. Dave Hamish introduced guests Sandra Headrick and Richard "Guns" Nendelson. Sandra was representing Arizona Public Service in preparing for the Veteran's Day Parade and Guns Nendelson is a visiting USSVI member. Ray Samson asked for the floor to give further tribute to "Guns" Nendelson, citing his support and participation in the restoration and preservation of the USS Torsk memorial in Baltimore, Maryland. The motion was made, seconded and approved by voice vote that the minutes be approved as printed in the November newsletter. The Base Treasurer was not present at the meeting and the financial report was not available.

OLD BUSINESS

Ben Acosta, Sandra Headrick and Jim Nelson were asked to brief the membership on the procedures to be followed in the formation and conduct of the Veteran's Day Parade. The ensuing information and discussions helped explain the various aspects of parade; where to meet and how the Perch Base parade elements would proceed. Dave Hamish also announced that, the U.S. Marine Corp was celebrating its birthday on the 10th.

NEW BUSINESS

Dave Hamish briefed the membership on the "Dinner for Sailors Program". The program was initiated by USSVI - Lockwood Internet Base and initially went out to the submarine sailors and their families on the East Coast. It has since been expanded to include the submarine communities in San Diego, California and Bremerton, Washington. Dave informed the membership that the Board of Directors had voted to take \$200 normally contributed to needy families at Luke AFB and contribute it to the "Dinner for Sailors Program". The funds will be equally divided

between the programs at San Diego and Bremerton. He also encouraged individuals to make contributions through the USSV Charitable Foundation. In doing so, they should designate that their contribution is for the "Dinner for Sailors Program" and specify East Coast or West Coast. Shipmate Ray Samson informed everyone that the details of the program will be posted on the Perch Base Web Site (www.perch-base.org).

GOOD OF THE ORDER

Dave Hamish recognized shipmate Paul Lake who was instrumental in putting together arrangements for Perch Base to conduct monthly meetings at the American Legion Post #62. The facilities and accommodations are exceptional and the atmosphere cordial. Dave asked the membership to give Paul a "thank you and well done" applause. Shipmate Ben Acosta announced that there would be a gathering of Submarine Veterans at Ruth Fisher Elementary School to talk to and meet students and teachers at that school. The meeting will take place on Friday, November 16th and anyone interested in participating will be welcome. Several members will take the parade float down and give the students a first hand view of the magnificent parade float; the sound of a diving klaxon and patriotic music. Shipmate Garry Shumann won the 50/50 raffle. The winner's share of the raffle was \$58. Half the proceeds from the monthly raffle go to the winner of the drawing and the other half is split with a portion going to the national scholarship fund and the remainder going into the Base treasury. Shipmate Roger Cousins was given the floor to update the membership on the progress being made on the USS Phoenix Memorial. A location has been found for siting the Phoenix sail on the grounds at the Veteran's Hospital.

ADJOURNMENT

All the outstanding business being concluded, it was moved and seconded that the meeting of the Arizona Submarine Veterans - Perch Base be adjourned. The motion carried by voice vote. The Base Chaplain; Howard Doyle led the membership in the benediction and closing prayer. The meeting was adjourned at 1350 hours.

Welcome Aboard New Crewmen:

For the month of December, we welcome aboard new member, Ronald C. Young. Ronald, with wife Donita, and family live in Litchfield Park. On March the 15th of 1973, Ron qualified on USS Bengamin Franklin SSBN640(G), and left the Navy after giving (6) years of service. Welcome aboard Ron and Perch Base would hope to meet you soon, at a future meeting.

ReEnlistment for 2001:

Re-Enlistment letters were sent on the 19th of November. The letters were sent two weeks late.

There were several reasons but not one good excuse. At the date of this writing, it appears that the membership, will not be losing too many of it's numbers. This is good news. Those of you that are not going to re-up, please send your reasons to the membership chairmen Ramon Samson. If we need to change our ways, we need your impute, good or bad.



Perch Base Booster Club 2002:

The counter was re-set to zero, for Booster Club 2002, but as you can see there is a good start already for the up and coming year. Jerry N. Allston, Bob Bailey, Kenneth E. Becker, Joseph A. Bernard, Richard Bernier, Wayne A. Braastad, Edgar Brooks, James F. Clewett, Roger J. Cousin, Ray Lee Graybeal, Charles Greene, Billy A. Grieves, Warren A. Grossetta, Glenn Herold, Stephen F. Hough, Ron Kloch, Robert A. Lancendorfer, Doug La Rock, Dale Martin, Robert E. May, Bill Mc Nay, Roger M Miller, Roger R Miller, Joseph R. Mullins, Jim A. Nelson. James W. Newman Sr., Royce E Pettit, Scott Prothero, Frank W. Rumbaugh, Dick Schiltneck, Douglas F. Schultz, Wayne Smith, Robert G. Sothern, George Woods, Jerry D. Yowell.

Small Stores:

Our storekeeper, Garry Shumann, is looking forward to sending much of his stores to all you members who want to send a Submarine gift this Holiday Season. Garry has a very comprehensive array of USSVI Small Stores, consisting of hats, shirts, sweat shirts, belt buckles, beer mugs, cocktail glasses, coffee mugs, and a slew of other memorabilia. We have a good source for Vest's and forms for ordering may be found on the Perch Base web site. Don't forget the 2002 Calendar. Don Wannamaker has done a super job in getting this project off the ground and words alone are not sufficient to express our gratitude. Give Garry a call for ordering and don't forget that order forms can be printed off the Perch Base web site. (Garry's number on front cover)

Next Meeting and Location:

January's meeting of the 12th, will be held at our new location, at American Legion Post 62, located at 11001 North 99th Avenue. This is North of West Peoria Avenue, in the city of Peoria, West of Hwy 101. Meeting Starts at 1200 Hours. Off HWY 101 take the Peoria exit and proceed West to 99th Ave., than right (North) to Post 62, which is on the East side of the street. We would hope to see a good turn-out as the people of this post have welcomed us with open arms, thanks in part with shipmate

Paul Lakes efforts, who belongs to this post and is its finance chairman. The Post puts out a really neat table of food and the \$3.00 cost, is more than reasonable. Anyone that would like to join Post 62, please contact the COB Jim Nelson. Phone number on cover.

Scuttlebutt from the Lower Flats:

Once again I am asking the membership, to send their thoughts and ideas to your POC's on front cover. We need your participation to make the newsletter, web page, projects, and any other endeavors, interesting for all. Do any of you have a personal web page, on your qualifying Boat? If so, let me know so I can link to the Perch Base page. Last year we had only 10 members wanting call (business type) cards. Of the 10 two were out of state. I know that every member, has written their phone number, on a piece of paper at least a dozen times last year. How about handing them a card this year, with all the pertinent information on it. Cost is nominal at \$5.00 for 20 cards, and they are handy to have, & help in Base costs.

Lost Boats and Crews for December:

USS CAPELIN (SS 289); Dec. 2, 1943 78 Men Lost:
Returning from her first war patrol after only 17 days out, CAPELIN (Cmdr. E.E. Marshall) came into Darwin 16 November 1943 with a defective conning tower hatch mechanism, excessively noisy bow planes, and a defective radar tube. These flaws were corrected to the satisfaction of the Commanding Officer, and the ship then departed for her second patrol on 17 November. Her area was in the Molukka and Celebes seas, and she was to pay particular attention to Kaoe Bay, Morotai Strait, Davao Gulf and trade routes in the vicinity of Siaoe, Sangi, Talaud and Sarangani Islands. She was to leave her area at dark 6 December. Nothing has been positively heard from CAPELIN since she departed. However, BONEFISH reported having seen an U.S. submarine on 2 December 1943. This position is in the area assigned to CAPELIN at this time. An attempt to reach CAPELIN by radio on 9 December 1943 elicited no response. On 23 November an American submarine was attacked off Kaoe Bay, Halamaera. However, the Japanese state that this attack was broken off, and the evidence of contact was rather thin. The only positive statement that can be made is that CAPELIN was lost in Celebes Sea, or in Molukka Passage or the Molukka Sea, probably in December 1943. Enemy minefields are now known to have been placed in various positions along the north coast of Celebes in CAPELIN's area, and she may have been lost because of a mine explosion. In her 17-day first patrol, CAPELIN sank two Japanese medium freighters for 7,400 tons of merchant shipping. This first patrol was conducted among the islands immediately west of New Guinea.

USS S-48 (SS159) December, 7 1921 No Men Lost:
Builder's trials were conducted on S-48 on the 7th of December 1921. During a dive off Penfield Reef, a manhole plate in one of the aft ballast tanks was left unsecured, and S-48 sank in 60 feet of water. The crew, contractor's personnel, and naval observers brought the bow to the surface and escaped through a torpedo tube to a tug which took them to New York. On 20 December, the submarine was raised and taken back to the builder's yard where repairs were begun. The work was completed ten months later; and, on 14 October 1922, USS S-48 (SS-159) was accepted by the Navy. On the night of the January 29th, 1925 S-48 arrived off the New Hampshire coast. At about 1830, the wind picked up and a heavy snowstorm developed. Visibility was reduced to zero. Soon after 1934, the S-boat grounded on rocks off Jeffrey Point; pulled herself off; then grounded again in Little Harbor. Messages requesting assistance were dispatched. By midnight, the storm had worsened, seas were coming "clean (sic) over the S-48" and she was rolling 15° to port, 60° to starboard. Violent rolling lasted for only a little over thirty minutes but a heavy list developed. By 0330 on the 30th, the Battery Compartment was taking in water. Chlorine gas was forming. The storm continued; but help arrived at 0500, and Coastguardsmen manning lifeboats rescued the crew. After receiving treatment for exposure and gas at Ft. Stark, crew members were transferred to the Navy Base at Kittery. In 1940, S-48 was ordered activated. She was re-commissioned on 10 December, but remained at Philadelphia until mid-March 1941. She then moved up to her home port of New London. As a unit of SubRon 1, she provided services to submarine and antisubmarine warfare training commands at New London and Portland Maine, until after the end of European hostilities. Overhaul and repair periods during that time were frequent; and, in the summer of 1945, the World War I-design submarine was finally designated for disposal. On 21 August, she departed New London for the last time. On the 29th, she was decommissioned at Philadelphia; on 17 September 1945, her name was struck from the Navy List; and, on 22 January 1946, her hulk was sold to the North American Smelting Co., Philadelphia, for scrapping.

USS SEALION (SS 195) Dec 10, 1941 5 Men Lost
The first submarine victim of enemy action was USS SEALION (SS 195). The start of the war on December 8, 1941 found her, along with USS SEADRAGON, in the final stages of overhaul at the Navy Yard, Cavite, Philippines. Both ships were scheduled for completion on December 12th. Despite frequent air raids in the Manila area during the first two days of war, enemy planes waited until the third day to pay a visit to the Navy Yard in Cavite on the afternoon of December 10th. The air

raid alarm sounded at approximately 12:30 PM as 54 enemy planes zeroed in on the shipyard. SEALION, nested at Machina Wharf, had SEADRAGON inboard and the minesweeper BITTERN outboard. All hands, with the exception of the Commanding Officer, LCDR R.G. Voge, the Executive Officer, LT A. Raborn, and three men, were below decks. LCDR Voge saw the first wave of bombs land 100 to 200 yards astern of SEALION and noticed that the planes were too high to reach by machine gun fire. He immediately ordered all hands below. It was a wise decision. The second wave of bombs hit the ship almost simultaneously. While the SEALION crew was spared from that initial blast, a fragment of the bomb pierced the conning tower of the inboard SEADRAGON killing ENS Sam Hunter, the first submarine casualty of the war. Seconds later another bomb passed through the main ballast tank and the main pressure hull and exploded in the after engine room, killing four men working in the compartment—electrician mates Foster, O'Connell and Paul, and machinist mate Ogilvie. The explosion also flooded the aft engine room causing SEALION to settle in the mud aft while the forward engine room and torpedo room slowly began to flood as well. When the ship had finally settled the remainder of the crew escaped to safety while 40% of the main deck was underwater with a 15-degree list to starboard. All motor controls, reduction gears, and main motors were destroyed, totally immobilizing the ship. The damage to the ship would normally have been considered non-fatal had there been overhaul facilities available for repair. SEALION wasn't so lucky. The bombing that wrecked the ship had also destroyed the Navy Yard and the closest repair facility now lay 5,000 miles due east at Pearl Harbor, Hawaii. Considering the war situation at hand, it was impossible to tow SEALION that distance. On Christmas Day, 1941, after the removal of all gear of value, such as gyro, radio and sound equipment, three depth charges were exploded inside the ship to prevent her from falling into enemy hands.

F-1 (SS-20) December, 16 1917 19 Men Lost:

F-1 (SS-20) was launched 6 September 1911 by Union Iron Works, San Francisco, Calif., as CARP; sponsored by Miss J. Tynan; renamed F-1 on 17 November 1911, and commissioned 19 June 1912, Lieutenant (junior grade) J. B. Howell in command. Assigned to the 1st Submarine Group, Pacific Torpedo Flotilla, F-1 operated in the San Francisco area on trials and tests through 11 January 1913, when she joined the Flotilla for training at sea, between San Diego and San Pedro, then in San Diego Harbor. Between 21 July 1914 and 14 November 1915, the Flotilla based at Honolulu for development operations in the Hawaiian Islands. F-1 was in ordinary between 15 March 1916 and 13 June 1917. When she

returned to full commission, she served with the Patrol Force, Pacific, making surface and submerged runs to continue her part in the development of submarine tactics. Her base during this time was San Pedro. On 17 December 1917, while maneuvering in exercises at sea, F-1 and F-3 collided, the former sinking in 10 seconds, her port side torn forward of the engine room. Nineteen of her men were lost, while the others were rescued by the submarines with whom she was operating. (F-1 and F-3 collided off Pt. Loma, San Diego, California. Information from: K. Jack Bauer and Stephen S. Roberts, "Register of Ships of the U. S. Navy, 1775-1990," p.257)

S-4 (SS-109) December, 16 1917 19 Men Lost:

S-4 (SS-109) was laid down on 4 December 1917 by the Portsmouth (N.H.) Navy Yard; launched on 27 August 1919; sponsored by Mrs. Herbert S. Howard; and commissioned on 19 November 1919, Lt. Comdr. Percy K. Robottom in command. Following acceptance trials and a visit to Havana, Cuba, from 14 to 19 January 1920, and subsequent operations along the Gulf and New England coasts, S-4 departed New London on 18 November 1920 to rendezvous with her assigned division, SubDiv 12, and SubDiv 18 off New Hampshire. The two divisions were about to embark on a historic voyage which, at that time, was to be the longest cruise undertaken by American submarines. Assigned to Submarine Flotilla 3 of the Asiatic Fleet at Cavite in the Philippine Islands, they sailed via the Panama Canal and Pearl Harbor and arrived at Cavite on 1 December 1921. S-4 operated out of the Cavite Naval Station, with occasional visits to Chinese ports, until late in 1924 when the two divisions were reassigned to the west coast. Departing Cavite on 29 October, they arrived at Mare Island, Calif., on 30 December. Remaining at Mare Island in 1925, she operated along the west coast through 1926, mainly at San Francisco, San Pedro, and San Diego. She departed Mare Island on 10 February 1927 and sailed to the Panama Canal Zone, where she operated through March and April, then proceeded to New London, arriving on 3 May. For the remainder of the year, she operated off the New England coast until, on 17 December, while surfacing from a submerged run over the measured-mile off Provincetown, Cape Cod, Mass., she was accidentally rammed and sunk by the U.S. Coast Guard vessel PAULDING (CG-17, ex USN destroyer DD-22). The only thing to surface, as PAULDING stopped and lowered life boats, was a small amount of oil and air bubbles. Rescue and salvage operations were commenced, only to be thwarted by severe weather setting in. Gallant efforts were made to rescue six known survivors trapped in the forward torpedo room, who had exchanged a series of signals with divers, by tapping on the hull. However, despite the efforts,

the men were lost. S-4 was finally raised on 17 March 1928 and towed to the Boston Navy Yard for dry-docking. She was decommissioned on the 19th. S-4 was re-commissioned on 16 October, after repairs. She served at Key West, Fla., early in 1929 and 1930, and in the northeast during the remainder of those years. In 1931, she operated again at New London until departing there on 3 January 1932 for Pearl Harbor. Sailing via the Panama Canal, she arrived at Pearl Harbor on 29 August. On 7 April 1933, S-4 was decommissioned and laid up. She was struck from the Navy list on 15 January 1936 and destroyed on 15 May by sinking.

Important Dates in December:

- Dec. 7 1941 - Japanese carrier aircraft attack U.S. Pacific Fleet based in Pearl Harbor, Hawaii.
- Dec. 9 1941 - USS Swordfish (SS-193) makes initial U.S. submarine attack on Japanese ship.
- Dec. 10 1982 - USS Ohio (SSBN-726), first Trident-Class submarine, returns from first deterrent patrol.
- Dec. 30 1959 - Commissioning of first fleet ballistic missile submarine, USS George Washington (SSB(N)-598), at Groton, CT.

Northrop Grumman takes control:

By Larry O'Dell, Associated Press taken from Navt Times. NEWPORT NEWS, Va. - Newport News Shipbuilding Inc., the nation's only builder of nuclear aircraft carriers, became part of Northrop Grumman Corp. on Friday. The Los Angeles-based defense conglomerate took possession of its third shipyard a little more than three weeks after the Newport News board agreed to the \$2.1 billion takeover. "As we look ahead as one company, Northrop Grumman is enthusiastically embracing the business of building and maintaining ships - and we are in this business for the long haul," Kent Kresa, Northrop Grumman's chief executive, said during a news conference at the shipyard. Northrop also owns the Avondale and Ingalls shipyards in Louisiana and Mississippi and is now the world's largest naval shipbuilder, Kresa said. He said the company also is the nation's third-largest defense contractor, with nearly 100,000 employees and expected 2002 revenues of \$18 billion. The Newport News yard has about 17,800 employees. About 100 corporate employees will be laid off, said Thomas Schievelbein, who became president of the new Northrop Grumman-Newport News. He said hourly jobs will not be affected. The shipyard's new owners met earlier Friday with union leaders. Kresa said at the news conference that the company will honor United Steelworkers of America Local 8888's contract, which expires in 2004. "In

listening to them this morning, they seem to be union-friendly, but again that in itself could be politics - tell you one thing and mean something else," said Arnold Outlaw, president of the local. He said he was especially encouraged by company officials' assurances that they value older workers. The average age of the yard's work force is 44, Outlaw said. Northrop made an unsolicited offer for Newport News Shipbuilding Inc. in response to a bid by rival shipbuilder General Dynamics Corp. Northrop argued that the General Dynamics bid would eliminate competition and endanger national security. General Dynamics and Newport News are the nation's only nuclear submarine builders. Support for the General Dynamics bid evaporated after the Justice Department said it would challenge such a merger on antitrust grounds. The Pentagon also supported the Northrop bid. Northrop bought the Newport News yard from shareholders for \$67.50 a share in stock and cash. The company also assumed \$500 million in Newport News debt. The Newport News yard initially will operate as a subsidiary of Northrop with Schievelbein replacing William Fricks at the helm of Newport News. Fricks' retirement took effect Thursday. Newport News eventually will be managed by Northrop's ship systems sector, which includes the Gulf Coast shipyards it acquired earlier this year. Nuclear work will continue to be done at Newport News while non-nuclear work will be done at the other yards.

South Korea Launches Diesel Submarine:

SEOUL, South Korea - South Korea's Daewoo Shipbuilding and Marine Engineering Co. handed over a ninth diesel-powered submarine for the nation's navy, the company said Friday. With Friday's delivery, Daewoo completed a contract to build nine 1,200-ton submarines for the South Korean navy. Daewoo handed over the first submarine in 1992. The Daewoo submarines were the first built in South Korea. The submarines are armed with torpedoes and anti-ship guided missiles and can travel at 22 knots, or 25.3 miles per hour, Daewoo officials said. The navy plans to build several 1,800-ton German-designed submarines by 2009. Those submarines will be built by South Korea's Hyundai Heavy Industries Co. in a technological tie-up with Germany's Howaldtswerke-Deutsche Werft AG. Daewoo's submarines were also built with German technology. Daewoo officials said they were talking with the Malaysian government to sell three submarines, although no concrete deal has yet emerged. Daewoo is a major arms contractor. It has built a 3,800-ton destroyer and other warships for the South Korean navy. It exported a 2,300-ton frigate to Bangladesh in May.

Russia Launches new Submarine :

Dec 04 2001 By Vladimir Isachenkov Associated Press MOSCOW President Vladimir Putin on Tuesday visited a northern shipyard to inaugurate a new nuclear submarine - the trip intended to boost the Navy's morale, sapped by the sinking of the Kursk nuclear submarine and the recent reshuffle of the Northern Fleet command. Putin briskly walked to the Gepard nuclear submarine built by the Sevmash plant in Severodvinsk, handing over a flag to its captain and welcoming the crew, which snapped to attention on the deck. "I congratulate you on the launch of your submarine," Putin said. "The Navy has received a ship it can be proud of." Since the Soviet collapse, the Russian Navy has struggled to find funds to maintain and repair its ships and had to scale back its modernization program. The construction of Gepard, which began in 1991, had been stalled by a severe shortage of money. Putin has won broad popularity thanks to his promises to end a decade of post-Soviet economic decline and restore Russia's might. Before heading to Severodvinsk, Putin used a Cabinet meeting Monday as an occasion to reaffirm his support for the military. Military spending must "have priority, even more so as we have worked out a serious and ambitious program of military reform," Putin said. Northern Fleet chief, Vice Adm. Vladimir Dobroskochenko, hailed the government for the launching of the new submarine. "I feel proud for Russia and for the Navy," he said Tuesday. The Gepard, which means cheetah in Russian, was built by the same Sevmash shipyard which launched the Kursk and most other Soviet and Russian nuclear submarines. The Kursk, which sank during a naval exercise in August 2000, killing all 118 men aboard, was raised from the Barents Sea floor last October.

The Pacific Submarine Strategy in World War II By Edward C. Whitman reprinted from, UnderSea Warfare

The Man of the Hour

Although he was born in Virginia in 1890, Charles Andrews Lockwood, Jr. was raised in Missouri. He entered the United States Naval Academy in 1908, joined the Submarine Force two years after graduation, and rose to command the old gasoline-powered A-2 (SS-3) and B-1 (SS-10) in the Philippines during World War I. Later, he led the First Asiatic Submarine Squadron and served as the Assistant Naval Attaché in Tokyo. Subsequently, he commanded the Simon Lake boats G-1 (SS-19-1/2) and N-5 (SS-57), took the ex-German submarine minelayer UC-97 into the Great Lakes on a Victory Bond drive, and commissioned R-25 (SS-102), S-14 (SS-119), and V-3 (SS-165). In his varied career, Lockwood also commanded the venerable monitor USS Monadnock (BM-3) and two gunboats on the Yangtze Patrol, served on the U.S. Naval Mission to Brazil, held down both headquarters and naval shipyard jobs, and headed SUBDIV THIRTEEN at

San Diego from 1935 to 1937. Before his assignment as COMSUBSOWESPAC at Fremantle, he had been the U.S. Naval Attaché in London from January 1941 until May 1942. Thus, Lockwood's accomplishments were extraordinary even before the untimely death of RADM English brought him to COMSUBPAC in February 1943. Fremantle and Brisbane - Early 1943 Two months before Lockwood took up his new position at Pearl Harbor, CAPT James Fife, then a Navy liaison officer at GEN MacArthur's new headquarters at Port Moresby, was ordered to replace the recently-reassigned Ralph Christie at Brisbane. In the aftermath of RADM English's death, however, Christie - now a rear admiral - was hurriedly brought back from the Newport Torpedo Station to replace Lockwood at COMSUBSOWESPAC in Fremantle. In response to the demands of the Solomons campaign in late 1942, Brisbane was by then home to three submarine squadrons - some 20 boats and their associated tenders and support facilities. Between the build-up to the invasion of Guadalcanal in August 1942 and its final pacification in February 1943, the Brisbane boats mounted nearly 60 war patrols, including forays into the Solomon Islands and inter-force transfers to Pearl Harbor by way of Truk and Rabaul. This offensive - largely steered by ULTRA cues into heavily-defended areas - accounted for only two-dozen enemy ships, nearly half of those near Truk. Moreover, three of the five boats that left Brisbane in February were lost to enemy action, leading to an internal investigation of Fife's leadership. In any event, with the Solomons campaign winding down and the war moving north and westward, Fife's command would be reduced to only one squadron by mid-1943. During their last several months under Lockwood, the small Fremantle force mounted just over 15 war patrols, but a third of these had been devoted to minelaying off Siam and Indochina, and another third had been associated with transits to Pearl Harbor. Postwar analysis credited 16 enemy ships to this effort, but as the only submarines well positioned to interdict the flow of petroleum - only lightly protected - from the Dutch East Indies to the Japanese operating bases and home islands, the Fremantle boats lost a significant opportunity. With Christie, in the first half of 1943, this pattern began to change, and half of the Fremantle sorties targeted Japanese convoy routes to the north and west. 23 sinkings were eventually confirmed - about one per patrol - but two more boats were lost to the enemy.

Seizing the Initiative from Pearl Harbor

With their failure to retake the eastern Solomons in late 1942, the Japanese turned in 1943 to defending what remained of their earlier conquests. Thus, with new war materiel arriving daily from the United States, the Allies quickly regained the initiative, took back Attu and Kiska in May and August and - under GEN MacArthur - attacked the

northern Solomons and "leap-frogged" westerly along the coast of northern New Guinea while isolating and bypassing Rabaul. Late in the year, ADM Nimitz's island-hopping campaign across the central Pacific got under way in earnest with the invasion of Tarawa and Makin in the Gilbert Islands in November. Accordingly, during 1943 the COMSUBPAC submarine force at Pearl Harbor - now under RADM Lockwood - gradually came to predominate over their counterparts in Australia. Because the Solomons action had drawn so many submarines to SOWESPAC, SUBPAC could only muster 28 war patrols for the first three months of 1943, and over half were sent to Truk, Palau, and the Marianas. A notable exception was the first penetration of the Yellow Sea in March by USS Wahoo (SS-238) under "Mush" Morton, with a total bag of nine enemy ships. Unfortunately the other Pearl Harbor patrols for that same period saw only limited success, at least partially because of the high priority placed on hard-to-target enemy capital ships. By mid-spring 1943, however, Lockwood's force had grown to 50 submarines. Between April and August, he was able to send an average of 18 to sea each month for war patrols of 40-50 days, with over half targeted at enemy shipping in Empire waters and the East China Sea. A significant innovation occurred in July, when Lockwood and his brilliant Operations Officer CAPT (later RADM) Richard Voge sent three submarines into the Sea of Japan, entering from the north through the La Pérouse Strait. The three boats only managed to sink three small freighters in four days before withdrawing, and two subsequent patrols the next month - one under "Mush" Morton - did little better. In September, however, Morton returned to the Sea of Japan a second time and apparently sank four ships before Wahoo was lost to a Japanese anti-submarine aircraft in early October while attempting to come back out.

Tackling the Torpedo Problem

Much of Lockwood's command attention during 1943 was consumed by several nagging materiel problems that had crippled U.S. submarine effectiveness early in the war. Foremost among these was torpedoes - not only a shortage of numbers, but continuing evidence of the design defects the admiral had already encountered during his tenure as COMSUBSOWESPAC. Lockwood's earlier investigations at Fremantle had established that U.S. torpedoes were running too deeply, but even when this deficiency was corrected, torpedo performance continued to be suspect. Following an increasing number of attacks foiled by premature warhead explosions apparently due to a too-sensitive magnetic influence exploder, Lockwood prevailed on ADM Nimitz in June 1943 to order the magnetic "pistol" disabled on COMSUBPAC torpedoes and to rely solely on the contact exploder. But even with the magnetic feature disabled, Pearl Harbor submarines continued to

experience a significant percentage of "duds," and it soon emerged that there were also major defects in the contact exploder. This led Lockwood to a series of careful experiments in Hawaii in which torpedoes were fired against underwater cliffs to determine potential causes of failure. These revealed that the firing pin was too slender to withstand the shock of a 90-degree encounter without buckling and "dudding" the torpedo. When this last piece of the puzzle fell into place in September 1943, performance of the Mark XIV submarine torpedo finally reached acceptability, but it had taken literally half the war to get there. That the problem had to be solved in the field by the operators themselves - and in spite of a technical community that only wanted to minimize the deficiencies - still evokes bitter memories. Moreover, the dubious reliability of the H.O.R. main-propulsion engines - apparent from the beginning of the war - became even more critical in May 1943 when the twelve boats of SUBRON TWELVE arrived at Pearl Harbor, all fitted with H.O.R. diesels. In both shakedown cruises and their European service with the Atlantic Fleet, all of the SUBRON TWELVE submarines revealed engine problems. These only became worse under combat conditions in the Pacific, where virtually all the H.O.R. boats were handicapped by catastrophic breakdowns that often required curtailing war patrols and returning to base for repairs. One by one, the H.O.R. submarines were shuttled back to Mare Island for new Winton engines, but it was nearly a year until all had been returned to duty and the H.O.R. maintenance problems eliminated.

Japanese Supply Lines - a New Focus

For the bloody, but successful, invasion of the Gilbert slands in November, a dozen submarines provided direct support: conducting reconnaissance, landing commandos, performing "lifeguard" duty to pick up downed U.S. pilots, and blockading Truk. During this same period, however, Lockwood and Voge introduced two additional tactical innovations: deploying small, coordinated submarine "wolf-packs" as tactical units; and concentrating more anti-shipping efforts in the Luzon Strait between the northern Philippines and Formosa, where several Japanese north-south convoy routes from the conquered territories converged. The first three three-boat wolf-packs departed Pearl Harbor in September, October, and December - the first for the East China Sea; the others for the Marianas. Results were mixed. The first Marianas effort sank seven ships, but the total score for the other two was only four. Even as tactics and techniques improved, communications and coordination among wolf-pack members at sea remained difficult, and "blue-on-blue" engagements were a worrisome possibility. Nonetheless, in 1944, wolf-packing became increasingly common, particularly for commerce-raiding north of Luzon. "The Submarine Force played a key role in the

victory - not only by providing crucial sighting reports, but by sinking or heavily damaging six enemy combatants." Although both Fremantle and Brisbane maintained a steady level of activity throughout 1943, the latter steadily lost importance as a submarine base in the later stages of the conflict. Early that year, the number of submarines stationed in Australia had been fixed at 20, nominally with 12 at Brisbane under CAPT Fife and eight at Fremantle under RADM Christie. As the war moved up the Solomons chain and westward into New Guinea, the boats were reapportioned in favor of Fremantle, and when the total number of Australia-based submarines was increased to 30 late in the year, Fremantle was allocated 22 and Brisbane the rest. Fife made the best of this disparity by establishing an advance base at Milne Bay, New Guinea, 1,200 miles closer to his operating areas off Truk, Rabaul, and Palau. In the latter half of the year, his 33 war patrols resulted in 29 confirmed sinkings along the supply lines linking the three Japanese bases. During that same period, after Japanese tankers were moved up the priority list, Christie's growing force at Fremantle turned aggressively to attacking the oil traffic from Borneo and Sumatra. Nearly 50 enemy ships were sunk by the Fremantle force between June and December, and a dozen of these were oil tankers.

1943 - the Year of Transition

For all of 1943, the Submarine Force was credited with sinking 335 Japanese targets - or 1.5 million tons of shipping - essentially twice the corresponding figures for 1942. More importantly, after diminishing only slightly in 1942, the total tonnage of the Japanese merchant marine (including oil tankers), dropped 16 percent in 1943, despite a vigorous shipbuilding program not yet disrupted by Allied air attacks. Correspondingly, the importation of bulk commodities (not including petroleum products) into Japan had diminished by the end of 1943 to 81 percent of the pre-war level. Surprisingly, though, Japanese tanker tonnage actually increased by nearly 30 percent over the year due to need to transport oil from the East Indies. Starting in mid-1943, the gradual introduction of the Mark XVIII electric torpedo into the theater brought substantial relief from the persistent torpedo shortages of the early war years. Although slower than the Mark XIV by 10 to 15 knots and somewhat limited in range, the Mark XVIII left no tell-tale wake that could give away a submarine's position, and it was much easier to manufacture in quantity. By the middle of 1944, when all their teething problems had been solved, Mark XVIII torpedoes constituted three-quarters of the standard patrol load-out. Despite the large percentage of U.S. war patrols targeted specifically at major Japanese bases or cued against Japanese combatants by ULTRA information, U.S. submarines sank only one major Japanese warship in 1943 - the light aircraft carrier IJS Chuyo. That

same year, fifteen U.S. submarines were lost in the Pacific - plus two in the Atlantic. The Japanese lost 23As the number of war patrols from Pearl Harbor, Fremantle, and Brisbane mounted in 1943 and 1944, the percentage of Japanese merchant tonnage remaining afloat dropped relentlessly from its pre-war level. Of note is the peak of U.S. submarine activity in May 1942 in preparation for the Battle of Midway. Thrusting Westward - Early 1944 By the time ADM Nimitz's cross-Pacific thrust reached the Marshall Islands at the beginning of 1944, over 60 submarines were assigned to Pearl Harbor and 36 to Australia. Moreover, in recognition of the submarine contribution to the war effort, RADM Lockwood had been promoted to vice admiral just before the turn of the year. He quickly took advantage of the capture of Kwajalein and Majuro in the Marshalls in January 1944 to establish an advance submarine base on the latter in April, which put his Pearl Harbor boats 2,000 miles closer to Japan. Even before the fall of Eniwetok in February, and with Truk coming under increasing carrier-based air attacks, Japanese commander-in-chief ADM Mineichi Koga, had ordered his heavy units to abandon Truk and fall back on the Palaus. Then, under further pressure in late March and early April, Koga ordered a further dispersal of his fleet to Davao and Tawi Tawi (in the southern Philippines), Surabaya, and Singapore. Accordingly, Lockwood's and Christie's submarines at Pearl Harbor and Fremantle were kept busy supporting both the Marshalls campaign and U.S. carrier air strikes. With ULTRA intercepts to give advanced warning of the resulting Japanese withdrawals, numerous attempts were organized to intercept both enemy men-of-war and supply ships. Although a number of Japanese freighters and auxiliaries were sunk, the only major warships destroyed during this period were three light cruisers. Simultaneously, however, Lockwood increased pressure on the Empire, East China Sea, and Kurile Island supply routes, and in March and April sent two more wolf-packs to the Luzon Strait. Only the first of these produced significant results - seven freighters confirmed for about 35,000 tons - but all told, U.S. submarines sank 183 ships or nearly three-quarters of a million tons of shipping in the first four months of 1944.

Decision in the Philippine Sea

In the SOWESPAC area, GEN MacArthur's forces continued their advance westward across New Guinea, and by June 1944 the entire northern coast of the island had been secured. Simultaneously, Nimitz moved on toward the Mariana Islands with the intention of seizing Saipan, Guam, and Tinian as staging bases for the push toward Palau and the Philippines. To soften up those objectives, the 15 carriers of Task Force 58 under RADM Raymond Spruance mounted a series of powerful air strikes, while Lockwood sent a new wave of submarines westward to interdict any

Japanese attempts to reinforce the islands and to provide lifeguard services for downed airmen. To defend the Marianas and Palaus, ADM Soemu Toyoda, replacing ADM Koga, had earlier concentrated the Japanese fleet at Tawi Tawi, and he sortied a powerful force under ADM Jisaburo Ozawa on 13 June in an attempt to thwart the gathering attack on the Marianas. The result was the Battle of the Philippine Sea a week later, pitting Spruance's 15 carriers against Ozawa's nine. Subsequently dubbed "the Great Marianas Turkey Shoot," in which Ozawa lost nearly 350 aircraft without sinking a single American ship, the encounter on 19 and 20 June also cost the Japanese three large aircraft carriers, including two - IJS Taiho and IJS Shokaku - sunk by U.S. submarines. By the time Ozawa broke off the engagement and retreated northward, Japanese naval aviation had suffered a devastating loss that would never be redressed. Instead, Japan began training kamikaze pilots. Meanwhile, Saipan had been invaded on 15 June, to be followed by Guam and Tinian later in the summer. By 10 August, the entire Marianas had been taken, and additional advance submarine bases were promptly established at Saipan and Guam. Present at the formal Japanese surrender in Tokyo Bay on 2 September 1945 were the submarine tender USS Proteus (AS-19) and 12 submarines of SUBRON 20. (Fifteen years later, Proteus was converted to serve as a tender for the first of the Polaris SSBNs and performed in that capacity in both Scotland and Guam until 1982.) The emphasis on attacking Japanese shipping continued to grow. An analysis of submarine patrol assignments from the beginning of 1944 until the end of the war shows a steady increase in the percentage targeted at Japanese supply lines - rising from approximately 40 percent at the beginning of that period to more than double that by August 1945. Consequently, Lockwood began sending wolf-packs into the Luzon Strait on a regular basis, redirecting a group of three boats that had participated in the Battle of the Philippine Sea, and dispatching three more wolf-packs by mid-July. All told, these four efforts netted 17 enemy ships. Additionally, COMSUBPAC increased his emphasis on the East China Sea and also established a series of so-called "polar routes" that vectored submarines northward past the Aleutians and westward to the Kurile Islands and the Sea of Okhotsk, where they could prey on Japanese fishing fleets and coastal traders before slipping southward to patrol off Hokkaido and Tokyo Bay. With Brisbane's importance steadily diminishing in early 1944, CAPT Fife was re-assigned to staff duty in Washington, and overall command of the Australia-based submarines devolved on RADM Christie. Meanwhile, the Fremantle operation was approaching a peak of activity in September and October, when a total of 38 boats - most in wolf-packs - joined patrols

against the Japanese oil "pipeline" from Sumatra and Borneo and enemy attempts to shore up the defenses of the Philippines. These COMSUBSOWESPAC operations were facilitated by establishing two new advance bases north of New Guinea in mid-year: at Manus in the Admiralty Islands, and at Mios Woendi, just east of Biak. In July through October alone, Christie's boats sank nearly 100 enemy ships, joining over 150 more destroyed by their counterparts at Pearl Harbor. Exacerbated by the growing toll exacted by air attacks, the effect on the Japanese war effort was catastrophic. Total Japanese importation of bulk commodities for 1944 was half the pre-war level, and by the end of the year, their merchant tonnage (again including tankers) had dropped to 47 percent of the pre-war figure. The trail of submarine advance bases established by COMSUBPAC westward from Pearl Harbor - and by COMSUBSOWESPAC northward from Australia - clearly marks the convergence of the Allied offensive on the Japanese homeland in the last years of the war. Japanese defeats in the Battles of the Philippine Sea and the Leyte Gulf marked the beginning of the end.

The Beginning of the End

In preparation for the ensuing invasion of the Philippine Islands, GEN MacArthur's forces invaded the island of Morotai, northwest of New Guinea, in September 1944, and ADM Nimitz moved on Peleliu and Angaur in the Palau group. When U.S. troops came ashore on eastern Leyte on 20 October, however, ADM Toyoda had already initiated a series of countermoves. His overall plan was to bring VADM Ozawa's carriers down from Japan to lure VADM William Halsey's Task Force 38 away from Leyte Gulf so that a powerful surface fleet, including the super-battleships IJS Yamato and IJS Musashi, could come up from Singapore, penetrate the San Bernardino and Surigao Straits, and catch the invasion forces at Leyte Gulf in lethal pincers. The result was the Battle of the Leyte Gulf, 23-25 October 1944, perhaps the largest naval encounter ever fought. To support the U.S. invasion, RADM Christie positioned a dozen submarines southwest of Luzon to interdict Japanese forces coming up from the south, while VADM Lockwood deployed over twenty boats off Japan's Inland Sea and near the Luzon Strait to counter enemy moves from the north. Christie's submarines drew first blood early on the morning of 23 October by sinking two Japanese heavy cruisers and severely damaging two others west of Palawan. Then, on the 24th, U.S. carrier aircraft badly mauled the enemy surface forces in the San Bernardino and Surigao Straits - sinking Musashi - and then turned northward to find Ozawa's carriers. In subsequent surface actions, VADM Thomas Kinkaid annihilated the Surigao Strait force, but found himself badly outmatched at the San Bernardino Strait to the north, where the

debouching Japanese battleships sank two escort carriers, two destroyers, and a destroyer-escort before withdrawing - inexplicably - without attacking the landing force. Then, on the morning of the 25th, Halsey found the approaching Japanese carriers and sank all four of them, leaving only two hybrid carrier-battleships, IJS Ise and Hyuga, and their escorts to run a gauntlet back to Japan through several scouting lines of U.S. submarines deployed to intercept the "cripples." Among these, the U.S. boats managed to pick off a light cruiser and a destroyer. In addition to guaranteeing the successful invasion of the Philippines, the Battle of the Leyte Gulf reduced the Japanese Navy to a mere remnant of its former self, almost entirely bereft of carrier aviation. The Submarine Force played a key role in the victory - not only by providing crucial sighting reports, but by sinking or heavily damaging six enemy combatants. The reconquest of the Philippines continued with the invasions of Mindoro and Luzon in December 1944 and January 1945, leading to the recapture of Manila in early February. Meanwhile, with the remains of the enemy war fleet withdrawn into home waters, U.S. submarines were free to concentrate almost entirely on Japanese shipping. During all of 1944, more than 600 Japanese ships - or 2.7 million tons - were eventually credited to the U.S. boats, including a battleship, seven aircraft carriers, nine cruisers, and numerous smaller combatants. In the same period, the Pacific boats rescued 117 downed airmen from the sea in lifeguard missions. On the negative side, 19 U.S. submarines were lost to enemy action during 1944 - plus one sunk in a training accident - but in contrast, the Japanese sacrificed 56.

Final Victory in the Pacific

1944's anti-shipping campaign was so successful that by the beginning of 1945, virtually nothing was left to sink. Few enemy targets remained outside the Sea of Japan, the Yellow Sea, and narrow coastal lanes plied only by day. Nonetheless, U.S. submarines pursued their remaining quarry wherever it could be found, patrolling up and down the Japanese coast and often penetrating deep into their harbors, while performing lifeguard duty in support of a crescendo of air attacks on mainland targets by both carrier-based and long-range bombers. In February, the Australia-based Submarine Force - now under newly-promoted RADM James Fife - established another advance

submarine base at Subic Bay north of Manila, and within a few months, VADM Lockwood had moved his own headquarters forward to Guam. By then, more than 120 U.S. submarines were operating in the Pacific. By the time of the invasions of Iwo Jima and Okinawa in February and April 1945, Japan's war-making capacity had been virtually eliminated, and continuing air-raids on the major cities and military complexes were wreaking horrendous destruction on the civil and industrial infrastructure. Although detailed planning had begun for a massive invasion of the Japanese home island of Kyushu in November 1945, the unleashing of atomic weapons on Hiroshima and Nagasaki in early August brought a merciful end to the conflict on the 14th of that month. The formal surrender instrument was signed on the deck of USS Missouri (BB-63) in Tokyo Bay on 2 September. Appropriately, VADM Lockwood participated in the ceremony, and a dozen submarines and the tender USS Proteus (AS-19) were anchored nearby. Reflecting how completely the Japanese merchant marine had been swept from the seas, U.S. submarines sank only 190 enemy ships - most of them quite small - in the seven and one-half wartime months of 1945, equivalent to half the monthly average achieved in 1944. Since 1941, the Pacific Fleet Submarine Force had sunk over 1,300 enemy vessels - or 5.3 million tons of shipping - approximately 55 percent of all Japanese ships lost during the conflict. (The remainder was lost to aircraft, mines, and other causes.) Although this destruction was wrought by less than two percent of U.S. Navy personnel, our undersea victory in the Pacific exacted a heavy toll of ships and men. A total of 52 U.S. submarines were lost in World War II, most with all hands. Over 3,500 officers and enlisted men sacrificed their lives - 22 percent of those who went on patrol - the highest casualty rate in the U.S. armed forces.

Lest we forget.

"There is a port of no return, where ships
 May ride at anchor for a little space
 And then, some starless night, the cable slips,
 Leaving and eddy at the mooring place...
 Gulls, veer no longer. Sailor, rest your oar.
 No tangled wreckage will be washed ashore."

Leslie Nelson Jennings ("Lost Harbor")

**A Very Merry Christmas And Happy New Year
 To All
 God Bless those in Harms Way**

Return To:

U. S. Submarine Veterans, Perch Base
6509 W. Devonshire
Glendale, AZ 85033-3350

<http://perch-base.org>



85006+1128 14

