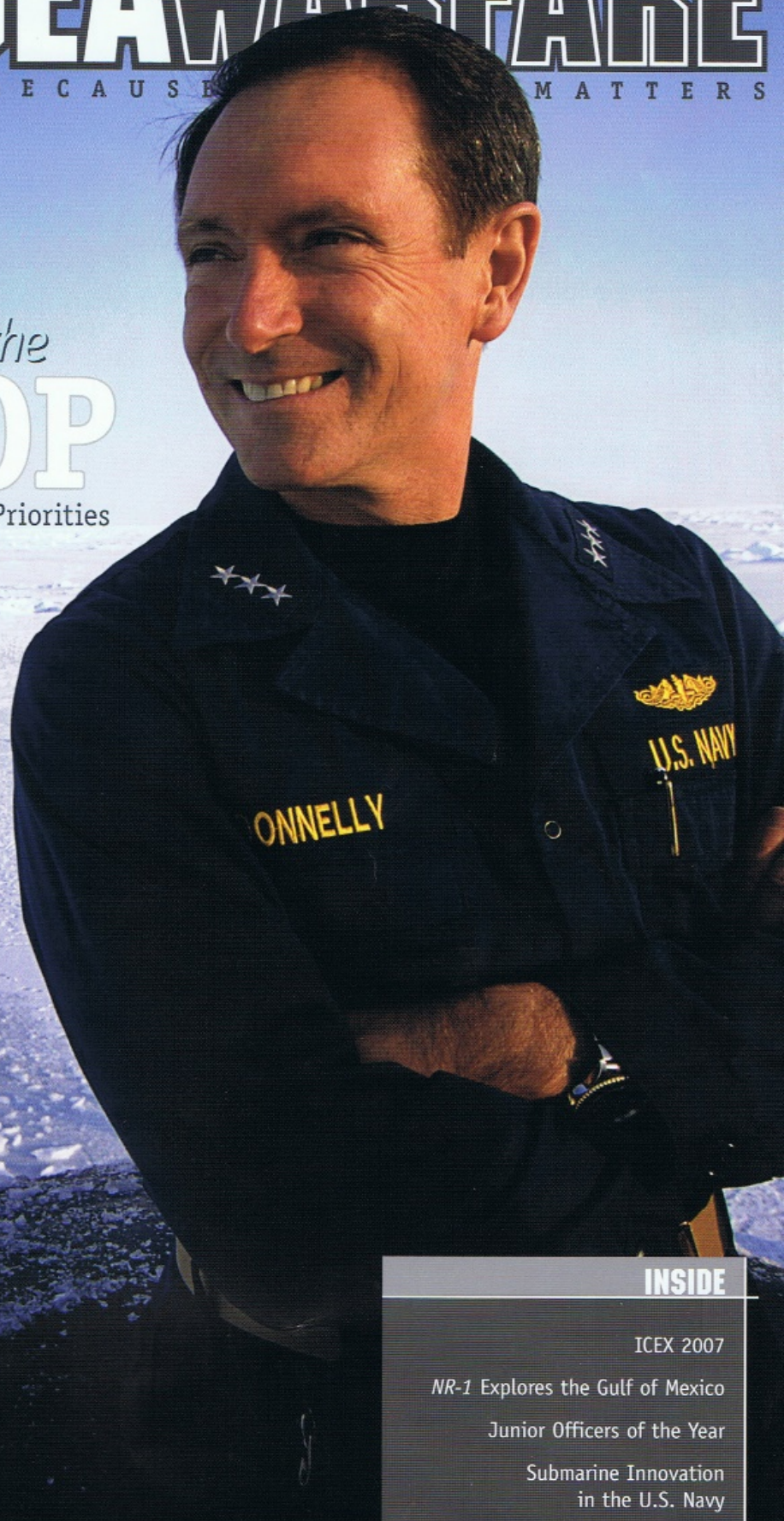


UNDERSEAWARFARE

U. S. S U B M A R I N E S... B E C A U S E M A T T E R S

VIEW *from the* TOP

Submarine Force
Commander Sets Priorities



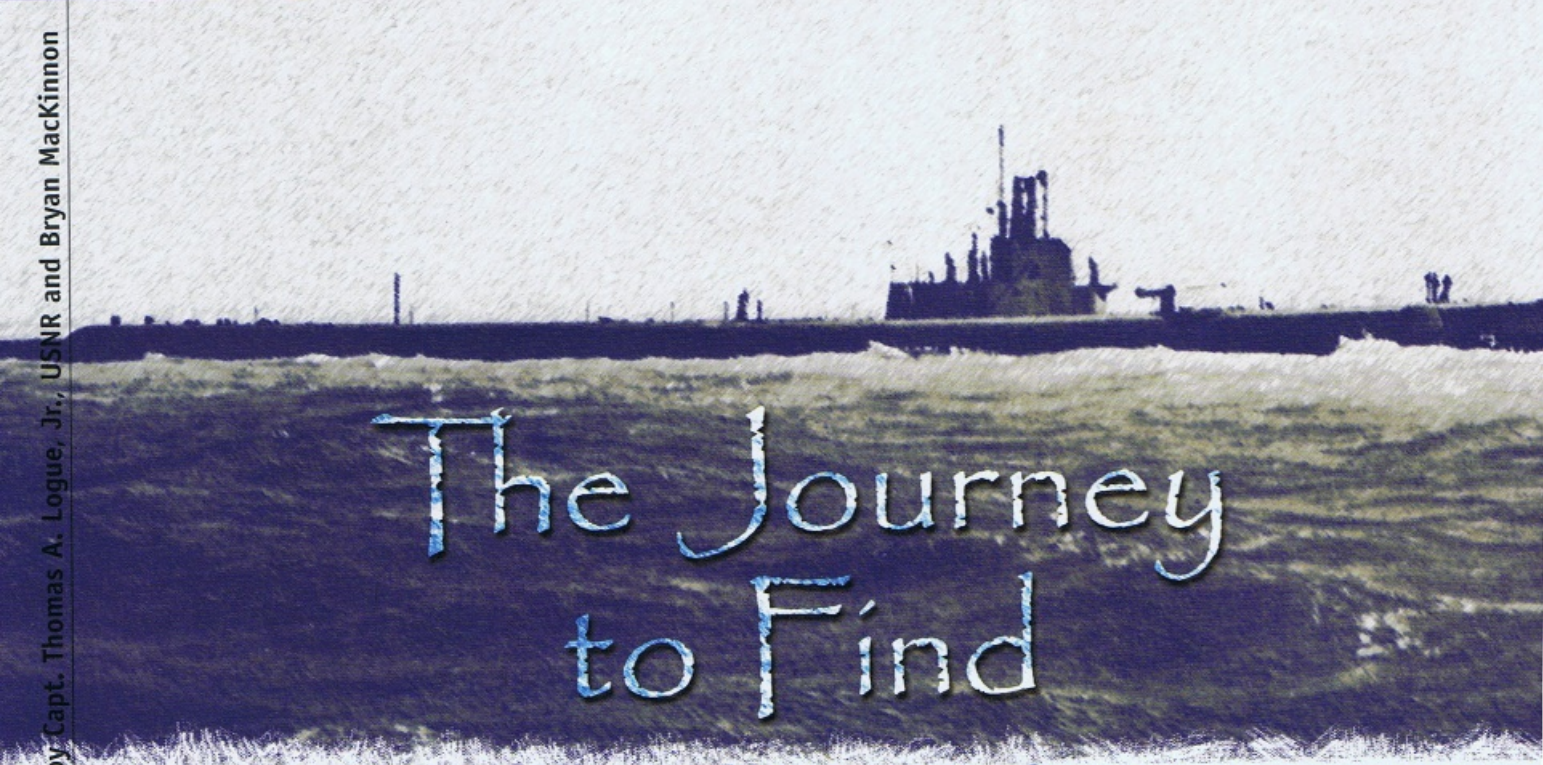
INSIDE

ICEX 2007

NR-1 Explores the Gulf of Mexico

Junior Officers of the Year

Submarine Innovation
in the U.S. Navy



The Journey to Find USS Wahoo

Setting sail after topping off at Midway Island in the late summer of 1943, headed for the Sea of Japan, the legendary *Gato*-class submarine, USS *Wahoo* (SS-238), was never to be seen again...until now. After considerable effort by many individuals and organizations from many countries, her final resting place has been confirmed by the U.S. Navy. She was discovered last summer, fatally damaged but in one piece, by a Russian dive team between the Japanese island of Hokkaido and the Russian island of Sakhalin, in the La Perouse (Soya) Strait.

Background

Many of today's nuclear-trained submariners may be only dimly aware of *Wahoo's* accomplishments during World War II in the Pacific theater. On the occasion of *Wahoo's* discovery, our intent is to recount some of her history and highlight some of the revolutionary tactics she employed under her commanding and executive officers, Cmdr. Dudley W. Morton and Rear Adm. Richard H. O'Kane. We also want to report some of the details of her discovery last year. Over the past eleven years, Bryan MacKinnon, grand-nephew of Dudley Morton, led the effort to find *Wahoo* and determine the circumstances of her loss.

For us, *Wahoo's* discovery represents a significant way-point in personal journeys that started very early in our lives.

Dudley "Mush" Morton, the Submarine Force's Rising Star

By the summer of 1943, everybody in the Pacific Submarine Force had heard of Dudley "Mush" Morton and *Wahoo*. They had become an overnight sensation after *Wahoo's* third patrol conducted off New Guinea earlier that same year. As part of his tasking for his first patrol as commanding officer (CO) of *Wahoo*, Morton's patrol orders included the directive: "Adjust speed, if possible, to permit daylight reconnaissance vicinity Wewak Harbor, New Guinea."² After consulting with his officers for their interpretation of "reconnaissance," Morton made his intentions clear. He decided it meant enter the harbor, submerged, and sink as many enemy ships as possible. Upon conducting a periscope survey of an inlet for which he had no official charts, he detected a Japanese *Shiratsuyu*-class destroyer apparently at anchor. He commenced firing a salvo of bow torpedoes only to discover that the destroyer was actually underway and his torpedoes would miss astern.³ He fired his last bow torpedo at 800 yards range using a "down

the throat" shot as the now fully alerted destroyer charged *Wahoo's* periscope with intent to ram. Morton obligingly kept the periscope raised to lure the destroyer into the path of his final torpedo. Morton later reported that this torpedo had "blown off the bow" of the destroyer.⁴ After snapping some photographs through the periscope, *Wahoo* commenced a 3-knot, 7-mile, submerged egress using dead reckoning and passive sonar alone.⁵ On the same patrol—two days later—Morton attacked and believed he had sunk an entire convoy composed of two freighters, a troop transport, and a tanker during an all day pursuit with multiple torpedo and gun attacks.⁶ Mush Morton, who had a flair for the terse message writing required of all submarine communications, composed the following for Commander Submarine Force, U.S. Pacific Fleet (COMSUBPAC):

SANK DESTROYER IN WEWAK SUNDAY
AND IN FOURTEEN HOUR RUNNING
GUN AND TORPEDO BATTLE TODAY
SANK CONVOY OF ONE TANKER TWO
FREIGHTERS AND ONE TRANSPORT
DESTROYING HER BOATS
TORPEDOES EXPENDED
PROCEEDING PEARL HARBOR
VIA FAIS ISLAND⁷

This patrol had been the most successful to date for an American submarine in the Pacific theater and was sorely needed for morale. Later when *Wahoo* returned to Pearl Harbor from her fifth patrol, Morton flamboyantly ordered a broom lashed to the periscope to highlight their success, reminiscent of the 17th century Dutch Admiral Martin Tromp who reputedly had adorned his flagship's masthead in similar fashion announcing his success in "sweeping" away his British adversary.⁸

Wahoo was christened "The One-Boat Wolf Pack" and after her third patrol, Fleet Adm. Chester Nimitz awarded Morton a Navy Cross. For sinking the troop transport, General MacArthur awarded him the Army Distinguished Service Cross. The *Wahoo* and her crew were awarded a Presidential Unit Citation. Word of Morton, Executive Officer (XO) Richard O'Kane, the crew

of *Wahoo*, and their achievements using daring, quick-thinking tactics spread rapidly throughout the Force. But this success was actually brought about through innovative thinking and protracted, intense effort by two committed and highly-driven submarine officers.

Morton's Unorthodox Fire Control Party

Morton and O'Kane were of like minds when it came to the aggressive pursuit of an enemy and, as such, they ended up "rewriting the book" on enemy pursuit tactics.⁹ Pre-war doctrine had called for submarines to conduct submerged passive sonar approaches only.¹⁰ Those surface ships that might happen their way were susceptible to attack. This resulted in few en-

counters and consequently low numbers of enemy ships engaged and sunk. Due to their lack of success and reluctance to pursue and engage the enemy aggressively, many submarine commanding officers in place at the start of the war were replaced.

O'Kane had felt the sting of underachievement on *Wahoo's* first war patrol. *Wahoo's* first commanding officer, Lt. Cmdr. Marvin Granville Kennedy, passed up what could have been *Wahoo's* biggest prizes of the war. The first was a midget submarine mother ship that they had misidentified as a sea-plane tender and the second, an aircraft carrier.¹¹ In both cases, a lack of experience and aggressiveness allowed these highly-valued targets to get away

Growing Up Wahoo

Thomas Logue writes:

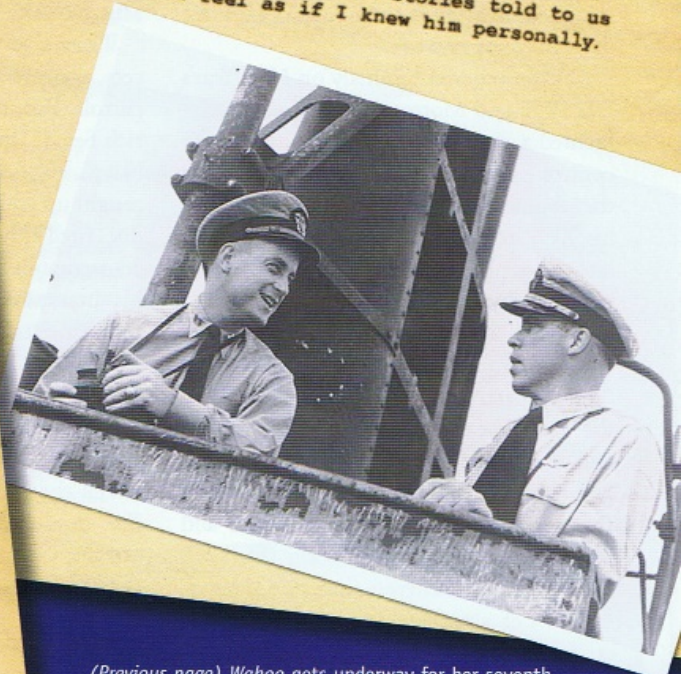
Ever since I can remember, I heard stories from my father and Uncle George about their older brother, Petty Officer 1st Class Robert "Bobby" Logue, who enlisted in the Navy after high school, volunteering for the dangerous submarine service. They told me about how Uncle Bobby had endured patrols on an older diesel submarine—USS *Dolphin* (SS-169). They described how he had just returned to the base at Pearl Harbor from the longest submarine patrol to that date, just four days before the devastating air attack by the Japanese. Standing duty that early December morning, he manned his battle station as deck gun captain and shot down at least one of the marauding planes.

Uncle George would go on to describe how as the nation mobilized for war, his older brother continued his service as a fire controlman on *Dolphin*. Dudley "Mush" Morton (a nickname shortened from "Mushmouth" that had been given him due to his Kentucky drawl)¹ first met Uncle Bobby when Morton rode *Dolphin* for sea trials in 1942. The second time the two met, *Wahoo* had just returned from her disappointing sixth war patrol. Morton had been unable to sink any targets due to the unrelenting torpedo problems which were plaguing all of America's Submarine Force, so he wanted his remaining torpedoes inspected and problems corrected. Uncle Bobby helped train *Wahoo* sailors on the then new MK 18 torpedo because he knew how to maintain, repair, test, and fire the Navy's new weapon in combat. Even though he expected orders stateside, when Morton offered to take him along as a technical expert into the Sea of Japan aboard *Wahoo*, Uncle Bobby jumped at the chance.



Bryan MacKinnon writes:

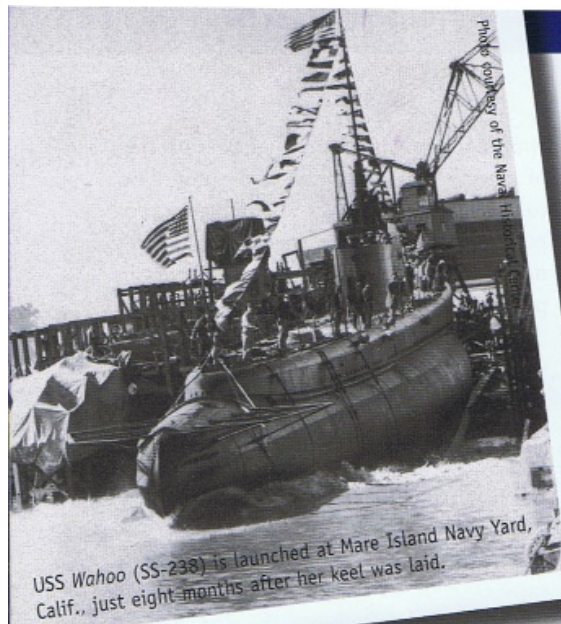
Dudley "Mush" Morton was a legend in my family as much for his sense of humor and charisma as for his war record. He married my great aunt Harriet in 1936 in Tsingtao, China. It was during a port call Mush's ship was making that Harriet and he met and later married. When my family recalled the prewar years, the stories would always be about Mush's extraordinary and contagious gift for humor. During the war years, especially in 1943, when Mush would visit my family stateside in between patrols, much of his levity was missing as the strains of a war time command were apparent. Since I was born 15 years after the war ended, I never met Mush but the stories told to us were so vivid, I feel as if I knew him personally.



(Previous page) *Wahoo* gets underway for her seventh war patrol after refueling at Midway Island Sept. 13, 1943.

(Above left) Petty Officer 1st Class Robert "Bobby" Logue was a crewman on *Wahoo* during her final patrol in 1943. (photo courtesy of the Naval Historical Center)

(Above right) Commanding Officer Lt. Cmdr. Dudley W. "Mush" Morton speaks with his Executive Officer Lt. Richard H. O'Kane on the bridge. (photo courtesy of the Naval Historical Center)



USS Wahoo (SS-238) is launched at Mare Island Navy Yard, Calif., just eight months after her keel was laid.

Photo courtesy of the Naval Historical Center

without *Wahoo* ever reaching a firing position. O'Kane had hoped that Morton's presence as a prospective commanding officer (PCO) during *Wahoo*'s second patrol would change their luck. And although their second patrol near the Solomon Islands was relatively successful—they believed they had sunk a surfaced submarine and a tanker—both O'Kane and Morton knew they could accomplish much more.¹² They also witnessed first-hand the stress placed on the CO during these approaches and attacks and later privately critiqued his every move.¹³ Armed with this data, they got to work.

Morton relieved Kennedy on New Year's Eve 1942 and Morton and O'Kane implemented a new twist to the traditional fire control party. But their idea required that the captain have extreme confidence in his XO, in this case Richard H. O'Kane, later Roger W. Paine, Jr., and finally Verne L. Skjonsby. In a remarkable display of leadership and faith in his subordinates, Morton promoted his XOs to the role of "co-approach officer," assigning them to the periscope to perform all observations and fire all torpedoes.¹⁴ Thus O'Kane was granted a tremendous training opportunity that served him well both on *Wahoo* and later as captain of the USS *Tang* (SS-306). Morton wisely believed that a commanding officer should always dispassionately retain the big picture, especially during approach and attack. In the concluding section of *Wahoo*'s third patrol report, Morton summarized their innovation and his faith in his XO:

The fire control party of this ship was completely reorganized prior to and during this patrol. The XO, Lt. R.H.

O'Kane in the co-approach officer (role). He made all observations through the periscope and fired all torpedoes. The CO studies the various setups by the use of the submarine attack course finder (ISWAS) and analyzing the torpedo data computer (TDC) and does the conning. A third officer assists the CO in analyzing the problem by studying the plot and the data sheets. On the surface the XO mans the target bearing transmitter (TBT), and makes observations and does the firing; the CO conns. This type of fire control party relieves the CO of a lot of strain and it gives excellent training to all hands, especially the XO. It is recommended that other ships give it consideration and thought.

The conduct and discipline of the officers and men of this ship while under fire were superb. They enjoyed nothing better than a good fight. I commend them all for a job well done, especially Lt. R.H. O'Kane the XO, who is cool and deliberate under fire. O'Kane is the fightingest naval officer I have ever seen and is worthy of the highest of praise. I commend Lt. O'Kane for being an inspiration to the ship.¹⁵

The Secret, Wakeless Torpedo

Wahoo's success using co-approach officers continued for her fourth and fifth patrols. But, the sixth patrol in the target-rich Sea of Japan was a different story. The Navy's systemic torpedo problems finally caught up with *Wahoo*. All ten of the torpedoes fired either failed to detonate, detonated prematurely, or ran erratically.¹⁶ Despite his attempts to troubleshoot the MK 14's problems at sea, Morton was forced to return from the war patrol early bringing back what remained of his defective torpedo loadout.¹⁷ He also eagerly anticipated the introduction of the MK 18 torpedo which the Westinghouse Corporation had just produced for the U.S. Navy, based on the German G7 E (electric) torpedo obtained from a captured U-boat.¹⁸

Although the MK 18s were slower and had a shorter range than the older, steam-driven MK 14 torpedoes, they had one overwhelming tactical advantage.¹⁹ Since they were electric-powered, they left no telltale wake. Heretofore when a salvo of MK 14s were fired, the Japanese escorts simply followed the torpedoes' wakes to determine the submarine's location, where-

upon they unleashed their punishing depth charge attacks. But when a salvo of MK 18s was fired, assuming a satisfactory fire control solution, the first indication to the target that a submarine attack had been launched would be the first MK 18 detonation on its hull. By this time the attacking submarine would have had sufficient time to conduct evasive measures—a tremendous advantage!

Bristling from the faulty torpedo performance on *Wahoo*'s last patrol and frustrated by the division, squadron, acting force commander, and the Bureau of Ordnance's reluctance to acknowledge any torpedo design faults, Mush wanted answers, a quick turnaround with a load of the new MK 18s, and someone with him that knew this new torpedo. Having worked closely with the Westinghouse technicians on the MK 18, Petty Officer 1st Class Robert "Bobby" Logue would join *Wahoo*'s crew and accompany them back to the dangerous Sea of Japan in the fall of 1943.²⁰ *Wahoo*'s abbreviated refit included not only re-provisioning and some R&R for the crew, but also an upgrade to the angle solver section of *Wahoo*'s TDC. The upgrade accounted for the MK 18's much smaller advance, which resulted from its smaller reach and turning radius at the slower speed. *Wahoo* then departed Pearl Harbor for the last time. Her secret operation order called for her to enter the Sea of Japan on or about Sept. 20, 1943, and conduct unrestricted submarine operations south of the 43rd parallel. USS *Sawfish* (SS-276), under the command of Lt. Cmdr. E. T. Sands, was to enter three days later and patrol north of the 43rd.²¹ *Wahoo*'s orders called for her to return by the same route no later than sunset Oct. 21, 1943, and radio back once clear of the Kuril chain circa Oct. 23.²² But Mush Morton and *Wahoo* were never to be heard from again.

The First *Wahoo* Search

Patrol planes began a search for *Wahoo* along her intended route shortly after the time of her anticipated off-station message. *Sawfish* had not heard from or sighted *Wahoo*. There was no explanation for *Wahoo*'s failure to report or return to base. But the results of *Wahoo*'s actions on her last patrol in the Sea of Japan were relayed by intercepts of Radio Tokyo which were broadcast to the world. On Oct. 5, they reported that an American submarine had

The Families Take Over

sunk the Konron Maru near the Tsushima Straits with 544 fatalities.²³ There were other Japanese vessels sunk in the Sea of Japan during the period that can only be attributed to *Wahoo*. In the final tally after the war, *Wahoo* was credited with sinking four ships on her last patrol.²⁴ Post-war research of the Japanese records indicated that an anti-submarine action had occurred on Oct. 11, 1943, in the La Perouse Strait.²⁵ And that was the extent of the Navy's investigation into the loss of *Wahoo*, until very recently.

Taking the Search to Japan

Soon after they learned of each other's common interest, George Logue and Marty Schaeffer showed up in Wakkanai, Hokkaido, Japan in 1993. It was from Wakkanai that the attacks on *Wahoo* had been launched, and these three Americans, who did not speak any Japanese, wanted to construct a memorial to her and the Japanese lost on the ships she had sunk. Logue and Schaeffer had experienced first hand the consequences of the war and wanted closure. They wanted to join with the Japanese and recognize those who had sacrificed most during the war.

To say their presence caused a sensation in Wakkanai is an understatement. While foreigners are not unknown there—Americans were stationed at the Cold War outpost of Wakkanai Air Station until 1972 and crewmen from Russian commercial ships are frequent today—their purpose was something new in

Japan's northern most city. While visiting Wakkanai, Logue, Schaeffer, and Stubler were hosted by the Japanese Maritime Self-Defense Force (JMSDF) for a private, at-sea wreath laying. Over the years *Wahoo's* location had been inferred from sporadic reports of fisherman catching their nets on an unidentified object lying on the bottom of the Soya Strait.

Fortunately for Logue and Schaeffer, and ultimately for the *Wahoo* search, several residents in Wakkanai were to prove key to the search.

Larry Hagen, who was a Christian missionary living in Wakkanai, was a key organizer for the *Wahoo* Memorial Service conducted in 1995. It was during this event that the two authors of this article first met. Another Wakkanai resident and an Imperial Japanese Navy submarine veteran, Satoru Saga, became the organizer on the Japanese side for the *Wahoo* Memorial. Saga counted among his friends Vice Adm. Kazuo Ueda, another

Thomas Logue writes:

Like so many other members of the *Wahoo* family over the years, I yearned to find out what had happened to Uncle Bobby, Mush Morton, *Wahoo*, and the rest of her gallant crew. Growing up in the 1960s and 1970s my search started by reading up in the 1960s and 1970s about submarines and *Wahoo*. I read books like "Wake of the *Wahoo*" by *Wahoo's* yeoman, Forrest J. Sterling²⁶ and "WARFISH" by *Wahoo's* engineering officer, George Grider.²⁷ I wondered about what it must have been like serving under Mush Morton on *Wahoo* during those times. Years later after graduating from the Naval Academy and entering Admiral Rickover's nuclear Submarine Force, I got to experience first hand what modern submarine life was like. But I really could not appreciate what it must have been like on *Wahoo* until I read Adm. O'Kane's book: "Wahoo—The Patrols of America's Most Famous World War II Submarine." My Uncle George's journey to find *Wahoo* had started much earlier than mine and was far more dedicated and personal. He had learned at the very impressionable age of sixteen of *Wahoo's* loss from his weeping mother.²⁸ She told him *Wahoo* was "overdue, presumed lost." Too young to recognize the Navy's euphemism, he vowed on the spot to find *Wahoo* and his older brother, literally. He never gave up. And starting in the early 1990's with the help of a colorful World War II submarine veteran named Marty Schaeffer, he ratcheted up the search efforts by several orders of magnitude.²⁹

Bryan MacKinnon writes:

I have been living in Japan since 1994 working for an American investment bank. Being based in Japan and related to *Wahoo's* commander, I was in a unique position to continue the search that George Logue began many years before. In the 50 plus years since the war ended, Japan and the United States have grown very close economically and militarily. It was now possible for the two former adversaries to join together to finally solve the mystery of *Wahoo*. It was relatively easy for me to contact Japanese researchers and consult the wartime archives for any clues.



Photo courtesy of Vladimir Kartashev and the Russian dive team

Wreckage of *Wahoo* found in contested waters.



Photo courtesy of Vladimir Kartashev and the Russian dive team

er submarine veteran. It was ultimately Ueda who was able to access the Japanese archives and speak with the participants of the attack to accurately predict *Wahoo's* location.

Contested Area

The search for *Wahoo* was lengthy and patience was required. Being able to connect with the right people via the Internet was key. We knew approximately where she lay and that she was in relatively shallow water; however, she is in a highly contested part of the world. She lies in Russian territorial waters that belonged to the Japanese in 1943. To the north and west of her is oil. Northeast of her are the Kurils, an island chain that both Russia and Japan claim. But the Russians will shoot to kill to assert their claim to the land.

The Japanese Contribution

Today, a group of Imperial Japanese Navy submarine veterans meet in an informal reunion each year. Their WWII crafts, "midget submarines," of that era were about as far as can be from a *Gato*-class submarine and still be called a submarine. Cramped and dangerous, their task has been described by Capt. Yasuhiro "Tommy" Tamagawa, a reunion participant, as a kind of suicide mission, though not in the traditional "Kamikaze" sense. They had significant range and were designed for multiple patrols. These submarines were ready to be deployed in Japan's "Island Sea" in a desperate attempt to thwart the expected American invasion fleet in 1945. As the fleet approached, the midget submarine commander and his four crewmen would have made their way to the enemy, lay in wait, and at the last possible moment, fire their torpedoes. Firing the relatively massive torpedoes from these small craft would usually result in the bow broaching the surface, giving their position away. Submariner fatalities were expected to be high; however, the invasion never came.

It is then fortunate and perhaps ironic that this group of submariners was key in ultimately locating *Wahoo*. Among their number is a retired admiral; a businessman living in the city from where the attacks on *Wahoo* were launched; a retired captain who has worked as a liaison between the Japanese and American navies since the war; and a naval historical archivist. Instead of merely dwelling on their own exploits, *Wahoo* became sort of a quest for them too.

If there is one person most responsible for what we know of *Wahoo's* fate, it is Vice Adm. Kazuo Ueda (JMSDF, Ret.). Admiral Ueda, along with Saga, scoured the Japanese archives and interviewed the participants on the *Wahoo* attack. By the mid-1990s, Ueda had estimated the location of *Wahoo* to within one nautical mile of its actual location. Another group member, Noitaka Kitazawa, was an archivist retired from the Japan National Institute for Defense Studies. While Kitazawa was too young to be in the war, he did assist Keiko Takada and Bryan MacKinnon in locating for the first time actual photographs documenting the attack on *Wahoo*.

The MacKinnon Organization

The search for *Wahoo* is a 21st century endeavor aided by electronic mail and the World Wide Web. The MacKinnon Organization³⁰ became a clearing house for information contributed by families, researchers, and government archivists. Over time, a large collection of material has been accumulated. Bryan MacKinnon had been working on locating *Wahoo* since 1995 and has been in contact with the Japanese veterans group since the late 1990s. The next significant break came in 2002, when Wayne Sampey, who leads the Ocean Wilderness Group of Australia, contacted MacKinnon to assist with the search. Sampey brought decades of diving experience and professional expertise to bear. Sampey obtained sponsors and worked with the American and Russian govern-

ments who for the first time formally concurred with the plan to locate *Wahoo*. It was during this time that the Russians were informed of the *Wahoo* project's proposal of where she was located. He also began the dialog with the USS *Bowfin* Submarine Museum and Park to ensure the project was conducted by approved standards.

The Russians are Coming

The end of the Soviet Union brought a level of accessibility that did not exist before. The frustrations that both Dick O'Kane and George Logue complained of were gone and replaced by direct accessibility to Russian bureaucracy. Sampey navigated through this and the search received approvals at the highest levels of the Russian government.

During 2002 and 2003, Sakhalin Energy Investment Company Ltd. (SEIC) Explosive Ordnance Disposal Coordination Centre (EODCC) conducted extensive research of military and naval activities in and around the Sakhalin-Wakkanai region. During this time, SEIC EODCC member Ian Bullpitt consulted MacKinnon's *Wahoo* Web site to ascertain the possible location of the *Wahoo*.

In 2004, SEIC and the Russian subcontractor, Romona, conducted a sub-sea survey of La Perouse (Soya) Strait. While conducting the survey, they diverted from their normal survey route to search the "Ueda Location." They also included another area that was considered to be a possible site that Japanese fishermen had

From the Dive Team:

On July 28 and 29, 2006, dive team leader Boris Postovalov accompanied by one other diver, Andrei Doroshenko, located *Wahoo* on their second dive. Postovalov describes what he saw:

It has a rupture [in the midsection] all the way from the conning tower down to the keel. The submarine is laying down flat on the bottom surface and with the exception of this rupture, it looks almost whole. It has no other visible damage. The submarine is completely covered by various sea creatures—clouds of fish all around. It seems there are a few places with minor damage that might have been left by additional depth charging. This additional bombing was really not necessary. The sub was killed by a single powerful direct hit of an aerial bomb. The sub had no chance of survival and no one aboard likely had any chance of survival as a result of the attack.

been snagging their nets on over the years. SEIC produced side-scan sonar readings and images of both sites. The first images from the "Ueda Location" appear consistent with a submarine matching the dimensions of a *Gato*-class submarine³¹ and the second set of images appear to be those of a freighter.

In 2005, Bullpitt informed the *Wahoo* Project Group of these side-scan images. This is the first tangible evidence that the location computed by Vice Adm. Ueda in the 1990s is likely the location of the *Wahoo*.

Finding and Photographing *Wahoo*

Later in 2005, the Russian team "Iskra," led by Vladimir Kartashev, used the SEIC images and attempted to locate the submarine. Initial equipment failures prevented a successful search. Kartashev then contacted Bryan MacKinnon and sought to join with the *Wahoo* Project's efforts, including seeking additional funding for the Russian search efforts.

During the last week of July 2006, the Iskra team obtained video and photographic images of the "Ueda Location" that ultimately were confirmed to be *Wahoo*. The Iskra team effort was a relatively low-tech undertaking. With very limited funding, their search platform was an 18 meter sailboat with about six crew members.

Their diving equipment was basic, allowing for only a limited time at the 200-foot depth where *Wahoo* lay, and their video equipment was sufficient only for close-up shots.

After these dives, the Iskra team ended

its efforts, issued a press release, produced a short video to document their efforts, and is now using this expedition as a funding springboard for further projects in the region. Due to the aforementioned limitations of the Iskra's team equipment, they were not able to completely document the condition of *Wahoo's* exterior and her interior condition is completely unknown. A comprehensive survey to document her condition and perhaps more clues of *Wahoo's* final hours would require a return visit by a more sophisticated team.

Wahoo's Final Hours

From the Russian dive team report and their sketches, *Wahoo* appears to have been sunk by a single aerial bomb, no doubt causing immediate and catastrophic flooding of multiple compartments. The reason why *Wahoo* exited the Sea of Japan ten days early during daylight hours may never be known. Speculation has ranged from "exiting due to equipment or torpedo casualty" to "all torpedoes expended, returning to base." Ideally, a more comprehensive survey would greatly assist in knowing more about her final hours.

Memorials Planned

After the official U.S. Navy announcement of *Wahoo's* discovery by Commander Pacific Fleet (COMPACFLT) last October,³² Commander, Submarine Group SEVEN, Yokosuka, Japan, held an at-sea wreath-laying ceremony this year. A separate Memorial Day celebration was conducted at

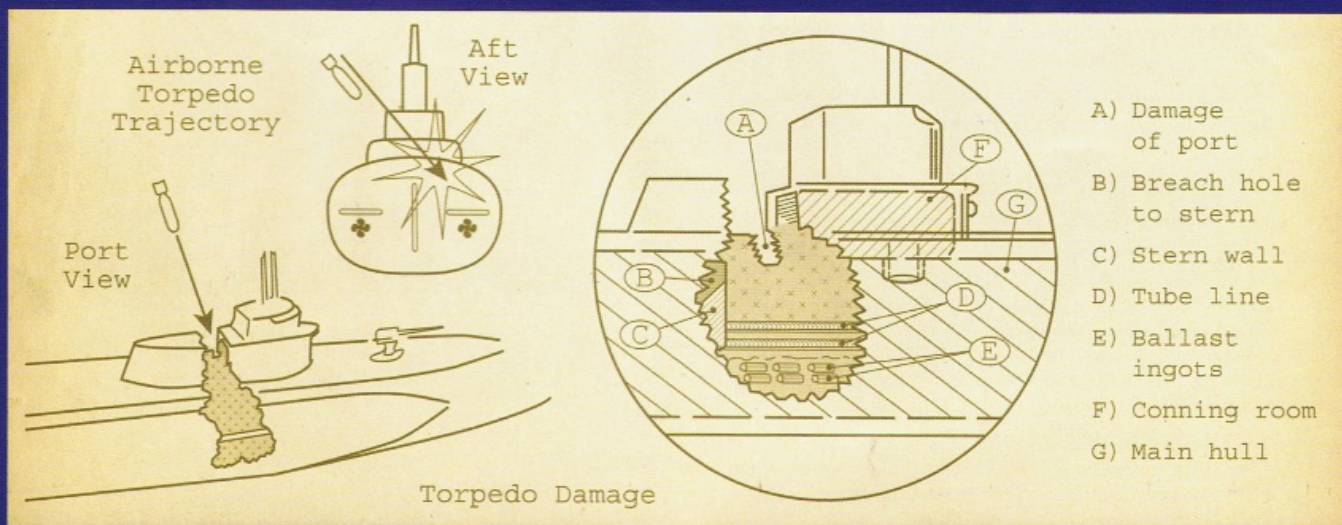
the *Wahoo* Memorial in Williamsport, Pa., the boyhood home of Petty Officer 1st Class Robert Logue, with Rear Adm. John N. Christenson, Commander Naval Mine and Anti-Submarine Warfare Command, Corpus Christi, (another nephew of Petty Officer 1st Class Robert Logue) speaking.

Surviving crewmembers and family of crewmembers who were either lost or had served on *Wahoo* are invited to attend the year's final event on the 64th anniversary of *Wahoo's* loss at the USS *Bowfin* Memorial in Pearl Harbor, Hawaii, on Oct. 11, 2007. For details visit www.oneternalpatrol.com/wahoo-memorial.htm or contact Charles R. Hinman, Director of Education, USS *Bowfin* Submarine Museum. Email: info@OnEternalPatrol.com. For other related World War II submarine information please visit: www.oneternalpatrol.com.

End notes for this article are available in the online version at http://www.chinfo.navy.mil/navpalib/cno/n87/usw/issue_34/index.html.

Capt. Thomas A. Logue, Jr., USNR, nephew of Petty Officer 1st Class Robert B. Logue, is a nuclear submarine officer and serves on active duty as the Chairman of the Computer Science Department at the United States Naval Academy in Annapolis.

Bryan MacKinnon, grand nephew of Cmdr. Dudley W. Morton, is founder and president of "The MacKinnon Organization," a non-profit group which researches World War II submarine warfare. He resides in Japan and works for the Global Advisory and Banking Technology Division of Merrill Lynch, Japan.



This graphic representation of the damaged *Wahoo* is based off a hand drawing provided by the Russian dive team. Courtesy of the Alion Science and Technology graphics department.