

wreckage by U.S.N.S. *Mizar*. After two more months of investigation, the Court again held that it could not determine precisely how the submarine had been destroyed.

Frustrated by their lack of any clear answers, the Navy's high command turned to the *Trieste II*, a specially designed deep water submersible capable of plunging down to the gravesite. Between 2 June and 2 August 1969, this bathyscaphe made nine dives to the *Scorpion*, photographing and diagramming her broken corpse. Although these efforts provided a clearer view of where she was and in what condition, they again failed to tell what had happened to one of the service's most elite warships. After thirty years, the *Scorpion*'s fate still remains shrouded in mystery, a not so ironic end for a member of the silent service that spent her life on the shadowy front lines of the Cold War.

Launched on December 19, 1959, and commissioned on July 29, 1960, the *Scorpion* was built by General Dynamics' Electric Boat Division in Groton, Connecticut. One of six Skipjack class nuclear attack submarines, which combined a tear drop-shaped hull with a S5W reactor, the 252 foot *Scorpion* was capable of traveling over 20 knots while on the surface and over 30 knots while submerged. Her top underwater speed was more than 8 knots faster than that of U.S.S. *Nautilus*, the world's first nuclear submarine, launched in 1954, and twice that of the best World War II German U-boats. While the Nazis' Type XXI submarine, completed in 1944 could travel at a top speed of 16.7 knots for 72 minutes without resurfacing, the *Scorpion* could easily travel submerged at top speed for 70 days. These capabilities for high underwater speed and unlimited endurance gave the Navy new tactical abilities undreamed of in 1941–1945.

Although World War II had witnessed two great submarine campaigns, the first in the Atlantic where the Germans tried to sever England's supply lines and the second in the Pacific where the Americans assaulted the Japanese merchant fleet, the submarines of that period were strikingly similar to their World War I counterparts in submerged speed and endurance. Dependent upon diesel oil while traveling on the surface and batteries while underneath, these submarines were forced to spend the bulk of their time above water recharging, only submerging once they had spotted a target. Their reliance on two propulsion systems made them easy prey for air and surface attacks. Only near the war's end did Hitler's U-boats experiment with snorkels and more powerful batteries, and American submarines regularly employ sonar and radar. Even with these innovations, the United States Navy still lost nearly one-fifth of its submarine force while fighting in both theaters. The dropping of the atomic bomb changed all this and made possible not only one fuel system but also much greater underwater speed and endurance.

The Navy quickly seized upon these new capabilities and deployed its nuclear submarines in a variety of missions, particularly in gathering intelligence about the Soviet fleet. In 1959, President Dwight Eisenhower approved one of the most closely guarded intelligence operations ever mounted by the United States. Code named Operation HOLYSTONE, its original purpose was to use specially equipped submarines to penetrate Soviet waters to observe missile launches and capture readouts of their computer calculations. Later, they also were used to photograph and gather highly sensitive configuration and sound data on the Russian navy, particularly its submarines. This information was then used by intelligence analysts to track hostile warships by listening to their noise patterns and sound signatures.

While the *Scorpion* specialized in developing undersea nuclear warfare tactics, she also was used to collect intelligence. For instance, in the late winter and early spring of 1966, and again that fall, she was engaged in what the Navy has called "special operations." Her then-commanding officer received the Navy's commendation medal for outstanding service. Although much about her last mission remains a mystery—five out of the last nine messages sent to her between May 21 and May 27 from Norfolk are still classified top secret—it seems likely that the *Scorpion* was engaged in or had just completed a highly sensitive intelligence operation when she was lost.

According to the first Court of Inquiry's sanitized declassified report, the *Scorpion* had been diverted to shadow a Soviet flotilla engaged in a "hydroacoustic" operation. This means the Russians were also collecting and analyzing information derived from the acoustic waves radiated by unfriendly ships and submarines. The Navy would have been greatly interested in any activity of this sort, particularly given the Soviets' location off the Canary Islands and near the Straits of Gibraltar, the gateway to the Mediterranean.

The Soviets also may have been trying to gather intelligence on the Americans' highly secretive Sound Underwater Surveillance System (SOSUS), an elaborate global network of fixed sea bottom hydrophones that listened for submarines. First developed in 1950 and installed in 1954, SOSUS formed the backbone of the United States' anti-submarine detection capability. This system became even more crucial in the late 1960s as the Soviet Navy began shifting its focus away from protecting Russia's coastal waters to building a blue water fleet spearheaded by advanced hunter-killer and ballistic missile nuclear submarines. This forced the Pentagon to place a premium on intelligence about the Kremlin's undersea operations.

By 1968, the Americans had deployed a SOSUS network off the Canary Islands and were laying another off the Azores Islands. Both were aimed at tracking Soviet submarines nearing the Straits of Gibraltar and approaching the Cape of Good Hope. Any Soviet attempt to disrupt or penetrate SOSUS would have aroused a great deal of interest in Norfolk and may explain the Navy's decision to send the *Scorpion* toward the Canary Islands.

Whatever he last mission was, it appears likely that the *Scorpion* had completed her operational phase by 7:54 p.m. on May 21, when she broadcast her last position and estimated time of arrival in Norfolk. Operating under strict orders to maintain electronic silence "except when necessary", the *Scorpion* sent only this message after she left Rota. At the time of her last communication, she was approximately two hundred miles or six hours away from the Soviet formation she had been sent to monitor. Nearly twenty-four hours later, SOSUS and civilian underwater listening systems ranging from Argentina to Newfoundland picked up the shock of an underwater explosion along the *Scorpion*'s projected route followed by crushing sounds not unlike those recorded during the *Thresher*'s destruction in 1963. According to these readouts, the entire episode lasted slightly over three months.

Applying sophisticated mathematics to these recordings and tracing the *Scorpion*'s presumed track and speed to Norfolk, the Navy designated an area of "special interest" for its search some 400 miles southwest of the Azores Islands. On May 31, the U.S.S. *Compass Island*, a navigational research ship, was dispatched to conduct an under-

water survey and on October 28, 1968, the U.S.N.S. *Mizar*, another navigational ship with advanced photographic equipment, finally found the wreckage only three miles away from where SOSUS computers had estimated it to be. Broken into two pieces, the *Scorpion*'s remains lay in over 11,000 feet of water.

Deeply shaken and still reeling from the loss of the U.S.S. *Thresher* (SSN 593) five years earlier, the Navy began its post-mortem with only the SOSUS readouts, the *Scorpion*'s operational history and the testimony of her former crew members. The first Court of Inquiry deliberated from 4 June 1968 until 25 July 1968 and examined 76 witnesses as it considered a broad array of fatal possibilities. First among these was that the Soviets had intercepted the *Scorpion* and finished her in an undersea dogfight. The Court discarded this theory after it examined the reports the intelligence community provided and found no evidence that the Soviet formation which the *Scorpion* had been sent to shadow had launched an attack or fired any weapons when SOSUS recorded the explosion. The Court also noted that there were no other Russian or Warsaw Pact vessels within 1,000 miles of the *Scorpion*'s last reported position.●

AVIATION SAFETY PROTECTION ACT

• Mr. GRASSLEY. Mr. President, I am pleased to join Senator KERRY in introducing the "Aviation Safety Protection Act of 1999." This legislation will grant whistleblower protection to aviation workers, thus helping to increase the safety of the aviation industry and the traveling public.

I have long been a supporter of whistleblower protection for government workers. This act will extend that protection to aviation workers. Airline employees play a vital role in the protection of the traveling public. They are the first line of defense when it comes to recognizing hazards and other violations which can threaten airline safety. These dedicated employees should not have to choose between saving the public or saving their own jobs. The extension of whistleblower protection will eliminate that unfair choice and will allow them to do what is right. What is right is to be able to tell airline management of aviation safety problems without fear of retaliation or losing their job.

I have been working with Senator KERRY and flight attendants on this vital legislation for the past several years. It was included in the last Congress in the FAA reauthorization bill. Unfortunately that bill was not passed into law. We are looking forward to working closely with Senator MCCAIN and Congressman SHUSTER this year as the FAA reauthorization legislation moves through the Congress.

The traveling public expects and deserves the safest air travel system possible. Granting aviation employees whistleblower protection will fill a gap in the air travel system.

I join with Senator KERRY in urging my colleagues to cosponsor this legislation.●

MAX ROWE PAYS TRIBUTE TO OUR AMERICAN HERO, JOHN GLENN

•Mr. DURBIN. Mr. President, I rise today to share with my colleagues an article written by Max Rowe. On November 8, 1998, Mr. Rowe, a guest columnist for the Springfield Journal-Register, wrote an article paying tribute to John Glenn entitled, "Glenn is a hero for the ages."

Mr. President, I would like to speak for a brief moment about Mr. Rowe and some of his accomplishments. Max attended the University of Illinois where he received his B.A. and law degree (J.D.). Following his academic career at the University of Illinois, he furthered his education by pursuing a Master of Business Administration from the University of Chicago. After completing his education, Max went on to work for the Kirkland & Ellis law firm where he dedicated over 30 years of his life to his true passion, the practice of law. In 1995 Max was elected to the Illinois Senior Hall of Fame, and he volunteers part-time at the Memorial Medical Center in Springfield. On the side, he is a management consultant and writes for the Journal-Register.

I believe Max's life experiences inspired him to pay tribute to John Glenn, a man whom he respects so much, and a man who will keep withstanding the test of time, much like himself. John Glenn, one of his all-time heroes and someone I have had the honor to serve with in the Senate, is an inspiration to so many people in so many ways. To some he is a husband, a father, a grandfather, an astronaut, a United States Senator, or a Presidential candidate, but to all of us he is a true American hero.

Mr. President, I ask that the full text of Max Rowe's article, "Glenn is a hero for the ages," be printed in the RECORD.

The article follows:

[From the Springfield Journal-Register, Nov. 8, 1998]

GLENN IS A HERO FOR THE AGES

(By Max Rowe)

One of my all-time heroes is former and present astronaut John Glenn, who is now 77 years old and has just completed a mission with six other astronauts on the space shuttle discovery.

We senior citizens and those of you over 50 remember well when John Glenn blasted off Cape Canaveral into Earth orbit on Friendship 7 almost 37 years ago. In that five-hour mission he would orbit the Earth three times at an altitude of 100 miles, traveling at over 17,000 mph.

From start to finish the venerable and trusted Walter Cronkite covered the flight on our TVs, using words only, as there were no sophisticated cameras at Cape Canaveral or on board Glenn's space ship that could cover the actual flight. At lift-off Cronkite yelled, "Go, baby!"

On board Friendship 7, John Glenn had only one simple, hand-held camera to snap shots out of his window. In Glenn's interviews after his splashdown, he kept using the word "pleasant" to describe his experience with zero gravity on his flight and his views of Earth. He is quoted as saying, "This free-floating feeling, I don't know how to describe it except that it is very pleasant. It's an in-

teresting feeling. Sunset at this altitude is tremendous. I've never seen anything like this. It was a truly beautiful, beautiful sight."

Before Glenn's 1962 spaceflight, two Russians had orbited Earth, Glenn helped us catch up with (and eventually surpass) the Russians in spaceflight experience and technology.

On the afternoon of Oct. 29, 1998, I sat before my TV waiting through two short delays for the launch. At 1:20 p.m. "successful lift-off" put John Glenn and six other astronauts into an almost nine-day space flight on Discovery. What a contrast to his 1962 flight! Discovery has about a dozen high-tech cameras to keep NASA and us informed of every phase of the flight and thousands of controls and pieces of complicated, marvelous equipment to record everything from start to finish. At last we will learn, among other things, the effect of spaceflight on an older person and on the aging process.

John Glenn has been a role model for us all his life, serving with great distinction in World War II as a Marine combat flier on 59 missions. He has been decorated with 20 metals, including six Distinguished Flying Crosses and the Congressional Space Medal of Honor.

He married his childhood sweetheart in 1943 and has two children and two grandsons.

Glenn will retire in January 1999 after serving as a U.S. Senator from his home State of Ohio for 24 years. He has proven it is possible to be a happy and devoted family man in spite of living for so many years with fame and in the spotlight of Washington, DC.

I hope every American is as proud and thrilled as I was as John Glenn and his six companions headed off into space on their historic mission. John Glenn's return to space is important to all us senior citizens and to people over 50 years young, who will soon join our rapidly growing senior group. He is verifying that we are not "over the hill" and that with proper physical, emotional and mental activity, we still have many satisfying and useful years to live.

Before heading into space, Glenn spent over 500 hours in rigorous physical training to prepare himself for his very demanding space journey. Those of you who have been reading my earlier columns will remember that one of my recommendations for living to age 104 is regular, vigorous exercise. For most of us seniors, a 30-minute daily brisk walk will do wonders for our health and happiness.

The worldwide interest in this spaceflight will do much to heighten interest in space travel for the rest of us and help NASA's future programs and funding. Let's you and I make a date to fly to Mars in the year 2010!

God bless you and keep you safe, John Glenn. You truly have all "The Right Stuff!"•

RETIREMENT OF LSU SYSTEM
PRESIDENT ALLEN COPPING

•Mr. BREAUX. Mr. President, this month marks the end of a distinguished and remarkable career in public education for the president of my state's flagship university. At month's end, Dr. Allen A. Copping will be retiring, leaving the post of president of the Louisiana State University System that he has held since March of 1985.

Dr. Copping's retirement is significant for several reasons. Under his able and dedicated leadership, the LSU System has enjoyed enormous growth and development and is recognized around

the country as a leader in educational excellence in numerous fields of academic pursuit. Dr. Copping's fourteen-year tenure is significant for another reason: He will always be remembered as the first health scientist to hold the position as LSU president.

Allen Copping is a native of New Orleans, born in 1927 and educated in the city's public schools. After graduating from Loyola University with a Doctor's degree in Dental Surgery in 1949, Dr. Copping entered the U.S. Navy and served our country with distinction during the Korean Conflict. After the war, he returned to New Orleans, where he began a very successful dental practice and also landed on the faculty of the Loyola University School of Dentistry. In 1968, Dr. Copping joined the faculty of the newly created LSU School of Dentistry as an associate professor and, six years later, he was appointed the second dean of the LSU School of Dentistry.

As dean, Dr. Copping's leadership ability and his vision quickly caught the eye of the LSU Board of Supervisors, which chose him to head the LSU Medical Center as Chancellor in 1974, a position he held with distinction for the next eleven years. During his years at the helm of the Medical Center, Dr. Copping helped initiate a remarkable expansion in both the curricular offerings and in the physical facilities at the Center.

On March 18, 1985, Allen Copping became the third president of the LSU System and the fifteenth LSU president, a job that entailed the leadership and supervision of the eight campuses in the system and management of an annual budget of over two billion dollars.

During his tenure as LSU president, Dr. Copping guided the system through some very challenging years, highlighted by the development of the world-renowned Pennington Biomedical Research Center at Baton Rouge and the addition of the Health Care Services Division of the LSU Medical Center.

Throughout his years at the helm of the LSU System, Dr. Copping enjoyed a well-deserved reputation as a man of extraordinary loyalty, honesty, compassion and sincerity who is unalterably devoted to public education and the well being of his native state of Louisiana.

Mr. President, on behalf of the citizens of my state, I wish to congratulate Allen Copping on a well-deserved retirement and offer my profound gratitude for the leadership that he has provided the LSU System over the past fourteen years. He will be missed, but I know that I and other public officials will continue to benefit from his wisdom and his commitment to providing a quality education that meets the needs of our country's most precious commodity—our young people. I wish Allen and Betty and their family all the best in this next and very exciting phase of their lives.●