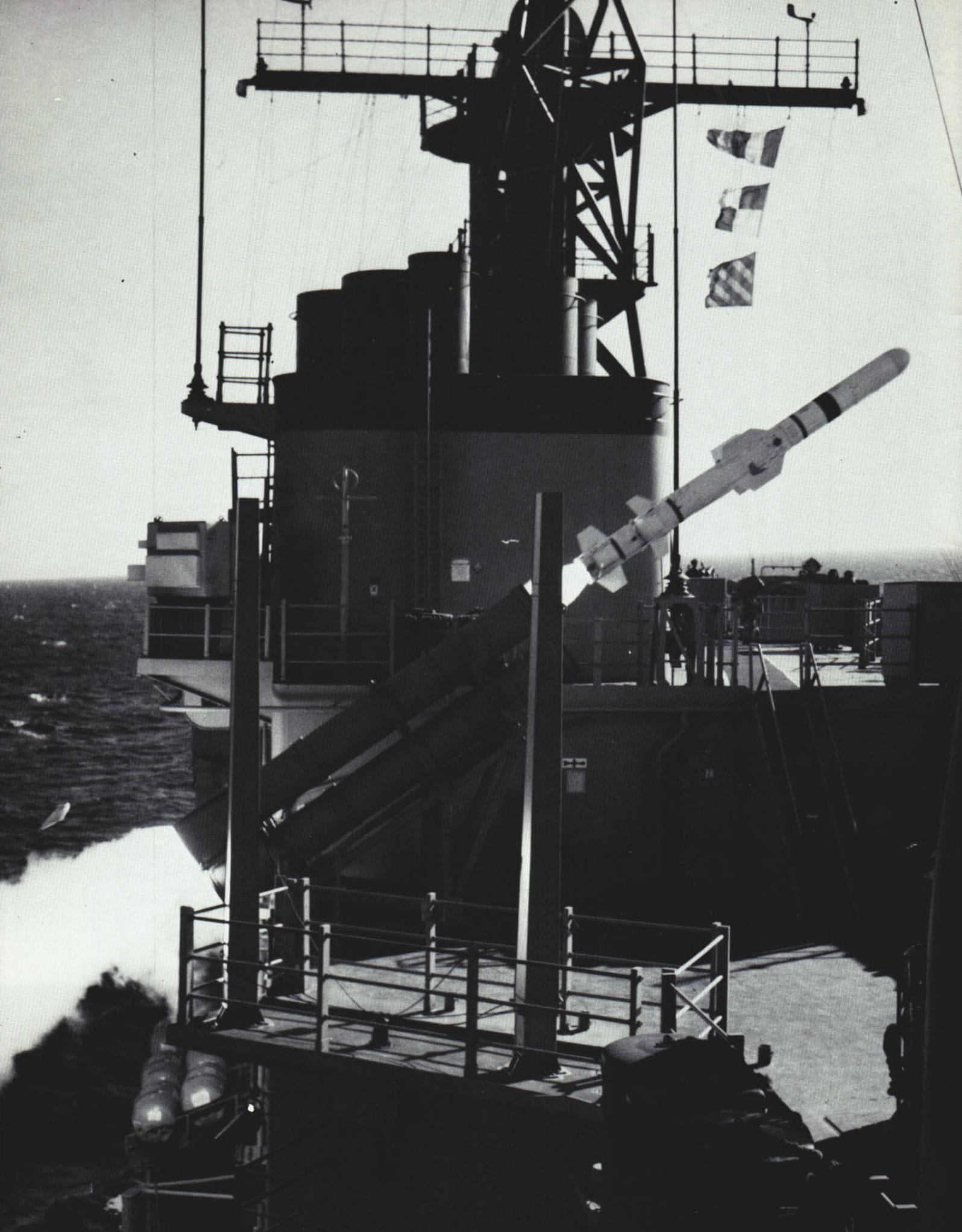


ALL HANDS

NOVEMBER 1982





ALL HANDS

MAGAZINE OF THE U.S. NAVY

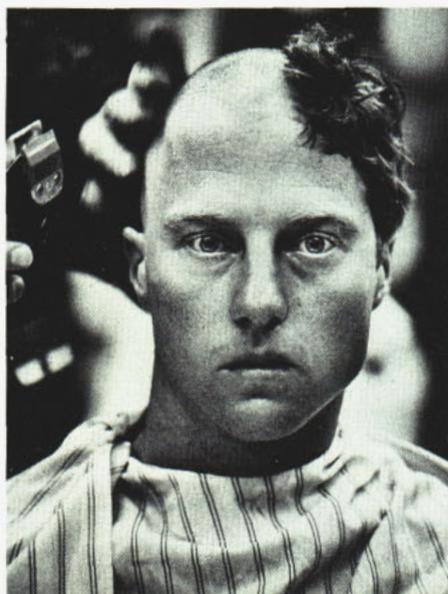
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Front: Artist William Gilkerson's depiction of the American frigate *Alliance*, commanded by John Paul Jones in November 1799 in breaking through a British blockading squadron. Trapped in Dutch waters, Jones daringly took the riskiest route through the Strait of Dover and broke free into the Atlantic. *Alliance*, one of the few U.S. Navy ships to survive the Revolution, was ultimately wrecked in 1800. The original painting is in the U.S. Naval Academy's collection.

Inside Front: The destroyer USS *Fletcher* (DD 992) fires a *Harpoon* anti-ship missile from a four-canister *Harpoon* installation amidships. The canister launch system can be installed aboard any surface ship. McDonnell Douglas Photo.

Back: Duty at NAS Brunswick, Maine, means the enjoyment of winter sports. Photo by JOC James R. Giusti.

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NavSpaSur

Keeping an Eye on Space-Age Traffic



Space travel in the last half of the 20th century almost borders on the routine. Just as the airplane made global travel a matter of fact, space-age technology will take man on a new epoch of space exploration.

Today's space pioneers face adversaries much as America's pioneers did when crossing the wilderness in covered wagons. Instead of hostiles and rugged terrain, today's pioneers—astronauts—face the proliferation of "space junk"—a modern-day threat to space navigation.

With the development of reusable space vehicles, navigating space through the rubble left by earlier space missions or active satellites requires an around-the-clock watch. From its first successful test flight to its most recent, the space shuttle orbiter *Columbia* and its crew have managed nearly flawless voyages in space. Its success was due, in part, to the efforts of a small Navy command in Northern Virginia.

The Naval Space Surveillance System, Dahlgren, Va., is a radar system that stretches across the southern United States. As a part of its mission, it works in conjunction with the North American Aerospace Defense (NORAD) Command's SPADOC (Space Defense Operations Center) Computation Center to support NASA in tracking the *Columbia's* flight path. The command calculates the orbits of the shuttle orbiter and man-made material floating in space to prevent collisions. It will calculate the orbiter's docking maneuvers with satellites and provides real-time analysis of the shuttle's orbit to verify orbital maneuvers.

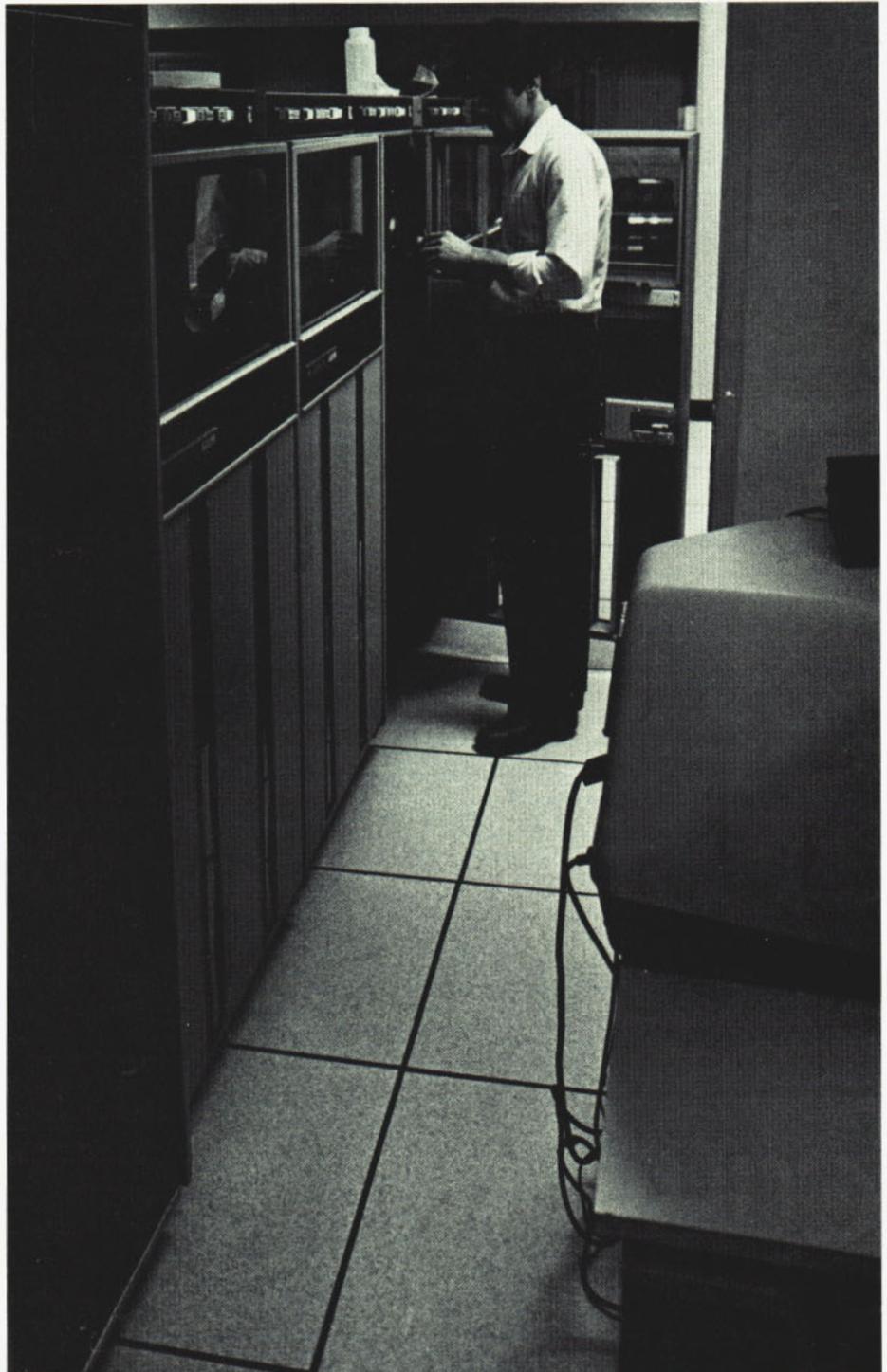
"There are approximately 5,000 cataloged objects in near-earth orbit," said Lieutenant Commander Luke H. Miller, the system's operations officer. "We record observation on most of these before and throughout a mission to make sure there's no danger of collision."

There are no nautical charts to "sail" a spaceship through objects hurtling through space at thousands of miles per hour. And the clutter is greatest along the most heavily traveled routes.

This man-made clutter includes spent fuel tanks, rocket motor shells, non-functioning satellites and shards

of material broken up in space. The most dangerous are fragments from accidental rocket explosions.

"The shuttle is susceptible to damage from an impact with any of the objects," said Richard H. Smith, NavSpaSur senior space scientist. "Fortunately, these are relatively easy to avoid because they're not randomly



Leon Cropper, a computer systems analyst at NavSpaSur headquarters.

distributed. They tend to be concentrated in several altitude bands, and if these bands are avoided, the risk of collision is greatly reduced.”

Providing tracking and navigational support requires the command's 12 officers and 96 civilians at the headquarters building to increase their normal operating tempo. The military command duty officer watches are doubled, and civilian employees—normally on day shifts—switch to a shift schedule to absorb the extra data processing demands.

“Our computer center is normally active 24 hours a day,” said Miller. “But during a shuttle mission, we take

CDO Lt. Ann K. Yoshibashi routinely communicates over computer lines with NORAD's computation center. Lower right: The dawn of a new age in space flight as space shuttle Columbia rises off pad 39A a few seconds past 7 a.m., April 12, 1981.



Earth to Space and Back

An American newspaper in 1947 carried a series of imaginative stories describing a trip to the moon and back in reusable airplane-like rocket ships. More than three decades later, the curtain rose on an era of plane-like spaceships that will shape U.S. space exploration for the remainder of this century.

The epoch of the reusable space vehicle opened at 1:21 p.m. EST, on April 14, 1981. The space shuttle orbiter *Columbia*, manned by John W. Young, commander, and Robert L. Crippen, pilot, made a perfect landing on the hard-packed bed of the Mojave Desert after a near flawless voyage in space.

Columbia is the world's first reusable spaceship and the kingpin of NASA's Space Transportation System—a fleet of four space shuttle orbiters. *Columbia*'s sister ships are *Challenger*, *Discovery* and *Atlantis*.

In addition, NASA's STS initially includes the Spacelab—a reusable,

manned, earth-orbiting laboratory carried into space in the orbiter's cargo bay, and three types of “space tugs” for boosting payloads to orbits beyond the shuttle's operational altitude. Futuristic plans for the system call for orbital electrical power stations, more advanced space tugs, robotic systems for in-space maintenance and construction, and a heavy-lift vehicle for greater payload.

The space shuttle itself is a complex configuration of three main elements—the orbiter, a 100-ton, thick-bodied, delta-winged aerospace craft built to last for at least 100 flights; a dirigible-like expendable external tank containing a half million gallons of propellants secured to the orbiter's belly; and a pair of reusable solid rocket boosters. Each booster is longer and fatter than a railroad tank car.

While the orbiter looks and acts like an airplane during the final minutes of flight, it's far more complex than to-

day's most sophisticated aircraft. Within its fuselage of heat-shielding tiles are housed 49 engines, 23 antennas, five computers and separate sets of flight controls for in-space and in-the-air flight. It normally will carry a crew of three astronauts and one to four scientists or technicians on a variety of missions lasting seven to 30 days.

The first true aerospace vehicle, the shuttle takes off like a rocket, operates in orbit as a spacecraft and lands like an airplane. It will be the key element in American space operations through the 1980s and into the '90s. Underlying this is the unprecedented operational flexibility of the space shuttle to deliver, retrieve and re-deliver unmanned satellites in any desired orbit as well as serving as a platform for scientific investigation in space. It can carry an assortment of instrument packages into space for scientific experiments.

Through substantial reduction in mission cost because of the reuse of the

extra care to make sure our satellite observation data base is up-to-date.”

Said Smith, “The excitement begins with the launch when many activities occur nearly simultaneously. The missions are carefully planned to leave very little to chance. Calculations are made for the intended orbit as well as for related maneuvers that may be made during the shuttle mission.

“Similar computations also are done at NORAD and at the NASA Johnson Space Center,” he added. “With this cross check of data, it is very unlikely that erroneous calculations would go undetected.”

“We enjoy being part of the space shuttle program,” said Captain John E. Zwick, commanding officer. “The people here are a dedicated work force. The unique aspects of our support to the shuttle breaks our daily routine.”

The work of the system’s military and civilians in the space program has brought them in the media limelight. Nevertheless, behind this fame, the command continues on with its primary mission—space surveillance.

Along with naval officers from various professional communities, civilian employees provide a corporate memory and the scientific know-how. They’re the space scientists, mathematicians, physicists, computer system analysts, operators and programmers, and electronic engineers who helped develop and advance the system to its current state-of-the-art.

NORAD keeps track of the more than 5,000 man-made objects in space, some as small as 4 inches in diameter. Of those objects, NavSpaSur tracks and catalogs some 3,200 satellites that pass through its tracking area.

“Not everything passes through our area,” said Miller. “Television, weather and navigational satellites with very high altitudes over the equator don’t pass over the United States. So we don’t see them. But if a satellite is up there and passes through our area of coverage, we’ll see it.”

“You have to realize that there is a large space satellite threat to our naval forces,” said Zwick. “The current threat is Soviet satellite reconnaissance against our naval forces.

“Our Navy realized in the very beginning of the space race that it needed to support the fleet with data on satellite surveillance. And you’ll see us move towards a larger space role as that threat grows and becomes more well known.”

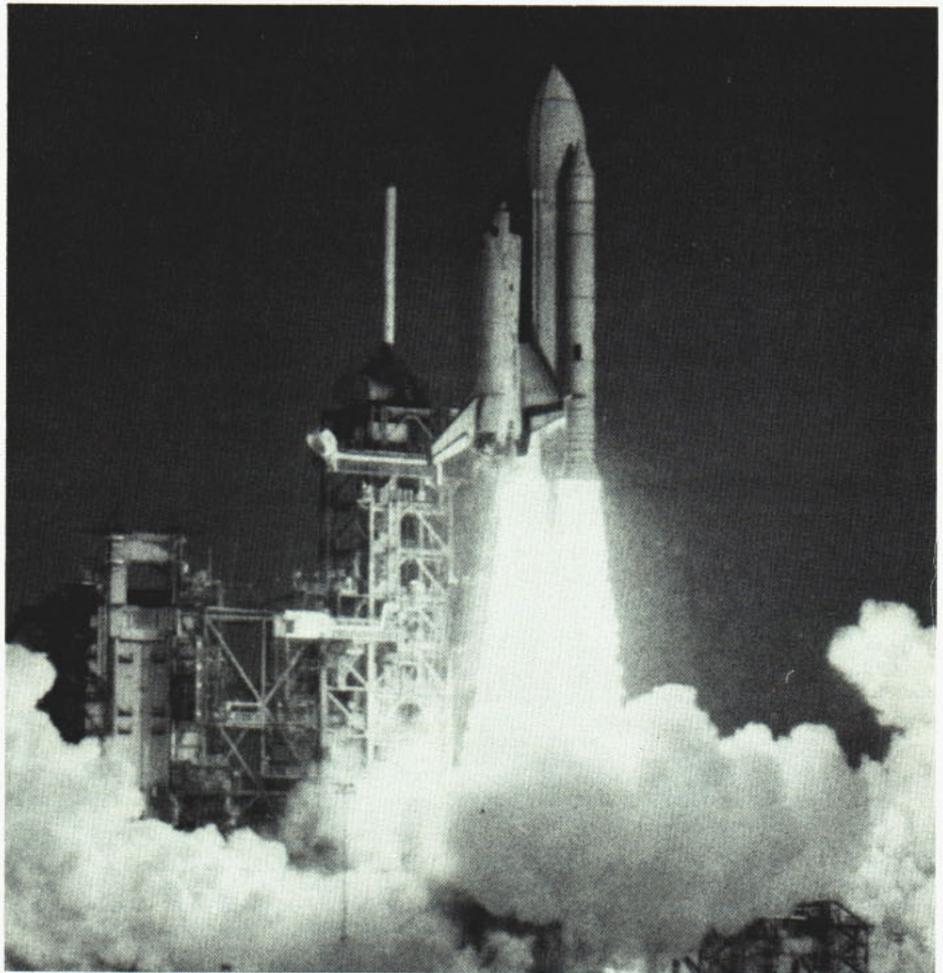
On Oct. 4, 1957, the Soviet Union succeeded in putting a satellite in

Again

shuttle’s two principal components—the booster systems and the manned orbiter—NASA estimates that the cost to place satellites in orbit will be one to two-thirds the cost of launches aboard *Delta*, *Atlas-Centaur* and *Titan* rockets.

When the space shuttle has completed its final test flights, space travel will no longer be restricted to a select population of trained astronauts. NASA plans for the currently programmed fleet of shuttles to operate on an airline-like schedule by the year 1988. The present goal is for 24 launches a year with manifested cargoes. *Columbia*’s first satellite boosting operational flight is set for late fall with two communication satellites as its first commercial cargo.

The concept of a reusable spaceship written about in 1947 has become a real product of American space technology and marks America’s return to the space race after a six-year absence.



space. The historic launch of *Sputnik I* became a symbol of Soviet space superiority and the space race was on. But that effort was short-lived; the U.S. Navy launched America's first satellite, *Vanguard I*, in 1958.

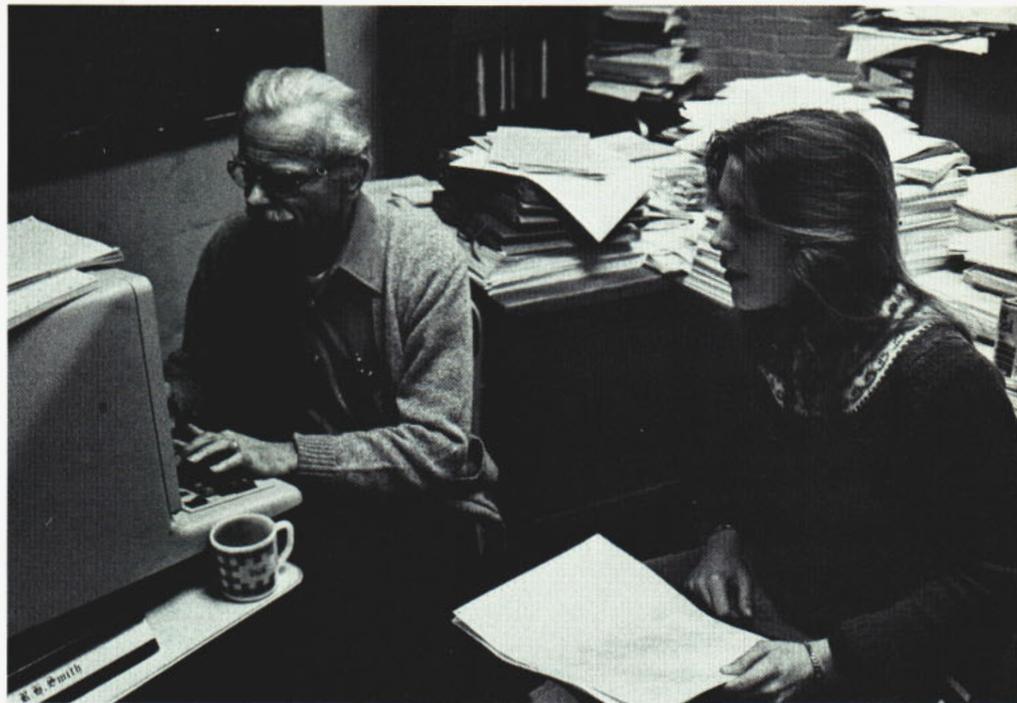
And in 1960, the Navy developed its first space-oriented command—NavSpaSur. Its mission was simple—“maintain a constant surveillance of space and provide satellite data as directed....”

Smith has been on the space surveillance team from its inception. He is one of two persons originally selected to work on the project that eventually evolved into NavSpaSur.

“Although it was a job that had to be done,” he said, “it was personally satisfying to me that we are able to produce space vulnerability products the fleet needs to overcome the threat that surveillance satellites pose.”

Since the early development of its first surveillance components, the system has grown and modified its capability for detecting satellites and plotting their orbits.

“The NavSpaSur sensor system is actually a large continuous wave radar that stretches across the southern Unit-



ed States,” said Miller. “The energy band is quite extensive—reaching more than 15,000 miles high and extending more than 5,000 miles.

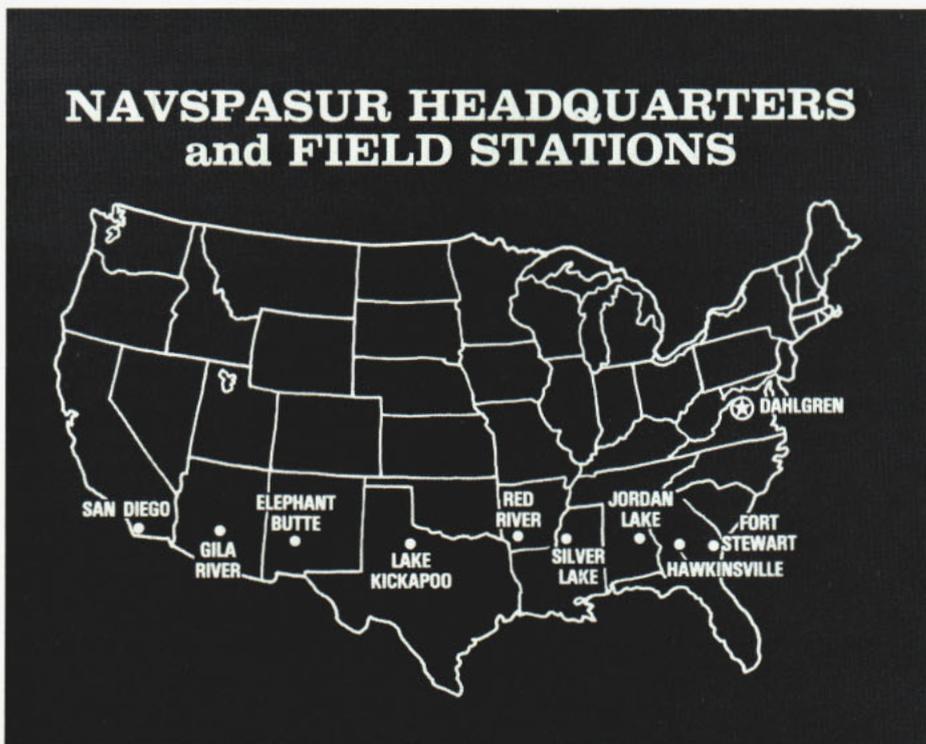
“We are dedicated to detection. When an object passes through the radar fence, we know it. This command is the only U.S. sensor capable of de-

tecting a new object routinely and consistently without any sort of prior tip-off.

“When China launched its first satellite in 1970, we were the first to detect it,” added Miller. “Early detections happen regularly with the Soviets who launch nearly 100 satellites a year.”

Located in an unpretentious red brick building which also houses the enlisted dining hall at Dahlgren's Naval Surface Weapons Center, the headquarters houses the NavSpaSur command center and a computational digital computer complex. The radar system itself consists of nine field stations—a mixture of three transmitters and six receivers stretched from Fort Stewart, Ga., to San Diego, Calif.

The main transmitter, located at Lake Kickapoo, Texas, and two gapfiller transmitters, at Gila River, Ariz., and Jordan Lake, Ala., emit a continuous fan of energy.



Above: Science adviser Richard H. Smith and mathematician Deborah Newcomb at work on a satellite's signature computation. Right: Work in the computer room goes on around-the-clock.

When a satellite passes through this zone, energy is reflected back to one or more of the receiver sites located at Fort Stewart; Hawkinsville, Ga.; Silver Lake, Miss.; Red River, Ark.; Elephant Butte, N.M.; and San Diego, Calif.

"The raw signal contains information on the satellite's position and approximate velocity," said Miller. "This data is communicated to the headquarters where the actual computer calculations are accomplished. Basically all the data comes from our system, but as part of NORAD, we also get data from other tracking sensors worldwide."

The processed data supplies the command with information on the satellite's identity, where it has been and where it's going to be in the future. In the form of a mathematical description of the object's motion in space, the data is then used to predict what the sen-

sors are going to see tomorrow.

"In predicting what we will see, we perform our identification function. And anything we didn't expect to see is presumably an unknown," said Miller. "When we find an unknown, the analysis procedures are initiated."

While the process would seem to take forever, it actually takes an average of two seconds from initial detection to identification. This even seems more remarkable when one realizes that NavSpaSur averages more than 31,000 observations daily.

"In keeping with our mission, we provide the fleet with information that lets them know when they're vulnerable to satellite detection," said Zwick. "Based on the information we supply, a ship or task force commander can take the necessary countermeasures."

The command's computer complex further supports NORAD's efforts as the network's backup computation

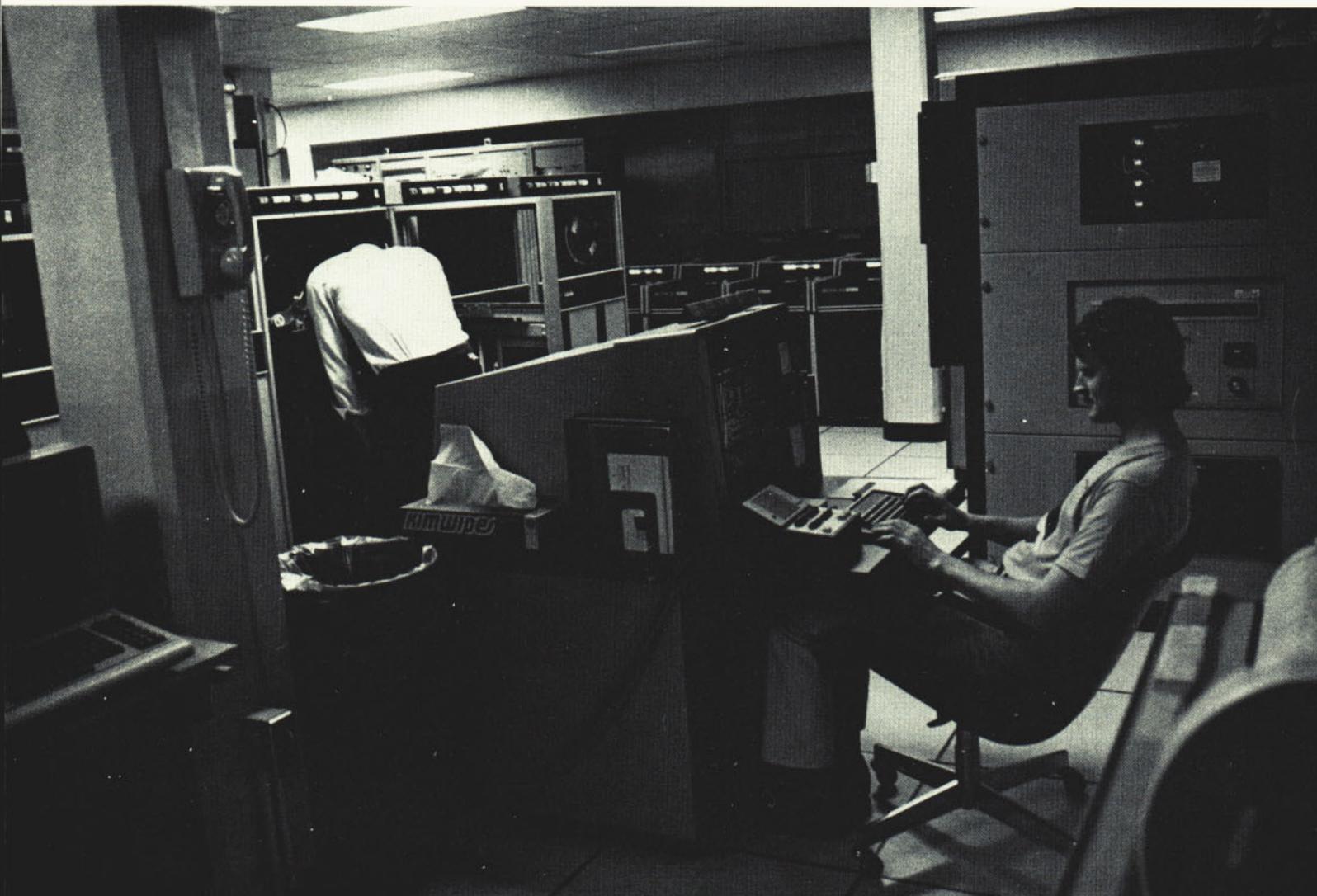
center and maintainer of the space catalog of satellite data.

In addition to being a vital link in the nation's security chain, the command also provides space data to more than 600 individual naval units, staffs, shore activities, universities, geodesy programs and defense contractor companies involved in space exploitation.

Nevertheless, it's space shuttle support that has made this small command's professional effort publicly known. And, as the space shuttle mission expands, so will the U.S. Navy's role in servicing space and the ocean fleets with up-to-date satellite data.

What is now an unusual venture for these Navy professionals will soon become routine, and we can envision that shuttle flights to orbiting space stations will become as commonplace as the commuter train run between Washington, D.C., and New York City.

—Story by JOC James R. Giusti



Diving Their Way to Salvation



When they recovered the wreckage and bodies from a commercial jet crash in the Potomac River last January, the members of Mobile Diving and Salvage Unit Two (MDSU-2) received something they're not used to—a great deal of notice from both the public and the news media. Although the aviation disaster commanded front-page headlines of *The Washington Post* and many other newspapers across the United States, the Air Florida 737 catastrophe was a routine mission for the 120 U.S. Navy divers and support people who make up MDSU-2. They salvage aircraft about as often as the average person goes to the bank.

Based at the naval amphibious base in Little Creek, Va., the unit—affectionately known by its members as “Mud Sue Two”—has pulled F-4 *Phantom* jet fighters from the waters off Charleston, S.C.; dragged F-14 *Tomcats* out of the Chesapeake Bay; and pried UH-1 *Huey* helicopters from the muddy ocean bottom. MDSU-2 is believed to be the only diving and salvage unit in the U.S. Atlantic Fleet with “fly-away” capability: Its diving equipment is portable and can be quickly transported by aircraft. The unit's Pacific Fleet counterpart, MDSU-1, is based at Pearl Harbor, Hawaii.

In addition to the many aircraft it has

recovered, MDSU-2 in recent years has salvaged several ships: the ex-USS *Ozark* (MCS 2) after it was driven aground in shallow waters off west Florida by Hurricane Frederick in 1979; the U.S. Coast Guard cutter *Cuyahoga* (WIX 157) that sank in the Chesapeake Bay four years ago; and the Coast Guard cutter *Blackthorn* (WLB 391) that collided with another vessel and went down in Tampa Bay, Fla., in 1980.

Some salvage work—like the Air Florida jet—has been unpleasant for the Navy divers because of the human casualties involved. When the *Blackthorn* was brought back to the surface, 14 bodies had

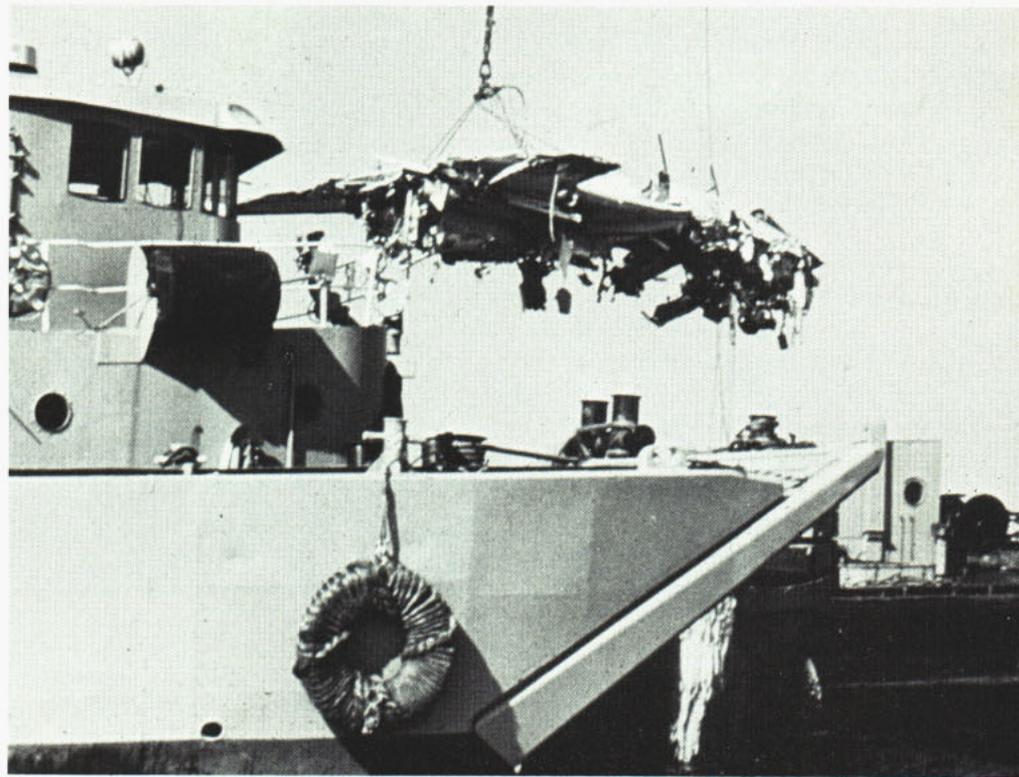
to be removed. Although the removal of bodies from wreckage can be emotionally unsettling, the men of the unit have learned to accept it as the most unpleasant experience in an otherwise challenging and enjoyable profession.

Being the commanding officer of a diving and salvage unit is quite another challenge in itself—one that Commander Stephen W. Delaplane seems to thrive on. "As the only unit of our kind on the East Coast," he said, "it often seems as though we're meeting ourselves coming back."

"But my approach to our work, and that of former commanding officers of this group, has been one of active marketing. We go out and look for work in addition to the routine jobs that normally come our way. We get impatient if we sit around here too long."

The unit has done a lot of work for the civilian sector. Under Public Law 513, the Secretary of the Navy can provide salvage services to state and federal agencies, as long as the Navy divers are not competing with private companies engaged in the same type of work. Commercial salvage jobs are one thing, but emergency situations or accidents that involve military equipment are quite another.

Because of its "fly-away" capability,



MDSU-2 can respond rapidly to salvage missions around the world. The unit has a variety of air compressors and diving equipment that can be put on pallets and transported by plane, boat or truck—whatever it takes to reach a particular site. Or

else, a team can fly overseas and contract for a vessel to use as an operating platform.

Once the unit and its equipment reach a salvage site, Delaplane may take charge as the on-scene commander in control of the entire operation (as he was for the Air Florida crash in Washington, D.C.) or become the salvage master, responsible for the technical development of a salvage plan and its execution. Additionally, a diving officer is assigned to each operation and is responsible for planning all the dives. Each platform or barge that divers operate from has a diving supervisor; he is responsible for the actual dives carried out from his platform.

The unit can field four separate diving teams, and each is fairly autonomous with its own complement of equipment and support people.

So it follows that four different salvage jobs can be undertaken simultaneously by the unit at four widely separated locations.



Opposite page: Student diver IC2 Victor Botting is helped into a Mark V diving outfit. (Photo by Carolyn Harris) Above: An F-14 Tomcat is salvaged from the Chesapeake Bay. Left: Part of an F-4 Phantom jet is hoisted from the Atlantic Ocean off Charleston, S.C., during salvage operations.

MDSU-2

But a diving team's staying power is distinctly limited since they take only an "initial response capability" with them—equipment that can fit onto a transport plane.

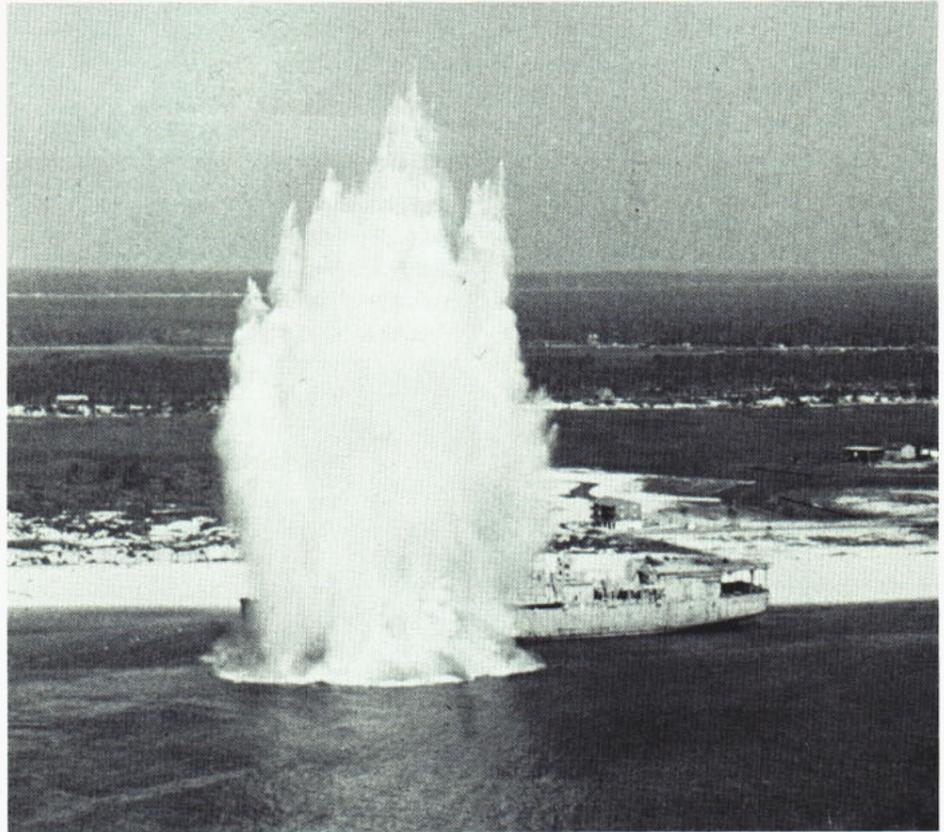
Specifically, this equipment consists of a fly-away diving system (FADS) made up of two air compressors and a console for controlling airflow. One person mans the console during diving operations and controls valves that supply primary air and standby air. If a diver should lose his primary air supply, the standby air would be used to bring him back to the surface.

A typical diving station consists of one diving supervisor and two divers. Each diver has two tenders who take care of the umbilical hose during surface-applied diving. A log keeper records information received from the diver while he's on the bottom, and a phone talker communicates with the diver through audio equipment inside his diving suit (for deep-sea diving, either the MK-5 metal "hard hat" diving suit or the new MK-12 Fiberglas model). One additional person is on board the diving platform to check equipment, and, of course, there is a man at the console.

The FADS that diving teams take along are mobile, but they are by no means small; each measures about 8 feet square and weighs about a ton. Commercial divers' portable units provide a more realistic and safe diving capability that would certainly suit MDSU-2's mode of operation. Such units are just now becoming available to the Navy.

The particular units that MDSU-2 salvage divers are equipped with take them to a maximum operating depth of 190 feet. After that, they have to employ mixed-gas diving (breathing a combination of helium and oxygen), which will take them down to about 300 feet—360 in an emergency. But the FADS aren't equipped for mixed-gas diving.

Helium has to be used with oxygen in depths greater than 190 feet because at that pressure (about five atmospheres) nitrogen starts to have a narcotic effect on a human's system. So helium, which has no narcotic effect, is substituted. Since it can't sustain life, all the helium really does is take up space in the lungs in order to avoid the use of pure oxygen—that has its own toxic effects. If a diver went below 25 feet



using pure oxygen, he could go into convulsions and possibly drown.

Primarily, MDSU-2 is an air-breathing organization during its underwater work. It has divers who are trained in the use of mixed gas, but the available equipment currently limits them to air-breathing operations.

At any salvage site, the diving team's main objective is to "satisfy the cus-

tomers," as Delaplane put it. "Initially, what I try to do is find out exactly what the customer wants—if it isn't obvious. With the 737 jet in the Potomac, our objectives were fairly obvious. One customer, the District Police Department, wanted us to recover all the bodies; another customer, the National Transportation Safety Board, wanted us to recover the wreckage so they could determine the cause of the crash."

If a customer doesn't have the equipment required to do the job (in Delaplane's estimation), then the closest assets are contracted for through the officer of the supervisor of salvage: derricks, barges or whatever happens to be needed to achieve the objective.

The most technically challenging job that Delaplane recalls his unit having to face involved a target ship—the *Ozark*—which the U.S. Air Force was using off the Gulf Coast. Hurricane Frederick had broken the ship's mooring chain, carried it about 50 miles and planted the hull in 8 feet of mud and 10 feet of water about eight miles east of Pensacola, Fla.

The Air Force had no useful equipment to save the ship: one 6,000-ton vessel 455 feet long and 60 feet wide, with an 18-foot draft, stuck fast in the Gulf Coast shallows. MDSU-2 was called in to extricate it.

First, a dredge was contracted for, to dig a huge hole alongside *Ozark*. Demolitions were also used to remove some of the sand

around the hull. Finally, three vessels, in harness, pulled the stubborn ship back into deep water.

With that, "Mud Sue Two" pulled off what was probably the biggest Atlantic Fleet extraction job since World War II. It proved to be a technical nightmare, but in terms of pressure from media coverage, it was a snap. "We were just sitting out on the beach all by ourselves," Delaplane said.

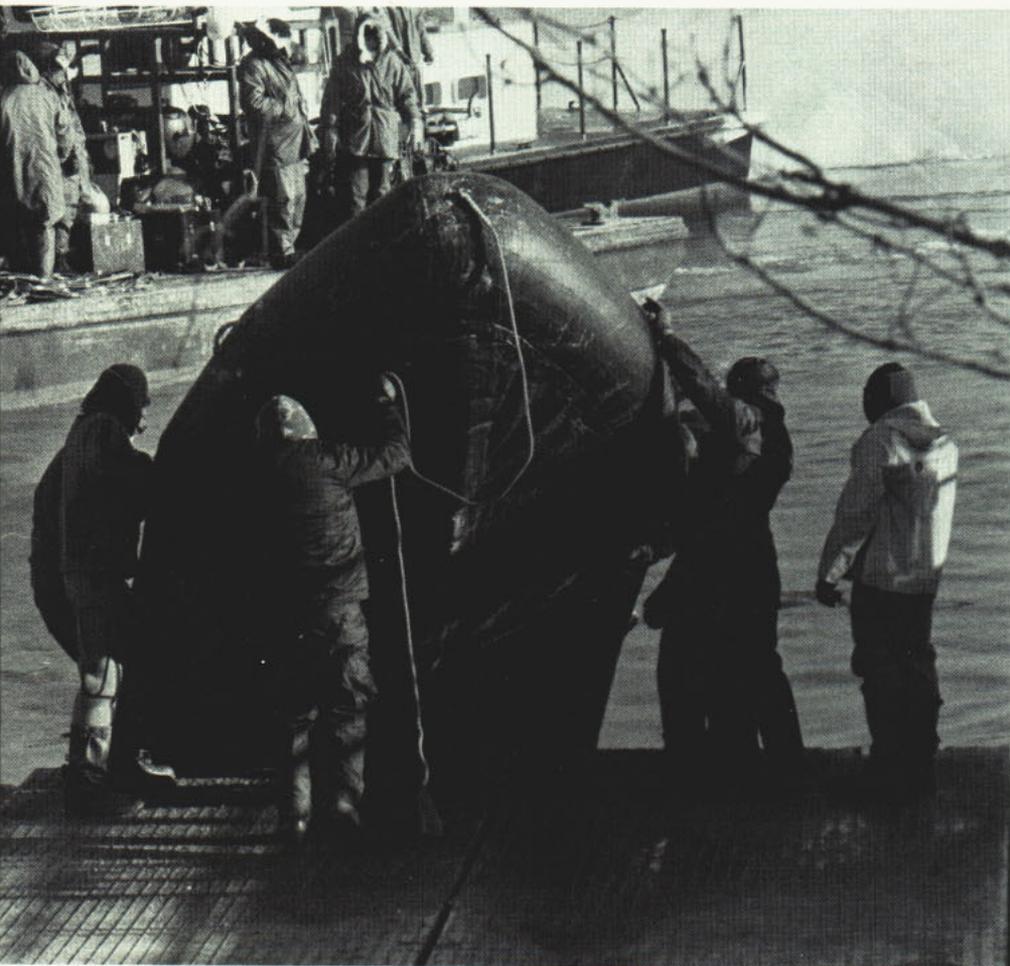
Not so with the Air Florida crash. Delaplane found himself briefing dozens of people several times a day during the salvage effort. And he spent a lot of time running interference for his men—keeping the media and onlookers off their backs. The divers had enough to worry about without being subjected to many questions.

Delaplane explained that "the diving in the Potomac wasn't unusual, but the situation was. Certainly the location was unusual, the intensity, the visibility of the job, the fact that we were a coffee break

away from the Pentagon and a mile away from the White House. Those were the unusual aspects of the job."

Diving conditions, even with the January ice on the river and extremely cold temperatures, were no surprise. One of the unit's diving teams had just returned from an operation in North Carolina, and although there was no ice, equipment had frozen because of the wind chill factor.

Regardless of environment, a certain amount of anxiety is always associated with a dive. The training of Navy divers is geared toward the safety and productivity of the diver who's on the river or ocean bottom. It is a situation with many risks, but when one is properly trained and has confidence in the people he's working with, those risks tend to be minimized.



After a diver hits the water, he stays on the ladder attached to the diving barge long enough to orient himself; then he descends, accompanied by the sound of his own heartbeat. Typically, he sees nothing along the way.

Opposite, top: Ozark, one of MDSU-2's most technically ambitious salvage jobs, lies aground off the Florida coast. Opposite, bottom: Charges rigged by MDSU-2 divers are set off to help free Ozark. Left: MDSU-2 divers launch an inflatable raft on the icy Potomac River at a crash site. (Photo by JOC Phillip A. Mason) Above: An MDSU-2 diver in Mark V diving gear. The helmet alone weighs 54 pounds. (Photo by Carolyn Harris)

When he hits bottom, the footing may be fairly solid (as it was in the Potomac), or it may be covered with thick layers of silt. When that is the case, a diver may hit bottom and keep right on going until he's up to his waist or higher in mud. To "wash himself out," he uses a high-pressure water hose sent down from the barge. At times, it's easier to crawl on one's stomach over the mud instead of slogging through it in a standing position. Either way, the diver can't see where he's going.

His only point of reference is the umbilical hose that links him to the diving platform. The diver keeps his hand on it as he slowly backs away from the spot where he touched bottom. The phone talker on the surface gives directions: "OK, stop. Now move to your left—that's fine. Feel anything?" The diver "feels" with the umbilical hose as well. If it snags on something, the diver will follow the hose until he finds out what the object is. Meanwhile, he's tripping and falling across other objects in his path; he can feel by their hardness whether they are made of wood, stone, metal or something else.

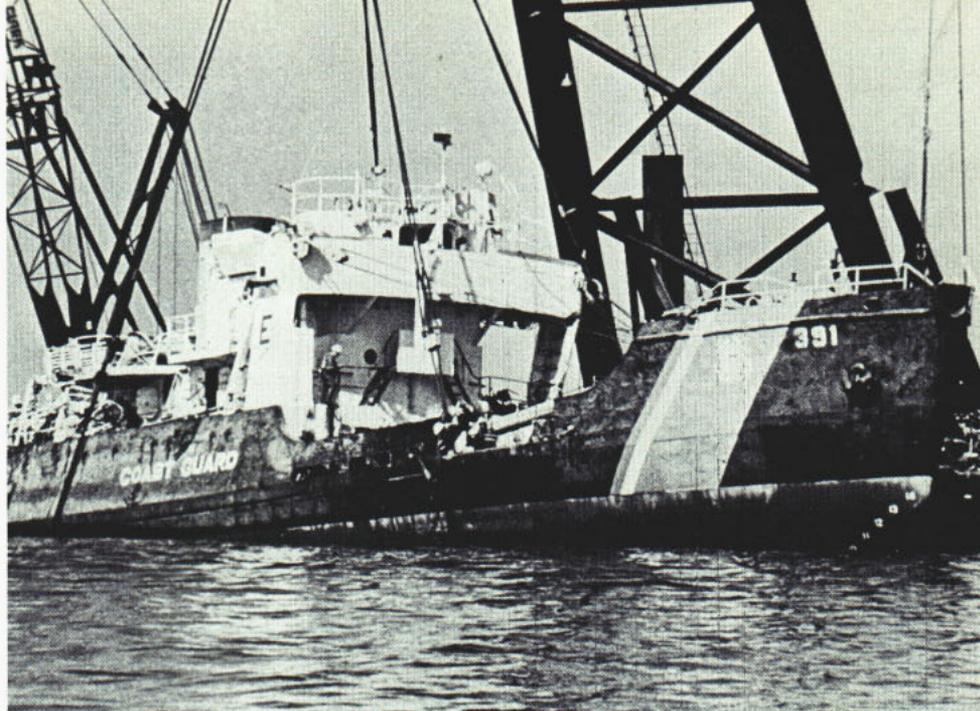
What can be really unnerving is when a diver falls into a hole. He doesn't know how big it is, and he doesn't know what's inside it because he can't see more than a foot or two beyond his faceplate under the best conditions.

That's how Delaplane found the cockpit of the 737 on the bottom of the Potomac. "I walked over the edge of a 6- or 8-foot depression and bounced in. Then I came up against some metal and realized it was the cockpit. We'd figured it was somewhere in that area. We have a lot of drawings at each diving station to brief the diver, so he has the knowledge of prior dives working for him—he can get a picture of what's down there.

"I just happened to bounce onto the top of the cockpit. Basically, the line cutting the plane was just below the windows. I moved down the port side of the aircraft and described what I found to the phone talker topside: 'I see the pilot and there are a bunch of flight logs and papers pressed up against the windows.'

"Then I went around to the other side and picked up the co-pilot; he'd been thrown out of the aircraft."

At the initial briefing for the Air Florida



salvage operation, Delaplane told his team: "Look, we're going to be dealing with a lot of bodies here. I know that we're all hairy-chested divers, but underneath that wet suit is a human being that feels, and hurts, and cries. So what we have to do is be very open about it, and we've got to be very good shipmates. If you sense that someone's having trouble, then talk to him about it. If you've got to cry, then cry for God's sake. Get it out, and then continue on."

As they went on with the recovery of victims and wreckage, there were times when all of them cried together.

Salvaging the Coast Guard cutter *Blackthorn* was an even more difficult experience emotionally, because the 14 victims were fellow sailors. Delaplane and the other Navy divers on that operation were acutely aware of the fact that it could just as well have been them in the same situation.

Salvage work isn't for everyone, especially when it includes the recovery of bodies. So a lot of individual appraisal goes along with selecting prospects for diving school and—later—selecting individual members of a diving team. Every job has a different set of challenges, and every diver should be broken in gradually. Delaplane said it doesn't make sense to send a fellow straight out of diving school into a wrecked aircraft to remove the pilot. He should first be given a job that will give him the experience to deal with tougher challenges later.

"I'm monitoring things on a job all the

Blackthorn is raised from the waters of Tampa Bay during a 21-day salvage operation.

time," the commander said. "How people are responding to a job, to each other and to the stress. A 12-hour day is an easy one for us, but there are physical limitations. You just can't take people too far, even if they want to put out the extra effort, because they get tired and start to make the wrong decisions. That almost always means trouble."

The salvage Navy has a tradition of naming diving barges after shipmates who have been killed on the job. Usually, the first words out of Delaplane's mouth at a briefing are to the effect that he doesn't want any barges to be named after members of his crew. Although Navy divers have earned themselves an apparently carefree reputation, the reality of MDSU-2 and other Navy diving units is that emphasis is always placed on safety and professionalism.

"I've heard it said that divers have a secret death wish," Delaplane said. "But from where I stand, life is very enjoyable and every day is precious. I'm 35 years old and there are some things I've done that I wouldn't do again. My life has been very exciting, and the way I operate, I'm sure I'll find a lot of interesting things to do in the future."

From the way that salvage diving operates, it's certain that Delaplane and MDSU-2 will find the future quite interesting—they can scarcely avoid it.

—Story by JOI Philip M. Callaghan

Currents

Navy ships on special escort duty

Ten ships of the U.S. Sixth Fleet, responding to a special request arising from negotiations conducted by U.S. Special Envoy, Ambassador Philip C. Habib, to help end the crisis in west Beirut, Lebanon, provided escort services for merchant vessels chartered to remove PLO combatants from that city.

Taking part in the evacuation were guided mis-

sile cruisers USS *Biddle* (CG 34) and USS *Wainwright* (CG 28); guided missile destroyers USS *MacDonough* (DDG 39), USS *King* (DDG 41) and USS *William V. Pratt* (DDG 44); destroyer USS *Manley* (DD 940); and frigates USS *Aylwin* (FF 1081), USS *McCloy* (FF 1038), USS *Truett* (FF 1095) and USS *Vreeland* (FF 1068).

Foreign cars must meet U.S. standards

Service members stationed overseas who ship foreign cars to the United States sometimes find that such automobiles do not meet U.S. standards because of improper conversion. The result is often a fine and additional money to pay a mechanic to do the job correctly.

The Environmental Protection Agency will issue waivers of certain environmental standards. However, EPA warns that safety standards will not be waived. *Vehicles that cannot be made to conform to U.S. standards will not be allowed to remain in the United States.*

Because of the expense and inconvenience of

importing foreign cars, EPA officials advise buying only vehicles which are certified and labeled for sale in the United States.

Questions about emission standards can be addressed to the U.S. Environmental Protection Agency, Manufacturers Operations Division, EN340, Investigation and Imports Section, Washington, D.C. 20406.

Safety requirement questions should be addressed to Director, Office of Vehicle Safety Compliance, National Highway Traffic Safety Administration, U.S. Department of Transportation, Washington, D.C. 20590.

A SPARTEN regimen for Navy recruits

SPARTEN—Scientific Program of Aerobic and Resistance Training Exercises in the Navy—is a new system of exercises being introduced at Recruit Training Command San Diego. The pilot program, to be followed by one company, is designed to improve health and physical fitness.

SPARTEN will be more demanding than the fitness programs now in use at training centers and will emphasize aerobics, exercises that concentrate on the respiratory and cardiovascular systems.

Recruits trained in the SPARTEN system will

be given before and after fitness tests of muscular strength, endurance and stamina. During recruit training, they will exercise for two 40-minute periods for six days a week. The morning period will emphasize flexibility and calisthenics. Evening sessions will include a 3 1/2-mile run, done at an 8-minute-mile pace. Weight training machines will figure prominently in the new program.

SPARTEN test results will be followed closely with an eye to introducing portions of the program to the fleet.

Currents

Time limit on household goods separation shipment

The Uniform Pay and Benefits Act of 1981 required, effective Nov. 1, 1981, that Navy people ship their goods or make application for shipment within six months after separation. After applying, if personal hardship prevents shipment

within six months, they must re-apply to a personal property shipping office for an extension. Retiring members will have up to one year for shipment.

NIS investigation leads to drug conviction

On July 28, 1982, a general court-martial found a junior officer guilty of all charges and specifications involving the sale, use, possession and transfer of marijuana. He was sentenced to five years' confinement at hard labor, forfeiture of all pay and allowances, and dismissal from the service. For an officer, dismissal from the service is equivalent to a dishonorable discharge. The

court-martial grew out of a Naval Investigative Service investigation into drug trafficking earlier this year which resulted in the apprehension of a group of individuals in March. The individual initially began his sentence at a Navy brig but will be transferred to the federal facility at Leavenworth, Kan., for the balance of the sentence.

Looking toward a brighter future

If you're a highly motivated career Navy enlisted person who would like to receive an advanced degree, the Navy will help you with its Enlisted Education Advancement Program. Administered by the Chief of Naval Education and Training, EEAP provides a program of study leading to an associate degree. Under EEAP, selected people can improve their qualifications in a technical skill and also improve their supervisory and management skills. Although selectees pay for all tuition, books and fees required to complete an associate degree, they continue to receive full pay and allowances (less proficiency pay) during enrollment.

Ninety enlisted persons were selected in 1980

for the program. Courses of study ranged from culinary arts to electronics. In 1981, another 100 persons were selected and 125 this year; next year 150 will be selected.

Official information—including eligibility requirements—for the 1983 EEAP selection process can be found in OPNAV Notice 1510. It contains a sample application letter, address and deadline for submission of application.

For more information on the Enlisted Education Advancement Program, contact your local Navy Campus office. Point of contact at CNET is Lois Martin, Autovon 922-1758, commercial (904) 452-1758.

New JUMPS policy means better service

On Sept. 1, 1982, local disbursing officers were authorized to compute, locally, certain categories of pay. Other pay categories will not be paid until reflected on a leave and earnings statement, but they will be paid within three months. This new override procedure will enable disbursing

personnel to process all actions in a more timely manner, have sufficient time to resolve problem cases, and provide better service to all members. In addition, it will significantly reduce the number of incorrect payments which often mean hardships to members concerned.

Humanitarian service medal for ACs

Military air traffic controllers who were assigned to Federal Aviation Administration facilities as a result of last year's strike by civilian air traffic controllers may be eligible to receive the Humanitarian Service Medal. Award of the medal is not automatic and the service of people detailed to this duty must be certified as honorable

by their commanding officers. The period of duty covered is Aug. 3, 1981, to a yet-to-be-decided termination date.

OPNAV Notice 1650 series will contain details. For more information, contact Commander R.H. Bruce in Washington, D.C., at Autovon 224-2390, commercial (202) 694-2390.

Twilight tour eligibility requirements changed

Eligibility requirements for twilight tours, which enable Navy people completing 30 years' service to request a specific area for their last tour, have been modified.

Twilight tours are available to all Regular Navy enlisted people eligible for voluntary, non-disability retirement. Eligible members may request shore duty in a continental U.S. location for the last two years of active service prior to retirement. They may then be reassigned to an activity within the geographic area of their choice, assuming that a billet exists in their rate. Detailers are allowed a difference of two paygrades between the applicant's paygrade and the billet requirement in making such an assignment.

Assignment to any overseas area may also be

requested. However, for this type of assignment, members will be required to serve the entire "accompanied" or "all others" tour length and must be able to complete the full tour by the end of 30 years' active service. Retention beyond that point will be considered on a case-by-case basis.

Twilight tour requests should be submitted at least 28 months, but no more than 32 months, in advance of the requested effective date of retirement for assignment within CONUS. Overseas assignment requests should be submitted at least 40 months but no more than 44 months ahead.

Detailed information on twilight tours can be found in Chapter 13 of the "Transfer Manual" and from local personnel/pass offices.

An Adventurous Spirit Needed

If you love the outdoors and don't mind cold, snowy winters, then there is not another military base so ideally and scenically located.

This sums up many a sailor's feeling about the Naval Air Station Brunswick, Maine.

Even so, this inspirational mecca for American artists and writers isn't for everyone. A distinct type of sailor desires duty in a locale where early explorers searching for the Northwest Passage found one of the world's richest fishing grounds. Maine also boasts a wilderness in which the French built a profitable fur trade and from which the English took tall pines for ships' masts.

"Maine is a special state with a very special set of opportunities," said Don Panati, Brunswick's recreational services director. "The scenic beauty and natural phenomena here are unsurpassed. Maine offers some of the largest parcels of natural wilderness on the entire East Coast, making hunting, fishing, camping, canoeing and hiking tremendous.

"But there isn't a large amount of organized activities in the area. It takes a person who ventures out on his or her own to seek things out. It takes a bit of the adventurous spirit."

Built during World War II on what was once a vast blueberry field and following several years when it was closed, NAS

Brunswick was reactivated in 1951. It commands a backdoor view of the most varied scenery of any state east of the Mississippi. Here, sailors and their families are surrounded by 17 million acres of forest, and they're close to miles of sandy beaches and rocky shoreline, countless lakes and numerous rivers.

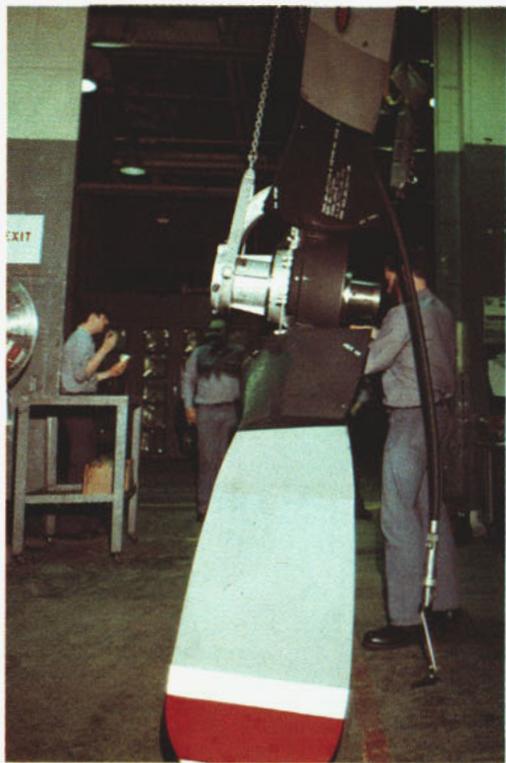
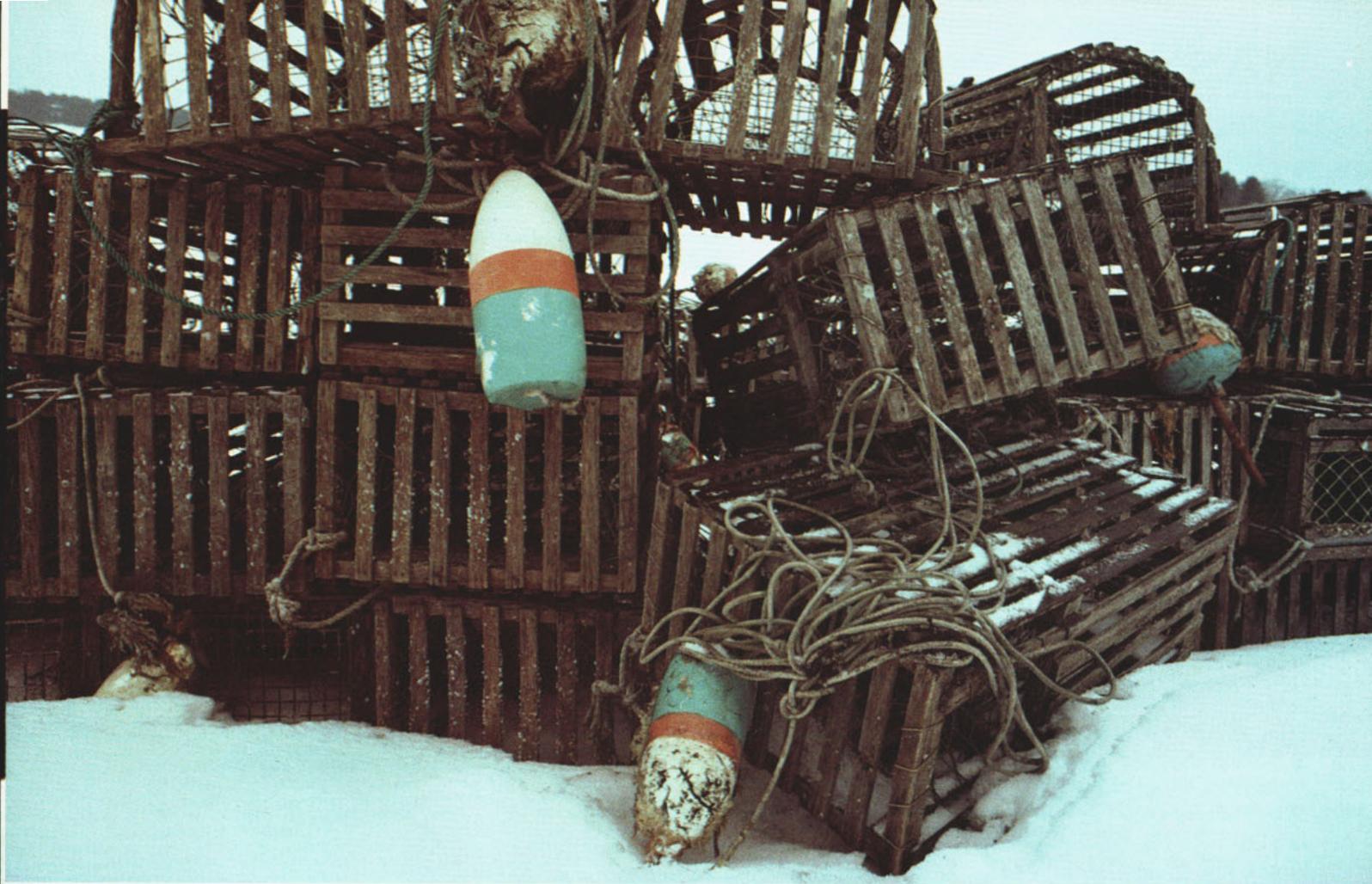
"When I was a detailer in Washington, D.C., I always wondered why I couldn't get anyone out of Brunswick," said Captain W.L. Rice, now the station's commanding officer. "The problem was, I literally had people standing on my desk to get there and people there saying, 'let me

stay.' So when my turn came, I had to find out what made duty here so great."

Brunswick attracts Navy men and women. As air stations go, it is something of a classic. With the addition of one search and rescue helicopter and a UC-12B logistics aircraft, it is home for six Navy P-3C *Orion* squadrons and 32 tenant commands supporting the people and aircraft of Patrol Wing Five.

NAS Brunswick and its collection of commands—each with a specific mission—are committed to the training of patrol squadrons and their search for submarines.





A common sight at NAS Brunswick is that of Navy sailors maintaining patrol aircraft. Outside the main gate, lobster pots, piles of snow and scenic panoramas are the norm.

NAS Brunswick

“That’s a full-time job for the 4,700 military and civilians here,” said Rice. “Everybody supports the wing, whether they’re my personnel or someone else’s.”

The thrust of the station’s support is provided by the aviation intermediate maintenance and air operations departments. For without them and the backup support of the command’s other departments, no one would take off.

The pace on the twin 8,000-foot runways seldom slows even with Maine’s unpredictable weather. The seemingly endless winter, with its average snowfall of 77 inches, doesn’t cause the shutdown of runways. Brunswick’s snow removal division is equipped with ample equipment to clear the runways of snow.

“The Mainers are used to the weather; they clear away the snow and keep on moving. That’s what we do on the base too,” said Rice.

“Some days we have only 20 flight operations to control; on other days we have as many as 200,” explained Air Traffic Controller Second Class Hez Rash. “It varies with the weather and the day of the week. But it’s excellent duty. No one could ask for anything more.”

“The pace keeps me on my toes. It’s a challenge to see if I can do it,” said Airman Gale A. Bertelsen, “nothing is ever the same.”

While air ops controls the runways and airways, Brunswick’s AIMD supplies the mechanical, electronic and electrical savvy. This outpost of an intermediate maintenance facility boasts an impressive record. Its power plant division reached a pinnacle in aviation maintenance support recently by placing all seven of its pool engines in a “ready for issue” condition for the fourth time in less than three years.

“My AIMD is probably unique in its support of *Orion* aircraft,” said Rice. “They have never had what we call a blank firewall (an aircraft missing an engine) in something like five years. That is usually unheard of in the aviation community, and it shows that when we build up an engine and install it, it stays running.”

“The secret to Brunswick’s AIMD’s record is our department head’s trust in the professional ability of our personnel,” said Master Chief Avionics Technician Charles

V. Hutchins, AIMD’s quality assurance division officer. “We have the latest in P-3Cs and can solve any problem.”

The support goes beyond the hangars and flight line. It’s found in the Navy Exchange, recreational services, public works, the supply department and others too. It’s complete involvement.

That involvement, through an active





command career counseling program, also earned Brunswick the 1981 Golden Anchor Award.

This commitment to people adds to the station's appeal. As a Mainer claimed, "Brunswick is a nice place to visit but an even nicer place to live." And Navy families there seem to agree.

It's clearly a four-season area. Winter brings heavy snows and temperatures frequently dropping below zero. Yet, it's rare that a day of work or school is missed. Spring ends a long winter hibernation with a riot of flowers and warm days accompanied by cool nights and soft, moist breezes. Summer is warm and humid with an average temperature of 70 degrees. Fall rounds out the year with October's flaming maples, orange oaks and soaring evergreens. With these kaleidoscopic colors come crisp, dry days and cool, clear nights.

"Once people get up here they seem to like it. This is the heartland of America," said Rice. "Maine residents are honest and candid people.

"We have a very warm community relations spirit. So, it's very easy for our people to go out into the community and live

In winter, Maine's wild rivers are bordered with snow and ice, and fishermen battle the frigid weather. Recreation can be seen in friendly games of ice hockey or in sailors skiing on the base's bunny slope. But no matter the weather, flight operations continue.





Before the white snow of winter falls, NAS Brunswick and most of Maine is a kaleidoscope of flaming maples, orange oaks and soaring evergreens. Nevertheless, the base's tempo is geared to supporting the Navy patrol squadrons stationed there.

gram under way at Brunswick includes a hangar, gym, child care center, PASS office and family services center. Of the nine UEQs built in 1952, eight have been renovated to include two- and three-person rooms.

To fight cabin fever, Brunswick's recreational services runs a full line of athletic programs—an on-base ski hill, ski lessons and cross country course; a year-round swimming program; a special interest center; and a well-stocked outdoor gear locker.

"We try to offer a wide range of activities," said Panati. "We're also at a stage where we're rebuilding and improving the overall quality of Brunswick's recreational program."

Thus, with an assignment to Brunswick, adventurous Navy men and women can live in a state where the surf pounds against granite shores and the forest profile of mountains is etched with lakes and rivers.

—Story by JOC James R. Giusti
—Photos by JOC Giusti, PH2 Clay Meeks
and PH3 Dan Kennedy

even with the weather extremes."

"It's great! Any detailer will tell you that there isn't any better duty than here," said Chief Aircrew Survival Equipmentman Jim Hill. "And this is the only place I have been where a Navy person could go to a town meeting and have his or her vote count."

Although the naval air station may be a detailing oasis, it has drawbacks. The most noticeable is, simply put, it's not cheap to live in the Brunswick area.

With on-base housing in heavy demand, there is a waiting period of six months to a year. Off-base housing in outlying com-

munities requires a 20- to 40-minute commute. The cold winters mean about \$800 a year in heating oil bills. Moreover, off-base rentals are also in short supply and almost out of the question during the summer tourist season. Even the winterized summer houses that are available must be vacated by June.

Winter also brings "cabin fever." For the less adventurous this can be a severe problem. And the station's buildings are, for the most part, of 1950 vintage.

On the other hand, all base facilities are within convenient walking distance of one another. A major new construction pro-

In the Dog House

Naval aircrews at the Naval Air Station Brunswick, Maine, find themselves in the "dog house" more often these days.

No. They're not in trouble. They're just training more often.

The "dog house" the six anti-submarine warfare patrol squadrons find themselves in is a P-3C Update II operational flight and tactical trainer. It is one of six the Navy uses for patrol squadron aircrew training stateside and in Hawaii. The "dog house" contains simulated flight stations of the latest version of the P-3C Update II *Orion* aircraft.

"The weapons systems trainer (WST) here is the only ASW trainer in the Navy dedicated to train operational units on a full-time basis," said Lieutenant Commander Steve S. Turnbull, Patrol Wing Five's WST training coordinator. "It trains the aircrews here in the P-3C Update II aircraft which is today's state-of-the-art anti-submarine warfare platform."

Aircrews undergoing the training face eight different mission scenarios with variable sea states, weather conditions, oceans, enemy air and land radars, and more. If an *Orion* is capable of processing it, the trainer simulates it.

"We can make it as hard or as easy as we want depending on the crew's proficiency. It's realistic and demanding training that tests an aircrew's ability," he said.

Nevertheless, the effort molds an air-

crew into a cohesive unit and realistically simulates the various conditions they could encounter on deployment.

"Our goal is to make this training as real as possible for the squadrons and help them prepare before deployment," said Turnbull. "Most squadrons use it as a cost-effective means for building up their aircrews in preparation for an operational readiness evaluation."

While the patrol wing coordinates the 15-hour day training schedule, the Brunswick detachment of the Atlantic Fleet's Fleet Aviation Specialized Operational Training Group maintains and mans the tactical trainer. The simulator provides a substantial saving in dollars and in aircraft wear and tear. Before its installation, Brunswick's P-3C Update II aircrews had to fly to the Naval Air Station Jacksonville, Fla., for simulator training or perform on-board training during operational and training flights.

"Until it arrived, training was very expensive. It roughly cost \$1,000 per actual training flight hour to train crews," said Turnbull. "Now everything is compressed into four solid hours of training on station."

The simulated training is integrated into a squadron's overall training program where actual experience is gained through additional training flights and actual operational missions.

A bronze plaque near the entrance to the "dog house" best explains its purpose: "The device you are about to enter costs you and other American taxpayers 6.4 million hard-earned dollars. That's cheap, however, when one realizes the advantages gained in crew integrity, proficiency and above all—safety.

"This is a sophisticated example of American ingenuity built for use by professionals."

—Story by JOC James R. Giusti

Lt. Cmdr. Steve S. Turnbull programs the P-3C Update II operational flight and tactical trainer with one of eight mission scenarios for patrol crews training.



Getting Down to the Smallest Detail

Television fans may associate the term "forensic lab" with Jack Klugman as "Quincy" hunched over a cadaver or on the trail of a murderer. However, the chemists with the Naval Investigative Service Forensic Laboratory, Pearl Harbor, Hawaii, are on a somewhat different trail.

This lab and other NIS forensic labs have the job of detecting and certifying samples of evidence seized by military law enforcement agents. Such evidence is used in court to convict users and traffickers in illegal substances.

"About 90 percent of the drugs we have seen here are marijuana," said Donald Chinn, chief chemist. "The next category is cocaine, and after that it's LSD.

But the list of drugs the forensic lab can detect doesn't stop there. Literally any drug from the common aspirin to heroin can be verified through lab tests.

It all starts when an NIS agent arrives at the lab with a substance seized in a bust. As he steps through the doorway, television cameras scan the entrance. Once the agent identifies himself, he's escorted to the evidence custodian, who takes charge of the evidence, tags it and painstakingly documents delivery.

When the logging is completed, the custodian places the evidence in its own bin in a locked room containing other collected materials—pipes and roach clips, tiny amounts of residue, bags of pills. The

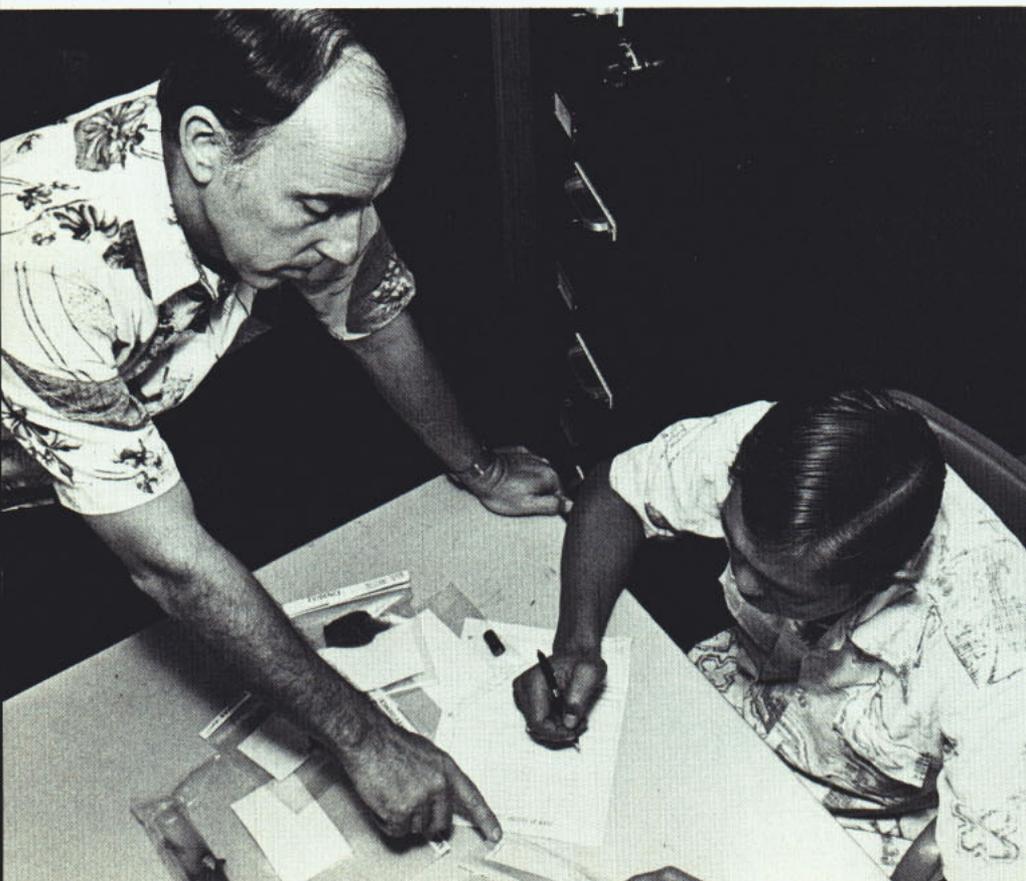
room is kept locked until a chemist puts the substance through the testing phase.

In testing evidence, a chemist may check out only a snipping no bigger than a pinhead. Even so, every test the chemist makes on the evidence is carefully documented, from initial checkout with the custodian to final disposition. An error or missed step in the documentation process could mean the difference between making or breaking a case.

First, the chemist examines the substance under a microscope. If it is marijuana, it'll show a characteristic structural "signature"—tiny spikes poking from the surface of the leaf that chemists call "bear claws." Other drugs such as amphetamines or "speed" show crystalline structures and colors peculiar to the type of drug. Each variety of drug has its own "fingerprint." No two are alike.

The next step is a chemical reaction test. Here the chemist places the bit of substance in a test tube and adds a drop of chemical. After the mixture is swirled around, a bluish-colored liquid develops in the tube. Then a drop of chloroform is added and settles to the bottom. The chemist notes that the top portion of the liquid is still blue, but the solution at the bottom of the tube is purple. Only marijuana reacts to these chemicals in this manner.

Nevertheless, these two tests may not be conclusive enough to hold up in court. The chemist runs additional samples through spectrographic analysis in which the energy wavelength of the drug is measured against known data, or through vapor analysis by which a small amount of the substance is burnt inside a piece of equipment that prints out a signature of its smoke.





Samples of contraband are documented by the forensic lab's evidence custodian, Al Tagab (lower left), before being tested by a chemist, Phyllis Quinn (left), or examined by the head chemist Donald Chinn (below).

Only minute amounts of the drug are necessary for the tests—even the scraping from the inside of a pipe can be identified with certainty. These tests are highly accurate and acceptable as evidence.

After testing, a chemist may be called on to provide expert testimony at a trial. He must be able to explain every step of the tests in language that can be easily understood.

In addition to certifying evidence samples, the NIS forensic lab chemists eventually will be able to take “fingerprints” from specific samples. These identifiable characteristics would be used by law enforcement agents to track drugs to their source.

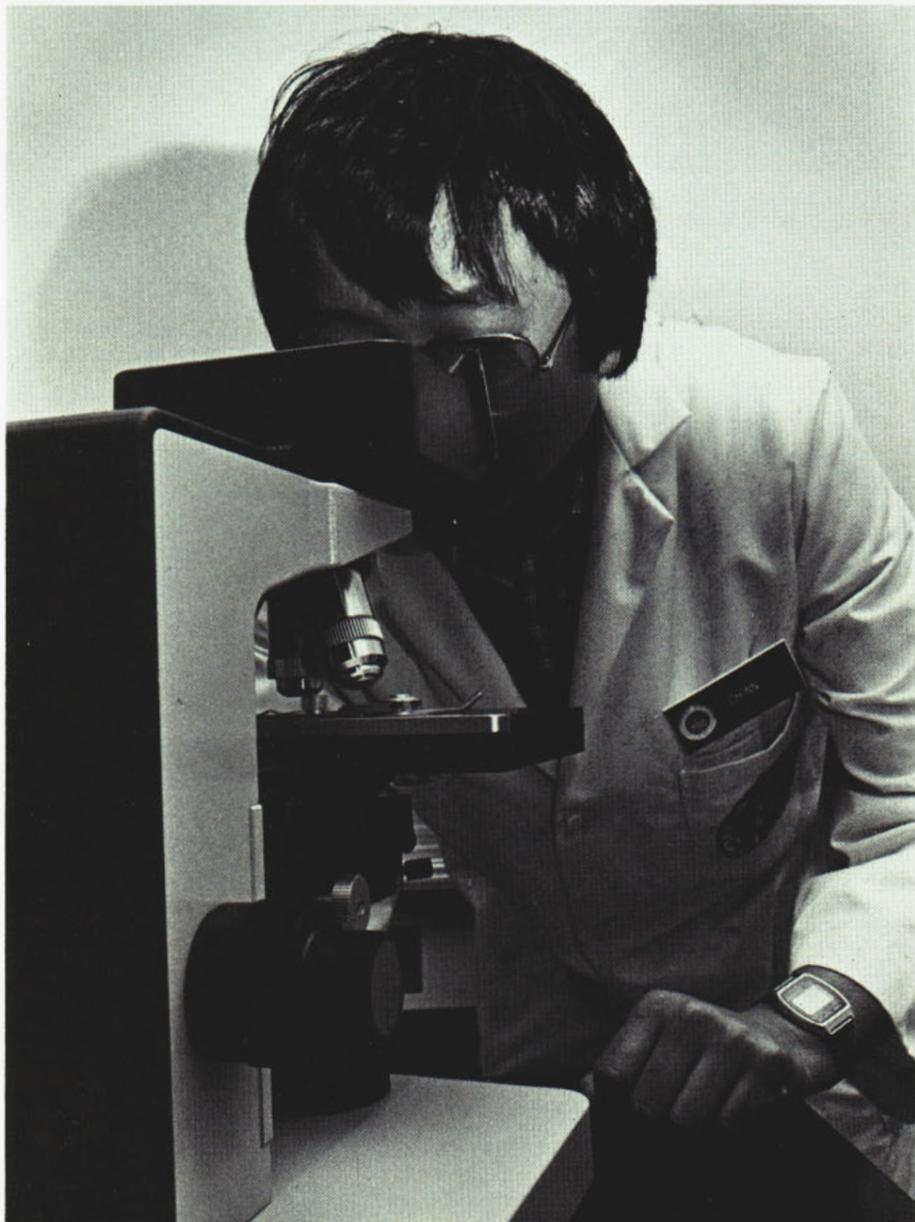
The Pearl Harbor lab was established to eliminate delay in processing evidence in the Pacific area and to provide expert witnesses in the local area. To further support Navy drug investigation, other NIS forensic labs have been established in San Diego, Norfolk, Va., and Naples, Italy.

When the forensic lab opened at Pearl Harbor, then Chief of Naval Operations, Admiral Thomas B. Hayward, made it clear that there's no room left in the Navy for drug abuse.

“This lab is dedicated to the problems that can be cast in negative terms. The negativism that is associated with drug use and abuse does not have to be rampant in the armed forces. . . we must alarm our shipmates with the intensity of our fervor that we are going to stamp this problem out of the armed service. . . .”

—Story by JO1 Charles D. Neal

—Photos by PH2 Raymond Head



Bearings



Experiencing Navy duty in Washington, D.C., are (l-r) DKSN Rita Dew, HM3 Vicki Dew and DKSN Donna Dew, sisters from Brown's Valley, Minn., who continue to share common experiences, this time as members of the U.S. Navy family. Vicki is assigned to the Naval Station at Anacostia, while Rita and Donna serve at the Personnel Support Detachment at Crystal City in nearby Arlington, Va.

Keeping Records Is a Snap

This summer, the Naval Sea Systems Command began testing a new computer system that promises to revolutionize shipboard record keeping. Dubbed SNAP II—Shipboard Non-Tactical ADP Program—the new system will automate the laborious task of record keeping.

The system will use "off-the-shelf" computer hardware and system software. Application software to perform specific Navy functions is being developed by Navy computer experts. Initially, this software will handle records for maintenance and administration. A word-processing capability also will be provided. Later, software to handle supply, finance, payroll, leave and the like will be issued to the fleet.

Almost every sailor in the fleet will benefit in some way from the quicker, more accurate service SNAP II is expected

to provide. Current plans call for installation of the system on more than 450 ships and various shore sites.

While SNAP II will automate many functions, storekeepers and yeomen need not worry about job security. The system will not eliminate people, it will just increase their effectiveness because less time will be spent keeping records. That means more time for other duties.

Currently there are representative systems on about 20 ships, including destroyers and frigates. Some of these systems have been in use for almost two years, and this prototype experience has been favorable. If everything goes as planned, installation of SNAP II will begin in January 1983. It will take about six years before the system is installed on all ships and shore sites.

—By Tom Gniech

Ranger Walk Down

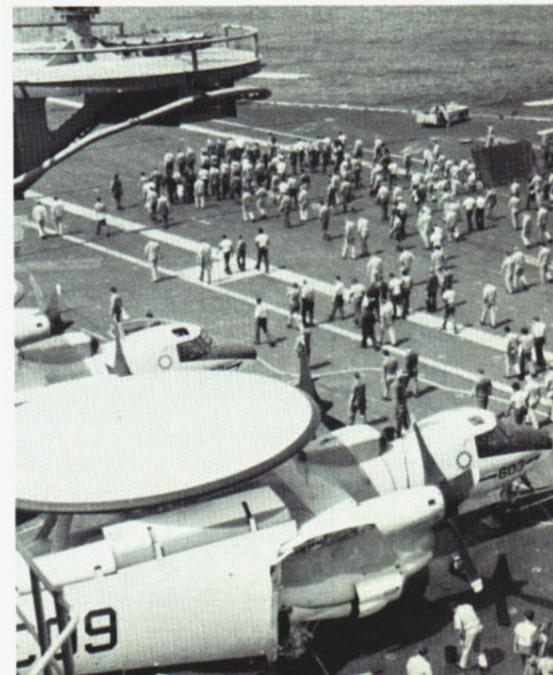
Aboard USS *Ranger* (CV 61) in the Indian Ocean comes the familiar intro over the 1MC (public address system): "Good morning on *Ranger*—this is the officer of the deck."

The crew knows what to expect, yet judges the speaker for originality. The OOD continues: "It's a lovely morning. The sun is rising on our starboard beam and on our port side is the *Spruance*-class destroyer USS *Paul F. Foster* (DD 964). I'd like to invite you up to the flight deck to share these sights and participate in the first FOD walk down of the morning."

Sailors may chuckle at the OOD's humorous and picturesque approach to the impending walk down, but they head for the flight deck knowing that prevention of foreign object damage is far from funny.

FOD prevention isn't taken lightly by *Ranger*. The idea is to scour the deck for anything not tied down that could be sucked into a jet intake. Anything absorbed by an engine could result in a tragic loss of life and, at the very least, could cause major damage to an expensive power plant.

For 100 consecutive days, *Rangermen* and bluejackets of Carrier Air Wing Two have responded to the safety challenge. Gathering at *Ranger's* bow, they form into a series of human lines walking aft, metic-



ulously inspecting more than 150,000 square feet of non-skid decking and pad-eyes, collecting anything not attached.

Ranger's air boss, Commander Jon Dekker, is the caretaker for the 1,071-foot flight deck and "choreographer" for all walk down evolutions. "You just don't have 100 days FOD free without a successful safety program," he said, "and you can't have a successful program without a super team effort."

"During this period, only six engines were requisitioned by the air wing—a 70 percent reduction over the first month of our last deployment," said Commander Al Rossiter, aircraft intermediate maintenance department head. "In addition to the savings in man-hours required to repair these engines, this reduction means that we have more engines in our on-board pool to meet future squadron requirements."

In fact, Rossiter's department was awarded the Commander Naval Air Force, U.S. Pacific Fleet Battle "E" recently which signified them as the most efficient aircraft intermediate maintenance department in the Pacific Fleet.

—Story by Ensign C.T. Cullen
—Photo by PH2 Jeff Ray

It's more than a casual stroll when USS Ranger (CV 61) crew members participate in the ship's foreign object damage prevention program (FOD). This particular walk down marks the 100th day Ranger's aircraft engines have been clear of FOD.



Chuting Stars. Exiting a U.S. Marine CH-46 helicopter at 12,500 feet over Fort Story, Va., the Navy Parachuting Team (east), practices a free-fall routine. Falling at a rate of 120 mph, the chutists fell for 71 seconds to 2,500 feet before opening their parachutes.

Photo by EN2 Steve Westling

Mail-order Uniforms

Active duty, reserve and NROTC people can now order Navy uniform items and accessories through four mail-order facilities. The mail-order system supplements uniform shops at small Navy Exchanges where lack of space has allowed only the most essential items to be stocked.

Each mail-order facility provides uniform items for a specific category of Navy people. These facilities are:

Enlisted Mens' Uniforms

Supply Department, Mail Out Center
Building 1312 NTC
Naval Administrative Command
Great Lakes, Ill. 60088

Enlisted Womens' Uniforms

Clothing Officer
NTC 45
Naval Administrative Command
Orlando, Fla. 32813

Officers & CPOs (men & women)

Norfolk Uniform Mail Order Center
PO Box 15065
Norfolk, Va. 23511

Made-to-Order Uniforms

(officers & CPOs)
Naval Uniform Shop
Fort Wadsworth
Staten Island, N.Y. 10305

Prices and ordering information are specified in the clothing price list for enlisted men and women (NAVRESSO Publication 90). For officers and CPOs, ordering and price information is listed in NAVRESSO Publication 69. These forms are available at all NEXs and Navy supply offices or may be ordered by writing to:

Navy Uniform Division (NUD)
Navy Resale and Services Support
Office
Fort Wadsworth
Staten Island, N.Y. 10305

Bearings

Around the World Orion

A P-3 *Orion* aircraft from the Pacific Missile Test Center, Point Mugu, Calif., completed an around-the-world trip in 80 hours total flying time. The 14-day mission was in support of *Harpoon* missile training exercises for Seventh Fleet units in the Indian Ocean.

Designated "Bloodhound 36," this Point Mugu P-3 is outfitted to provide the range safety, tracking instrumentation and missile termination systems for "live" firing of the *Harpoon* missile. It is flown by a crew assigned to the Range Aircraft Support Division.

The historic trip began with an 8 a.m. departure on March 4 from Point Mugu and proceeded east via Naval Air Station Brunswick, Maine; Naval Station Rota,



Spain; Athens, Greece; Nairobi, Kenya; and Diego Garcia, the Indian Ocean island which would be the staging area for the fleet exercises.

A foot of snow in Maine wasn't exactly a pleasant opener for the flight, but it soon changed into warm sunshine at Rota, Spain. A cool rain in Athens didn't keep the crew from visiting the ruins at the Acropolis—a highlight of the stopover in Greece. After crossing the Mediterranean, the P-3 continued over the Nile River, crossing Egypt and Sudan to arrive at Nairobi about sundown. Early the following day, the crew went on a half-day photo safari at the Kenya National Wild Animal Park before continuing the flight to Diego Garcia.



The morning after arrival at Diego Garcia, several crew members boarded the aircraft carrier USS *Constellation* (CV 64) to brief the commander of the carrier group and the assigned squadrons on the scheduled *Harpoon* firings. Two of the next three days were spent flying in support of the fleet training exercises.

With their mission completed, the crew flew the P-3 to Bangkok, Thailand, pausing for a brief rest and then went on to NAS Cubi Point, Republic of the Philippines, where pre-arranged maintenance was performed on the aircraft. "Bloodhound 36" continued on to NAS Agana, Guam, and NAS Barbers Point, Hawaii.

"A full day's rest in Hawaii before winging home was appreciated by all hands," said aircraft commander Lieutenant Commander Richard Timm. "We flew 12 flights in 15 days and accumulated 80 hours of flight time."

Tired but happy to be home again in Point Mugu, crew members felt a sense of accomplishment in having completed a successful mission.

"There's a certain pride in being part of PMTC and being able to support the fleet here on the range and on the other side of the world," Timm said.

"As they say in the Navy recruiting posters," he added, "It's more than a job—it's an adventure"—especially when we fly around the world."

The Lieutenants Rios

Cultural differences between people can sometimes lead to misunderstanding and alienation. But overcoming those differences can sometimes create tight bonds of friendship. U.S. Navy Lieutenant Pat Rios and Spanish navy Lieutenant Francisco Rios went a step beyond friendship. They got married.

Pat and Francisco met during their first tours of duty in Rota, Spain. As an ensign in 1976 Pat was assigned to Naval Station

Rota as the educational services officer. She met Francisco at a club where Spanish and American officers gather each week during off-duty hours.

"The club offers an excellent way for Spanish and American officers to learn more about each other's culture while enjoying a pleasant social situation," Pat said.

After their initial meeting, Pat and Francisco began dating. "I was trying to learn Spanish, and Francisco was trying to perfect his English. We agreed that when we dated, I would speak only Spanish and he would speak only English," Pat said.

After dating for about six months, Francisco left Rota for flight school in Pensacola, Fla., and Pat was transferred to San Diego.

"Although we were separated," Pat said, "we stayed in touch. We probably spent half our paychecks on telephone bills. We finally decided to get married."

Pat and Francisco were married in 1977 at the Naval Academy in Annapolis, Md. Pat then returned to San Diego, and Francisco returned to flight school.

Francisco went on to advanced flight school at Naval Air Station, Meridian, Miss., where he completed his training and earned aviator's wings. Francisco was then reassigned to the Spanish Eighth Harrier Squadron in Rota.

Pat was also reassigned to Rota after her tour in San Diego. Before instructing the Leadership Management Education and Training courses for division officers at Rota's Human Resource Management Detachment, Pat was protocol and station administrative officer.

The Rios have a 3-year-old son, Carlos, born in Rota in September 1979.

—Photos by PH3 Kim Arrington

The Rios at home with their 3-year-old son, Carlos.



Lt. Francisco Rios and Lt. Pat Rios in front of a Harrier jet in Rota.



No Wrecker's Yard for Vogelgesang, Steinaker

Two of the last remaining FRAM I destroyers, USS *Vogelgesang* (DD 862) and USS *Steinaker* (DD 863), were decommissioned and transferred recently to the Mexican Navy at Newport, R.I.

Both were *Gearing*-class destroyers, built by Bethlehem Steel Company at Staten Island, N.Y. *Vogelgesang* was commissioned on April 28, 1945, and *Steinaker* on May 26, 1945. The transfer

ceremonies in Newport were attended by relatives of the ships' namesakes: Rear Admiral Carl Theodore Vogelgesang, who died in 1927, was a commander of a battleship division and founder of the U.S. Naval Mission to Brazil; Marine Private First Class Donald B. Steinaker was killed on Guadalcanal in 1942, while defending his post against an overwhelming force of Japanese attackers.

Ships of this type were the mainstay of the destroyer Navy for almost 30 years. In the early '60s, they were upgraded under the Fleet Rehabilitation and Modernization Program. On each ship, one gun mount was removed; added were sophisticated anti-submarine torpedo tubes and an anti-submarine rocket (ASROC) system. Rounding out the new package was the AN/SQS-23 Sonar system.

These capabilities, combined with the two 5-inch/38-caliber gun mounts, made *Vogelgesang* and *Steinaker* two of the most versatile ships in the Navy. In the early '70s, both ships were transferred to the Naval Reserve Force.

In February of this year, 37 years after their commissionings, their service came to an end. The ceremony was unique in its tradition and occurrence—the simultaneous decommissioning and transfer of sister ships to a foreign government.

As with all naval evolutions, planning was essential. First consideration was the crews. In October, Newport-based *Vogelgesang* established a career counselor hot line and sent a three-man team to Washington, D.C., to negotiate directly with the detailers. Commander Bruce Rossing, executive officer and team leader, said, "In retrospect, our decision to

BMC(SW) William A. Sawyer and his Mexican counterpart watch a Mexican sailor paint out Vogelgesang's name. Right: An emotional moment for the U.S. and Mexican navies as Vogelgesang's colors are lowered for the last time.





Another Life

deal for orders in Washington was well founded. We arrived just as the new requisition hit the street, and by coordinating with the decommissioning desk we were able to get orders for most of the crew on the first day.

"Before the trip, we helped every man fill out duty preference sheets, ensuring that their choices were sensible, career enhancing and in accordance with prescribed sea/shore tours. We took one sheet for each man to Washington; the other sheet was kept at the fingertips of the chief petty officer who manned the hot line back on *Vogelgesang*.

"When we were unable to get exactly what a crewman desired," Rossing said, "we called the man involved and worked the problem out with the detailee on the spot. I estimate that we were able to attain a 95 percent happiness factor regarding the crew and their new duty assignments. I

strongly recommend to any ship facing a decommissioning that they send a team directly to Washington."

Shortly thereafter, decrewing began. *Vogelgesang's* stand down for decommis-

sioning began Dec. 11, 1981. By that time, the ship was down to about 80 percent of the normal 176-man complement. *Steinaker*, homeported in Baltimore, Md., did not begin stand down until after arrival

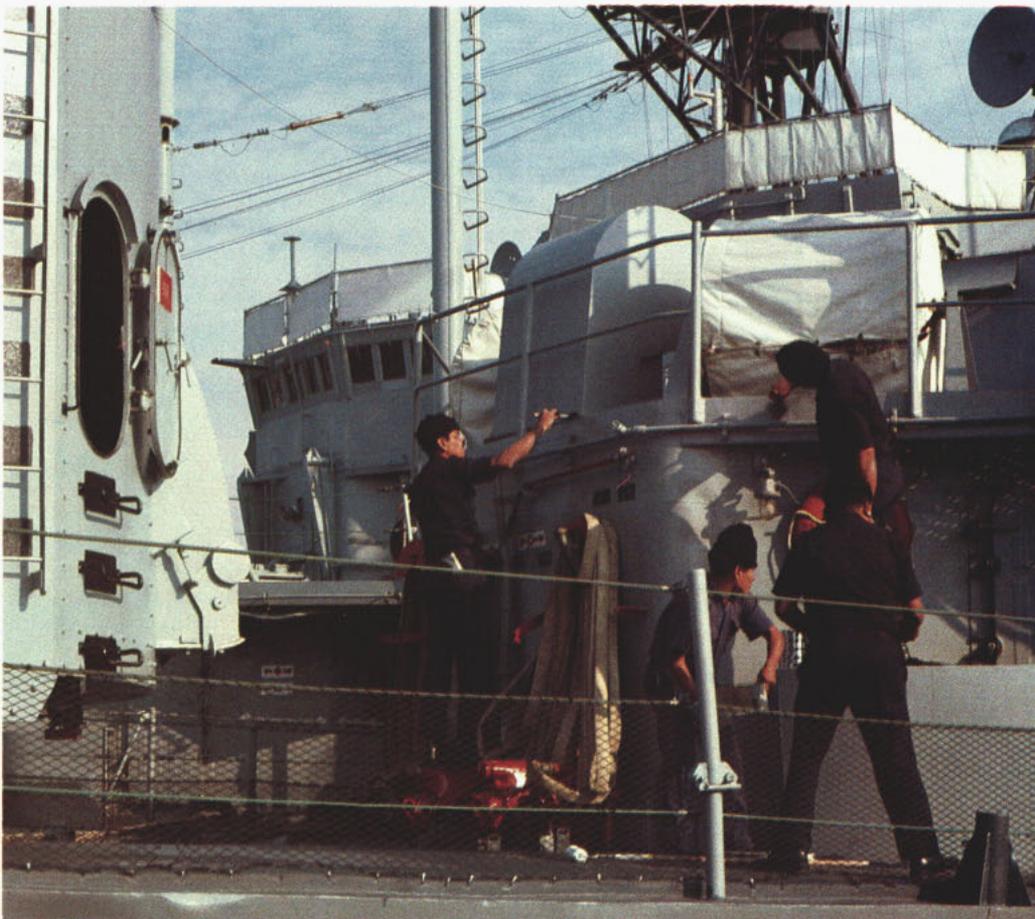


Right: Mexican crewmen wait to board their new ships. Below: Admiral Harry D. Train II, then Commander in Chief Atlantic Fleet, arrives for the transfer ceremony.

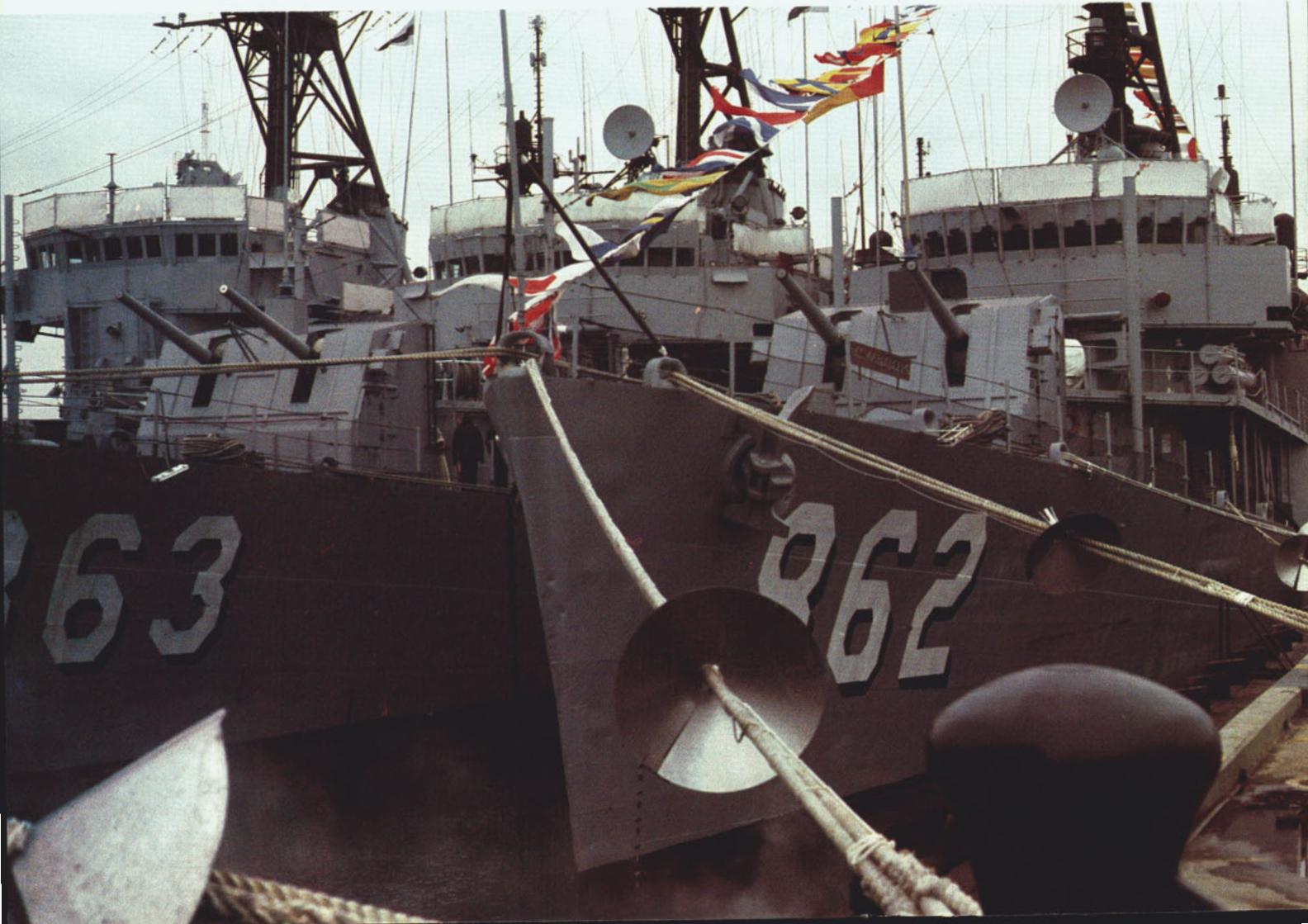




The conclusion of the formal ceremony is marked by Cmdr. Edwin P. Nicholson, last CO of Vogelgesang, with handshakes and congratulations. Then it's business as usual with Mexican sailors performing topside maintenance.



Another Life



in Newport in January. On the date of decommissioning, each of the two ships had approximately 80 men aboard.

Then the Mexican sailors needed to be considered. The first contingent, consisting of prospective commanding officers and 25 supervisory people for each ship, arrived at the end of January. Berthing, messing and cultural integration had to be planned for and provided. Despite the fact that both the Americans and Mexicans incorrectly anticipated that the other group would contain numerous bilingual people, everyone got along well. The Mexicans were professionals in every sense of the word, and the Americans were confident that their ships were in good hands.

More Mexicans arrived in February, and each ship essentially had two crews. The Mexican sailors worked side-by-side with the Americans, performing preservation, training and rehearsals for the decommissioning and transfer.

As the day drew near, ceremonial aspects became paramount. But guest lists, parking, receptions, honors to be rendered to dignitaries, seating arrangements, programs and the schedules of events were eventually worked out.

The ceremony took place at 2 p.m. on Feb. 24 under overcast skies—a cold wind cut across Narragansett Bay. The Mexican crews waited in ranks on the pier as the guests arrived. The ships, moored next to each other, had a brow linking their two helicopter flight decks where the ceremony was to take place. White-gloved officers and chief petty officers escorted guests to the seating area on the combined flight decks while the two commanding officers waited on *Vogelgesang's* fantail to greet the VIPs.

Commander Edwin P. Nicholson of *Vogelgesang* and Commander Richard E. Seaman of *Steinaker* welcomed the guest speaker, Admiral Harry D. Train II,

Commander in Chief, U.S. Atlantic Fleet, and the ranking Mexican, Admiral Miguel Gomez Ortega, General Commander of the Mexican Navy.

Also present were Werner Steinaker of Watertown, N.Y., brother of PFC Steinaker, and Mrs. Zenaide Vogelgesang Bradley of Whitefield, N.H., daughter of Admiral Vogelgesang. Mrs. Bradley had christened *Vogelgesang* in 1945. This day, almost 37 years later, she sat in the front row, huddled in a Navy blanket, as were most of the guests.

Shortly, Nicholson strode to the podium. *Vogelgesang* was to be decommissioned first. After brief remarks to the audience and to his crew standing in ranks on the flight deck, he turned to Allen, saluted, and said, "Commodore, I am ready to decommission *Vogelgesang*." He ordered the executive officer to "Haul down the commission pennant and colors"—the bugler from the Northeastern

Navy Band sounded "Retreat," and the flag of the United States was lowered for the last time on *Vogelgesang*.

Then, to the strains of "Anchors Aweigh," the crew, with the exception of the quarterdeck watch, marched smartly off the ship and assembled on the pier next to the Mexicans. *Steinaker* was then decommissioned in exactly the same way. Now the ceremony was in the hands of the Mexicans. The orders to "Set the watch" and "Man the ships" were given. Mexican sailors relieved the watches on both ships, and the new crews boarded their ships. The Mexican colors were raised and USS *Vogelgesang* and USS *Steinaker* passed into U.S. naval history. They were now the Mexican Navy destroyers *Quetzalcoatl* and *Netzahualcoyotl*.

—Story by ETC (SW) Michael J. Heyden
—Photos by ETI (SW) Bruce Clark, Nancy Groenert and ETC (SW) Heyden



Top left: *Quetzalcoatl's* executive officer leads his crew aboard. Top right: Admiral Miguel Gomez Ortega, General Commander of the Mexican Navy, at a reception following the transfer ceremony. Left: USS *Vogelgesang* (DD 862) and USS *Steinaker* (DD 863) berthed at the Navy Fleet Pier, Newport, R.I. Right: The Mexican ensign is raised over *Quetzalcoatl*, formerly USS *Vogelgesang*.

Only the Strong Survive

The din invades the dark hallway like a jet engine in a chapel. It's the sound of metal garbage cans rolling, bouncing along the polished stone floors. Suddenly the racket stops, and a voice like gravel in a cement grinder shouts, "ALL RIGHT, boys and girls. It's time to get up and GET ON LINE. QUICKLY, QUICKLY, QUICKLY—MOVE, MOVE, MOVE!"

And so it begins. Fourteen weeks of Aviation Officer Candidate School. Fourteen weeks that will turn civilian men and women into some of the most highly motivated junior naval officers in the world.

"Down!"

"DISCIPLINE, SIR!"

"Up!"

MOTIVATION, SIR!"

"Down!"

DISCIPLINE, SIR!"

"Up!"

"MOTIVATION, SIR!"

Push-ups. Leg lifts. PT. The chorus of voices in the predawn darkness marks the beginning. The first of five days in "Poopieville," the first five days of learning how to be a naval officer.

The drill instructor continues to shout, but with the breaking day comes a different kind of noise: aircraft engines as flight ops begin at nearby Sherman Field. A T-2 zooms overhead. "Man, that's why I'm here," whispers an out-of-breath candidate. "That's what I wanna' do."

The Navy's Aviation Officer Candidate School is located at Naval Air Station Pensacola, Fla. Unlike its counterpart—

Officer Candidate School in Newport, R.I.—AOCS produces naval officers with discipline in aviation instead of shipboard fields. Aviation officer candidates learn the same naval and leadership subjects taught at Newport, but instead of learning about ship propulsion plants, they learn about aircraft engines; instead of ship navigation, they get aviation navigation; and rather than shipboard damage control, they are taught aerodynamics. The final product is the same though: After 14 weeks, successful candidates graduate and are commissioned ensigns in the U.S. Navy.

AOCS is not easy, and, as a result, the key to success in the program is an overwhelming desire to excel. A college degree is the basic requirement for acceptance into the training, but applicants must also pass a battery of demanding physical and psychological tests. Applicants must be physically qualified to fly aircraft, and many candidates who don't make it through training are usually dropped from the program because they are not physically qualified—NPQed in AOCS jargon.

The school's academic curriculum is extremely challenging and, coupled with the rugged physical training, keeps AOCs busy from predawn to well after taps—in some cases. But the stringent requirements are not without reason. Following their commissioning, the former AOCs continue their aviation training in a variety of fields including pilot training, naval flight officer, air intelligence and aviation maintenance officer training.

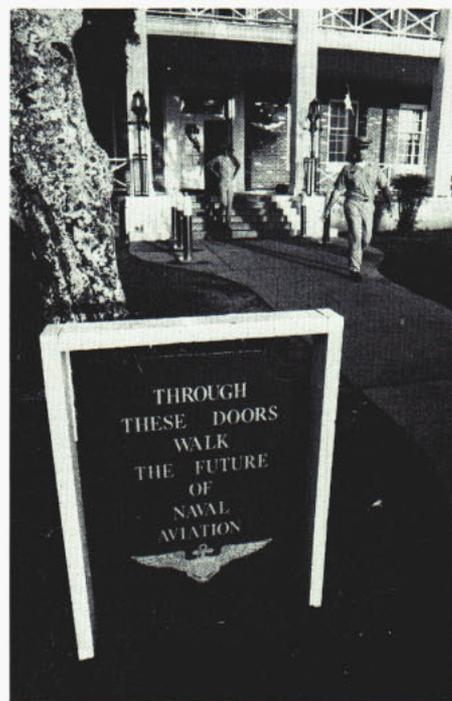
"Belly! . . . On your bellies!"

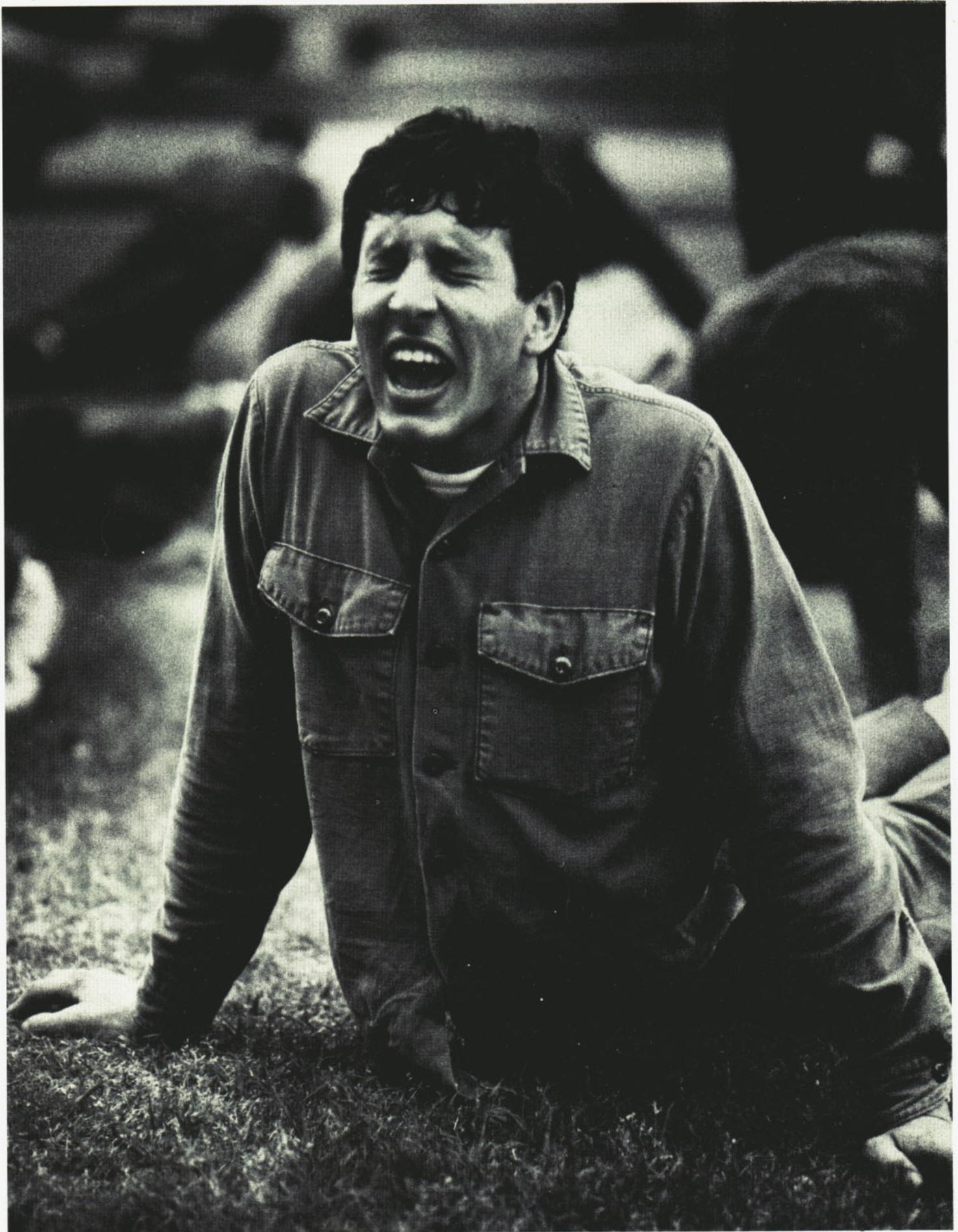
More push-ups.

"Don't anticipate me, candidates. Don't you dare anticipate me!" shouts the voice in the Smokey Bear hat.

Poopy week, the candidates' term for the first week of AOCS, begins dark and early at 5 a.m. on Monday when the poopies meet their drill instructor, the Marine non-commissioned officer who

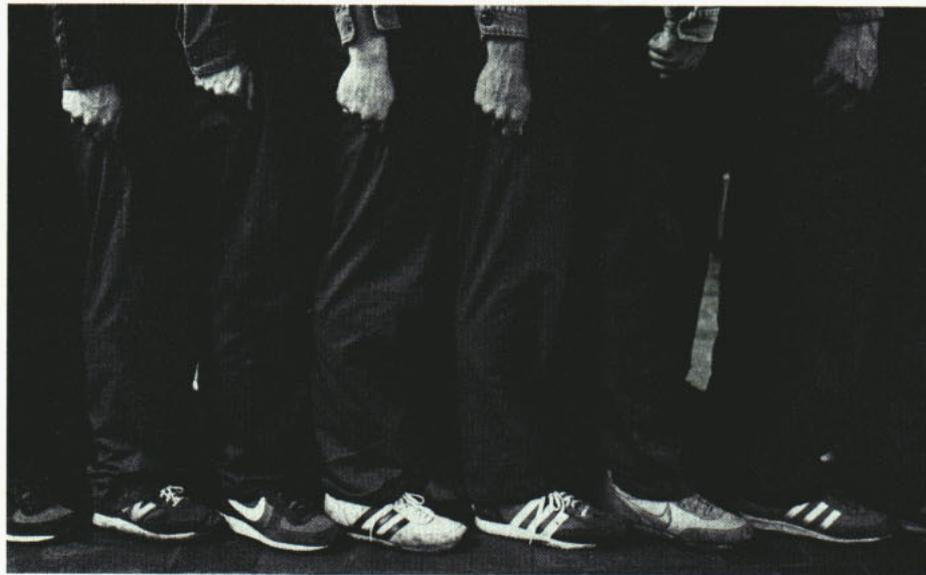
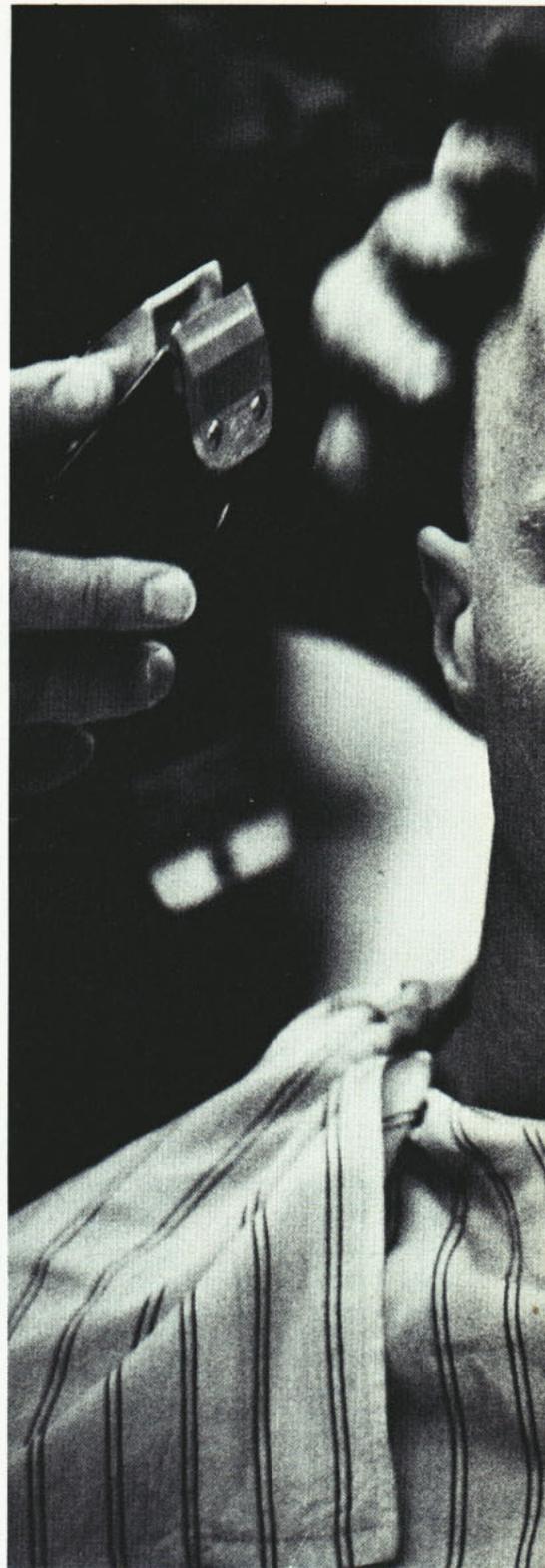
A sign outside the Aviation Officer Candidate School (below) reminds students of their importance. Candidate John P. Gombar (right) agonizes through a push-up as he screams "MOTIVATION SIR."





AOCS

Marine drill instructors like Gunnery Sgt. J. Campos (right) waste no time telling candidates about the military way of life. Class 20-82 (below) lines up "thumbs to the front" for their first breakfast in the Navy.



will guide them through their 14 weeks of training. For some, it's their first contact with military life.

The first day begins in a daze. PT, breakfast, more PT, then haircuts. Haircuts—the stripping away of the last vestiges of civilian identity, the beginning of a military lifestyle, and the making of a naval officer. A mad dash from the barber's chair to the formation outside. All the while the DI presses, yells, cajoles. "Feet at 45-degree angles. Keep your thumbnails to the FRONT!"

The short march to the uniform shop does not go well. The class is having diffi-

culty halting in unison.

"It's 'step together, freeze, sir,' candidates," shouts the DI.

"YES SIR!" comes the group reply.

"Try it again, candidates!"

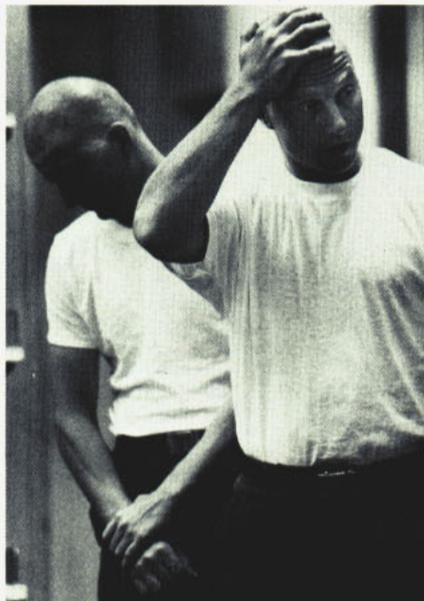
"YES SIR!"

Another try and another failure. More PT, this time jumping jacks to the cadence of "Only the strong survive, sir. Only the strong survive."

After several tries, the class finally reaches the uniform shop, and the DI turns his poopies over to candidate officers, AOCs in their final week of training who act as the regiment's administrators. The

candidate officers are less vocal than the DI; they've been poopies too. They remember.

Once inside, it takes awhile before the poopies realize they can talk to one another. Hands rub newly cropped heads; uniform shirts are donned; combination caps are carefully examined. Then, quietly, words are exchanged.



The first days are the most traumatic as candidates break old habits and get new hairstyles. Candidate Randal G. Smith (left) gets adjusted to his AOCS haircut. Candidate Rene M. Marin's helmet (below) shifts over his eyes as he snaps to attention.



"Man, how many push-ups have we done so far?"

"I don't know. Hang on. Just try to make it through lunch time."

Near the stacks of shoe boxes, three candidates practice. "Step together, freeze, sir. Step together—no it's like this," and one demonstrates, colliding into the rear of another. Muffled laughter.

"Whatever you do, don't laugh out there, man. It really tees him off if you even smile."

The rest of the day passes quickly. ID cards, lunch, instructions on how to stow uniforms. The DI teaches, rehearses and admonishes his poopies, watching their every move and demanding perfection. The choruses of "YES SIR!" can be heard

echoing throughout the area.

To the uninitiated, the training may seem harsh, but candidates can DOR-drop on request—at any time during the training, usually with no obligation. But despite the pace and the demands, most candidates make it through the training and find AOCS a challenging and rewarding experience.



“Attention to detail, that’s what we’re trying to teach,” said Commander Mike Scully, director of AOCS. “I don’t care what it is, there’s a procedure for it—an orchestrated movement they must learn. Attention to detail.”

“What we’re trying to do is give them the mental discipline they need for naval aviation—to be aware of procedure, procedure, procedure,” he said. “When that warning light comes on in the airplane, you have a set of procedures to go through. We start with this. We start with making a big deal out of a little thread hanging from the uniform—an Irish pennant—because they didn’t have the attention to detail to check it.”

Attention to detail permeates every facet of life at AOCS; lockers are arranged a certain way, drinking glasses are placed on dining trays in a specific pattern, and when leaving an office, candidates must turn to the right not the left. All this may seem trivial, but it is this attention to detail that

AOCS



Cmdr. Mike Scully (opposite page, bottom) stresses that discipline and procedure are key words in the life of a candidate and Navy aviator. Gunnery Sgt. J. Campos (opposite page, top) tells Candidate Robert D. Muro to speak louder during an RLP inspection. Candidate R.P. Hajek (left) learns that little is missed during an inspection. Members of class 16-82 (below) do push-ups because of poor performance during inspection.

could ultimately save an aviator's life.

Five days are spent in Poopieville; five days and a crash course in military life. On the fifth day, poopies are outposted—they move from Poopieville into one of the two battalions' spaces. Their olive drab uniforms are left behind, replaced by the working khaki uniforms of naval officers. The candidates are now full-fledged members of the regiment, and the training begins to take a slightly different tack. As the weeks go by the emphasis moves toward academics. The DI remains an ever-present entity, though, and he continues to demand perfection in military procedures.

Perhaps the most significant point in an AOC's initial training is passing a room, locker and personnel inspection—RLP for short. Until a class passes an RLP, the candidates are "unsecured" and easily spotted by the absence of colored tape on the ends of their name tags. Unsecured classes cannot march anywhere unless escorted by their DI, a candidate officer or their class officer—the commissioned officer, usually a lieutenant, responsible for the class. "Secured" classes sport yellow or blue tape on their name tags, can talk in the dining hall, relax at the AOC club and leave the base when their extra military instruction is worked off. The first chance at passing an RLP comes during the fourth week, and it is an unforgettable experience.

If one DI is demanding, four DIs are four times as demanding. During an RLP, four DIs and three class officers inspect a class.

"How many items are in this shaving kit, candidate?"



"Eight, sir!"

"Are you sure?"

"Yes sir!"

"Let's count 'em, candidate."

A few feet away another DI inspects a locker. "Would you wear this shirt in an inspection, candidate? Would you?"

"No sir!"

"Good, because it looks terrible!"

The class officer quietly talks with another candidate. "You've got a smiley on your cap, here," he said, as he shows the AOC how to correct the slipped webbing. "Tuck your shirt in this way."

Across the room yet another DI is inspecting underwear. "What size is this supposed to be folded, candidate?"

"Six inches, sir!"

"Well, is it?"

"Yes sir!"

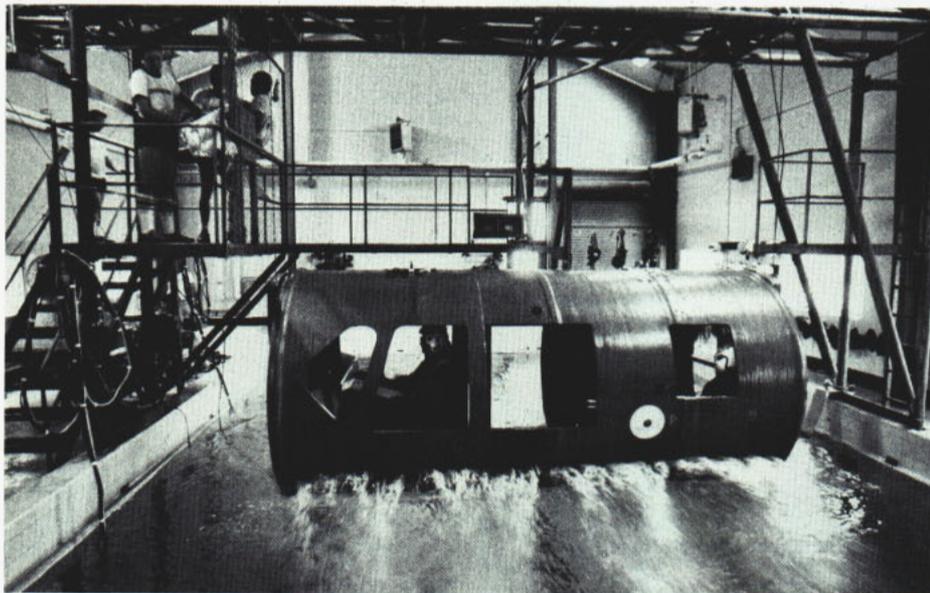
"Well, I measure 6 1/4 inches, candidate!"

"Sir . . . it's close, sir!"

"Now son, if you were flying from Miramar, Calif., to Pensacola, Fla., and you were one degree off, now just where do you think you'd end up? What do you mean, 'close.' REDO IT!"

Passing an RLP is a big hurdle and, once done, all other things seem to fall into place. This doesn't mean the military training is any easier; a class can always lose its tapes—become unsecured—at any one of the remaining inspections. But it takes cohesiveness and teamwork to pass an RLP, the same teamwork it takes to be

AOCS



successful in the Navy.

AOCs receive several types of training geared specifically to the aviation fields: pressure chamber tests and training; ejection seat training; deep-water environmental survival training; parasailing; and how to leave a helicopter downed in water—uncharitably called the “helo dunker,” a sort of second cousin to the Delbert dunker they will try in later flight training. The favorite, by far, is parasailing.

Under the watchful eye of the staff from the survival school, candidates can experience the thrill of a simulated parachute jump. Dressed in flight suits, jump boots and football helmets, and outfitted with a special harness and parasail, candidates are towed aloft and then allowed to float back to earth, almost like a real parachute jump. During the training, the AOCs learn the proper way to land, how to maneuver the chute to control their landing and how to gather up the chute once on the ground.

“It was GREAT!” said Aviation Officer Candidate Morgan Hammac. “Can I do it again?”

“Only if you re-enlist,” comes the reply.

Parasailing comes toward the end of the 14-week session. By this time, the pres-

sure is somewhat reduced. Most candidates have completed “the big three”—navigation, engineering and aerodynamics—and are looking forward to their commissioning and further aviation training. As the AOC training draws to a close, candidates are eager to share stories about their experiences.

“When I first heard my DI, I thought he was a raving lunatic,” said Hammac with a grin. “You can’t do anything right, and they yell at you for anything from walking to scratching your head. You can’t even lay on the ground and sweat right,” he said, still smiling.

“I didn’t see the DI’s face for two weeks,” said AOC R.P. Hajek, laughing. “If they catch you looking at them, you PT.”

“And I remember the time some lieutenant asked us why we joined the Navy and no one really knew,” said another candidate, laughing harder.

“I always wanted to fly,” said AOC George Koban. “AOCS is challenging, extremely challenging academically and physically. This kind of training is definitely necessary.”

“The whole adjustment to the military

lifestyle was the most difficult,” said AOC Brian Reidy. “It takes a little getting used to the whole lifestyle, but no one thing in particular is really bad. There have been a lot of feelings of real achievement and satisfaction—of really having accomplished something positive. It’s been good. At the beginning there are times when you say ‘God, this is unbelievable,’ but every-



During the last half of the school, the instruction becomes more technical. The "helo dunker" (far left) teaches candidates how to evacuate in a safe and orderly manner (bottom center) from a helicopter that has gone down in water. Candidate Fernando Villanueva (below) pulls the handle that will send him straight up in an ejection seat simulator. Teamwork is always evident whether the class is studying for exams or running for exercise (top center).



thing has a purpose."

"Toward the end, you see the light at the end of the tunnel and you're glad you went through it," added Hammac. "And you start seeing the need for all this, which is surprising because I thought I could never find a justification for some of this stuff," he said with a laugh. "But my life is worth it."



AOCS

Class 10-82 (right) takes the oath of commission from Capt. R.L. Rasmussen, commanding officer of the Naval Aviation Schools Command. Ensign George D. Fairhurst (below) accepts his first salute.

"I like it," said AOC Fernando Villanueva. "I think the program serves its purpose, preparing candidates for a commission. This is not my first exposure to Navy aviation. I was from the fleet; I worked as an aviation boatswain's mate, and I was exposed to aircraft working in V2 division, which is catapults and arresting gear. I was on the *America*," he said. "I was working on my degree. When I got reassigned to a shore station at Lemoore, Calif., I completed my degree prior to getting reassigned to sea. Instead of going to sea, I came here."

Villanueva continued, "The hardest part of the program was the first week. The rest of the training is not that hard. The first week was really culture shock, even coming from the fleet. I knew there was a



poopie week, but I didn't expect it to be like it was." He added, "I know the rationale behind it is to weed out the weak ones which they are very successful in doing."

"The physical requirements here are quite heavy," added Hammac. "You have to be able to do them and balance it with

the academics. It's great, though, 'cause I realize I have higher limitations than I thought I had. I was a corpsman before I came into the Navy this time," said Hammac. "But I had no conception of what this was going to be like. I expected more or less an enlisted boot camp. It wasn't. It was quite a bit harder than that."

"I came here with a somewhat naive idea of what to expect," said AOC D.R. Tonder. "I'm prior enlisted; I was an air traffic controller for four years, completed my degree and came here. This was a lot tougher than boot camp. But it's worth it; we all want to fly."

Graduation: Dress uniforms, families, the band, flag pageant, speeches, diplomas, commissioning. New shoulder boards, this time with a stripe to accompany the star. The first salute to the new officers is delivered by their former DI; dollar coins are presented in return, the continuation of a Navy tradition. Almost as quickly as it begins, it is over. Fourteen weeks from civilian to naval officer—14 weeks of hard work, discipline, attention to detail. Aviation Officer Candidate School: The making of a naval officer—in pursuit of wings of gold.

—Story by Marge Holtz

—Photos by PH2 Robert K. Hamilton



Switching Roles



He stands ramrod straight, his military appearance impeccable. On his collar are the five bars of regimental commander, on his chest the tags denoting honors achievement in academic and military subjects and in physical training. Today he is Aviation Officer Candidate Mark Farley; tomorrow he becomes Ensign Mark Farley. Two years ago he was Sergeant Mark Farley, U.S. Marine Corps and a drill instructor at Aviation Officer Candidate School.

From a marine DI with a background in infantry to a Navy ensign headed for naval flight officer training is a big jump. Not only has Farley made that jump, he has made it with honors. His marks in both military and academic subjects at AOCS were exemplary; those marks coupled with the ratings he received from the members of his company and from his class officers combined to make him the regimental commander. He graduated first in his class and was recommended for a regular rather than a reserve commission in the Navy.

"My father was a naval aviator, spent 31 years in and retired in 1974, so I grew up around the Navy," he said. "I always had this thing about flying, but from the 10th grade on, I didn't have good enough vi-

sion, so I never really considered it. I knew about the naval flight officer program, but, at the time, it didn't excite me that much."

Farley attended college but after 3½ years became disillusioned, dropped out of school and enlisted in the Marine Corps. "I always had it in the back of my head I wanted to be a marine," he said. "As soon as I made corporal, I put in for DI school, and when I finished, I asked to be sent here." When his Marine Corps enlistment was up, he returned to civilian life, but the desire to fly persisted. He completed his college degree through the New York State Regents Program and was accepted in the Navy's AOC program.

Being a former DI was a definite advantage at AOCS, and Farley is the first to admit it. "We passed our RLP on the first try. I knew what to look for, and I helped everyone else. The guys in my room got ready early, and they helped the others too. The whole company worked together," he said.

Marine Corps boot camp is tough training by any standards and Farley agrees, but he has now modified his views somewhat. "There are times when this training is rougher than Marine boot camp. The academics here require a lot of work and paired with the physical training can really keep the pressure on." The hardest thing to adjust to at AOCS was "lack of sleep. I came here wanting to excel and to do that I had to get up early and work after taps," he said.

Farley's advice to anyone considering applying for AOCS is "think long and hard about it. If you decide to do it, commit yourself 100 percent. This is a good program, but it's not easy. Don't make a snap decision."

Although his vision is still not good enough for pilot training, Farley is looking forward to becoming an NFO. "Think I want to go tactical," he said. "Either tactical navigator or radar intercept officer, but I'm not absolutely sure. I'll have to see how my body reacts to the different types of aircraft. I'll go wherever they send me."

His officer candidate training complete,

Farley led his regiment through the traditional graduation parade and commissioning ceremonies. But his commissioning ceremony was special; his father, Captain Russell J. Farley, U.S. Navy, Ret., administered the officer's oath to his son. Now he is Ensign Mark Farley, U.S. Navy, working for wings of gold.

Candidate Mark C. Farley leads his regiment in the pass and review following graduation of class 10-82.



The Navy Remembers

In commemoration of the Navy's 207th birthday last month, All Hands began a year-long series highlighting selected events important in Navy history. In this issue, we look back at some significant November events.

Many milestones throughout the Navy's history occurred in November: chaplains were first assigned to ships (1775); the Navy's first steam-powered ship to circle the globe, USS *Ticonderoga*, completed its cruise (1880); and Lieutenant Commander Richard E. Byrd flew over the South Pole (1929). It was also in November that Navy beat Army 24-0 in their first football game (1890).

The Corps is Born

The Marine Corps has always been a

part of the Navy. During the Revolutionary War, as they have in modern times, marines embarked aboard Navy ships and made beach landings. Privates in the Marines and sailors in the Navy were governed by the same rules and regulations and also drew the same pay: \$6.67 a month. At that time, marines and sailors also received the same daily ration of food: usually a pound of bread, a pound of pork, a half pint of peas—and a half pint of rum.

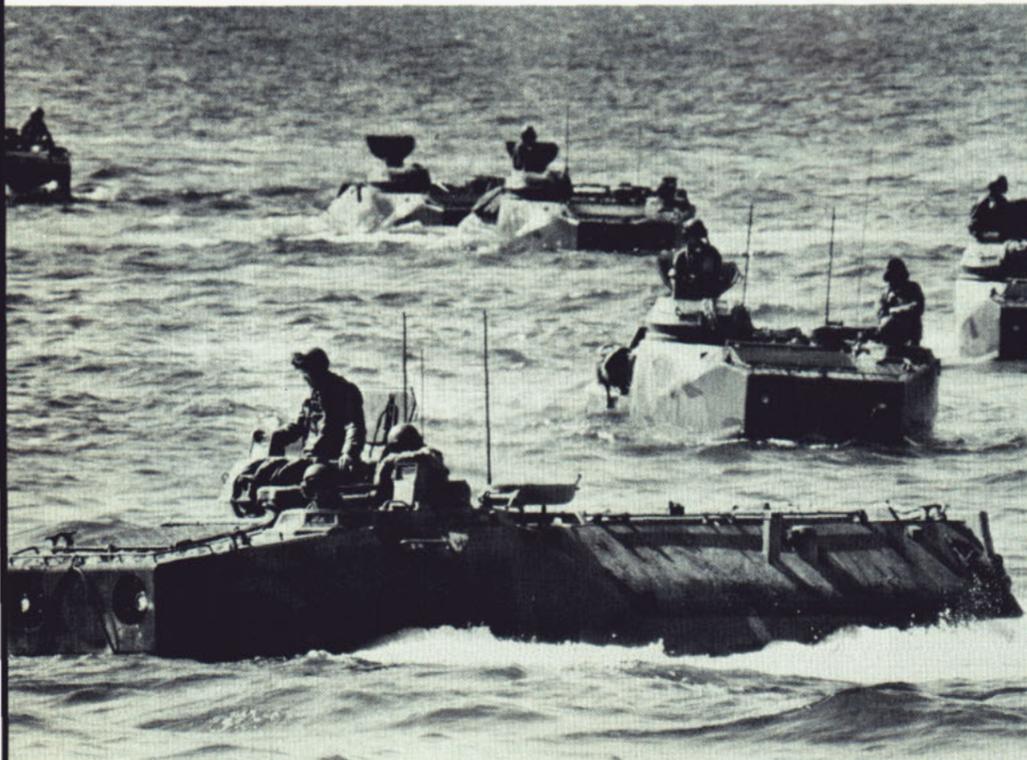
After only the first few months of the war, both the Second Continental Congress and its Marine Committee—

earlier the Naval Committee—recognized the need for marines. Men were needed who could not only fight well as members of boarding parties and shore landing forces, but could also be good seamen and serve well aboard ship when necessary.

The Continental Navy was formed on Oct. 13, 1775. Barely a month later, the Second Continental Congress approved a resolution drafted by the Marine Committee creating the Continental Marines. The date was Nov. 10, 1775—recognized officially as the birth of the Marine Corps.

Recruiting for the newly formed Continental Marines began at the Tun Tavern on the corner of King Street and Tun Alley (now South Water Street and Wilcox's Alley) in Philadelphia. Robert Mullan, the tavern owner, was later commissioned a captain in the Marines.

However, he wasn't the first commissioned officer in the Marines. That distinction belongs to Samuel Nicholas, also of Philadelphia and also a tavern owner. He was commissioned on Nov. 28, 1775, and is now recognized as the first Marine Commandant.



Members of the 4th Marine Amphibious Brigade participate in a landing exercise. Photo by PH2 Robert K. Hamilton. Opposite: Foilborne, USS Pegasus (PHM 1) can attain speeds of more than 40 knots.

The Fleetest of the Fleet

By its very nature, water slows things down. It has to do with physics—density to be specific. The denser something is, the slower an object moves through it.

Because water is 18 times denser than air, submarines and ships have a more difficult time plowing through the ocean than a jet does gliding through the air. And that doesn't even take into account the different sizes and shapes of submarines, ships and jets, or the varying surface resistances or drag coefficients between air and water.

The Navy will never forsake the seas; however, there is a breed of ships that comes close to leaving the seas behind and flying through the air. Those ships are hydrofoils. They can travel at speeds in excess of 40 knots and are virtually unaffected by rough seas.

The first of a new class of patrol hydrofoil missile ships was launched Nov. 9, 1974, after years of Navy tests and evaluations. It was USS *Pegasus* (PHM 1), the first of six hydrofoils scheduled to be in commission by mid-January 1983. It is awesome watching *Pegasus* skim across the ocean. Its entire hull rises out of the water as *Pegasus* flies along using its three foils.

Pegasus is 131.2 feet long (40 meters) and carries a crew of 21—four officers and 17 enlisted people. Designed not only by the United States but also by Italy and West Germany, the PHM was the first Navy ship built under the metric system. *Pegasus* is armed with a *Harpoon* missile system, MK 94 gun fire control system, MK 75 76mm light-weight gun and the rapid bloom off-board chaff system.

Women Assigned to Sea Duty

Believe it or not, women serving at sea are nothing new. During the Civil War in the 1860s, four nurses served aboard the Navy hospital ship USS *Red Rover*. Nurses also served aboard the transport ships USS *Mayflower* and USS *Dolphin* in 1913 and aboard the hospital ship, USS *Relief* (AH 1) in 1920.



But never in the history of the U.S. Navy have as many women served aboard a variety of ships in such a wide range of job areas as now.

It all stems from the legislation enacted in October 1978 when President Carter signed the authorization to amend Title 10, Section 6015, U.S. Code, allowing women to be assigned to certain non-combatant Navy ships. On Nov. 1, 1978, the first Navy women officers reported aboard five ships: USS *Vulcan* (AR 5), USS *L.Y. Spear* (AS 36), USS *Norton Sound* (AVM 1),

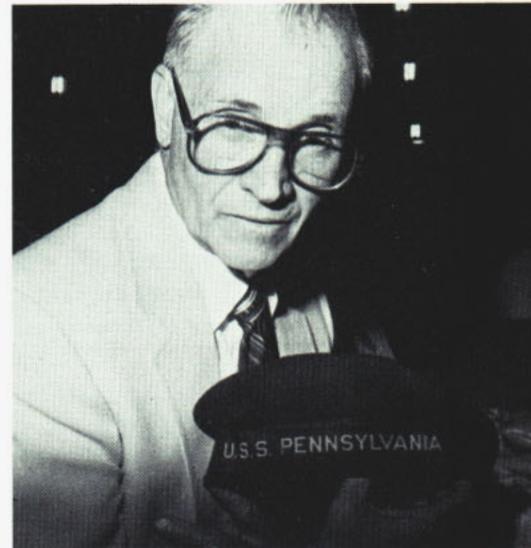
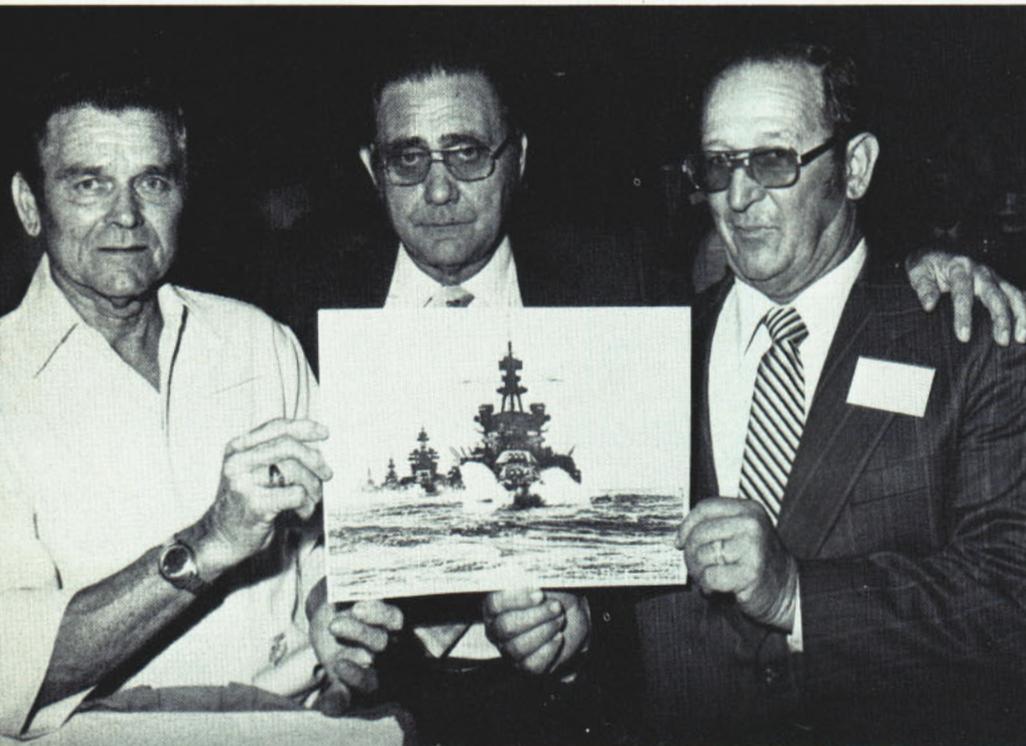
USS *Dixon* (AS 37) and USS *Puget Sound* (AD 38) in accordance with the amendment. Early the next month, Navy enlisted women reported aboard ship.

Soon thereafter, women were serving aboard 14 Navy ships. As of July 30, 1982, there were 193 women officers serving aboard 32 ships and 2,185 enlisted women serving aboard 20 ships.

To borrow a phrase, women in the Navy have come a long way.

—By JO2 Gary Hopkins

What a Reunion is All About



Organizers of the Memphis reunion (l-r) Dewey Green, Jess Dennis and Sheran Fontenot with a photograph of their well-remembered ship. Above: Ray Woods with his memento of the days when a flat hat was a sailor's prized possession.

Most ships retire from service honorably. Some, after their decommissioning, live on as floating museums or monuments. Others are honored piecemeal—their helms, compasses or ship's bells are polished and given places of esteem in academies, quarterdecks and other traditional locations.

The battleship USS *Pennsylvania* (BB 38), however, has not been so honored. It never was a monument; no part of the ship remains. It endures only in the memories of its World War II crew. *Pennsylvania* lies on the bottom of the Pacific, sunk not by the enemy, but by its own country.

You couldn't accuse the Japanese of not trying, though, even from the beginning. *Pennsy* was sitting in Pearl Harbor on Dec. 7, 1941; the surprise attack sunk its sister ship, USS *Arizona* (BB 39). *Pennsylvania* sustained considerable bomb damage, and that day was the beginning of a four-year engagement under enemy gunfire.

Throughout the heat of the war years, *Pennsy* steamed from one Pacific battle to the next until 1946 when battle worn and battered it was marked to become a target for atomic bomb testing. The memories of the ship resurfaced from time to time, but it wasn't until 1980 that *Pennsy's* crew decided to try to get together again.

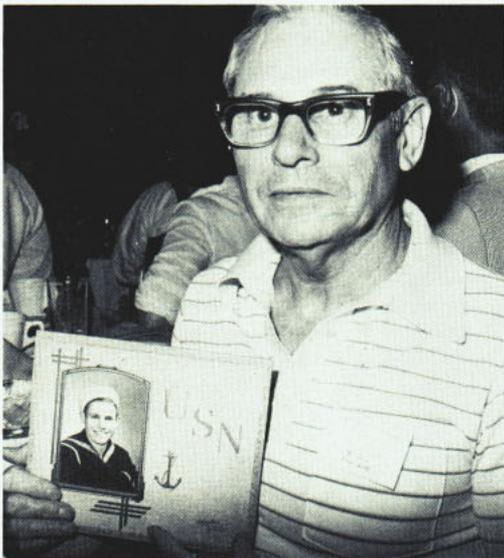
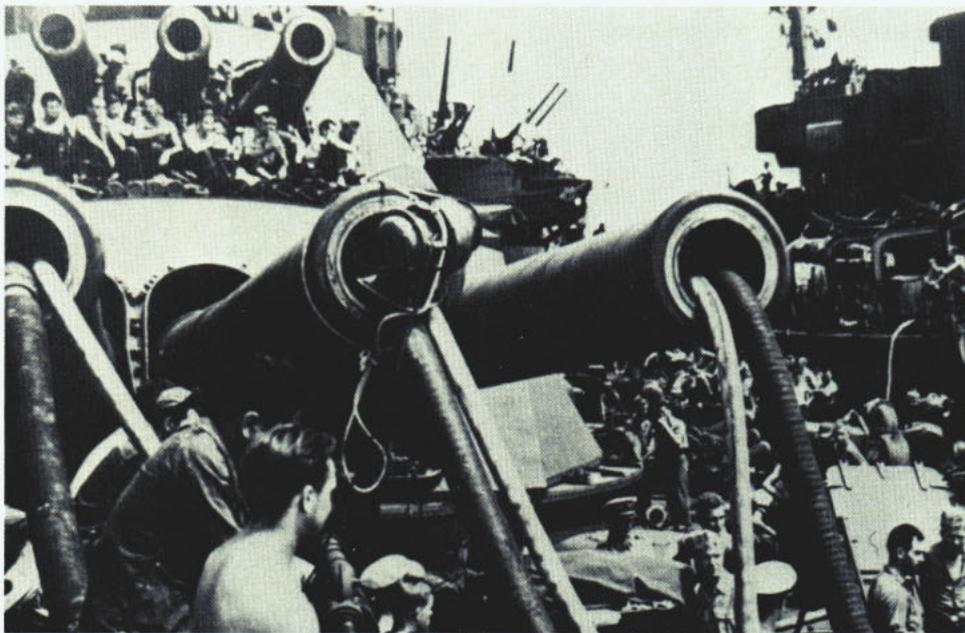
"I can't tell you why we waited so long," said Jess Dennis, of Memphis, Tenn. Dennis, who served as a shipfitter and diver on the ship, began the *Pennsylvania* reunions two years ago. "When we first got together, there were only seven of us," he said, "but the next year we had 57. This year there are 110."

Two thousand five hundred men served on the *Pennsylvania* at any one time; so far, the reunion committee has located 650 former crewmen. "It's been some job tracking these fellows down," said Dennis. "Most of them left the military right after the war. But we've advertised in vari-

ous publications, and we're real pleased with the response, so far."

Former shipmates and their wives came from all over the country to attend this year's reunion, held recently at a hotel in Memphis. "We spent three days getting reintroduced, enjoying dinners and parties together, and just mainly reminiscing," said Dennis.

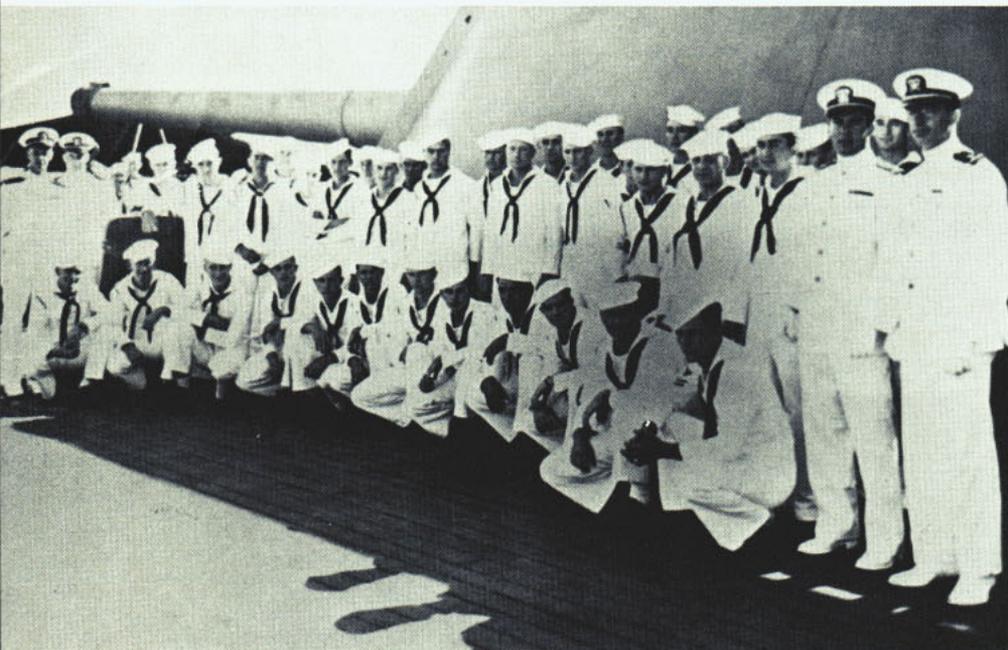
There's enough to reminisce about. From May 1943 to August 1945, the *Pennsy* and its crew took part in every Pacific battle from Attu and Kiska in the north, to Lingayen in the Philippines, including the Battle for Leyte Gulf, the biggest naval surface battle in history. Aside from being the only battleship to take part in every combat amphibious operation in the Pacific, *Pennsylvania* was also the only one to receive a special commendation from the Secretary of the Navy. James Forrestal wrote, "... she navigated in poorly charted waters to deliver her accurate



broadside on predetermined but invisible targets; intensive fire from her batteries blazed the way for our assault waves in the Gilberts, the Marshalls, and the Marianas . . . The *Pennsylvania* completed nearly 30 years of unflinching service by her deadly, close-in bombardment and gunfire support . . .”

“I’ll tell you how accurate she was,” said Dennis. “At one island, we fired at a concrete pillbox (fortification). The first shell knocked a hole in the pillbox. The second shell went right smack through that hole, and blew the thing apart.

“She had some firepower,” he continued. “Sometimes it seemed like she’d blow herself apart from firing. Once we thought she’d been hit. No, she hadn’t, she



just fired so many rounds that she looked like she was on fire.”

In a way, *Pennsy*’s zeal seemed its own undoing. By the end of the war, the ship, badly deteriorated, limped back to the West Coast on one propeller. “She was really worn out,” said Dennis. “The gun barrels, everything. She was just too worn out for anything.”

The government came to the same conclusion. In 1946, *Pennsylvania* was designated for atom bomb testing in the Marshall Islands. In February of that year the battleship headed for Bikini Atoll. The last line in *Pennsylvania*’s cruise book reads: “As this story closes, the old battlewagon . . . with all flags flying, is . . . on her last journey, facing fire and blast for her flag—as was her wont always.”

“They did use her for a target,” explained Dennis. “But even that didn’t sink her.” By that time, though, officials were concerned about radiation, so *Pennsy* was towed out to sea. “Twelve sailors went on board to open her sea cocks and let her sink,” he said. “That’s terrible, but that’s what happened.”

Crew members believe that if ever there was a ship that deserved a place as a museum or monument, it was the *Pennsylvania*.

Dennis said that for many of the men, those years spent aboard the *Pennsy* during World War II were the most meaningful of their lives. “That’s why they came from all over the country to Memphis to attend the reunion,” he said. And they plan to do so again. The *Pennsylvania* committee is already working on another reunion, to be held again in Memphis in 1983. They also have plans to begin a collection of the ship’s mementos and memorabilia for donation to a museum.

Although the history of the USS *Pennsylvania* has been written, the crew isn’t willing to close the book.

Those desiring information on the USS *Pennsylvania* reunion should write Jess Dennis, 3053 Birchfield Drive, Memphis Tenn. 38127

—Story by JOI Melanie Morrell

Top: A pumping operation on Pennsylvania’s deck following damage by a Japanese torpedo. Center: George E. Henderson and a photo of himself as a fresh-faced sailor in 1942. An early photo of some of Pennsy’s crew alongside one of the ship’s big guns.

Mail Buoy

One of the Best

SIR: The August '82 All Hands was, in my opinion, one of the best issues. The article on the "Golden 13" was especially heart warming. You also did a good job with the reunion.

Keep up the good work.—Cmdr. T.R. Pocock

Boat People

SIR: I read with great interest the article "Boat People... Continuing Story" in the July 1982 issue. Having served aboard the USS *Towers* (DDG 9), I remember well the first hectic moment after a boat sighting and the gratification of seeing the relieved faces of those people as they were helped aboard.

There is, however, one ship and numerous crewmen that have been slighted in the article. That ship is the USS *Parsons* (DDG 33), which was homeported in Yokosuka, Japan, prior to the USS *Towers*, and the men who cross-decked from the *Parsons* to *Towers*.

As part of the USS *Kitty Hawk's* (CV 63) battle group and with the assist of her air wing, *Parsons* became the first combatant to embark Vietnamese refugees after the president instructed the Seventh Fleet to assist Boat People and to embark them if necessary.

During the following months, *Parsons* made two more rescues, one of which was 111 people in a 17-foot boat.

After one boat was attacked by pirates, *Parsons* joined the search and rescue effort and acted as the helo control unit. This effort, unfortunately, only resulted in one Vietnamese being saved.

Also, on *Parsons'* list of humane actions are several assists including fuel, food and navigational guidance. I submit that the *Parsons* has earned the right to be mentioned and that the crewmen who cross-decked to *Towers* should be recognized as having been involved in six major embarkations, saving hundreds of lives, several assists and one search and rescue.

—OSC K.P. Osterberger

Quick Switch

SIR: How could you of all publications not notice that the first class pictured in the June All Hands article about "Dubrovnik—Another Time and Place" is a JO1 and not an SH1!!—JO3 Lynn Gladstone

• *Our image is shattered. Here's hoping we didn't slip too far down in your estimation by making such a goof.*—ED.

Wooden Ships Still Sail

SIR: Reading the August '82 All Hands I noticed that the story entitled "Jason's Ironman" on page 27 erroneously stated that "wooden ships have gone." As commanding officer of USS *Exploit* (MSO 440), a wooden ship, I can attest that the iron men of the Navy's mine countermeasure force still sail the high seas in wooden ships!—Lt. Cmdr. H.C. Kaler

Reunions

• **USS Essex (CV/CVA/CVS 9)**—14th annual reunion June 14-18, 1983, in Orlando, Fla., for all ship's company, air wing and embarked staff who served in the '50s and '60s. Contact Bob Morgan, 3841 S.W. 29th Place, Orlando, Fla. 32674, or Captain Horst A. Petrich, 621 Robens Road, Virginia Beach, Va. 23452.

• **Fighter Squadron 11**—Reunion Jan. 28-30, 1983, in Virginia Beach, Va. Contact Lt. Paul Pompier, Fighter Squadron 11, FPO New York, N.Y. 09501; telephone (804) 425-3349 or Autovon 274-3349.

• **DesRon 23 "Little Beaver Squadron," USS Charles Ausburne, Dyson, Claxton, Stanley, Converse, Foote, Spence and Thatcher**—Joint reunion October 1983 in Washington, D.C. New members contact C.D. Lail, 159 9th St., Colonial Beach, Va. 22443; telephone (804) 224-7643.

• **USS Shaw (DD 373)**—Reunion May 20-22, 1983, in Corpus Christi, Texas. Contact E.E. Ness, 1900 No. Serrano Ave., Los Angeles, Calif. 90027.

• **USS Chew (DD 106)**—Crew members who served from 1917-24, 1940-45 interested in a future reunion, contact Jesse Pond, PO Box 205, Sperryville, Va. 22740.

• **USS Salt Lake City (CA 25)**—Reunion Aug. 7-11, 1983, in Reno, Nev. Contact Myron Varland, 715 Blackmer Ave., Albert Lea, Minn. 56007.

• **Brotherhood of Navy Storekeepers**—All U.S. Navy storekeepers, past and present, interested in forming a storekeeper brotherhood, send self-addressed stamped envelope to SKC Gabriel Aviles, USS *Glover* (FF 1098), PO Box 10004, Norfolk, Va. 23513.

• **USS Waller (DD 466)**—Reunion July 1-4, 1983, in Asheville, N.C., for World War II and recent crew members. Contact J.L. Arrington II, Route 10, Box 361-H, Charlotte, N.C. 28213.

• **USS Coontz (DDG 40) AKA (DLG 9)**—Reunion tentatively planned for April 1983 in San Diego for plank owners and others who served and are now serving on the *Coontz*. Contact Emmett H. Hamilton SKC, Ret., PO Box 23001, San Diego, Calif. 92123; telephone (714) 571-2994.

• **USS Evans (DD 552)**—Reunion planned for May 13-15, 1983, in Mobile, Ala. Contact Larry Dick, 1610A Sylvan Ave., Modesto, Calif. 95355.

• **Navy Patrol Bombing Squadron 117 (VPB-117)**—Need names and addresses of squadron mates for roster and reunion plans. Contact J.B. "Nick" Carter, 17 Athena Court, Little Rock, Ark. 72207; telephone (501) 225-2132.

• **GRO-PAC 8 and Transportation Division Island of Saipan 1944-46**—Future reunion. Contact William A. Walker, 5421 Dossett Rd., Eight Mile, Ala. 36616, or Paul W. Mishier, Route 14, Box 28, Brazil, Ind. 47834.

• **VBF-2 (Jellybeans) from December 1944 to November 1945**—Any former members interested in a reunion, contact Congressman Don Clausen, Washington, D.C., or Bob Anderson, 134 Stonegate Road, Portola Valley, Calif. 94025; telephone (415) 851-8810.

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**At my age, most other guys
are still looking for
their first promotion.
This is my fourth.**



It means you're on your way to being the best at what you do. A reward for experience and know-how that's going to keep paying off throughout your Navy career and for the rest of your life.

In most jobs, moving up is its own reward, but the Navy offers you even more. More opportunities to take on responsibility and to sharpen your leadership skills. More

challenges that provide the kind of experience that can put you even further ahead in your field.

See your career counselor and see how much further you can go. You've gone a long way in the Navy. Why not check out all of the opportunities available for you to move up in a career you can be proud of.

You can go further. In the Navy.

**MOVE UP, NOT OUT.
STAY NAVY. SEE YOUR CAREER COUNSELOR.**



A Look at Brunswick • See page 16