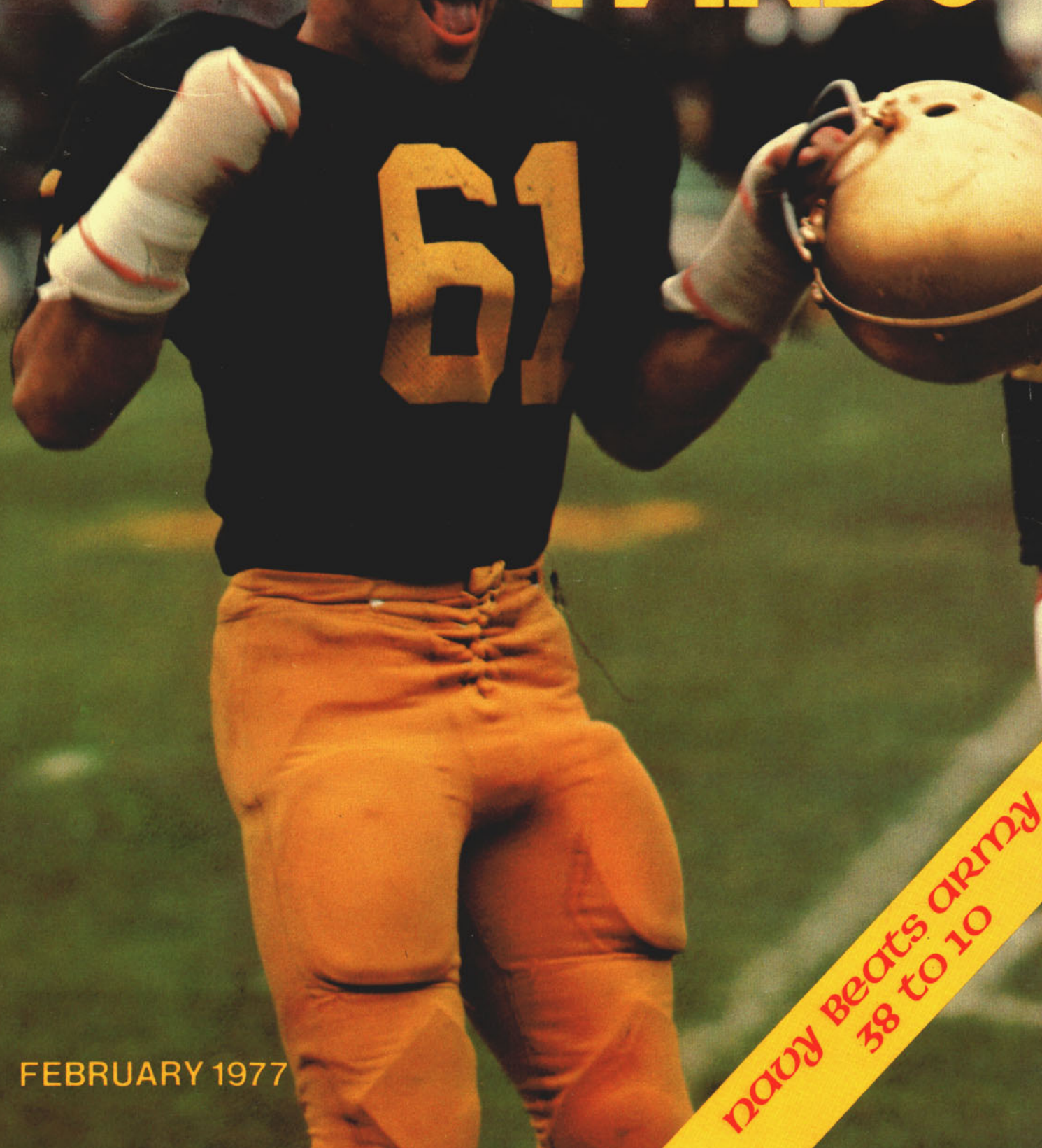


ALL HANDS



NAVY BEATS ARMY
38 TO 10
Robby

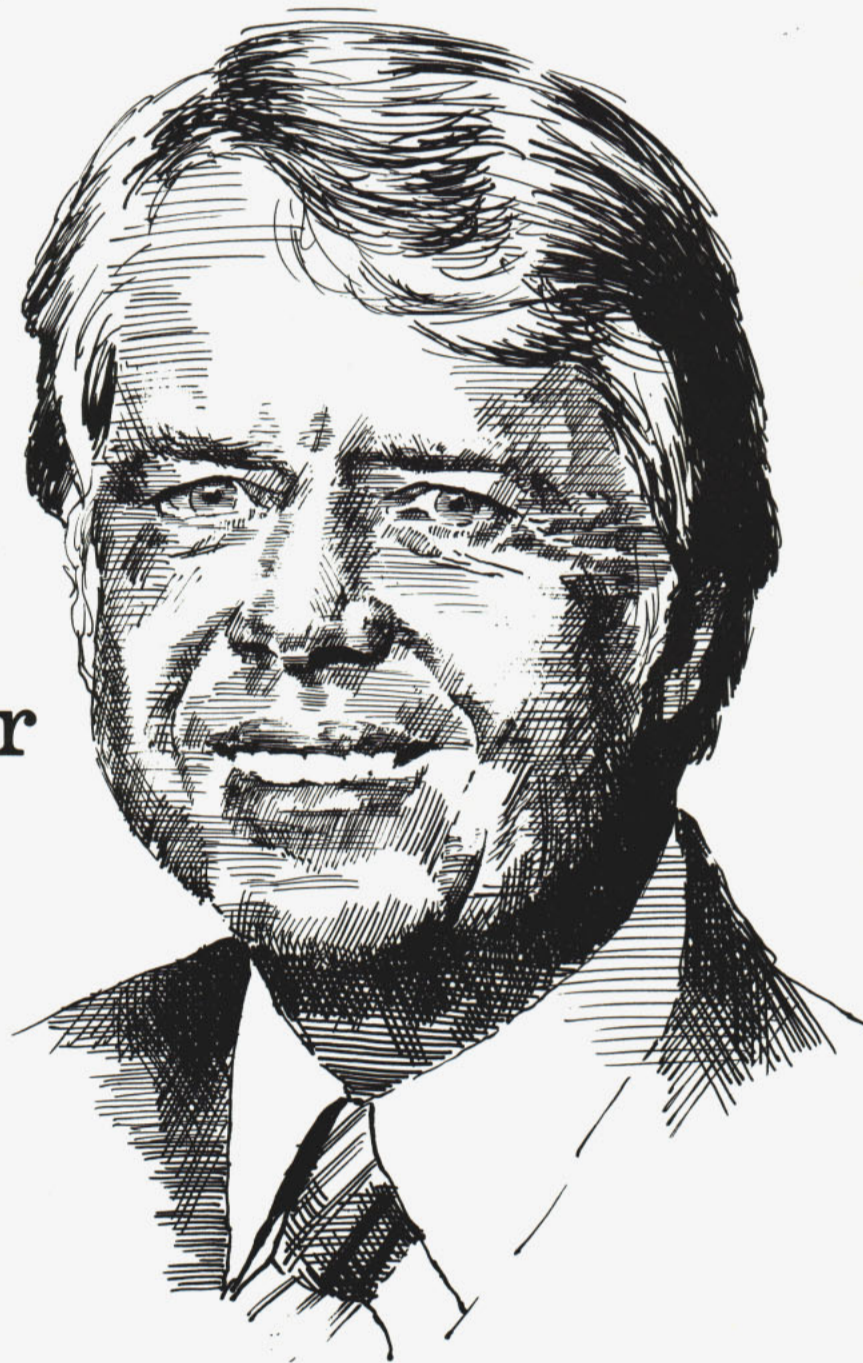
FEBRUARY 1977



Naval Officer 1946-53
Commander in Chief 1977

Jimmy Carter

39th President of the
United States





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FEBRUARY 1977 NUMBER 721

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Covers:

Front: Navy co-captain Jeff Sapp's expression tells it all – Navy's the winner again. Sapp, described by coach George Welsh as "the best defensive middle guard in the country," ended the 1976 season with 143 tackles, was tapped for a host of all-American squads and won a berth on the East Squad in the Japan Bowl Game in Tokyo. (Photo by JO1 Jerry Atchison)

Inside Front: Art by staff artist LT Bill Ray

Back: Photo by JO2 Gary Grady

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Currents

Navy Seeks

Major Sea Pay Hike ● The Navy has developed a proposal providing for a big increase in sea pay – unchanged since 1949 – to seagoing Navy careerists. Under the new plan, which provides for payments from \$25 to \$100 monthly, a sailor would be eligible for sea pay if he had completed three qualifying years at sea, was serving aboard a ship whose mission is primarily accomplished underway, and had been advanced to petty officer grade. The new sea pay plan has been endorsed by the Department of Defense for forwarding to the 95th Congress. Target date for payment of the increased rates is 1 Oct. 1977.

President Names

New Secretaries ● Dr. Harold Brown has been appointed Secretary of Defense and W. Graham Claytor Jr. has been named Secretary of the Navy by President Jimmy Carter. Dr. Brown has served as president of the California Institute of Technology and once headed the Livermore Nuclear Laboratory. He was director of research and engineering in the Department of Defense and took part in the SALT II negotiations. Dr. Brown also is a former Secretary of the Air Force. Claytor, a lieutenant commander during World War II, served as commanding officer of the submarine chaser USS SC 516 and the destroyer escorts USS Lee Fox (DE 65) and USS Cecil J. Doyle (DE 368). Until recently he was chairman of the board and chief executive officer of the Southern Railway System.

First Trident

Missile Launch Successful ● The first flight model of the Trident missile successfully completed its planned flight of more than 4,000 miles after being launched from Cape Canaveral recently. This was the first in a series of test firings of the new long-range missile. The new missile will be capable of submerged firing from both the Poseidon and the new Trident fleet ballistic missile (FBM) nuclear-powered submarines. Improved solid propellant, electronics and materials give the Trident missile much greater range than the currently deployed Poseidon missile. The Trident missile will carry a multiple, independently targeted reentry vehicle (MITV) warhead to a range of 4,000 miles. The missile is guided by a self-contained inertial guidance system, independent of external command and controls once it is launched. It is approximately 34 feet long and six feet in diameter and weighs in excess of 65,000 pounds. The first submerged launch from a Trident submarine is planned for the summer of 1979. The placement of Trident missiles in Poseidon submarines will begin in 1979. Modifications of Poseidon submarines to accommodate the change to Trident missiles can be accomplished alongside a tender.

POVs Subject

to Strict Inspection in Japan ● Military personnel who bring their personal vehicles to Japan may encounter problems and considerable personal expense in order to license and drive their vehicles in the country (including Okinawa). Vehicles manufactured before April 1, 1976 must meet the 1973 Government of Japan inspection standards which are not too severe. However, those vehicles manufactured after March 31, 1976 must be inspected under the 1975 Government of Japan emission standards which are very strict. This inspection under the 1975 standards is only done in Tokyo, at personal cost (in the neighborhood of \$500) and takes from 90 to 130 days. If a vehicle was manufactured after March 31, 1976, it may only be shipped to Tokyo. Once it arrives there, it becomes the member's personal responsibility, including any further transportation costs to the member's particular duty station in Japan or Okinawa. All vehicles having a catalytic convertor must have the convertor operational and must have a heat shield and warning light installed at an approximate cost of \$200-\$400. Further, unleaded gasoline is not available in military PX service stations and must be purchased on the economy for about \$1.50 per gallon.

3,000-Ton

SES to be Constructed ● A contract to build a 3,000-ton Surface Effect Ship (SES) prototype designed to travel at speeds three times faster than conventional ships was recently awarded to a San Diego firm. The ship is scheduled for completion in fiscal year 1983. This SES will be 270 feet long, 105 feet wide and will be powered by gas turbine engines. The 3,000-ton prototype will be capable of carrying 125 officers and men.

PREP Program

Revised Under New GI Bill ● The Veterans Administration Pre-Discharge Education Program (PREP) is now available only to service personnel participating through financial contributions. PREP provides on-base education for those who seek high school level remedial, refresher or completion courses. Participation is limited to the last six months of the first enlistment and applicable to those entering the service after Dec. 31, 1976, provided they had not joined under the Delayed Entry Program prior to Jan. 1, 1977. Individuals enrolled in PREP courses by Oct. 31, 1976 may continue to complete the course but may not reenroll for courses beginning on or after Nov. 1, 1976. Cost of tuition for high school level courses may be charged to the service member's VA entitlement if the courses are taken within the 50 states. For further information see NavOp 161/76 or see your command education officer.

CNO Sailors

of the Year Nominees Sought ● Fleet and shore commands have begun screening Sailor of the Year nominees. Competition ends April 15, and names of the fleet Sailors of the Year and shore command nominees must be submitted to the Chief of Naval Personnel by May 6. A board established by the Chief of Naval Personnel will select the shore Sailor of the Year. Winners will be announced in the summer of 1977 and awarded five-day vacations at CONUS locations of their choices and meritorious promotions to the next highest paygrade if they meet all requirements.

The Sea Releases Her Grasp

BY JOI CHRIS CHRISTENSON

An eight-week battle against the frigid and stormy North Atlantic to retrieve an F-14 *Tomcat* lost from USS *John F. Kennedy* (CV 67) during a NATO exercise, ended in November, when the mangled remains were finally recovered. The recovery ended an exhausting, frustrating and, ultimately, triumphant chapter.

The F-14 had careened across *Kennedy's* flight deck, and into the sea after one engine jammed at full power, during launch preparations in September. The two-man crew ejected safely onto the deck of *Kennedy*.

When the F-14 made its unscheduled departure north of Scotland, the Navy was faced with a decision to leave it or retrieve it. The decision to retrieve the plane set in motion a long chain of events which resulted in the recovery of both the fighter and her *Phoenix* missile.

The Navy's Supervisor of Salvage

made plans for a two-stage operation. USS *Shakori* (ATF 162) was specially outfitted with side scan sonar and special navigation equipment and began the search phase. Streaming a torpedo-shaped sonar "fish," *Shakori* painstakingly established a grid search pattern. Steaming back and forth on predetermined search lines, *Shakori* found a promising contact on Oct. 3.

The ship put into port at Aberdeen, Scotland, for supplies and further planning. Returning to sea several days later, *Shakori* discovered that the "promising contact" was not to be found. Undaunted, she continued the search and was able to relocate the contact—several hundred feet from its original location.

The second stage of the operation was now about to begin with the arrival of the Norwegian flag vessel M/V *Constructor*, with CURV III, an unmanned U. S. Navy submersible, on board. The plan called for CURV to use her television cameras to positively identify the contact as the missing F-14. On subsequent dives CURV was to bring down and attach

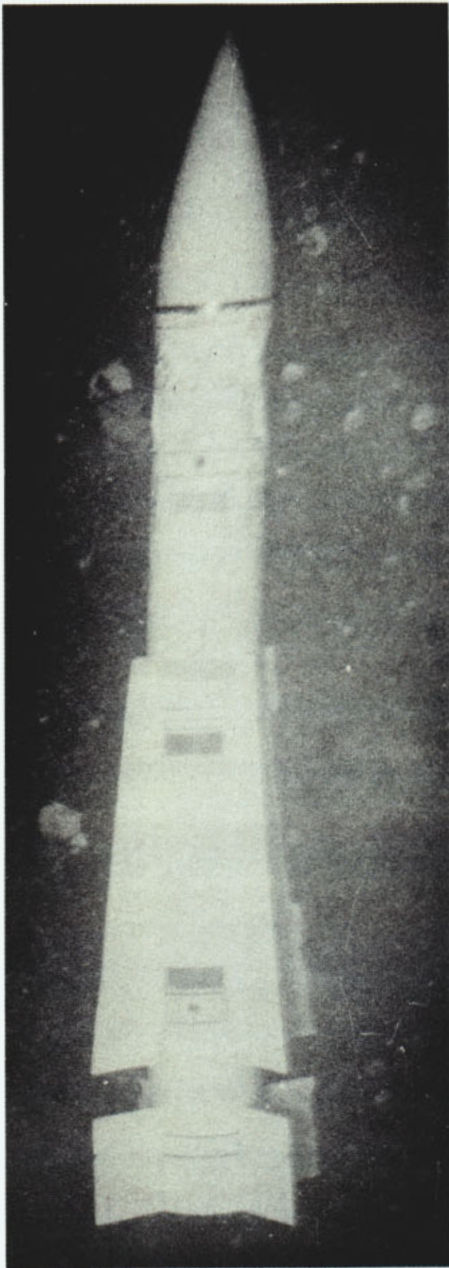
an eight-inch nylon lift line.

The plan didn't work. An electrical failure knocked CURV out of action and the Navy ordered in *NR-1*, a nuclear-powered research submarine, to aid in the operations. *NR-1* arrived on scene and quickly identified the plane.

But she also discovered that the F-14 was badly fouled in a heavy fishing net, and that the sophisticated *Phoenix* missile was not attached.

The recovery stage began with the *NR-1* hooking a nylon line 30-feet long and 10 inches in circumference around the starboard main landing gear of the *Tomcat*. On October 26, *Constructor* lowered a hoisting line to *NR-1* which connected it to the line previously attached to the landing gear. *Constructor* then passed the hoisting line to the British flag vessel M/V *Oil Harrier*.

Oil Harrier was able to raise the plane near the surface. She then proceeded to slowly tow it toward shallow water. After traveling some three miles, however, shifting ocean currents, high winds and choppy seas



produced too much tension in the lift line and it failed.

But this time the plane landed, wheels down, so the *NR-1* could not get close enough to place another loop around the landing gear, so it was decided to use the 30-foot line already attached for the next lift attempt. Adding to the complications was the fishing net in which the plane had originally become entangled, for the net now constituted a danger to a submersible trying to get close to the plane. The next day, a replacement 10-inch-circumference, nylon lift line provided by *Shakori* was passed by *Oil Harrier* to *Constructor*. Again, *Constructor* positioned the line for *NR-1* which made the hookup to the 30-foot line, and passed it back to *Oil Harrier* for hoisting. The lift commenced at 2230 and at 0100 the line parted for the second time, allowing the aircraft to fall back to the seabed, again with wheels down. When the line was recovered, it was discovered that the failure had occurred in the 30-foot section that had been heavily stressed in both lifting evolutions.

While the salvage team considered what to do next, *NR-1* began searching for the *Phoenix* missile. On October 30, the missile was located, and the next day *NR-1* succeeded in lifting the weapon to the surface, using her remote grapple.

Putting an alternate plan into effect, M/V *Constructor* and M/V *Oil Harrier* were replaced by the German

flag salvage vessel M/V *Taurus* and the large British trawler M/V *Boston Halifax*. An additional vessel, the German salvage support ship SS *Twynford* accompanied the group back to the recovery site. When trawling for the aircraft with a special steel trawl net by *Boston Halifax* proved unsuccessful, *Taurus* and *Twynford* towed a wire drag and succeeded in snaring the aircraft. With both ends of the wire drag on *Taurus*' winches, the aircraft was towed submerged almost ninety miles to shallow water off the coast of the Orkney Islands. Here, U. S. and German divers attached additional cables and the aircraft was finally brought aboard.

Admiral David H. Bagley, Commander in Chief U. S. Naval Forces Europe praised the combined efforts of the navymen involved: "During the past eight weeks you have worked and performed admirably under the most adverse conditions. Your perseverance and flexibility in meeting and overcoming the varied problems of this successful deep ocean recovery with limited assets, is a source of admiration and pride to all of us who realized the complexity of the task you have performed." →

Left: Phoenix missile on the ocean bottom as seen from the nuclear-powered research vessel, NR-1.

Below: Taurus crew begins hoist of mangled F-14 onto deck. Photo by PHC M. W. Melton.



The Eyes of the Search

Side Scan Sonar



The hundreds of men, numerous ships and mix of equipment that searched for the sunken F-14 all depended on one device—side-scanning sonar. It provided them with the eyes they needed thousands of feet beneath the surface of the ocean.

USS Shakori (ATF 162) towed the side-scan sonar—a torpedo shaped “fish”—that picked up a promising contact eventually identified as the missing F-14. Side-scan sonars are towed astern of a vessel near the

seafloor. They are controlled by the mother ship’s speed and the length of the towing cable.

They emit short acoustic fan-shaped pulses that bounce off objects. The information is sent to onboard graphic recorders where a record similar to an aerial photograph is made.

The Navy had plenty of “muscle” on the F-14 search site. But the “eyes” of that search made the difference between success or failure.

Engineering Specialist

High priority in Navy's future



A plan to regenerate and redirect the Navy's most important team of engineering specialists—a community of restricted line officers called Engineering Duty Officers (EDs)—was approved by the Chief of Naval Operations in October 1976. These changes will affect not only the ED community, but the entire Navy as well.

Vice Admiral C. R. Bryan, USN, COMNAVSEASYSCOM, a career ED, directed the study group which formulated the planned changes. In the following interview, VADM Bryan discusses the "new look" of the engineering duty officer community.

Q. Admiral Bryan, what does this extensive overhaul of the ED program mean in terms of our Navy's ability to carry out its mission?

A. The Navy's ability to fulfill its mission depends on the number and quality of modern warships we can build, and on the material readiness of existing ships and combat systems. Most Navy people are acutely aware of problems being encountered in these areas: shipbuilding costs; claims dis-

putes with some shipbuilders; extensive work required to catch up on the ship overhaul requirements; and simply keeping our ships and equipment in an up-status when deployed. Engineering Duty officers have important responsibilities related to all these matters, and must nurture and maintain the degree of technical competence and experience in ships, ship combat systems, and ordnance and electronic systems necessary to solve these problems.

The ED study, completed in August 1976, recommended ways to improve the Navy's ability to do this job. CNO has directed that the recommendations be implemented.

Q. *Admiral, why was a study of the ED community ordered initially and what changes were deemed necessary?*

A. Based on his own experience and the advice of his advisors, the CNO ordered the formation of a study group to investigate the role of the ED community in light of increasingly sophisticated shipboard systems and complexity of their maintenance. He noted that there was a clear need for a comprehensive review of the fundamental requirements for EDs and also for a specific determination of their role in the Navy today and in the future.

Through the years, the EDs are hardworking, dedicated officers. To fulfill their roles for the Navy of the future and achieve lasting solutions for the problems I mentioned earlier, we need even more technical expertise and involvement by EDs than we have had. Our study has shown that we need to train existing EDs more, and we need to recruit new people who have the potential to perform at extremely high levels of technical competence.

Q. *What precise roles did the study group envision for the future ED community?*

A. We felt that one of the key problems in the past has been a lack of a clear-cut definition by the Navy of the ED's role.

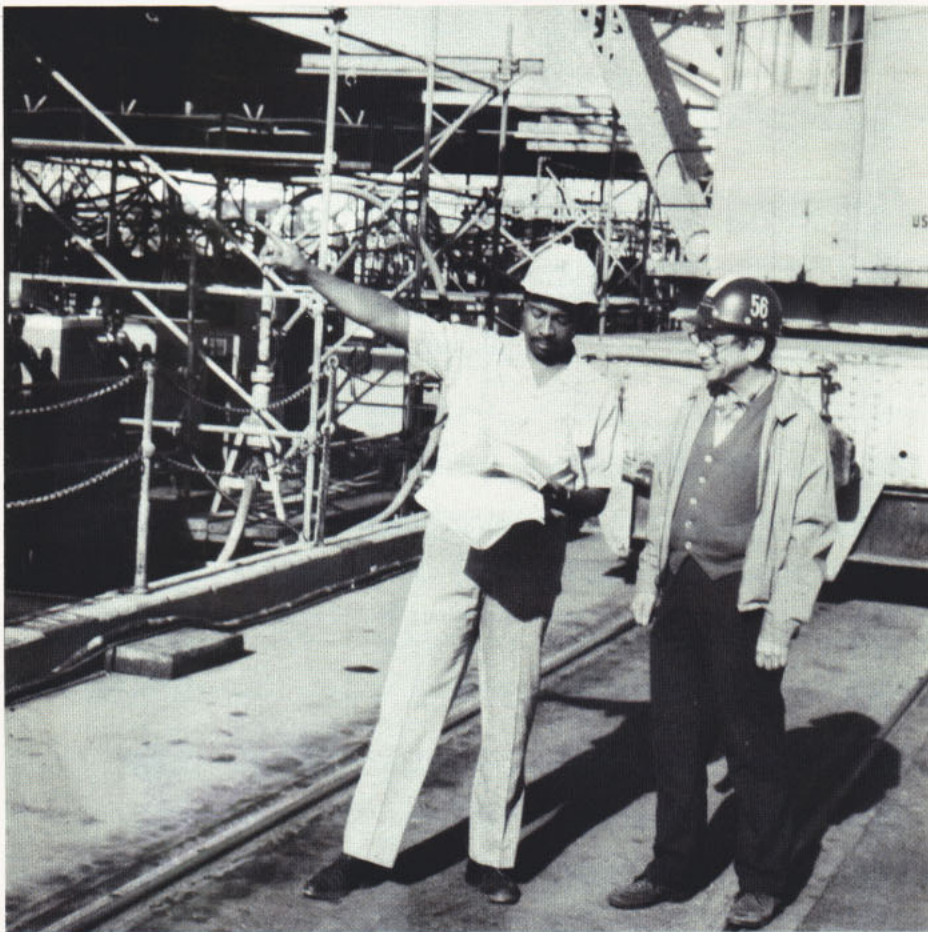
The group determined that the Navy needs EDs who are highly trained, experienced, professional naval engineers capable of technically supervising the design, acquisition and maintenance of ships and combat systems. That means EDs should be ready and able to ac-

cept personal responsibility for technical matters in assignments involving ships and combat systems, and other associated areas.

Q. *How does the Navy plan to develop the kind of ED community it wants?*

A. Several changes are anticipated. The fundamental one involves an aggressive effort to bring in the kind of technically qualified people we need. It means selling the ED career field to qualified students at the Naval Academy, NROTC units and Officer Candidate School. We were formerly unable to assign people to the program directly from the Academy and NROTC, but those avenues are now being opened.

Q. *What is the relationship between*



the Unrestricted Line subspecialist and the ED?

A. There is a need for high quality URL subspecialists in the design, acquisition and maintenance of ships and combat systems, to provide operational experience and that degree of direct technical contribution appropriate to their subspecialty. The URL material

support selection board recently completed a review of the URL community to identify individuals qualifying as proven subspecialists. The review board recommended designation of 331 new proven material support and the continued proven subspecialist designation of 629 officers in the grade of lieutenant commander through captain.

However, as a result of stringent selection standards, proven subspecialist designation for 425 officers (90 lieutenant commanders, 217 commanders and 118 captains) was deleted.

Q. *What are the plans for improving qualifications of EDs once they are in the engineering community?*

A. First, we want to ensure that the



jobs EDs are assigned make the best use of their abilities and develop their potentials as officers and engineers. This will require some changes in the ED billet structure. Since EDs must be competent naval officers first, they should have sea duty experience early in their careers. At more senior levels, however, EDs will no longer be assigned as engineering officers aboard individual ships. Such an assignment is more properly the role of the unrestricted line specialist. EDs at sea will serve as tender repair officers and main propulsion assistants on some carriers.

There will continue to be EDs in key fleet and type commander maintenance jobs. More emphasis, however, will be placed on ED direct involvement—technical involvement—in design and shipbuilding.

Q. *What about education and training for EDs of the future?*

A. The right kind of education is crucial to fulfilling the ED role and was carefully considered by the study group. A bachelor's degree in a scientific or engineering field was considered

a valid prerequisite. The Engineering Duty Officer's Basic Qualification Program, already in effect, was endorsed as an important training milestone early in an ED's career. Finally, a two-year postgraduate program in a field related to ships, ship combat systems, or ordnance and electronic systems was determined to be appropriate

advanced training.

Subject to Navy requirements, selected officers may be authorized to continue beyond the master's level to permit concentrated study in the application of their technical specialty to the design of ships, ship and combat systems, and ordnance and electronic systems. Although some aspects of management such as contracting and finance are important, the emphasis at postgraduate school is clearly on the side of technical know-how.

There will continue to be a need for specific management training through selected short courses in certain disciplines and through courses available at the Defense Systems Management College at Ft. Belvoir, Va. The management of our ship and weapon system acquisition programs will be improved in direct proportion to the degree of solid technical expertise behind that management. Many competent engineers have become successful managers; I do not know of any mediocre or poor engineers who ever became good managers.

Q. *Were current billets reserved for*

EDs reviewed?

A. Yes, each senior key position was analyzed to determine whether the position was, in fact, needed and, if so, the required grade required to fill it. The group then recommended the category of individual best qualified to perform the assignment, whether an ED, URL, staff corps officer or civilian. The group identified 178 captains' billets as "key," but due to the complexity of the career field and short time available for the study, a similar careful evaluation of other ED billets may require adjustments to this list.

Q. *You mentioned the need for advanced education for EDs. Where is this advanced education usually obtained?*

A. Postgraduate education for EDs is normally through either the Naval Postgraduate School, Monterey (NPS) or Massachusetts Institute of Technology (MIT). Study at NPS is generally a two-year effort leading to a master's degree in engineering or an associated technical area. Study at MIT is a two- or three-year effort leading to a master's or an engineer's degree.

A technical master's degree, however, is sufficient in most instances for proper accomplishment of ED duties.

Summary

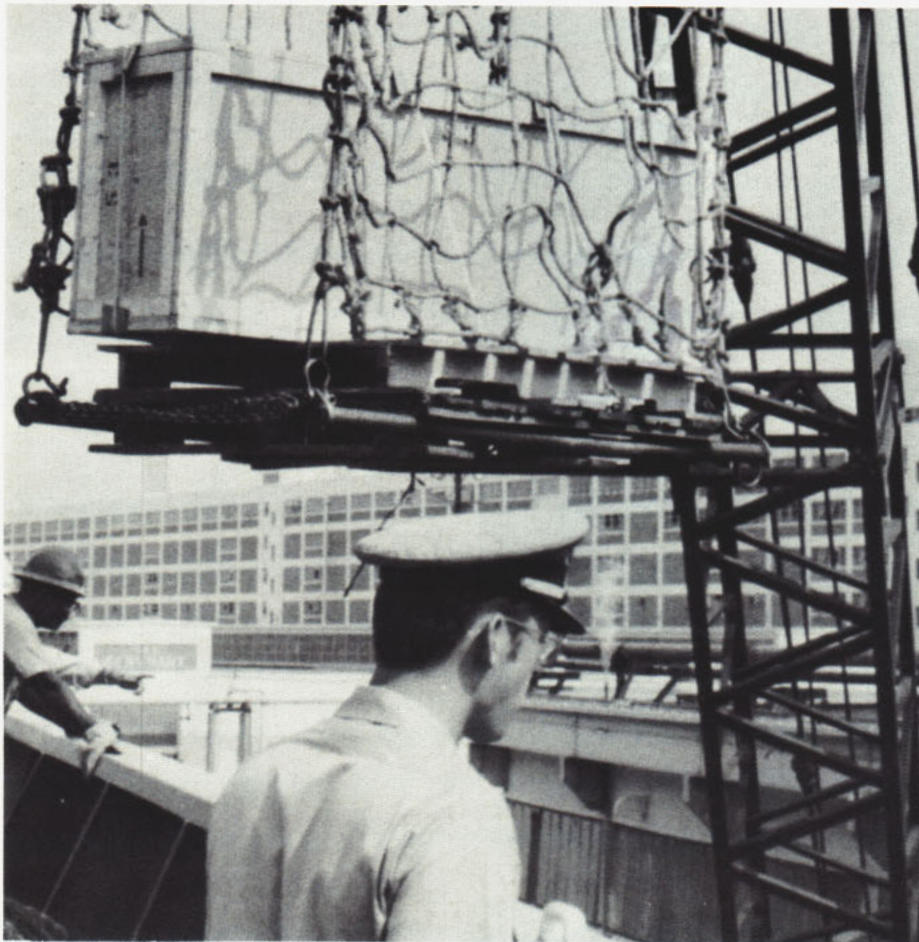
The engineering duty officers of the future will be actively recruited, provided specific ongoing professional training and assigned to the jobs, both ashore and afloat, where their expertise can most benefit the Navy.

An active program of regenerating the Navy's most important team of engineering specialists takes high priority. It will ensure that top-caliber people become the EDs of tomorrow.

At the same time, sharply focusing on the duties and responsibilities of the ED will guarantee that when they are called upon, they will truly be the "experts" the Navy must depend upon in this technological age.

And, finally, EDs will continue to be naval officers and professional engineers. But they will also possess the solid, "hands-on" type of experience and training required of people knowledgeable of complex systems. ⚓

'TUT' Took 3301



What's so unusual about a Navy ship carrying non-Navy cargo? Nothing, unless that cargo happens to be the most spectacular archeological discovery of the 20th century.

Fifty-five pieces of treasure, some of the most beautiful and fabled hoard found in the tomb of the boy-king Tutankhamen (c. 1343-1325 B. C.), were transported by USS *Milwaukee* (AOR 2) from Alexandria, Egypt, to Naples, Italy, where they were transferred to USS *Sylvania* (AFS 2) for delivery to Norfolk, Va.

The Egyptian Government made an unprecedented loan of the treasures to the U. S. for a traveling exhibition that will be seen in Washington, Chicago, New Orleans, Los Angeles, Seattle and New York City over the next 30 months. The exhibit opened in November in Washington, where it will remain until mid-March.

Very little is known of Tutank-

Left: Crate containing part of the Tutankhamen treasure is unloaded from USS Sylvania (AFS 2) at Norfolk.



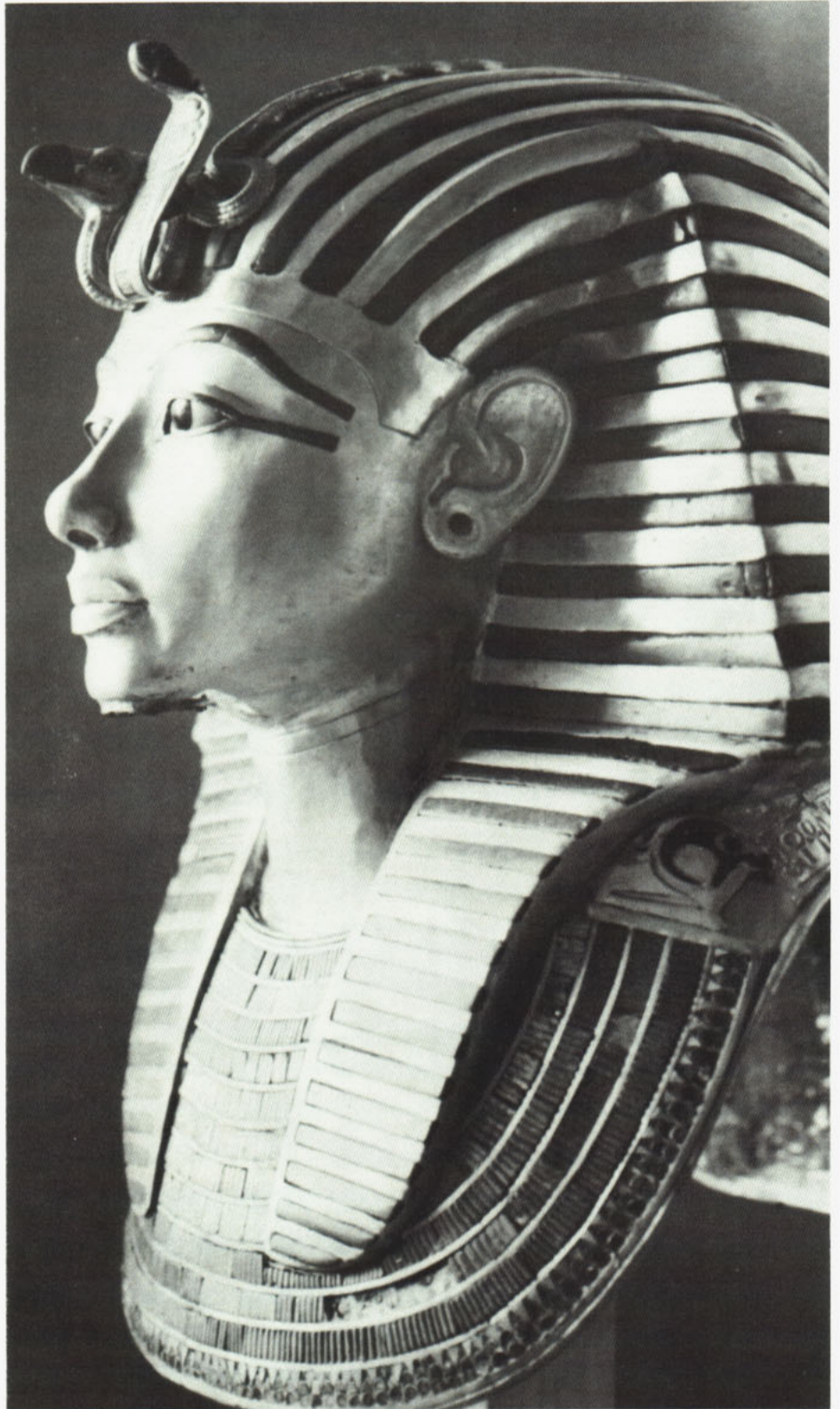
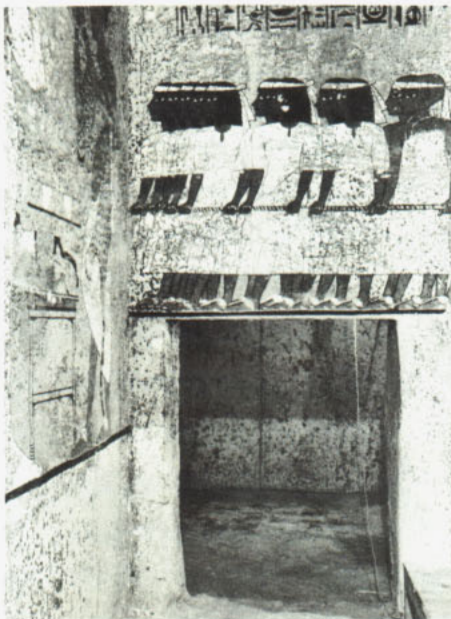
Years to go to Sea

hamen's life and reign, a period of internal upheaval, unrest and demoralization among the Egyptians. He ascended the throne when he was about nine but died when he was only 18.

His own tomb was unfinished at the time of his death and he was buried in one prepared for Ay, his chief vizier. The whereabouts of Tutankhamen's tomb remained a mystery for centuries until archeologists found it intact and nearly undisturbed although ransacking robbers had virtually destroyed countless tombs through the centuries.

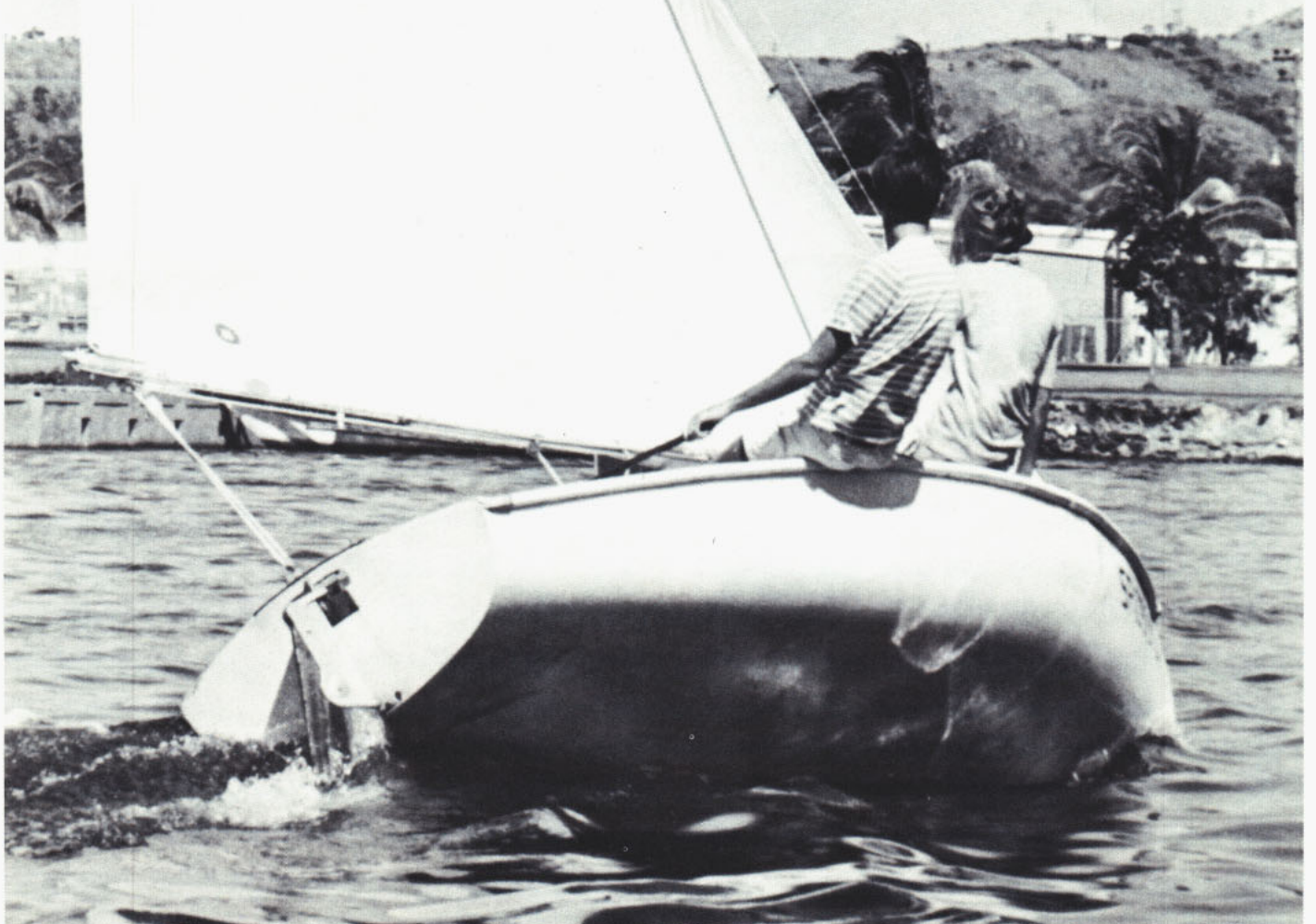
Included in the U. S. exhibition is the gold mask of Tutankhamen, inlaid with carnelian, lapis lazuli, colored glass and quartz; the wooden gilt statuette of the Goddess Selket; the gilded figure of Tutankhamen harpooning; and a small gold shrine of detailed craftsmanship. Also included are examples of funerary jewelry and furniture. ↴

*Below: East wall of burial chamber.
Right: Tutankhamen's mask.*



She Took Only Minutes To Find Her Element

L₁₄





Above: Cheryl watches her students navigate Subic Bay yacht basin. Left: She helps student rig the rudder.



If interest in sailing has picked up recently at the U. S. Naval Base, Subic Bay, R. P., it may just have something to do with the new sailing instructor down at the yacht club.

Cheryl Von Gogh is a blonde, blue-eyed sailing enthusiast, and the wife of a Navy first class mineman. She is also one of many Navy dependents

who have become actively involved in Navy community life, and is fully enjoying herself in the process.

For one who had never sailed until she arrived in Subic, Cheryl has come a long way. Of course, it took a little husbandly prodding by Bob Von Gogh to begin her nautical career. In fact, he signed her up for lessons behind her back.

"He didn't tell me until two days before the course began," Cheryl recalled. "But after I got started, I really liked it. Sailing is great fun."

Well, one thing led to another. Cheryl's instructor needed an assistant, and was obviously impressed with the cut of his student's jib. She began assisting with rigging on Saturdays, and lectures on Thursdays and the next thing she knew she had earned her own Red Cross instructor certification card, and was launching novitiates into the exciting world of sailing.

In her new capacity, Cheryl has

assumed numerous responsibilities. Classes often are large—20 or more—and instruction includes man overboard drills, rigging, the theory of sailing, how to handle a capsized vessel and, of course, student sailing in the yacht club's *Lido 14s*.

An old salt by now, Cheryl speaks of her new calling with a good deal of pride and authority. "The whole idea of the (nine-week) course is to teach people how to handle the boat properly and safely," Cheryl said.

"Anybody can get out there and sail. They can also do a lot of things wrong. Like jibing—that's when the stern passes through the wind and the boom snaps from one side to the other. If the student isn't alert or doesn't know what he's doing, he can get hit on the head, knocked overboard or the boat could capsize."

Are there any questions out there? If so, you'll have to get in line. ⚓

DAYDREAM



False Wounds Add Realism in Deadly Game

BY LCPL N. LALUNTAS

"OK, move it out," shouts a Marine gunnery sergeant; a platoon of Navy men hustles into the thicket.

"Stay on line and spread it out," barks the instructor. "If this was the real thing and you were bunched up, half of you would be dead. All it takes is one grenade . . ."

The wistful fantasy of a seasoned Marine "gunny"? No, it's just training as usual at the Fleet Marine Force Atlantic's Field Medical Service School, Camp Lejeune, N. C. The students are Navy hospital corpsmen who may be called upon to serve with Marines.

"What are you going to do to control that hemorrhage, Doc?" asks the field operations chief. "This arm splint



ING IS OUT

is good and tight, but don't leave so much of the hand showing," advises the medical instructor. "If the man must walk any distance, it would work its way loose."

In field exercises, under simulated battle conditions, there may be as many as 50 "casualties" in an area of about 1,000 square feet.

"I'd hate to be in a war situation with this many casualties so close together," remarked one student.

The mass casualty exercise starts with a simulated amphibious landing which meets heavy resistance. About 45 corpsmen are designated "casualties" and are sent into the field with fake wounds made out of rubber. Each wound is considered serious,

some more so than others and needing more immediate attention. Twenty-five students, playing the role of company corpsmen, search the area engulfed by smoke. The students must try to remain hidden from the enemy, using any trick of concealment they can. A radio-controlled machinegun, firing blanks, is set off every time a corpsman is sighted.

After an hour of this kind of exercise, the students, tired and sweaty, trudge to a clearing for a C-ration break.

After the too-short lunch period, the men are rounded up for the "search and destroy" briefing. Their mission: sweep the woods to find and destroy a guerrilla base camp. The military

tactics instructor maps out the area.

In full combat gear, the sailors fall out onto the road. "Keep moving into the woods," commands the instructor, "and keep your minds on the assault. Daydreaming could mean death."

One man charges ahead of the rest as they comb the thickets. "Hey, John Wayne, you wanna get with the rest of us? You're not gonna win it all by yourself," yells a Marine instructor.

A shot rings out and the man falls. As a company corpsman rushes to his side, another radios for a medevac.

The corpsman quickly wraps the fallen man's head, offering reassurance as he tends the wound. "Hang in there, buddy. You're gonna make it. Somehow I just know," he grins. →



Hospitalman R. L. O'Keefe pushes on through water and mud during training mission.

Navy corpsmen spend six days and nights in the field applying first aid and military tactics they have studied for five weeks in the classrooms.

"Our mission," says Lieutenant (junior grade) David D. Brooks, training officer, "is to train hospital corpsmen and dental technicians to serve Fleet Marine forces. That means a complete understanding of Marine Corps functions, organization and tactics, in addition to medical skills." This is accomplished through the field exercises.

"We throw so much at them in so short a time, that it is difficult to comprehend without the field exercises," says Marine Gunnery Sergeant Calvin E. Decker, military training NCO.

"Some of them feel we're trying to make Marines out of them." No, he stresses, "but they have got to see how it works before they can do their job."

"Most of them have never lived or worked with Marines," continued Decker. "Our training must prepare them to protect themselves and serve their units."

"Ideally, the corpsman will take his place in a Marine formation and never falter."

High ideals and compassion are not uncommon in the ranks of corpsmen who have served with Marines in combat. For instance, Marines at the Field Medical Service School still talk about Hospital Corpsman 2nd Class Chris M. Pyle. Pyle received orders to Viet-

nam after completing field training. In a letter to his mother drafted January 1969, he wrote the following words:

"Some day I will see before me a wounded Marine. I will think all kinds of thoughts, but my training has prepared me just for this moment. I doubt that I will be a hero, but to that Marine, I will be God. I am hoping no one will die while I'm helping him; if so, some of myself will die with him. No matter who it is, if he's wounded in the middle of a rice paddy, you can bet your bottom dollar that whatever God gave me for power, I will try until my life is taken to help save him and any other."

"Doc" Pyle was killed in action May 28, 1969. ↓

*Below: Fallen tree conceals Hospital
Corpsman Third Class D. L. Jackson as
he bandages a leg wound.*

*Bottom: "Casualties" head to rear, seeking
medical aid.*



Rights & Benefits

Buying your mobile home

JO2 DAN WHEELER

It's no secret. Housing prices have risen so rapidly during the past 10 years that many Navy members (and their civilian friends) have been priced out of the home-buying market. For some, an alternative to buying traditional housing or a condominium is purchasing a mobile home. That's when expert advice is sought from an experienced friend—the Veterans Administration.

Though VA has been guaranteeing mobile home loans for only six years, they have been in the business of helping veterans and service members buy all types of dwellings for more than 30 years. During that period, VA has "cosigned" more than nine million mortgages totaling \$120 billion.

When VA began guaranteeing loans for mobile homes and lots, the limit was 30 per cent of the purchase price. The Veterans Housing Amendments Act of 1976 increased the guarantee to 50 per cent, or \$12,500 on single-

width units and \$20,000 on double-width units, whichever is less.

A "guarantee" is simply that amount for which VA cosigns on your mortgage. If, for example, VA guaranteed \$12,500 of a \$30,000 mortgage on a single-width mobile home, and the borrower later defaulted causing the lender to foreclose, Uncle Sam would have to pay the guaranteed portion of the loan and subsequently bill the borrower for VA's net loss after the home was resold. (It's important to note here that VA usually assumes the entire note and resells the home itself. Occasionally a purchaser can get a bargain by checking VA listings first when searching for a home.)

The readily apparent benefit of the guaranty program is that it meets the requirement for investment protection demanded by commercial lending institutions through substantial down payments. Because VA-guaranteed loans require no down payments (because VA affords the lender protection), it's easier for young couples and those who have been unable to save enough for a conventional mortgage loan to purchase their first home.

Other advantages include the fact that the VA:

- Inspects homes on the market and requires sellers to meet minimum quality standards, thereby ensuring that VA purchasers get value for their home-buying dollars.

- Is ready to work with a purchaser who finds himself in temporary financial straits after purchasing a home. Often the administration acts as a liaison between the service member and the lender to prevent

foreclosure and effect a mutually acceptable agreement temporarily lessening payments, if necessary.

- Polices builders to ensure they are strictly following building codes.

- Continually works with lenders, encouraging them to lend to service members and vets under the guaranty program.

- Works closely with potential purchasers to ensure they are aware of hidden costs in home ownership and that they are not buying a home which they may outgrow.

If the mobile home in your future was constructed after June 15, 1976, it must meet the new Department of Housing and Urban Development standards. These specify that the unit must be suitable for single-family occupancy on land (as opposed to a houseboat, for instance) and it must have facilities for eating, cooking, sleeping and sanitation.

A VA-guaranteed mobile home loan may be used to purchase either:

- A mobile home unit, double or single width. Doubles must be at least 20 feet wide with 700 square feet of floor space; singles, 10 feet wide with 400 square feet of floor space.

- A land lot for an already owned mobile home. According to VA officials, this type of loan is difficult to get approved under the guaranty program because commercial lenders are reluctant to lend money in such a small amount if they have to abide by VA stipulations setting maximum interest and term of payments.

- A mobile home unit and a lot for installation.

- For preparation of a lot on which to install a mobile home.

Anyone who has served on active



duty since Sept. 16, 1940 and separated under other than dishonorable conditions (or is still on active duty) is eligible for a VA-guaranteed loan on any type of family dwelling if he or she meets financial requirements set by VA and the lender. Only those individuals, however, who have full entitlement for the guaranty program are eligible. In other words, if a vet or service member has previously used a VA guarantee, that loan must have been paid in full or assumed by another VA purchaser before a second guaranty loan can be made.

Additionally, unremarried spouses of members who served on or after Sept. 16, 1940 are eligible if the member died as a result of a service-connected disability. Spouses of personnel officially listed as MIA or POW for at least 90 days are also eligible. (This entitlement ends when notice is given that the service member is no longer MIA or a POW.)

Currently, there are 30 million veterans, not including active duty members, living in the United States. Many of them are eligible for the VA mobile home guaranty program. If

you are one, or are an interested active duty member, contact the nearest VA office or commercial lending institution for more information and applications. ⚓

Grains of Salt

Dorie Miller - He Displayed Selfless Courage



Blacks have made a number of noteworthy contributions to the U. S. Navy in its 201-year history. Few, however, have given as much as Dorie Miller, an enlisted hero during the attack on Pearl Harbor. This is his story.

Born in Waco, Tex., on Oct. 12, 1919, Doris (Dorie) Miller entered the Navy as a Mess Attendant 3rd Class at Dallas on Sept. 16, 1939. In his brief career he advanced to the rate of Ship's Cook 3rd Class.

Miller conducted himself heroically in the battleship

USS *West Virginia* (BB 48) during the Japanese attack on Pearl Harbor. Historians have recorded that he was collecting laundry in the battleship that Sunday morning of December 7 when general quarters sounded as the raiders struck Hawaii.

Dorie raced to his GQ station—the antiaircraft battery magazine amidships—only to find that torpedo damage had already taken its toll. He hurried topside where he braved the bombing, strafing and flaming decks to help the ship's mortally wounded commanding officer to a safer place. Miller then manned a machine gun and opened fire on the attackers, relating later that he believed he got one before being ordered to leave the bridge after some 15 minutes of continuous firing.

For his selfless courage in trying to save the commanding officer and his extraordinary display of heroism in the face of death, the 22-year-old sailor was awarded the Navy Cross.

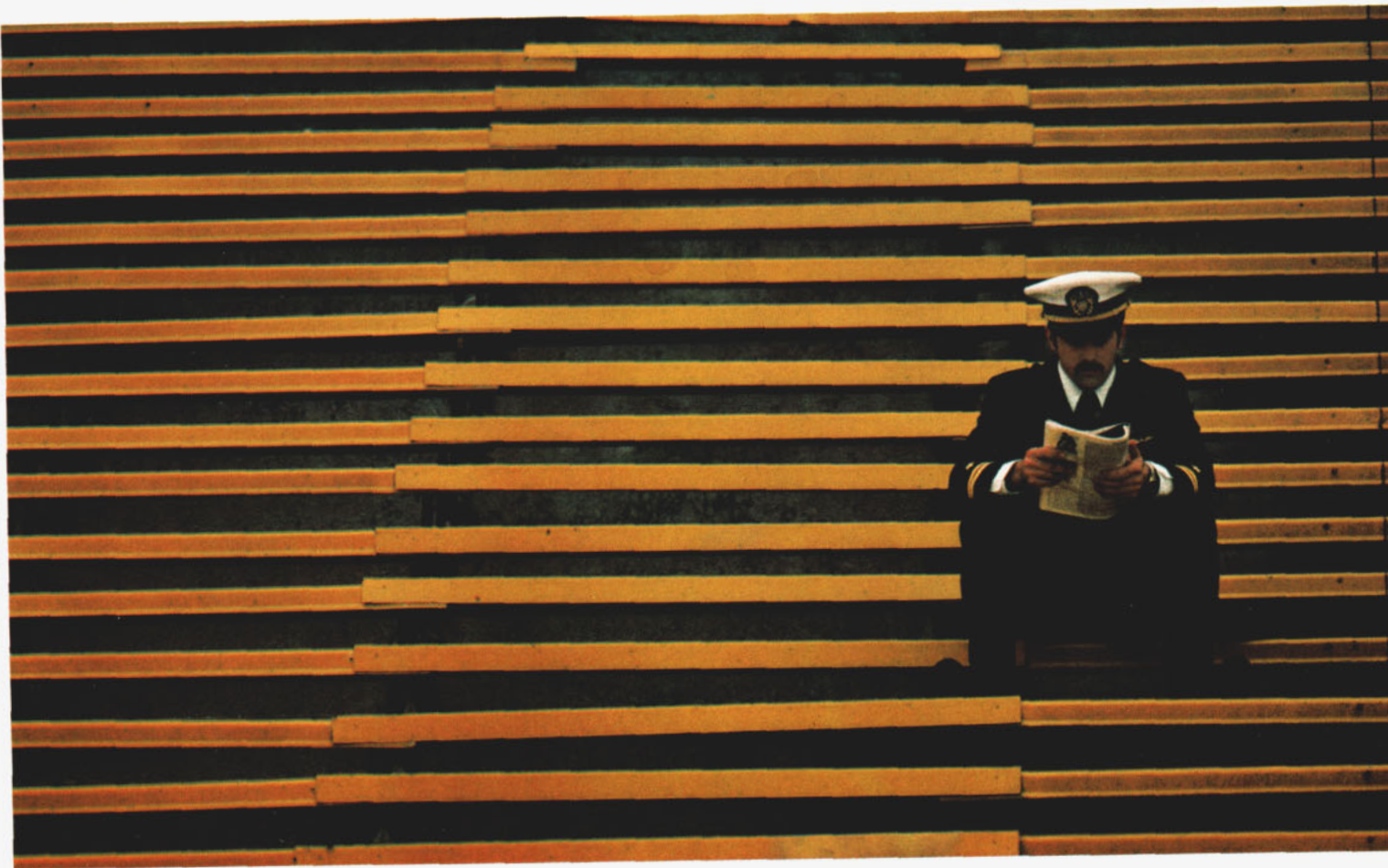
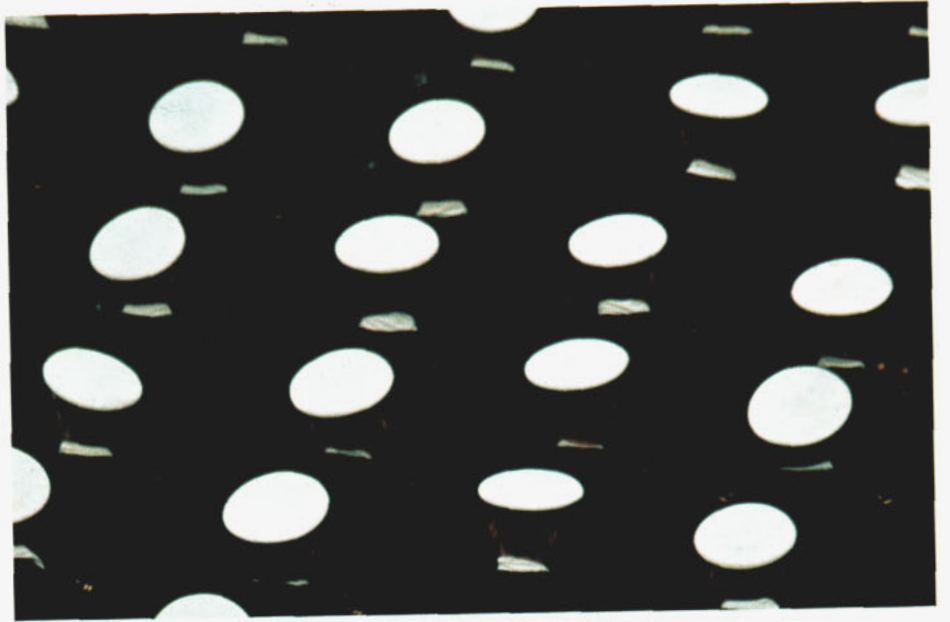
Following his tour aboard *West Virginia*, Miller spent 17 months in the cruiser USS *Indianapolis* (CA 35). He then spent a brief time at Puget Sound Naval Shipyard in Bremerton, Wash., before joining the crew of a newly constructed escort aircraft carrier USS *Liscombe Bay* (CVE 56) in the spring of 1943.

Shortly afterward, Miller was promoted to third class. Then, barely more than two months later, having completed drill and exercise periods off the California coast, Dorie and the new flattop departed San Diego on October 21. Their destination was Hawaii and subsequently the invasion of the Gilbert Islands.

The battle for Tarawa began November 20, ending in U. S. victory some 76 hours later. The young Texan sailor had had his second taste of battle and came out unscathed.

The following day, just after reveille—on her 99th day as a Navy ship—*Liscombe Bay* became the target of a Japanese submarine torpedo. In 23 minutes she sank, carrying the task force admiral, commanding officer and 644 crewmen with her. Petty Officer Dorie Miller was not among the 242 survivors. ↓

**THEY
GAME
EARLY**



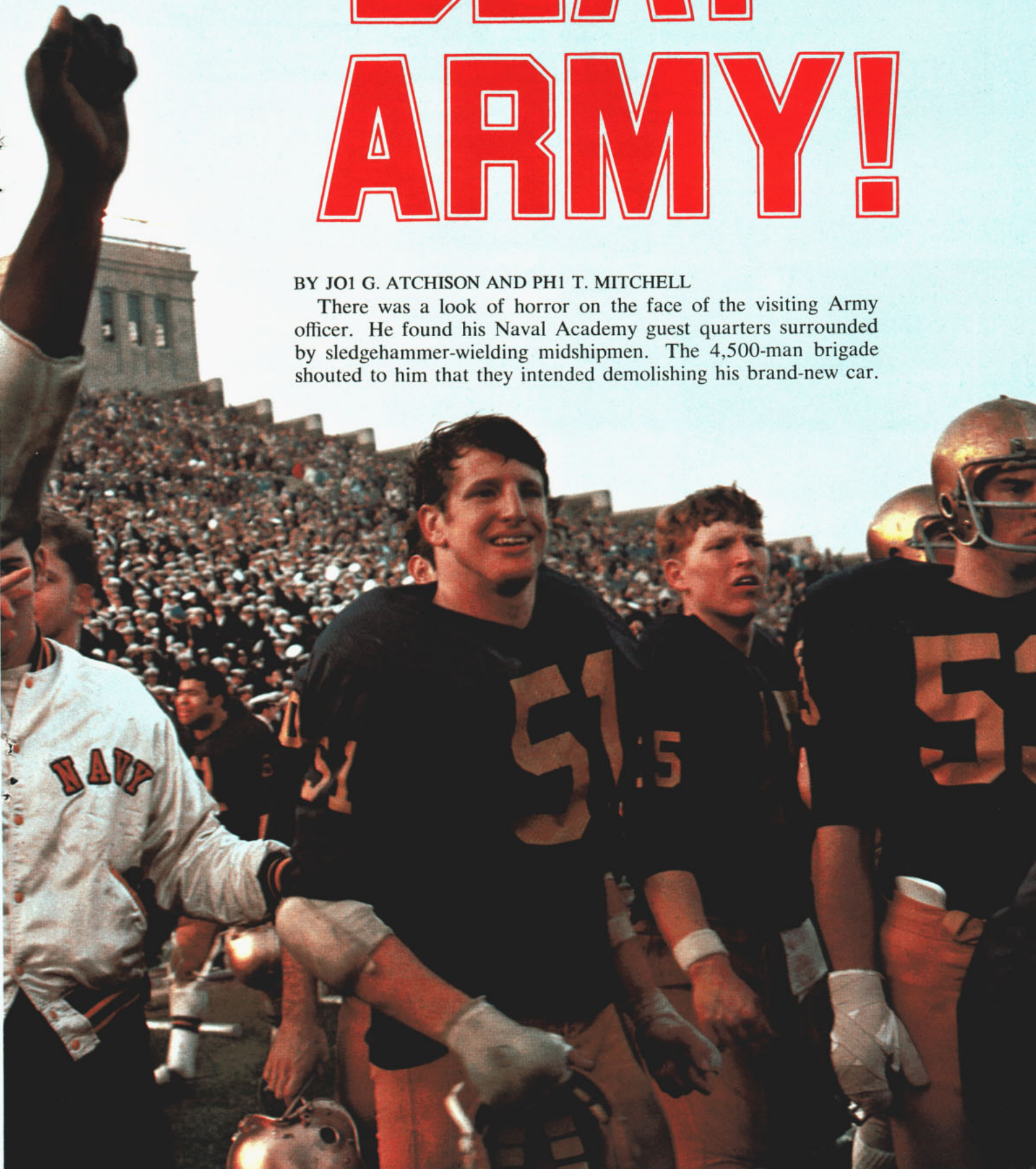
TO WATCH NAVY...



BEAT ARMY!

BY JOI G. ATCHISON AND PHI T. MITCHELL

There was a look of horror on the face of the visiting Army officer. He found his Naval Academy guest quarters surrounded by sledgehammer-wielding midshipmen. The 4,500-man brigade shouted to him that they intended demolishing his brand-new car.



Below: Exuberant midshipmen carry Academy Superintendent RADM Kinnaird McKee during pre-game pep rally. Right: Applying Tecumseh's annual coat of war paint.



Stunned, he watched as the midshipmen began hammering away. His fear almost turned to panic when, after the horde reduced the car to rubble, they turned on the house. The grim-faced Brigade Commander marched up the steps and handed the quaking officer a piece of paper . . . a check for more than \$4,000—collected at a dollar apiece from the brigade—and enough to replace the Army officer's "new" car with a better model.

What's going on?

That incident, considered by many Naval Academy alumni as the grandest

prank of all, happened in 1969—at the start of the week-long series of events serving as prelude to the annual Army-Navy football game.

Each year, during one madcap week in November, the Naval Academy takes on a decidedly different face. The subdued atmosphere of a center of learning and naval tradition is shattered by the raucous pranks and pratfalls of thousands of midshipmen gearing up for the big game. The crisply manicured lawns, stately buildings and dignified faculty homes suddenly blossom with posters and floats, all bearing the same basic message:

"BEEEAATT AAARRMMYY!!!"

The roar of a thousand voices shatters the midnight silence, bounces off

the buildings and echoes through the yard. The massive doors of Bancroft Hall crash open and wave after wave of midshipmen come pouring down the steps, across Tecumseh Court and spread out—so it was in November 1976.

The object of the midshipmen's most recent boisterous assault was the superintendent's home. After cheers, songs and skits on Rear Admiral Kinnaird R. McKee's front lawn, the superintendent (as tradition said he would) granted "over-the-wall" or liberty in town for the midshipmen. Away they went—streaming through the gates and into the nearby community.



Left: Guarding Bancroft Hall at three in the morning is the A-4 Skyhawk midshipmen moved from its permanent home on Thompson Field. Below: Navy fans silhouetted by massive bonfire.



But even as this mass of midshipmen began a night on the town, a small, secretive group had stayed behind to launch yet another mission in the spirit of Army-Navy Week. For 51 weeks a year, two Navy aircraft—an A-4D *Skyhawk* and an F-4A *Phantom*—sit heavily chained and bolted to concrete pads adjacent to Thompson Field. But in the week before the game, they tend to change settings—showing up in the darndest places.

The skulking group sifted, one by one, from the shadows and crept across the road. Various tools and lengths of rope appeared from beneath sweatshirts. The great plane-kidnap was on.

Next morning, there sat the *Skyhawk*

on the steps of Bancroft Hall. Midshipmen on their way to class passed around the plane as if nothing were amiss. One, laden with books, paused to examine his classmates' work. "Not bad," he said. "They only had about a two or three-inch clearance to get this thing up here. It'll probably take a week to get it down."

Between classes the courtyards filled with midshipmen's black uniforms and white covers. Up close, one could observe subtle—and not so subtle—alterations in their uniforms. One midshipman strode purposefully toward class, a purple bow tie adorning his otherwise immaculate uniform.

"Beat Army," it said. Such variations on the usually stringent dress code are not uncommon during Army-Navy Week.

Another midshipman, wearing his uniform but sporting the hat style Napoleon made famous, paused and addressed an instructor: "Good morning, professor," he said as he doffed his "cover" and executed a sweeping bow.

The professor shook his head, muttering under his breath as he continued up the steps of Bancroft Hall. →

Pranks, like a cleverly placed smoke bomb in the Army ranks, divided the fans' attention between the playing field and the stands.

Below: Just before the game the brigade of midshipmen marched onto field under cadets' watchful eyes.



Inside Bancroft Hall, people hurried to put the final touches on their "Army Projects"—a euphemism for the incredibly intricate displays and floats each company of midshipmen builds and exhibits at the Academy and at the game.

"Our 'engineers' started in September designing and laying out the electrical circuits and motor parts for this little baby," said a midshipman as he patted what resembled a giant bucket similar to the container in which Southern-fried chicken is carried home. But, according to the legend on the six-foot-tall bucket, it actually contained "Annapolis fried mule." What appeared to be a full-sized back end and hooves of a mule protruded, twitching and turning, from the top of the bucket. "We began 'appropriating' the necessary materials for it a couple of months ago," the midshipman said as he picked up his scattered tools.

But the reward was not just in the building of the projects. One afternoon that week, with all the pomp and ceremony befitting any serious occasion, the "Army Projects" were judged. "Not scathing enough in its attack against Army," said one judge of a project. "The rockets on this 'Attack-Army airplane' failed to fire—definitely not acceptable," said another.





A winner was picked after the judges compared notes to the tune of boisterous lobbying by project builders. A two-man tank, that not only moved about on its own power (accompanied by appropriate tank-like sound effects) but also had a working cannon, won by acclamation. Anything that could launch an orange across Tecumseh Court and strike a target bearing a mule's face in the bull's eye—or actually mule's nose—had to be a winner.

As the days passed, the fervor grew and tales of pranks increased. Midshipmen relished recounting some of the classic stunts—like the demolished car story—that had been pulled off over the years. The one about the Army exchange officer at the Academy who was locked in his room with a mule that had been fed a laxative was a popular tale.

But while pranks may come in endless variety, some things remain constant—like the annual pep rally bash and bonfire. Days before the big event, the Academy maintenance crew was busy laying hands on every available scrap of wood. A steady stream of stake trucks and vans backed up to the center of Thompson Field and dumped their booty. Old wooden pallets and broken chairs were flung on a rapidly growing pile. What appeared to be a batch of tomato plant stakes—perhaps taken from an unsuspecting faculty member's garden—joined the 20-foot-high stack.



The night of the pep rally and bonfire, an expectant crowd gathered around the mammoth woodpile to watch the football team set it off.

“What do you mean you don't have any matches?” The players, looking sheepishly from one to the other, turned their pockets inside out. But, of course! Since none smoked, how could they carry matches?

After a moment's uneasiness, a local newspaper photographer came forward and graciously offered the use of his cigarette lighter. The football players set to work.

Quickly then, the entire week's work was engulfed. First Thompson Field glowed. Then, as the flames

(Continued on page 47)



The sights and sounds included cheerleaders, drum and bugle corps and groups of midshipmen—with friends and family.

BEAT ARMY!

Keeping America Beautiful



YN3 Dickie Erickson stops to talk with a working party planting trees along the main street of Norfolk Naval Station's Destroyer and Submarine Piers. Freshly painted blue and gold trash cans are another of the base's beautification projects.

A Winning Recipe in Norfolk

STORY BY JO2 GARY GRADY
PHOTOS BY PHC MILT PUTMAN

RECIPE

Mix one part transient personnel with one part Correctional Center confinees and add ingredients to already prepared portions of fresh air and hard work.

Add a liberal sprinkling of imagination, enthusiasm and planning.

Stir briskly for two years and top with volunteer work by assigned base personnel and their families.

Serve with generous portions of increased base pride.

The result of the above original recipe has been a well-groomed new look for the U. S. Naval Station, Norfolk. It has also been an award-winning dish; NavSta Norfolk was recently named winner in the government agency category of the national Keep America Beautiful competition.

"When I came here as commanding officer," said Captain Paul L. Merwin, "we made changes in the organization and got people involved in a cleanup program. Base cleanup was given high priority."

The two-year project involved more than just picking up surface trash. Abandoned vehicles were towed to salvage yards, older barracks were modernized, streets and sidewalks were widened and resurfaced, gutters were cleaned, drains unstopped, and trees and shrubbery were planted and trimmed. Wives clubs painted fire hydrants in a Bicentennial motif and planted flower gardens alongside well-traveled streets. In no time, these changes gave the base a new look.

Still, one major eyesore remained—the "strip" on Hampton Boulevard right outside the Naval Station's main gate. This collection of aging buildings, locker clubs, bars and pawn shops—not government property at the time—gave visitors a negative impression before they even reached the base.

Either fate or coincidence, however, eliminated the strip from the list of deterrents to beautification. When a runway extension at the adjoining Naval Air Station became necessary, the large tract of land purchased by the Navy included this area bordering both sides of Hampton Boulevard for several blocks. Dilapidated structures were demolished—those in good repair were refurbished and converted for Navy use. "Honky-tonk Boulevard" lost its roaring twenties look; grass and trees were planted and the

avenue landscaped, creating a park-like atmosphere.

Only a few individuals permanently attached to the Naval Station were directly involved in the on-going program. The executive officer, Commander Jimmy Pappas, accomplished much of the planning. The station's first lieutenant, Master Chief Master at Arms Hugh G. Wade, put the plans into action with the assistance of Chief Constructionman Donald W. Oswald. Oswald was subsequently awarded the Navy Achievement Medal for his efforts.

Everyone on the base however has become involved in keeping the new look looking new. It's a known fact that a clean place is likely to stay clean. The average person feels little remorse or hesitation when adding more debris to an already littered area, but most think twice before tossing the first soft drink can or candy wrapper on a manicured lawn.

While some incurable litterers still seem to reside at Naval Station, Norfolk, littering and vandalism have been greatly reduced since the beautification program began. This is partly due, of course, to pride; the upgrading of security and the subsequent strict enforcement of anti-litter regs also have played a part. Persons caught littering on base are reported, even ticketed. Civilians are ordered to the local Federal Magistrate's Court; military offenders are referred to their commanding officers for appropriate action.

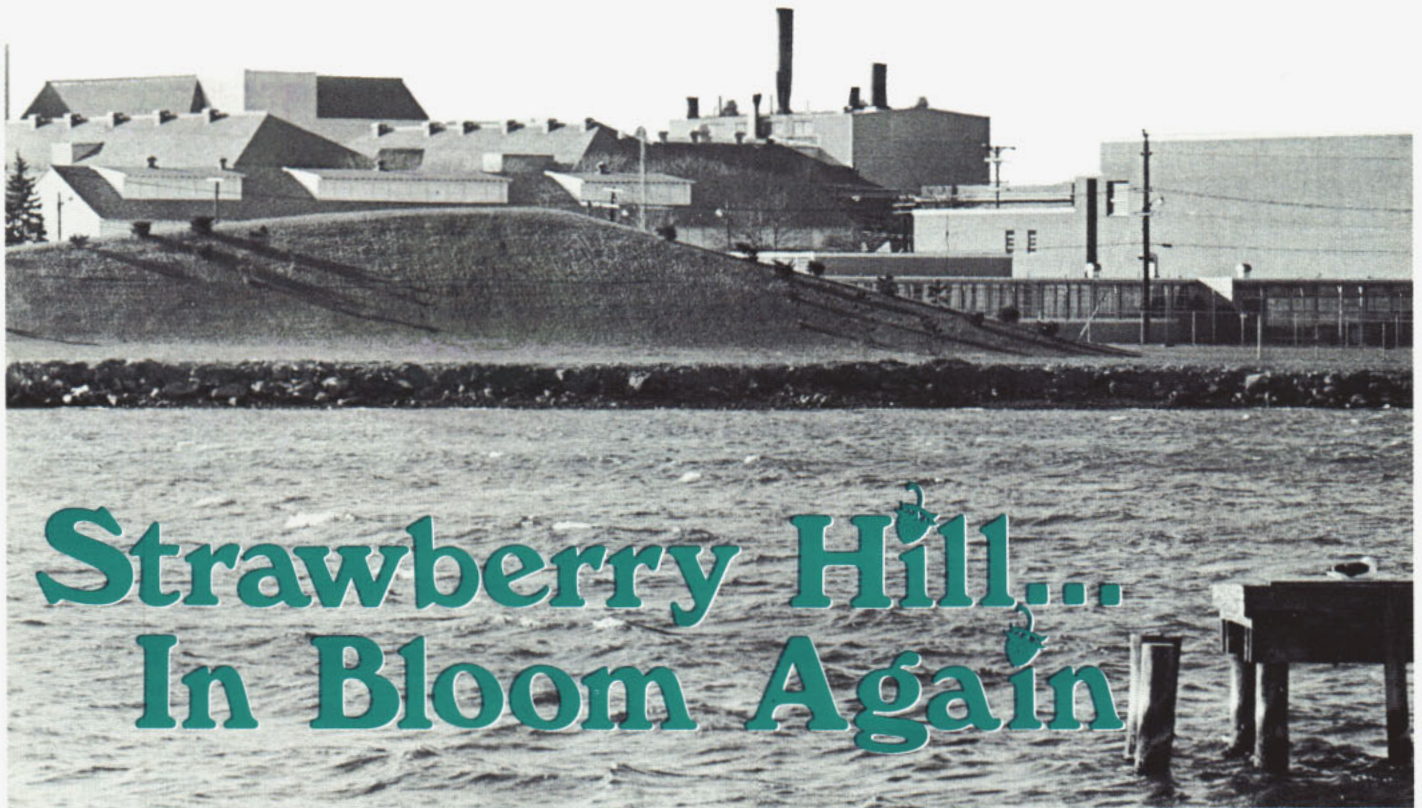
Although the station's clean-up program began independent of any nationally organized endeavor, it has measured up admirably in national competition.

"We saw an ad for the Keep America Beautiful contest," CAPT Merwin said, "and decided to enter. Within two weeks, we had put together a booklet of photos and background material and sent it in for consideration. Frankly, I didn't expect to hear anything more."

(Keep America Beautiful, Inc., is a nonprofit society founded in 1953 to combat litter and improve solid waste disposal. It actively supports more than 100 conservation programs and encourages the cleaning up and beautification of industrial areas under its Clean Community Systems project.)

Much to Captain Merwin's surprise, a telegram came a few months later telling him the Naval Station had been awarded first place in the Government Agency Category of the annual Keep America Beautiful Awards Program. The station topped competition involving other military installations, state, local, and federal organizations.

CAPT Merwin stated that the award was important, but more valuable was its contribution to "safety, morale, good order and discipline."



Strawberry Hill... In Bloom Again

BY JO2 DAVE HOCH

Strawberry Hill—plowed away decades ago, yet never removed from Coast and Geodetic Charts—has returned to a more beautiful Newport, R.I., after a 30-year absence. Other landmarks, more accurately called “eyesores,” have been banished as a result of the Naval Education and Training Center’s (NETC) beautification program.

Not limited to NETC, the two-year-old program encompasses the entire Newport naval community including naval housing areas.

A perfect example of the spirit motivating the program, Strawberry Hill’s restoration is indicative of cost-saving measures taken in times of economic belt-tightening. The hill, a ledge outcrop on the northern end of Coasters Harbor Island, was leveled in 1942 to make room for the Navy Firefighting School. Its core, however, was used as fill for the road bordering the shore along Narragansett Bay. Now, three decades later, the hill again stands—the solution to an expensive problem.

‘Before the beautification program began, each separate command had responsibility for its own turf.’

The problem was created in 1973 when the firefighting school was demolished and it was discovered that it would cost \$26,300 to haul away the ensuing rubble. One enterprising architect struck on the idea of using the rubble to rebuild the once flattened Strawberry Hill. Debris was

stacked into contoured hills and covered with earth fill. The mounds were then graded and seeded to allow 200 trees and shrubs to be planted. Today the hill is a part of a newly built recreation area on the spot where once a smoke-spewing ecological disaster stood.

This type of beautification is commonplace at the Newport naval complex today. “Before the beautification program began,” said Captain Howard Kay, NETC’s commanding officer, “each separate command had responsibility for its own turf. There was no standard painting policy, no standard sign format, and no genuine attempt was made to create a harmonious environment.”

Then, in 1973, as a result of the Shore Establishment



New sentry booths at all gates to NETC have greatly improved first impressions.



Strawberry Hill today, left, at the site of the old Firefighting School on Coasters Harbor Island.

Realignment action, boundaries separating individual commands disappeared. "At that time, a plan was formulated to create aesthetically pleasing surroundings through a systematic cleanup and renovation of the base. Strawberry Hill is one result," the captain said.

Since the program's inception, 58 old buildings have been demolished and the land on which they sat was landscaped; remaining buildings have been repainted in pastels. Signs on base and off have been adapted to a uniform color scheme of blue and gold; unnecessary signs have been removed.

Additionally, three new recreation areas have been constructed and named for early ships figuring prominently in Narragansett Bay's history. BEQs have been renamed in honor of Rhode Island Navy Medal of Honor recipients. All base streets have been renamed in honor of various Newport naval heroes and historical personages. Finally, area directories have been posted in convenient locations around the complex.

Seventy thousand square yards of streets and parking lots have been paved, bus shelters renovated, new guard shacks at the main gates built, dead and dying trees have been removed and shrubs and floral plots planted in their places. An established litter patrol polices the grounds and shoreline and ensures that trash is placed in the new and attractive waste containers at convenient locations.



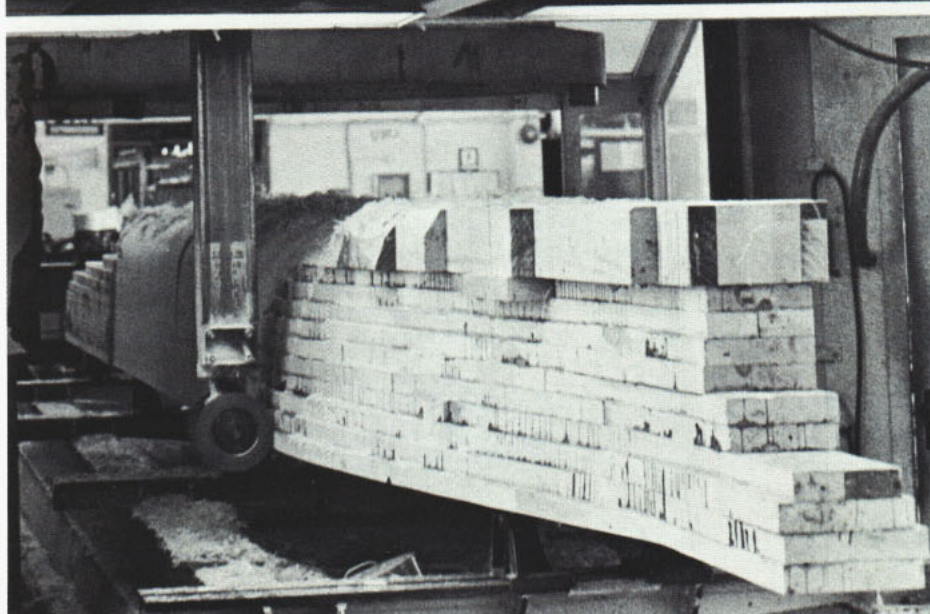
Before and after scenes of the same area show the Navy Firefighting School in its heyday, and Strawberry Hill as it looks today.

A constant lookout for possible problem areas is maintained by an NETC public works inspector, who routinely conducts three inspections each week. Inspection findings are reported directly to the commander for action when appropriate.

Major construction played a large part in the renovation process and has contributed to the new look with the addition of a third building at the Naval War College, a new commissary store and expanded parking facilities. The rest of the beautification program (with the exception of demolition) was accomplished through "self-help" projects or by private groups within the housing area donating their time and efforts.

"Because Newport is a primary site for officer training and education, it is our responsibility to make it as attractive as possible," CAPT Kay said. "Many of the international officers who train here get their first impressions of the U. S. Navy from what they see here. We'd like to think everyone—staff and students, military and civilian—will want to make this center and the Newport complex one in which he or she can take real pride." ⚓

They Build a Model Fleet



BY LT JOHN F. DONOVAN

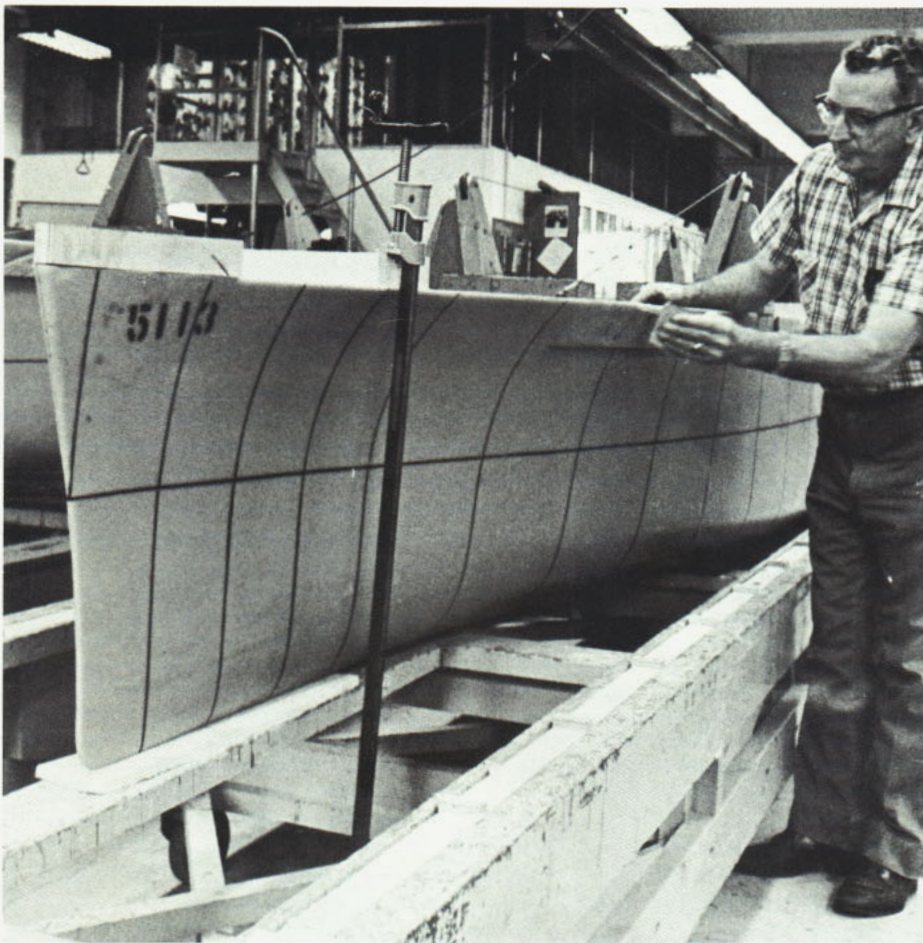
The Navy pays people just to build model ships all day.

Sort of like gluing together the \$2.89 model kits from hobby shops, except the Navy models run up to \$30,000—and they have to be accurate.

The modelmaking takes place at the David W. Taylor Naval Ship Research and Development Center, Carderock, Md., a quiet retreat near the Potomac, 12 miles northwest of the Capitol, in Washington, D. C.

Fifteen modelmakers construct wood and fiber glass models from 10 to 32 feet long and up to five feet wide. Their work is in support of research, development, test and evaluation missions which help the Navy zero in on the best vessels and related equipment the defense dollar can buy.

Carderock is where tomorrow's ships are proved today. The Navy tries to go about it in a practical, economical and logical way. It makes sense to build a model of a ship and subject it to simulated sea and combat environments before building the ship itself. Models help engineers observe performance, determine design modifica-



tions and ultimately build a better ship. It's better than estimating utility and performance on paper, or constructing the real thing and then spending millions to make alterations.

The same modelmaking technique is used at Carderock in designing submarines, aircraft, missiles, propellers, screws and rudders.

Carderock models are tested in basins which can duplicate every sea condition. The longest basin, 3,078 feet, is so long the water surface actually bends to a measurable degree with the earth's curvature.

Tests occur in five major basins: deep water, shallow water and turning, high-speed, seakeeping, and rotating arm. The first three are in a cavernous building nearly a kilometer long, capped by a concrete barrel roof. Air currents that could interfere with delicate testing are minimized and the absence of natural light impedes algae growth.

The seakeeping and rotating arm basins are in the Harold E. Saunders Maneuvering and Seakeeping Facilities building which covers nearly five acres.

All basins have electric towing carriages which are laid on girder structures embedded in concrete and mounted on bedrock.

The new high-speed carriage under construction will reach speeds of 55 feet per second, equating to more than 100 knots in ship model testing.

The model-testing approach is tried and true. Benjamin Franklin is thought to be the creator of the first model basin. That consisted of a narrow trough in which a board was pulled over water by a string extending over the trough's far end, around a pulley and attached to a weight.

In 1896, Congress provided the Navy \$7,500, "for making plans. . . . Toward the construction of a model tank" at the Washington Navy Yard. David Watson Taylor, for whom the Carderock facility is named, supervised construction of the first basin. He was the Secretary of the Navy Board of Constructors and had helped design the country's first three battle-ships. Taylor eventually retired as rear admiral, but not before acquiring the unofficial title of dean of the Navy's

hydromechanics, structural mechanics and aerodynamics pursuits. Taylor was at the Carderock opening in 1940; he died shortly afterward.

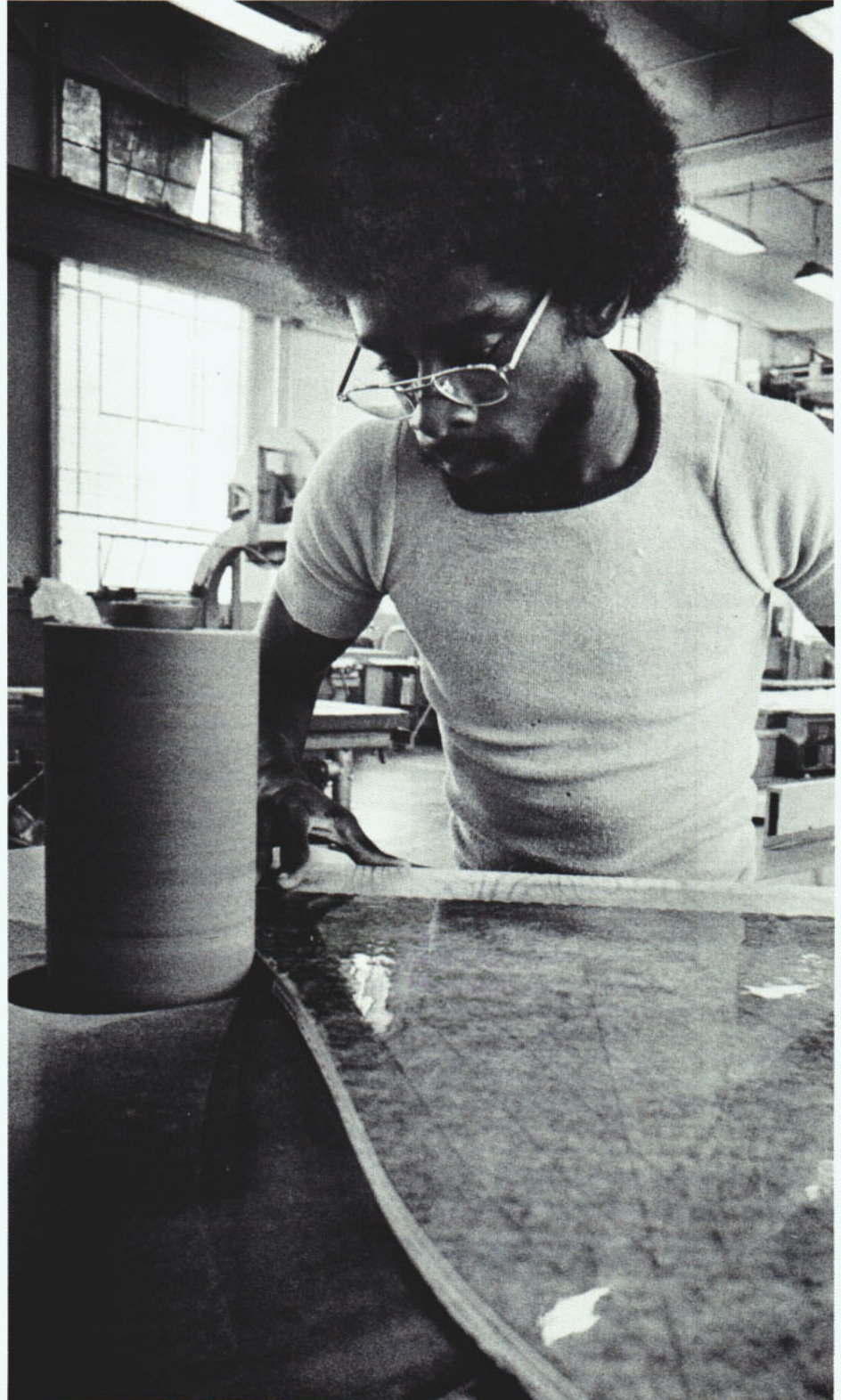
Taylor favored wood models and these have been the main type down to the present. Later, wax models came into use but have now been discarded. Fiber glass models using wood molds are the newest concept.

Today's modelmakers work in a modern, well-equipped shop adjacent to the long basin. They use high-powered lathes, presses, sanders, saws and other tools to shape "roughs" of the desired models. Wood models of sugar pine planks are glued (no nails) under as much as one million pounds per square inch to form the rough dimension. Craftsmen use warp-resistant mahogany for submarine models.

Enter the computer, in this case a "numerical control profiler." The profiler, which weighs in at 90 tons and cost \$300,000, has a two-story gantry that moves two cutting tools past the "roughs," shaping them along three planes.

The cuts are determined according to a computer program that defines a specific drilling, milling or cutting technique. The program is based on the desired design. The result is a model that meets the most exacting specifications. Even though the whole process takes about 80 working days, the computer techniques saves many man hours.

Carderock models are hollow so en-





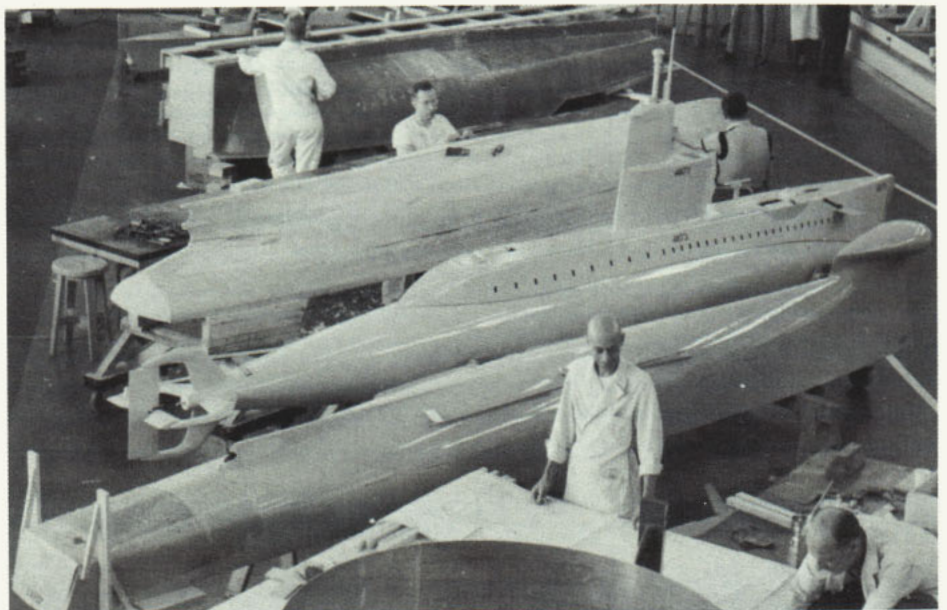
Many valuable engineering contributions result from modelmaking; most notable in the early days was the invention of the bulbous bow. This design reduces water resistance by placing an extension of the bow below the forward waterline.

Modelmaking requires expert artisans and aspirants undergo a rigorous five-year apprenticeship with OJT. A good background in shop practices is a prerequisite and, more than that, an apprentice must have great perseverance in learning the exacting trade.

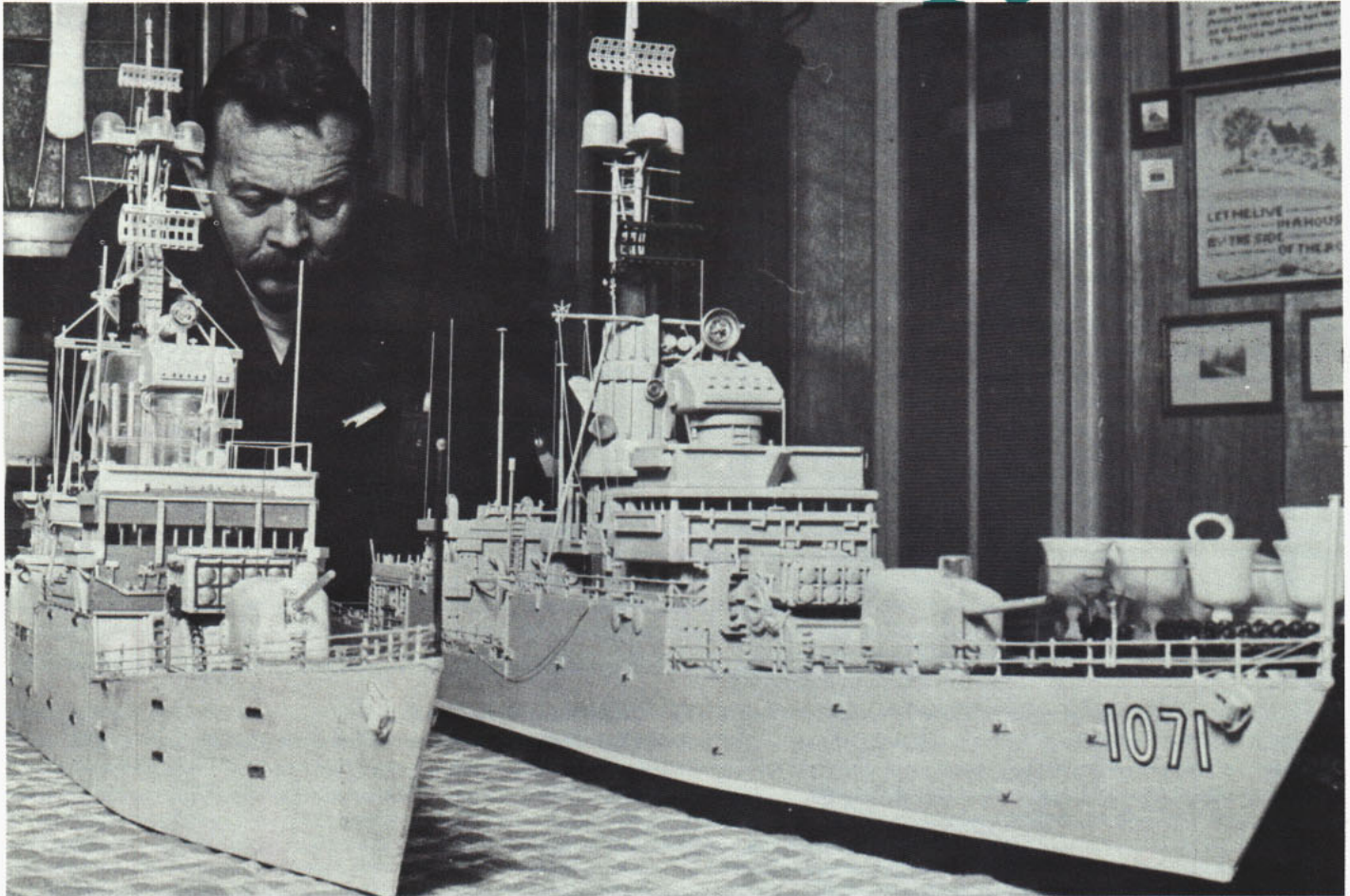
But once they have learned, these modelmakers of Carderock embark on a vocation that might well be the envy of anyone who has lovingly and painstakingly built a model of a clipper or a warship. ⚓

gineers can install scientific payloads of highly sensitive electronic and sounding gauges which measure water resistance, friction, cavitation (the hollow space which trails a vessel moving through water), and other hydrodynamics. This instrumentation yields vital data in ship planning and makes the whole model effort worthwhile.

Carderock wood and fiber glass models usually appear without their superstructure because the vessels' chief utility is to provide observation of performance in wet surface areas. A machine shop builds model superstructures of metal for testing in wind and smoke environments. Although no models are intended for display, their exact scale makes them suitable for this purpose.



Miniature Shipyard



BY LT G. C. GILLETT

The lure of the sea is strong, and is reflected in many ways. Bill Carter's "shipyard" in landlocked Wichita Falls, Tex., is a good example.

Bill served six years in the Navy.

After his discharge in June 1946, he figured the Navy was a thing of the past, but somehow the years of shipboard life left an impression that suddenly emerged in an idle moment as a desire to make a model of a ship. With no particular goal in mind, he picked up a picture of an old Baltimore mail liner and set to work.

He had never worked with models before, but his six years as a boatswain's mate left him the knowledge of

how things should look. Even more helpful was his almost uncanny ability to see a common, everyday item, such as a plastic blade dispenser, as a miniature component of a ship.

Several months and a lot of rummaging for odds and ends produced an amazingly realistic model of the old mail liner.

Thirty years, a lot of patience, and an unbelievable amount of odds and ends have fostered the growth of the "shipyard," as his friends have dubbed his home. By his own admission, Bill isn't sure how many models he has built, but it is somewhere around 70. Although he did not originally intend to concentrate on Navy ships, it has turned out that every one he has built

Bill Carter compares his models of USS Badger (DE 1071) and USS Knox (DE 1052), noting the differences which can be detected because of the materials he uses (household items) and the guides he follows (photographs and drawings). Photos by LT George Gillett.

has been either a Navy vessel, or one contracted to the Navy at some point, including, too, the gleaming stern wheel river steamer he completed a month ago.

Most models are styled after certain classes rather than specific ships. For example, he may point to one and say, "That's an APD; I'm not real sure which one." He concedes that his scale is not always exact, but, "They run pretty close to one foot to 100 feet—his *Intrepid* is close to eight feet long

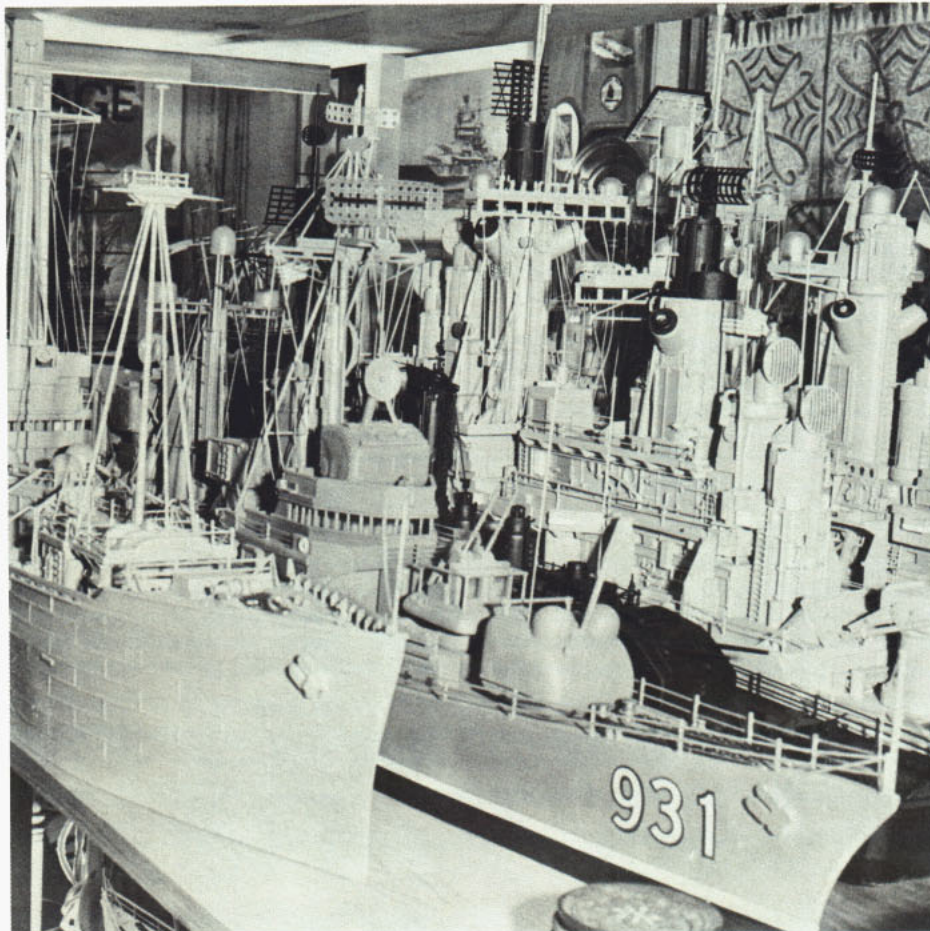
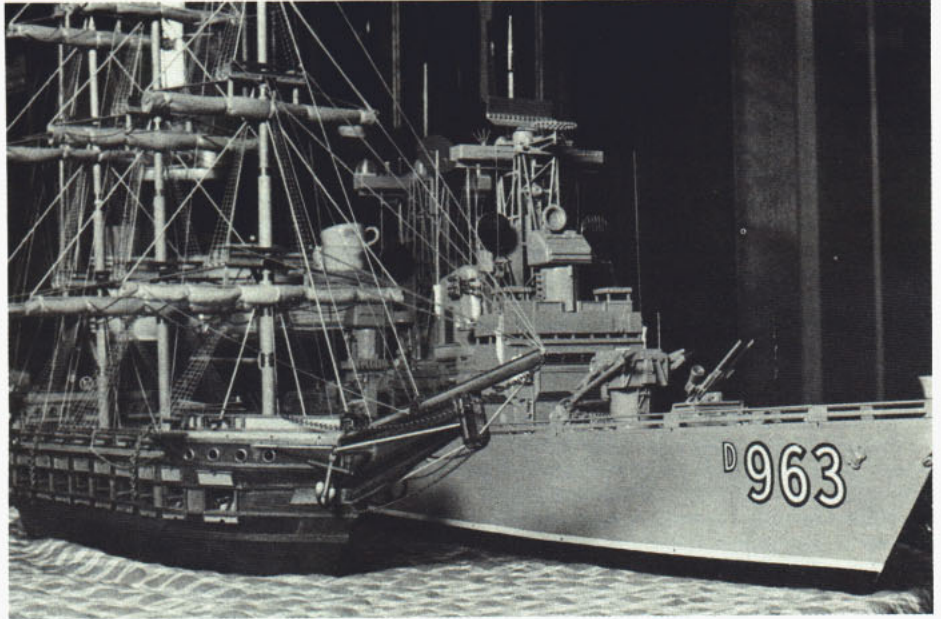
and a little hard to move around.”

Intrepid, now on display in the Navy Recruiting Office in Fort Worth, was built about seven years ago, while Carter’s son, Hal, was serving aboard her as a gunner’s mate.

Of all the models he has built over the years, only a couple have been made for a specific reason or purpose. One of these, *USS Constitution*, was built for his wife, Helen. “She has always admired ‘Old Ironsides,’ so I built it for her.”

It is apparent that the model is special—it occupies its own space on

The old and the new are equally at home in the “shipyard.” Here USS Constitution shares the dining table with USS Spruance.



a shelf of antiques, apart from other ships. ⚓

Maritime memorabilia are stacked to the ceiling in Bill Carter’s “shipyard.”

Bearings

Airwaves' Recruiting

If you went to high school in the Barstow, Calif., area, you would certainly know who Happy Harry and Smilin' Jack are. If (as is more than likely) you didn't go to high school in Barstow, be advised that the Happy Harry and Smilin' Jack Radio Show has an estimated 83 per cent of the kids glued to their radios.

Which may still leave some readers racing to say "Who cares?"

But consider the fact that Happy Harry is actually Navy Chief Petty Officer Harry Penny, the local Navy recruiter and that Smilin' Jack is actually Staff Sergeant Jack Campbell, local recruiter for that branch of service which flies a lot of airplanes.

The two, each of whom at one time belonged to the other's branch of service, share more than a successful radio show in common. Since they teamed up they have been recruiting new sailors and airmen at a pretty good clip.

One of the reasons for their success has been guest appearances by people like Skip Young (above on the left) who is known to millions as Wally of the Ozzie and Harriet Television Show of the '50s.

A lot of kids in the Barstow area know about Wally and Happy Harry and Smilin' Jack because of the successful radio show. But what may be more important is that those same kids also know quite a bit about the Navy—and that other branch of service which flies a lot of airplanes.

Oily Palate Pays Off

A Pearl Harbor Navy couple has found a way to enjoy a greasy-foods diet without gaining a pound. In the



process, they manage to contribute to the fight against water pollution. *E. B. Bolosan* is an oil skimmer craft that has slurped up 15,000 gallons of oil in the 18 months she's been at Pearl.

In spite of her steady diet, she remains a fit and trim 20,000 pounds and she's still capable of squeezing around piers and ships and into tight areas where floating oil forms into pockets. Designed to collect oil spills quickly and efficiently, *Bolosan* is self-propelled and can be operated by one person.

The other soft spot in the hearts of the harbor cleanup crew goes to "Juicy Lucy," a converted World War II landing craft.

Bolosan's palate is tickled only by a



steady diet of oil, but Juicy Lucy is less discriminating. She is quite happy slurping up everything from driftwood to tin cans. Between the two of them they are doing a good job of licking the harbor "plate" clean.

Charting His Art

Tell Lieutenant Bruce Koltz that the only successful artist is the highly trained artist and you'll probably get an argument.

Koltz—who has a penchant for scribbling on charts and has received only a year of formal art education—recently picked up not only the Coronado (Calif.) Art Association's Artist of the Month Award, but also won first place in an 11th Naval District Arts and Crafts Fair and first in the Heritage 1976 Art Exhibition graphics category.

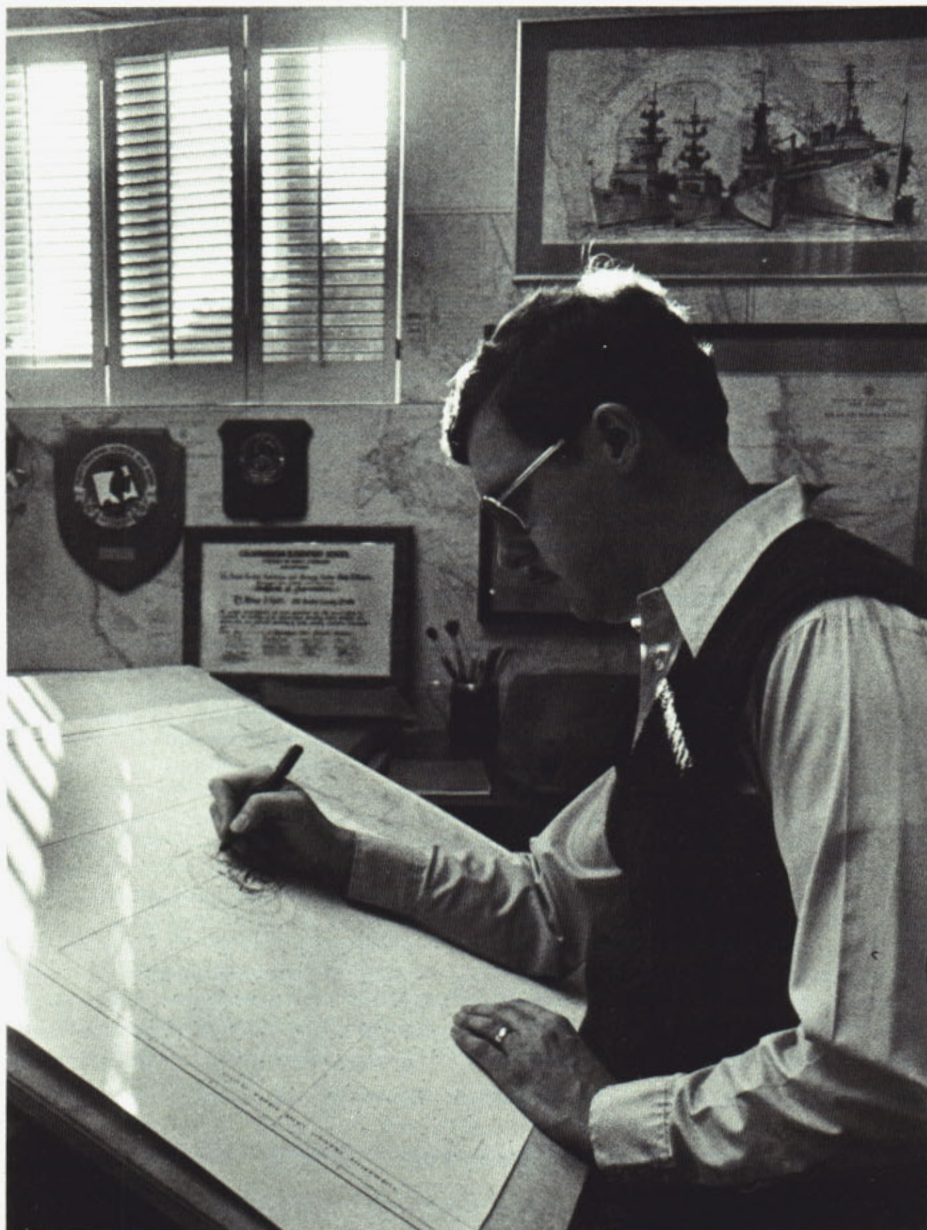
The USS *Bristol County* (LST 1198) officer's style of drawing over navigational charts developed in a coincidental way. "In January 1974, I had

the urge to draw, but I didn't have any paper," he said. "My roommate was the ship's navigator and he let me search through a pile of discarded charts. I was looking for a big piece of white paper, but decided to use the front of a chart instead."

That first chart drawing led to many, many more, until nowadays Koltz spends four to nine hours a week per-

fecting his art. His room is appropriately wallpapered with navigational charts. Each chart he uses pertains to the particular ship he's drawing. Now, however, he purchases his charts from a local distributor.

After having completed more than 200 chart drawings, Koltz appears to have hit upon a good thing—without much training.



Bearings

Tri-Nation Exercise

There were *Tomcats*, *Skyhawks*, *Harriers*, *Sea Knights*, *Sea Stallions*, *Cobras*, gators, leathernecks . . . and, of course, koalas, wallabies and kangaroos.

America's finest were on display in October as nearly 17,000 U. S. servicemen joined 14,000 members of Australian and New Zealand armed forces in Kangaroo II. This was the largest peacetime exercise ever conducted in Australia.

The 31,000-strong tri-nation military force converged in 40 ships and 250 aircraft off Australia's northeast Queensland shore under sunny skies for the 17-day ANZUS exercise. Kangaroo II was designed to test and refine procedures for combined operations in the defense of a coastal area.

Highlight of the exercise was the massive amphibious assault launched by the Navy-Marine Corps sea-air-land team in Shoalwater Bay, 500 miles north of Brisbane.

High-flying Celebrants

With a task group of three U. S. Navy ships (CTG 101.1) as special visitors, the East African nation of Kenya celebrated the 13th anniversary of its independence in December.

Officers and men of USS *Guam* (LPH 9), USS *Claude V. Ricketts* (DDG 5) and USS *Dupont* (DD 941) were hosted by celebrants of this former British colony. They, in turn, played hosts to the many eager ship-board visitors during the four-day stay in Mombasa.

Official ceremonies marking the an-



niversary were held in Kenya's capital of Nairobi, 250 miles inland. Flying from *Guam*, the AV-8A *Harriers* of Marine Attack Squadron 231 saluted Kenya in a tightly executed fly-over.

The Chief of Naval Operations, Admiral James L. Holloway III, said that the "highly successful participation of AV-8A aircraft in Kenyan Independence Day activities once again demonstrated the ability of the Navy to respond when needed in furtherance of diverse national policy objectives."

He extended his personal "well done" to all concerned.

Visiting U. S. Sailors and Marines took in the sights and sounds of

Mombasa. They also visited the famous wild animal preserve and the ancient Arabian bazaars. Purchases were concluded despite the babble of many tongues.

Aboard the ships, a special visiting program was set up which allowed Kenyan naval officers and enlisted men to visit their American counterparts.

The American Ambassador to Kenya, Anthony D. Marshall, said that he took pride in the peaceful mission.

"This particularly applies," he added, "when—by peaceful actions—the United States, through the Navy and Marine Corps, can 'show the flag' toward maintaining peace."

Wail of a Banshee

Aviation Administration Man Third Class Mike Baumeister—Navyman and college student—is a part-time banshee.

At least, Mike's bagpiping may sound like the wail of a banshee to some, but it's music to his Scottish ears. When not at work at Naval Air Station, Patuxent River, Md., or attending school at St. Mary's College of Maryland, Mike can often be found strolling the banks of Patuxent River playing 16th century bagpipe songs.

His grasp of things Scottish traces to his mother's side of the family. Besides playing the bagpipes he has traveled through Scotland while on leave and collected Scottish memorabilia, including the kilt. ("A true Scot would never, ever discuss what he wears under his kilt," he said with a grin.)

He plays the bagpipes during his "quiet time" and, since neighbors and friends don't often agree with his in-

terpretation of "quiet time" Mike has settled on what many may consider an appropriate vocation. He's studying to become a forest ranger.



Top SurfPac Enlisted

New Master Chief Petty Officer for the Naval Surface Force Pacific is Master Chief Boatswain's Mate Jesse J. Holloway. A native of Enfield, N. C., the 27-year Navy veteran previously served in USS *Monticello* (LSD 35) as Master Chief Petty Officer of the Command and also as that ship's training team leader and enlisted watch coordinator. The new MCPOF was promoted to E-9 in Jan. 1973.



TOMAHAWK





WWK

adds up to versatility

BY LT PHILIP KAZANJIAN

The Navy's *Tomahawk* Missile—now being perfected—is so accurate that a nuclear submarine could fire one at a street corner 450 miles away, and hit within 30 feet of the traffic light at that corner.

Scheduled for initial deployment to the fleet in the early 1980s, the *Tomahawk* is a highly versatile weapon capable of being launched from surface ships, submarines, aircraft or land platforms. The missile's versatility, range and accuracy have made the *Tomahawk* program "the most important we have underway in regard to potential and application," according to Deputy Secretary of Defense William Clements.

Basically the *Tomahawk* is a relatively light (2650 pounds), small (219 inches long by 21 inches in diameter), pilotless airplane propelled by a turbofan engine. Its Soviet counterpart, now standard on most Soviet warships and older submarines, is 37 feet long and weighs 26,000 pounds.

Tomahawks contain a number of features which represent major technological breakthroughs in weapon development:

- The turbofan engine powering the missile weighs only 130 pounds and is less than three feet long. Considered to be one of the smallest turbofan engines in the world, it is capable of developing more than 500 pounds of thrust at cruise conditions and able to

TOMAHAWK

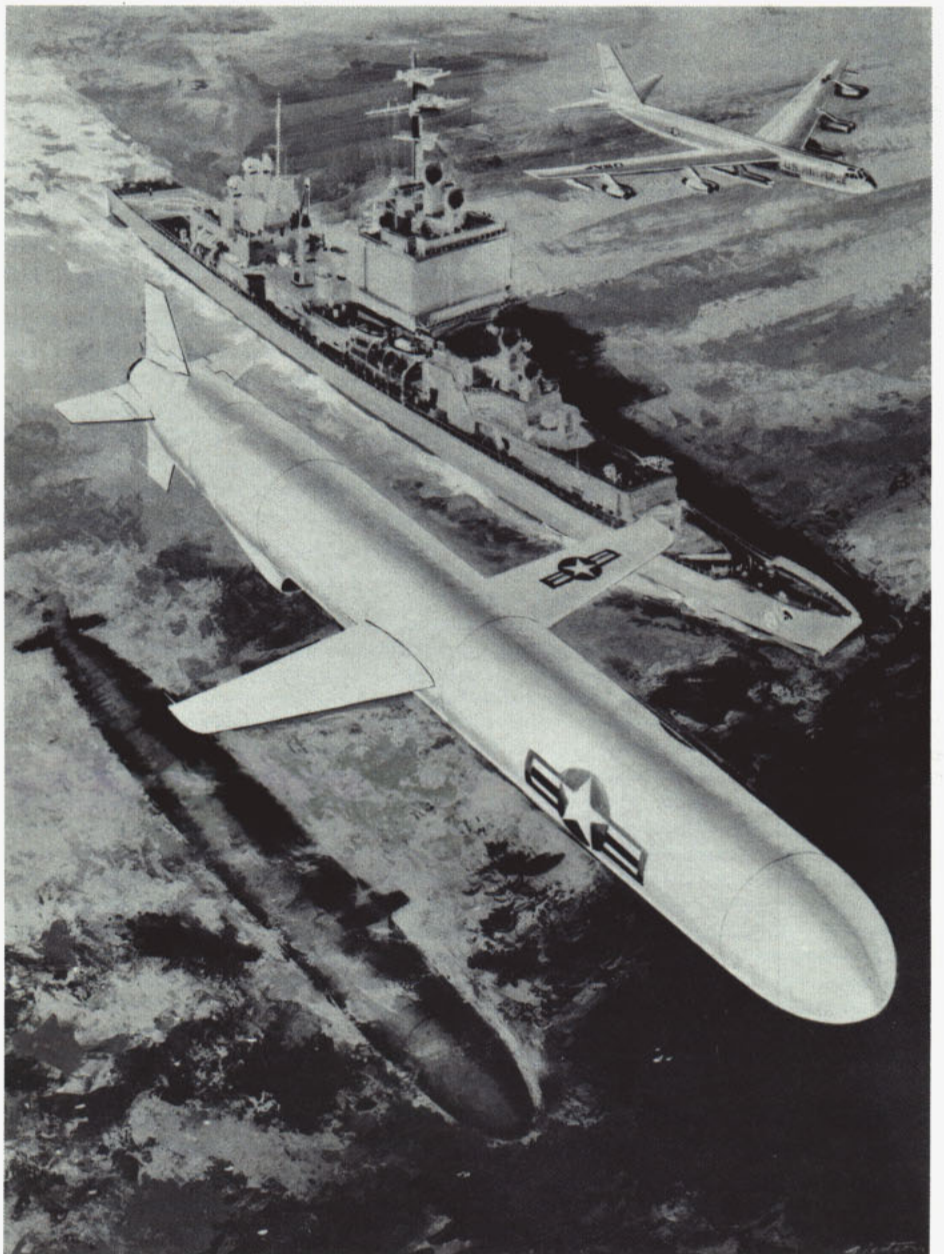
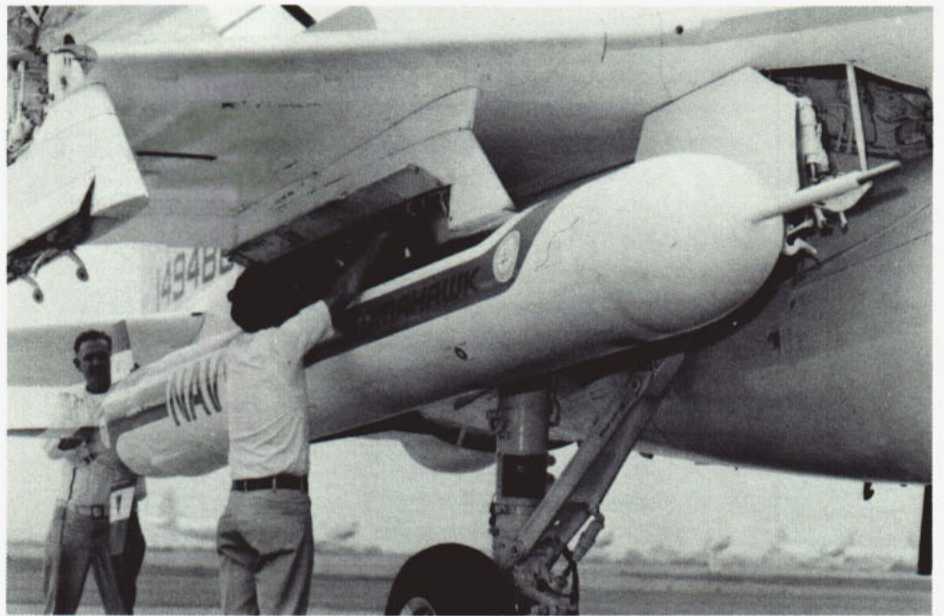
propel *Tomahawk* at high subsonic speeds.

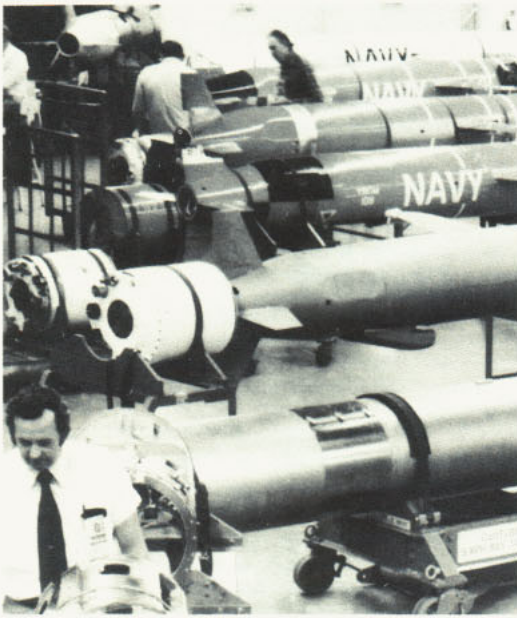
- There are two variations of the missile—nuclear and conventional. *Tomahawks* carrying nuclear warheads will have ranges of approximately 2,000 miles. The conventional version, designed for antiship missions, has an operational range of over 250 nautical miles. Both the nuclear and conventional versions are highly accurate.

- The long-range land attack *Tomahawk* owes its accuracy to an onboard computer, a radar altimeter, inertial guidance, and a navigation system called TERCOM (terrain contour mapping). The system allows the cruise missile to hug the ground while maintaining very low flight altitudes, over varying degrees of terrain roughness. In this way *Tomahawks* are able to avoid detection by long-range early warning enemy radar.

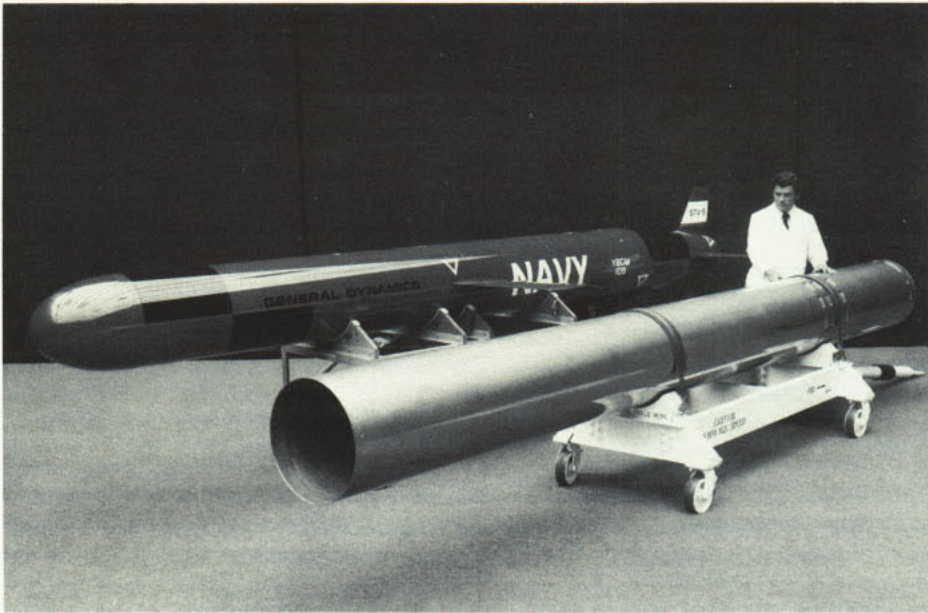
Because *Tomahawk* is designed for launch from submarine torpedo tubes, it is readily adaptable for use on any platform. When fired from a submarine, surface ship or ground launcher, the missile is powered by a solid-propellant rocket motor. Once in flight, wings and fins are deployed from stowed positions within the cylindrical missile body. The rocket motor continues in use until *Tomahawk* reaches a speed which permits its turbofan en-

Above: A versatile missile, Tomahawk can be launched from submarines, surface ships, aircraft and land platforms; here it is mounted on an A-6 Intruder. At Right: Artist's concept of missile in flight.
(All General Dynamics photos.)





Left: Production and assembly of Tomahawk Cruise Missile at West Coast plant. Below: Off the production line.

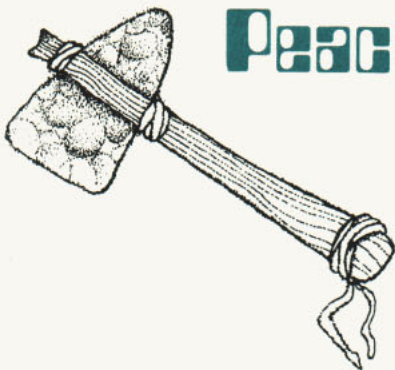


gine to take over for the cruise portion of the flight.

One major advantage of *Tomahawk* is the capability to strike at land and sea targets from outside the enemy's weapons range. While *Tomahawk* won't replace the torpedo, it is expected that a number of cruise missiles will be carried by submarines. The exact number, of course, will be dictated by mission, nature of threat and geography.

Although *Tomahawk* Missiles are but one of the Navy's ongoing hardware developments, it is recognized, according to General George Brown (Chairman of Joint Chiefs of Staff), as "having significant use in the Navy's vital sea control mission." ⚓

Symbolic of Both War and Peace



Named "otomahuk" by Algonquians living along the St. Lawrence, the tomahawk was the war hatchet of the North American Indians. Meaning "to knock down," it was used both in hand-to-hand combat and as a throwing weapon, but also served as a small axe.

Most tomahawks were made of a stone sharpened at the ends and driven into a hole bored through a stout wooden cudgel. More primitive types, however, had stone heads simply bound to clubs with animal sinews or tough vines. A deer antler was sometimes substituted, making the weapon's appearance similar to a modern pickaxe

and just as deadly.

After the arrival of Europeans, stone was abandoned and heads were usually fashioned of iron but sharpened at one end only. The blunt end was occasionally chipped out and made into a pipe bowl—the hollowed handle served as a stem. Known as peacepipes by white men, these tomahawks were venerated by all tribes and displayed in their chiefs' wigwams.

Symbolic of both war and peace, the tomahawks were ceremoniously buried at the end of hostilities to be exhumed with equal pomp when war resumed—hence the expression "burying the hatchet."

Information Exchange

Q. *Can the Navy require its people to pay a private debt? How can indebtedness affect a Navy person's career?*

A. The Navy is without legal authority to require a service member to pay a private debt or to divert any part of his/her pay to the satisfaction of a debt, even though a civil court has directed payment.* On the other hand, Navy personnel are not, by virtue of military status, released from any continuing obligation to obey pertinent civil laws which may require payment of debts. A Navy person who repeatedly incurs debts beyond his or her ability to pay may jeopardize security clearance status, advancement status, certain duty assignments, and qualification for reenlistment or extension of enlistment.

**However, pay may be directed to be garnisheed in cases of alimony and child support nonpayment.*

Q. *If I enroll in an academic program under the Navy Campus for Achievement, how long may I take to earn my college degree?*

A. If you enroll in an NCFCA degree component institution, you will have 10 years from the date of your Letter of Agreement to complete your academic program, whether or not you stay in the Navy.

Q. *Why did the Department of the Navy cancel its Proficiency Flying Program?*

A. The Department of the Navy undertook an extensive review of the Proficiency Flying Program because of budgetary constraints, and found that about \$6.5 million might be saved annually. The money saved will be reprogrammed to other, more essential, aviation requirements.

Q. *Why do certain enlisted personnel graduate from "A" school and then proceed to a shore command for a period of 15 to 18 months while others spend their entire first enlistment aboard a Navy ship without the option to transfer?*

A. With the new concept of fleet manning, "A" school students going to CONUS shore duty are assigned tour lengths of 18 months; outside CONUS they are assigned IAW Chapter 4 of the Enlisted Transfer Manual, thus releasing personnel for earlier rotation to sea duty commands.

As far as your being required to remain in one ship for an entire enlistment, once you have completed a minimum activity tour of 24 months you can put in an Enlisted Transfer and Special Duty Request Form (Navpers 1306/7) requesting transfer to another activity—this is covered in Chapter 3 of the manual. Another option is the self-nego-

tiated exchange of duty (Swap). If both commands are in agreement, first-termers are given the opportunity to swap to either sea or shore duty, provided all eligibility requirements are met and that all swaps are executed at no cost to the government.

Q. *What practical qualifications must an officer demonstrate, in addition to passing the written test, to be qualified for command?*

A. First, he must qualify as an engineering officer of the watch. This can be done during a present shipboard tour or can be authenticated from qualification achieved during a previous tour. Next he must demonstrate seamanship prowess under cognizance of an officer of the grade of captain in the following: mooring, getting underway from a pier or nest, anchoring, maneuvering in restricted waters, recovering (simulated) a man overboard, replenishment at sea, and evolutions peculiar to ship type.

Q. *Under the new method of determining Champus payments, how much are doctors and other providers of medical care allowed to receive?*

A. Under the new method, a factor known as the 75th percentile is used. This does not mean that Champus payments are reduced to 75 per cent of the billed charges, but simply that the prevailing charge is now set at an amount which is high enough to cover the usual charges for any service or supply in three out of four bills from all doctors or other providers of medical care. These rates are determined during the previous year, and there may be differences due to varying local rates. ↓

Ruth Hank-Hon. Mention, '76 Cartoon Contest



"... Yes, Smedley, we know they depend on you . . . Still, they're not dependents."

BEAT ARMY!

(Continued from page 27)

shot higher, the hundreds of pleasure craft in the harbor were illuminated by the raging bonfire. Now the countdown began in earnest: one more day of classes, Thanksgiving Day and then on to Philadelphia for the game.

Saturday morning at John F. Kennedy Memorial Stadium in Philadelphia didn't look promising. One of the stadium security guards, portable radio next to his ear, stood in the soggy end zone and gazed at the black scudding clouds. "Hey, gang, it'll be fair today," came the radio announcer's voice, "with absolutely no chance of rain and a record-breaking high temperature of 60 degrees. I'll be back with a look at the national map after this important word. . . ." The guard snorted.

Concessionaires fought the blustery winds as they set up hot dog, popcorn and soda stands. A network television cameraman, walking hunched over against the wind, moved from stand to stand. "All the hot chocolate in the world," he said to no one in particular, "but not a single cup of coffee is ready yet."

Caravans of buses from Annapolis and West Point rolled into the parking lot at almost the same time. Spectators, trudging toward the stadium—arms laden with blankets and thermos bottles—paused to cheer or bleat derision as the "good" and the "bad" guys passed.

The thousands of milling blue and grey uniforms surprisingly sorted themselves out and quickly began forming into solid blocks—ready to enter the stadium.

The pre-game activities were handled with dispatch. First the massed Corps of Cadets, then the Brigade of Midshipmen were presented to the audience. The combined West Point and Annapolis choirs sang the National Anthem, the starting lineup of each team was announced and the coin-toss was handled with aplomb at the 50-yard line. It was time to play some football.

Almost.

An official black limousine with two streaming American flags and surrounded by running men entered the stadium and came to a screeching halt in front of the VIP box on the Army side. Many of the Army cadets sprang from their seats to rigid attention.

Out of the limousine rolled a burly man wearing a Gerald Ford rubber mask. The Naval Academy's Brigade Activities Committee, also known as the Bizarre AC, had struck again.

Preliminaries and pranks finally

finished (or were they?) the teams finally began the game.

The excitement and color accompanying any college football game was present, but here the excitement was magnified by 77 years of traditional rivalry. And the color was intensified by the masses of blue and gray uniforms (and a couple of artfully placed green and white smoke bombs in the Army ranks—the Bizarre AC's final ploy.)

Early in the fourth quarter, with Navy holding a not-necessarily-insurmountable lead, a midshipman—girlfriend on one arm, air horn and blanket in the other—was seen leaving the stadium.

"The sun just broke through the clouds and shone directly on the Navy huddle," he said. "If that doesn't mean we've got it all wrapped up, I don't know what does."

Navy had wrapped it all up. The midshipmen trounced Army for the fourth year in a row, 38-10.

And as the 4,000 midshipmen poured from the stadium, one couldn't help but wonder. Could there be one plebe among them who—at that very moment was formulating an Army-Navy week prank that will finally eclipse the car-demolishing stunt?

Time will tell. ⚓



Some of the old traditions, like the post-game cuff link exchange between cadets and midshipmen, took a new twist this year.

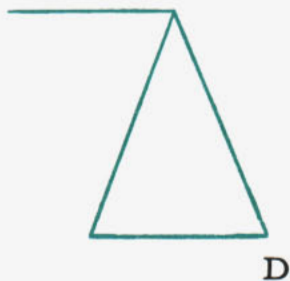
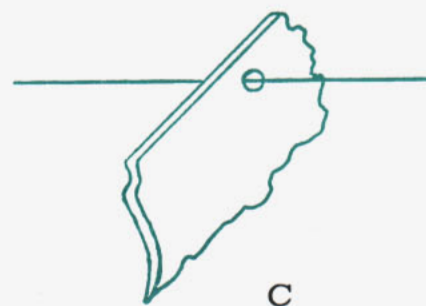
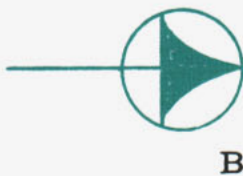
Stern Shots

How well can you read a damage control diagram? In an emergency, the safety of your ship could depend on your knowledge.

The symbols below are commonly used to indicate valves and other fittings on damage control diagrams. Can you identify them? Test yourself. Here are the answers, match them with the proper symbol.

Answers appear below.

- ___1. Hatch
- ___2. Bulkhead penetration
- ___3. Sea chest
- ___4. Stop-Lift check valve
- ___5. Relief valve or spring-loaded check valve
- ___6. Fog foam proportioner pump and control
- ___7. Remotely operated closure fitting



Answers to quiz: 1.(F); 2.(C); 3.(D); 4.(E); 5.(A); 6.(G); 7.(B).

Secretary Honors Navy Wives



Outgoing Secretary of the Navy J. William Middendorf II takes to the boatswain's pipe in presenting a specially prepared certificate of appreciation to Mrs. Dabney Holloway (center), wife of the Chief of Naval Operations, and Mrs. Frances Walker, wife of the Master Chief Petty Officer of the Navy, on his last day in office. The certificate noted both ladies' "steadfast, unselfish and too often unheralded contribution in furtherance of Navy goals. . . ." By this presentation, the Secretary honored the quiet and dedicated efforts of the wives of all Navy officers and enlisted men the world over. Photo by David Wilson.



Base Beautification page 28