

# ALL HANDS

MARCH 1978



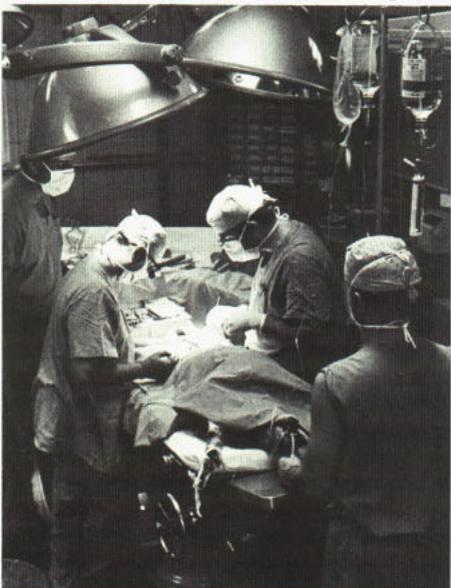


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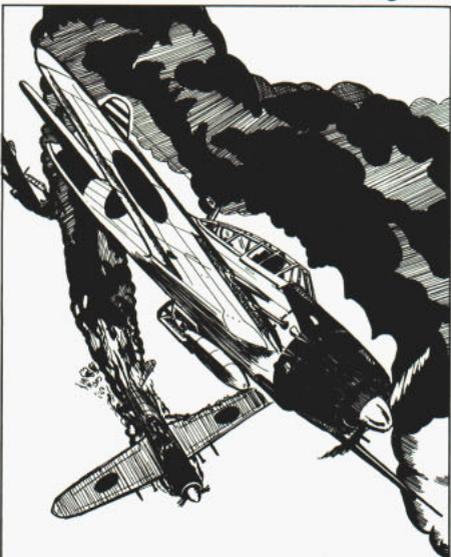
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## Covers

*Front: Aircraft on the flight deck of USS Independence (CV 62) in the Mediterranean. Photo by PHC Bill Pointer.*

*Inside Front: Navy dependents have always been an important part of the Navy family. Photo by J. O. Cooper.*

*Back: Audie Bransford highlights the career of CAPT Johnston Blakely of USS Wasp in the War of 1812.*

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# Currents

## **Purchase of Bell Bottoms**

**Authorized for May** ● Chief of Naval Operations Admiral James L. Holloway III has announced that any Navy men E-1 through E-4 attached to fleet units who were not selected to participate in the first phase evaluation of new fabrics for the traditional jumper-style uniform will be authorized to purchase and wear the new uniform in May when the fleet evaluation program for the uniform begins. The approximately 20,000 fleet sailors selected to wear test the new blues will be issued their uniforms without charge. Shore-based personnel and reservists will be able to purchase and wear the uniform beginning in August as more uniforms become available. The new uniform, available in the dress blue version only, initially can be purchased through the Norfolk and San Diego Navy Exchanges or through the Navy Exchange mail order system. Eventually the jumper uniform will be available in all Navy Exchanges. The uniform will be manufactured in the 15-ounce blue serge material currently used in the winter weight service dress blue uniforms. The white hat will be of polyester blend. Rating badges and service stripes will continue to be the current all-embroidered style. Wearing of jumper style uniforms made of melton or any other material will not be authorized. Personnel should ensure that garments purchased are certified for wear according to Navy specification. Uniform manufacturers upon their request will be certified by the Navy to produce the authorized uniform. The uniform is optional and may be prescribed for all occasions where service dress blue is worn, including liberty purposes. Manner of wear shall be as directed in U. S. Navy Uniform Regulations. Service dress white jumper will be authorized at a later date after new materials have been adequately tested in the fleet.

## **U.S. Navy Memorial**

**Foundation Holds Founders' Meeting** ● The United States Navy Memorial Foundation held its Founders' meeting on Jan. 26, 1978, in Washington, D.C. The Foundation is a non-profit organization dedicated to erecting a monument in the Washington area to all Navy personnel, living and deceased, and to establishing a scholarship fund for the children of current and former Navy personnel. The Memorial Foundation will work closely with the National Endowment for the Arts to select a distinguished art committee, a prominent sculptor, an historic monument design and a suitable location for the memorial. Former Secretary of the Navy J. William Middendorf III will serve as Chairman of the Foundation. Other Board members include former Navy Secretary John Warner, former Chairman of the Joint Chiefs of Staff Admiral Thomas Moorer, and former CNO Admiral Arleigh Burke.

### **Fifteen Women**

**Enter Flight Training in FY 79** ● The Navy will enroll 15 women in its flight training program during FY 79. Selection of women candidates will be made by a single selection board in July 1978. Women officers who desire to be considered for flight training and meet the requirements contained in BuPersMan 6610360 should submit their applications to the Chief of Naval Personnel (Pers 433E) before June 30, 1978.

### **Nautilus Memorial**

**Study Authorized** ● A study to consider preserving USS *Nautilus* (SSN 571), the world's first nuclear powered warship, as a monument and placing it on public display at the U.S. Naval Academy, Annapolis, Md., has been authorized by Secretary of the Navy W. Graham Claytor Jr. The inactivation of *Nautilus* was disclosed on January 23 by the Defense Department as part of the FY 79 defense budget. Any plan resulting from the study will be submitted to Congress for approval.

### **Europe Mail**

**to Go Through Norfolk** ● The Navy and the U.S. Postal Service (USPS) have taken combined action to restore a smooth flow of mail to and from Navy units in Europe. Most mail bound for Navy units in Europe now is being processed through Norfolk, Va., instead of the Fleet Post Office in New York where both incoming and outgoing mail are backlogged. A message issued by USPS last month directed its dispatch centers around the country to route the mail to the Fleet Postal Unit at the Norfolk Naval Station. The directive covers first class and registered mail. Mail from the northeast section of the country, including New York, will continue to be processed through the Fleet Post Office in New York. The temporary rerouting of other mail through Norfolk will continue until the New York branch can return to normal operations. Mail service through New York had been slowed since before Christmas because of several factors, including the heavy holiday load. The situation was aggravated by a severe snowstorm which hit New York on January 20, and deteriorated further, following a crippling storm which temporarily closed down the city. The temporary measure does not alter recipient addresses. Mail should continue to be addressed to FPO New York addresses.

### **New Phone System**

**for BT, MM Detailers** ● In a continuing effort to improve communications with detailing communities, a rotary phone system has been installed in the Bureau of Naval Personnel's BT/MM detailing shop. Because the BT and MM ratings are large, members have had difficulties, in the past, reaching their detailers. This new system, which doubles the number of lines, is part of an improvement plan to give all detailing communities similar equipment. The new rotary phone numbers for BTs and MMs are – Autovon: 224-4550; Commercial: 202-694-4550. The detailer phone numbers for nuclear power MMs and BTS who are submarine designated remain the same. The numbers are – Autovon: 224-1016/1227; Commercial: 202-694-1016/1227.

# New role for an old plane

STORY BY ART SCHOENI  
PHOTOS BY PAUL BOWER

A weatherbeaten A-7C *Corsair* II sporting the yellow diamonds of VA-174 lands at Naval Air Station, Dallas. Taxiing onto the parking ramp at Vought Corp., the pilot, Lieutenant Commander Bill Goesling, climbs out and hands the plane's logbooks to a flight line inspector.

The airplane was returning to Dallas, where it was built nearly 10 years before. This *Corsair* is one of 60 A-7s now being remanufactured into two-seat TA-7C trainers under a Navy program. (A total of 36 A-7Cs and 24 A-7Bs are being completely disassembled, inspected and rebuilt as trainers). This will give them eight to 10 more years of life in the fleet. The remanufacturing program is well underway at Vought (a subsidiary of LTV). NAVPRO (Naval Plant Representative Office) Dallas is the cognizant contract administration office at Vought and is responsible to see that Vought produces for the government what was contracted.

The conversion program is the first time the Navy has literally cut an existing airplane in half with a saw and remanufactured it into a new aircraft.

The Navy has two reasons for converting the 60 early *Corsairs* into two-seat trainers:

- It saves a lot of dollars; a completely reworked two-seat *Corsair* II trainer goes for \$2 million per aircraft, as against \$7 million for a new one.
- Under the present training doctrine, transition from a different type of airplane to an A-7 requires that the transition pilot be chased by an instructor pilot in a separate A-7.

Putting the instructor in the back seat of the same airplane cuts the fuel cost in half and requires fewer total aircraft for the training mission. TA-7Cs replace A-7Es in the training squadrons on about a 2 for 3 ratio.

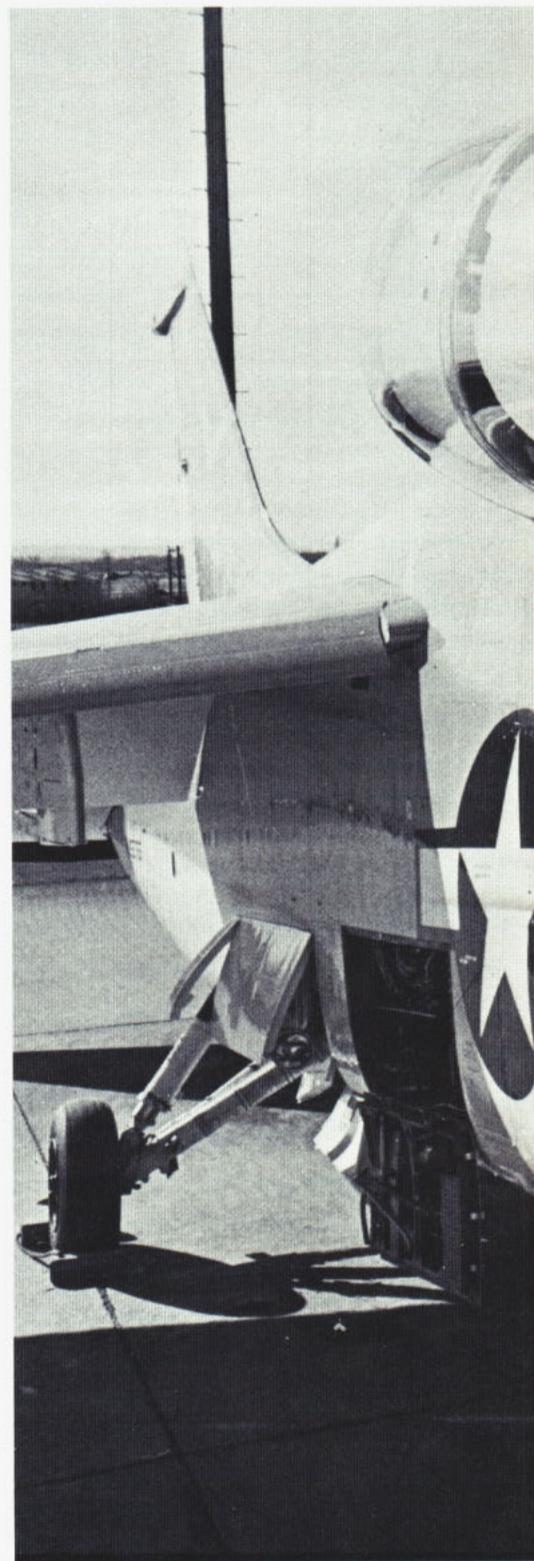
The quality of training also is improved. Having an instructor in the back seat allows him to observe the activities of the transition pilot and offer constructive comments on a real-time basis.

LDCR Goesling was wearing two hats when he flew the A-7C from Cecil Field in Florida to Dallas. As assistant naval plant representative under Commander Jim Beam, he plays a part in supervising the personnel assigned to the NAVPRO. As a naval aviator, with 4,000 flight hours, he occasionally steps in to keep flight schedules moving.

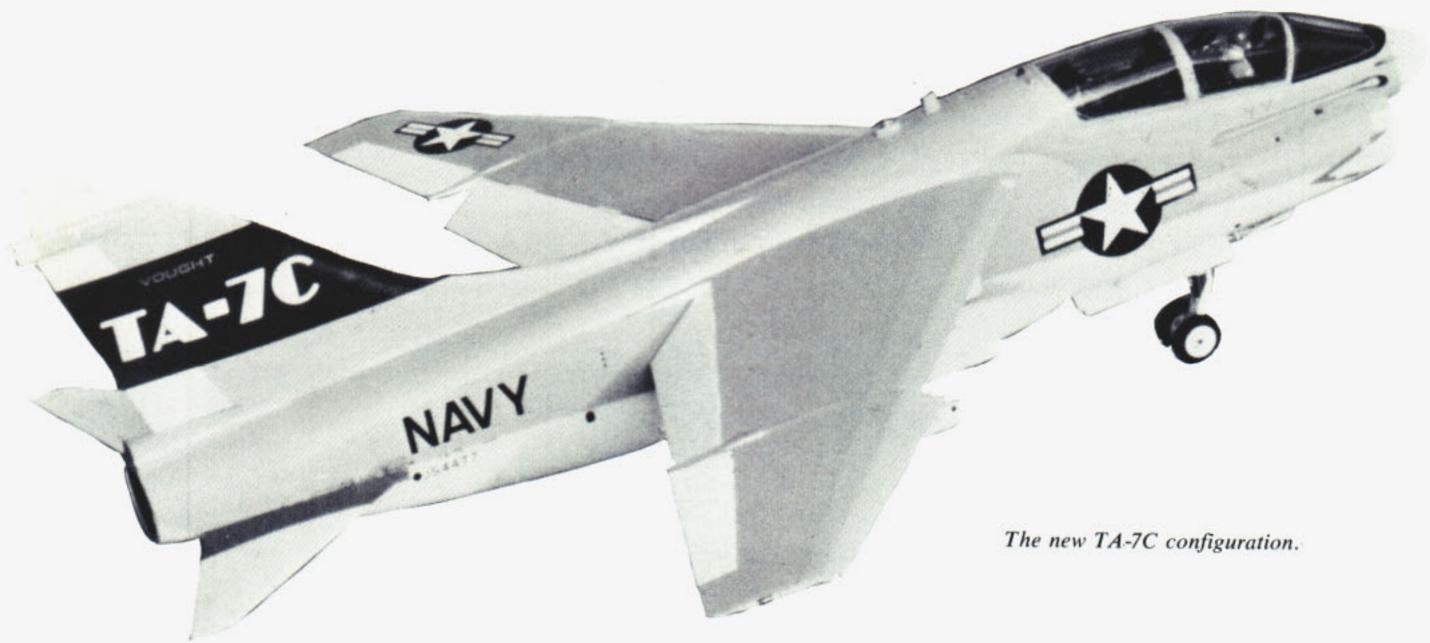
In this case, he had ferried a new A-7E to Cecil and brought back a war-weary A-7C for conversion into a two-seat trainer. The *Corsair* had seen both Vietnam combat duty and Mediterranean deployments with two different squadrons. The last tour was with a VA-86 *Sidewinder* insignia on its tail. Completing its last deployment it was transferred to VA-174, hence the yellow diamonds.

The Navy has bought nearly 1,000 of the A-7 *Corsair* IIs since the first one flew in 1965. In Vietnam, the light attack bombers operated from carriers in the Gulf of Tonkin flying more than 100,000 combat missions. Together with the Air Force A-7Ds, they dropped more than 200,000 tons of bombs and rockets.

The 60 planes being converted come from fleet squadrons. The aircraft have accumulated many flight hours and present a colorful variety of squadron insignia as they arrive.







The new TA-7C configuration.

It takes a year to disassemble an A-7 and remake it into a trainer. Day-to-day guidance and inspection at Dallas is done by NAVPRO's five officers.

There are 106 civil service and five military personnel who carry out a multitude of duties in the NAVPRO. They administer contracts, monitor flight test programs, evaluate contractor quality and engineering systems, monitor cost-control management, and monitor the contractor who manages all government-owned equipment.

Similar NAVPRO organizations are located at the aircraft and aircraft engine facilities of Grumman, General Electric, Lockheed, McDonnell-Douglas, Sikorsky and Rockwell. Each NAVPRO is a field activity of the Naval Air Systems Command.

The two-seat *Corsair II* retains most of the physical characteristics of the original A-7. It is 34 inches longer and four inches higher. The lengthening resulted from insertion of the second cockpit. This additional length consists of a new 16-inch section in the forward part of the fuselage and a stretch of about 18 inches at the trailing edge of the wing.

The elevation of the rear seat provides the instructor with good visibility in all directions. The extra height resulted from the slight banana-like fuselage curvature necessary for tailpipe clearance on takeoffs and landings.

The TA-7C retains the same ordnance carrying capability as the A-7E except that it carries less 20mm ammunition. It also has the same computerized navigation and weapons delivery system, including the head-up display (HUD) and projected map display, as the A-7E.

The HUD is a relatively new feature in Navy aircraft. By means of letters and symbols, the pilot can get flight information as he watches the target through his gunsight. It enables him to fly the most accurate course to the drop or firing point. In the TA-7C, an onboard closed-circuit TV system allows the instructor to monitor the HUD presentation of the student in the front cockpit.

The instructor does not have all of the weapons control switches in his cockpit. However, lights indicate when the student has moved a switch which would enable a station to release bombs or fire rockets/missiles.

Instrument hoods can be installed over both cockpits for instrument training. Pilots have previously received instrument training in the TA-4 *Skyhawk*. All training in the TA-7C should enhance the overall

proficiency of all A-7 pilots.

The final "quality check" on the aircraft is accomplished by the flight test division. Its director, Lieutenant Commander Fields Richardson, monitors all test flying including that accomplished by Vought test pilots, all of whom are graduates of Navy or Air Force test pilot schools.

Vought test pilots fly each airplane until all systems are operable. At this point, the airplane is presented to the Navy. The Navy's team then flies the airplanes to insure they meet military specifications, thereby insuring a combat capable weapons system for the fleet. Each airplane is flown at altitudes ranging from 200 to 45,000 feet and from stall to supersonic speeds.

The Navy selected the TF-30-P408 non-afterburning turbofan engine for the trainers since the A-7Bs and A-7Cs from which they were converted already were equipped with that engine. The TF-30 is lighter than the TF-41 used in the A-7E, thereby partially offsetting the increased weight caused by the addition of a second cockpit.

In a national emergency, the TA-7C—whose service life is expected to be about 10 years—could very easily be outfitted with the additional equipment required to make it combat-capable. Deliveries of the 60 completed TA-7Cs are expected to run into the middle of 1980. ↓

# Turning the A-7 Corsair into a two-seat trainer

STORY BY ART SCHOENI  
PHOTOS BY PAUL BOWER

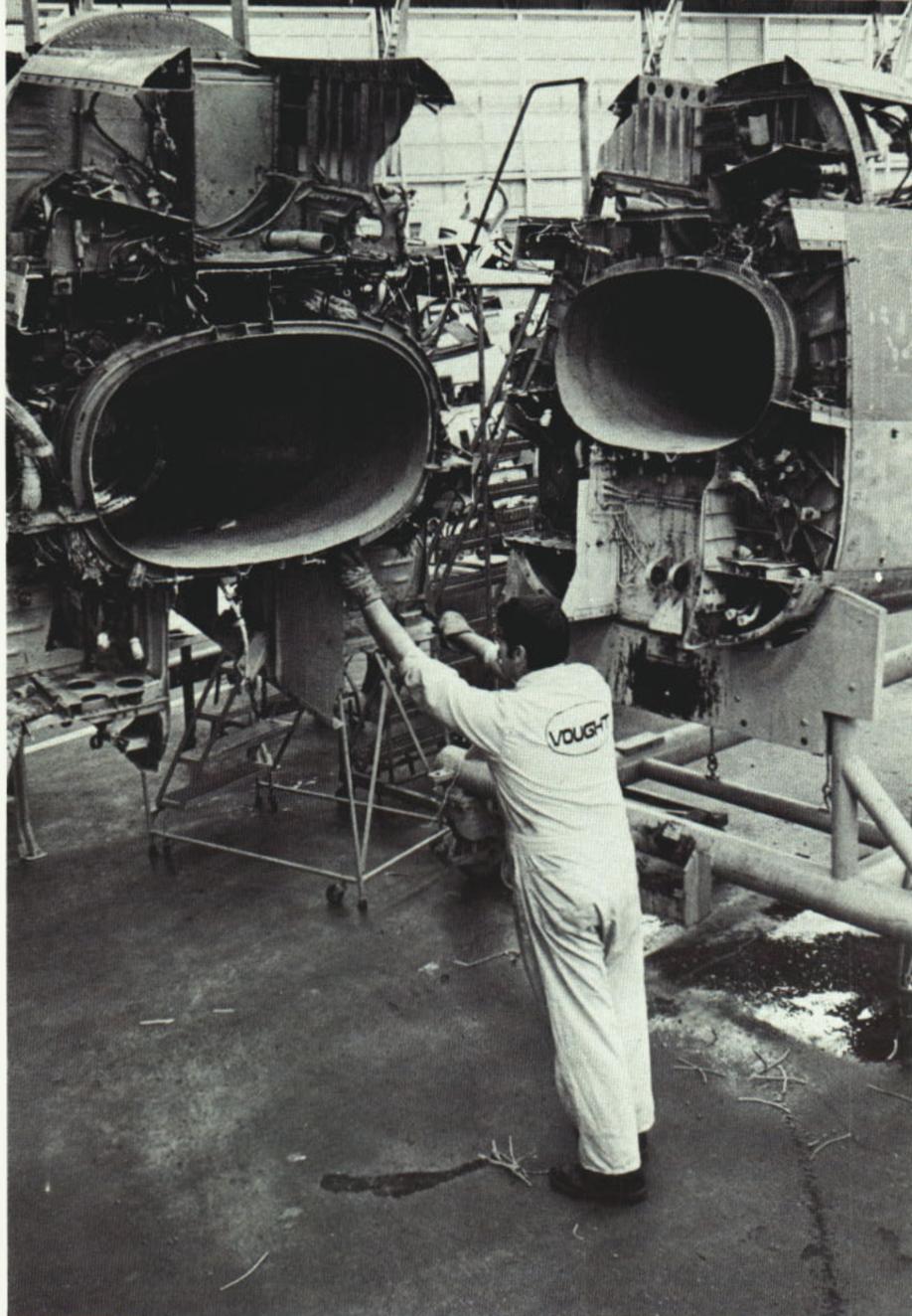
Let's look at what happens to an airplane when it arrives at Dallas at the start of its year-long transition from a single-place A-7C aircraft to a two-seat TA-7C trainer.

As soon as the engine stops, the ejection seat is secured so it cannot be fired accidentally. Fuel is removed from the tanks and the systems are purged and treated with a preservative. After being towed into a hangar, its engine and ejection seat are removed.

A team of Navy and company inspectors immediately inspect and inventory the airplane. All inventoried equipment is then removed and sent to various laboratories for inspection and repair as necessary (IRAN). Additionally, everything else useable is cleaned, labeled and stored in bins for installation as the airplane is reassembled.

Next, the aircraft goes to the paint hangar where all paint is removed from the outside skin. It is blasted with a special chemical paint remover so that corrosion can be more easily spotted. This "vacuuming" technique is new. All waste from this process is collected rather than being allowed to flow into the sewage system, thus reducing pollution.

The airplane then moves into the disassembly area where it is put into a



cradle and the landing gear and wing are removed.

Next step is actually to saw it in two right behind the cockpit. A Skil-type saw chews through the fuselage skin, electrical wiring and hydraulic tubing. Anything to be salvaged and reused is stripped and stored. Then a thorough corrosion inspection is conducted. Any components showing wear are rebuilt or new parts substituted. Judgment of NAVPRO inspectors goes into every step of the operation.

Engines are sent to Norfolk. Other components—ejection seats, landing gear, hydraulic actuators—are sent to the Naval Air Rework Facility at NAS

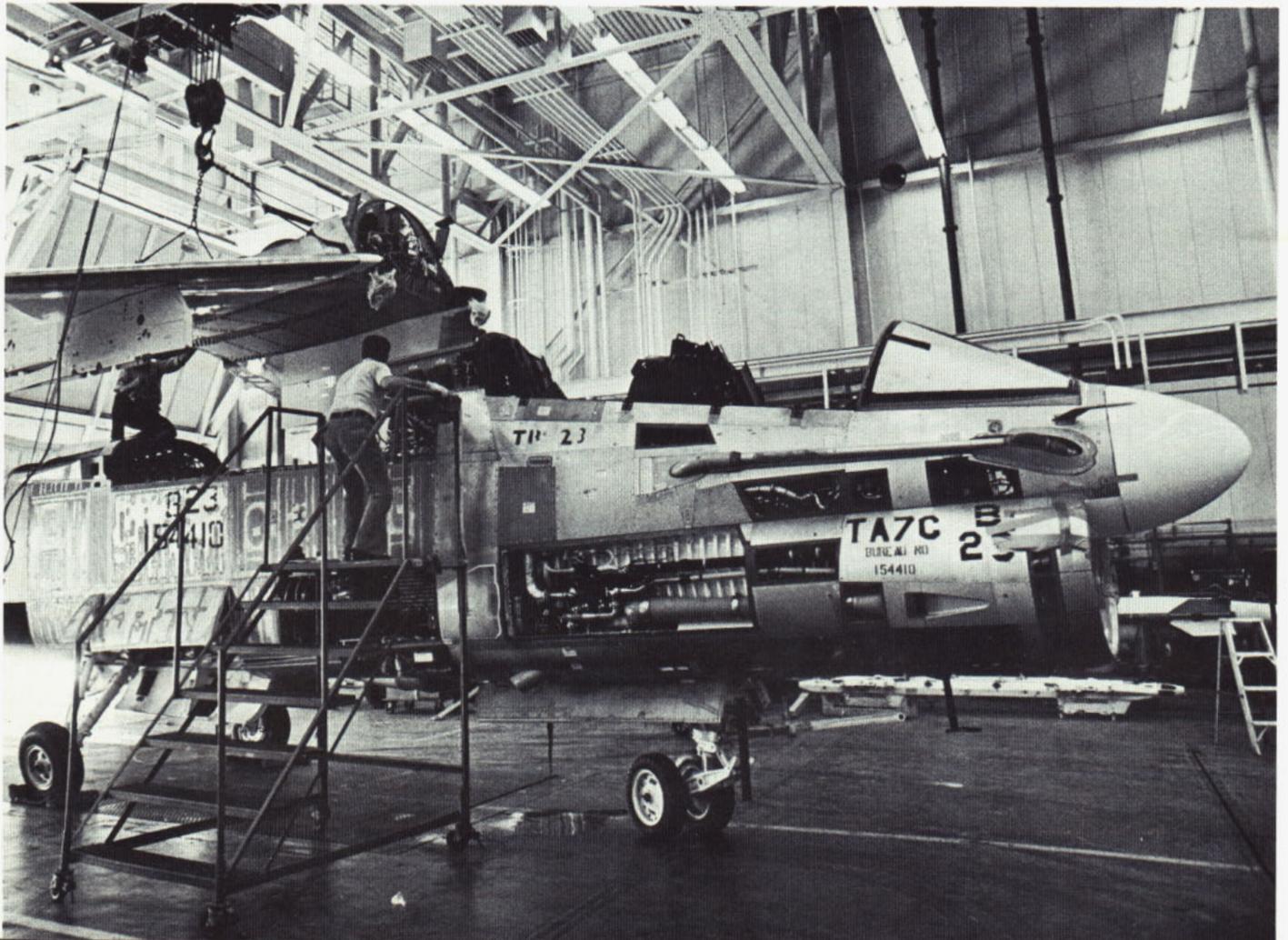
Jacksonville for repair or for their refurbishment.

NAVPRO decides which items can and must be scrapped or repaired, through a joint task control board of Vought and Navy people.

Scrapping is held to a minimum—most of the avionics systems arrive in good condition, but some sets need readjustment, fine tuning or updating. The air conditioning heat exchanger is one item which receives a very critical examination, since the scrap rate is high. Windshield panels frequently are scratched and must be scrapped.

The entire nose section of the A-7, once the instruments and other fittings are salvaged, is discarded. An entirely

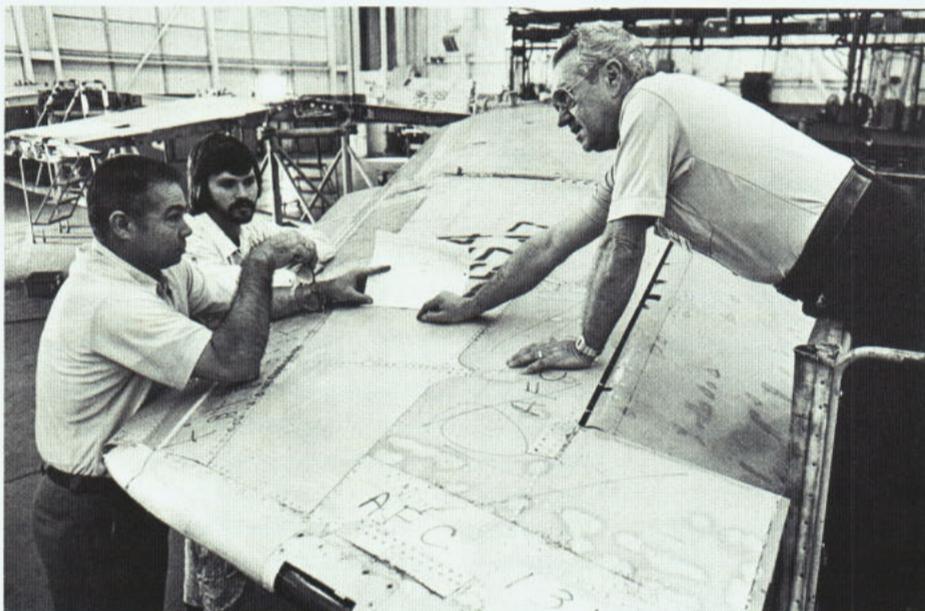
*Below: The aft fuselage of the Corsair is lengthened by 18 inches. Bottom: In final assembly, the wing is refitted to the two-seat fuselage.*





Left: An A-7 is blasted with a chemical paint remover.

Below: NAVPRO and Vought personnel inspect wings during rework.



new forward section incorporating the two seats is built on the final assembly line. The wing remains out by the flight line where a new fairing is installed to streamline the fuselage into the second cockpit. The wing's wiring is the only wiring in the entire airplane that is left intact.

One of the most noticeable new features of the two-seater is a side-opening canopy. Normal ejection is through the canopy. Emergency ground egress is achieved by use of a shaped charge explosive which shatters the plexiglass in an emergency.

Another new feature of the *Corsair II* trainer is a parabrake installed in a housing atop the tailcone under the rudder. This installation could be used in emergencies or for short field landings.

After the new nose section with two cockpits is manufactured, it is mated to the reworked fuselage and wing. Navy and Vought inspectors watch the operation closely. The engine, not necessarily the same one that was in the aircraft originally, is installed and

an engine run is performed on the ground. Ejection seats are installed. A complete weapons delivery check is conducted. The fuel system is checked, pressure is tested and a complete operational check is made.

After these things are done, the airplane goes back to the paint hangar for a new paint job because the original stripping removed the paint down to bare metal. It will return to the Navy with a regulation paint job, but without squadron letters or insignia. NAVPRO inspectors get back into the airplane again to verify company systems operational checks and to okay the seat installations.

The TA-7C then is ready to have its electrical and hydraulic operations checked preparatory to its first flight by two Vought test pilots.

Company test pilots then fly the remanufactured airplane for up to three hours, giving it a complete systems check in both cockpits. It then is ready for NAVPRO flight test pilots to run their acceptance flights. Everything has to be in good working order—engine, seats, landing gear,

electronics, avionics and hydraulics. Navy and company cooperation is close and constant to make sure the pilots in the fleet get the best possible airplane to fly.

A group from the Naval Air Test Center (NATC) at Patuxent River, Md., is to conduct an extensive test of this new model airplane, known as the Navy Technical Evaluation (NTE). This test, which all new airplane types and models must pass before acceptance for fleet use, is to be conducted in Dallas.

The second major hurdle is the evaluation by the Board of Inspection and Survey (BIS). While the NTE requires approximately four weeks and ensures that the airplane performs as it should, BIS trials get down to the "nitty gritty" details of ensuring that the airplane meets every specification to the letter; thus BIS trials are conducted at NATC and require about two months.

While BIS trials are going on, the two-seat trainers will begin going to VA-174 at Cecil Field in Florida and VA-122 at Lemoore in California for operational training use. ↓

# Techniques for Successful RECRUITING

BY JOCS BILL WEDERTZ

Successful Navy recruiters invariably possess three important attributes: they relish the challenge; they view monthly goals as minimum, not maximum, acceptable standards; and they are enthusiastic about the role they play in the Navy. All are confident professionals, willing to accept nothing less than their best.

Eight of these outstanding Navy recruiters—selectees for Recruiter of the Year (FY 77)—and their families were guests of honor in award ceremonies held in Washington, D.C., in late January. Top honors went to Data Processing Technician 1st Class Charles W. Krahn Jr., Navy Recruiting Command's Area Three, who was advanced to chief petty officer.

Seven runners-up were: Aviation Machinist's Mate (Jet Engine Mechanic) 1st Class David T. Warmkessel, Area One; Fire Control Technician (Surface Missile Fire Control) 1st Class William J. Hallmark, Area Four; Electronics Technician (Communications) 2nd Class Joseph V. Bruno, Area Five; Engineman 1st Class Shawn T. Kolstad, Area Seven; Fire Control Technician (Surface Missile Fire Control) 1st Class Daniel J. Petz, Area Eight; Aviation Structural Mechanic (Hydraulic Mechanic) 1st Class Robert F. Baxter, Air Reserve; and Master Chief Yeoman Frederick C. Der Baum Jr., Surface Reserve.

Each Recruiter of the Year (ROY) is an individual; each has his own unique

way of doing the job and assessing rewards.

## Street Walkin', School Talkin'

Recruiter of the Year DPC Krahn is articulate and self-assured, confident in his ability to recruit top-quality young people and confident, too, in the product he sells—a Navy career. He is the recruiter-in-charge of the three-man Ocala, Fla., station. During FY 77, his recruiting efforts reaped 109 Navy recruits—210 percent of his assigned goal.

"I was a recruiter in Orlando, Fla., for two months before coming to Ocala in August 1975," Krahn said. "By September, I was on my own."

Unemployment was high in Ocala and it should have been rich in potential recruits, but people weren't enlisting. What was needed, Krahn decided, was an all-out campaign to educate local residents about the sea service and make them aware of the outstanding opportunities inherent in a Navy career. At least part of his efforts were influenced by his commanding officer Commander Charles S. Cornett Jr., NRD Jacksonville, who believes in "school talkin' and street walkin'."

"Once I started telling people about scholarships, the Naval Academy, and other educational opportunities, the ball started rolling," Krahn said.

More important than talking programs, Krahn soon discovered, was

showing the uniform. He showed up everywhere—schools, gas stations, retail stores—and placed "take-one" racks of recruiting materials wherever he could. "I've got a pretty good reputation out there now," Krahn said. "That's all it takes."

Often devoting 18 hours a day to recruiting duties, Krahn is totally involved in community affairs. He formed an Educator Action Council composed of local vocational and guidance counselors. He frequently invites top high school seniors and their teachers to tour the numerous naval facilities in Florida.

Acting as a resource material instructor in local schools, he has established rapport with most teachers and students. He took the CNO Sea Power presentations and adapted them for use in sociology, environmental sciences, civics, Americanism vs. Communism, and history classes he teaches on an

*Rebekah Krahn places a chief petty officer's hat on her husband, Chief Data Processing Technician Charles Krahn, Navy Recruiting's Outstanding Recruiter of the Year. Chief Krahn was meritoriously advanced by Admiral James L. Holloway III, Chief of Naval Operations (right), during ceremonies in Washington. Photo by PH1 A. Watkins.*

average of once a week in various schools throughout his district. These "extra" activities, no doubt, help account for his being able to beat all other service representatives in the area.

Krahn, at 33, is a 12-year veteran; he's married and has two young daughters.

#### Getting the Best for the Navy

During ADJ1 Warmkessel's first two years on recruiting duty he averaged five new contracts a month. In FY 77, he raised that average to 9.08, account-

ing for 109 new sailors from the Philadelphia area.

In addition to simple hard work, Warmkessel believes that using referrals from community contacts and recruits, and intensifying his recruiting efforts at high schools, accounted for his success. He was the recruiter-in-charge of the NRS at Kensington and Allegheny Ave. during FY 77, an inner-city recruiting station covering about 10 square miles with a population of 157,000.

Warmkessel's approach is honest and straightforward. He encourages

applicants who are unsure of what to do to check out all of the services before deciding, of course, to "go Navy."

"It's important that they make their own decisions," Warmkessel said. "I even go so far sometimes as to call another service recruiter and arrange an appointment for a young person. If they're not happy, they'll make everyone working around them unhappy too. I'd rather have a guy happy in the Air Force than unhappy in the Navy."

Warmkessel's strong community involvement is highlighted by his exten-



# RECRUITING

sive work (about 20 hours each week) as a troop leader with the Boy Scouts. Additionally, he is a volunteer police officer for the New Jersey Marine Police on weekends and an instructor in a local lifesaving course.

A 19-year veteran, Warmkessel is married and has two children, 14 and 5 years of age.

## You Have to Do It Better

Unlike the other selectees, who said they did not specifically seek the Recruiter of the Year honor, FTM1 Hallmark said that the nomination was one of his personal goals for FY 77. Of his accomplishment, Hallmark, who is recruiter-in-charge of the Washington, Pa., station, said, "I've always worked hard to gain a reputation of 'he-does-it-the-best'."

For him it's a matter of personal pride. Hallmark feels that his job as a recruiter is something that the Navy needs done and "something which is just as important as when I operated and maintained a missile system aboard ship."

Beginning his Navy service in Au-

gust 1964, Hallmark remained on active duty until August 1974. After leaving the Navy he began a construction company and then an electronics firm. Although both were successful, he became dissatisfied because he hadn't completed his Navy career.

"I just felt like I was on leave and ought to be reporting back," he said of his two years in civilian life. "So, I decided to come back." His return to Navy life was as a TEMAC recruiter/canvasser. He has remained in that status since June 1976.

Upon reporting to Washington, Pa., Hallmark assessed the area's potential as an "open marketplace"—a market that yielded 119 accessions during FY 77, 92 of whom were school-eligible enlistees.

Hallmark spends his "spare" time helping coach a youth basketball team, serving as adjutant of the local American Legion Post, as a member of the Taylorstown volunteer fire department, and as a scoutmaster for the Taylorstown Cubs. He's also an active member of the VFW post and the PTA. He has five children from 6 to 19; his

oldest son is undergoing hospital corpsman training in Pensacola, Fla.

## Hey, Dude, What's Happening?

"Good morning. Navy travel and

*Bruno: "DEP is often the motivating factor that keeps them in school in order to get such-and-such program."*



adventure. Joe Bruno speaking. Could I help you?"

"... Hey, dude, what's happening?"

Although this is not the typical telephone greeting in most recruiting stations, it is perfectly in character for ETN2 Bruno, recruiter-in-charge of the two-man, inner-city NRS in Chicago. Bruno's community consists of about 70 percent black, 25 percent Hispanic and five percent white. During FY 77, he attained 159 percent of his goal; that's 92 new sailors.

Like other ROY selectees, Bruno found that getting his message into the public schools was essential. "I found

*Warmkessel: "I'd rather have a guy happy and in the Air Force than unhappy and in the Navy... we don't need that."*



if you're sincere with the school counselor, if you don't make a pest of yourself, and if you make sure you have an appointment, they are receptive," Bruno said.

"I had to show school counselors that the Delay Entry Program (DEP) is very often the motivating factor that keeps students in school because a high school education is necessary to take advantage of so many Navy programs."

Bruno feels getting out on the street, especially in the summer, is just as important as referrals. Both he and his partner RM2 (SS) Larry Ambrey spend as much time out of the office as possible. When they walk the streets, Chicago people nod and speak, even shout a greeting from across the street. Bruno has firmly established a good reputation both for himself and the Navy. He is married and has a 3-year-old daughter. In his off-duty hours he

is pursuing a bachelor's degree in electrical engineering.

### **Don't Just Look At One Before Buying**

"I never figured I'd stay in the Navy," said EN1 Kolstad, "but the more I talk about it as a recruiter, the more I sell myself."

But he's also sold plenty of other young men and women on the Navy—105 of them in FY 77 alone. A lot of people ask how he does it. "By telling the truth, first of all," he says.

It doesn't do the recruiter or the Navy any good to misrepresent things, Kolstad says. As soon as a person gets to boot camp and begins comparing notes, the truth is found out. "And what kind of sailor would we have acquired by lying?" Kolstad said. "He'd probably be walking around mad all the time, never doing a good job—just because he wasn't told the

truth right off."

To ensure that his accessions know what they are getting into, Kolstad encourages each to shop around before joining. He tells them that joining the service is similar to buying a new car: you don't just look at one and buy it. You find out where you can get the best deal.

Another believer in goals, Kolstad maintains that they are only the minimum figures to reach each month. He is impressed with the caliber of his fellow recruiters and with many other people he's met since joining the Navy in 1971. "I try to absorb all the good qualities I see in other people," he said. "I'm not like them, I'm still myself, but I listen to advice."

Kolstad and his wife Cheryl enjoy many outdoor activities such as hiking, camping and water-skiing when he can break away from recruiting.

### **It's Just Like You Said**

FTM1 Petz doesn't consider himself a high-pressure recruiter. In fact, he doesn't consider himself that way at all. "I'm a teacher," he said. Assigned to the four-man Glendale, Ariz., station, Petz is credited with putting 99 new men and women in Navy uniforms during FY 77.

"I probably get more satisfaction out of recruiting than anything else I've done," he said. "It just really helps



*Secretary of the Navy W. Graham Claytor Jr. congratulates Diana Karchella as her fiance, Fire Control Technician (Surface Missile Fire Control) 1st Class William Hallmark, one of this year's outstanding recruiters, looks on. Rear Admiral E. S. Briggs, Commander, Navy Recruiting Command (far right), shares the greeting. Photo by PH1 A. Watkins.*

# RECRUITING

when the kids come back and say, 'Thanks a lot, I'm really having a great time . . . It's just like you said'."

Petz doesn't believe that everyone should be a recruiter. According to him, a recruiter must be something of an egotist, flexible, and very receptive to people's needs and desires.

Like other ROYs, Petz is very much

involved in civic and community organizations. Of particular note has been his work with the Community Action Programs in Wickenburg, Buckeye, and Gila Bend communities. A 10-year veteran, Petz is married and has two sons, 7 and 5.

## A Lot Have Been Alienated

AMH1 Baxter feels there is a vast difference between reserve and regular

1972, he has recruited more than 519 veterans—an impressive average of 13.5 each month. In FY 77, he exceeded his quota by 250 percent, recruiting more than 150 veterans for reserve programs. Baxter's recruiting was accomplished while assigned to the Naval Air Reserve Unit (NARU), NAS North Island, Calif. He has since been transferred to instructor duty at the Reserve VETRO school in New Orleans.

As an instructor, Baxter is not an official recruiter, but it's difficult to hold him down. He's already recruited one person for the TAR program and is "working" several others.

One of Baxter's most noteworthy recruiting efforts was done at home.

*Baxter: "The time for manipulating is over. You are better received if you tell the truth."*



AMH1 Baxter feels there is a vast difference between reserve and regular

*Petz: "You can't say what your best pitch is because it depends on what the guy wants to buy."*

Navy recruiting. Obviously there is a difference in programs, but one other difference surfaces frequently.

"A lot of prospects have already been alienated," Baxter said, "or they feel that a recruiter in the past did them some injustice. During the first enlistment processing, the individual is younger, more receptive.

"When we run into them, though, they want everything spelled out. They want to see it. They want to read it. You've got to constantly prove yourself to each individual you encounter."

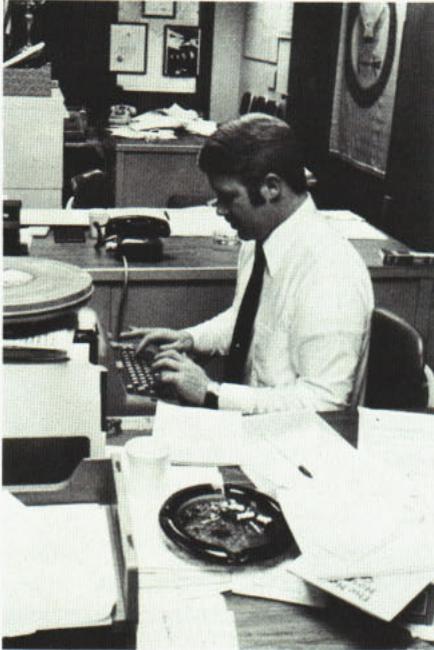
Proving himself has become a way of life for Baxter. Since being assigned to reserve air recruiting in August



## Reserve Recruiter

A recruiter since 1968, Master Chief Yeoman Der Baum began recruiting at Andrews AFB, near Washington, D.C., and sandwiched in some time with the sheriff's office in Savannah, Ga. He came to NRC Charleston, S.C., in 1971. FY 77 marks the third consecutive year that he has been selected as the Surface Reserve Recruiter of the Year. He accomplished

Kolstad: "We want people who want to be in the Navy—people who want to stick with the Navy—people who like what they do."



Der Baum: "The secret is long hours and plenty of telephone calls."

March 1978

"I even enlisted my wife in the reserves," he said, "and my sister-in-law, too." Some of the recruiters ribbed him that he must have been really hard up for quota and chided him about putting the kids in next. It doesn't bother him, though—he believes in what he's doing.

Baxter is involved in community activities including VFW, PTA, and in supporting youth programs such as the Bobby Sox League and the Boy Scouts. He and his wife have three children ranging from 8 to 17.

Through their community involvement and personal commitment, DPC Krahn and the seven Recruiter of the Year runners-up are helping to make the all-volunteer Navy a reality. Their highly imaginative, individualistic recruitment programs are proving that honest person-to-person programs can reap rewards for the Navy in the form of top-quality enlistees.

## TOP DISTRICT

What does it take to finish the year as the Navy Recruiting Command's top performing district?

According to Captain Jack M. Kennedy, commanding officer of Navy Recruiting District (NRD) Miami, Fla., it takes teamwork.

Without that super team, as the captain calls his group of 120 sailors and civilians, it wouldn't have been possible for NRD Miami to take FY 77 top honors in all three categories: best district in officer programs, best district in enlisted programs, and best district in overall performance and production. Miami was at 184 percent in officer programs and at nearly 114 percent in enlisted programs.

Teamwork, as referred to by CAPT Kennedy, means officer and enlisted recruiters supporting and making referrals to each other.

"There are six key factors," CAPT

Kennedy says, "which made our performance in FY 77 possible: communications, teamwork, trust and confidence, a desire to succeed, goal-oriented efforts, and the fact that top management in the command got personally involved."

CAPT Kennedy and his chief recruiter, Master Chief Torpedoman's Mate Ernest L. Brown, made a concentrated effort to improve communications among the field recruiters, and between themselves and the field. They spend much of their time personally bringing recruiters up to date. Critical recruiting information has to be passed along as soon as possible, CAPT Kennedy says.

Numerous reasons which were cited by the captain could have contributed to failure instead of success. Civilian unemployment during the period fell from 13.8 percent to 8.6 percent, much of the Florida population is retired, and a great many Spanish-speaking people are not U.S. citizens.

"You also have Florida's incredible weather, a positive factor for the state, but one which can become negative when talking about leaving 'to see the world'," CAPT Kennedy said.

In spite of these barriers, NRD Miami did succeed. The district enlisted over 2,500 new sailors in FY 77 and had an additional 400 persons enrolled in the Navy's Delayed Entry Program (DEP). The quality of the recruits was equally impressive — 83 percent were high school graduates.

Others who played a major role in Miami's accomplishments include the executive officer, LCDR Harlan W. Woodward; LCDR James E. Kirkendall Jr., former officer programs officer; and LT Kenneth W. Caldwell. Also responsible for the program's success were the district's zone supervisors Senior Chief Aviation Structural Mechanic Floyd E. Harden and Senior Chief Engineman Robert W. Eichman, and the district's top recruiter Chief Interior Communications Electrician (SS) Jose A. Cardenas. ↓

**S**urgeon General of the Navy, Vice Admiral W. P. Arentzen sent a letter in September to all Medical Department officers stressing the need to curtail self-destructive behavior among Navy people.

"One of the principal forms of self-destructive behavior among the personnel for whom we care is cigarette smoking," wrote the admiral. "... the control of cigarette smoking alone could do more to improve health and

Expert Committee recently reaffirmed a statement released in 1970 concerning the effects of smoking cigarettes and health. It states that "smoking-related diseases are such important causes of disability and premature death in developed countries that the control of cigarette smoking could do more to improve health and prolong life in these countries than any single action in the whole field of preventive medicine." The specific effects of

time number of cigarettes smoked, and depth of inhalation. Lung cancer is also inversely related to age: the younger one starts smoking, the greater the risk of disease. The use of filter tips and low-tar content cigarettes has been shown to reduce slightly the risk of developing lung cancer; the risk is higher than that in nonsmokers, however.

**BRONCHITIS AND EMPHYSEMA:** Extensive studies in a number

# *A death defying tale*

prolong life in developed countries than any other single action in the field of preventive medicine."

The admiral stressed that health care professionals must encourage the development of programs which will decrease sickness and premature death caused by smoking, obesity, drug abuse and alcoholism, among other abuses. Consequently, Admiral Arentzen stated, the programs will not necessarily be designed to discourage cigarette smokers. He said the programs are meant "to encourage them (smokers) not to affect adversely their own well-being and that of their families and shipmates."

The admiral stressed that physicians and other health care professionals should set the example by not smoking themselves or displaying other forms of self-destructive behavior. Especially, professionals should behave in a manner consistent with the knowledge that smoking is a health hazard.

The following statement issued by the U.S. Department of Health, Education and Welfare/Public Health Service accompanied the Admiral's letter and adds credence to his beliefs. It is reprinted here for the benefit of all hands.

## **Effects of Smoking on Health**

A World Health Organization (WHO)

smoking, as outlined by the WHO Committee, are summarized below:

**LUNG CANCER:** The increase in lung cancer mortality in those countries where cigarette smoking has been widespread continues without interruption. In some countries, such as the United Kingdom and the United States, there is a leveling-off of mortality rates among men under 60 years of age, for whom cigarette consumption reached a plateau 20 years ago. In women, whose cigarette consumption has been rising rapidly in the past 30 years, lung cancer mortality continues to rise at an increased rate. Mortality rates from lung cancer are 10 times greater in smokers than in persons who have never smoked. Cessation of smoking reduces this differential gradually so that after 10 years the mortality rate for these ex-smokers approaches that for persons who never smoked. This indicates that widespread cessation of smoking would rapidly reduce lung cancer mortality.

In the United States smoking was considered to be responsible for 68,000 of the estimated 84,000 lung cancer deaths in 1976. Lung cancer risks increase directly with the number of cigarettes smoked every day, total life-

of nations confirm that pulmonary function of cigarette smokers is impaired in every known respect when compared to nonsmokers. The prevalence of cough and expectoration in both men and women is closely related to the number of cigarettes smoked; these symptoms usually abate once a person stops smoking. Recurrent episodes of respiratory infection, associated with this excess secretion of mucus, are more frequent in cigarette smokers than in nonsmokers. Studies demonstrate that cigarette smoking is responsible for approximately 70 percent of chronic bronchitis and emphysema cases. Death rates from respiratory diseases are higher in smokers than in nonsmokers, accounting for about 25,000 deaths each year. When young patients stop smoking, pulmonary function may return to normal. Even in persons with moderately severe obstructive disease, stopping smoking may result in striking improvement in labored breathing and cough, with some improvement in pulmonary ventilatory function.

**CORONARY HEART DISEASE:** The most important specific effect that smoking cigarettes has on health is the development of premature coronary heart disease (CHD). Cigarette smokers have a significantly higher risk of CHD morbidity and mortality. Long-

term epidemiologic studies of healthy populations confirm that a cigarette smoker is more likely to have a myocardial infarction and to die from CHD than a nonsmoker. Cigarette smoking is one of the major risk factors for CHD and acts in combination with elevated blood pressure, elevated serum cholesterol and other risk factors.

Heart disease caused 648,540 deaths in the United States in 1975. Cigarette smoking is considered responsible for approximately 25 percent of these deaths. Stopping smoking and controlling other risk factors can reduce morbidity and mortality of CHD.

**OTHER CANCER:** In addition to developing lung cancer, cigarette smokers have a significantly higher rate of cancer of the larynx, pharynx, oral cavity, esophagus, pancreas, and urinary bladder. Pipe and cigar smokers have elevated risks of developing cancer of the oral cavity, pharynx, larynx, and esophagus when compared to nonsmokers.

**PREGNANCY:** Mothers who smoke

cigarettes during the second and third trimesters of pregnancy have been found to have babies with a lower average birth weight than babies of nonsmoking mothers. This effect is probably the result of higher levels of carboxyhemoglobin in the fetal circulation. An increase in perinatal mortality has been observed in babies born to smoking mothers, particularly when other factors which affect perinatal mortality exist. Stopping smoking is recommended during pregnancy. ↓



## Oceanographic Research Tower

# Everything from Sound Refraction to Purple, Hinged Scallops

STORY AND PHOTOS BY  
JOHN YONEMURA

As the morning fog rose from Mission Beach, just north of San Diego, an unusual-looking structure came into view on the horizon.

"What is that thing out there?" asked a young surfer straddling his bright green board. "Heck, I don't know," answered his companion.

A mile offshore, rising 13 meters out of the water, stands the Navy's oceanographic research tower. Since it was erected in 1959, it has been the site for experiments which are enabling the Navy to make better use of the sea.

"It's surprising how many San Diego people don't know what the tower is," says Dale Good, head of the Naval Ocean Systems Center's (NOSC) Ocean Measurements Branch. Involved with the tower since 1962, he coordinates different projects conducted at the site.

Because of the importance to navigation (surface and subsurface), transmission of sound and longevity of underwater equipment, many studies

have been conducted at the tower on water motion, sea temperature, sea chemistry, biology, seafloor topography and geology, and the testing of experimental materials and equipment.

The tower's location was not selected arbitrarily. Directly off Mission Beach in 17 meters of water, it has an unobstructed exposure to the open ocean.

"If we went even a few miles north or south, we would have rocky terrain and a lot of kelp. This would adversely affect our experiments," explains Good.

"The tower facility itself has really expanded over the years," he continues. "When it was first put into place, it had only one room. That one room was immediately found to be inadequate and has now expanded to six rooms on three levels."

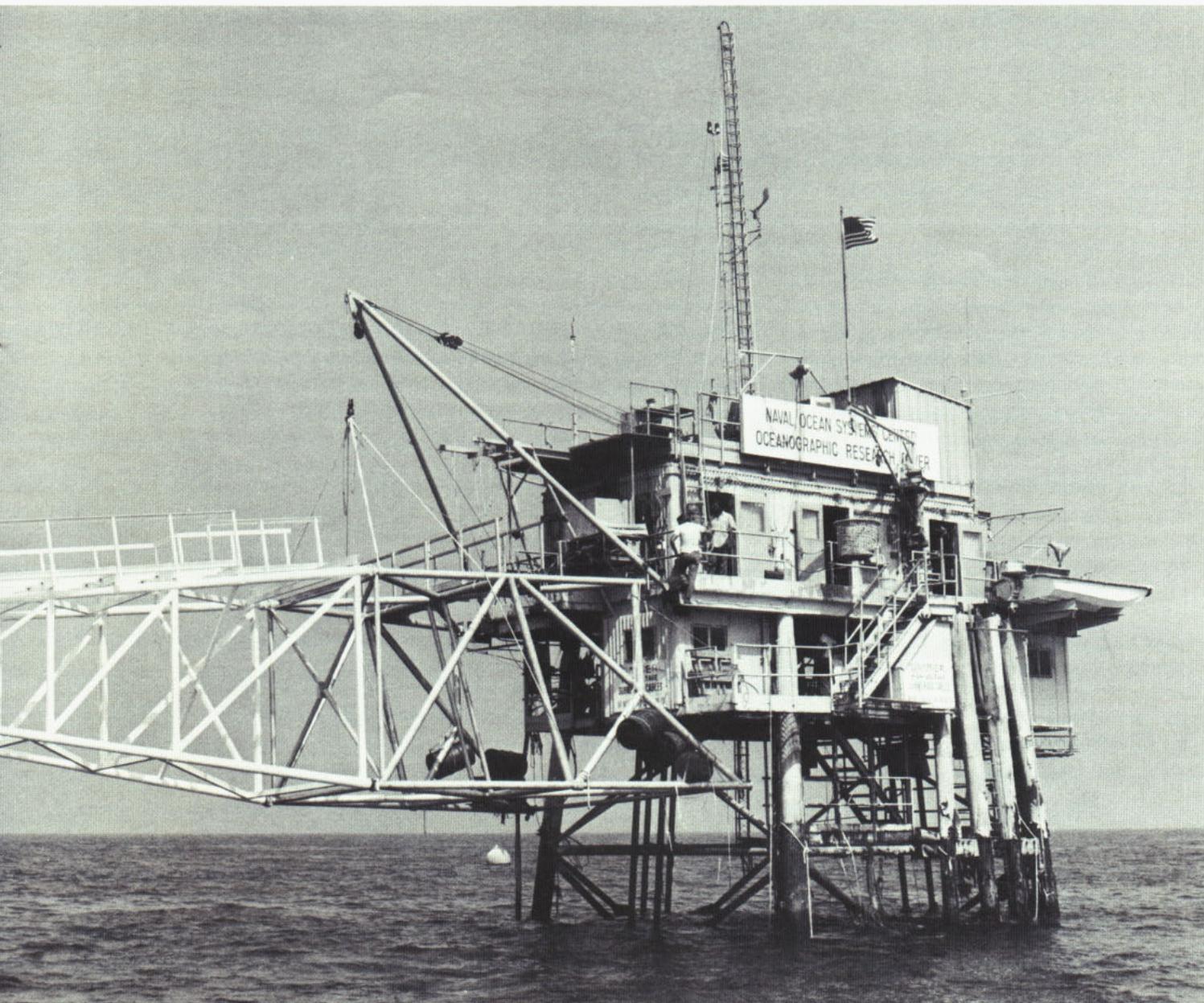
The tower is permanent, and, as such, has several advantages over an anchored vessel trying to conduct the same studies. For one thing, the tower is accessible. It's only 30 minutes from NOSC—15 minutes by car to the Mission Bay pier and another 15 minutes



by boat. And yet, it is far enough from the shore and populated areas to provide a natural, open-sea environment.

One of the greatest advantages is the tower's stability. It is very secure in high winds, waves and currents and has withstood storm surf up to four meters. This stability comes from the construction of the legs. They slant away from the tower platform at an eight-degree angle and are anchored to the bottom by steel pins—a foot in diameter—driven 63 feet into the ocean floor. This allows the use of highly sensitive measuring instruments, accomplishing precision readings.

The tower's permanence is another advantage. Naturally, long-term measurements could not be made economi-



cally or efficiently from surface craft. Instruments mounted on the tower, however, can operate unattended day and night under all weather conditions. Permanence also makes scheduling and planning easier for Good, who says, "When the tower was put in, it was expected to last for 10 years, maybe a little more. Well, here it is 18 years later, and it still looks very sound, structurally, underwater. We're not sure how much longer it will last, but apparently it will be for some time."

The biggest advantage of the tower is that it is much more economical than an oceanographic ship. Its initial cost was only one-fifteenth that of an average oceanographic ship; maintenance costs—painting, cathodic protec-

tion, utilities and replacement of worn parts and cables—are about one-eighth as much as that for a ship.

Manpower utilization is much more efficient. Where—on a ship—most personnel are concerned with propulsion and navigation, almost all human effort on the tower goes toward scientific projects. The tower is usually manned by four or five persons, but it can accommodate at least twice that many if needed.

The tower is versatile as well. Studies of water motion, acoustics, electromagnetics, chemistry, biology and geology—related or unrelated—can be conducted simultaneously.

Most experiments involve internal waves. "These are similar to surface

waves," explains Good, "but they are beneath the surface and only occur where there is a change in density. Here at the tower we have a density boundary occurring at the thermocline which is present during the summer months. The thermocline is identified by an abrupt change in temperature within a small change in

depth. At that depth a change in density occurs which supports the internal waves. These may range from one or two meters to over six meters in height and the period of the waves varies from five to 20 minutes."

Studies of internal waves are viewed as important because sound waves transmitted through them are refracted differently, depending on where they hit the internal waves. Submarine communications is one aspect of this research, but just as important is its antisubmarine warfare aspects coupled with detection and navigation systems.

The internal waves can be monitored by temperature sensors because of the thermocline condition. This past summer, four arrays of these sensors were put in strategic locations near the tower. For this particular experiment the presence of internal waves was correlated with data being gathered from an extremely sensitive superconducting gradiometer which was being tested as a tool for measuring the change in the earth's magnetic field with the passing of internal waves.

Another notable experiment, this one last winter, involved NASA and 21 other agencies. "Measurements were made of wave height, sea temperature, air turbulence, and environmental factors from the tower," Good states, "then compared to measurements made by four aircraft using remote sensors. The sensors used on the aircraft are prototypes of sensors to be used in the Sea Satellite Program in late '78 or '79.

"Normally we prefer to observe and experiment from the platform when the weather is nice, but in this case, we wanted information at peak storm periods," said Good. "We had some pretty scary days out there trying to get people on and off the tower in those conditions."



In spite of this, the tower has an excellent safety record over its 18-year lifespan. Several persons have fallen into the water and there have been a few minor injuries but all possible safety precautions are taken.

Good cheerfully tells the tale of one of his early experiences with the tower. It turned out that one of his first duties was to write an instruction of "do's" and "don'ts," one of which was never to stay on the tower alone.

"Well, we had some of our own experiments going on during the day and we were also participating with Lockheed on a nighttime experiment. I was planning to spend one night with the Lockheed people, so I went out on the last run of the Navy boat for that day, which was also used to take the daytime crew ashore. They were all anxious to get home, so, since I expected the Lockheed boat in a matter of minutes, I told them to go on in.

"I waited and waited. No boat showed up, so I called our operations office on the radio and asked them to phone Lockheed for a status report.

*Above: Oceanographer Paul Hanson (right) with Dale Good, Director of NOSC's Instrumentation Branch. Opposite page: Navy divers use the NOSC boat to place temperature sensors at strategic points around the tower for an upcoming experiment.*

After checking for a long time, they notified me that the Lockheed boat had broken down but would be out later. Finally, at 2330 that night, I was notified by radio that the boat could not be repaired. I said, 'Don't worry about me. I'll lock the doors, hit the sack, and see the day crew in the morning.'

"Well, before morning an unexpected storm blew in and no one could get a boat out to the tower. It wasn't until the evening of the next day that I finally got off the tower. So, I had the dubious honor of being one of the first to be stranded on the tower alone.

"I'll tell you," he adds, "that tower made some awfully strange noises. You just couldn't believe all the creaks, groans and banging that had never been obvious before."

Occasionally, sharks are seen near the tower, but they have never been a problem. If there are divers in the

water, they just get out until the sharks leave. Once, when Good and oceanographer Paul Hanson were working on the bottom, a huge, dark shape loomed into view through the murky water. "At first we couldn't tell what it was but as it continued to pass by, we realized it was a California gray whale, and in a few moments a second one

passed right by us. It wasn't particularly frightening since they didn't seem to care if we were there or not. It is unusual for them to come into water that shallow."

Hanson, a long-time Navy oceanographer, believes that a few unauthorized persons have boarded the tower when it was unmanned. "Mostly they

were just curious," he says, "and never did any real damage until recently when vandals broke some windows and stole some diving gear."

At one time, three 40-foot booms extended from the tower. Sailboats would get too close, get tangled in the booms and sometimes rip their sails and pull the booms down. Tom La Puzza, of the NOSC public affairs office, was raised in the San Diego area and admits to having been one of the curious boaters. "When I was a kid, long before I even knew what NOSC was, I used to sail around the tower," he said. "I never came aboard, though."

NOSC is currently cooperating with San Diego State University in a mariculture experiment at the tower. At three different depths, 30 cages have been attached to the legs. Eight purple, hinged scallops reside in each cage.

"They are finding out that the scallops grow faster at the tower than in the bay," Good explains, "and faster at mid-level than close to the surface or on the bottom, probably because of the thermocline providing more food at that level." Another research organization has abalone growing at the tower.

"We really get a variety of projects and people out here," he says. "We do applied research, and that's what keeps this work so interesting. There are always new studies coming up. You wonder after finishing one project what's going to happen next. I suppose we'll never run out of things to do."





**D**eep beneath the ocean's depths cruises the nuclear-powered submarine USS *Pintado* (SSN 672), a self-contained environment where 123 men live and work.

Narrow passageways and cramped quarters are a fact of life for the crew but they've adapted to a space no larger than two semi-trailers end-to-end by forming a close-knit group—a common trait in the submarine force.

"A submariner learns to give and take with other people," explained Machinist's Mate 1st Class Gary L. Vital. "It's a hard life living in close confinement, but we learn to respect each other's rights."

Vital is one of many who agree that working together in tight quarters, coupled with an understanding of the job at hand, spawns a camaraderie unique to submariners.

"The closeness is an advantage since a sailor gets to really know his shipmates," said Commander John J. McDonald, Jr., *Pintado's* skipper. "How well can the commanding officer of a 5,000-man aircraft carrier know his crew?"

The brotherhood of submariners is an outgrowth of trust, since each man's life is in the hands of his shipmates. One mistake could result in the loss of the submarine and its entire crew.



# USS PINTADO

we work harder at being better

STORY BY JOI JAMES R. GIUSTI, PHOTOS BY PHC KEN GEORGE, AND JOI GIUSTI



*Chief Electronics Technician Orval G. Watson, chief-in-charge, topside, forward.*

*Bottom: On Pintado, good food is high priority—mess cook F. Martin Lea with the day's dessert.*

“You learn to trust everyone,” said Vital. “A guy could endanger us all by doing something wrong or not knowing what to do. Basically, a submariner has to know what it takes to save his and everyone else’s skin.”

All personnel reporting to a submarine must qualify in order to earn the dolphins of the submarine force, but it takes time.

A sailor goes through four phases of training—ship orientation, damage control, ship systems and watchstanding. It can take up to a year for a sailor to qualify, and then he has to requalify on each boat he serves.

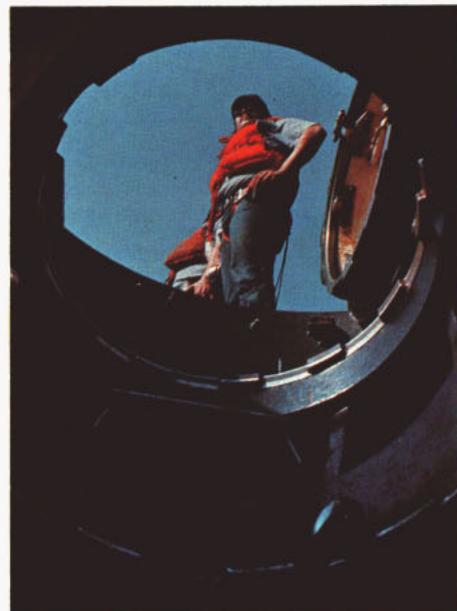
After the initial qualification requirements—being successfully checked out on all ship’s systems by a qualified submariner—are completed, the man goes before a three-man board usually consisting of two officers and a chief petty officer. The man is again required to demonstrate his knowledge of how and why the sub works.

Those with nuclear designations must also go through a stringent nuclear training program. But nuclear power training starts even before a sailor reports to the submarine. After his initial training, a sailor with a nuclear designation goes through the advanced Nuclear Power School and



*Below: Pintado's control room.*

*Bottom: Electronics Technician 3rd Class Rodney C. Roberts (foreground) and Machinist's Mate 2nd Class Paul E. Kazlauskas practice throwing heaving lines as Pintado enters Hong Kong harbor.*



*Above: Radioman 3rd Class Robert M. Rodriguez, topside petty officer, waits for Pintado to tie up.*

*Right: Machinist's Mate 1st Class Gary L. Vital following a six-hour watch.*

*Bottom: USS Pintado (SSN 672) leaves U.S. Naval Station, Subic Bay, R.P.*

Training Unit where he receives first-hand experience working on a nuclear-power plant. The schools are located in New York, Connecticut, Florida and Idaho.

Training is the cornerstone of the submarine force's success and is borne out by the speed and precision in which crewmen respond to an alarm.

Unlike surface ships, where an announcement is made when an evolution is to be a drill, submarines operate under the premise that all alarms are the real thing.

Stemming from the emphasis on training is professionalism, but it's much more.

"It's pride in being a submariner," adds Vital. "We work harder at being better; we have to. *Pintado* is designed to submerge and we all want to get back to the surface."

A submariner's time is spent standing six hours on watch and 12 hours off. When off duty, he heads for the crew's mess which serves four meals a day and also doubles as the crew's lounge.

Meals are served in 32-man shifts with mess cooks serving platters and bowls of food which seem to vanish as fast as they're delivered to the tables. But the food never runs out. With conversations ranging from the number of broken hearts left behind in San Diego to the mail they can't receive





*Below: Executive Officer LCDR Fred P. Gustavson conducts a training lecture in the crew's mess.*

*Bottom: Machinist's Mate 2nd Class Paul E. Kazlauskas maneuvers through one of the sub's berthing areas.*



while underway, one submariner injects, "We get the best food in the Navy here." A passing cook nods agreement.

After the main course, the mess cooks hurry from table to table with desserts which are prepared daily aboard *Pintado*. They range from cakes and pies to cookies and ice cream.

After the meal, some men head for their "skids" or bunks, one of the few places a sailor can be assured of some sort of privacy, while others hurry to get in a quick game of checkers, chess or acey-ducey before they "burn a flick" (show a movie).

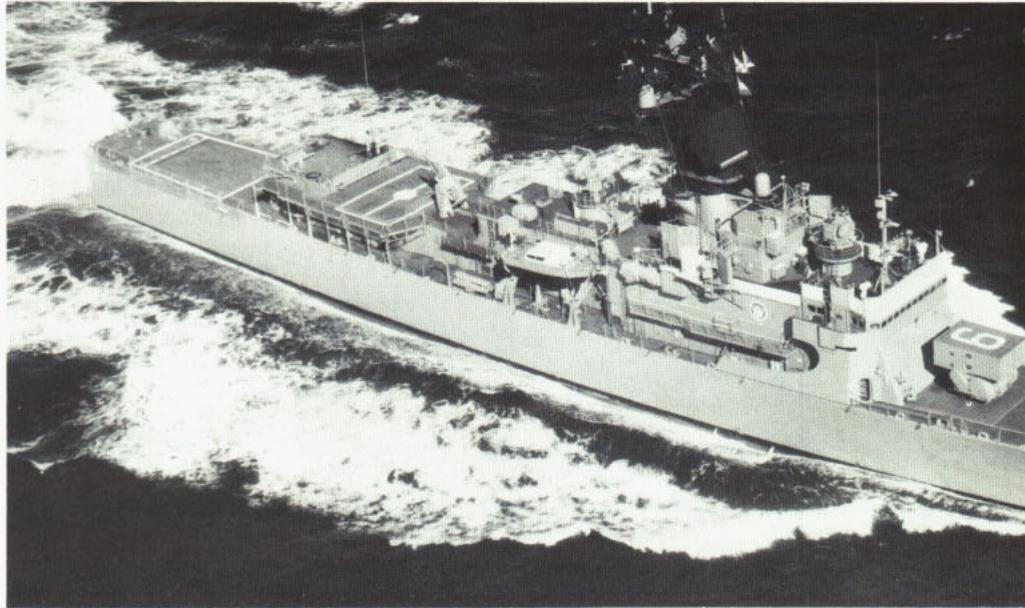
Even with the inconveniences of submarine life, few sailors would leave it. Vital echoes the sentiment of many submariners, "I wouldn't go to a skimmer (surface ship) even if the hours were shorter."

For these sailors, a feeling they're dedicated, professional and being the best are rewards enough for an unusual way of life. ⚓





# West Africa



BY LT RICHARD DICK

Crewmembers aboard USS *Julius A. Furer* (FFG 6) recently visited three ancient African ports in nations as new as the space age.

The occasion was a good will tour along West Africa's coast. Preconceived notions the crew may have had about the Dark Continent were quickly dispelled—Africa, they found, is a continent rich in natural beauty with a tradition of friendliness towards visitors.

Long before tying up at the first port—Freetown in Sierra Leone—*Furer* began preparations for a busy schedule of ceremonial visits and social functions. In addition to the normal shipboard routine of maintenance and training, all hands turned to, putting in extra effort to ensure a flawless shipboard appearance.

The highlight of the visit had to be the arrival of Siaka Stevens, President of Sierra Leone. A 21-gun salute greeted the president as he came aboard in the afternoon and *Furer* later got underway. For the next few hours,

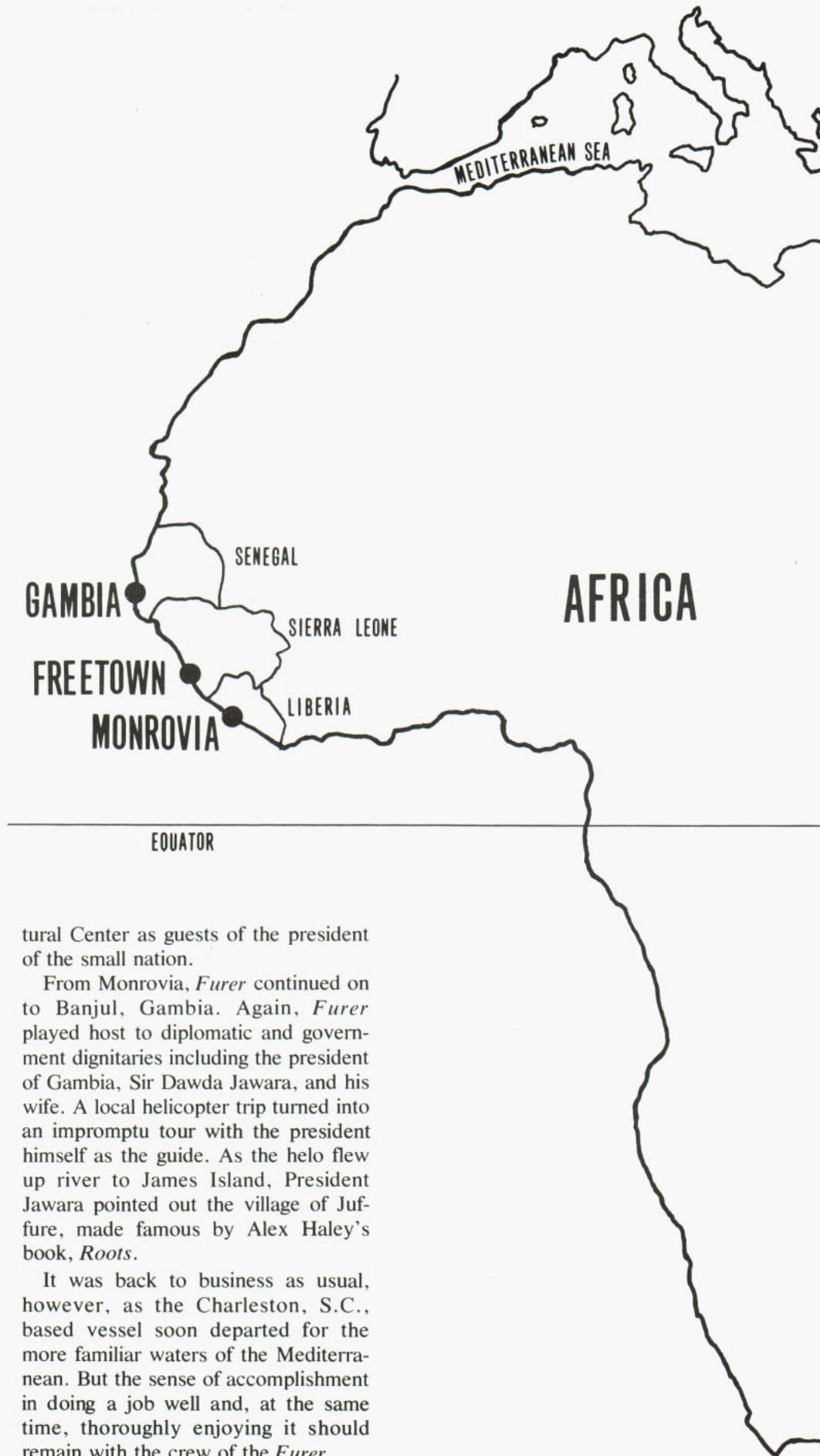
# Ho!



President Stevens saw a display of the capabilities of the guided missile frigate. The president seemed thoroughly impressed with the readiness of the ship and her crew, and when presented a *Furer* ball cap, he donned it immediately.

The feeling of fellowship continued throughout the day as crewmembers enjoyed the white sands and warm waters of Lumley Beach or participated in traditional sports events with the Sierra Leone army. As might be expected, the army won a soccer game handily, but came up against some stiff competition in basketball—*Furer's* team won, 69 to 51. They may have become a bit too overconfident because at the next port call, Monrovia, Liberia, *Furer's* basketball team suffered defeat at the hands of the Liberian armed forces.

At Liberia, the ship was opened to visitors, and people were quick to return invitations. The crew went on fishing expeditions with the Liberian navy, toured and lunched at a local rubber plantation, and enjoyed a special performance at the National Cul-



tural Center as guests of the president of the small nation.

From Monrovia, *Furer* continued on to Banjul, Gambia. Again, *Furer* played host to diplomatic and government dignitaries including the president of Gambia, Sir Dawda Jawara, and his wife. A local helicopter trip turned into an impromptu tour with the president himself as the guide. As the helo flew up river to James Island, President Jawara pointed out the village of Jufure, made famous by Alex Haley's book, *Roots*.

It was back to business as usual, however, as the Charleston, S.C., based vessel soon departed for the more familiar waters of the Mediterranean. But the sense of accomplishment in doing a job well and, at the same time, thoroughly enjoying it should remain with the crew of the *Furer*.

# Bearings

## News Center Director

"Twenty-five years ago, there weren't many fields a young woman could enter as a profession," Captain Alice C. Marshall said, explaining why she chose a career in the Navy.

She had worked in radio and television but opportunities were limited. "Up to a certain point, women were employed just like the men, but men became station managers or moved up in the network," she said.

"The women never went in that direction. I felt that was true in other

areas; I believed my best opportunity was the Navy."

CAPT Alice Marshall is now director of the Fleet Home Town News Center in Norfolk, Va. The center produces 100,000 press and radio releases a month on individual Navy, Marine Corps and Coast Guard members. It operates on the principle that sea service people make good news copy in their home towns.

However, Fleet Home Town News Center does not originate, only reproduces, the press releases. Information is submitted by commands all over the

world. Data is electronically processed and distributed to the nation's news media.

CAPT Marshall is also director of the High School News Service, a DoD activity that publishes a magazine called "Profile" six times a year. This deals with all five services and is distributed nationwide to high schools and career counselors.

When the captain was commissioned in 1952, there was only one woman captain on active duty in the Navy—the director of the WAVES. That officer held captain's rank only while serving as director. When she left the job, she reverted to the rank of commander.

"Today there are at least 10 women line captains and even an admiral," CAPT Marshall said.

In the 1950s, women officers were generally limited to positions in the administrative fields. "For a woman to get into a field like electronics," she said, "that woman had to be very exceptional. Now only the seagoing jobs are closed to us."

Fleet Home Town News Center is CAPT Marshall's first command. Yet, she has no qualms about her ability to handle the assignment. "Good management is good management," she said. "I don't think the techniques I use should be different because I'm a woman. I approached this job as I've approached every other job—with the intention of doing it to the best of my ability and with a concern for the mission, the people and the command as a whole."

CAPT Marshall would like her next command to be a ship, though she knows it won't be. "At this point, we are far away from a woman being in command at sea because of a lack of practical experience," she said.

"However, commanding a ship is a



management function much like managing any other activity, but it also presents a possible combat situation. We don't have women now who have the training and background to command at sea."

The captain thinks that women should be allowed to go to sea though. She says there are a number of jobs that could be done by women on ships without jeopardizing readiness. Addi-

tionally, she thinks women should be allowed to fly all types of aircraft. "I think we have some women who would make marvelous fighter pilots because of their stamina and abilities."

In spite of restrictions, CAPT Marshall has had a rewarding career. "I have done everything I set out to do," she said. "When I came in, commander was the highest permanent rank a woman could attain. I set out to

be advanced as far as I thought my talents would reasonably take me; now I have a command—that was one of the things I wanted."

A quarter century of naval experience has entitled CAPT Marshall to give advice to young women (and men too) just starting out: "Do your job the best way you know how. Learn as much as you possibly can."

*JO2 Glenna Houston*

## X-Wing Provides Lift

Engineers at the David W. Taylor Naval Ship Research and Development Center in Carderock, Md., may have solved an aerodynamic riddle that has been giving vertical-takeoff-and-landing-aircraft experts quite a headache. How does one design a plane that can do what appears impossible—hover like a bumblebee one minute and zoom like a diving hawk the next?

The X-Wing composite aircraft may

be the answer to the problem.

Sponsored jointly by the Defense Advanced Research Agency and the Navy, the X-Wing has proven capable of extending hovering and high speed cruising (Mach .80) in recent tests. Past attempts to develop a VTOL aircraft with both capabilities have been unsuccessful—hovering and high-speed cruising seemed to be mutually exclusive characteristics. X-Wing's "unique circulation control aerodynamics" are expected to provide a

much needed breakthrough solution.

For the technically minded, this is how the X-Wing works.

The circulation control concept employs relatively thick, hingeless blades with rounded trailing edges. Low pressure air is pumped into each blade and is ejected from a thin slot on the upper surface of the trailing edge. Due to an aerodynamic phenomenon—the Coanda effect—the air adheres to the rounded edge until it reaches the lower surface, thus keeping the boundary layer from separating. This creates high lift.

The single lift system is used throughout the entire speed range. Operating as a four-bladed rotor, the X-shaped wing allows the aircraft to hover or proceed at low forward speeds. When the wing is slowed or stopped, the aircraft is capable of high forward speeds.

In other words, the X-Wing can hover when the wing spins like a rotor, and cruise at high speeds when the wing is locked into one position (though that position can be varied on an axis).

Full-scale wind tunnel tests of the critical rotor and hub control system are scheduled for 1978. Flight tests of a demonstrator vehicle could begin as early as 1979. It is possible that the X-Wing composite aircraft will be in the fleet of the 1980s.



# Bearings

## Taping Noted Editor

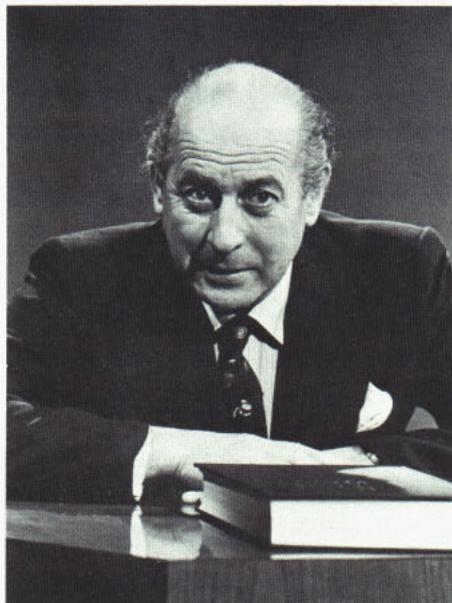
This spring, the Naval Photographic Center in Washington is expected to release a 20-minute SITE System television spot featuring Royal Navy Captain John E. Moore, editor of *Jane's Fighting Ships*. CAPT Moore expounds upon his findings concerning the balance of sea power between the U.S. and Soviet navies.

"If they [the Soviet Navy] are to operate in any kind of hostile situation," *Jane's* editor said, "the difficulties for [them] will be far greater than for any other navy in the world." CAPT Moore emphasized that the deciding factor in any naval confrontation would not be numbers or tonnage of the opposing fleets, but the attitudes, training and experience of those who man the ships.

Chief of Naval Operations Admiral James L. Holloway III has repeatedly stated that "Today the U.S. fleet has a slim margin of superiority over the

Soviets in those scenarios involving the most vital U.S. national interests."

CAPT Moore draws upon his 34 years of naval experience to explain why the CNO's views, in his opinion, are valid. "Let us describe [the Soviet



Navy] as a generally *good* outfit," the captain said, "but what I'm talking about is a comparison between them and the *excellent* outfit which is the U.S. Navy. You have to remember when comparing yourselves in the U.S. Navy to the Soviets that you have the advantage.

"You have the advantage of education, tradition, knowledge and experience. These things are of the greatest possible value should it ever come to a confrontation."

Moore stresses that analysts have to avoid comparing navies based solely on tonnage and numbers of fleet units. "These are idiocies compared to the study of the men that man them," CAPT Moore said. "The greatest single factor is the man."

Interspersed with the captain's comments will be stock footage illustrating as nearly as possible the subjects about which he speaks including Soviet and American training, vessels and methodology.

## First Off the Line

Patrol Squadron Six (VP 6), based at Barbers Point, Hawaii, recently accepted delivery of the first of nine modernized P-3B *Orion* aircraft it will receive from the Naval Air Rework Facility Alameda, Calif.

Four other Hawaii-based squadrons and 13 reserve squadrons eventually will receive the modernized P-3B, resulting in a major upgrading of antisubmarine warfare capabilities.

The modernized P-3B features a digital computer processing capability, a world-wide Omega navigation system, tactical display capabilities and advanced acoustic sensor equipment. These give the aircraft an ASW capability comparable to the P-3C.



## In the Public's Eye

"It's our way of celebrating the Navy's 202nd birthday . . . it shows to thousands of viewers our support for the Navy, the Naval Reserve, and the military establishment in Jacksonville and the world." That's how sports editor Nick Bashnan explains why he and weather man Ray Boylan are wearing uniforms for the evening news on station WTLV-ch. 12. Bashnan is a Navy Reserve officer with the Naval Reserve Public Affairs Unit at NAS Jacksonville and Boylan is a retired Navy lieutenant (Anchorman John Hogan and anchorwoman Deborah Gianoulis are in the middle).



## Selling a Navy Career

Aboard USS *Worden* (CG 18), operating out of Yokosuka, retention is more than just a word—it's a common occurrence. In the six quarters from July 1976 to December 1977, *Worden* reenlisted 100 percent of all eligible second-term and career designated personnel and two-thirds of all eligible first-termers for an overall retention rate of 79 percent.

Much of the credit for *Worden's* enviable reenlistment record goes to Navy Counselor 1st Class Grover L. Strickland, career counselor for the cruiser. "We're not just looking at the next tour or reenlisting for orders," he said. "We try to sell the Navy as a career."

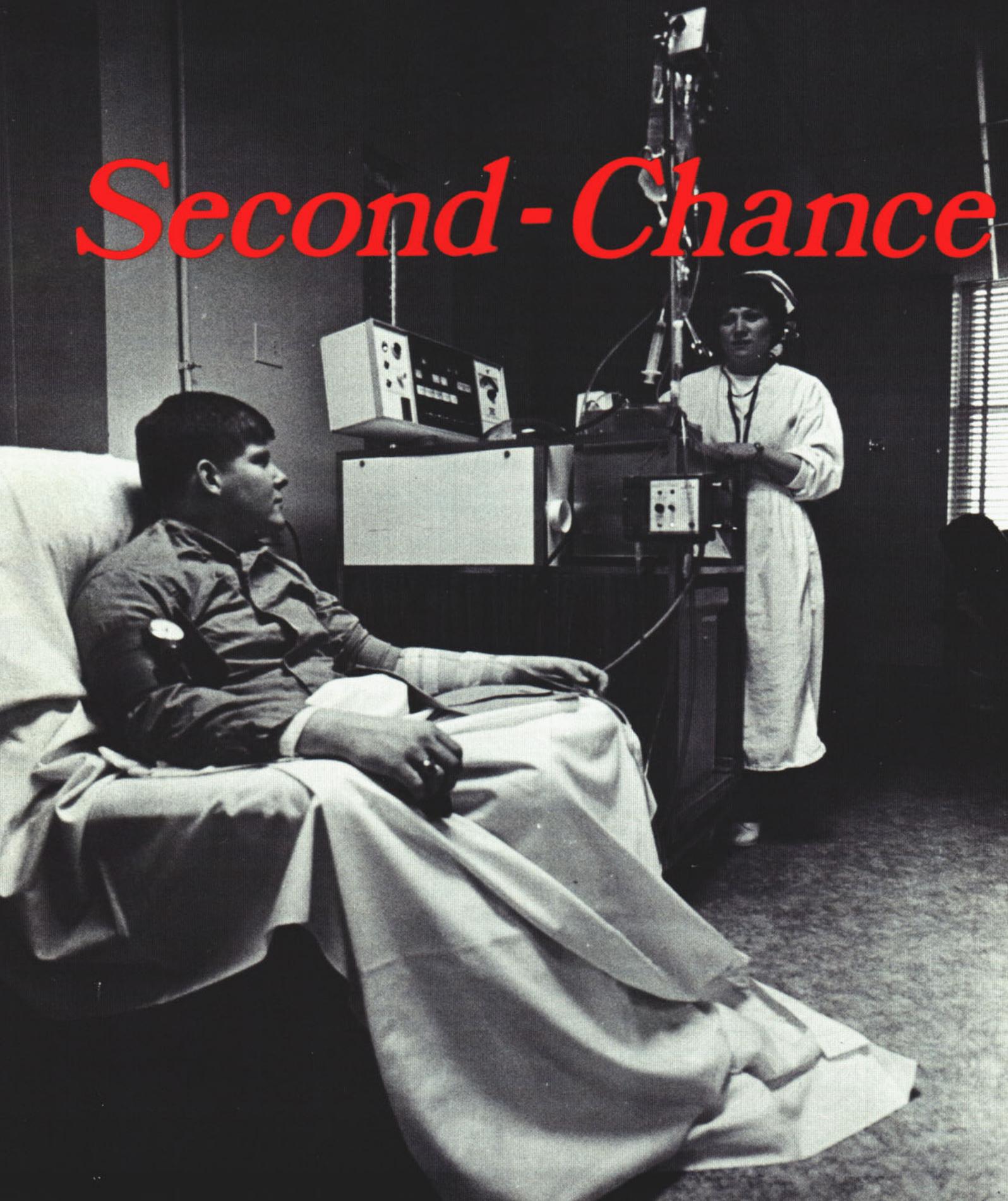
Strickland feels *Worden's* achievement is linked directly to the level of training on board. "As the men become more proficient in their jobs," he explained, "they take a greater pride in their work. They start looking for ways to improve themselves further and that includes reenlisting for a school."

Translated into terms of people, *Worden's* reenlistment percentages reflect 18 first-termers, five second-termers and 11 career designated personnel who have "re-upped" in the last year

and a half. In the most recent quarter, USS *Worden* cleared the boards by achieving 100 percent reenlistment of all eligible personnel regardless of pay grade.



# *Second-Chance*



BY JO2 DAVIDA MATTHEWS

Seventeen-year-old Judy Gregory didn't feel well, but she accepted the day's discomfort as part of her pregnancy. By that evening, Judy was in so much pain that her husband, Army Spec. 4 Terry Gregory, rushed her to

general physical condition, she was a prime candidate for a kidney transplant. But she faced another problem, one that has plagued the transplant program since its inception: lack of donors.

"Judy's name was placed on a list with about 30 other people from this

area," said Lieutenant Commander (Dr.) Mitchell Goldman, head of Reparative Surgery Division at the Naval Medical Research Institute (NMRI), Bethesda, Md. "How long she would wait depended upon the donation of a compatible kidney. Often, close relatives will donate one of their kidneys—40 percent of the kidneys we transplant come from living relatives of the recipients," he explained. "Those transplants stand a better chance of 'taking' because of the similarity of tissue. The success rate is about double that of transplanting from cadaver donors."

*LCDR Goldman*

# Miracle Kidney Transplant

Portsmouth Naval Hospital.

Judy had suffered a total kidney (renal) failure. She was in critical condition for days, eventually losing the baby while doctors fought to keep her alive. Judy recovered, but her life would never be the same.

In the following years, Judy's doctor tried medication after medication—each with its own peculiar side effects—in an effort to heal her kidneys. Most of the foods she loved were forbidden—she was placed on a strict no-salt diet of bland foods. Worst of all, Judy faced dialysis.

Three times a week, she checked into the hospital where she was connected to an artificial kidney machine. For eight hours, her entire blood supply passed through filters which cleared her body of poisonous wastes.

"I felt like I was chained to that machine," Judy said. "It took so much time and interfered with my life and how I wanted to live it. I was willing to try anything to get away from it—to start living a normal life again."

Judy wasn't alone with her problem. Each year, more than 10,000 Americans develop chronic renal failure. Their only hope is to be hooked up periodically to a dialysis machine or to receive a kidney transplant.

Judy's doctor contacted the Navy's kidney transplant team at the National Naval Medical Center (NNMC), Bethesda, Md. Because of her age and



*Lieutenant Maureen Robards, charge nurse of the hemodialysis unit at the National Naval Medical Center at Bethesda, monitors dialyzing patient. Photo by JO1 P. Sundberg.*

The source of kidneys from living relatives is limited, however. Few patients have blood relatives who are both able and willing to donate a kidney. Patients must rely on kidneys from deceased donors.

"It may be necessary to check hundreds of donor kidneys against the body chemistry of the recipient to avoid rejection or at least ensure a minimal reaction that can be controlled by anti-rejection drugs," Dr. Goldman said.

A computer system is now aiding facilities nationwide in this screening process. The transplant team daily receives a computerized file of all waiting recipients, complete with their physical and histocompatibility (tissue) data. Donor organs that do not match any recipients in the region where they become available can now be sent to a more closely matching recipient elsewhere. "We are cutting down considerably on wasted organs, made useless because we couldn't find a recipient in time," Dr. Goldman said.

So Judy waited. Twice, kidneys were donated that initially matched her requirements. She was rushed from Portsmouth—one time by helicopter—to Bethesda for final typing and matching. Both times, the organs were closer matches for someone else.

Then in April 1977, a year and a half after Judy's name had been placed on the waiting list, the transplant unit was notified of another kidney that tentatively matched Judy's needs. They sprang into action. Again, Judy was brought to Bethesda. At the donor hospital, both kidneys were removed, prepared for transport, flown to Andrews Air Force Base, Md., then airlifted by helo to Bethesda.

"Speed is critical," explained Goldman. "We can keep a kidney viable only 72 hours by using a Belzer perfuser—a machine that keeps fluids circulating through the organ by way of a blood vessel. The sooner the organ can be transplanted, the better the chances of success.

"In Judy's case, it wasn't necessary. But if need be, we'll fly a surgical team

anywhere in the U.S. to harvest an organ," he continued. "Many hospitals don't realize we exist or that we have the capability to do this. As a result, thousands of organs are lost to us each year."

As for Judy, she finally got the kidney she had been waiting for; but it's not a happy ending yet. Despite treatment and precautions, her body rejected the organ. She developed a wound infection and later, a viral infection. "The drugs we must use to control rejection leave the body practically defenseless against bacteria that normally would be harmless or easily combated," Dr. Goldman explained. "For a transplant patient, a cold can kill."

Judy has been in and out of the hospital since her operation and is currently undergoing radiation treat-

ments to counter still another rejection episode. Despite all the problems she has had with the transplanted kidney, if it fails, Judy is determined to go through with another transplant.

"I'm only 24 and I can't stand the prospect of dialysis the rest of my life," Judy said.

Judy's transplant also releases the dialysis machine for someone else. "There just aren't enough of these artificial kidneys to care for the people who need them. The situation is so critical in some areas that many hospitals are forced to work around-the-clock operating their dialysis machines to keep up with the demand," Dr. Goldman said.

Dialysis is a costly, time-consuming business. The annual cost for a person with little or no kidney function approaches \$25,000. Less expensive—but





less efficient—machines may be purchased for use at home, but even these involve an annual outlay of several thousand dollars.

A transplant procedure costs about \$10,000 to \$15,000, and the transplanted kidney has an average lifespan of five years. “. . . but there are many exceptions,” Dr. Goldman reported. “In October 1969, our team performed its first kidney transplant on David Bryan, the 19-year-old son of a retired Navy man. He is still maintaining normal renal function.”

Since that first operation, 60 kidneys

have been transplanted at Bethesda. Last October, to avoid duplication, the Navy transplant team joined forces with the Army at Walter Reed Hospital.

“It takes the same number of people to do transplant surgery whether it be one or 30 operations a year. By combining our facilities, we not only get a better transplantation unit, but also get more time to devote to research,” Dr. Goldman said.

Now most of the actual transplant operations are performed at the Walter Reed facility. Research continues at Bethesda.

Mitchell Goldman is more than qualified to supervise research in organ transplantation. He received his BA

degree from Brandeis University in Mass., then continued on to Harvard Medical School. He completed his internship and residency training at Peter Brigham Hospital in Boston, site of the first kidney transplant performed in the U.S. He joined the Naval Reserve in 1970 and came on active duty in 1976.

“There are so many questions still unanswered—how the body rejects organs and how we can prevent it without lowering the body’s defenses, long and short term preservation, closer tissue typing and matching—the list is endless,” he said.

Dr. Goldman, assisted by five hospital corpsmen—HM1 Dennis French, HM1 Mike Forney, HM1 Lou Meister, HM2 Keith Gawith and HM3 Jerry

*Left: Corpsmen insert a segment of freeze-dried artery to study the animal's reaction. Above: Delicate operation requires a closer look.*

Forgey—is making progress in transplant surgery using animals obtained from a conditioning farm. The majority of the actual experimental surgery is performed by the corpsmen who attend a nine-month transplant technician school conducted at Bethesda before assignment to the research unit.

A freeze-drying method developed at NMRI has revolutionized tissue preservation. The process removes water from frozen tissue by vaporizing the moisture in a high vacuum and then condensing the vapor. The tissues may then be stored under vacuum at room temperature for 10 years or longer. When used for transplanting, the tissues require no matching since the ability to provoke rejection is lost in the freeze-drying process.

However, larger organs present problems. Quick-freezing produces intracellular ice crystals that damage the cellular structures. For long-term preservation of organs, a new method must be developed. That is just one of the many areas Dr. Goldman's unit is investigating.

Although long-term preservation or even portable artificial kidneys will be available someday, it's little consolation to those who need kidney transplants now. Eighty percent of today's patients with renal failure will never receive a kidney because there aren't enough being donated.

In early 1976, more than 10,000 people were living on borrowed kidneys, 52 others were alive because of someone else's heart, and 28 depended on transplanted livers. Each year, about 6,000 people see again through donated corneas.

Four times as many people survive from day to day, waiting for their second chance through a gift of a donor organ. If you would like to help save the life of a fellow human being, you can take steps now to ensure that your wishes are carried out.

You can take your body with you, but in this case—don't. Leave behind a part of yourself so that others might live. *Photos by JO1 Jerry Atchison.* ⚓



*HM2 Gawith adjusts kidney perfuser.*

# Paving the way

The Uniform Anatomical Gift Act which served as a model for similar laws passed by all 50 states and the District of Columbia provides that persons 18 or over may donate all or part of their bodies for research, transplantation or placement in a tissue bank. When properly filled out, a wallet-size card such as the example shown is accepted as a legal document. Many states are permitting intentions to be indicated on drivers' licenses. In any case, you are free to change your mind at any time.

The model law for donations also makes the following provisions.

- A donor's valid statement of gift is paramount to the rights of others except where a state autopsy law may prevail.
- If a donor has not acted during his lifetime, his survivors, in a specified order of priority, may do so, in his name.
- Physicians who accept organs or

tissues, relying in good faith on the documents, are protected from lawsuits. The physician attending at the time of death, if acquainted with the donor's wishes, may dispose of the body under the Uniform Anatomical Gift Act.

- The time of death must be determined by a doctor who is not involved in the transplantation, and the attending physician cannot be a member of the transplant team. The transplant team, likewise, is forbidden to make a death diagnosis—certifying that the donor is indeed dead.

- The donor may revoke the gift and the gift may be rejected if not suitable.

The act states that the gift may be made by a will and becomes effective without waiting for probate. However, you should reveal your intentions to your doctor and to as many relatives and friends as possible, and carry a donor card with you at all times.

Many potential donors fear that if they sign up to donate an organ after death, it might be taken before they are, in fact, dead.

Obviously, the victim is a patient first and becomes a potential "donor" only when it is certain that there is no way to save his or her life. If breathing and the heart have stopped, there is no problem in declaring death. However, if the victim is put on a mechanical respirator to try to keep oxygen and blood circulating to the brain, it is not so simple.

Many states have revised their laws making absence of brain function as well as absence of spontaneous heart-beat the main determinant of death. Generally, brain death is declared only if the victim cannot breathe spontaneously without mechanical assistance, if there is no response to pain or light, and if an electroencephalogram reading of brain waves shows no activity for 24 hours. ↓

**UNIFORM DONOR CARD**

**OF** \_\_\_\_\_  
Print or Type name of donor

In the hope that I may help others, I hereby make this anatomical gift, if medically acceptable, to take effect upon my death. The words and marks below indicate my desires.

I give: (a) \_\_\_\_\_ any needed organs or parts  
 (b) \_\_\_\_\_ only the following organs or parts

\_\_\_\_\_

Specify the organ(s) or part(s)

for the purposes of transplantation, therapy, medical research or education;  
 (c) \_\_\_\_\_ my body for anatomical study if needed.

Limitations or special wishes, if any: \_\_\_\_\_

Signed by the donor and the following two witnesses in the presence of each other:

<small>Signature of Donor</small>	<small>Date of Birth of Donor</small>
<small>Date Signed</small>	<small>City &amp; State</small>
<small>Witness</small>	<small>Witness</small>

This is a legal document under the Uniform Anatomical Gift Act or similar laws.

For further information consult your physician or

American Medical Association  
535 N. Dearborn, Chicago, Ill. 60610

Cut along dotted line

# 1979

## Defense budget

The administration's \$126 billion defense budget for FY 79, announced in late January, was described by Defense Secretary Harold Brown as "austere but adequate."

The proposed budget, while providing the Navy with \$1.1 billion less for shipbuilding than last year, still boosts the Navy's overall package by \$1.2 billion over FY 77's figure. The budget is aimed primarily at strengthening the combat capability of those U.S. forces which support the NATO Alliance. It places high priority on cruise missile production and the development of a new land-based ICBM.

The budget makes provisions for a six percent pay raise in October 1978 and the passage of legislation providing for sea pay, family separation allowance, quarters allowance and military trailer allowance. It also includes \$88 million to extend travel and transportation entitlements to dependents of junior enlisted personnel overseas.

The Navy will procure one less Trident submarine in FY 79 than in FY 78, in keeping with the administration's plan to build three Trident submarines every two years (as presented to Congress last year). The Navy will also build nine other combatant ships as compared to 11 in FY 78. Dollars for the procurement of new aircraft—24 F-14s and five F-18s—also are included in the proposal.

The proposed budget also calls for a reduction of about 10,000 active duty Navy personnel in FY 79 and the transfer of 35,000 Naval Reservists from the Selected Reserve to the Ready Reserve.

Funding for aircraft carriers, additional A-7E *Corsair* aircraft, new engines for the F-14 aircraft, and procurement of the surface effect ship (SES) is not included in the budget.



When asked why funding for the SES was not included in this year's budget, Secretary Brown said, "We would still need to understand much better than we do just what it would be used for, and how it would be used, what it would be equipped with and what advantages it would offer for its obviously very substantially increased cost. In the absence of a better understanding of that, I considered that at this budget level it did not compete, and so it is not included in the budget."

The Navy will continue to operate 13 carriers and 12 air wings throughout FY 79. Four *Los Angeles*-class nuclear submarines will be introduced into the fleet. USS *Nautilus* (SSN 571) will be inactivated for a net gain of three nuclear-powered submarines. (*See Currents.*)

Eight new *Spruance*-class destroyers and one new amphibious assault ship (LHA) will be delivered during FY 79. One destroyer and one diesel submarine will be deactivated.

With respect to future ship procurement, Secretary Brown said, "We are delaying the fiscal year 1983 projections that we will be presenting to Congress on the Navy ship construction program until there is a completion of a study by the Navy and the Office of the Secretary of Defense of the Navy ship construction program in February, after which the President and I will make our decisions in March probably and forward the program to Congress."

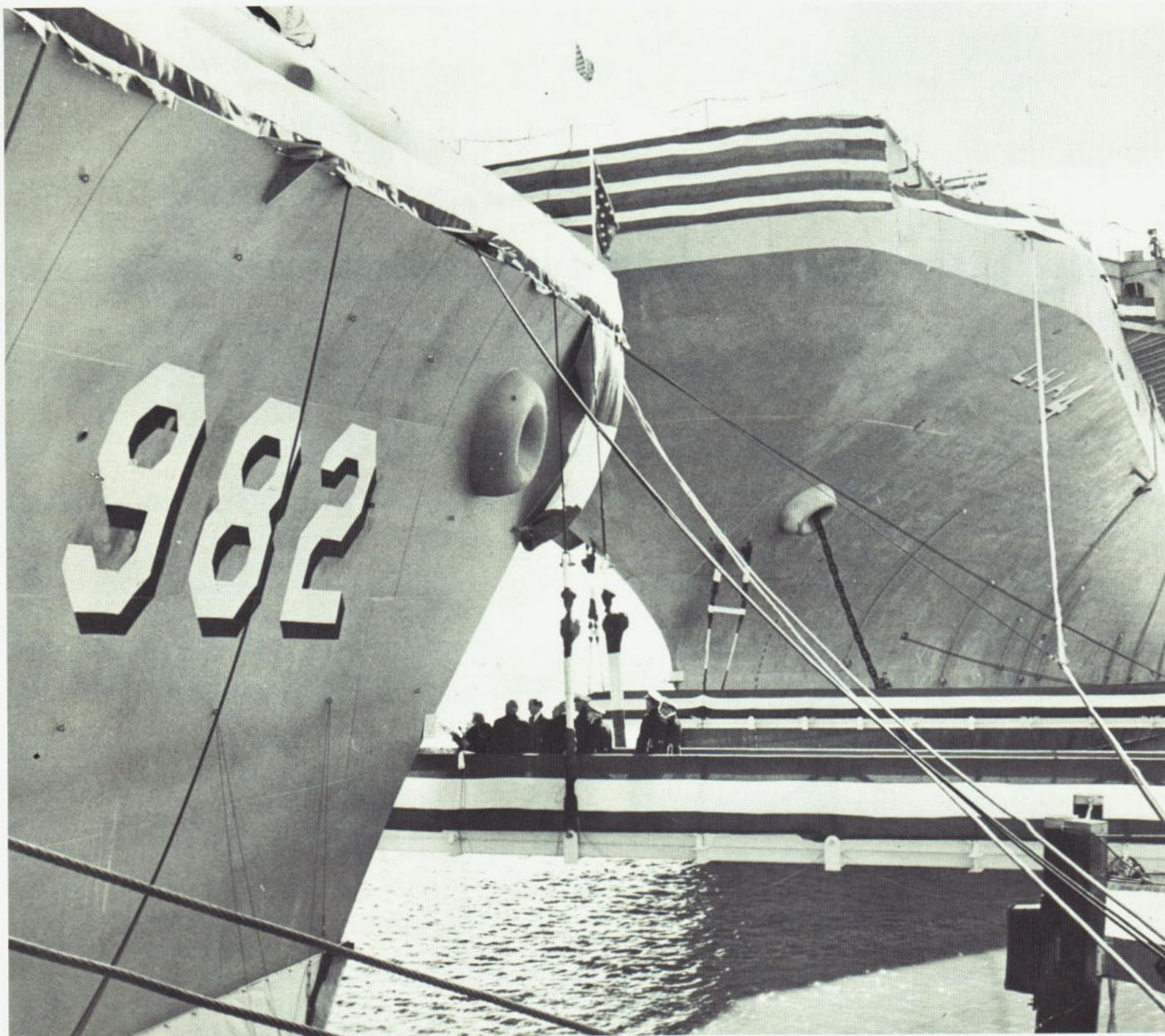
The FY 79 defense budget proposal has been forwarded to Congress for approval. ⚓

## New additions to the fleet

The U.S. Navy in fiscal year 1979 will welcome 14 new ships to the fleet: one submarine tender, one amphibious assault ship, and the rest destroyers and nuclear submarines. Nine of these have already been launched. The newcomers are:

<i>Emory S. Land</i> (AS 39)	<i>Cushing</i> (DD 985)
<i>Conolly</i> (DD 979)	<i>Harry W. Hill</i> (DD 986)
<i>Moosbrugger</i> (DD 980)	<i>Nassau</i> (LHA 4)
<i>John Hancock</i> (DD 981)	<i>Birmingham</i> (SSN 695)
<i>Nicholson</i> (DD 982)	<i>New York City</i> (SSN 696)
<i>John Rodgers</i> (DD 983)	<i>Indianapolis</i> (SSN 697)
<i>Leftwich</i> (DD 984)	<i>Bremerton</i> (SSN 698)

Those ships that have already been launched are: *Emory S. Land*, *Conolly*, *Moosbrugger*, *John Hancock*, *Nicholson*, *Nassau*, *Birmingham*, *New York City*, and *Indianapolis*.



# DIVINE WIND



# Desperate Reenactment of an Ancient Legend

BY JOHN M. JOYCE

*Editor's Note: The Pacific Theater during World War II was the scene of many intense battles, often involving unique situations and innovations for air/naval warfare. Of these, none were more intriguing or frightening to American Navy men than the kamikaze attacks of the Japanese.*

*While ancient and modern war records cite many examples of desperate acts of courage by individuals, seldom have entire units been formed for the purpose of trading their members' lives for as much death and destruction as possible.*

*The following article about the kamikazes deals with courage. To the Japanese of World War II, hearkening to the ancient code of the samurai, there was nothing more glorious than to die for the cause.*

*Through this article, ALL HANDS attempts to show, without judgment, another aspect of warfare unique to Navymen.*

*As to any respect or abhorrence for men fighting for their beliefs, that determination rests solely in the viewpoint of the individual.*

High over the shimmering surface of the Pacific Ocean, the "Divine Wind" of the ancient Japanese gods was blowing full force the night of March 11, 1945. Its purpose was to sweep off the face of the ocean an enemy threatening the homeland, just as the kamikaze (divine wind) had destroyed a Mongol fleet attacking Japan in 1570.

Passage of centuries had altered its appearance. The shriek of the gale was now the whine of an airplane engine, and movement was directed not by the hand of the gods, but by the hands of humans—those of pilots.

One of the pilots that night glanced to his side at the other planes flying in formation with him, all at the same speed. The sight comforted him. Knowing the other pilots shared his destiny made his fate more bearable. Theirs was a rare comradeship, one shared only by men who willingly

face certain death together—death which, to them at least, was heroic and meaningful in the belief that it would breathe new life into their gasping nation.

Already, pilots of the Special Attack Corps, Kamikazes, formed only five months before, had inflicted heavy losses on the American Navy off the Philippines and Iwo Jima. Tonight, his purpose and that of the rest of his small *tokkotai* (special attack unit) was to crash their planes, each carrying a 250-kilogram bomb, into ships of the U.S. fleet anchored in the Ulithi Islands.

As his twin-engined plane bucked and shuddered like a frightened horse, he fought a surge of panic. The plane had been patched together and reinforced with parts from damaged planes for this one final trip. It had taken on barely enough fuel to reach the target. Fingering a small *omamori* (good luck charm) in his tunic pocket, he prayed that he be allowed to acquit himself with honor along with his comrades, that he not waste his life out here, alone.

Looking ahead to the distant horizon, he saw a filmy whiteness hanging low as a morning mist and knew his plea had been answered. He then threw a switch which released tinfoil in the hope that it would jam the Americans' radar.

Seconds later, a glow from the illumination of many lights lit the northwest sky. In the fleeting moments he recalled other lights, the lights of Yokohama. A year before he had sailed from there, and had watched as those lights faded in the distance. He realized now that it was the last view he had known of his homeland.

Suddenly, the glow was gone. Radar had found his group, but it was too late—he was already winging over the dark humps of the outlying islands. His fears, his memories quickly faded. Now, seconds from death, his muscles tensed and twitched from the great power he felt as he made the final preparations.

He armed the bomb so it would explode on contact and adjusted the small white flag on his shaved head, turning it

until the crimson sun was over his forehead. Starting the descent under full throttle, he braced for anti-aircraft fire but there was none.

The sight below filled him with joy. Masts, turrets and superstructures from a multitude of ships riding at anchor were silhouetted against the darkened waters of the lagoon.

Almost a thousand ships of all types rode at anchor in the natural harbor formed by the coral islands of Ulithi. Every shape the pilot had memorized in recognition class was present—the carriers, battleships, cruisers, destroyers and auxiliaries—sitting like fat, sleeping pigeons.

They comprised one of the mightiest forces of naval power ever assembled in one place. It was the American invasion fleet which was forming for the landing on Okinawa and included elements of the famed Task Force 58.

Flushed with excitement from the number of prime targets which were his for the choosing, the young pilot wiped the sweat from his eyes and scanned the scene, searching right, then left. Suddenly something straight ahead, at the far edge of the harbor and near the open sea, caught his attention.

It seemed to be a compact superstructure centered on a long, low flight deck—it was a carrier and it was a big one. With his throat dry and his nerves tingling, he shoved at the control stick and took dead aim for the carrier's island.

The plane responded, lurching as it accelerated into a steep power dive; pilot and plane were one. The pulse of the motor matched the pounding of his heart; the scream of the plane's dive gave voice to his defiance.

As he gained speed, the ocean seemed to race past him. Growing bigger and coming closer every instant, the dark water and darker outline of the ship rushed to meet him. In the last instant, he could see the white phosphorus of the waves lapping at the ship's hull-like surf breaking on an island's shore.



At that instant, only he and his gods will ever know if he realized too late that he was plummeting toward a real island.

With the great number of possibilities on which to unleash his fury, the young kamikaze pilot, in his excitement, had mistakenly zeroed in on Sorlen, one of the small, low islands in the horseshoe-shaped atoll.

Sorlen was equipped with support facilities for landing craft units. The signal tower and water tank which had been erected near the center of the barren, sandy island would, in the darkness, project a shadowy contour similar to that of a carrier.

Off-duty sailors on the island that night were watching a movie when "Condition Red" sounded. As the sailors moved through the darkness toward their assigned stations, they grumbled over the interruption, believing perhaps that the alarm was only for the highflying, unarmed reconnaissance planes—the "Bed Check Charlies"—which had been spotted before over Ulithi at this time of night.

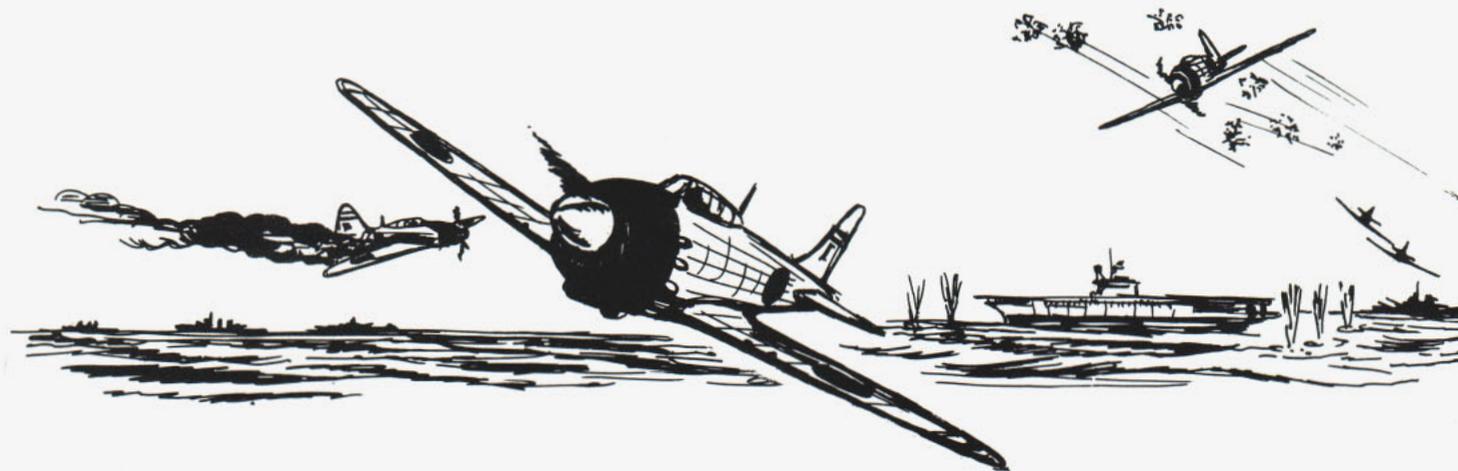
Whether it was because they moved slowly at this thought, or because the alarm had been sounded late, the men hadn't gone far when they heard the shriek of the kamikaze rushing headlong across the anchorage. Hypnotized by the shrill crescendo of the plane as it roared out of the blackness in vengeance, the sailors watched it strike the ground between the signal tower and water tank.

Sorlen shuddered under a crunching impact as the "Divine Wind" unleashed its fury in a thunderous ball of fire. Fragments of rock and metal whipped through tents and rattled the tin quonset huts while, at the heart of the blast, flames erupted amid billowing clouds of dense black smoke.

Long after the storm had subsided and the fires had died, a stunned silence hung over Sorlen. Ghostly traces of the "Divine Wind" lingered, fanning smoldering embers in the wide, shallow, newly formed hole.

\* \* \*

That one young pilot may have considered himself a failure, but he was not the only one to misjudge a target that dark night. Of the 11 pilots who took off from the Japanese stronghold of Truk and coaxed their rickety



medium bombers through the lonely one-way trip to Ulithi, 10 had misjudged their targets: one, the young pilot who hit Sorlen, and the other nine who crashed harmlessly into the inky waters of the lagoon. Only one of the ragged, hard-bitten band managed a degree of success, striking the fantail of the carrier USS *Randolph* (CV 15).

It was hardly a devastating blow to the U.S. Pacific Fleet, but the Japanese were far from finished using their "Divine Wind." In Japan, thousands of young men were volunteering for the Special Attack Corps, eagerly pledging their lives to gain time for their beleaguered country. Using the bomb-laden plane as a projectile, one man could sink a great American ship of the line.

To the Japanese, these were magnificent odds; the life of one man against the lives of hundreds, even thousands of the enemy. Their slogan—"One man, one warship"—reflected that belief.

Designed to channel decimated air strength into maximum efficiency, the kamikazes had met with sporadic success. The Special Attack Corps, first a desperate replacement for Japan's shattered Navy, would become an integral part of the defense of the Ryukyu Islands, where they would burst from the skies and ignite what one observer would describe as "a hail of flaming terror and searing death."

When the skies cleared over the Ryukyus, more than 4,000 Japanese planes had been destroyed, 1,228 of them kamikazes. But America had paid a terrible price, with 34 ships sunk and 288 others damaged. The U.S. Navy had suffered its most costly campaign of the war.

However, the losses could have been far greater.

No matter how viewed, courage and valor in battle are never limited to only one side. For Americans, their courage lay in the gallant efforts of Navy men to keep disabled ships afloat that day—efforts typified by the officer who was the senior man alive on a destroyer under kamikaze attack at a remote picket station. The last message he sent from the stricken ship was a battle report to the flagship, the carrier USS *Bunker Hill* (CV 17).

Closing, he said, "I am an ensign. I have only been on this ship for a little while, and have only been in the Navy

for a little while. I will fight for this ship to the best of my ability. Forgive me for the mistakes I am about to make."

Similar words might have been uttered by the young Japanese pilot of the Special Attack Corps the night he rocketed through the sky and crashed into the barren, sandy island of Sorlen.

Forgiveness and honor most certainly were given to the young American ensign. And, the kamikaze's superiors—his gods—would forgive him, for most certainly he was a novice and he had but one chance.

As Admiral Marc Mitscher (CTF 58) said bluntly, "There are no experienced kamikaze pilots."

## Museum in Philippines

In an account of the kamikaze, Vice Admiral C. R. Brown said "Among us who were there in the Philippines and at Okinawa, I doubt if there is anyone who can depict with complete clarity our mixed emotions as we watched a man about to die—a man determined to die in order that he might destroy us in the process.

"There was a hypnotic fascination to a sight so alien to our Western philosophy. We watched each plunging kamikaze with the detached horror of one witnessing a terrible spectacle rather than as the intended victim."

These words are found in a museum in the Philippines honoring the memory of kamikaze pilots. Also, a marker has been erected in a sugar cane field 60 miles north of Manila, site of a Japanese airfield from which the suicide pilots took off during the war.

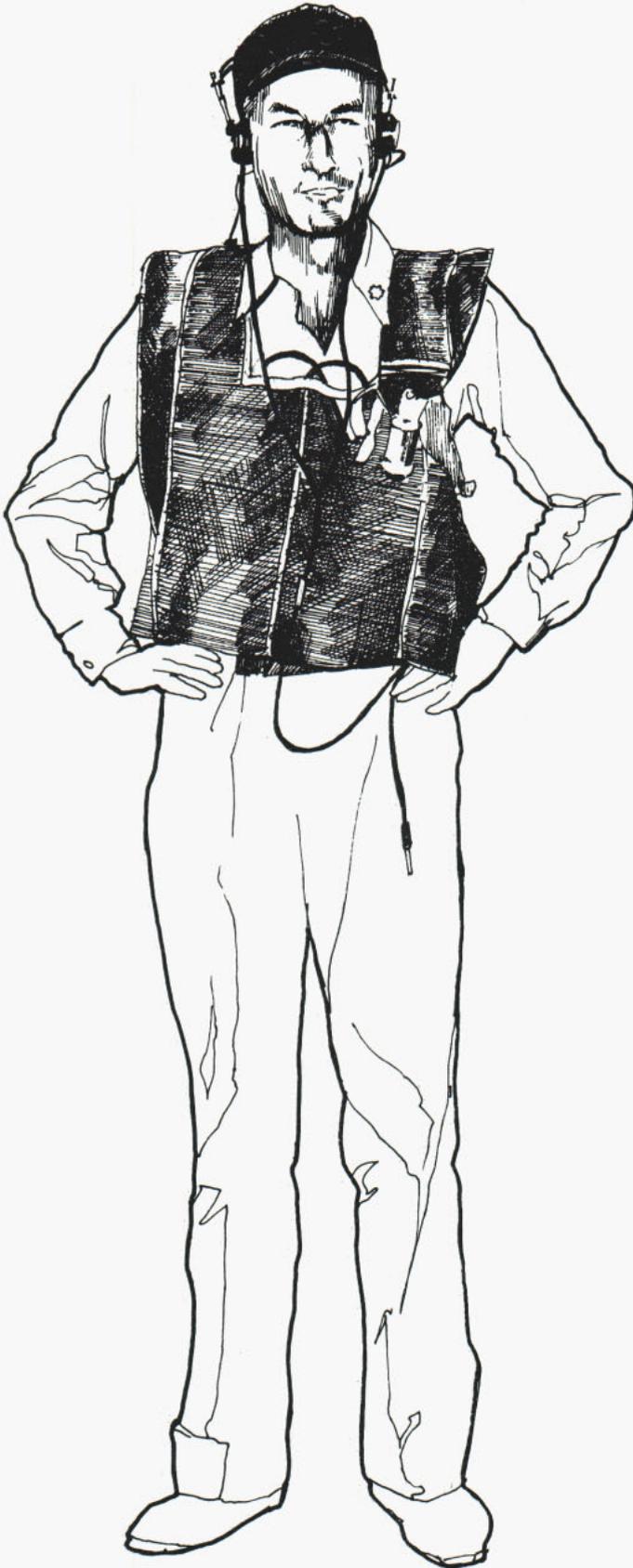
Neither the words nor the marker are meant to specifically glorify the kamikaze. Rather, they are intended to serve as a lasting tribute to those who died for their convictions.

As the world has changed—generating respect for different countries, cultures and people—attitudes have changed to the point where former enemies, such as the United States and Japan, can, and do, become friends and staunch allies. ⚓



# A one-man air squadron

BY JO3 KEN ORNICK



A name is more than a moniker when it conveys an interesting story. Such is the case with Brewer Field at Naval Air Station, Agana, Guam.

Dedicated to one of the true heroes of the “Marianas turkey shoot,” Brewer Field had its beginning in June 1944.

Guam was occupied by the Japanese who were using the island to extend the operational capabilities of their carrier-based aircraft, and the U.S. Navy carrier USS *Essex* (CV 9) was ordered to thwart the enemy’s plans.

Fighters were launched from her deck and Commander Charles Brewer, Jr., commanding officer of Fighter Squadron 15, was credited with sinking an enemy destroyer using only his plane’s machine guns.

Following that encounter, *Essex* steamed all ahead full in search of Japanese carriers. By the morning of June 19, *Essex* had not established contact. It was feared that an attack could be momentarily launched against her if Japanese carriers were lurking just outside radar range.

CDR Brewer led a patrol of 11 fighters to detect and engage the enemy if an attack seemed imminent.

U.S. suspicions were confirmed shortly thereafter—enemy aircraft were airborne southwest of *Essex*. The Japanese force consisted of 16 bombers and 24 fighters. Brewer directed his patrol to attack as the Japanese bombers began to scatter and the Rising Sun fighters jockeyed for position. Within minutes, Brewer’s guns had downed the enemy strike leader and three fighters. The Japanese dispersed and Brewer’s squadron returned to *Essex*, victorious.

Late that afternoon, Brewer led another patrol over Guam which was to strafe the Japanese and prevent them from using the airstrip as a staging area. In the course of the initial attack, one Japanese fighter was destroyed as it tried to land.

Then Brewer’s luck turned. Twenty Japanese fighters dived on his patrol from the rear. Piloted by the best airmen in the Japanese Navy, each fighter bore a special insignia attesting to the pilot’s skill.

Fighting was frantic as the enemy made well-disciplined and coordinated attacks. Though the Japanese formation’s leader was downed by Brewer, the fight continued and the American patrol was caught in the twisting combat, fighting to survive. Finally extricating themselves from a situation turned bad, the patrol returned to *Essex*, but Brewer was not among the surviving pilots.

No one knows his fate, though there were reports that he crashed into the sea.

The last line of the plaque dedicating the airfield in Brewer’s memory expresses more than the appreciation of a grateful nation: “His example of courage, leadership and selfless devotion to duty will live on in the memory of all who fly from this field.” ↓

# Rights & Benefits

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## Earning Credits Through SOC

Servicemen's Opportunity Colleges (SOC) make it easier than ever for Navy people to earn a college degree while on active duty. SOC is unique because it is an arrangement between a national group of accredited colleges and the military which enables people on active duty to achieve a college degree. More than 350 accredited public and private institutions now honor college-level work completed by service members before and during active duty.

Each Servicemen's Opportunity College bases its admission requirements on present academic ability, recognizes GED high school diplomas, and allows individual consider-

ation for students in exceptional situations. SOC colleges are really a network of institutions that make a commitment to serve the special needs of military men and women. In this respect, participating colleges offer the following advantages to Navy men and women.

SOC colleges try to be more flexible in scheduling classes.

In case of transfers which could interrupt course work, departing students are allowed to take early exams or continue their studies through correspondence or independent study.

In event of TAD orders or watch-standing duties, SOC colleges are more liberal in providing makeup work.

Academic counseling is provided and recognition is given to the learning value of military experience.

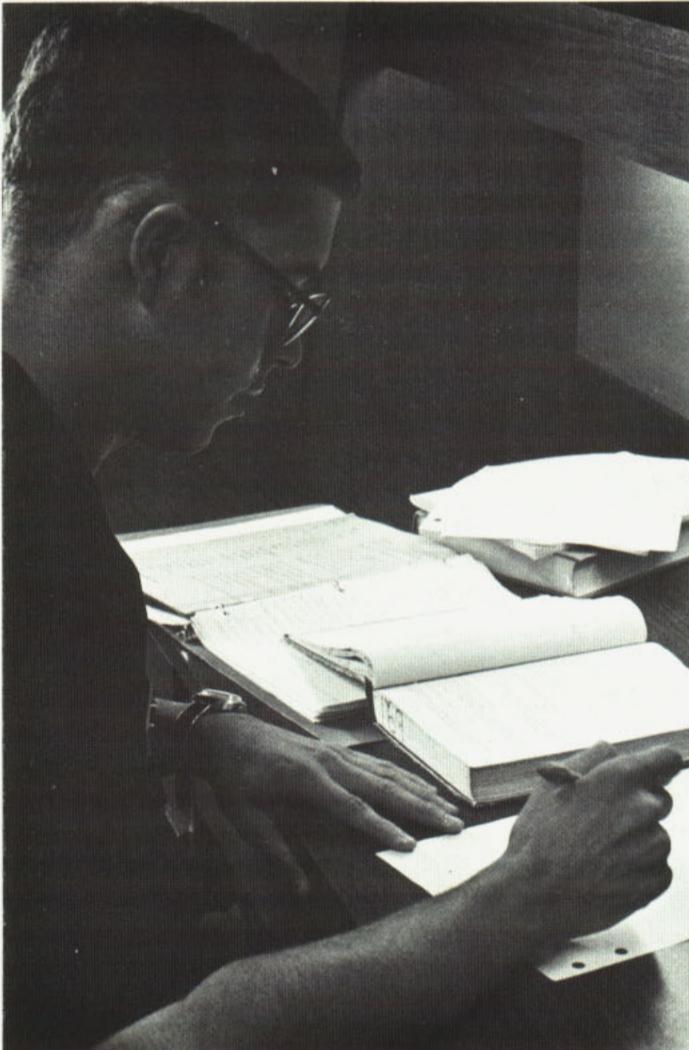
Credits earned at accredited colleges or universities are counted toward a degree if they meet the degree requirements. SOC colleges have developed residency requirements that are more relevant to the high mobility of military students.

Credits earned both on and off campus count toward residency requirements if earned under the institution's sponsorship. Exceptions to this basic residency requirement may be granted when unusual circumstances warrant.

Participating colleges and universities do not have to accept any individual who wishes to apply, but acceptance guarantees that each application will be judged on the basis of ability rather than availability. In other words, the institutions do not have to waive their academic admission requirements in order to participate in the program.

An added feature of the Servicemen's Opportunity Colleges program is the "contract for degree" option offered by many of the participating institutions. This option works like a traditional credit transfer, only in reverse. Instead of getting a degree from the last institution attended by attempting to transfer all previous credits, a student decides from which institution he wishes to receive his diploma early in his college career. Credits earned at other institutions are transferred to the selected institution, which serves as a repository for all the student's academic records and which awards a degree upon fulfillment of the contract.

Navy men and women interested in attending a SOC college should contact either their education officer or the local Navy Campus for Achievement Advisor (NCFA) for details and a listing of the SOC institutions. ↓



# Mail Buoy

## Anchor Weight

SIR: I noticed what I believe to be an error in the October 1977 issue of ALL HANDS. The caption to the photograph on the cover states the anchor chain of the USS *John F. Kennedy* (CV 67) is "a 180-fathom chain, each link weighing in at 160 pounds."

Being a Plankowner of USS *Nimitz* (CVN 68) and well-remembering the ship's Familiarization Qualifications, I believe the correct weight should be 360 pounds per link.—S. E. Tourtellot, YN2, USN.

• *You are correct. We are still searching for the 200 pounds per link we lost between here and the printer.*—ED.

## Was It Really?

SIR: Concerning your "Stern Shots" in the November issue of ALL HANDS, USS *Hartford* was Admiral Farragut's flagship, but your illustration at "A" is of a ship of the line—not a screw sloop. The picture is small, so details are hard to spot, but since I don't believe we ever had any steam-powered ships of the line, is it really British?—Tyrone G. Martin, CDR, USN, 57th in command of USS *Constitution*.

• *You are right. The ship illustrated is not the USS Hartford. We contacted both Naval History and Warship International who agree the ship is probably British but this is not a certainty.*

*They also add that the photo is of a small ship of the line with less than 80 guns.*—ED.

## More Research

SIR: In reading the December 1977 issue of ALL HANDS, I found the article on "Brain Wave Research" of great interest. I also appreciated the mention of some of our work here at the Naval Academy.

As a matter of interest we at the Academy have the best neurological signal analysis real-time laboratory in the country. Some of the more notable accomplishments include: the measurement of the speed of the brain—with this technique we can tell, with 100 percent accuracy, whether reading difficulties are neurological or academic in origin; we can predict performance at the Naval Academy with

as great an accuracy as the combination of the math and college board scores; we can determine whether a person was born left- or right-handed, and recognize the neurological signature of minimal brain dysfunction.

All of these are in addition to some of the long-range work we are doing on the advanced identification of neurological disorders several decades in advance of their normal appearance. . . —Karel Montor, Ph.D., associate professor, U.S. Naval Academy.

## Right Arm Rates

SIR: I am seeking information on the right arm rates in 1940, 1941, 1942 and 1943. In 1943 I think they went to the left arm. There is one rate I am particularly interested in. I would like to know if the Aviation Machinist's Mate rate was ever worn on the right arm. This matter has caused quite a disturbance where I am employed.—Mrs. Lois Hughes, Jacksonville, Fla.

• *We offer the following in hopes it will quell the disturbance at your place of employment: Right arm rates signified men of the Seaman Branch. The following ratings comprised the Seaman Branch during the World War II period: Boatswain's Mate, Turret Captain, Signalman, Gunner's Mate, Fire Controlman, Quartermaster, Mineman and Torpedoman's Mate.*

*Right arm rates were disestablished on April 2, 1949. Aviation Machinist's Mate was not a right arm rate.*—ED.

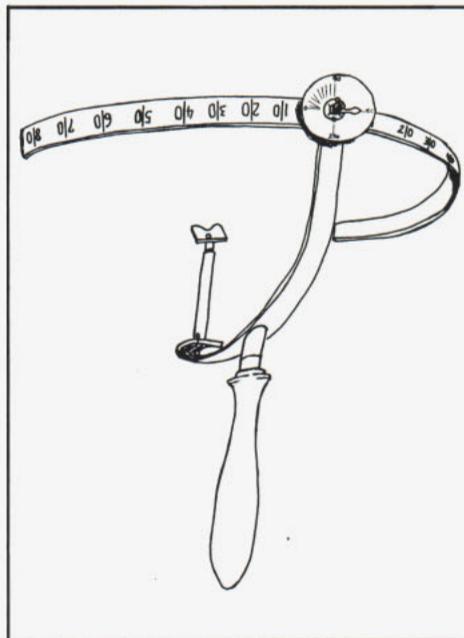
## What Is It?

SIR: I have an item that was washed up by Hurricane Carla, and I am curious about it. It appears to be navigational equipment so I thought perhaps you could help me.

All except the handle is made out of metal. The handle is made from wood, painted black and is about 6 inches long. (see illustration). The disk on the top is one and three-quarter inches in diameter. It is numbered in 15 degree increments, up to 360 degrees.

The half-circle arm to which it is attached is numbered from 0 to 90 on each

side. The degrees on the disk are changed by swiveling the half-circle arm, which will swivel in a complete circle in either direction. Written on top of the disk are the words, "E. S. Meyerowitz," appar-



ently the name of the company that manufactured the instrument.

I would appreciate any information you may have as to the application of this instrument, when and where it was made.—Ralph Spence, Tyler, Tex.

• *Our search for an answer to your question led us first to the Naval Supply Systems Command. They were as puzzled as you over the instrument's identity and suggested we send your letter and sketch on to the Naval Observatory, which we did.*

*Although the people at the Observatory could not come up with an answer, they did suggest we contact Mr. Saul Moskowitz of Marblehead, Mass., a specialist in nautical instruments. Here is the essence of the reply received from him:*

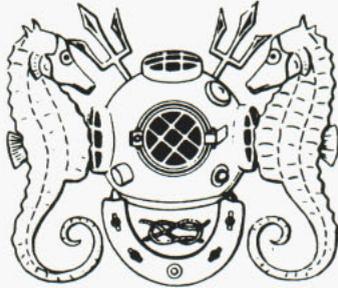
*"... Meyerowitz is a New York City eyeglass firm; still in business. The object in question is a circa 1900, or later, device for measuring angular field of vision of a person being tested for glasses. In perfect condition it has no historical, antique, or monetary value. In less than perfect condition, it is worth even less."*

*Scratch one find.*—ED.

# Stern Shots

The following badges and emblems indicate special designations which Navy people wear to denote qualification in certain specialties or branches. Can you identify all of them?

B.



C.



A.



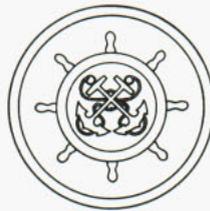
D.



E.



F.



G.



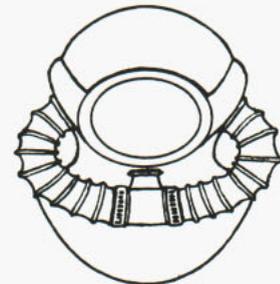
H.



I.



J.



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Answers: A - Balloon Pilot; B - Master Diver; C - Master Explosive Ordnance Disposal; D - Aircrewman; E - Submariner; F - Craftmaster; G - Special Warfare; H - SSBN Deterrent Patrol; I - Combat Aircrewman; J - Scuba Diver



*During the War of 1812, the sloop WASP, 18 guns, one of our nation's most colorful fighting ships, mysteriously vanished at sea. Aboard was Irish-born CAPT Johnston Blakely, her skipper and a master ship handler. He had one of the best trained crews in our infant Navy.*

*WASP's disappearance suggests that fate obliged the British by accomplishing a task which they themselves could not complete.*

*On May 1, 1814, WASP slipped her moorings at Portsmouth, N.H., and showed up soon thereafter*

*in the English Channel where she spread terror among British shipping. She took many valuable prizes and with great cunning attacked and soundly thrashed two brig sloops in separate engagements. The first encounter was with H.M.S. REINDEER; the second was H.M.S. AVON. Both were destroyed.*

*This spectacular, but ill-fated cruise, lasting less than six months, is likened to a flare which, bursting into flame, brightly lit a few pages in history.*

*On Sept. 21, 1814, WASP seized her last prize, a*

*brig, which was sent to Savannah with reports of Blakely's operations to date.*

*On Oct. 9, WASP was hailed by the Swedish brig ADONIS. On board were two American officers who were transferred aboard. This was unfortunate in that WASP sailed away and was never seen or heard from again.*

*CAPT Blakely began his naval career as a midshipman on Feb. 5, 1800. He was 33 years old when WASP was lost. Ironically, he never heard that he had been promoted in rank to captain.*