

# ALL HANDS

AUGUST 1978

21st CNO







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# ALL HANDS

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## Covers

Front: The new Chief of Naval Operations, Admiral Thomas B. Hayward. See interview beginning on page 4.

Back: A shot of a glider belonging to the Test Pilot School, taken from the school's second glider — both in flight over the southern Maryland countryside near NAS Patuxent River, Md. See story starting on page 19. This and the front cover are the work of staff photographer PH1 Terry Mitchell. At left: PH2 Dwain Patton's entry, "Eat My Dust," which took Second Place in the Sports Category of the 1977 Military Photographer of the Year contest. Patton also took Third Place in the contest's Pictorial Category.

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# Currents

## Flag Level Review

**On Some Personnel Assignments Possible** ● A new process that permits officers in command to request a flag officer level review of personnel assignments by detailers when normal avenues of appeal have been exhausted has been approved by the Chief of Naval Personnel. The system is designed to bring the needs of both the Navy and the individual into balance after all facts have been taken into consideration. The appeal for a flag officer level review may be made by officers in command or immediate superiors in command if they believe BUPERS has not been apprised of all pertinent facts of an individual's case in making an assignment. To initiate the review, a formatted message is sent to BUPERS with information copies to the chain of command. Information to be provided in the message includes the individual's name, reason for requesting the review and any additional pertinent information. A decision will be made by a flag officer in BUPERS and the reply returned to the command on a priority basis. Officers in command have been advised to be judicious in selecting only those special cases that they believe merit flag level review.

## Special Operations Officer

**Designator Established** ● Approval has been given to form a separate category of unrestricted line officers termed "special operations officers" – a further step in the Navy's move to specialize its officer communities. Secretary of the Navy W. Graham Claytor Jr. authorized the new designator (1140) which will cover duties formerly performed by the surface warfare and engineering duty communities. Special operations officers will conduct operational diving and salvage, explosive ordnance disposal (EOD) and expendable ordnance management (EOM). Approximately 335 special operations officers will be assigned to salvage ships and in ordnance-related jobs aboard carriers, amphibious and service force ships as well as EOD teams. Initially, newly selected officers will be designated 1190 for training until they have met the necessary experience and qualifications for 1140. Active duty lieutenant commanders and above may request 1140 designation if they are diving and salvage or EOD qualified or possess significant experience in EOM. Interested active duty lieutenants and below should request 1140 designation if they are already qualified in diving and salvage or EOD. They should request an 1190 designation if they are qualified to enter into training for either diving and salvage or EOD.

## Ney Award

**Winners Announced** ● Winners of the annual Captain Edward F. Ney Memorial Awards for unequalled achievement in overall enlisted dining facility operations for 1978 have been announced by Secretary of the Navy W. Graham Claytor Jr. First place winners, Afloat: Large, USS *Hunley* (AS 31); Medium, USS *Ortolan*

(ASR 22); Small, USS *John Marshall* (SSBN 611) (Blue). Ashore: Naval Surface Weapons Center, Dahlgren, Va. Second place winners, Afloat: Large, USS *Proteus* (AS 19); Medium, USS *Manitowoc* (LST 1180); Small, USS *L. Mendel Rivers* (SSN 686). Ashore: Naval Air Station, Chase Field, Beeville, Texas. Third place winners, Afloat: Large, USS *Lexington* (CVT 16); Medium, USS *Elliot* (DD 967); Small, USS *Takelma* (ATF 113). Ashore: U.S. Naval Communication Station, Puerto Rico.

### GUARD III Program

#### For Career Petty Officers Announced

● A new Guaranteed Assignment Retention Detailing (GUARD III) program which will extend provisions of the GUARD II program to career petty officers has been announced by the Bureau of Naval Personnel. Under the GUARD III program, enlisted personnel are provided two guaranteed assignments, one of which must be used at the first reenlistment. The second guaranteed assignment may be used any time prior to start of the member's 25th year of service. Personnel who have had two guaranteed assignments under GUARD I or GUARD II in their first 10 years of service will be entitled to one additional GUARD assignment as a careerist. Phase-in of GUARD III begins on Oct. 1, 1978, for all E-4 through E-6 (and eligible E-3s) with two or more years of active service, but less than 13 years' active obligated service at EAOS and all E-7 through E-9 with less than 25 years. Phase II of the program's implementation comes not later than Oct. 1, 1979, when all E-4 through E-6 with more than 13, but less than 25 years' active military service at EAOS are eligible to participate. Personnel requesting GUARD III are required to:

- Not be under PCS orders at time of application.
- Be within six months of EAOS.
- Be eligible for duty requested.
- Have a consistent record of above average performance or a trend toward improved performance.
- Be recommended for reenlistment.

Details are contained in BUPERS Notice 1306 of June 21, 1978.

### Great Lakes

#### Cruise Scheduled

● Three Atlantic Fleet destroyers will conduct a six-week Great Lakes cruise beginning in August and make port calls in numerous U.S. and Canadian cities. USS *William C. Lawe* (DD 763), USS *Davis* (DD 937) and USS *Robert A. Owens* (DD 827) will make port calls in Oswego, Ogdensburg and Buffalo, N.Y.; Erie, Pa.; Cleveland, Toledo and Ashtabula, Ohio; and Detroit, Mich. The ships also will visit the Canadian cities of Halifax, Nova Scotia; Montreal, Quebec; and Toronto, Ontario. The cruise will train naval reserve crews during active duty for training periods and provide experience in restricted water navigation and operations. Additionally, the presence of U.S. Navy ships will be used to support recruiting efforts and to bring the Navy to a large segment of Americans in inland areas for the first time in recent years.

## Interview with ADM Hayward:

# Charting a Course

*(Editor's Note: Shortly before relieving Admiral James L. Holloway III as Chief of Naval Operations, Admiral Thomas B. Hayward talked with All Hands about the challenges he faces as CNO, the state of the Navy and the Navy's future role in national defense. He was interviewed by All Hands staff member JO1 Jerry Atchison.)*

*All Hands: What do you consider will be your most important challenge as Chief of Naval Operations?*

Admiral Hayward: I think there are a number of challenges. But let me discuss two in particular. First, we are going to have to meet the personnel needs of the future. We must man our Navy with qualified, technically competent people. The second is also a major challenge. It is to help the Navy have more confidence in itself. By that I mean I want to take necessary steps to help us counteract the overabundance of criticism that's been directed toward the Navy in the past six or nine months and to refocus on the many strengths of the Navy.

*All Hands: Are there other challenges and what priorities have you set for yourself?*

ADM Hayward: There are many challenges—the Navy is a very complex organization. We have many requirements, all of which demand the CNO's attention in significant ways. However, I don't see anything that's dramatically different from my perspective than it has been with Admiral Holloway. I think Admiral Holloway had his eye properly focused on the issues that bear on a ready, capable Navy, and I hope to maintain the momentum he has generated.

*All Hands: Do you intend implementing any new programs to meet the challenges of which you spoke?*

ADM Hayward: I want to place additional emphasis in a couple of areas, particularly as it relates to what our needs are for a motivated career force.

One of these is going to be in the area of leadership and management training, which we have already institutionalized in a preliminary way. I feel it needs a great deal of expanding.

*All Hands: Are you speaking, sir, of the new LMET (Leadership and Management Education and Training) program currently being developed?*

ADM Hayward: That's correct. It is my view that most leaders are made, not born. They become leaders through the development of their various talents. Some are stronger than others. But most of us learn to be leaders through observing both good and bad leaders. We often learn most by our mistakes rather than our achievements. So I want to strengthen our leadership training in a way that reaches a much higher percentage of our chain of command.

I also want to concentrate on those things I think influence the enlisted careerist; to improve the prestige of career personnel so that a naval career will, in fact, be satisfying to the professional. We will then have more people wanting to join the Navy and a much higher percentage wanting to stay in the Navy.

*All Hands: Do you have a specific approach in mind?*

ADM Hayward: You can't single out one or two things that are going to make a major change or we would have done them. Leadership is a major area though. You become career motivated by virtue of the way in which your command functions and operates. I am also thinking of the way in which the chain of command can be strengthened to the point where the careerists—the chief petty officer, first class and those officers who have established themselves as careerists—carry a greater share of responsibility in the chain of command. They should have greater authority to make decisions and be accountable for them. That will bring out the best in the best people. The better people will have greater job satisfaction and will want to stay on in the naval service.

*All Hands: Are you saying some people could find themselves assuming greater authority than they traditionally have in the past?*

ADM Hayward: The authority has been there but we haven't taken advantage of it. Senior petty officers, particularly, have found their authority eroded, in their view. I want to help restructure that so they feel more comfortable

with their authority and responsibility and, hence, will exert more and do a better job.

*All Hands: If you were asked why an individual should make the Navy a career, how would you reply?*

ADM Hayward: First, if an individual is looking for a life of riches and wealth, he's looking in the wrong direction. That isn't why we serve in the Navy. But if you are looking for an opportunity to accept responsibility, then the military services represent the type of challenge a talented individual will find a great deal of satisfaction in pursuing.

I've never had a job in which I was able to put my arms around all my responsibilities. There was always more to

do than time to accomplish it. This meant it was always a challenge to get on with tackling the job. There was no burden involved. Rather, it was a chance to seek ways to further expand one's own capabilities. That's the strength of naval service—for both officer and enlisted. It is one's own perspective of what you are trying to accomplish in life. A naval career provides the opportunity for one to reach out just as far as he wants.

*All Hands: Statistics, like rising attrition/desertion and falling recruitment rates, indicate the Navy faces real personnel problems. To what do you ascribe these problems and how, specifically, do you intend dealing with them?*



## Interview with ADM Hayward:

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ADM Hayward: I'd like to set the record straight. The question implies more difficulty than we are currently experiencing. I did say I consider the personnel picture to be of major importance and that it will receive my highest priority because I believe manning the fleet with quality people is going to be a difficult task.

But the view that the Navy is in trouble today because of desertion rates, difficult recruiting and retention problems is overstated.

We have taken a number of corrective actions that are effective today in countering the trend. We are seeing distinct improvement in the absenteeism problem, doing well in retention for the most part, and our recruiting is good in terms of the quality of people we are bringing in.

Those are the positive aspects of the picture at the moment. But I'm not willing to accept that we don't have some difficult challenges ahead. The most difficult will be in the retention of our career personnel. I want to focus on things we can do to improve retention of mid-career petty officers, those with eight to 12 years of service in whom we have invested a great deal of time and training, those who have specific skills and have proven themselves to be real contributors. We're not hanging on to nearly enough of those individuals, and I want to take every possible action to encourage that group of enlisted people and junior officers to recognize the high potential of a naval career.

I think some of our absentee problems and retention issues were brought about by the very stringent demands we have placed on our ships' personnel, in particular those in the engineering ratings. Our strenuous efforts to upgrade the engineering standards led to an enormous amount of pressure on our people, plus long and tough working hours. In general, they responded superbly. The fact is the fleet is in far better condition than it was three years ago because of their efforts.

The Fleet Readiness Improvement Program has now been in effect long enough that the results are clearly here. We have proved that the high professional standards we've demanded were needed. We now realize we needed to place high demands on ourselves in a professional way because the Navy is a much more sophisticated organization than it used to be.

I think we've had retention problems because a great many of our people are uncertain about the future.

I think there has been a tremendous dwelling upon negative aspects of what to anticipate in the future and this has had a detrimental impact on the general attitude across the board. It has led to much uncertainty. People have begun asking, "Should I stay in this outfit for another 10,

15 or 20 years when we're not sure what's ahead?" We've overreacted to that and we need to take a more mature focus on the situation.

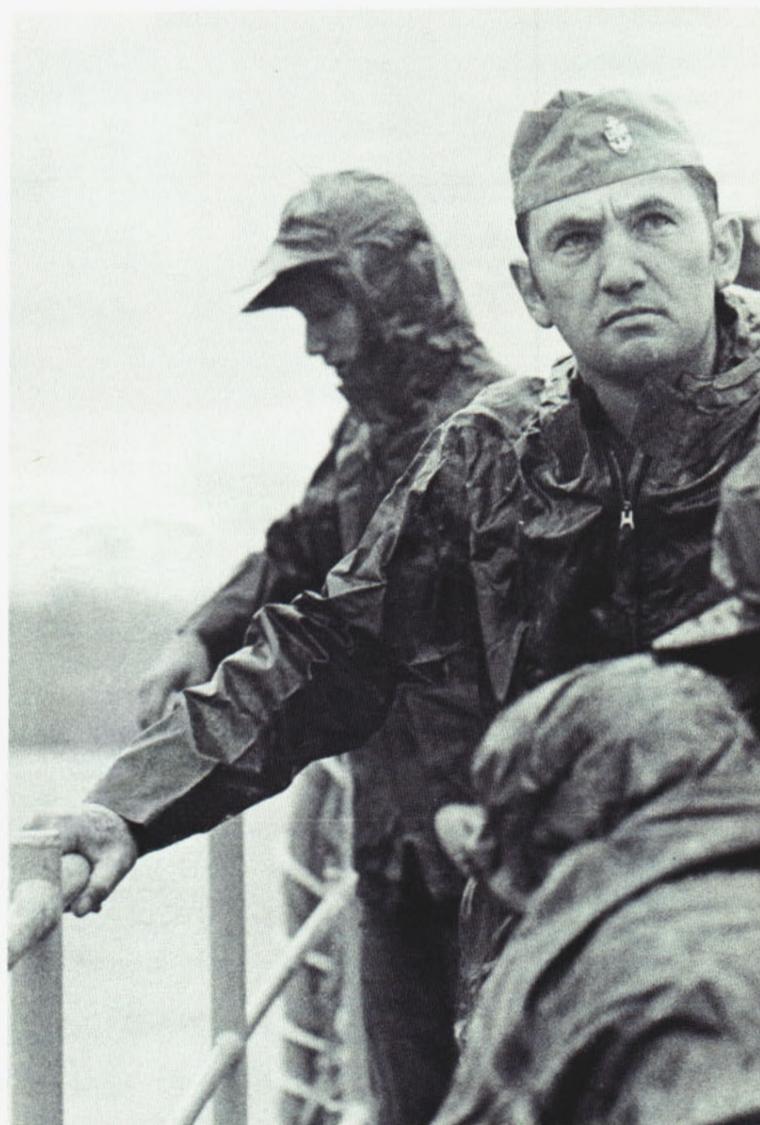
*All Hands: What are your personnel retention goals?*

ADM Hayward: My retention goal is to retain every good man and woman in the United States Navy. There isn't a

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**"... My retention goal is to retain every good man and woman in the United States Navy..."**

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specific percentile goal in any area. We want to hang on to everybody who has potential, who has proven to be a reliable performer. For every second or first class petty officer we retain, that's up to four recruits we don't have to recruit, train and bring up to that point of expertise. Obviously, the thing for us to do is a better job of retaining our career people.

*All Hands: Would you comment on discipline in the Navy today and what, if anything, should be done in this area?*

ADM Hayward: After three years in the Pacific of seeing a lot of ships and squadrons and talking to many of our

people, I'm not at all disappointed in the general state of good order and discipline in the Navy. Over the past couple of years I think there has been a strengthening of the chain of command and greater awareness on the part of senior petty officers and junior officers that they need to play a more active role in the maintenance of good order and discipline. I would hope to encourage that even more, because we've not quite achieved the level of discipline we would like to think the United States Navy represents.

*All Hands: When women are permitted to be assigned aboard ship, how do you see them being employed at sea?*

ADM Hayward: Quite a bit has been published in the last six months or so with respect to the Navy's plan to introduce women aboard ship. I don't see any reason to make any alterations to that plan. It is a very carefully structured program that will be carried out methodically so that it will not be detrimental to anyone, male or female. It is important we do it according to a very careful, discreet, well-thought-out plan. From what I have seen, that plan is in existence.

*All Hands: Do you see the mission of the U.S. Navy changing in the future? What, in general terms, will the Navy need to meet her 21st century mission requirements?*

ADM Hayward: I don't see any major change in the mission of the Navy up to the year 2000. The United States has become more and more an island nation as the world has shrunk in terms of the global scope of nations' interests, technological expansion and the ability to travel and communicate rapidly around the world. These things have forced the nations of the world to act more globally. The United States will be a major actor in that scene.

On that basis, the Navy will continue to play a very vital role in the security of our country's interests. The basic missions of the Navy will not change.

The changes in hardware that will occur will be evolutionary rather than revolutionary because our ability to convert technology into hardware is basically evolutionary. So, in spite of the fact we have some new concepts of warfare—laser technology, new forms of surface vessels such as surface effect ships and other hull forms, V/STOL applications—these concepts must be brought along and developed in a methodical, technological way. Generally, it will take time.

*All Hands: Would you discuss the role of the aircraft carrier in respect to any changes in the fleet?*

ADM Hayward: I have said the Navy will change shape



## Interview with ADM Hayward:

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slowly between now and the year 2000. Hence, the role of the aircraft carrier will continue to be a principal element of our fighting capability. Air superiority will remain a basic requirement. Naval forces must not only control the surface of the seas and the oceans under that surface, but the air space above, as well. The battle group centered around the aircraft carrier will continue to be a significant factor in our ability to carry out naval missions.

*All Hands: Are you speaking, sir, from both a defensive and offensive posture?*

ADM Hayward: I don't look at them separately. As a world leader, the United States must have a Navy that is able to support our country in a dynamic way. Naval forces must be capable of taking the offensive, keeping any

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**“. . . The battle group centered around the aircraft carrier will continue to be a significant force in our ability to carry out naval missions . . .”**

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potential enemy on the defensive. Rather than our being in a reactive role, we must be capable of an active role, creating problems for potential adversaries rather than the reverse. Naval weapons must be capable of doing both offensive and defensive tasks.

*All Hands: Are the oceans of the world, then, still an effective barrier?*

ADM Hayward: I do not see the day when oceans will cease to be a major factor, if not the dominant factor, in national security, commerce and international affairs. As we look to the potential of the seabed resources, they would suggest there will be an even more important role for naval forces in the protection of our national interests.

*All Hands: Along these lines, do you foresee any new or emerging problems that must be faced by the Navy in the near or long term?*

ADM Hayward: Yes, I do, in a geopolitical sense. We have been observing throughout the last decade a further



expansion of Soviet interests in parts of the world which have not previously introduced a specific problem to the United States from a security point of view. This appears to be part of a long-term trend. The Indian Ocean, the continent of Africa and, perhaps ultimately, the continent of South America, are going to take on a greater and greater importance in our country's fundamental national security interests. In that sense, the continuing requirement for a strong, capable U.S. Navy seems pretty clear.

*All Hands: Do you foresee any changes in fleet deployment cycles?*

ADM Hayward: No, I don't foresee any major changes. My concern is going to be over establishing a proper balance between our force levels and their commitments. From my answers to previous questions, it's clear I believe the country will continue to rely upon the United States Navy for forward deployed forces as a fundamental element of our national policy. That reliance will place continued pressures on our Navy to be forward deployed, perhaps even more than we experience today. But the general policy of a six-month, portal-to-portal overseas deployment has a lot of logic with me and I'm going to support that to the best of my ability.

Where we are unable to meet the forward deployment requirements and also keep this goal in balance, then I am going to do all in my power to fight for more forces to meet the goal—or reduce the commitment.

The individual sailor must keep the importance of the Navy to our national requirements in perspective. As he deploys away from home for six or seven months, he should realize he is fulfilling a very important service to his country. I know we lose sight of that from time to time but it's part of the satisfaction we ought to be getting out of being naval professionals.

On my part, I will try to make sure the deployment ratio is a sensible one that does not violate the basic interests of young Americans today—to their family life as well as their job commitments.

*All Hands: Does the Navy have, either under construction or on the drawing board, those systems it will need to increase its capability over the next few years?*

ADM Hayward: Yes, we do. The decisions made in the past were intelligent ones. They have led toward the introduction of the right kinds of weapon systems to meet the threat of today. My job is going to be to ensure that the legacy I leave for future CNOs is similar to the good one I've inherited. It's a tremendous challenge today to articu-

late our requirements in an effective way to our civilian leaders here in the Department of Defense as well as to Congress. We need to make sure the Navy stays in the forefront of technology. Doing so will ensure we are a very competent Navy.

*All Hands: Is the U.S. Navy the most powerful navy in the world today? Will it be so in the future?*

ADM Hayward: We all know who our principal competitor is in the world today.

Ten to 15 years ago, one would not have asked that question because it was patently clear the United States Navy commanded the seas and was substantially superior. The very fact you ask the question reveals the uncertainty commonly held today that our leadership on the seas has been eroded.

It is difficult to give a black and white answer; a yes or no—we are first or second. Rather, I would suggest that there are many ways in which the Soviet navy is superior to the United States Navy today, and vice versa. It's clear the Soviet navy is larger than ours in almost every category of ships, with the exception of the attack carrier. In some areas, their quality is very good; perhaps every bit as good as ours.

On the other hand, we still have the capability of putting together a battle group and applying it to any ocean in the world where we consider the vital interests of the United States at stake. And that battle group would prevail in any contest with the Soviets.

*All Hands: What are your thoughts on the eve of becoming the U.S. Navy's senior military member?*

ADM Hayward: I'm very encouraged by the condition of the United States Navy today. My three years of experience with the Pacific Fleet gives me a great deal of optimism about the Navy. Our Navy is a very good navy. We have excellent equipment. The people who man the ships and squadrons are good, solid individuals who know their jobs and will respond to a crisis just as well as any group of Americans ever have.

When the chips are down, the United States Navy can be counted upon to carry out its role in a very effective way.

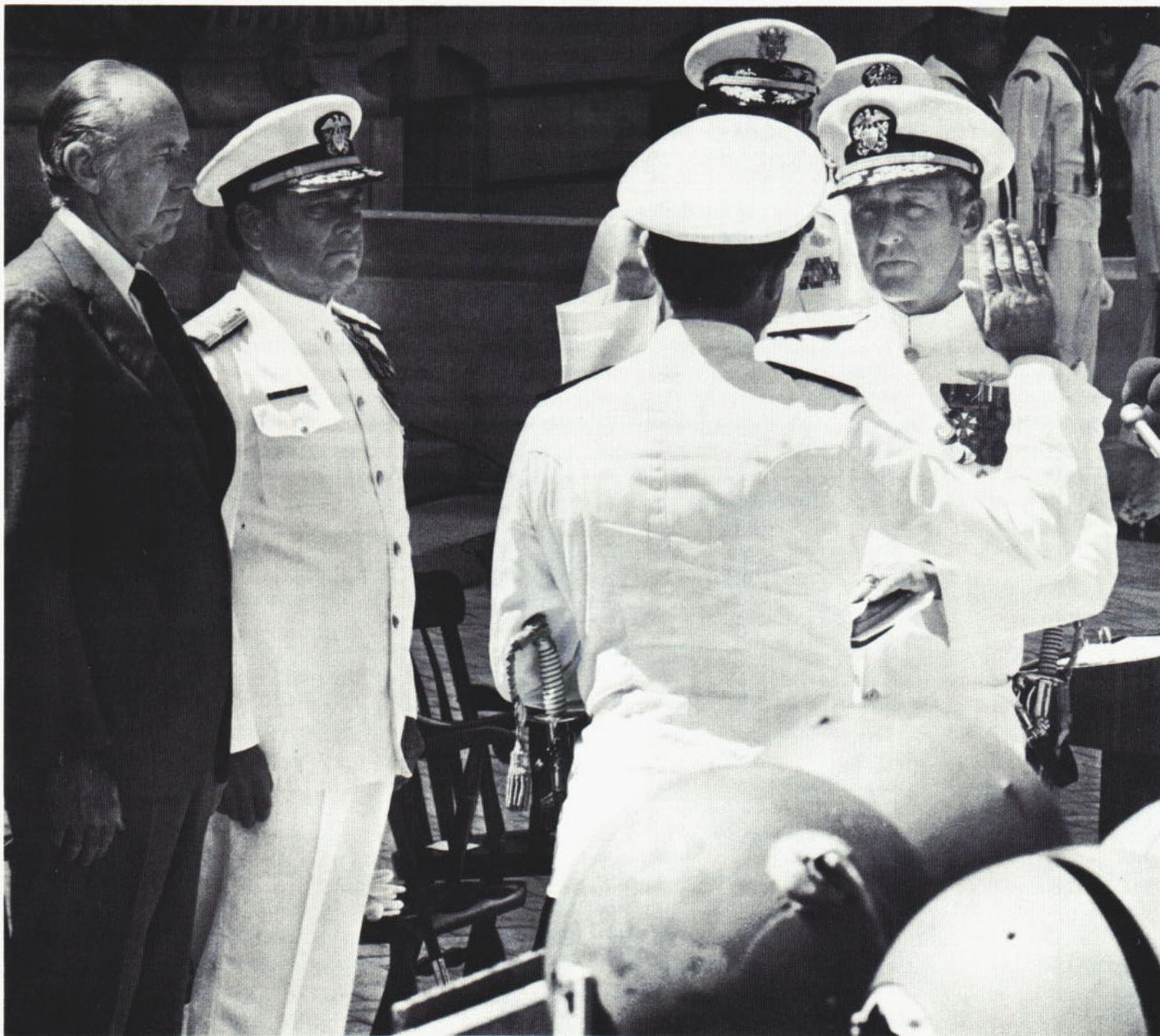
I intend to try to articulate this optimism to individuals in Washington and to the Navy in a way that will encourage us to recognize the strong points about our Navy. And there are far more strong points than weak ones. If we can do this, we will have a better perspective of our jobs, a better perspective of our future, much greater job satisfaction and much greater pride in our performance. ↓

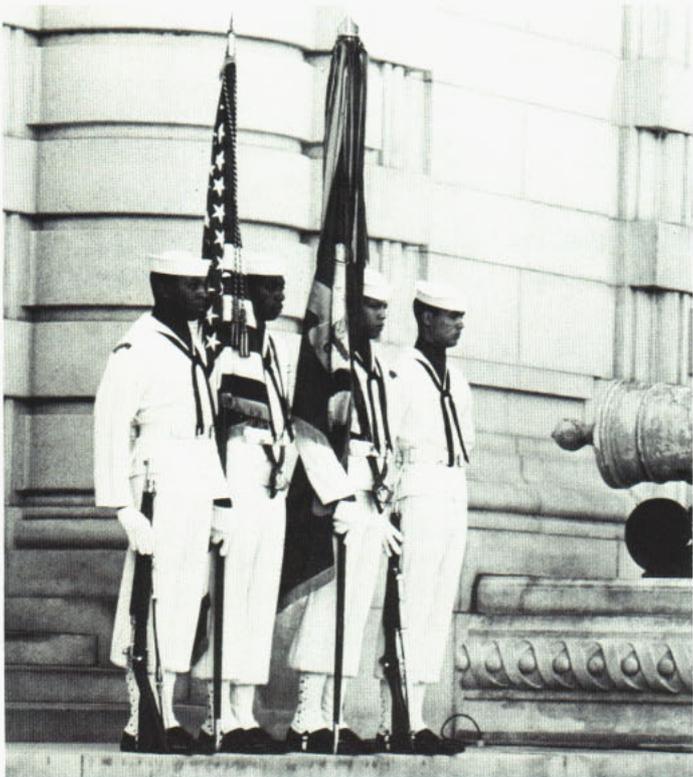
# CNO Change of Command

Admiral Thomas B. Hayward became the 21st Chief of Naval Operations in ceremonies held at the Naval Academy in Annapolis, Md., on July 1, 1978.

The new CNO takes the oath of office from Rear Admiral William O. Miller, Judge Advocate General, while Secretary of the Navy W. Graham Claytor Jr. and the outgoing CNO, Admiral James L. Holloway III, look on. ADM Holloway and ADM Hayward wish each other well; (at right, middle) Secretary Claytor presents the Defense Distinguished Service Medal to ADM Holloway. Naval Academy midshipmen meet ADM and Mrs. Hayward.

*(Photos by JO1 Jay Davidson and PH2 Douglas Klotzbach.)*







# Midget Sub's Endless Journey

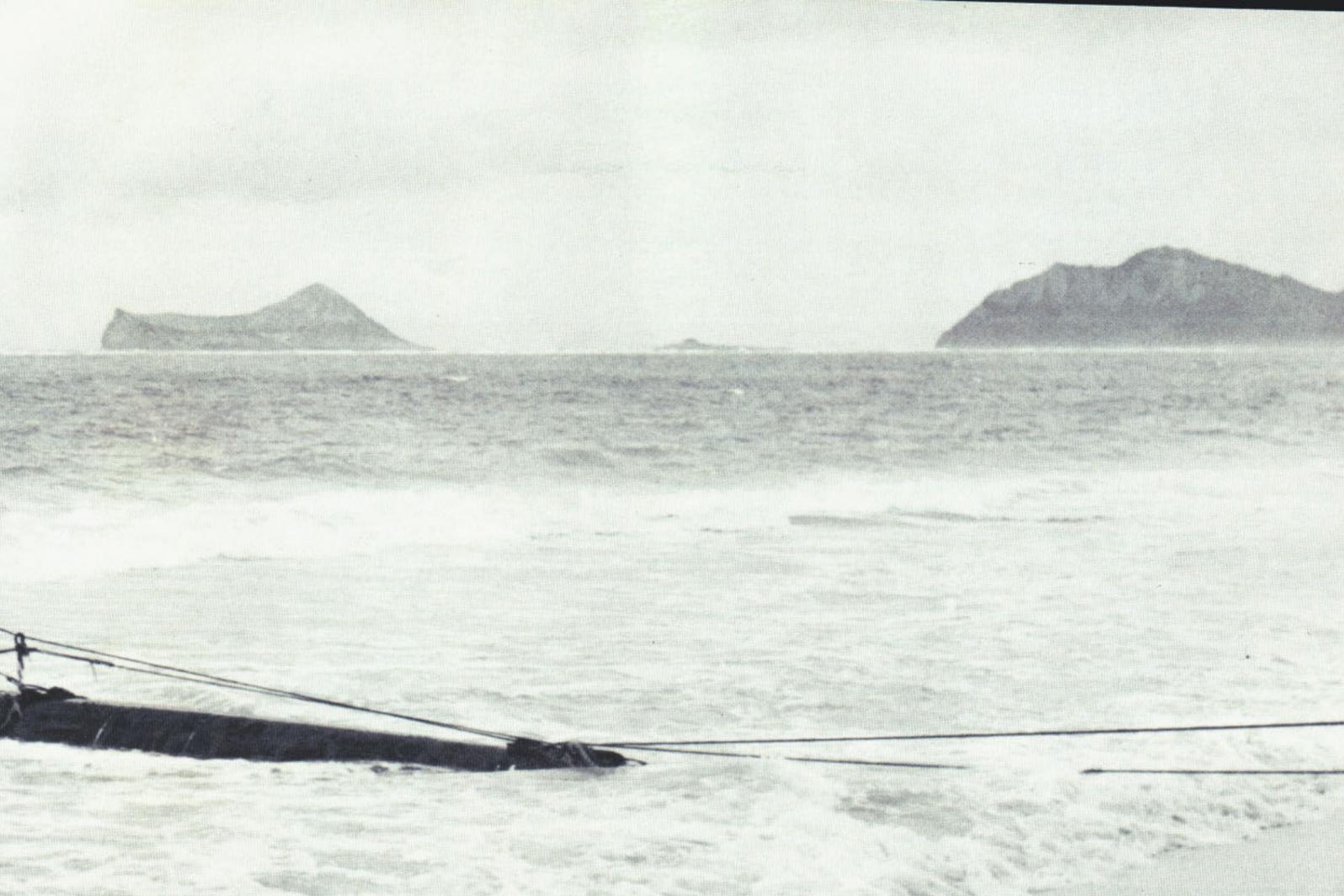
BY C. L. JACKSON

The moment had arrived. Ensign Kuzuo Sakamaki was prepared. A deeply patriotic Shintoist, he believed he would join his ancestors if he died honorably for the glory of Japan. Now, on the night of Dec. 6, 1941, he faced a momentous choice—he could abort his suicide mission or continue on as best he could. Despite a mechanical failure in his midget submarine, his decision was immediate.

“On to Pearl Harbor!” he told his commander.

Sakamaki might have been better off if he had not gone on. The voyage of his midget submarine became a nearly comical succession of errors which ended with the sub's capture by the U.S. Navy.

Sakamaki was born in 1918. Like most Japanese children, he grew up with a deep reverence for his parents, teachers and the Emperor. In 1937, he entered the Japanese Naval Academy, one of 300 selected from more than 6,000 applicants. After his graduation



and commissioning as a midshipman, he received a month of flight training and spent a year at sea. Eight months before Pearl Harbor, Sakamaki was promoted to ensign and ordered to report to the seaplane tender *Chiyoda* at Kure. There he learned he was to become a member of the Special Attack Naval Unit, handpicked to crew Japan's new secret weapon—the midget submarines.

The class A midget subs used at Pearl Harbor were built in Ohurazaki, near Kure. In all, 1,278 midget submarines were planned; only 438 were actually completed and, of these, 62 were class A submersibles.

Nearly 80 feet in length, the midgets were armed with two torpedoes and carried two-man crews. Thin-hulled, vulnerable to depth charges, class A midgets relied on their size and high speed to escape detection and capture—test models reached 24 knots. Additional hull fittings on the attack midgets used at Pearl Harbor slowed them to 19 knots but they could maintain that speed for 50 minutes. However, when

the charge of the electric batteries was exhausted, the vessels became helpless.

After months of training in the small vessels, Sakamaki joined a squadron of 18 fleet-type submarines that steamed out of Kure in November 1941. Five of the larger subs carried a midget submarine on their decks. The midgets were to be launched under cover of darkness a few miles off the coast of Oahu the day before the air attack. They were to enter the harbor at night, lie in wait on the bottom, then rise to the surface during the attack and inflict as much damage as possible.

The Japanese made no provision for recovering the tiny submarines and the midgets' commanders knew they weren't to let their vessels fall into enemy hands. It was clearly understood that the crews would not be returning. Sakamaki's sub, with its malfunctioning gyrocompass, was particularly vulnerable.

Twenty minutes from launch, Sakamaki made the ceremonial preparations for a warrior's death. He wrote a fare-

well note to his father, showered, donned his uniform of *fundoshi* (G-string), white headband and leather jacket, and sprayed himself with the perfume of cherry blossoms. Sakamaki was ready to meet his ancestors.

He and his one crew member, Seaman Kyogi Inagaki, climbed into the midget submarine and secured the hatch. The mother sub, *I-24*, submerged. At exactly 11 p.m., the mother sub released the four large holding clamps. The midget was on its own.

Nose down, the little sub headed straight toward the depths. Sakamaki fought to right her and shouted to Inagaki to shift the ballast to the after compartments. Crush depth for the  $\frac{3}{8}$ -inch thick hull was 100 feet, a point they were rapidly approaching. Sakamaki reversed the engine to slow the downward dive. Finally, the sub backed toward the surface.

By the time they adjusted the trim, it was past midnight. Sakamaki wasn't worried. He thought that as long as they entered the harbor at night, no

# Midget Sub's Endless Journey

harm was done. He and Inagaki relaxed, drank some saki and ate. It would be their last calm moment for a long time.

After proceeding on course, based on the magnetic compass, Sakamaki raised the sub slightly and peered through the periscope. They were headed the wrong way. He submerged and ordered a course change. A few minutes later, he dared another look. Now they were headed back to Japan. Course change after course change still found the sub going in all directions but the right one. As the hours passed, Sakamaki grew desperate. Soon the sun would be up and they were nowhere near the harbor.

Dawn brought Sakamaki some hope. From 35 feet down, his periscope picked up the sun's penetrating light. Using the sun as a reference, he got his bearings and took up a general course for Pearl Harbor.

Then he spied two patrolling U.S.

*Right: Jackson, a month after Pearl Harbor attack. Below: Midget sub beached on Oahu.*

Navy destroyers and decided to follow at full speed in their wakes. However, one of the destroyers—USS *Ward* (DD 139)—suddenly went to battle stations. She had picked up the midget sub on sonar. Five depth charges hit the water and the midget sub shook violently. Sakamaki, standing on the periscope viewing platform, was knocked out. Minutes later, when he regained consciousness, he found Inagaki still racing the sub in first gear but in the wrong direction. He ordered the sub turned around and made an attempt to escape the *Ward*. Once again, depth charges stopped them.

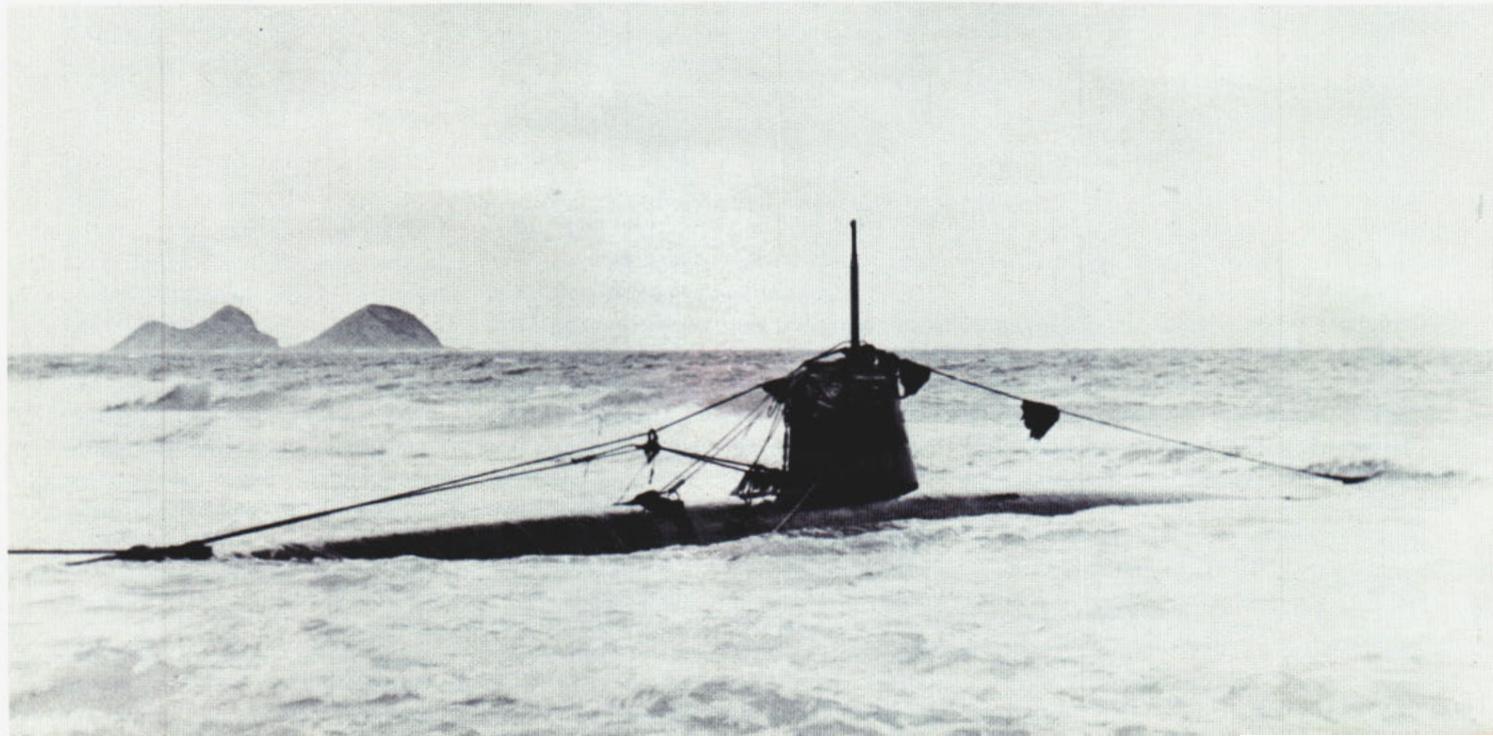
Later, cautiously, Sakamaki brought the sub back up to periscope depth. He saw dense columns of smoke rising over Pearl Harbor. Realizing there was no longer a need for secrecy, he decided to run the gantlet of destroyers on the surface so he could see where he was going. He hoped his unexpected burst of speed would put him beyond harm's reach. The sub sped forward, decks awash. Depth charges exploded all around them and, once again, Sakamaki was forced to submerge.

Veering off course 20 degrees, he counted to 10, desperately turned 40 degrees in a compensating direction, counted to 10 again, then straightened his course. He figured he had gone around the destroyers and thought he was entering the harbor.

But it wasn't to be. A reef at the

right of the channel barred his way. The sub struck with such force that the bow was lifted clear of the water. Frantically, Sakamaki tried to rock the sub off the reef with all back full. As the destroyer USS *Helm* (DD 388) barreled down on them at flank speed, Sakamaki threw the protesting throttle into full reverse and closed his eyes—his sub freed herself.

Making an emergency dive, the midget raced clear of a shower of depth charges. But now, gases leaked from damaged batteries, fouling the air with deadly smoke.



Still, Sakamaki made two more attempts to enter the harbor; he was turned back by depth charges. Shifting to ahead full, he promptly ran onto another reef, this one to the left of the entrance. Full astern did nothing to free them so they again began shifting the lead ballast aft. The task was painful; the shorting batteries caused continual shocks to pass through their bodies.

As Sakamaki was placing ballast in the stern, the sub slipped backwards off the reef. But before he or Inagaki could get to the controls, the sub hit

the ocean floor tail first, causing still more damage. On top of it all, Sakamaki discovered the torpedo's firing mechanism would not work.

It was now past noon and Sakamaki still had not entered the harbor. He decided to use the submarine as a ram to set off the torpedoes. He raised the sub and adjusted the controls to full speed, but the craft's maneuvering ability had been completely destroyed. Without steering, all hope was gone. Defeated, exhausted and nearly overcome by fumes, the two men collapsed.

The rest of the day was spent in a daze—Sakamaki was unable to accept the undignified end to his mission. As darkness fell, he brought the sub to the surface and opened the hatch. When he awoke again at dawn, he discovered that they had drifted within 700 feet of the shore. Excited, he shook Inagaki awake. If they could beach the craft, they might be able to repair the steering mechanism. Sakamaki tried to start the engines but the batteries were depleted. As they drifted farther from shore, Sakamaki cried in frustration. Just then, a large wave picked up the sub and tossed it up onto yet another reef.

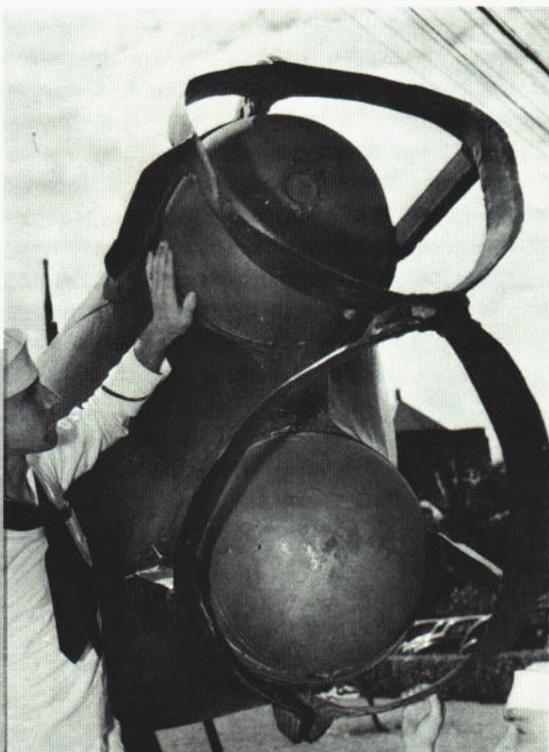
Failing was one thing, but to let a valuable secret weapon fall into enemy hands was unforgivable. The subma-

rine had to be destroyed. Sakamaki rigged an explosive charge and lit the fuse. He joined Inagaki on the deck and secured the hatch. They jumped into the water for the mile-long swim to shore.

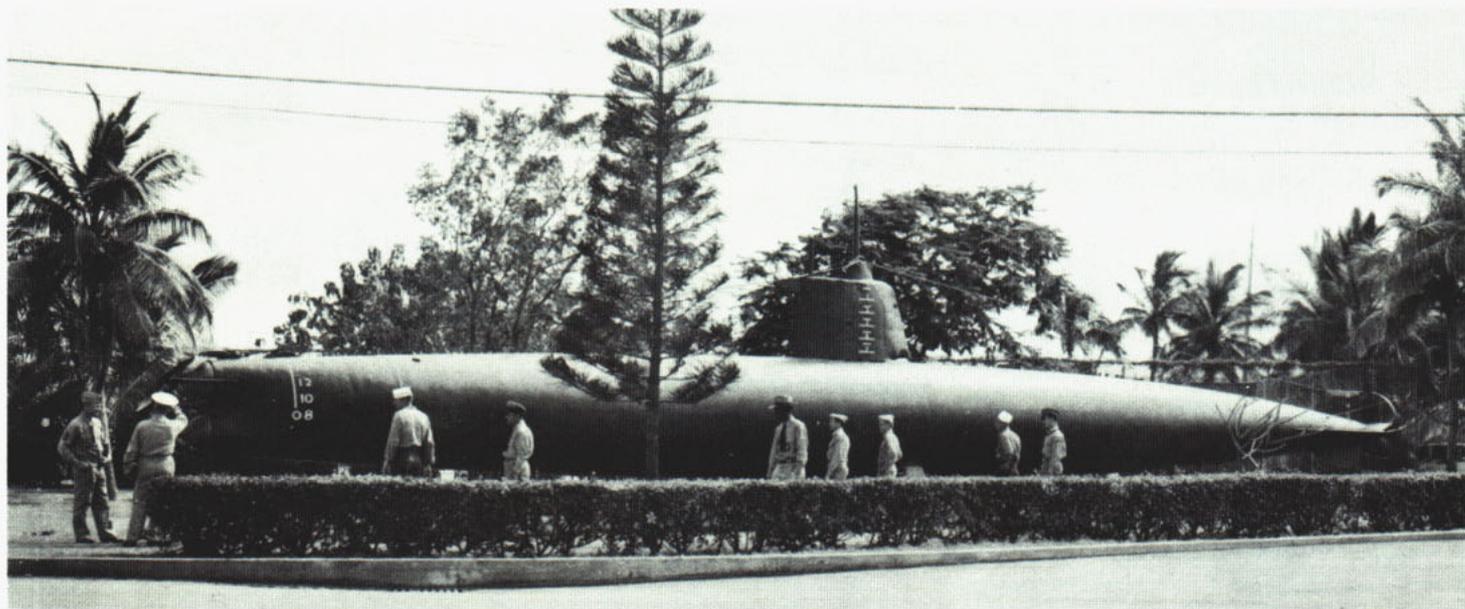
The rough water quickly separated them. Sakamaki was thrown up onto the shore at Waimanalo Bay near Bellows Field, 50 miles from Pearl Harbor, where he lost consciousness. Army Sergeant David M. Akui found him a few hours later, not far from the drowned body of Inagaki, and took him as the first prisoner of war of the U.S. in World War II.

Much of America's concept of Japan's military fanaticism was formed from the questioning of Sakamaki. Disgraced, he only asked for the honor to commit suicide. After weeks of intense interrogation, however, Sakamaki was taken to San Francisco. He spent the rest of the war in various internment camps and after his release returned to Japan. Later he wrote a book entitled—somewhat pretentiously—*I Attacked Pearl Harbor*.

Of the five midget submarines launched on Dec. 6, only one made it into Pearl Harbor and fired its torpedoes. Immediately depth charged, it sank without causing any damage. Sakamaki's midget sub, perched precariously on top of the reef, became a target for patrol craft. It was bombed but never hit. The near misses jarred it loose from the reef and set it adrift toward the shore.



*Left: Sailors inspect torpedo noses protruding out of sub's bow. Below: Sub on temporary display at Pearl Harbor before a war bond tour.*



# Midget Sub's Endless Journey

A salvage crew from Pearl Harbor Submarine Base was sent on Dec. 10, 1941, to board the Sakamaki sub. I was a radioman second class serving aboard the battleship USS *Pennsylvania* (BB 38) (which had been in drydock during the Dec. 7 attack) as part of CINCPAC's staff. Because of my slight build, I was selected to go aboard the midget sub and remove all communication gear for study.

The morning was cold and miserable as the salvage party climbed into a truck for a jostling hour and a half ride. When the truck finally stopped, we jumped out, happy to stretch our legs.

"What the hell is that?" someone asked in amazement.

*Right: Japanese fleet-type subs captured at the end of the war. Below: The one midget sub that made it into the harbor caused no damage and was depth-charged, creating this washboard effect on her hull.*

Tethered to a palm tree, a long cylindrical object rolled in the surf about 50 yards from shore.

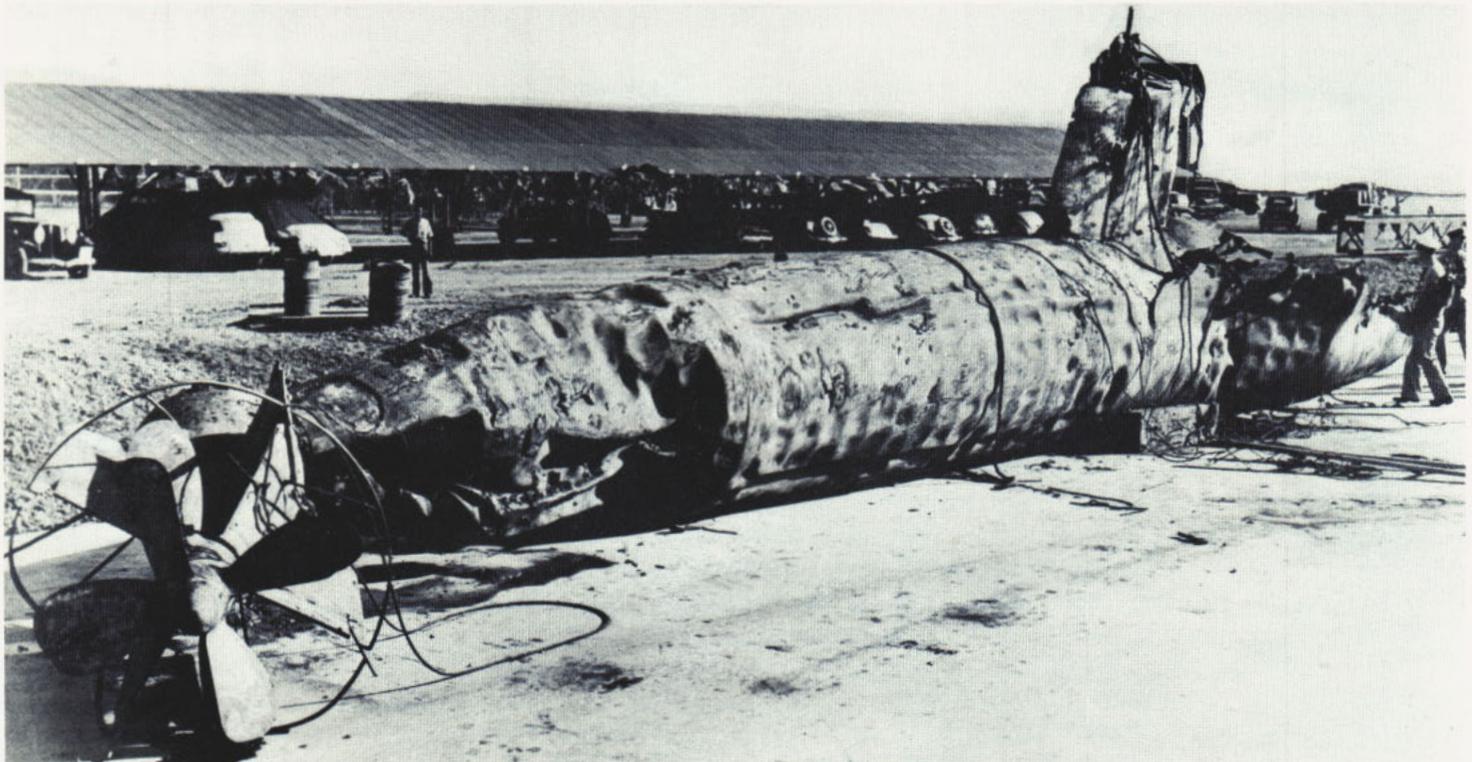
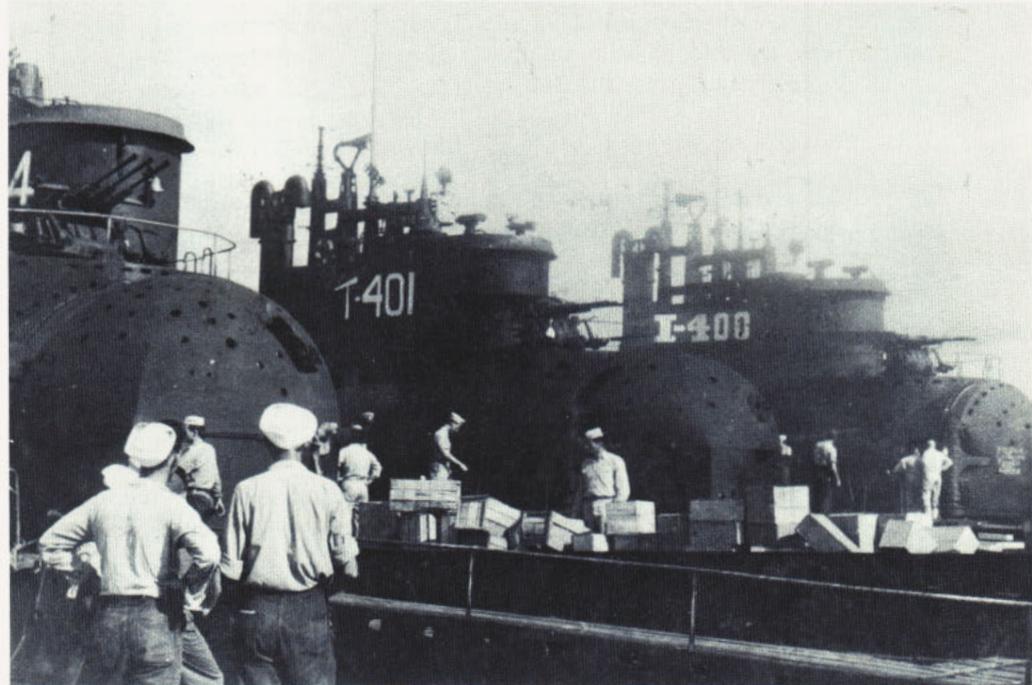
"Strip down and go take a look, Jackson," the chief of the salvage party told me.

Clad in skivvies, I dove into the surf and swam the short distance to the craft. When I got to what looked like the bow, I reached for the iron framework to board. From shore the chief

yelled, "Get the hell away from there; those are torpedoes sticking out!"

I backed away fast, swam around to the side and pulled myself aboard. Shivering, I walked to the conning tower and pulled open the entrance hatch. The air was foul. After taking a few deep breaths, I eased myself through the small opening.

There wasn't much to see. The communication gear was on the starboard



side. A navigation chart occupied the port side. I was shocked to find that it was an official U.S. Navy chart of Pearl Harbor with positions of most of the larger warships neatly penciled in. I gathered up as much as I could and headed for the beach. After my second trip, the chief and officer in charge of the salvage party came aboard while I removed the radio gear.

The chief discovered the explosives

with the wet, slightly burnt fuse. Like most of Sakamaki's efforts this, too, had failed. We got the radio cables and motor-generator ashore and I came back one last time to get the transceiver. I pushed the radio up through the conning tower and paused a moment to take one last look before crawling out of the midget sub.

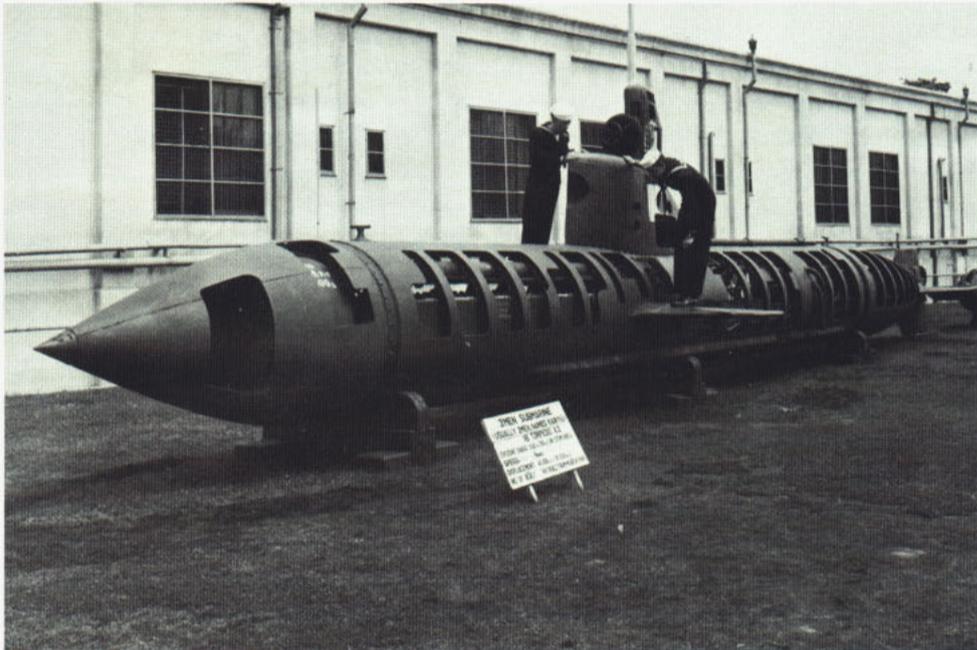
Later, the sub was disarmed and picked over completely. Japan's secret

weapon was no longer a secret, and every sonar man in the Navy soon knew from then on that even a tiny blip on his screen spelled potential danger. The annotated chart I had retrieved from the sub showed the positions of many of our ships and a carefully plotted course for the small intruder. It was suspected that the craft had made an early morning reconnaissance of the berthing of fleet units and had successfully communicated the findings back to Japanese attack forces. That a sub could get past harbor entrance patrols and nets was alarming enough, but this chart revealed that the sub had traveled completely around Ford Island undetected! (It was this evidence that prompted the widespread belief that Japanese midget submarines "must have been in the harbor a few days before the attack and evidently were moving in and out of the harbor at will," as the Army Pearl Harbor Board summed it up.)

This opinion was reversed later when a chart found in a downed Japanese bomber proved that the submarine chart was only an attack plan, not the route of a daring reconnaissance mission.

Eventually, the midget sub was used in America's war bond effort. Viewing windows were cut into the sides and the sub traveled all over the U.S. to carnivals and state fairs. I was on leave in Pittsburgh, Pa., when I saw the midget sub again. Japan's secret weapon, draped in red, white and blue bunting, had become the means of raising money to build American ships to fight Japan.

*(Editor's note: The ill-fated midget submarine that dropped "Prisoner No. 1" and Japan's secret weapon into America's lap is now on exhibit at the Lighthouse Museum, Key West, Fla. Similar Japanese midget submarines are on display at many locations, including Naval Submarine Bases, New London, Conn., and Pearl Harbor, Hawaii, and the Washington, D.C. Navy Yard.)* ⚓



*Left top: This version of a midget sub could carry a three-man crew and be rigged to fire torpedoes, or carry explosives in bow section and ram targets. Left: Another type of midget sub, this one at Mariners' Museum, Newport News, Va.*

# Rights & Benefits

## Your best investment... EDUCATION

More than 2,000 years ago, Aristotle wrote, "Education is the best provision for old age." Time has proven the wisdom of his observation.

Still, more than a good pension plan, education is the key to advancement in today's technical Navy. Ambitious Navy people can cash in on golden educational opportunities by signing up for VEAP, the Veterans Educational Assistance Program.

The new VEAP has replaced the old GI Bill. Navy people who entered the service after Dec. 31, 1976, are eligible to participate in the contributory program by setting aside as much as \$75 each month in an education fund. Uncle Sam will add two dollars for each dollar saved by a Navy person. After contributing the maximum each month for three years, and adding the government's contribution, a Navy man or woman would have accumulated \$8,100 which could then be used to pay educational expenses while in the service, after separation, or both.

Though a \$75-per-month contribution is the maximum, Navy people can set aside as little as \$50 each month or any \$5 increment in between. Members must agree, however, to participate in the program for a minimum of 12 months. Exceptions can be made in cases of financial hardship.

VEAP is more than simply a savings account. Members will be entitled to the total amount in their account after completing their initial enlistment or period of obligated service, if they use it in a VA-approved educational program. If a member decides after being released from active duty not to continue his education, the member's share of the fund will be refunded within 60 days of notifying the Veterans Administration.

If, after attending school for several months, a veteran or active duty service person decides to drop out, he may withdraw the remainder in his fund or leave it in anticipation of returning to school at a later date.

Matching funds will be paid to students for the same number of months as they participated in VEAP. If a Navy person contributed for 24 months, for instance, he or she could receive as much as \$225 a month for 24 months (\$75 contributed + \$150 matched funds = \$225).

The following chart shows how much you can save through VEAP:

Your contribution	You save	Government contribution	Total
<b>After One Year</b>			
\$50.00 a month	\$ 600.00	\$1200.00	\$1800.00
\$55.00 a month	\$ 660.00	\$1320.00	\$1980.00
\$60.00 a month	\$ 720.00	\$1440.00	\$2160.00
\$65.00 a month	\$ 780.00	\$1560.00	\$2340.00
\$70.00 a month	\$ 840.00	\$1680.00	\$2520.00
\$75.00 a month	\$ 900.00	\$1800.00	\$2700.00
<b>After Two Years</b>			
\$50.00 a month	\$1200.00	\$2400.00	\$3600.00
\$55.00 a month	\$1320.00	\$2640.00	\$3960.00
\$60.00 a month	\$1440.00	\$2880.00	\$4320.00
\$65.00 a month	\$1560.00	\$3120.00	\$4680.00
\$70.00 a month	\$1680.00	\$3360.00	\$5040.00
\$75.00 a month	\$1800.00	\$3600.00	\$5400.00
<b>After Three Years</b>			
\$50.00 a month	\$1800.00	\$3600.00	\$5400.00
\$55.00 a month	\$1980.00	\$3960.00	\$5940.00
\$60.00 a month	\$2160.00	\$4320.00	\$6480.00
\$65.00 a month	\$2340.00	\$4680.00	\$7020.00
\$70.00 a month	\$2520.00	\$5040.00	\$7560.00
\$75.00 a month	\$2700.00	\$5400.00	\$8100.00

(Maximum Amount)

Navy people who came on active duty before Jan. 1, 1977, cannot participate in VEAP, but they are still eligible for benefits under the previous GI Bill. In fact, after formulating VEAP, Congress passed another educational bill which increased GI Bill benefits for veterans not eligible for VEAP.

Called the G.I. Bill Improvement Act of 1977, it increased educational benefits by six percent for veterans not eligible for VEAP and required that benefits be used within 10 years of discharge or by Dec. 31, 1989 whichever comes first.

Single veterans going to school full time in a VA-approved educational program now receive \$311 each month. Veterans with one dependent receive \$370 a month; with two dependents, \$422, plus \$26 a month for each additional dependent.

The new law also increased the maximum amount available for VA educational loans to \$2,500 per school year, payments for tutorial assistance, and hourly rates for VA work-study payments.

Eligible members interested in using their GI Bill educational benefits, even while on active duty, should contact the educational services office or their career counselor.

# Test Pilot School

STORY BY JOC DAN GUZMAN  
PHOTOS BY PH1 T. MITCHELL

The Patuxent River area of southern Maryland is known for its countless waterways and beautiful woodlands—a sportsman's paradise. For the U.S. Navy it has been an ideal environment for learning, an area unhampered by population growth and the accompanying industrial pollution.

The first jet-powered aircraft was tested at the Patuxent River Naval Air Station in 1945; night fighter tactics were developed there. Work on discovering the weaknesses of enemy aircraft in World War II was also undertaken at Pax River—using captured enemy planes.

From such testing evolved the Flight Test Pilots' Training Program, with an informal curriculum presented three half-days a week over a nine-week period. Graduates received a certificate along with a useful memento, a six-inch slide rule. In 1948, when a Test Pilot Training Division was formed, the curriculum was expanded to six months.

Formalization of test pilot training generally is credited to Captain Sydney S. Sherby, Admiral Thomas F. Connolly, and the late Vice Admiral Frederick M. Trapnell. The full-fledged U.S. Naval Test Pilot School (TPS)

came into being in 1958. The scope of instruction continued to grow with the addition of a helicopter flight syllabus in 1961. Today, the 11-month course is divided into two phases, academic and flight.

*Navy line crew member helps a TPS student strap himself into the ejection seat of an F-5.*



Famous graduates of the school include astronauts Colonel (now a Senator from Ohio) John H. Glenn Jr., Commander M. Scott Carpenter (USN, Ret.), and Rear Admiral Alan B. Shepard Jr. (USN, Ret.).

Though assignment to the school continues to be highly prized by young naval aviators, it is still "a hell of a lot of hard work," according to Commander J.D. Hamilton, the school's director.

The basic mission of the Test Pilot School is to train experienced aviators, flight officers and engineers to become qualified test pilots, test flight officers and test project engineers. Additionally, the school provides a technical and scientific advisory group to the fleet, the Naval Air Test Center or any activity requesting assistance, from the National Aeronautics and Space Administration on down.

"In 1966, with the input of naval flight officers," said CDR Hamilton, "and the advent of airplanes like the F-4, A-6 and others coming down the road that had more than one seat and more than one function, we added Navy Flight Officer (NFO) training."

Number two man in the cockpit, the NFO is taught to evaluate weapons systems, radar, anti-submarine systems in the P-3 and S-3 aircraft and electronic countermeasure systems.

"In 1975 the airborne systems

*Facing page: Aviators from all points of the compass come to TPS to learn to be test pilots. Royal Air Force Flight LT. Geoffrey Peck prepares to climb into an F-5.*

course was added," said Hamilton, "and, in 1977, we started working with the vertical short takeoff and landing (V/STOL) course, which will help with the V/STOL-type aircraft.

"Our main objective, though, is to cycle young aviators coming from fleet operational tours so they may better relate the capabilities of the airplanes and weapons systems to the mission for which they were designed.

"We get a good cross section of people here, from fighter and attack pilots to the ASW and helicopter communities."

Though a good percentage of the pilots are from all the armed services, the school also gets those from the National Aeronautics and Space Administration, the Department of Commerce and the Coast Guard. Additionally, aerospace contractors send representatives, mostly engineers, to the school as do all the allied or free world countries.

U.S. Navy pilots attend other test pilot schools as well through an exchange program with the Air Force Test Pilot School at Edwards Air Force Base, Calif., the Empire Test Pilot School in England, and Etner in France.

The curricula of the schools are basically the same, but the Pax River school is tasked with a number of special test projects and, sometimes, evaluating and trouble-shooting. As an example, when the Marine Corps was thinking of buying the *Harrier*, a TPS team did a complete, preliminary evaluation of the aircraft. Also, when the Greek Air Force was having trouble with a particular type of training aircraft, the TPS dispatched one of its pilots from Pax River to Greece. He flew the aircraft and, eventually, with a team of maintenance people, pinpointed and solved the problem.

Pax River has a reputation world-

wide as a demanding school with very high standards. According to CDR Hamilton, "We're doing everything we can to maintain those standards. It's just something that the students have to learn to live with.

"They have to be able to do their homework for the academic portion. Then, they must be able to put their studies aside when they get ready to fly and think about what they're going to do in the air that day.

"As far as the flying risk," he said, "on a daily basis we not only fly the airplanes to the very edge of their limitations, but we also collect data for reports while airborne."

What about the glamor of being one of the chosen few? When one hears the words test pilot, an image immediately comes to mind of the daring young naval aviator in white scarf and goggles.

Hamilton chuckles at this. To him, this is the stuff of which movies are made. He said that you won't find anyone in the business who thinks that way.

"There's a feeling of pride and accomplishment when you're working with new aircraft and weapons systems for the first time. I think a lot of guys get a kick out of being able to say they were the first Navy pilot to fly the F-14, A-6, P-3 or whatever. As test pilots, they are usually looked upon as the center of source information on that airplane. We try to emphasize the professionalism, not the glory," he said.

"The work is very hard, but I'm more concerned with their working too late at night, rather than knocking off early. It's competitive."

A board composed of representatives from the Naval Air Test Center, Commander Naval Air Systems Command, and the Bureau of Naval Personnel select student test pilots. Selec-

tion is based upon several factors: recent fleet operational experience, academic and flight background, and availability for rotation to shore duty. Also, they must be recommended by endorsing seniors concerning flying ability, motivation and professional competence.

Math through college algebra and physics are a prerequisite; calculus is highly desirable. Completion of at least two years of college level engineering helps.

The school presents short review courses in algebra, trigonometry, calculus and mechanics. This is followed by aerothermodynamics, a study of jet and reciprocating engines, aircraft and engine performance, airplane stability and control and weapons systems analysis. Also included are detailed studies of helicopters, flight test instrumentation and flight test project planning.

The student aviators—about 30 in each class—are exposed to a variety of aircraft and must be able to fly anything from the supersonic T-38 *Talon* to the unpowered X-26A glider. Currently, the school has 11 different types of aircraft: the T-2C *Buckeye*, TA-4 *Skyhawk*, A-7 *Corsair*, T-38A *Talon*, OV-1 *Mohawk*, NU-1B *Otter*, U-6A *Beaver*, AH-1 *Cobra*, CH-46 *Sea Knight* helicopter, OH-58A *Kiowa* and X-26A glider.

Flight phase of the curriculum includes planning, flying and writing reports of test flights. All flights are test flights with the exception of familiarization in new types of aircraft and night proficiency flying. The goal is to develop certain abilities in the potential test pilots, including those of observing and obtaining accurate test results, working as part of a team and reporting objectively.

Perhaps the most hair-raising portion of the flight phase and probably the greatest high-risk flying accomplished



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at the school is the out-of-control flight segment—recovering from an out-of-control spin.

Basically, out-of-control flight occurs when controls are positioned properly, but the airplane does not respond, goes into a spin, and plummets toward the earth.

The out-of-control flight segment includes the well-known upright spin with which almost every pilot is familiar. A couple of more frightening and disorienting spins are the inverted spin, where the pilot is upside down while spinning, and the coupled entry. In the latter, the aircraft alternates between rapidly tumbling head-over-heels and doing little yawing circles about the vertical tail. This action resembles the



*Top: Aircraft variety is a necessary asset for TPS, from fixed wing, such as an OV-1 Mohawk, to the double rotor H-46 Sea Knight helo. Bottom left: Their canopies open, Marine CAPT Dave Beard and Royal Air Force Flight LT Geoffrey Peck prepare for test hop.*

*Below: Beard and Peck talk over a "gripe" with the line crew.*

spin of a little maple leaf seed when it flutters to the ground.

The Naval Safety Center lists spins as the probable cause of about 20 aviation accidents each year. When a pilot's aircraft goes into a spin, the normal reaction is to get out fast.

Yet, test pilots are expected to push their airplanes to any limit required by a test project. That includes throwing the plane into a deliberate spin, calmly reading the instruments and discussing what is happening while the aircraft is out of control and plunging from 25,000 feet. Then, at precisely the right moment—usually 15,000 feet—the pilot brings the aircraft under control.

This ability and confidence are

taught only at Pax River where five, qualified instructor pilots demonstrate out-of-control flight.

A program was started last year to train fleet pilots in out-of-control flight. It has already paid a direct dividend.

"One of the pilots we trained returned to the fleet and actually got into a spin in an F-4," Hamilton said. "The pilot was able to recover the airplane; both he and his skipper credited the recovery to the out-of-control flight training.

"We are now training seven to eight fleet pilots a month in this phase. In the near future, VF-26 on the West Coast will get five T-2C aircraft and we'll train five of their instructor pilots

to demonstrate out-of-control flight. They, in turn, will train a large percentage of the fleet pilots in West Coast squadrons. VF-43 on the East Coast is also slated to take part in this program.

"The program is invaluable to the fleet," Hamilton explained, "especially because of the aircraft we use, the T-2C *Buckeye*. Its outstanding characteristic in out-of-control flight is that the controls can be set similar to the control positions on most any fleet-type aircraft—the F-14, F-4, A-7 or A-4, and it will recover from a spin with any of those different control positions."

Recovery of an aircraft from a spin

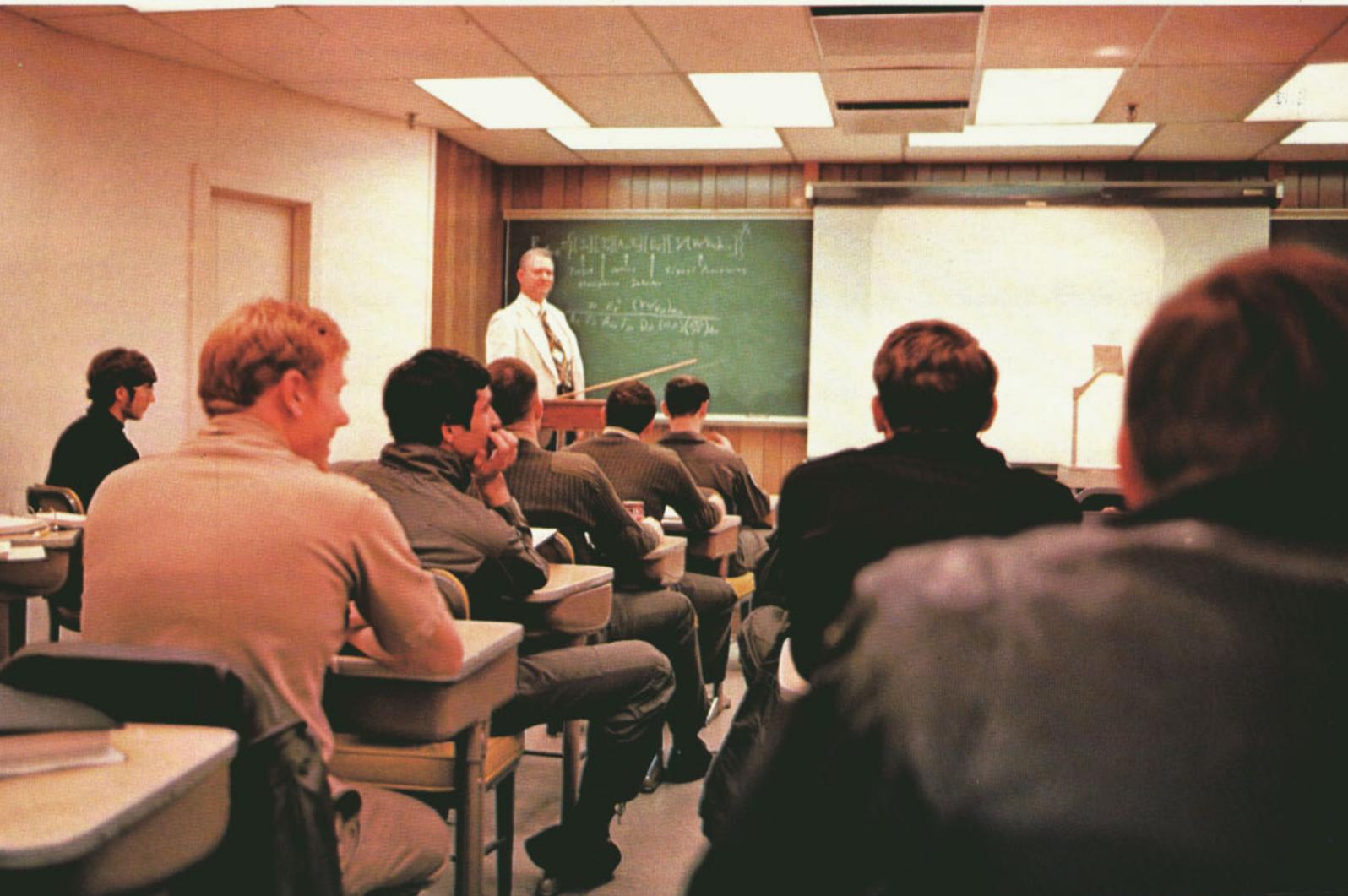


*Top: Preflighting his aircraft, a TPS student checks the main landing gear for hydraulic leaks that could lead to trouble.*

*Bottom: The other half of TPS, a class with Dr. George Masters, Airborne Systems Instructor.*

not only means the saving of a life but also a substantial saving in money. The Navy's first airplane in 1911 cost \$5,500. Today's Navy plane costs as much as \$20 million. If just one aircraft and its pilot can be saved as a result of this training, the cost of the program will have been paid for more than 20 times over again.

Saving aircraft and saving lives are an important part of the Test Pilot School's complex mission. Taken together as a package, the school's academic, ground and flight syllabus turns out the world's best pilots—those who follow in the footsteps of John Glenn, Alan Shepard and Scott Carpenter, an excellent company of Navy and Marine Corps aviators.



# Gliders Build Confidence

Enlisted men have served in naval aviation since its beginnings in 1911 when they reported for duty with the first two naval officers to enter flight training. Today there are more than 25 enlisted aviation ratings, each as modern and complex as the aircraft the men serve.

One Navy man, however, has returned to the basics of naval aviation. Aviation Metalsmith Second Class Dale A. Dalka, until recently, was the only plane captain in the Navy who ran alongside his airplane holding the wing off the ground as the aircraft took off. Dalka is plane captain of two X-26A gliders—the only operational gliders assigned to a Navy command.

Just recently Dalka completed train-

ing another Navy man, Aviation Metalsmith Airman Andy Owsiak, to serve as a glider plane captain.

The importance of the glider to the Test Pilot Program is sometimes obscured by the fact that many pilots regard the glider part of their training as the only fun phase left at the Test Pilot School. The rest, to them, is all hard work.

In use for more than 12 years, the soaring program was instituted to increase the variety of airplanes a student test pilot should experience. In the glider, the student test pilot encounters considerably different handling qualities, landing techniques and airspeeds than he finds in powered aircraft. It introduces a wide range of

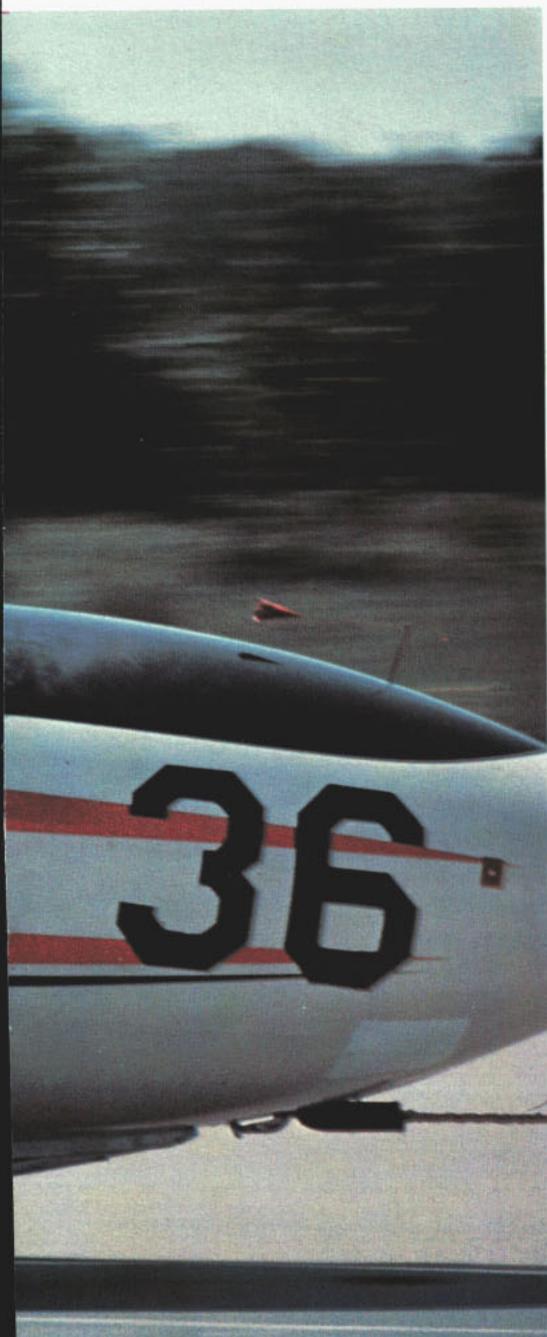
landing distances, gives training in energy management, and provides appreciation and understanding of the meteorological conditions for gliding. This knowledge will come in handy if the pilot ever finds himself in a jet with a stalled engine.

The soaring program is a confidence builder. In the last phase, the student's glider is launched at 5,000 feet. He then must put the craft through its paces—spins, stalls and recovery. While still in the air, as with other aircraft, he must complete observation reports, detailing lessons learned.

This entire process begins with the man on the ground, the plane captain. When the student test pilot enters the cockpit of the X-26A glider, Dalka has









*Top left: LCDR J.L. "Cork" Corcoran keeps a steady eye on the yellow tow line, keeping proper tension and a low tow altitude. Top right: An X-26A banks steeply toward an auxiliary field for a perfect one-point landing. Below: Almost hovering over the airstrip, the glider makes use of its thin, narrow wings and slow flying capabilities.*

already put his seven years of experience with gliders to use in the preflight inspection.

There are more than 26 items that must be checked in the pre-flight inspection. Dalka, with his ever-present screwdrivers and adjustable wrench, meticulously goes over the aircraft checking the cables, fuselage and wings. He ensures the radio battery is charged, and sees that the control stick works properly. The list goes on.

"I've been plane captain for eight different types of aircraft," Dalka said, "but I like gliders best—they're more interesting. During my first four years with gliders here I used to do much of the maintenance work myself. Now a civilian corporation does the work."

He knows the gliders intimately. To become plane captain he practically memorized the Naval Air Training and Operating Procedures (NATOP), much like an owner's manual for a car. He then had to pass a comprehensive written exam.

Additionally, he is well versed in the low-speed, propeller-driven U-6 *Beaver* tow plane.

After hooking the *Beaver* to the glider with 1,500 to 2,000 feet of 2,300-pound test rope, Dalka helps the pilot into the glider and checks parachute, shoulder straps and seat belt. He then directs the tow plane forward until the slack is out of the line. Returning to the glider, he lifts the wing resting on the ground, keeping both wings level.

The tow pilot moves his rudder left and right, signaling, "Is everything ready?" and the glider pilot gives the thumbs up signal to Dalka. The U-6 then begins to tow the glider, with Dalka running alongside holding the glider's wings steady and level until aerodynamics takes over and levels out the glider.

For Dalka, paper work is ever present. He must keep the gliders' logs and records or yellow sheets—entering the pilot's name and social security number, and the takeoff and landing times.

Sometimes, Dalka goes along for the ride. "It is just great," he says, "the most beautiful flying I've ever done. You are really free up there—no noise except the whispering of the wind."

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## THE GLIDER IN NAVAL AVIATION

**Jan. 31, 1930**— Lieutenant Ralph E. Barnaby made a successful air-to-ground glider flight, dropping from the rigid dirigible USS *Los Angeles* at an altitude of 3,000 feet over Lakehurst, N.J.

**June 6, 1933**— Two *Franklin* gliders were received at NAS Pensacola; instructor training in the new craft began immediately under LT Barnaby. Glider training, as an experimental feature of the training program, continued into 1936.

**April 19, 1941**— Development of a GLOMB (Glider Bomb) guided missile was initiated at the Naval Aircraft Factory. The GLOMB was a glider designed to be towed long distances by

a powered aircraft, released in the vicinity of the target, and guided by radio control in its attack. It was equipped with a television camera to transmit a view of the target to the control plane.

**Jan. 30, 1942**— The Secretary of the Navy authorized a glider program for the Marine Corps consisting of small and large types in sufficient numbers for the training and transportation of two battalions of 900 men each.

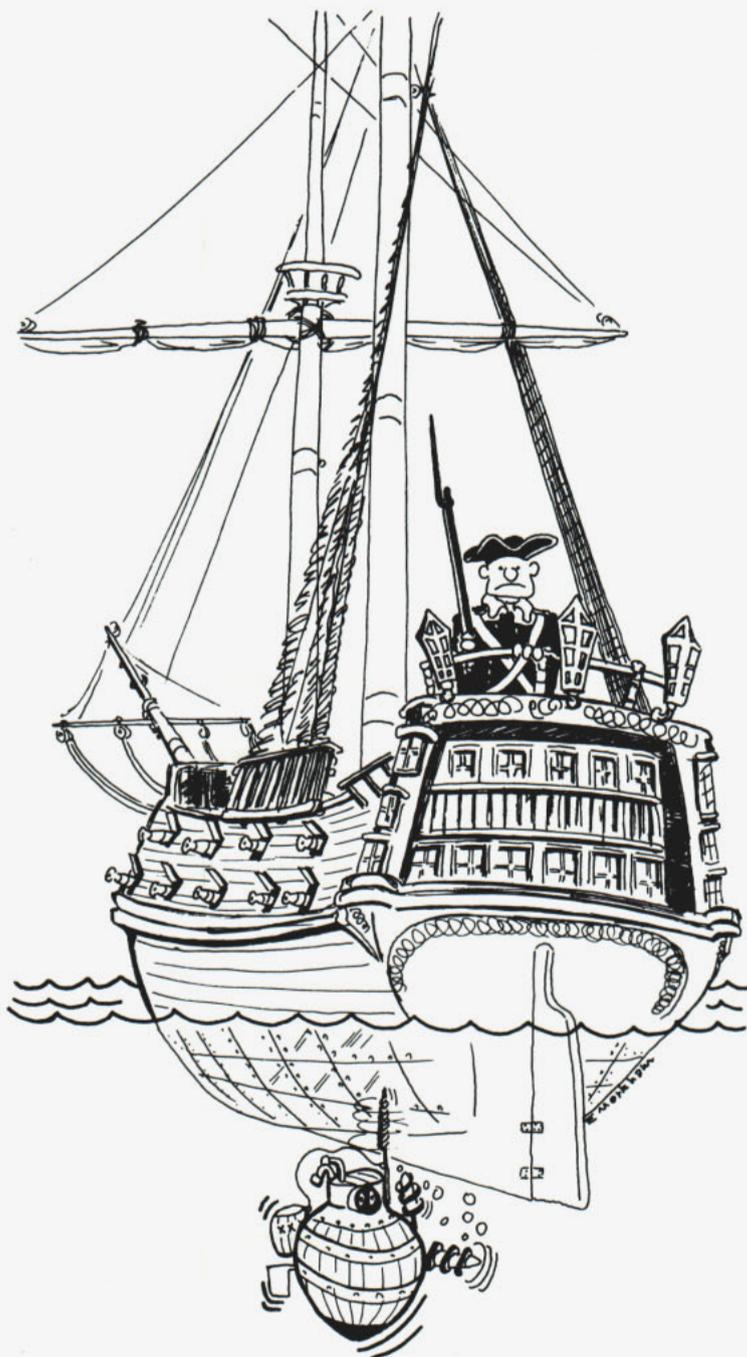
**May 10, 1942**— The possibility of increasing the range of small aircraft, by operating them as towed gliders, was demonstrated at the Naval Aircraft Factory when Lieutenant Commanders W.H. McClure and R.W. Denbo hooked their F-4Fs to tow lines streamed behind a twin-engined airplane, cut their engines, and were towed for one hour at 180 knots at 7,000 feet.

**April 4, 1943**— The Naval Aircraft Factory reported that, in tests of an automatic flying device for use on towed gliders, the LNT-1 had been automatically towed without assistance from the safety pilot.

**May 18, 1943**— The program for the use of gliders as transports for Marine Corps combat troops was cancelled, thereby returning the Navy's glider development to an experimental basis.

Later in 1943, before abandoning its glider program, the Navy acquired a total of 13 troop-transport gliders. These could accommodate 15 fully armed troops or one jeep or a 75mm field gun, which could be loaded or unloaded through the hinged nose. The Navy also developed a unique wooden 12-seat flying boat transport glider. Only four were built. Larger amphibious gliders, with twin hulls and accommodating 22 troops were ordered, but never built.

# Grains of Salt



## Sgt. Lee's adventure with the Turtle

BY YN1 GEORGE D. CAMPBELL

A few hours before dawn on Sept. 7, 1776, Sergeant Ezra Lee of the Seventh Connecticut Regiment boarded what appeared to be a giant, wooden egg floating in New York Harbor. The "egg" was America's first operable submarine. Perhaps it could be called, for that matter, her top-secret weapon named the *Turtle*. Lee was her first captain and crew.

*Turtle's* mission was to sink a target of necessity, Admiral Lord Howe's 64-gun flagship *Eagle*, then lying at anchor with a convoy of British warships off Governor's Island. Lee's assignment was fraught with danger and doomed from the start—but more about that later.

David Bushnell, an inventor obsessed with the idea of building an underwater craft which could be used successfully against the British fleet, designed *Turtle*. Freely using ideas of the French marine scientist Denis Pinel, Bushnell built an oaken-frame craft which stood six feet high, and was bound by huge iron bands holding the caulked planks in place.

Having run tests on *Turtle* himself, school teacher Bushnell was confident his sub contained sufficient air when submerged to sustain life for 30 minutes. As a precautionary measure, however, *Turtle* was equipped with a 200-pound disposable keel attached by chain which could be released if emergency surfacing were required.

Even with every possible disaster planned for or considered, opponents of *Turtle* termed Lee's mission "mad and suicidal" because they thought anything could go wrong. If

the spring-loaded cock should jam, Lee would drown; the 1,000 pounds of lead ballast could suddenly drop, thus flipping the craft and trapping the operator; and who knew what dangers debris in the harbor held for *Turtle's* eight windows?

Still, the British hold on New York had to be broken and any course offering hope to that end was considered. Already, Long Island was occupied and the harbor blockaded. After three chilling days of fighting in the rain, General Washington was elated to receive General Israel Putnam's order to proceed with an attack by *Turtle*.

Sergeant Lee embarked and the hatch was clamped shut behind him. Harnessed to the stern of *Turtle*, just above her rudder, was a magazine containing 150 pounds of gunpowder and a timing mechanism.

Lee was ordered to attach the magazine to *Eagle's* hull by means of an anchoring screw controlled from inside the sub, set the timing mechanism and escape undetected.

Vigorously pedaling the crank which turned the screw propeller, Lee guided his sub toward the enemy fleet. With precious little light seeping into the craft, Lee could barely read the water gauge and compass. Fact is, he bobbed right past *Eagle* before getting his bearings.

"By labor at the crank for the space of five glasses by the ship's bell or two-and-a-half hours," he finally arrived at the stern of Howe's man-of-war. When near enough to

actually touch *Eagle*, Lee submerged and set to work fastening the "bomb" to the target.

*Turtle's* screw bore wouldn't penetrate *Eagle's* hull. The sergeant later explained that "the entire hull [was] sheathed in copper; surely Putnam's military intelligence knew of the copper-clad bottom."

Later, Bushnell wrote, "Had [Lee] moved a few inches, which he might have done without rowing, I have no doubt he would have found wood where he might have fixed the screw."

Frustrated and fast depleting his oxygen, Lee brought *Turtle* to the surface. First light engulfed the craft and its captain could hear the Britishers on *Eagle* changing the watch. With the tides banging *Turtle* against the warship's side, Lee knew his mission had failed. No longer concerned with attaching the magazine, he feared for his life.

Opening the valve that started water flowing into the ballast tank, Lee submerged and went as fast as he could, making a direct course for Manhattan Island some four miles distant. With the tide in his favor, he could turn about two knots if all went well.

All didn't go well.

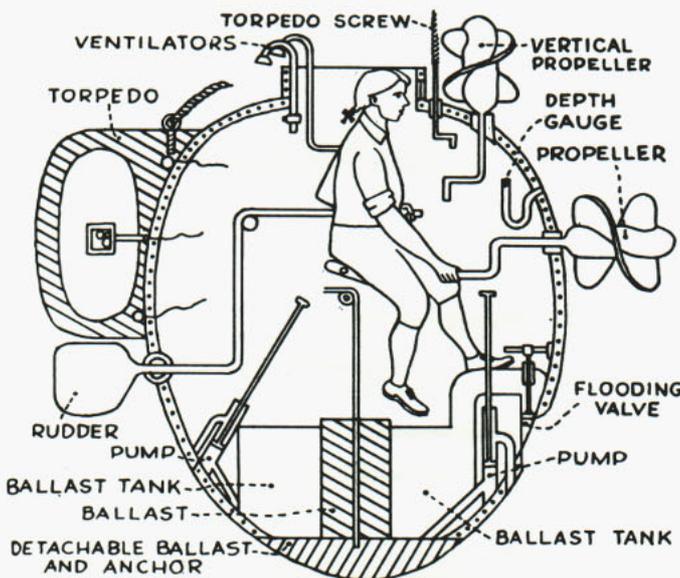
Not familiar with the harbor and frightened to boot, Lee had to resurface constantly to check his bearing and adjust his course. Before he reached shore, the British had spied *Turtle* and immediately launched a longboat to investigate.

Feeling the weight of the magazine, and with muscles aching and the enemy closing, Lee released the bomb in hopes "that if they should take me, they would likewise pick up the magazine and then we should all blow up together."

Approaching within 50 yards and seeing the magazine released, the British suspected a Yankee trick and aborted their chase. Shortly thereafter, Putnam dispatched a whale-boat which came alongside *Turtle* and towed her to safety.

About 20 minutes later, the harbor was rocked by a tremendous explosion which sent columns of water high into the air and caused the British to weigh anchor and seek safer anchorage elsewhere. *Turtle's* magazine had exploded and, indirectly, had achieved its purpose.

The blockade of New York began to collapse and the Continental Army withdrew. Though the short career of *Turtle* had ended, a new chapter in naval history had begun—a book still being written to this day. ⚓



*Eyes of the scientist:*

# *UNDERWATER PHOTOGRAPHERS*

BY PHI JON SAGESTER



Members of the Atlantic Fleet Audio Visual Command's diving unit, Chief Photographer's Mate (DV) David Graver, and Photographer's Mate Second Class (DV) Larry Cregger, help Photographer's Mate Third Class (DV) Troy Gruber prepare for a dive at Webbers Falls Dam in Oklahoma.

Looking at the underside of an oil slick, are there long streamers hanging from it that increase its drag as it moves across the water's surface? Does it actually travel just below the surface or does it travel on the surface?

Scientists at the National Oceanic and Atmospheric Administration (NOAA) of the Department of Commerce needed answers to these and other questions for their research on the environmental impact of oil spills. To get the answers, NOAA went to Atlantic Fleet Audio Visual Command's (FLTAVCOMLANT) diving section.

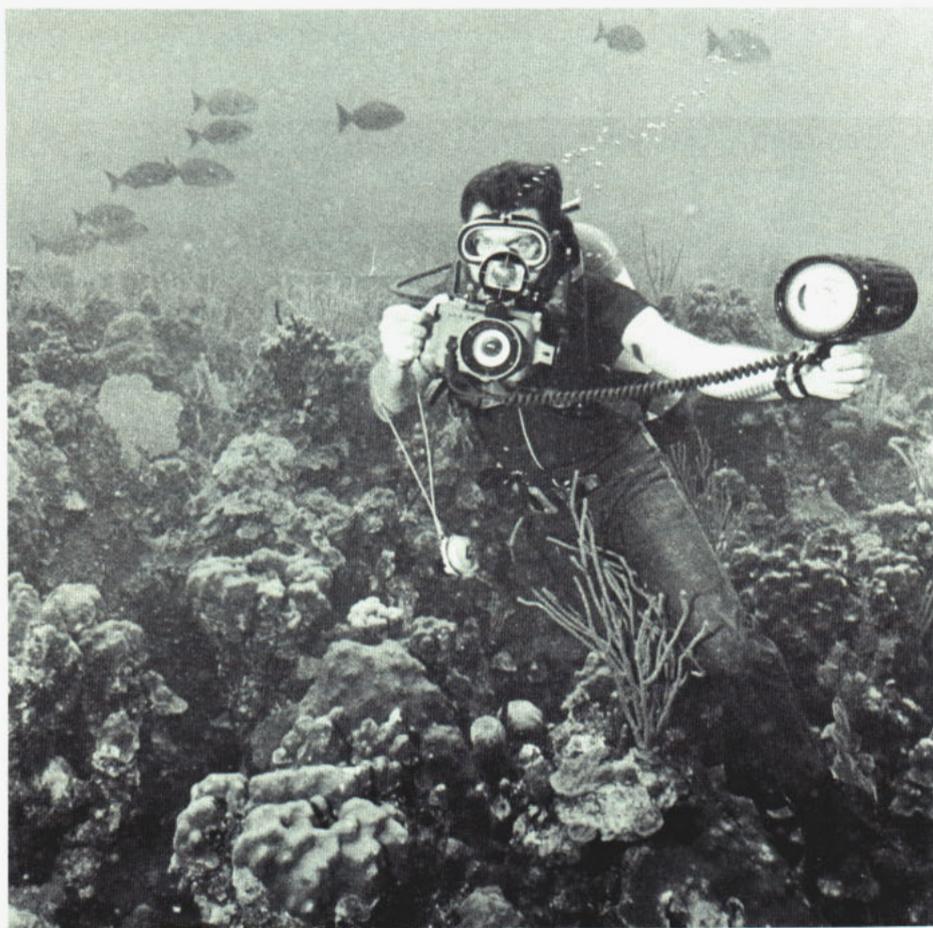
"We have been ignorant of how thick patches of oil disperse in time and space," said NOAA's Dr. James Mattson. "Without answers to these questions, it really was impossible to develop any theoretical explanations for the movement of thick patches of oil."

When the oil tanker *Argo Merchant* ran aground in December 1976 and started breaking up off Cape Cod, a four-man diving team took underwater cinematography of the spill.

"The information the divers brought back was of tremendous value. It was used by the scientific community to develop mathematical models for the behaviour of thick oil," said Dr. Mattson. "Getting a visual observation of the underside of the slick had never been done before and could not be done once the incident was over. It is not likely a similar observation will have to be repeated in the future."

The work the diving photographers accomplished demonstrates their invaluable assistance to scientific research.

←  
Photographer's Mate Second Class (DV) Ken Hess, left, helps fellow diver Photographer's Mate Third Class (DV) Troy Gruber who just emerged from diving in *Argo Merchant* oil slick.



## UNDERWATER PHOTOGRAPHERS

"We're the underwater eyes of the scientists," Chief Photographer's Mate (DV) David J. Graver said.

From their base at Little Creek, the 10-man unit has deployed to the North Atlantic, the Caribbean and throughout the United States. They have performed at least six diverse jobs for the scientific community in the past couple of years.

For National Aeronautics and Space Administration (NASA), they filmed the underwater portion of a documentary on astronauts learning to build in space by simulating the condi-

tions of weightlessness underwater. NASA uses such films as training aids.

In addition to scientific and engineering jobs, they are also tasked with performing more routine assignments such as photographing construction and surveying ships' hulls.

"If it can be done photographically underwater, we'll do it," said Graver.

The diver photographers are trained as photographers first and divers second. Like all Navy divers, they are SCUBA-qualified, and then trained through to second class divers (to 150 feet), first class divers (to 300 feet)

and, finally, saturation divers.

Since the Navy has no formal training for underwater photography, team members must perfect their skills through on-the-job training. Each person must be proficient in still and motion picture photography and must be able to use a variety of cameras in color and in black and white.

A small community, with only 17 billets, the diver photographers respond to requests for their services from all government agencies. The FLTAVCOMLANT unit currently has two first class divers, one of whom is



a saturation diver. All others are second class divers.

Divers maintain a prestigious status in the modern Navy, but the photographer divers augment that position by providing images of the underwater world for those who do not have the opportunity to view it.

They are the Navy's window to an underwater world. ⚓

*A Navy photographer/diver uses a Nikon F camera in an ocean eye housing to photograph the "world beneath." →*

*Photographer/diving team poses for a photo with denizens of the deep.*



# Bearings

## MSC Pacesetters

Ferne Doyle and Cristina Zarate, second classmen from the U. S. Merchant Marine Academy, Kings Point, N. Y., are living proof of women's adaptability to shipboard life. They recently completed an Antarctic cruise aboard Military Sealift Command's tanker USNS *Maumee* (T-AO 149), their second long sea voyage since entering the academy.

Zarate, an engine cadet, is learning practical and theoretical aspects of shipboard engineering—which means she spends a good part of her time in coveralls working in the engine room. Navigation and ship handling occupy most of deck cadet Doyle's time.

"You can learn a lot in school," Zarate explained, "but unless you go to sea and apply the theories to practical use, you can't see how things really work."

How did the men of the 30-member crew react?

*Midshipman Cristina Zarate*



"The men treated us just as they would treat any midshipman," Zarate said. Both agreed that the attitudes hardest to change were those of the older men. "Many felt we weren't strong enough or couldn't handle the physical labor," Zarate said. "After they saw that we were there to work



*Midshipman Ferne Doyle*

and do what was expected of us, they accepted our presence and helped us."

For the most part, both women were satisfied with their life aboard ship. "This is a good ship," Zarate said. (*Maumee* is the fourth ship on which she has served.) "It's older and rolls a lot. Everybody has to cope with seasickness, but the longer you are on board, the easier it gets."

During their three-month training period aboard *Maumee*, the women participated in Operation Deep Freeze, the annual supply mission to McMurdo Station, Antarctica. Cadets from the academy train at sea for a year—six months as a sophomore and six months as a junior—aboard many different ships.

This year, the Kings Point School, like other federal and state maritime academies, had women members in its graduating class. After fulfilling requirements to become licensed merchant marine officers, all eight of the women who graduated this year from Kings Point were hired as permanent crew members aboard various merchant vessels.

## Ten-Ton Hospital

If a dependent child wakes in the night because of an illness, help is usually as close as the nearest clinic or hospital—it's a convenience that many take for granted. On the Indian Ocean island of Mauritius, however, children are not so fortunate.

The island's medical facilities, which serve more than one million people, are limited, and children who require surgery have to be flown to such far-off places as England, Australia or Switzerland. Although the problem of caring for sick children on Mauritius is acute, it's one that is now being solved with the help of the Children's Hospital National Medical Center (CHNMC) in Washington, D.C., and the Navy's Project Handclasp.

Last fall, CHNMC sent 10 tons of hospital equipment, including beds, stretchers, wheelchairs, and operating room materials, to the Project Handclasp coordinator at San Diego. Arrangements were made to deliver the material to Mauritius, along with medical supplies, diapers, medications and a sewing machine workshop from the Project Handclasp inventory.

Recently, the USS *Fox* (CG 33) and USS *Hassayampa* (AO 145) arrived at Mauritius with the equipment. On March 12, Mauritius' Independence Day, 18 crates containing enough material to equip a 40-bed hospital were

presented to the people of the island.

Although the hospital has not yet been completed, CHNMC and Project Handclasp have laid the groundwork to insure a healthier future for the children of Mauritius.

## Early Arrivals

Whoever said that lightning never strikes twice in the same place wasn't counting on the Navy. In the Navy almost anything can happen and usually does.

In spite of the odds, two petty officers from the Naval Reserve Center, Long Beach, Calif., Yeoman Second Class Jesse Williams and Quartermaster First Class Roberto Baluyot, became fathers under rather unusual though very similar circumstances. Both drove their wives to the hospital, and neither made it in time. Williams was first. He delivered his daughter, Ursula, on September 15, 1977. Baluyot repeated the feat on March 2, 1978, when he delivered his daughter Valerie.

Despite rumors to the contrary, Captain William F. Bell, the Reserve Center CO, says he doesn't want members of his command to let this method of delivery become a trend.

The trend worrying the staff at the Reserve Center was started by YN2 Williams and his wife, Rita, when their plan to drive casually to the hospital was thwarted—he was forced to stop only a few blocks from their home to assist with his daughter's birth. Though the situation was alarming, Williams handled himself admirably, well almost. In his excitement, he told his wife that their Ursula was a boy. Later, at the hospital, a specialist, trained in such nomenclature, straightened him out.

Valerie Baluyot's birth was very

much the same except that her parents were a bit more prepared. Since the Williams' experience had been the subject of considerable discussion around the Reserve Center, Roberto Baluyot decided to take along some towels, just in case.

Sure enough, on the way to the

same Navy hospital he, too, was forced to stop and help his wife, Rosalia, with the impending delivery.

No such mistake was made by QM1 Baluyot as was made by Williams. Being an old hand at fatherhood, Roberto Baluyot knew instantly his Valerie was not a boy.—YNI James L. Dorman

## Eager to Start

An NJROTC unit in Guam that has sent 21 former members to the U.S. Naval Academy over the past few years recently got a chance to show their present crop of budding sailors what it's really like to serve in the U.S. Navy.

NJROTC cadets from the junior class at Father Duenas Memorial High School went aboard the amphibious assault ship USS *Tripoli* (LPH 10) for a 13-day orientation cruise from Guam to Subic Bay, Republic of Philippines.

The orientation cruise provided cadets an opportunity to observe life aboard a Navy ship underway. During the cruise, cadets were assigned to one of four groups and rotated through *Tripoli's* major departments: Operations, Engineering, Deck and Air. They stood indoctrination watches and received tours and briefings by each department.

While aboard USS *Tripoli*, the cadets also learned about the different Navy rates, how each rate functions in the department and the overall mission of the ship.



# Bearings

## Keeping Shipshape

Not many people exercise or lift weights at 3:00 a.m. There just aren't that many gymnasiums open at that time of the morning. But, there's one place where the time of day is of no concern to the physical fitness buff—the refurbished gym and sauna aboard the nuclear-powered aircraft carrier USS *Nimitz* (CVN 68).

*Nimitz* crew members waited patiently while six weeks of planning and hard work transformed an already adequate athletic facility into what they now consider the world's finest sea-going physical fitness camp.

A standing weight rack dominates the center of the main area and two heavy-duty cable pulley machines, an

inclined bench and several multipurpose benches line the bulkheads around the gym. In addition to a stereo system, mirrors used to improve lifting form were installed.

The gym and sauna are open 'round-the-clock when *Nimitz* is at sea.

Mess Management Specialist Seaman Bill Fiore, physical fitness supervisor and gym project manager, feels that the improvements should help the crew become more interested in physical fitness. "I'm trying to stress the importance of staying in shape," he said. "In order to get results, though, people will have to show initiative."

Fiore foresees an athletic club forming soon with *Nimitz* physical fitness T-shirts available to those attaining a prescribed level of performance.

## New In-Flight Fare

Used to be that air crews at Naval Air Station, Brunswick, Maine, ate an average, everyday, run-of-the-mill, brown-bagger's two sandwiches, banana, milk and cookies during their missions patrolling the North Atlantic.

Not anymore. Thanks to a team of Brunswick food service specialists, every person on every flight now has 14 different meals from which to choose for in-flight fare. It's part of a new program at Brunswick called Flight Deli.

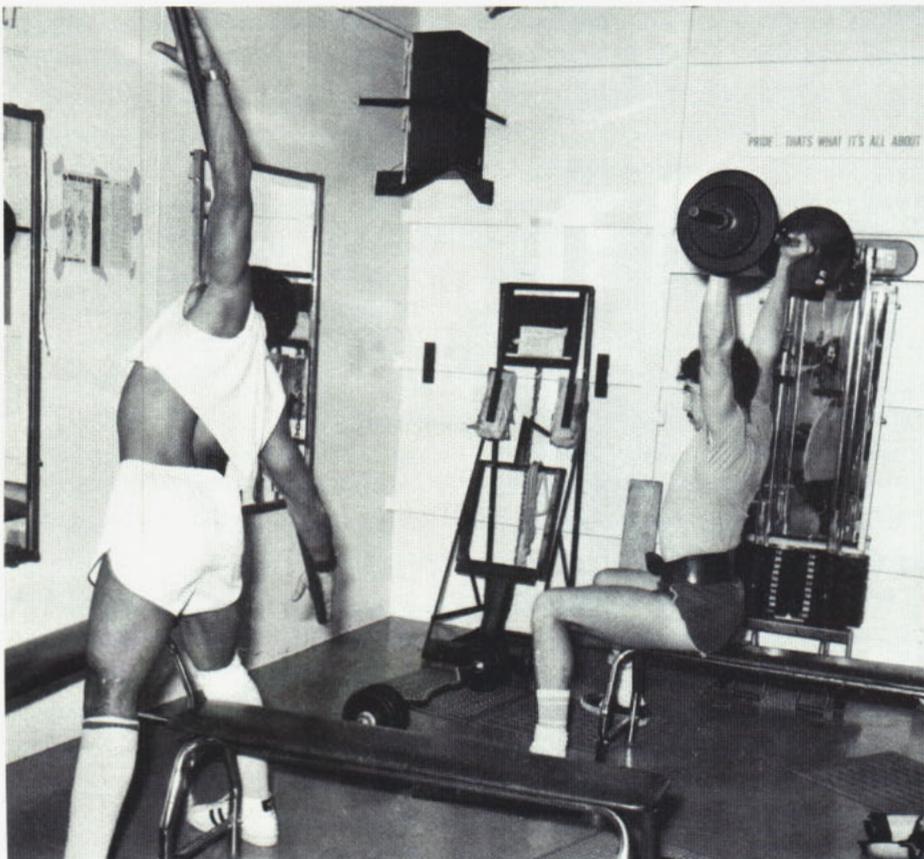
The team, headed by Mess Management Specialist Second Class Mike Tice, established the Flight Deli to improve the quality and variety of meals prepared for aircrew members who often spend 12 to 14 hours at a time per flight. Those hours can be grueling. Meals in flight, therefore, are more than nourishment or hunger-stoppers. They also serve to break the monotony of long missions.

Of the 14 meals on the Flight Deli's menu, seven are cold ones ranging from the standard box lunch to a special dieter's meal of chef's salad and fruit. There are three frozen dinners, including turkey, beef sirloin and omelette, plus four unprepared component meals for those who prefer their own cooking. These component meals include the meats plus all the extras necessary to make the meals complete.

The menu may not be as large as some, but any choice is better than no choice at all.

## Protecting Their Own

Winners of the Secretary of the Navy's Environmental Protection Awards for 1977 were recently announced in Washington. These awards



are given to commands in recognition of outstanding efforts, innovation and all-around good housekeeping. They are also given to stimulate greater efforts in improving and protecting the environment.

This year's Environmental Protection Award winners are:

- USS *Howard W. Gilmore* (AS 16)—for the greatest initiative taken by a large naval ship toward operating in an environmentally acceptable manner. This is *Gilmore's* second consecutive award for environmental protection.

- USS *Garcia* (FF 1040)—for the greatest initiative taken by a small naval ship toward operating in an environmentally acceptable manner.

- Naval Air Station, Chase Field, Beeville, Tex.—for the outstanding environmental protection program sponsored by a large naval facility.

- Naval Fuel Depot, Jacksonville, Fla.—for the outstanding environmental protection program sponsored by a small naval shore facility.

- U.S. Naval Air Test Center, Patuxent River, Md.—for the outstanding

environmental protection program sponsored by a naval research and development activity. This is the first time that an award has been given to an activity competing in a second category.

- U.S. Naval Supply Depot, Subic Bay, R.P.—for the outstanding environmental protection program sponsored by a naval industrial facility.

- Marine Corps Base, Camp Pendleton, Calif.—for the outstanding environmental protection accomplishment by a large Marine Corps activity.

## OutFoxing the Sea

Unmistakably, the mirror signals flashing across the Gulf of Siam on May 3 were signals of distress, and the alert signalmen aboard USS *Fox* (CG 33) caught them. When the *Fox* came alongside, the San Diego-based guided missile cruiser sent a rescue and assistance team to the stricken

Thai fishing vessel which had been drifting on the open sea for 12 days. The craft's diesel engine and radio were inoperable and the 23 crewmen were down to a one-day water supply.

Machinist's mates took the fishing vessel's engine to the *Fox's* machine shop for repairs, while electronics technicians completely restored the radio. Other crewmen replenished the fish-

ing boat with water and other supplies.

*Fox's* crewmen then reassembled, drained, flushed and refilled the repaired engine with fresh oil. It was tested and successfully started; the Thai boat headed for the nearest port under its own power.

*Fox*, commanded by Captain James F. Kelly Jr., is currently operating as part of the Seventh Fleet.



From Pacific Islands to Pensacola...

# GRADUATES of '78



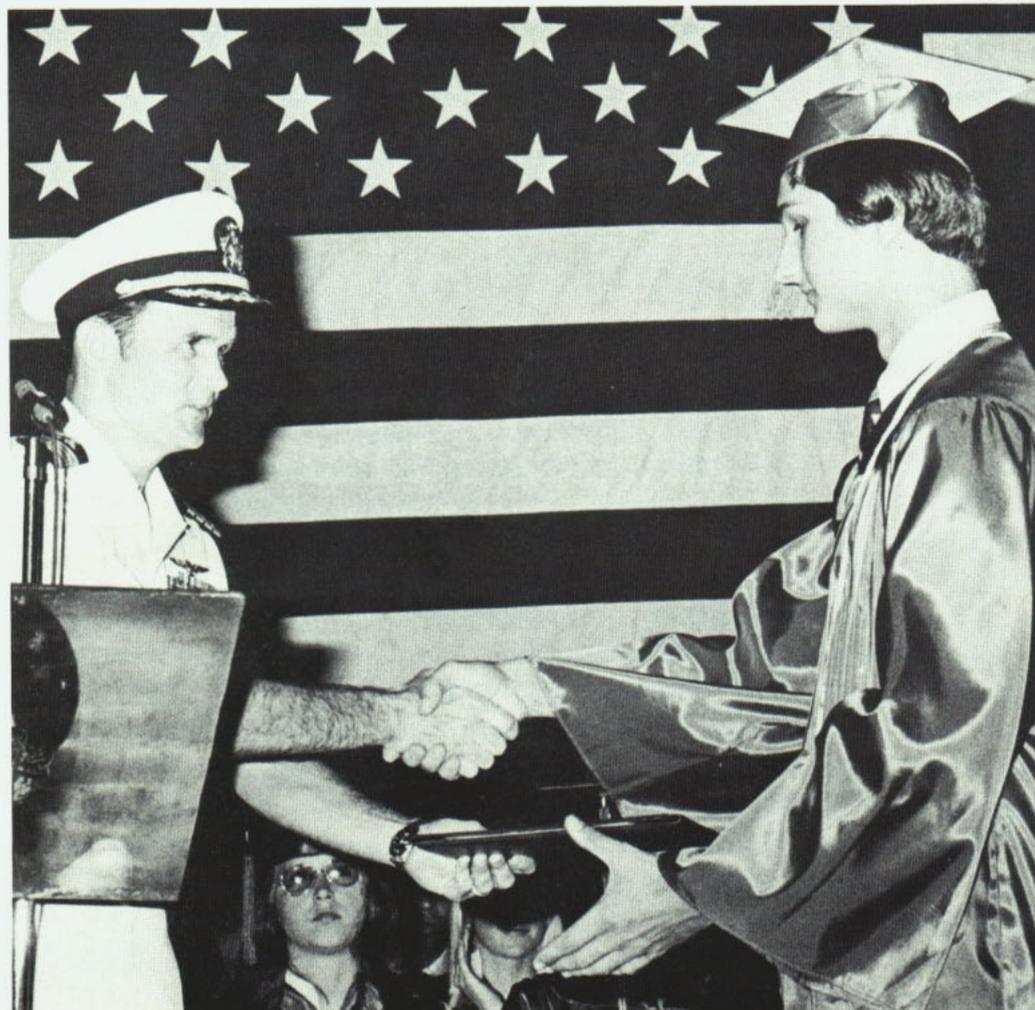


June graduation ceremonies are fairly standard—except when the U.S. Navy gets involved.

The Navy was involved in at least three unforgettable high school graduations this spring: one aboard the USS *Midway* (CV 41) at Yokosuka, Japan; one aboard the USS *Lexington* (CVT 16) at Pensacola, Fla.; and one on the Pacific island of Ulithi.

On *Midway*'s hangar deck, 63 members of the class of 1978 from Yokosuka's Nile C. Kinnick High School filled a stage inboard of the number one elevator. *Midway* crewmen, many of whom have dependents attending Kinnick, had a special interest in the ceremony.

During the June 2 exercises, Captain Thomas Brown III, Commanding Officer, presented graduate Mark Harper with a letter from Admiral James L. Holloway III, then Chief of Naval Operations, congratulating him on his



*Clockwise from left: Rear Admiral David S. Cruden presents a plaque to an Outer Islands High School honor graduate. Graduating senior Eugene Yamamoto addresses his classmates aboard USS Midway. Graduates of Nile C. Kinnick High School. Mark Harper receives his appointment to the Naval Academy from Midway's commanding officer, Captain Thomas Brown III.*



appointment to the Naval Academy. Mark's father, Commander Cecil D. Harper, is a Navy chaplain.

The Officers Wives' Club Thrift Shop awarded \$1,000 scholarships to four graduates: Barbara Blair, Karen Jackson, Robert Schaeffer and Eugene Yamamoto.

At the request of the graduating seniors, Marshall Roper, a Navy civilian employee, presented the diplomas. His son Edward was the fifth Roper child to graduate from Kinnick.

After the ceremony, the graduates and guests attended a reception on the rear hangar deck. Because there seemed to be no precedent for shipboard graduation receptions, Navy tradition took over when CAPT Brown

cut the first piece of the huge graduation cake.

On the training carrier *Lexington* at Pensacola, Fla., on June 5, more than 3,000 family members and friends witnessed the flight deck graduation of 401 Pensacola High School seniors.

Captain Eugene B. McDaniel, Commanding Officer and father of graduating senior David McDaniel, delivered the commencement address. A prisoner of war in North Vietnam for six years, CAPT McDaniel drew on his experiences to tell the seniors how fortunate they are to have graduated as citizens of the "most free, fairest country on earth."

Speaking of his life as a prisoner, CAPT McDaniel said that an enemy

"can take everything from you except what is ingrained in your hearts and minds."

Another high school graduation ceremony in which the Navy had a big part took place on Ulithi Island in the Yap District of the Trust Territory of the Pacific Islands (TTPI). There, 34 young adults, in traditional ceremonial dress, celebrated their graduation from the Outer Islands High School with native song and dance, formal speechmaking, and the receiving of gifts.

Rear Admiral David S. Cruden, Commander, U.S. Naval Forces Marianas, as commencement speaker, witnessed the ceremony along with members of his staff and the COMNAVMARIANAS Band.

The Outer Islands High School is a boarding school serving students from the islands in the Ulithi Atoll and throughout the Yap district. Local islanders, U.S. teachers on contract to the TTPI and Peace Corps volunteers make up the faculty.

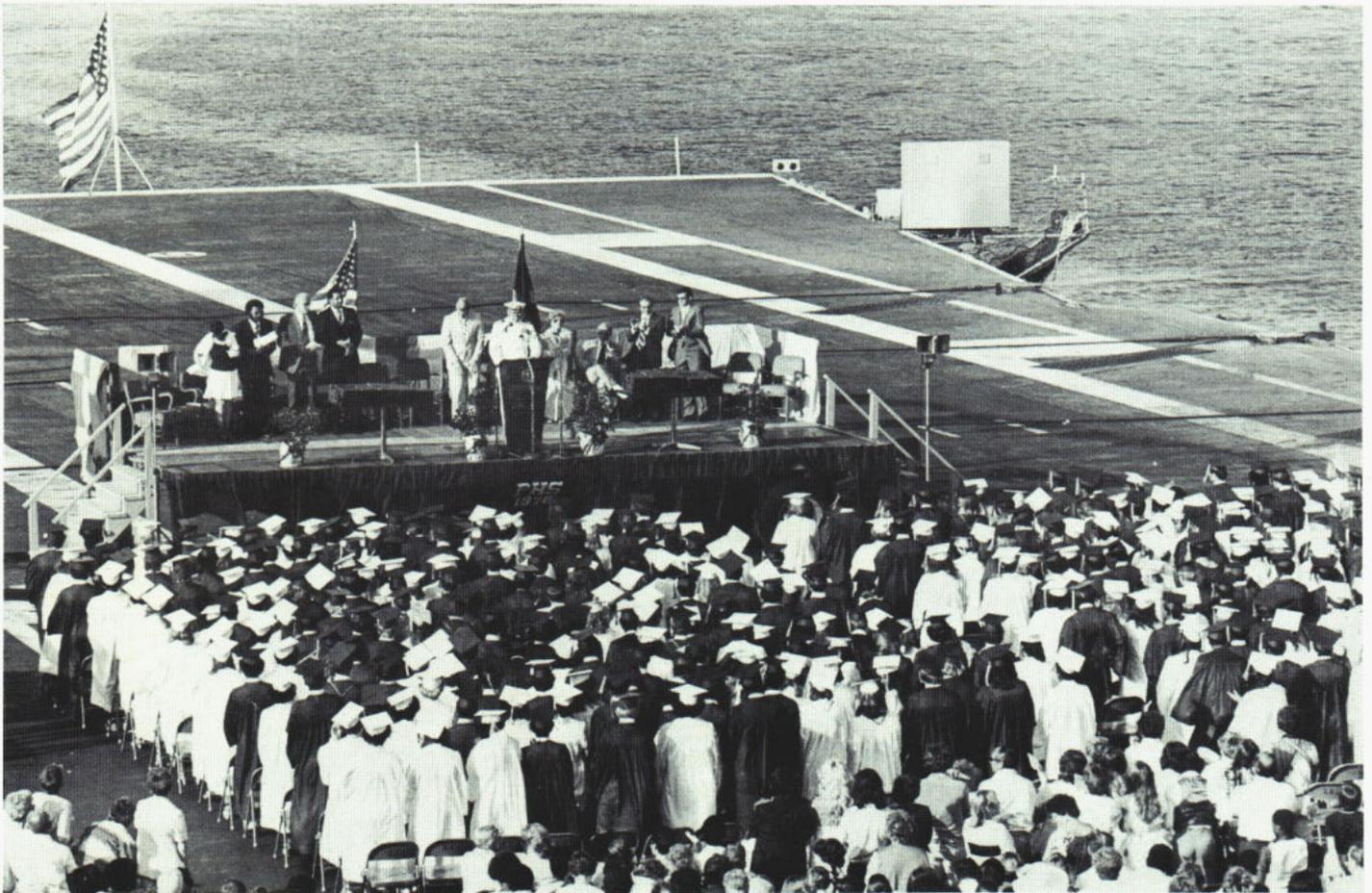
Except for courses on island culture, the curriculum is similar to that of U.S. high schools. Students participate in most of the same sports as other high school students but they also have the option of spending free time in local activities such as spear fishing.

Much like the graduating seniors aboard *Midway* and *Lexington*, the Outer Islands High School graduates face the challenge of a future which, as CAPT McDaniel said, is "for your generation to mold."

*(Photos by LT H. A. Hilton, J01 Gary L. Martin and Art Giberson.)*



*Left: Graduation ceremony on Ulithi Island. Right and below: Captain Eugene B. McDaniel, commanding officer of the USS Lexington, addresses the Pensacola High School graduates.*



# Getting the Best Out of Everyone

*USS Carrier had just returned from a grueling, eight-month WestPac deployment. Her tired crew were eagerly looking forward to the 30-day stand-down period which traditionally follows an extended deployment.*

*But after only three days in port, the Weapons Department got an unpleasant surprise. They were going right back on a 12-hour-day work schedule because the ship was headed for the yard.*

*The groans grew louder when they learned they would have to chip and paint their assigned spaces without the benefit of air conditioning because it, too, was being prepared for rework.*

*The unexpected work under bad conditions soon had people griping. Although the chief told them they'd get liberty as soon as the job was done, these hopes were dashed when the department head assigned still more tasks.*

*After about a week of this heavy work schedule, and with no end in sight, discipline began to break down.*



A few sailors reported for work drunk, others started going to sick call every morning and those on the job started taking longer and longer smoke breaks.

By Friday, the Weapons Department UA rate had skyrocketed to 30 percent. Things were looking bleaker and bleaker . . .

\* \* \*

If you were in charge of our mythical Weapons Department, what would you do? How would you get the job done, lower the UA rate and get your sailors to tackle a difficult job with as much effort as possible?

If your answer ranges from "nothing" to "put them on report," you're wrong. Some people think there is no way even a good leader could solve the problems of USS *Carrier's* Weapons Department. They too are wrong.

One group of junior petty officers, however, have learned effective solutions for what they now believe is an elementary problem in leadership and management.

They are neither super sailors nor super leaders. They are simply 19, randomly selected, second and third class petty officers who recently graduated from a newly developed pilot program called Leadership and Management Education and Training (LMET). They are among the first Navy people to attend a course designed to teach every person in the Navy the techniques and skills used by superior leaders and managers.

These recent graduates of LMET training conducted at Amphibious School, Naval Amphibious Base, Coronado, Calif., say they learned some surprising things about themselves, their leaders and the people with whom they work.

For some, the biggest surprise was also the reason for the course's development: leadership skills can be learned. The myth of "Leaders are born and not made" has been tossed out.

Before finding out what these sailors learned and how they did so, we have to look at why the Navy decided a program like LMET was required.

A few years ago, fleet commanders reported their disappointment with the level of leadership ability demonstrated by some of their people. In recent years, a number of incidents have driven home the Navy's need for more effective leaders and managers. Personnel problems—like rising desertion and attrition rates—have, in many cases, been linked to poor leadership. The number and experience levels of supervisors have dropped as the Navy has grown smaller. More sophisticated equipment and a tight budget have also worked to cut the time previously used to train the Navy's future leaders.

During a recent interview with ALL HANDS magazine, Commander D. P. French, BuPers LMET Project Director, emphasized the Navy's need for more and better trained leaders.

"In the smaller Navy of today, we can't afford to have people doing only part of their jobs. We must have the best level of effectiveness we can get out of everyone. . . ." (See "Leaders can be made," May 1978 ALL HANDS.)

Besides teaching effective skills,

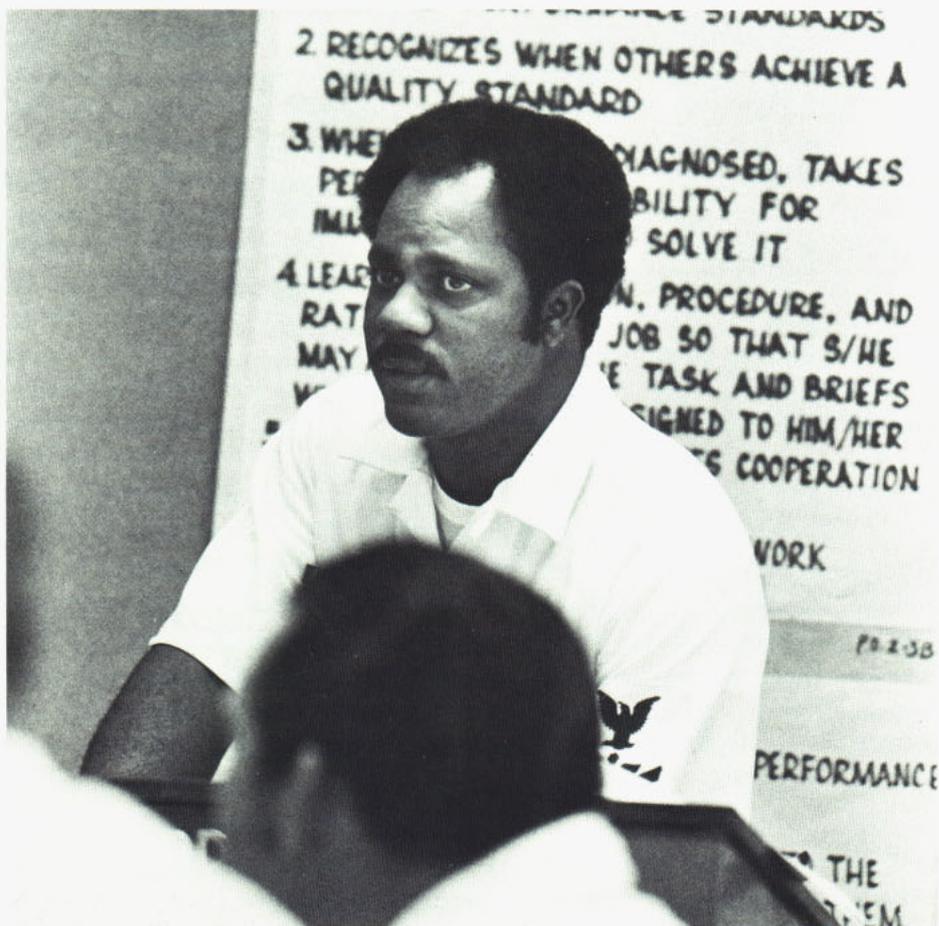
LMET has also been designed to eliminate the major barrier faced by past leadership courses. That barrier is to relate the theory of the classroom to the real-world leadership and management problems found on the job. After all, learning the theory is no good if you can't put it to work.

To accomplish this, the course at Coronado departed from past Navy leadership courses. It also employed a variety of novel techniques to ensure each student returned to his command ready to demonstrate—and not just talk about—effective leadership and management skills.

Training is based upon learning leadership competencies—skills used by all the Navy's effective leaders and managers and proven to be successful at all levels in the chain of command and with all types of Navy units.

LMET students began by examining each of five leadership areas: a leader's concern for efficiency and effectiveness, the skillful use of influence, advising and counseling, problem solving, and process management.

The course aroused even the most



Left: LMET pilot course for petty officers conducted at NAB, Coronado, Calif. Right: AO1 Braxton is one of three Navy "facilitators" at the LMET course.

complacent student's interest because of a variety of instructional techniques not often found in a school setting. To begin, no lecturer stood at a lectern and read from notes to a group of furiously scribbling students. And the only tests were those that individuals gave themselves to test their own leadership strengths and weaknesses.

Instead, aided by a classroom facilitator, the students learned by talking of their leadership experiences—good and bad—among themselves and with the LMET staff.

With the facilitator's help and using their own experiences, students soon were able to identify the leadership skills that applied to the area under study. They then were able to take problems posed by the staff and practice resolving them in situations closely resembling those they might find at their parent units.

As they worked on classroom exercises, they learned not from a text or a lecturer, but from each other. The results of their work sometimes pleased them, and always provided food for thought.

So when the LMET students got to the block of exercises on problem solving, for example, they learned that one of the skills they must have is the ability to identify the different causes of job-related or personal problems.

"During class I was feeling pretty smug," said one student. "I knew this problem we recently had aboard ship was being handled the wrong way. And some of what I learned today told me my feelings were right.

"But then I learned I had done things—without realizing—that only contributed to the problem. I could have done other things that would have helped solve it.

"You don't feel so smug when you realize you have leadership deficiencies just like the next guy."

Another student, surprised to learn about one aspect of leadership and management said, "I thought things that happened on my submarine didn't happen anywhere else. But some of these guys assigned to ships or with

aviation squadrons have shown me we all have the same situations to deal with. It's just that the language is sometimes different."

A second class petty officer explained his initial skepticism about a course intent upon making better leaders out of everyone.

"The shop I run has always been known for getting the job done and my bosses give me credit as a good leader because of that. So I figured I'd come here and they'd try to teach me to do things in a manner that rubs me the wrong way.

"Instead, I've learned exactly what it is I've been doing right, what other things I can do to make the job go even better, and different approaches

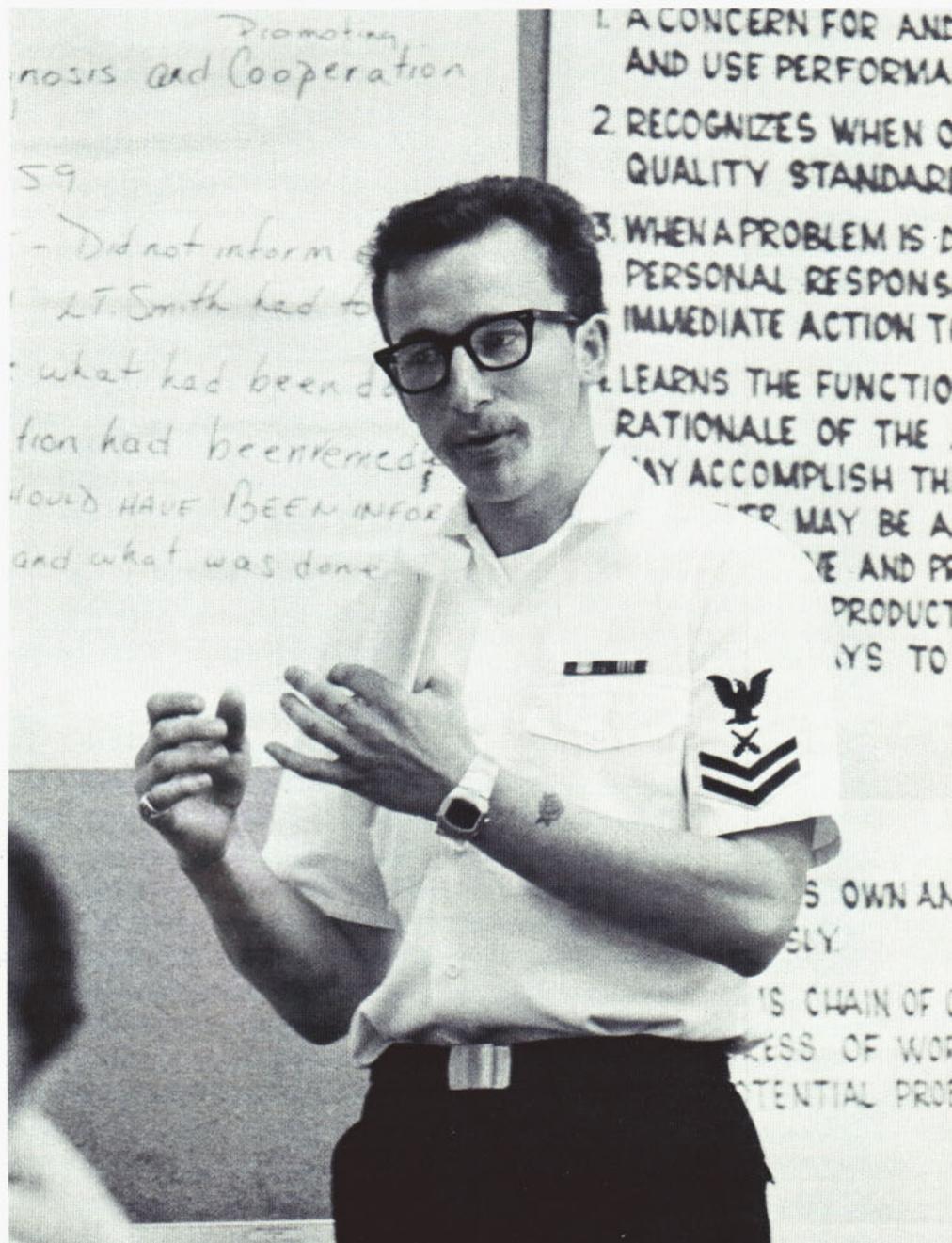
to try if I don't succeed the first time.

"The important thing is I can take these competencies and tailor them to my particular style instead of the other way around."

Students also learned leadership skills are not solely for leaders but of equal importance to those being led.

"I was really puzzled when I got here," a third class petty officer said. "Since I'm low man on the totem pole in my shop, there's no one for me to lead. So why send me to leadership school?"

"Then, when I really got into LMET, I discovered good leadership is important to everyone in a command. For instance, I'll leave here knowing I can solve problems instead



*GMT2 James Plansky explains his study group's approach to solving leadership problems.*

of automatically passing them up the line. I can talk to my bosses about getting the job done the best way possible.

“My bosses, in turn, will be better at their jobs because someone like me—a person who understands some of their responsibilities and problems—will be working for them. As a result, I’m also leaving here knowing I’m a more important member of our shop than I previously thought.”

But will these students—and the LMET students of the future—really be able to bridge that barrier between theory and on-the-job reality? An Aviation Ordnanceman voiced the consensus of the class.

“A couple of years ago, I worked for a chief who returned from some leadership course and really did nothing more than talk a good game. As far as any of us could see, his leadership techniques didn’t get any better or worse.

“When I get back to work, I know I’ll be looked at the same way. Sure, I can ‘talk a good game’ now, but the only thing people will accept is my

demonstrating I am a better leader than before. I know there are things—basic things—I can do that should convince people I’m a better leader and that this course is worth it. After all, you’ve got to show people that it works before they’ll buy it.”

Toward the end of the course, the competencies in each of the five areas were all brought together. Students learned how leadership skills work not only independently but in unison as well. They also had fun demonstrating these skills by solving the problems of an air squadron many had encountered before.

The air squadron is the focal point of a motion picture that still pops up on the late night movies. And, boy, do they have problems. Crewmen work around-the-clock battling the enemy or trying to keep the planes flying despite shortages of parts or personnel. Everyone seems to have at least one personal problem. The principal characters are burdened with more than most could bear. On top of this, poor or nonexistent leadership is pushing the whole squadron right over the edge.

The LMET students didn’t just *watch* the film, they dissected it. What leadership skills were used or should’ve been used during a given scene? What did leaders do right? How could they have done it better? Were there other methods they could have used with success?

The students tested each of their newly learned leadership and management competencies on every relevant scene in the movie. During the animated discussions that followed, the previously mentioned sailor who is “low man on the totem pole” explained not only what the squadron’s crew could have done better, but pointed out how some of their leaders could have stifled problems before they developed.

These 19 LMET students have become some of the first people to experience a training program that will someday be given to everyone in the Navy—including Naval Reserve Forces and civilian employees.

Presently, courses for officers and enlisteds destined for sea duty are in various stages of development. Making LMET part of technical training—such as is being done at the Boiler Technician’s School in Great Lakes—is also being worked out.

As LMET becomes a reality, existing leadership courses such as Leadership and Management Training (LMT) will be phased out.

LMET doesn’t have all the solutions to the challenges of today’s Navy. But better led and managed people, more skilled leaders and a whole lot of hard work can go a long way toward finding those solutions.

Indeed, LMET may have already demonstrated it’s headed in the right direction.

“I’ve been in the Navy three years,” a third class LMET graduate said. “But this is the first time I’ve seriously thought about staying in and making it a career. LMET has shown me leadership is not ‘pie in the sky’ but a challenge if you know what you’re doing and how you’ll do it.

“I think I know . . . and I’m going to give it a try.” ↓



*TM2 Gary Lovin enjoys the LMET approach to leadership training.*

# Mail Buoy

## VP-22's Orion

SIR: In your article in March 1978 ALL HANDS about VP 6 squadron receiving their new model of P-3B *Orion* aircraft, one gets the impression that the plane in the picture is one of VP 6's planes, but it is not. It is from VP-22. It should have been stated in the article that the plane in the photograph is a VP-22 plane.—SK3 Deborah S. Gierhart.

## Ending Harassment

SIR: Major Fishback's article, "Rights & Benefits—Putting an end to harassment" (pg. 12 of the April ALL HANDS), suffers from at least one significant omission as well as an outright error.

By omitting any definition of bill (or debt) collectors, the article can easily mislead a reader into thinking that the law applies to *creditors* (the person or organization to whom the debt is owed). Navy Federal Credit Union's recent experience shows that many Navy and Marine Corps personnel think this law gives them the right to evade valid financial obligations merely by telling a creditor, in writing, that they refuse to pay or wish not to be contacted further.

In fact the law does *not* apply to creditors, but only to persons or organizations whose primary business is collecting debts for someone else.

One reason that responsible creditors like Navy Federal Credit Union were not made subject to this law is because they have long followed most of the rules set forth in the Fair Debt Collection Practices Act. They have done so, because, as the name of the law implies, these rules are *fair*. But they are *not* required to do so under the law. Creditors may still make every reasonable attempt to collect money owed them, including communicating with a person's commanding officer.

DOD Directive 1344.9, "Indebtedness of Military Personnel," sets forth standards of fairness and permits contact with a debtor's commanding officer by a creditor after bona fide attempts to contact the debtor directly have failed and if the creditor certifies compliance with the DOD Directive.

And even bill collectors are not re-

stricted to the hours between 0900 and 2000 as stated in the article—the law allows an extra hour on either end, from 0800 to 2100.—Leonard J. Simon, Chairman, NFCU Credit Committee

## First Replenishment

SIR: In JO2 Dan Wheeler's "For the Navy Buff" in your April issue, he states the first underway replenishment of a U.S. Navy ship took place off Tripoli in 1804. By that time, the Navy already had gained considerable experience in that evolution through the long-term sustenance of our ships deployed to the West Indies during the Quasi-War with France (1798–1801).

A scan of the "Quasi-War Documents" series of six volumes, published by the Government Printing Office in the 1930s, indicates the earliest deploying units either supported themselves with local purchases or returned home before their stores were exhausted. But by the spring of 1799, naval stores sites (under naval agents) were being established in the theater of operations and merchantmen were being hired to haul the freight from the U.S.

I don't know when the *first* instance of underway replenishment occurred, but I do know that at 10 a.m. on Dec. 30, 1799, the chartered schooner *Elizabeth* (Captain Thomas Hughes) rendezvoused with *Constitution*, for just that purpose. The frigate took her supplier in tow to keep her close as her boats plied back and forth with the stores. In 24 hours, 260 barrels of bread, 75 each of beef and pork, 15 of "Indian meal," 10 of flour, 30 of potatoes, and eight of cheese, as well as four tierces [a tierce is a cask of 42-gallon capacity] of rice and one of "pease," another small cask of "pease" and six kegs of butter were transferred. All told, over 50 tons of supplies were hoisted out of the schooner into boats, rowed to the larger ship, hoisted out of the boats and stowed below. No one had trouble sleeping when the job was done!

Notice that no spirits were included in the deliveries. Believe it or not, eight days later, *Constitution* ran out of rum with the issuance of a half-ration to the crew! Captain Silas Talbot borrowed 30 gallons the next day from squadron mate *Boston* so that his men not be denied this vital

element of their diet. On Jan. 13, 1800, *General Greene* arrived from Cap Francais, Haiti, with several hundred gallons of brandy, rum, and gin to relieve the pinch.—CDR Tyrone G. Martin, USN (Ret).

## Reunions

● USS *Thornhill* (DE 195)—Reunion Sept. 22-24, 1978, in Stroudsburg, Pa. Contact Joe Cannavo, 28 Spring St., Winsted, Conn. 06098.

● *Lake Mead Base*—Reunion Oct. 14, 1978, in conjunction with Navy Birthday Ball. Contact James Doloway, 3897 San Andres Ave., Las Vegas, Nev. 89121.

● USS *Yorktown* (CV 10) Assn.—Reunion Oct. 6-8, 1978, in Charleston, S.C. Contact James T. Bryan Jr., Frank B. Hall & Co. of N.Y., Inc., 88 Pine St., New York, N.Y. 10005.

● USS *Gregory* (APD 3)—Reunion proposed for survivors of *Gregory*, which was sunk off Guadalcanal on Sept. 5, 1942. Contact Randall C. Coleman, 1600 Maryland National Bank Bldg., Baltimore, Md. 21202.

● USS *Saratoga* (CV 3)—Reunion Sept. 8-9, 1978, at San Diego, Calif. for all former Navy and Marine Corps shipmates of ship's company or air groups and CV 60 shipmates. Contact P. R. Tonelli, 6382 Cantiles Ave., Cypress, Calif. 90630.

● USS *Miami* (CL 89)—Reunion May 25-27, 1979, at Virginia Beach, Va. Contact S. C. Richardson, USS *Miami* Reunion Committee, 5507 Limeric Circle, Apt. 46, Wilmington, Del. 19808.

● USS *James E. Craig* (DE 201)—Reunion in Schenectady, N.Y., on Labor Day weekend 1978. Contact Ray Iafraite, 1310 Lark St., Schenectady, N.Y. 12306.

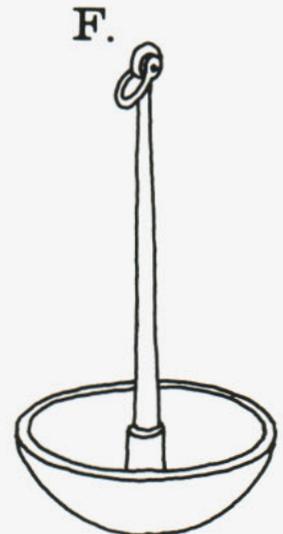
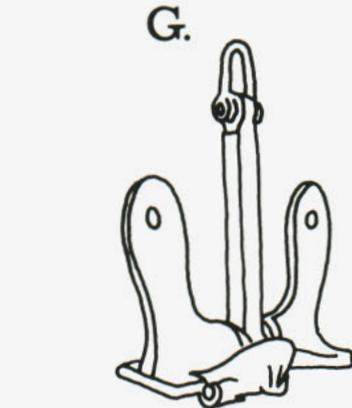
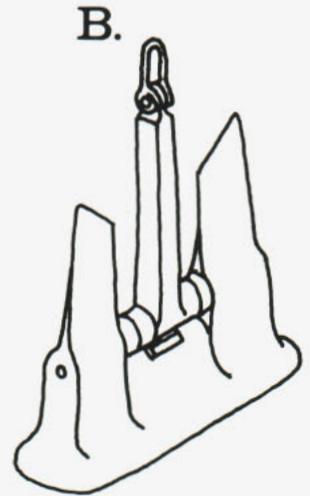
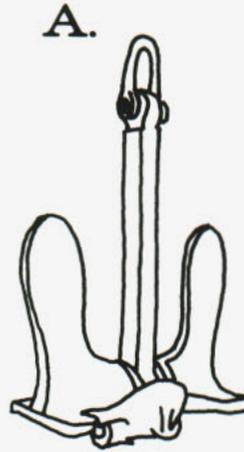
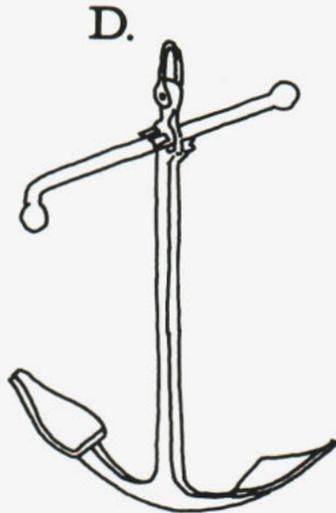
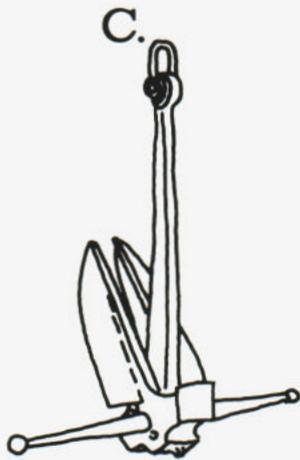
● USS *Natoma Bay* (CVE 62)—Reunion Oct. 20-22 in New Orleans. Contact Bob Wall, 141 Boynton Blvd., Apt. 6, Daytona Beach, Fla. 32018.

● USS *St. Louis* (CL 49)—Reunion planned in mid-1979 to celebrate 40th anniversary of commissioning. Contact Al Seton, 220 Otis Ave., Staten Island, N.Y. 10306.

● USS *Hugh W. Hadley* (DD 774)—Reunion on Nov. 3-5 in Ft. Lauderdale, Fla. Contact Hunter S. Robbins Jr., P.O. Box 2035, San Leandro, Calif. 94577.

# Stern Shots

As Navy men, you know that all ships have an anchor. But did you know there are a wide variety of anchors in use in the Navy today, each with its own unique holding power? How many of these iron weights can you name correctly?



Answers: A – Mark 2 stockless; B – Two-fluke balanced fluke; C – Mark 2 lightweight; D – Navy type stock; E – Danforth; F – Mushroom; G – Standard Navy stockless.

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