ALLHANDS

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• SILHOUETTE IN THE SUN-a diver conducts camera tests during Project Caribbean, an exercise to prove the ability of the Navy's newest prototype underwater cameras. By PH1 P. C. Wilkerson.

. AT LEFT: PATIENT TRAINING AND GUIDANCE in almost every field of endeavor can be found in the Navy; from aerospace to zoology the Navy has everything to offer in professional education and on-the-job training. Photo depicts training in a comprehensive patternmaking course. Photo by PH2 Rex-zane Rude.



INTRODUCING CNT STREAMLINED TRAINING FOR THE NOW NAV

CHIEF OF NAVAL TRAINING



VADM Malcolm W. Cagle

LITTLE MORE THAN A YEAR AGO the Navy reorganized its training efforts, creating a single Naval Training Command. The change was made without fanfare, but since 1 Aug 1971, many exciting results have been noted. The first Chief of Naval Training considers them among the most significant adjustments made in the field of naval training and education within the past 25 years.

What's so special about a single training system and how is it designed to affect the Navyman's educational processes? This was the topic of a recent talk between ALL HANDS and Vice Admiral Malcolm W. Cagle, USN, the man selected to guide the Navy's new training and education endeavors.

What we learned follows.

A look at the background and situations which led to the change reveals that the idea of a single training command was not dreamed up just last year. It's been a subject under consideration since as far back as 1955, but for various reasons, lack of funds being among them, the previous recommendations to consolidate the training effort were never accepted, until now.

In the past, the Navy's training system was somewhat dispersed. The air effort went one way, the submarine effort went another way and the surface effort went still a different way.

While the Bureau of Naval Personnel had the responsibility for overseeing the movement of all personnel from its complex in Washington, it controlled only to a limited degree their training. Thus, a really

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centralized training coordination was lacking.

So, for the first time, under a single command concept, a true training system has been established.

THE NEW SYSTEM, according to Admiral Cagle, consists of four basic elements: first, requirements and resources identification; second, training and education program development; third, their application and, finally, evaluation. It works like this: People, some with, some without high school or college-level educations, are received into the Navy from different parts of the country with varying backgrounds and various degrees of experience. They are placed into the training system and given a military-oriented education. Then they are placed into jobs aboard ships, in air squadrons or at shore installations where they apply what they have learned. Finally, through a feedback process, the results of the training effort are analyzed and adjustments made accordingly.

This complete system did not exist before; besides being fractionary, there was no meaningful evaluation of the training process.

For such a training system to function, Admiral Cagle stated, three resources are needed: people, material, and, of course, money. People are needed as trainees and trainers. Equipment, such as textbooks, examinations, tape recorders, instructional television systems, computers and advanced, expensive simulators are all needed. Of considerable importance are resource dollars required to support the entire system, including funds for construction of military barracks, mess halls and the schoolhouse itself. Overshadowed by all these needs is another important factor-time.

WHEN ADMIRAL CAGLE is not at his Naval Training Command staff headquarters in Pensacola, Fla., he is in Washington, D. C., where he serves yet another function, that of Director of Naval Education and Training in support of the Chief of Naval Operations. In this capacity, he works closely with the Chief of Naval Personnel, dealing with internal personnel needs. He also works with the Chief of Naval

> Using the latest training and testing equipment available, trainees obtain a comprehensive working knowledge of all aspects of their Navy job. Competent instructors guide the Navyman through the accelerated coursework making the raw material into a professional and effective man.

Material for equipment support needs, and with the Commander of Naval Recruiting, programming current and future personnel requirements.

It is almost certain a Washington trip will be scheduled whenever a new weapons system is talked up, for a tremendous chain of training requirements must be considered: publishing training materials, setting up programs, establishing schools for the training of people to operate the weapons system. Beyond these, consideration must be given the longrange aspects of training throughout the lifetime of the weapons system, which could be as long as 30 years.

As can be imagined, the CNO-support aspect of his training job is extremely important in that training requirements must be identified early and completely and not be allowed to get lost somewhere in the shuffle between operational system concept and actual introduction into the fleet. It was primarily on this basis that the single command concept was founded, in the belief that greater overall control and direction could be achieved through one central office.

Developing the system was the second step. The creators of the new Training Command took the advice of nearly all previous studies related to the development of a single training system—since 1955 and began with the air side of the house as their model. Right from the top, the family tree was trimmed. The large flight training staffs (Chief of Naval Air Training and Chief of Naval Air Basic Training in Pensacola, and Chief of Naval Air Advanced Training in Corpus Christi, Tex.) were disestablished and the flag billets redistributed. Then the functions of all three staffs were compressed into one single staff, that of Chief of Naval Air Training now located in Corpus Christi.

THE STREAMLINING PROCESS extended into the training of pilots with the creation of a "single-siting" program. "Single-siting," according to Admiral Cagle, is a method which is used to simplify the processing of a student pilot. After he goes through primary training (and actually starts the flight program), he reports to one base and stays at that one base until he eventually pins on his wings. Before, the student was going to two, three or up to four bases. The transfers usually involved one week to two weeks on the road. For married students transfers usually involved moving family and furniture to a new base. Learning local air regulations and taking, in addition, two or three familiarization flights added more time to the syllabus. All this "Mickey Mouse" is being scrubbed out of the jet portion of the flight training system and a man can now expect to complete his flight course in eight weeks' less time.

Initially, the process of "single-siting" is time-consuming and requires special funding. A site must have all the types of aircraft a jet pilot will be trained in at that location. This means aircraft must be moved, mechanics and support personnel must be assigned, and all equipment and spare parts necessary to keep the system operating must be organized at the one location. In the interim, training must continue, in cadence, without losing a step.

The emphasis on compressing the air training was first placed on the jet pilot program. Attention will be focused by the Training Command next on helicopter pilots, and then on other pilot training areas.

M^{EANWHILE}, a training wing system has been created. Made up of eight wings, this system is nothing more than a reflection of the successful fleet system of RAGs-replacement air groups-only in this sense it applies to undergraduate pilot training, whereas the fleet RAG system is classed in the graduate category. The development of the training wings gives the air training command a much better control over all air training and should result in considerable dollar savings.

The importance of education in today's Navy cannot be overemphasized. For every time specifications for a new ship or weapons system are laid down, they seem to become more complicated, requiring better school-trained technicians.

Back in the days of World War I, the Navy functioned with considerable numbers of manual rates, such as coal-passing boiler tenders and powder-tossing ordnancemen. Today, a gunner's mate has to be a smart cookie; he has electric fuses to worry about and test equipment to operate. And even what once was



considered an uncomplicated rating—boatswain's mate —is no longer simple. In fact, says Admiral Cagle, very little is simple any more, it's nearly all complicated, placing a great demand on the need for quality people.

As mentioned earlier by Admiral Cagle, there are close ties maintained between the Training Command and the Recruiting Command, because the better



qualified an individual is upon entering the Navy, the less time is spent in training him. A sharp individual out of high school simplifies matters. But if a nonreader is received he must be given special handling; i.e., a remedial reading course, thereby increasing training time and costs.

O^N THE OTHER SIDE OF THE COIN-opposite from manpower-the admiral pointed out the machinery needed to make the whole system operable. It's called "training support," a big business, ranging from issuing number two pencils to school-course students to projectors, examinations, correspondence courses, and a great variety of simulators.

The hub of the support system is headquartered in Pensacola under the command of the Chief of Naval Training Support, directly responsible to the Chief of Naval Training. Direction of support is given from this point to the numerous training centers and activities the Navy operates across the nation, and to the Naval Training Equipment Center, formerly the Naval Training Devices Center, at Orlando, Fla.

Big items in the support system catalog are expensive simulators and computer-aided instructional equipment. Television systems rank high also in popularity, backed by the fact that three specialized ITV (instructional television) studios have been developed by the Navy, one in San Diego for West Coast units, another in Norfolk to support East Coast training, and the third, being constructed at the Naval Supply Corps School in Athens, Ga., expects to be operating soon.

The admiral said that the complex equipment within the shipboard system changes frequently in today's Navy. When a shipboard system change is developed, a new or revised training requirement is generally introduced.

This means that ship's company must be taken off the job to attend familiarization training, usually scheduled at a training center ashore. This, in turn, results in considerable manhour losses to the ship and represents one of the major problem areas the new Training Command is working to improve.

SEVERAL REMEDIES are being tried. As examples, Admiral Cagle said, certain shipboard equipments are doubling as training aids when not on the line. And at least one truck van has been salvaged and reconstructed into a mobile, pierside classroom equipped complete with blackboard, chalk and instructor. The two methods practically eliminate travel and time-loss problems.

Time is being saved also through combining certain air, surface and subsurface training courses which have common subjects, electronics and electricity, for example. Of the 71 Navy enlisted ratings, about 28 require a basic knowledge of both subjects. Therefore, student ETs and EMs attend common basic courses. Additionally, a jet mechanic studying the operation of a J-79 engine in an F-4 aircraft could feasibly sit alongside an engineman slated to help man DD 963 -the principles of gas-turbine engineering apply equally to both pieces of equipment. (DD 963 is the first of the new ultramodern destroyers of the future scheduled to join the fleet in 1974. See September 1970 issue of ALL HANDS.) Combining such training interests, the admiral said, is called common-coring, another positive approach toward burying dead-time and consolidating training efforts.

In another dead-time problem area, a recent study revealed that students spend too much time waiting around; waiting to get into school, waiting to get orders, waiting to be transferred. Wasting valuable time.

MUCH OF THIS DEAD-TIME has since been eliminated under a new system designed by the Training Command and BuPers to get an individual into school promptly through planned placement. If for some reason a schedule is not met, there's a built-in backup system called "catch-up" which can be put into effect.

"Catch-up" means simply that if a student arrives at a school in the middle of the week and classes commenced the previous Monday, he is given special instruction in order to catch-up with his intended classmates. This may require burning a little midnight oil for a short period on the part of the individual and an instructor or two, but it eliminates waiting, perhaps from 10 days to two weeks, to enroll the student in the next class. Through this effort, 334 man-weeks of training pipeline time were saved in a sampling test, with something in the neighborhood of 15,000 manweeks expected to be saved within the next year, according to Admiral Cagle.

Another significant improvement derived from combining the various training activities noted by the Training commander is that of relating management practices, one to another. As an example, the managers of the Naval Training Centers at Great Lakes, San Diego and Orlando got together for high-level rap sessions, exchanging and developing training ideas. As a result, the recruit syllabus has been revised to include "finger courses."

After a recruit receives his first week of indoctrination and undergoes six weeks of basic general military training, he receives specialized instruction in one of four courses: fireman, seaman, airman, or constructionman. In other words, if it has been determined through evaluation of background study and basic battery exam results that Seaman Recruit Tom Wayne is suitably qualified for placement into the field of naval aviation, he will be enrolled in the airman finger course and be allowed to concentrate on an aviation profession right from the beginning of his naval career.

A PILOT PROGRAM being tested at NTC Orlando has recruits scheduled to receive their seaman and fireman finger course training on board ship, with the first group slated for an October cruise in the destroyer uss *Harold J. Ellison* (DD 864).

In keeping pace with modern educational methods, new training techniques are being applied throughout the training system by the central command and, where practical, trainees are being allowed to progress at their own individual pace. Lock-step instruction classes—where the instructor stands in front of a room uttering textbook paragraphs to a sleepy-eyed group of students—are being sliced out of the training program. Now, the student becomes occupied, and he's a participant actively engaged in assisting himself through the learning process. Take the method of teaching use of a battle tele-

phone for instance. The trainee sits in front of a table-. top TV set, wearing a set of earphones, grasping a microphone. He presses a button and the set, displaying a graphic subject in vivid color on the screen which voices something like: "Repeat after me target bearing zero-four-five-a," then it stops. The trainee presses the button again and repeats the command and proceeds through the push-listen, push-reply method until testing on battle-telephone procedure is complete. In this case, his replies are recorded on tape, allowing an instructor to evaluate the trainee's progress at a later time. No doubt this type tabletop TV training will become a routine method aboard ships of the future equipped with education centers designed with booth-type training aids offering academic and military-oriented instruction, some by the push-button method, perhaps.

Admiral Cagle stated that the evaluation function of the Training Command's new system is being promoted to highest priority. It is the one element-the

The Navy instructor must first and foremost be a professional in his own field. Whether it is in the classroom or on the job, the years of experience and know-how plus the use of modern training aids make the trainee ready for his job in today's Navy.







feedback, measurement and analysis of the results of training—that was lacking under the previous training system, and upon which the success or failure of the new training program might well depend.

A NALYZING THE EFFORTS of training is accomplished by two primary means—through evaluations provided by the Pacific and Atlantic Fleet Training Commanders, and through questionnaires received directly from the man himself after being trained or in the process of being trained.

From the command standpoint, information on what type of training is needed within the fleet is forwarded for consideration by the Training Command. Through the questionnaires, an individual has an opportunity to comment and help guide the present and future training effort through his personal observation. The form may contain upwards of 150 rate-oriented and conclusive questions such as: . . . what do you actually do? . . . how do you participate? . . . do you work by yourself, . . . or as a member of a team? . . . how often do you perform a certain task? . . . every dav? . . . once a week? . . . once a quarter? and . . . how do

The proof of Navy training is the confidence and competence the Navyman shows when actually on the job. Since many times costly machinery and even lives are dependent upon the skill and knowledge he possesses, the Navyman must have the very best training available despite the high cost involved.







you relate to those for whom you work? . . . is your job challenging? and so forth.

B Y THIS QUESTIONNAIRE SYSTEM, much can be learned. One example cited by Admiral Cagle: Aviation ordnancemen 1st class were being trained in service schools to check the electric firing circuit on fighter aircraft rocket racks. Through the questionnaire it was learned that this particular job was actually being done by aviation electrician's mates 3rd class. AE3s now receive formal instruction in the classroom.

Such analytical information, as it is gleaned, will also affect the data written into practical factors and

Navy Campus Of Achievement

F THE ALL-VOLUNTEER FORCE concept becomes reality next year, perhaps more than ever before naval professionalism will depend on qualified, dedicated persons who are motivated toward making the Sea Service a career. The professionalism will survive, however, if the right people are trained and the right people retained as instructors and teachers of tomorrow's Navy.

To meet the instructor requirements, the Navy is developing specific career programs for its officer, enlisted and civilian specialists, making it feasible for an individual in uniform to remain in the field of education and training throughout his entire career, and even beyond.

One example is the Navy Campus of Achievement. Totally new, the program is wide open. It's a university without walls, so to speak, whereby an individual entering the Navy without so much as a high school education could foreseeably retire from his Navy career with an associate degree or perhaps even as a college graduate.

Its scope is unlimited.

The old slogan, "Join the Navy and see the world," will become, more and more, "Join the Navy, see the rate examinations as well, which should point out its importance to the Navyman in general.

Yes, the new Training Command has caused quite a stir in a short time, so much so that educators from a sister service have been knocking on Admiral Cagle's door seeking knowledge of the basis of its success. This, in itself, helps to substantiate the fact that education in the Navy remains second to none in its scope and mission. And there is no denying that it aptly applies to the Sea Service's slogan of the 70's, that: Today's Navy Is More Than Ships At Sea.

-JOC Marc Whetstone, USN.

world, learn a valuable skill, earn a degree, and go back to civilian life with job potential, a pension and a degree!"

N^{AVY} CAMPUS OF ACHIEVEMENT can also serve the non-careerist as a steppingstone toward higher education while in service, but it was primarily developed in the interest of the careerman.

Laying the foundation for the program, the Naval Training Command is working closely with junior college, college and vocational groups in developing a method by which credit for academic and vocational training achievement will be recognized. It will work something like the system used in transferring credit earned from one college to another.

For instance, when a new man enters the Navy, he will bring his educational record with him-evidence of high school, vocational or college training he has received. This data will be put into an education record in terms acceptable to the colleges and universities participating in the program. Then, as the individual goes through his education and training process in Navy schools, or as he enrolls on his own in offduty study, his achievements will be credited and compiled accordingly.

To avoid haphazard pursuits, Navy educational advisors will be available to direct each individual in a well-organized and accepted education program that may ultimately lead to an associate or baccalaureate degree.

In view of the All-Volunteer Force, the Navy Campus of Achievement should have great recruiting and retention value.



DEDICATION & EXTENSIVE TRAINING LEAD TO DISTINGUISHED SERVICE MEDAL



LAST SUMMER Senior Chief Operations Specialist Larry B. Nowell was awarded the nation's third highest military award, the Distinguished Service Medal, for his exceptional performance as a combat air intercept controller, guiding Navy and Air Force pilots in downing 12 Mig aircraft over Vietnam. Such an achievement gained the attention of the Secretary of the Navy, who made the presentation, and brought deserving credit to the chief and to the ship on which he is serving.

But gratification should not end there.

Inasmuch as Chief Nowell's professionalism is founded primarily on the naval instruction he has received over the past 14 years, it may be fair to recognize the Navy's many educators associated with the chief throughout these years. Agreed?

Anyway, the Navy's training people would like to believe that heroes are made, not born, and occasionally come up with a case to support their belief.

Take Chief Nowell's, for example.

Since 1958-when he first entered the service-he has developed himself through professional instruction

Left: Mrs. Nowell pins the Distinguished Service Medal on her husband, OSCS Larry B. Nowell, while Navy Secretary John Warner and the CNO, Admiral Elmo Zumwalt, watch approvingly.

TRAINING FOR OPPORT

S^{AN} DIECO's naval training facilities have opened their doors to groups of high school counselors from all over the United States in what may prove to be the most effective long-term recruiting effort of the year. This project, called the "Conference on Training for Opportunity," is hosted by Rear Admiral Newton P. Foss, Commander Training Command, U. S. Pacific Fleet (COMTRAPAC). The conferences are aimed specifically at high school counselors.

These conferences are now scheduled to be conducted on a monthly basis through June of this year. Two conferences have been held to date: a pilot conference in August for a group of high school counselors from Iowa, and one in October for counselors from the Los Angeles area.

The format for these sessions has been standardized to provide a balanced program of briefings, questionand-answer sessions, and tours. This package is designed to acquaint high school counselors with the training available in the Navy and the opportunities



such training offers both toward a military or civilian career. It begins with a formal welcome dinner at a local officers' club where the counselors are able to meet COs of the commands and schools they'll be visiting.

The conference officially opens with a slide presentation, "Training for Opportunity," which outlines a typical enlisted career. Its focus is on training-starting with boot camp and ending with the sailor returning to an advanced school as an instructor. This overview is followed by briefings on "Recruit Training Today" and classification.

E^{DUCATIONAL} SPECIALISTS from the Service Schools Command at San Diego, who are responsible for the content and style of presentation of Navy courses, address the topics of teaching techniques and school administration. Lunch at the NTC galley provides counselors the opportunity to talk with Class "A" school students as a supplement to their walk-through



in no less than eight formal Navy schools. Additionally, he has completed 10 Navy professional, job-oriented correspondence courses (some required of officers), together with educational courses taken through USAFI.

H^{IS} FORMAL TRAINING began with Class "A" Radarman School (Radarmen changed their designation from RD to OS-Operations Specialist-1 November), followed by Class "B" RD training in the maintenance and operational fields of radar. At this point in his career, as a 1st class petty officer with six years' service, he began concentrating on steps leading to his present specialization, studying first the Naval Tactical Data Systems, then courses necessary to become an air intercept controller and eventually an air intercept control supervisor, the job he held on the guided missile cruiser uss *Chicago* (CG 11) at the time of his intercept-guiding accomplishments.

Before his *Chicago* assignment, Chief Nowell graduated from a Navy Leadership School, then became a certified Navy Instructor and for a time taught other aspirants the art of intercept control.

Right: Chief Nowell, flanked by his proud wife and Secretary Warner, at ceremony held in the Pentagon. Whether or not Chief Nowell is inclined to agree with his educational peers on the subject of man-made heroes is a matter known only to himself. But, those who work alongside him in front of his radarscope claim he demonstrates an uncanny knack at anticipating the right move at the right moment.

That's known as perception. And perception is inborn.

-JOC Marc Whetstone, USN.



UNITY

tours.

To measure the effectiveness of these conferences, COMTRAPAC has devised a feedback mechanism in the form of an opinionnaire. As part of a 30-page conference folder, this opinionnaire solicits the counselors' views about the content and logistics of the conference and questions about areas of naval training which the educators feel were not adequately covered during the conference. COMTRAPAC then prepares a follow-up package containing answers to questions, a letter from RADM Foss, and a booklet called "Careers" which describes all the enlisted ratings.

Suggestions received through the opinionnaire have proven extremely useful in upgrading the organization and content of the conference. The results of this upgrading and modification: 95 per cent of the participants in the October conference gave the tour an overall evaluation of outstanding or excellent, and none described it as anything less than good.



Below, left to right: High school counselors tour a ship during COMTRAPAC's monthly Conference on Training for Opportunity. (2) Counselors learn instruction techniques at Yeoman/Personnelman school. (3) Talking with a student at the Development and Training Center. (4) Visiting the Data Processing Class "A" School. Above: Students from the Machinery Repairman School discuss their goals.





Deep Water Environmental Survival Training



M ORE THAN 120 DOWNED AIRMEN have been picked up by a rescue squadron in the Gulf of Tonkin since 1967. Most of those rescues were made by helicopters flown from ships—reason enough for pilots and air crewmen to undergo deep water survival training.

Not so surprising, such a course exists-the Deep Water Environmental Survival Training course. Acronym: D-West.

D-West is a one-day course, half of which is spent in the classroorh. The other half is spent in the open sea off San Diego. It goes something like this:

"Eyes on the horizon. Feet together. Release the 'chute while on your back."

As those instructions, so calmly covered in morning class, fight for collection in your thoughts, there's a click and you're dropping at 22 feet per second. But the fall is only 15 feet from a floating ramp and before you realize it, you're over your ears in the salty Pacific.

Just as quickly you surface, helped by the medium landing craft chugging steadily along at six knots, dragging you behind, defying you to detach yourself from the soggy parachute harness that defies your efforts to free yourself.

S^{OMEHOW} YOU MANAGE to get free and, at the same time, remember to give a "thumbs up" along with a quick grin to the safety swimmer peering at you from a nearby utility boat.

But that's just part of it. There's still a life raft to open and crawl into. You have flares to pop, making sure to remember that the red end with the "bumps" is for night use and the smooth end is for daytime.

The wrap-up comes with the arrival overhead of rescue helicopters from nearby Imperial Beach Naval Air Station. You brave the stinging spray of rotorblade-whipped water long enough to wrap the extended rescue harness around yourself for the 40-foot



Left to right: After being dropped 15 feet into the water, the trainee is dragged at six knots until he is able to detach the harness. The life raft is then inflated and flares are popped. When the helicopters arrive, the rescue harness is attached.

hoist up to the chopper, thus ending the class.

Classroom work starts at 0730 with a movie showing a textbook pilot "punch out" from the time he leaves the aircraft through the survival sequence.

That film, "Search and Rescue, Sea Phase," is the brainchild of the rescue experts at the Pacific Fleet Aviation Specialized Operational Training Group (FASOTRACRUPAC) at NAS North Island. D-West is part of that organization.

After the movie the instructors go to work, giving demonstrations and lectures on survival equipment and tips on how to use it.

"Most pilots and crewmen have had much of this (training) before," says instructor PO1 Dave Leighton. "For them it's refresher training."

A LONG WITH THE SHOW AND TELL ON standing procedures for survival and rescue, the D-West instructors pass along hints on techniques developed recently. One such technique calls for the uncommon use of common kitchen foil to make downed airmen more detectable by radar. It was developed by Chief Petty Officer Rene' LaMarche, another of the training group's senior instructors.

Chief LaMarche tested the foil at NAS Fallon, Nev., by wrapping a piece 18 inches by six feet around his body. He was detected on radar by an aircraft flying at 5000 feet, 19 miles away. PO1 Leighton passes that development along, telling his students that the foil can be folded into a package two inches by four inches and stuffed into the survival vest.

Although D-West is not a required course for pilots or aircrewmen, it is highly recommended by the Commander of the Pacific Fleet Naval Air Force. Apparently students take the recommendation seriously, because each Monday and Wednesday, when D-West classes convene, there are between 15 and 40 men in the classroom willing to take a dip in the drink.

-Story and photos by Chief Petty Officer Warren Grass







New Construction in Today's Navy IT NEVER STANDS

A WHOLE HOST of new ships – ships that can sail faster, dive deeper, and carry more than ever before—have been launched at Navy and civilian construction sites around the nation during the past few months. They underline the consistent modernization of the sea service.

Heading the list, of course, is the May launching of *Nimitz* (CVN 68), a nuclear-powered carrier and the largest ship afloat in the Navy.

Nimitz's launching signaled a new phase of surface nuclear power that was ushered in with Enterprise. Such power will allow ships to go farther and longer than any in history. The nuclear carrier Dwight D. Eisenhouver (CVN 69) is now under construction, and funds to permit construction of CVN 70 (as yet unnamed) are being sought from Congress. (For more information on the nuclear surface fleet, see the Sep 72 issue of ALL HANDS.)

But that's the future. Let's look at the immediate past. During the last few months there have been a tremendous number of new ships to hit the water under the American flag.

LEADING THE FIELD in the number of new ships launched or commissioned by the Navy over the past year and a half has been the *Knox*-class ocean escort. Designated for antisubmarine warfare as well as search and surveillance missions, these ships have been increasing in number to protect other ships already in the fleet. There are to be 46 ships of this class-36 have been delivered to date. In CY 1972, six were delivered and two more were scheduled.

One such ship is USS Stein (DE 1065), commissioned early last year. Stein is equipped with a longrange, bow-mounted sonar, an antisubmarine rocket launcher, four torpedo tubes and a single 5-inch/.54caliber gun, which add to her potent versatility.

A sister ship to Stein has been named for Lieutenant Nathaniel Fanning, a naval Revolutionary War hero. Uss Fanning (DE 1076) was commissioned during the summer of 1971 and she is one of the modern ocean escorts especially designed to screen support forces and convoys, to locate and destroy enemy submarines. She also performs search and rescue patrols, evacuation, blockade and visit-and-search missions. The ship is the third to be named in honor of Lieutenant Fanning, who served as "captain of the maintop" during the decisive 1779 battle between Bon Homme Richard and the British warship, Serapis.

uss Cook (DE 1083), when just commissioned in Boston and on her way around Central and South America to join Destroyer Squadron 13 in Long Beach, departed her scheduled course upon hearing a distress signal from M/v Barao De Maua. The 5000-ton freighter had experienced an explosion in one of her cargo holds. When Cook arrived on the scene, the Brazilian crewmembers had already been picked up by a Swedish container ship; several, though, had been killed, while others were seriously injured.

COOK PROVIDED A CORPSMAN and medical aid and she searched for a missing seaman. Once the emergency help was given, *Cook* resumed her scheduled cruise. Capable of speeds up to 27 knots, she is armed with depth charges, torpedoes, helicopters and guns. She also has space reserved to incorporate a close air-defense-missile system. Named for Lieutenant Commander Wilmer Paul "Bill" Cook, a graduate of the Naval Academy who was killed in aerial combat over North Vietnam in 1967, *Cook* is now an operating unit of the Pacific Fleet.

Other ocean escorts launched include USS Bagley (DE 1069), USS Robert E. Peary (DE 1073), USS Harold E. Holt (DE 1074), USS Bowen (DE 1079), USS Donald B. Beary (DE 1085), USS Brewton (DE 1086), USS Kirk (DE 1087), USS Jesse L. Brown (DE 1089), USS Barbey (DE 1088), USS Ainsworth (DE 1090), USS Miller (DE 1091) and USS Thomas C. Hart (DE 1092).

Brown is named for the black Navy pilot, Ensign Jesse L. Brown of Hattiesburg, Miss., who was killed



ALL HANDS



in action in Korea in 1950. She is a *Knox*-class escort which is 438 feet long and equipped with guns, antisubmarine rockets and torpedoes. She carries a bowmounted, long-range sonar and variable-depth sonar for submarine detection.

LSO IN THE KNOX-CLASS of escorts is Barbey, named А in honor of Vice Admiral Daniel E. Barbey, who organized and led the first Amphibious Warfare Section of the Navy in 1942. The new ocean escort, Bagley, is the fourth Navy ship to carry the name of a family which has contributed much to the naval service. The first three were a torpedo boat which served along the Atlantic Coast in World War I; a destroyer launched in 1918 and turned over to the British navy in World War II; and another destroyer which won 12 battle stars in World War II. All were named after Ensign Worth Bagley, killed in the Spanish-American War. The present Bagley, however, is named both for the ensign and his brother, Admiral David W. Bagley, who served in both World Wars.

Donald B. Beary is named for the late admiral who developed techniques vital to successful underway replenishment during WWII. Beary is designed for locating and destroying submarines and carriers. Integral bow-mounted, long-range sonar, variable-depth sonar and gyrostabilizers provide for improved seaworthiness and increased antisubmarine capabilities.

Also designed to seek out and destroy enemy submarines, Robert E. Peary carries much of the same



equipment found on *Beary*. She is the second ship to be named after the famous Arctic explorer—the first was a four-stack destroyer launched in 1920 which served as a convoy escort in WWII.

Brewton, like Robert E. Peary, is designed for antisubmarine search and destroy missions. She can attain a speed of 25 knots, and carries a crew of 17 officers and 228 enlisted men. She is named after Lieutenant John C. Brewton, who died of combat injuries in Saigon in 1970.

Kirk, a member of the Knox-class of escorts, is named for the late Admiral Alan Goodrich Kirk, dip-



lomat, strategist, and master of amphibious warfare during WWII. *Harold E. Holt* is named for the late prime minister of Australia, and *Bowen* for the late Vice Admiral H. G. Bowen.

THE NAVY'S UNDERSEAS FLEET has also grown considerably in the past few months. New commissionings include uss Archerfish (SSN 678), uss Pintado (SSN 672), uss Drum (SSN 677), uss Sand Lance (SSN 660), uss Pogy (SSN 647), uss Silversides (SSN 679), and uss Batfish (SSN 681). Recently launched were the submarines uss Cavalla (SSN 684), uss William H. Bates (SSN 680) and uss Tunny (SSN 682).

When Archerfish was commissioned late in 1971, she became the 95th nuclear-powered submarine

Top: Artist's conception of the nuclear-powered attack carrier CVN 70. Above: Launching of the ocean escort Jesse L. Brown. Far Left: Launching of the carrier USS Nimitz (CVN 68). Left: Artist's conception of USS Dwight D. Eisenhower (CVN 69).

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placed on the Navy's active duty rolls. She carries a crew of 12 officers and 108 enlisted men and is the second ship to bear the name *Archerfish*, a fish which "shoots" small drops of water to knock down and stun insects. The first submarine to bear the name operated in the Pacific in WWII.

Pintado is another submarine whose namesake was a WWII fighter. The first sank or damaged 132,900 tons of enemy shipping. Today's new nuclear-powered *Sturgeon*-class boat is 292 feet long, with a beam of 31 feet and displaces 4600 tons submerged. She is armed with long-range torpedoes and the *Subroc* missile.

A LSO IN THE STURGEON-CLASS with a WWII namesake too, *Drum* was commissioned on 8 Apr 1972 at Mare Island, Calif.

Another Sturgeon-class submarine joined the fleet in September at Groton, Conn., as *Batfish* was commissioned. She has a crew of 12 officers and 108 enlisted men and she, too, carries the name of a WWII boat with a long list of combat achievements. rine of this class to be built in the Connecticut shipyard. She bears the name of the WWII fleet submarine which is credited with sinking the 30,000-ton Japanese aircraft carrier *Shokaku*.

C^{ONTINUING} MODERNIZATION of the Amphibious Forces is marked by the recent introduction to the fleet of additional *Newport*-class tank landing ships. These are USS Barnstable County (LST 1197), USS Harlan County (LST 1196), USS LaMoure County (LST 1194), USS Spartanburg County (LST 1192), USS Fairfax County (LST 1193), USS Barbour County





Pogy, the ninth nuclear attack submarine completed in Pascagoula, Miss., was commissioned in 1971. She has a 292-foot length, a beam of 31 feet and displaces 4200 tons. She has a crew of 12 officers and 98 enlisted men, and can reach a speed in excess of 20 knots.

Silversides, another member of the Sturgeon-class, can travel at speeds and depths comparable to Pogy.

William H. Bates, named in honor of the late member of the House of Representatives from Massachusetts, was launched late in 1971. She carries the latest in detection gear and armament.

Launched in Groton was Cavalla, the 12th subma-

(LST 1195) and uss *Bristol County* (LST 1198). Other amphibious ships to join the fleet are uss *Ponce* (LPD 15) and uss *Fort Fisher* (LSD 40).

Barnstable County, a 20-knot LST, can lift, transport and land over the beach more than twice the number of combat vehicles as could her WWII counterparts. Overall she provides a swifter and more efficient method of landing troops and equipment in combat. Barnstable County is the second ship to bear the name of the Massachusetts county; her predecessor was an attack transport which saw action in the Pacific during WWII.

Like Barnstable County, LaMoure County's tradi-

tional LST bow doors have been replaced by two outstretched derrick arms. These arms support a 30-ton ramp, enabling the ship to unload assault vehicles directly onto the beach. This ramp also makes it possible for the 567-foot-long ship to have a destroyer type bow, thus allowing her to attain 20-knot speeds.

This "over-the-bow" ramp design for amphibious ships is also exemplified by Spartanburg County, Barbour County, Bristol County, Fairfax County, and Harlan County. These ships, named for counties in South Carolina, Alabama, Rhode Island, Virginia, and Kentucky, respectively, are armed with four 3-inch/-.50-caliber guns in two twin mounts.

THEY HAVE THE MOST MODERN electronic equipment for efficient communications and dissemination of information. Living accommodations include air-conditioning, a recreation room, barber shop, ice cream shop, tailor shop, laundry and dry-cleaning plant.

In a letter to the crew of *Barbour County*, which is named for his native county in Alabama, Admiral Thomas H. Moorer, chairman of the Joint Chiefs of Staff, said:

"Anyone who has ever taken part in the unique environment in which LSTs operate shares a great re-



The amphibious transport dock *Ponce* carries Marine assault forces with their combat vehicles and cargo and can simultaneously launch amphibious craft and helicopters.

The commissioning of uss Fort Fisher (LSD 40) signified the last ship of the 20-knot Anchorageclass dock landing ships. Fort Fisher is equipped to disembark assault troops and equipment across her stern gate at anchor or underway, allowing quick transfer to the beach.

A MMUNITION SHIPS LED the new entries of the auxiliary class into the fleet last year. These ships include uss Kiska (AE 35), uss Mount Baker (AE 34), and uss Flint (AE 32).

Facing page, left: The destroyer escort Cook (DE 1083) underway. Left to right: The ocean escort Jesse L. Brown (DE 1089) slides down the ways. (2) At the christening ceremonies of the USS Bristol County. (3) The tank landing ship USS Barbour County (LST 1195). (4) The christening of the Batfish at Groton, Conn., recently. Below: The nuclear attack submarine USS Batfish.





Kiska, named for a volcanic island in the Aleutian Island chain in Alaska, is a *Kilauea*-class ship capable of operating at a sustained speed of 20 knots for replenishing fast-moving naval task forces underway.

Mount Baker, also a Kilauea-class ship, has a length of 564 feet, a beam of 81 feet, and a full-load displacement of 18,088 tons. She has facilities for helicopters and her armaments include eight 3-inch/.50caliber guns in four twin mounts. She is the second ship to be named after the volcanic peak in the state of Washington, just as *Flint* is the second ship to bear the name of the industrial city of Flint, Mich.

uss Wabash (AOR 5), a 37,360-ton oiler, was also

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recently commissioned-she is 659 feet long and carries 371 officers and enlisted men.

One of the most unusual ships in the Navy is the research vessel uss *Hayes* (T-AGOR 16), a twinhulled ship whose mission is oceanographic research. She is operated by a Civil Service crew of the Military Sealift Command, and her missions are controlled by the Naval Research Laboratory. With her twinhulled design, *Hayes* can turn within her own length and consequently provides a stable platform for research. She has space for laboratories much larger than could be set up on board conventional ships. She is named in honor of the late Dr. Harvey C. Hayes, who worked with sound as a method for ocean exploration and detection of objects underway.

The Navy has recently added to its fleet two more nuclear-powered guided missile frigates, uss *California* (DLGN 36) and uss *South Carolina* (DLGN 37). Participating in *California's* launching ceremonies was the First Lady, Mrs. Richard Nixon, who is a native Californian. *California* is designed to operate independently or as a unit of strike, antisubmarine, or amphibious forces. She provides fast, extended-range protection for nuclear attack carriers. Armed with two 5-inch/.54-caliber dual purpose guns, two *Tartar* surface-to-air missile launchers, along with ASROC, she has a normal crew of 500 men.

Not only are there new ships in the guided missile fleet, but a major new weapons system has also made its debut. USS Sterett (DLG 31) now carries the newly developed Light Airborne Multi-Purpose (LAMPS), for use in airborne electronic warfare. It is comprised of a Seasprite helicopter with sensor, navigational and other electronic equipment and is designed to extend the search and attack capabilities of destroyers and escort vessels through "over the horizon visibility."

THIS PAST YEAR has seen the ending and the beginning of the careers of some naval ships.

One with nearly 29 years of service, the carrier uss Wasp (CVS 18), was decommissioned and stricken

OCEANOGRAPHIC SURVEY / SILAS BENT

F ROM A DISTANCE, she looks like a very wealthy man's pleasure yacht. Then you see the machinery and lifting gear on the after end and you know there is quite a bit more involved than pleasure.

Painted a gleaming white, the U.S. Naval Ship Silas Bent is an oceanographic survey vessel. She's operated by the Military Sealift Command, and she's the first U.S. Navy ship to be built exclusively for oceanographic survey. Master of the ship is Captain Richard B. Hosey, a Civil Service mariner employed by the Navy's sealift command. All of the ship's 47 crewmen are also Civil Service employees. The ship is operated by MSC for the Naval Oceanographic Office, which establishes her missions and provides technical equipment and funds for ship operation. Scientists and technicians from the Naval Oceanographic Office who conduct oceanographic surveys may range in number from 15 to 24, depending on the mission.

A senior Naval Oceanographic Office representative aboard, Mr. A. Russell Mooney, explained the mission of *Silas Bent*.

"The basic mission is to seek a better understanding of the sea. The seas are so vast and, really, so little is known.

"We have several ships, and other countries and private concerns have their survey ships. But the amount of surveying time that these vessels put in is very small compared to the vastness of the area that we should know."

Silas Bent was in Japan to participate in the Second International Ocean Development Conference held in Tokyo in October. Oceanographers from all over the world attended the conference, presenting papers on different aspects of their work, from environmental studies to equipment, such as special instrumentation systems and deep research vehicles. In addition to the conference, there was an exhibit by various companies, displaying equipment used in oceanographic research. *Silas Bent* was available during the conference for tours and briefings.

N HER EVERYDAY WORK, Silas Bent provides overall oceanographic survey data necessary to support U. S. Navy programs and the national oceanographic program. She aids other government agencies such as the Coast Guard, the Fish and Wildlife Service and, of course, the National Oceanographic and Atmospheric Administration.

"Worldwide oceanographic institutions can obtain data from us," Mooney said. "The Japanese, Russians, Canadians, French – all have received information through the National Oceanographic Data Center. Almost anyone can get this data."

The various jobs performed by *Silas Bent* are dictated by the operating area and the season of the year. The ship is built to withstand heavy seas and still perform her mission.

"Last winter, this ship was working in the middle of the North Pacific," Mooney said, "surveying the southern boundary of the Japanese current in that area. The weather was bad, but *Bent* can operate in weather where other oceanographic ships can't."

Silas Bent probably is one of the best equipped ships of her kind in the world today.

"Essentially, we can do a very wide range of oceanographic surveys," Mooney said. "For one, we are equipped at all times to do regular bathymetric surveys. That is, measuring the depth of the water as we go along.

"We do seismic work, measuring the sub-bottom profile and we continuously measure the total magnetic field of the earth by towing a magnetometer. from naval records last July. Wasp was completed in 1943, and her planes made their first raids against the Japanese in May 1944. More than a decade later, 1956, she was reclassified as an antisubmarine warfare aircraft carrier. Toward the end of her career she participated in the recovery of various astronauts and their space capsules. Wasp was the ninth Navy ship to bear that name.

A somewhat unusual decommissioning came about when the hospital aboard uss *Sanctuary* (AH 17) was closed. The hospital ship was the last of six such afloat hospitals in the fleet. Ending a four-year tour in the waters off Vietnam, she had traveled more than 200,000 miles and had served nearly 50,000 in- and outpatients. In addition to combat support, *Sanctuary* provided treatment for Free World Military Assistance Forces and also civilians in the Republic of Vietnam.

Some ships don't die-they are just absorbed by other navies-such as uss *Park County* (LST 1077), which was turned over to the Mexican navy. The last of the U. S. Navy's WWII-type LSTs, *Park County* was built in a little more than a month and commis-

Also, sea surface temperature is recorded continuously and we are capable (when the ship is stopped on the surface) of making temperature and salinity measurements from the surface to the bottom. We analyze mud from the bottom of the ocean for its mineral composition and strength.

"A part of our effort is seafloor photography," he continued. "Bent has special cameras which are towed



sioned in May 1945. She was decommissioned the next year but called back into service during the Korean conflict. She was again placed in mothballs in 1955. Ten years later she was overhauled for duty in Southeast Asia, where she transported troops and their equipment and resupplied bases along the rivers in the Mekong Delta.

A 28-year veteran of service in WWII, Operation Deep Freeze in the Antarctic, and amphibious operations in the Caribbean and Mediterranean Seas, uss *Arneb* (LKA 56) has also been decommissioned by the Navy.

This ship served through many dangerous missions and in 1955 was trapped for 48 hours in a crushing ice field. Her hull was severely buckled when the ice put a three-foot hole in her side below the waterline, tore a blade off the propeller and bent her rudder 18 inches. Rapid emergency repairs enabled her to break through the ice and head for Australia, and a yard period to complete repairs. After that, she saw 17 more years of service until her decommissioning last year. —JO2 Jim Stovall

12 to 15 feet off the bottom giving a series of pictures of the seafloor. Plankton nets are also towed to collect samples of the minute life that inhabits the sea."

T HE WEALTH OF DATA and information gathered by Silas Bent and other oceanographic ships is put to many uses. The U. S. Navy uses it to support various research projects-nautical charts of various parts of the ocean are updated-the fishing industry uses the temperature and salinity information in studying fish migration.

A versatile ship, *Bent's* work changes according to the particular job. Missions are scheduled well in advance, but they're subject to last minute changes.

Following the ship's Japan visit, *Bent* was set to do a geophysical survey using seismic and bathymetry equipment, cameras and corers (devices for taking samples from the sea floor) in a submerged sea-mount area about halfway between Japan and Midway Island. The day before she arrived in Japan, however, the mission was changed. Her next job, instead, was to measure ocean currents between Japan and Korea.

Silas Bent is an unusual vessel. In the foreseeable future, the nations of the world may come to depend more and more upon the sea for their existence. With the help of ships like Silas Bent, the mysteries of the seas are being unraveled and, eventually, the wealth of the oceans will be available to the world.

-Story by JO1 Dan Hansen

Left: RADM M. E. Garrison, USN (Ret), Deputy Naval Oceanographer for International and Interagency Affairs, presents a plaque to Dr. Kiyoshi Kawakami, Chief Hydrographer of Japan's Hydrographic Department. Dr. Kawakami and his staff then toured the scientific spaces of USNS Silas Bent.



ON THE SCIENTIFIC FRONT

Scientists at NRL Build Wind-Wave Tank To Reproduce Equal of 50-Knot Winds at Sea

S^{CIENTISTS} know that short gravity and capillary waves serve to scatter radar impulses on the ocean surface, yet the extent of the disturbance or how to correct it is unknown.

To study methods leading to correcting the situation, the Naval Research Laboratory built a windwave tank 58 feet long and four feet wide. Its purpose: To reproduce the equivalent of 50-knot winds at sea.

The new facility enabled NRL researchers to measure the extent by which radar microwaves are scattered by wind-whipped waves. So far, studies have identified three kinds of waves which cause scattering. In the future, the wind-wave tank will be used to study radar wave scattering in an attempt to identify other ocean surface disturbances which also play havoc with microwave impulse transmission.

Timation II Satellite Will Provide Precise Time for Jet-Age Navigators

TIMATION II is one of two time-navigation satellites which orbit the earth at an altitude of about 500 nautical miles. Both are the precursors of similar satellites which, like *Timation II*, will furnish time correct to a microsecond.

Until the advent of jet aircraft, such hair-splitting accuracy was scarcely necessary but now it is an essential ingredient in proposed aircraft collision avoidance systems. Since knowledge of time affects both distance measurement and navigation, highly accurate clocks are necessary to insure adequate separation between the world's aircraft.

Currently, time standards at various sites throughout the world are compared either by using portable cesium-beam atomic clocks carried in aircraft or by means of the Loran-C navigation system operated by the U. S. Coast Guard. The former system, however, is expensive while the latter has inaccuracies brought about by propagation anomalies of land, sea and the ionosphere.

The Timation Satellite Program was started at the Naval Research Laboratory in 1964 as a means of providing precise navigation and time to an unlimited number of users with receiving equipment. Two satellites are now in orbit and two new ones are planned which will orbit earth at about 7500 nautical miles an altitude from which they will "see" more than a quarter of the earth's surface. These satellites will provide worldwide time dissemination data for navigation experiments and data on the exact location of earth sites. Current plans call for the fourth satellite to carry an atomic standard to further explore worldwide time.

Newly Developed Automatic Pulse Monitor Can Obtain Composite on Patient's Blood

A N AUTOMATIC "PULSE MONITOR" has been invented by a scientist at San Diego's Naval Undersea Center. By placing a patient's finger into an opening of a machine about the size of a typewriter, a physician can obtain a composite reading on the patient's blood chemistry, blood pressure, vessel elasticity and heart action.

The inventor, Bob Page, an electrical engineer, foresees wide application in instant pulse measurements, mass screening programs and circulatory system diagnosis. Large numbers of schoolchildren, he says, could quickly be examined for possible heart conditions. Sensors placed on the earlobes could monitor the blood flow in the brain during neurosurgery. Excessive white blood cells or clots in the circulatory system may also be diagnosed by the machine.

Scientists Debunk Idea of Dolphin Talk, But That Doesn't Rule Out Communication

Now WE KNOW-or at least, we think we know-that a dolphin can't speak. A Navy study debunked the idea that it might be possible for dolphins to talk to each other and stated it would be "improbable" for communication between man and dolphin to reach a higher level, than say, between man and dog.

Just because they can't talk, however, doesn't mean they can't communicate. Dolphins make three types of sounds: echolocation clicks (used for their underwater sonar system), squawks and barks (typical of other mammals) and their unusual whistle sound.

Heretofore, there has been speculation that the whistles simulated human speech and were, in fact, the key to a sophisticated dolphin language. The Office of Naval Research study, however, concluded that the whistle transmits only general information and is used for identification, indicating location and conveying a degree of excitement or fear. Although the mammals have been known to mimic alien sounds, researchers didn't consider this ability to be significant, pointing out that other animals can do the same thing, particularly dogs and birds.

The Navy is concerned with analyzing dolphin sounds to distinguish them from militarily useful targets or signals. During their study, however, researchers also discovered peripheral facts concerning the sounds dolphins make which, they speculate, may indicate the sea mammals' emotional state.

Latest Glass Ceramic Viewports Tested— Withstand Pressure Equal to 45,000 Feet

A GLASS CERAMIC VIEWPORT was recently tested to withstand pressures equal to 45,000 feet—a depth greater than the deepest ocean trench. The new viewport is a 150-degree spherical shell sector having an outside radius of four inches and a thickness of one inch. It is expected to solve the problem of optical distortion at great depths which has been characteristic of most acrylic lenses.

Heretofore, acrylic plastic has been extensively used at depths less than 10,000 feet. Although generally satisfactory at such depths, it was found that pressure

ON THE SCIENTIFIC FRONT

deformed the plastic below 10,000 feet, creating the optical distortion which the ceramic glass viewport seeks to correct.

Using commercially available materials, San Diego's Naval Undersea Center strengthened viewports and their mountings. Then, following the initial success of the glass ceramic, NUC made plans to conduct future tests on an additional 18 viewports. If these tests are also successful, the ceramic glass viewports are expected to be approved for unlimited deep submergence service.

New Diagnostic Tool Could Safeguard Sensitive Shipboard Electronic Gear

T^{HE} EFFECT of electromagnetic pulses on the Navy's sensitive electronic equipment is being studied at the Solomons, Md., branch of the Naval Ordnance Laboratory. EMPRESS (Electromagnetic Pulse Radiation Environment Simulator for Ships) is expected to be an effective diagnostic tool for testing a ship's response to bursts of electricity.

Électromagnetic pulses from a 1300-foot line, almost all of which is suspended 100 feet above the ground, are transmitted to a ship anchored in a cove of the Patuxent River just east of Point Patience. The pulses are recorded aboard the ship and analyzed to determine how this electrical energy couples to the ship and its electronic systems. With this information, technicians hope to identify weak points in the ship's system which are critical to its mission and to recommend corrective action.

Fully Automated Landing System Assures Safer Carrier Operations

N^{AVY} AVIATORS are now developing a fully automated landing procedure which should make life easier and safer for pilots and deck crewmen alike. The first such landing was made aboard uss *Ranger* (CVA 61) by Lieutenant J. L. K. Corcoran of the Naval Air Test Center, Patuxent River, this summer.

The procedure for the landing is fairly simple. The pilot links the plane's controls with a computer aboard the ship. Officials on the ship then feed the necessary information into the computer, which guides the plane in for a landing.

Previously, *Ranger* could only signal the information on landing to the pilot, who would make the necessary adjustments. But now, with this new system in effect, her crewmen can practically make a passenger out of the pilot.

The new system will enable pilots to make safer landings during the nighttime and in low-visibility weather.

VLF Propagation Paths Are Studied For Possible Communication With Subs

T^{HE} Naval Research Laboratory recently studied previously uninvestigated very low frequency (VLF) propagation paths to determine their suitability for communications with Navy submarines.

Using the Navy's transmitter at North West Cape, Australia, and receiving sites in Japan, Madagascar, Bahrain Island, Alaska and the Republic of the Philippines, the lab's scientists studied electromagnetic wave propagation at very low frequencies. They broadcast signals on a schedule which permitted propagation data to be collected on six frequencies in the VLF band over a three-month period.

As a result, the Navy now knows which VLF channels are the most suitable for communication transmissions to submarines and can also apply the information obtained from the experiments to the *Omega* navigation system.

Latest Design Acrylic Sphere Is Tested To Depth of 200 Feet at Undersea Center

O^{PERATIONAL DEPTH TESTS were conducted recently at 2000 feet on the latest design acrylic sphere proposed for underwater research by San Diego's Naval Undersea Center (NUC). The new sphere would update and significantly increase the depth capability of the center's transparent submersibles *Nemo* and *Makaki*, which are certified only for 600foot operational depths.}

The new capsule design calls for thicker walls and the re-engineering of hatches with the substitution of aluminum for steel. This change enables the new submersible to operate at increased depths without increasing the hatch weight. Aluminum is also resistant to corrosion and, because of its greater heat transfer capability, the capsule's interior will stay cooler during long dives in tropical waters.

Radar Altimeter in Next Year's 'Skylab' Expected to Acquire Wealth of Information

A MICROWAVE RADAR ALTIMETER experiment pioneered by the Naval Research Laboratory will be aboard the 1973 Skylab Mission. It is expected to acquire short-arc geoidal information and statistical geophysical data plus information on backscattered signal characteristics. The radar altimeter may also be capable of sensing ocean roughness using normal incident radar techniques. Other surface roughness experiments will include detection of snow- or ice-covered regions, terrain scattering as influenced by moisture, and studies of unusual ocean regions such as oil slicks.

Use of the radar altimeter in the 1973 Skylab may also provide future oceanographic information such as detecting tides, storm surges and possibly ocean surface elevations caused by currents.

Device, Smaller Than Bulldozer, Could Prove Boon in Heavy Moving Chores

A SIMPLE NEW CONCEPT of pulling, pushing or even carrying items which might otherwise be moved by a bulldozer or a forklift has been developed by Dr. Howard A. Gaberson of Port Hueneme's Naval Civil Engineering Laboratory (NCEL). The device, which is smaller than a conventional bulldozer, could have a number of Navy applications.

It could, for example, be used as standby land locomotion capability for landing craft and other boats; as a heavy concrete ram vehicle to clear roads of obstructions; as a general overland hauling vehicle for use in questionable terrain or as a forklift in over-thebeach hauling and advanced base warehousing. It could also be used for mobilization of large gantry cranes in shipyards.

Officially, the device is called vibratory locomotion (Vibra-Lo) and is described by Dr. Gaberson as a board set on the ground and shaken by a weight to go forward. Actually, the device moves when skids shuffle along the ground pushing, pulling or carrying a load. The skids move because of an oscillating weight which moves back and forth along a straight line inclined to the horizontal. At the top of the stroke, the weight pulls the skid up and forward. The upward force reduces friction and the skid slides forward. At

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the bottom of the stroke, the weight pushing down and backward on the skid increases friction thereby inhibiting a backward slide.

When the operator wants to back up, all he has to do is tilt the weight and oscillator drive toward the rear of the skid. Sideways locomotion is obtained by rotating the up stroke's direction to either side of the skid.

Applications of vibratory locomotion have been investigated by others but NCEL appears to be the first actually to build a prototype. The laboratory has, in fact, built three experimental models in the past three and a half years.

Inasmuch as the Gaberson device has infinitely fewer moving parts than a bulldozer, for example, its reliability is greatly increased while its maintenance costs are considerably reduced.





NAVY REGRU A DAY

T^{HIS} PAST YEAR the Navy, especially the Navy's recruiting effort, has been actively engaged in drag racing. The Navy's association with this fast growing and exciting sport is a natural one for the '70s.

and exciting sport is a natural one for the '70s. Don "Big Daddy" Garlits, who's been called the "King of the Dragsters," is responsible for the Navy's entry into the world of quarter-mile drag racing. Last winter he toured U. S. bases in Vietnam visiting drag racing fans. Upon his return he contacted the Navy's Recruiting Command in Washington and asked, "Is there anything I can do for the Navy?"

The immediate results was a recruiting poster showing Garlits in his dragster on the deck of the aircraft carrier *Lexington* hooked to a catapult ready for launch alongside a Navy jet.

The public's response to this poster caused the Recruiting Command to pursue its effort in the sport of drag racing, concentrating on the national events in which Garlits competes. One such event was the American Hot Rod Association's 6-8 Oct 1972 World Championships held at Fremont, Calif.

Arrangements were made to declare Sunday, 8 Oc-





TING SPENDS AT THE RACES

tober, "Navy Day" at the event. In addition Don Garlits agreed to autograph Navy promotional items and participate in Navy recruiting.

Fremont Raceway was literally covered in Navy blue. Navy pennants ringed the grandstands and Navy posters were affixed to every available space, while large banners proclaimed "Navy Day" at the drags. The track announcer provided a series of Navy public service announcements for use between races. Navy personnel manned the press trailer and control tower to assist with the coverage of the events.

NAVY RECRUITING put on display its 65-foot model of the aircraft carrier uss *Hancock*. Sea Cadets, Navy recruiters and representatives mingled with the fans to anwser questions about the "Now Navy." They passed out materials such as Navy posters, bumper stickers, tee-shirts, balloons, and decals. Other Navy activities included a jet flyover in the famous "missingman" formation, music by the Twelfth Naval District Band and naming the winners of the AHRA-Navy sponsored "Miss Bellbottoms" beauty contest. The Navy christenings of the two most famous vehicles in drag racing, Don Garlits' *Swamp Rat-IV* and Captain Jack McClure's *Sizzler-2*, were the most unusual events to take place at the finals. *Swamp Rat-IV* is powered by a 1972, 500-cubic-inch engine and is the favorite to break the last barrier recognized as attainable by men in the sport—the five-second mark.

Merchant Marine CAPT Jack McClure's rocket powered go-kart, *Sizzler-2*, holds five world records. At the finals it rocketed through the quarter-mile at close to 200 miles per hour before 15,000 fans.

Based on the tremendous reception and good will generated by the Navy's participation in drag racing, Navy involvement in future events appears sure to continue. Consideration is being given to expanding the scope of Navy involvement to include a greater number of drag races. Drag racing and the Navy have created a team which will enable each to prosper in the challenging '70s.

By LTJG P. Kazajian, USNR



Facing page: Recruiting poster of Don Garlits' dragster. (2) Garlits at the AHRA World Championships held in Fremont, Calif. (3) A drag racing pro-stocker cools its hot wheels in front of a Now Navy display. Left: Christening Don Garlits' Swamp Rat-IV. Above: Mechanics make last-minute adjustments. Right, above: CAPT Jack McClure's rocket-powered "Fly Navy" go-kart. Right: Drag race beauty queens.





New London Sailors Take

All-Navy Sailing Title









"O^{KAY, CHIEF,} let's get with it," the seaman said. "Right, skipper," the chief answered cheerfully.

Well, we're not sure that's exactly the way it was aboard the winner of the All-Navy Sailing Championships at Great Lakes this summer, but from all indications it might have been.

After all, it's not often that an 18-year-old seaman is the skipper-be it only a sailboat-and it's even less likely that a senior chief and a chief petty officer would make up his crew. But that's exactly the way it was when SN Kenneth R. Van Wagnen guided his craft across the finish line first at the championships.

Van Wagnen serves aboard uss Robert K. Huntington (DD 781), and his crew-Chief Sonar Technician James C. Stechell and Senior Chief Equipment Operator Harry A. Warjonen-hail from the Navy Submarine School at New London, Conn. Representing the New London branch of the Naval Sailing Association, they defeated nine other Navy crews to win this year's grand prize during the three days of competition.

The championship races began with only two-tofour-knot winds, but by the time the series concluded, the winds had picked up and small craft warnings were being hoisted. The three-man crews—all of which had to consist of at least one enlisted man—sailed their 18-foot interlakers with main, jib, and spinnaker sails. The different boats changed hands among the crews after each of the 10 races.

GOVERNED BY THE RULES of the North American Yacht Racing Union, the races produced the winner by the following point system:

The winning craft from each event was awarded one point; the boat that took second was given two points and so on down the line. At the end of the races, the boat with the lowest score won the All-Navy title. In case a boat did not finish a race, it was given one more point than the last-place boat received.

An Olympic style course was marked off in the Great Lakes harbor, and it included a windward starting leg, two reach legs, another windward leg, a leeward leg, and a windward beat to the finish line. Most of the legs were nearly a mile long.

Placing second in the championships was a crew from the Pacific Fleet Amphibious Force in Coronado, Calif.—Lieutenant (jg) Ted M. Ustick, skipper, and Lieutenant Lawrence G. McConnell and Builder 1st Class Joseph A. Damico.

Quartermaster 3rd Class Dennis Lettenmaier skippered the third place sailboat; Quartermaster 2nd Class Emress Black and Seaman James Hahn made up the rest of his crew. They represented the Annapolis, Md., branch of the Naval Sailing Association, and they are attached to the naval station there.

The Great Lakes crew, representing the Ninth Naval District, finished in fourth place. Skipper was Lieutenant Howard M. McCue, and his crew were Lieutenant John M. Cregor and Hospitalman Richard W. Moxley.

MEETING ABOARD the Naval Training Center, the crew represented the top talent from the East

and West Coast Championship competitions. The East Coast Navy title races were held at the Annapolis Naval Station. Besides those already mentioned, other crews from the East Coast came from the Naval Academy, Annapolis; the Naval Air Station, Pensacola, Fla.; and the Naval District, Washington, D. C.

From the West Coast came crews from the 13th Naval District, Seattle, Wash., and the 11th Naval District, San Diego, Calif. The West Coast Championships were completed at Coronado.

In addition, the USNSA, because of its contributions to recreational sailing in the Navy, was permitted to send one crew from each of its more than 30 branches to Great Lakes without first having those crews compete in a coastal championship. Representing USNSA branches were crews from USS *Forrestal* (CVA 59) at Norfolk, Va., and, of course, the champions from New London, Conn.



LIFERAFT RACING

and other assorted fun



FOURTEENTH NAVAL DISTRICT had a different kind of celebration at Pearl Harbor which offered something splashingly new in Navy anniversary parties liferaft races. Dubbed "The Race for the Suds," by a local newspaper, the races featured seven-man paddling teams representing more than 20 ships homeported at Pearl Harbor.

Unlikely winner of the day's events turned out to be an underdog crew from the submarine uss Swordfish (SSN 579). They had practiced only once before the race, but they were all members of the same division-Swordfish's "A" gang. They were "recruited" by their CPO, Chief Machinist's Mate Ken Sturtz.

The Swordfish Seven, led by their full-bearded and mustachioed chief, were not expected to win because they had recorded only the second best time in eliminations between submarine crews. They had a 1:58 heat to uss *Flasher's* 1:49, best of the day over the 772-foot course down Mike piers 1 and 2. The finish was at Merry Point Landing, across from the Naval Station Exchange, a well-known landmark to any Navyman who's been to Pearl Harbor.

B ECAUSE SUBMARINE OFFICIALS previously had not announced that the winner was determined by the best time, Swordfish and Flasher were matched again in a special run-off. *Swordfish* splashed to victory with a slower time (two minutes) than the first race but it was good enough to take the finals.

uss Beaufort (ATS 2), representing Commander Service Force, Pacific Fleet, turned in a time of 2:05 in the heats, and representing the Destroyer Force was uss Whipple (DE 1062) with a fast 1:58. Whipple carries the motto, "Resources Beyond Calculation," in bold letters across her superstructure. She was almost as strong this year as she was last year when her crew crushed all opposition in the tug-o'-war contest at the Navy Day open house in Pearl Harbor.

In this year's event, the *Beaufort* crew grabbed the early lead; the submariners remained close behind and looked wet and tired from paddling the extra heat in the eliminations. Then, at the midway point, *Swordfish's* gang caught *Beaufort* and sped to victory, banging the nose of their liferaft against Merry Point Landing in the winning time of 2:12. *Beaufort* was second with a 2:15 and *Whipple* finished last in 2:37.

The rivalry between destroyer, submarine and service force sailors was spirited. Ships' personnel, including many commanding officers, lined Mike piers on one side and Bravo piers on the other to cheer on their shipmates. This year's event was sweet revenge for the submarine Navy, which has finished dead last







in the tug-o'-war contest every year. They claim they don't have enough beefy sailors from among their small crews to match the surface Navy.

Swordfish paddlers were EN3(SS) James Knowles, MM1(SS) Leland Kidder, MM3(SS) Edwin Geiger, FA Wesley Mulvania, MM2(SS) Freddie Petit and MM3(SS) Lorry (Bo) Barnes-coxswain was MM3-(SS) Richard Huggins.

THE REWARD WAS ALSO SWEET (and sweet-tasting at that), two 15½-gallon kegs of beer. The thirsty *Swordfish* crew guzzled down the 31 gallons in less than five hours during two ship's official softball games.

Consolation prizes were awarded *Beaufort* and *Whipple*; each received a 7½-gallon keg, which they put away while swearing oaths to "beat those guys next year."

Liferaft races were the brainchild of Lieutenant Commander Norman M. Karns, Jr., of the 14th Naval District's staff. The rafts, standard seven-passenger Navy type, were not easy to paddle with speed and even harder to guide in a straight line.

Six rowers were allowed to sit inside or straddle the raft while a coxswain, sitting aft, guided the boat with another paddle. But teams in need of practice found themselves steering a zigzag course. Teamwork, rather than brawn, proved the margin of winning.

The winner's plaque, presented by Rear Admiral John L. Butts, Jr., district commandant, was mounted with two beer bottlecaps, symbolizing the prized kegs of beer. Two Honolulu television stations covered the races and one radio station broadcast the entire show live.

T HE DAY'S EVENTS also featured a 142-piece marching band with high-stepping drum majorettes and girl cadets from Sunnyvale, Calif. The band opened the noon-hour show-they were in Honolulu for the annual Aloha Day Parade in Waikiki the next day.

Entertainment also was provided by the Pacific Fleet band led by Lieutenant (jg) Phil Field. Hawaiian entertainer Danny Kaleikini and his troupe of dancers, singers and musicians added to the festivities.

Vice Admiral George C. Talley, Deputy Commander in Chief of the Pacific Fleet, cut one of the birthday cakes with the help of pretty Charlene Towers, who was the cover girl for the posters used to publicize the event. The cakes were mainly provided by the galley crews from the Submarine Base and the Naval Station. First slice was presented to Seaman George A. Gibbons, who was chosen as the most outstanding man from the Pearl Harbor Naval Station.





Top: The USS Swordfish crew hit Merry Point Landing first to win liferaft race during the Pearl Harbor Navy Birthday celebration. Bottom, left to right: The Swordfish paddling team scrambles ashore to claim the 31 gallons of beer they won for their shipmates. (2) Nalani Olds, singer in Danny Kaleikini's troupe, entertains the crowd. (3) SN George Gibbons accepts the first slice of Navy Birthday cake from poster girl Charlene Towers. (4 & 5) Danny Kaleikini and hula entertainers liven up the liferaft races.

Human Resource Development Centers:

YITAMIN PILLS' FOR A HEALTHY PEOPLE PROGRAM

M^{OST} NAVAL PERSONNEL are familiar with such facilities as Fleet Training Centers, Recruit Training Centers, Electronics Support Centers, Naval Material Centers, and Navy Supply Centers. These are primary points of broad managerial functions within the Navy-they provide assistance to the Fleet in the managing of dollars, material, education, and manning. Within the last year, four new centers have been established to address another management function –the management of people. These centers are called Human Resource Development Centers and are located in Newport, Norfolk, San Diego and Pearl Harbor.

R ECOGNIZING THAT PEOPLE are the Navy's most expensive and vital element and that the Navy must continue to explore the most modern and progressive means of managing this element, the Navy has established these centers as direct field representatives of the Human Resource Development Project Office (Pers-Pc) in Washington.

They will spearhead the implementation of programs and provide assistance to the Fleet in the areas of Race Relations Education, Command Development, Intercultural Relations (getting along with people in an overseas environment) and Drug and Alcohol Education and Rehabilitation.

The programs which were designed over varying lengths of time in Washington by both civilian and military personnel will inject into the management of people and human behavior the same degree of professionalism, proficiency and understanding that is currently prevalent in so many other areas.

While the groundwork and planning for these centers have been in the mill for almost a year, their existence has had a fairly "low profile." As one planner in Washington said, "Until these centers were established and manned, we felt the time was not ripe to publicize them. The areas they will be working in are so vital that we could not afford to raise the Navy's expectations before we were ready to produce."

Now, more than a year later, these centers are being rapidly manned and are getting on the line. Each center is headed by a captain and his executive officer will also be a "four-striper." Their staffs will consist of 58 active-duty naval personnel specially trained in at least one of five fields—race relations, command development, intercultural relations, drug and alcohol education, and alcoholic rehabilitation.

Their training is on the most contemporary and sophisticated level currently available, often drawing on the talents of civilian consultants. All these personnel will have specific qualifications not only in the areas of their particular specialties, but also a general approach to managing human resources, or people.

T^{HE} UNIQUE THING ABOUT these centers is that their assistance must come strictly on a request basis. While the Navy has developed effective models for troubleshooting or problem-solving teams in material and financial matters, there are no known comparable designs with respect to people. It is impossible for a team or group to go aboard a ship and straighten out the management of people. Rather, the effort is one of consulting, or working with the commanding officer to develop on-board programs.

The commanding officers of the centers have all been chosen from a list of highly qualified and proven Navy professionals. HRDC Newport, which was established officially in April 1972, is commanded by Captain K. H. Lyons, whose previous billet was as CO of uss Wasp (CVS 18). San Diego was established at the same time and its commanding officer is Captain G. R. Bradford, ex-commanding officer of uss Robert A. Owens (DD 827). Norfolk was the next center to be established (July 1972) and its CO is Captain R. S. Tisdale, previously COMDESRON 20. Captain D. L. Banks, Jr., ex-CO of USS Samuel Gompers (AD 37), is in command at HRDC Pearl Harbor, which was officially established on 1 Aug 1972.

The four Human Resource Development Centers work in tandem with five other field activities in the rehabilitation area. As the Project Manager, Captain O. N. Putman, said, "We would like to think that our programs and the HRDCs can prevent most problems but, in fact, that is a naive outlook. Some individuals run into rough going, and we feel obliged to help them get back on track." There are two Naval Drug Rehabilitation Centers (NDRCs), one at Miramar and the other at Jacksonville. They are commanded by Captain C. N. Pierozzi and Captain W. Moore, respectively. The Alcohol Abuse Control Program has three centers: Long Beach, Norfolk and Great Lakes. The commanding officers of these are Captain J. J. Zuska, Commander A. Croft and Commander J. Woodvard.

I^T IS SOMETIMES ASKED why there are just four HRDCs, since the magnitude of the problems which they will address would seem to warrant great dispersion. While in fact this is good logic, limited resources have held up any immediate further expansion. Second, it is also recognized that there is a necessity for short-term evaluation and assessment before broader application can be effected. A study has shown that over a five-year period the majority of naval personnel do, in fact, pass through one of these four areas in some primary duty.

The most common misunderstanding concerning HRDCs which must be overcome is that these centers are curealls or panaceas for commands with problems, or that they have a magic formula. That, of course, is not the case. The centers can be likened to vitamin pills. More to the point, there is no formula which applies to all commands.

As one of the HRDC commanding officers said, "Sometimes people call us up and say they want our 'race relations package' or 'drug education package.' This reflects the kind of confusion that we must overcome. We offer resources and assistance for commands to develop their own designs. We help diagnose problems, but we don't hand out standard solutions. Only commanding officers can do this. We should be seen as another tool for COs."

THERE ARE CERTAIN BASIC STEPS which can be taken to start "human resources analysis" and offer assistance within the command level, and to this extent the Human Resource Development Centers act in a traditional manner. In Race Relations, for example, the centers conduct two three-day seminars, one called UPWARD (Understanding Personal Worth and Dignity) and the other called the Executive Seminar. These seminars are designed to be given with a command involving middle managers and supervisors in the former, and the upper levels (CO and department heads) in the latter. After the sessions, the CO sits down with his consultants and constructs an individualized action program on board his command aimed at continuing race relations education.

In the field of Intercultural Relations–Navymen probably come in contact with the people of foreign countries more than any other group–the centers sponsor "Area Orientation Briefs" and workshops. These are aimed specifically at ships during Preparation for Overseas Movement (POM) and will be tailored mostly to the areas on a ship's port schedule. The more significant element of this program is actually carried out once a unit arrives overseas, when ICR teams work on scene to help combat what is familiarly known as "culture shock." To date there are no HRDCs overseas, although long-range plans look in this direction.

With Drug and Alcohol Education, trained drug education consultants from the HRDC work with local drug education specialists to further distribute Drug Education Kits and implement individualized drug education programs on board ships. All these specialists will provide practical information and assistance on all drug related issues.

T HE DRUG AND ALCOHOL EDUCATION KITS are made up of mini-projectors, videotapes, tape recorders, tapes, and books. They are designed to provide the basic cognitive material for any on-board drug education program.

Alcoholic rehabilitation will be offered through the services of the HRDC's three trained consultants who will coordinate with local AA groups, commands, and already identified recovered alcoholics. They also will act in liaison with alcohol rehabilitation centers and units.

The broadest of the five program areas—and what is often called the "umbrella" for all of them—is the Command Development Program. While specific incidents or problems may pinpoint action areas for some commands, others in fact may just want to take a more general approach, that is, the analysis and development of the entire organization—its management and its mood. This program has its counterpart in private industry, organizational development, and, in fact, has been lifted almost directly from industry, where many of the same problems and pressures are prevalent.

A CTUALLY, all the areas discussed here can profit from improved management abilities; consequently, the Command Development Program assists in any phase.

Through a one-week seminar, a survey held on board, and close work with consultants, the commanding officer and his command can achieve careful analysis of their organization and assistance in developing their own program. This program uses proven principles in this field and pertinent concepts of behavioral science.

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ALIEN ADDRESS REPORTS DUE DURING JANUARY

If you have an alien registration card and are in the United States or one of its possessions on 1 January, you must report your address during the month of January 1973. Alien Address Report Cards may be obtained and filed at the nearest post office. If you are outside the United States or its possessions, you must report your address within 10 days after your return. Be sure you submit your Address Report on time, as there are severe penalties--including deportation--for noncompliance.

EQUAL OPPORTUNITY ASSISTANT BILLET CREATED FOR STAFFS

An Equal Opportunity Assistant billet for each of the 22 fleet, force or type commander staffs was recently authorized by Chief of Naval Operations Admiral Elmo R. Zumwalt, Jr. Officers filling these permanent billets will assist commanders in providing subordinate commands with specific guidance for race relations education, establishment of equal opportunity programs, and initiation of other command development projects. The Equal Opportunity Assistant will not replace the existing command Minority Relations Representative who will continue to function in his present collateral duty role.

• DEPENDENTS I. D. CARD APPLICATION MADE EASIER

Recent changes announced by BuPers have now made it easier for dependents to obtain new, or replace lost or stolen, I. D. cards. Instead of applying directly to their sponsor's activity, dependents may now apply for I.D. cards at the nearest naval activity authorized to issue them. This activity will verify the claimed dependency with BuPers or, if necessary, with the sponsor's activity and, upon certification, issue the I. D. card. The new policy also applies to retired people and their primary dependents and is detailed in Change 3 to BuPers Instruction 1750.5D.

STATE OF WASHINGTON VIETNAM BONUS

The State of Washington recently became the 10th state to authorize a bonus for its Vietnam veterans. A \$250 bonus has been authorized for veterans and servicemen who have been awarded the Vietnam Service Medal and who were residents of Washington for at least one year before entering active duty. Certain career service people, those in the armed forces five or more years immediately before 5 Aug 1964, are not eligible. Applications for the bonus are now available by writing to: Vietnam Veteran Bonus Division, P. O. Box 586, Olympia, Wash. 98504. Payments will begin on 2 Jan 73. Other states having a Vietnam bonus are Connecticut, Delaware, Illinois, Louisiana, Massachusetts, North Dakota, Pennsylvania, South Dakota and Vermont.

LEAVE BEFORE SEPARATION: POLICY MODIFIED

If you need more time to get started in college than is authorized in an early separation program or if your prospective employer wants you to start work a couple weeks before your EAOS, you should now have an easier time making such arrangements due to a recent policy modification concerning leave

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in connection with separation. If you have leave on the books and your command can spare you, regardless of where you are located, your CO may authorize you to take leave of less than 30 days on your way to a separation activity of your choice--but at no additional cost to the government. This eliminates the requirement to return to your parent command at expiration of leave for separation processing. For more details, see your personnel officer.

ADVANCEMENT EXAMS COMING UP SOON

If you've got your practical factors, military leadership exam and recommendations in order, you should set your sights on the date listed below for the test you'll be taking. Following is the schedule for the February 1973 Navywide examinations for advancement to PO3 through CPO. It should also be noted that, beginning with this examination, CPO exams for all active duty people will be given on an annual basis so there will be no CPO exam in August.

• Petty officer 3rd class:	Tuesday	6	Feb	73	
• Petty officer 2nd class:	Thursday	8	Feb	73	
• Petty officer 1st class:	Tuesday	13	Feb	73	
• Chief petty officer:	Thursday	15	Feb	73	

NEW INCENTIVES FOR YNS AND PNS COMING TO WASHINGTON

Some new incentives, including the Navy's first "homesteader" program, are now being offered to yeomen and personnelmen who volunteer for duty in the Washington, D. C., area. These new incentives are: guaranteed oneyear extension of shore duty; inter-area COMPTOUR at the midpoint of a shore tour exceeding 48 months (upon request); and guaranteed return assignment to Washington, D. C., for those who request it and remain qualified. BuPers Notice 1306 (7 Nov 72) contains the details, and further information can be obtained by contacting YNCS Don Hibbitis or PN1 Bill Yaeger, Pers-B2022 (Autovon: 224-2217 or 224-2615).

SPANISH-AND PORTUGUESE-SPEAKING INSTRUCTORS NEEDED

The Bureau of Naval Personnel is looking for enlisted people who are fluent in Spanish or Portuguese and would be interested in instructor duty at the Inter-American Naval Training Center at Key West, Fla. The center was established in September to train members of South American navies in basic naval skills, and instructors in the following ratings are urgently needed: BM, GM, QM, EN, EM, EA, CE, CM, SW, UT and HM. Those selected will serve a three-year tour at the center and, if applicants meet the qualifications for instructor duty outlined in Chapter 5 of the Transfer Manual, any pay grade will be considered. Anyone interested in volunteering for this program should submit a special duty request, via the chain of command, to BuPers (Pers-B2021) or call (Autovon: 224-2196) for additional information.

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• COST PROHIBITS MORE BACHELOR HOUSING FOR FLEET PERSONNEL

Navy bachelor quarters ashore are not normally provided for people serving in ships except for the off-crew of two-crew submarines, ships of 1000 tons full load displacement or less, and small vessels lacking quarters. A recent study indicated that the cost--more than \$700 million--to construct adequate quarters for Fleet personnel is prohibitive, at least for the foreseeable future.

However, some activities currently have "inadequate" housing available where Fleet Navymen could be housed and still not deny space to those who are guaranteed housing. OpNav Instruction 11012.20 provides that members serving in ships and not maintaining a residence at the homeport location are entitled to occupy Navy bachelor quarters ashore on a space-available basis.

NEED STILL EXISTS FOR SPANISH-SPEAKING NAVY RECRUITERS

Applications are needed immediately by the Navy Recruiting Command from Navy personnel fluent in Spanish to fill billets as recruiters in large cities across the land. Personnel of Mexican descent are needed for vacancies which will occur in the spring in Denver, Colo., and Houston and San Antonio, Tex. Future assignments will involve billets in Los Angeles, Calif., Albuquerque, N. M., Oklahoma City, Okla., and Dallas and El Paso, Tex.

Assignments for Navy personnel of Puerto Rican descent -- also fluent in Spanish -- are available in New York City and Newark, N. J.

Enlisted men eligible for shore assignment -- who meet all requirements in Chapter Four of the Enlisted Transfer Manual -- should submit their requests for recruiting duty to the Chief of Naval Personnel, via their commanding officers. Such personnel should be highly motivated and meet the highest professional and personal standards in order to be selected.

LEAD-FREE GAS TO BE SOLD AT ALL EXCHANGE SERVICE STATIONS

The Navy Resale System is planning to include lead-free gasoline at all exchange service stations by 1 Jul 1974. This move is in line with Environmental Protection Agency regulations which are expected to require lead-free gas at all service stations, civilian or military, by that date. The additional service will allow Navy people, including those owning newer cars requiring unleaded gasoline, to take advantage of exchange prices.

• NET WORTH BALANCE SHEET OFFERED BY CAREER COUNSELORS

You should know where you stand before you leap, and your Career Counselor can help you find out. By consulting "Your Career Planner" (NavPers15136B), he can help you fill in the computation found there and provide you with a "Net Worth Balance Sheet." This can tell you what a carpenter in Rochester or a mechanic in Portland can expect to make and how much it will cost him to live in those places. The planner can help you compare those figures with what you would make if you decide to make the Navy a career. How do your Navy pay and benefits compare with what you will be making and spending in civilian life? Before making a final
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decision on a career in the Navy, check your command career counselor and make out your "Net Worth Balance Sheet" for the answer.

• FIRST FLEET TO BE DISESTABLISHED, THIRD FLEET CREATED

The Commander in Chief Pacific Fleet recently announced that the First Fleet and ASW Forces Pacific will merge on 1 February to form a reactivated Third Fleet. Consolidation of the two commands reflects the Navy's objective of reducing fleet staffs to achieve personnel and fiscal economies while retaining effective control and supervision of assigned operational units. The new Third Fleet Command will be homeported at Ford Island, Pearl Harbor, Hawaii.

• NIMITZ INITIALLY TO BE HOMEPORTED IN NORFOLK

The Navy's second nuclear-powered aircraft carrier, Nimitz(CVAN 68) will be temporarily homeported in Norfolk, Va., following her commissioning next September. The 95,000-ton attack carrier, currently under construction at Newport News, Va., will carry a crew of 130 officers and more than 2900 enlisted people. This initial assignment of Norfolk as home port is intended to eliminate long family separations for the commissioning crew. Upon completion of her fitting out period and shakedown operations around August 1974, Nimitz is expected to be homeported on the West Coast.

CHOLERA VACCINATION REQUIRED FOR AUSTRALIAN TRAVEL

Australia now requires vaccination against cholera for all arrivals into the country except people who have been in the United States for the preceding seven days who arrive in Australia directly from the U. S. or through the South Pacific. This measure was taken because of the recent importation of cholera cases to Europe.

DEPENDENTS' SCHOLARSHIP APPLICATIONS DUE SOON

If you have a child approaching college age or already enrolled in college, he or she may be eligible to compete for various scholarships which have been made available by Navy-oriented clubs and associations. Applications for these scholarships, which are awarded by the sponsoring organizations on the basis of financial need, character, and scholastic record, must be submitted to the Chief of Naval Personnel (Pers-P511) before 15 Mar 73. In most cases, scholarship awards are made to dependent children--including adopted children and stepchildren--of members of the Navy, Marine Corps, and Coast Guard who are on active duty, retired with pay or deceased (while on active duty or with retired pay). The official definition of dependent child is an individual who is unmarried and under age 21, or under 23 if enrolled in a full-time course of study at an approved institution of higher learning. For more information about the scholarships available and application procedures, see your personnel officer about BuPersNote 1755 (29 Nov 72).

from the desk of the Master Chief Petty Officer of the Navy

"One Navy"



MCPON JOHN D. WHITTET

PROGRESS toward equal opportunity and good race relations doesn't come easy.

About two years ago, Admiral Zumwalt initiated the first in a series of vigorous programs designed to do something about improving equal opportunity within the Navy. To date, there have been numerous

equal opportunity/race relations programs and Zgrams affecting minority group members of the Navy. Many of these programs have worked admirably. Good dialogue and grievance-handling procedures have been established on board most ships and stations. All of these programs have been calculated to stimulate equal opportunity, heighten our sense of responsibility and promote firm but fair leadership.

THESE PROGRAMS deserve our wholehearted support. No one goes his way alone in life or in the Navy. Each of us has to move over a little bit and make room for the pride and self-esteem of our shipmates. When you come right down to it, the face-to-face, heart-to-heart relationship ultimately determines the success or failure of any of our people programs. The spoken or unspoken word, the tone of our voices, an arrogant or selfrighteous attitude, even a facial expression—all can work to undermine the progress that has been made or the

progress that can be made.

All of us, regardless of our age, background, rate, color or years of service should be aware of and sensitive to the wants and needs of our shipmates. This is a very basic foundation of contemporary leadership. We must learn to be open, honest and fair in our relationships and to insist upon the maintenance of discipline through strict adherence to regulations.

EQUAL OPPORTUNITY requires equal responsibility. A racial problem is really a mutual problem with misconduct on all sides. Progress requires trust, communication and teamwork. No one has a license to take advantage of his shipmates or to take the law or government property into his own hands. Like a reward for good performance, punishment for unlawful behavior is a necessary part of Navy life. Navymen and Navywomen who violate a regulation or a lawfully given order may expect to receive an appropriate punishment.

All Navymen and Navywomen have an obligation to observe the rights and respect the dignity of others without prejudice or discrimination. This is as true for the man who makes out watch bills or cleans a compartment as it is for the leading chief or commanding officer. What one gets in this regard is roughly equal to what is given. Arrogance is apt to be met with arrogance . . . indignity with indignity. A slur is like throwing garbage off to windward.

WHITE, BLACK, MALAYAN, SPANISH-AMERICAN, OR INDIAN, we are all in the Navy together. Cooperation and racial harmony are not just ideas; they are absolutely essential. The idea of having "one Navy" is not an excuse for ignoring important racial or cultural differences. On the contrary, because of the "one Navy" concept, it is possible for us to have the kind of society that encourages human rights and strives for equal opportunity.

I know that the pressure of extended operations can make it rough, but we must get on with the business of creating an *equal* opportunity Navy. The opportunity for genuine progress has never been greater. Lend a friendly hand, shipmate. It's an ALL HANDS job!

Work Uniforms Tested, Improved

P^{RACTICALLY} EVERY MAN in the Navy knows a new working uniform is being tested before being approved for general use. The Navy does this by subjecting models of apparel to actual working conditions. Here is a brief situation report on problems encountered and measures taken to counter them.

 Shrinkage—All washable woven fabrics in Navy clothing should not shrink more than 0.2 per cent when laundered. This is the standard for sanforized clothing and there have been reports that the new cloth being used in the models shrinks more than the allowable maximum. The Defense Personnel Support Center (DPSC) which sets military uniform specifications, found that indeed there were a few cases where material shrank more than the allowable 0.2 per cent. However, DPSC also discovered that the excessive shrinkage usually occurred through overloading washers and dryers. The Navy Resale System has emphasized the importance to Navy laundry service teams that washers and dryers should be loaded only within the prescribed machine capacities. Uniforms improperly laundered at home or in coinoperated laundries are liable to excessive shrinkage.

• Excess Weight–Other complaints centered on trousers and shirts (particularly the latter) note that

they are too heavy to be comfortable in warm weather. Blue utility uniform fabrics heretofore tested have been half nylon and half cotton fabrics, woven 6.0 ounces per square yard for shirting, and 9.0 ounces per square yard for trousers. In an attempt to make the clothes more comfortable in warm weather new fabrics have been designed of 65 per cent polyester and 35 per cent cotton; 4.5 ozs/sq yd for shirts and 7.0 ozs/sq yd for trousers. Enough material for 500 test shirts and trousers has been ordered for fleet evaluation which began January 1973.

• Durability-Aircraft servicing crews say their standard olive green cotton utility trousers aren't sufficiently durable. They also maintain that sea-prest polyester/cotton permanent press white uniforms sold in Navy exchanges lack durability, too. Some have noted that the Army fatigues authorized for use by Seabees are more durable than cotton denim dungarees but, for carrier flight and hangar deck use, aren't equal in wear resistance to the new standard blue nvlon/cotton utility work trousers. These are a sea bag item but may also be issued as organizational clothing. An additional standard item of organizational clothing is a kelly green coverall with padded knees and elbows, and special seams designed for catapult hookup crews in order to resist the abrasive wear of the non-skid deck compound.

Combined use of the catapult crew coveralls and the blue utility trousers should eliminate complaints from carrier aircraft servicing crews about durability. The lack of durability concerning "sea-prest" white uniforms has been referred to the manufacturer.

Trip Checks Feasibility Of Traveling Detailers

THERE MAY COME A TIME in the not-too-distant future when special teams of detailers will travel to the fleet for a face-to-face discussion about your next set of orders.

Such a trip was tested recently by members of the Bureau of Naval Personnel (BuPers) detailing staff who traveled to various naval activities in the Norfolk, Va., area. They met with nearly 7000 enlisted personnel altogether during eight "Detailer Briefings" conducted by the head of the BuPers detailing section, Rear Admiral J. D. Watkins, USN.

During his presentation, ADM Watkins revealed some of the causes for the Navy's current manpower shortages and said that future shortages are expected to result from a recent cut in the Navy's payroll account. However, the recent changes in enlisted distribution (especially the new Centralized Assignment System in which all petty officers and strikers are detailed by BuPers) are designed to best utilize the limited manpower available while, at the same time, guaranteeing that the individual is treated as fairly as possible. Pay bills before Congress, the Nuclear Duty Bonus Bill just passed by Congress, and other pending incentive-type bills are all part of the effort made to enhance the attractiveness of the Navy as a career. The main focus is providing the test treatment to the individual, the admiral said, in both pay and job satisfaction.

A MORE EFFECTIVE METHOD of assigning personnel has been developed which should support job satisfaction. Using modern data processing equipment, the detailer can now quickly obtain a variety of pertinent information on an individual from the computer and use it to make better assignment decisions.

One of the factors studied is data obtained from evaluation records. The new Optical Character Reader (OCR)-type evaluation sheet in use for chief petty officers has proven to be a valuable tool for detailers and, according to the admiral, BuPers has planned a special OCR-type evaluation sheet for E-5 and E-6 personnel and another for E-4s and below to aid in detailing assignments. Other selected information from service records and duty preference sheets also has been fed into the system, thereby removing much of the guesswork on the part of the detailer as to which individual is best suited for a particular job.

It's doubtful that face-to-face detailing on a large scale is in the Navy's immediate future. But, based on the numerous status improvements emphasizing the personal approach toward job satisfaction, the Navy should-within the next three years-be one of the most attractive careers available to young Americans. –JOC Ken Ledbetter, USN.



CWO Parsons lines up a shot in WSALs "live" broadcast studio. Control room is visible through window in background.

List of New Motion Pictures Currently Available to Ships and Overseas Bases

H ERE IS A LIST of the movies being made available to ships and stations from the U. S. Navy Motion Picture Service. Movies in color are designated by (C) and those in wide screen by (WS).

Fuzz (C) Comedy Drama; Burt Reynolds, Raquel Welch.

Prime Cut (C) (WS) Action Drama; Lee Marvin, Gene Hackman.

Lady Liberty (C) Drama; Sophia Loren, William Devone.

Pickup on 101 (C) Melodrama; Leslie Ann Warren, Jack Albertson.

WSAL

T USED TO BE that to watch closed-circuit television aboard a ship, you had to go to an aircraft carrier. After all, it was said, smaller ships didn't have the population or the facilities to make closed-circuit television feasible.

Well, that kind of thinking has now officially become part of the "old Navy." The installation of closed-circuit TV facilities aboard uss *LaSalle* (AGF 3) this summer has put an end to it.

LaSalle's facilities are the first of some 135 which will be installed aboard ships of guided missile destroyer size and larger as part of the Navy's internal information program. While LaSalle started off with black and white TV, all ships following her in the program will be equipped with color TV systems. The

The Groundstar Conspiracy (C) (WS) Drama; George Peppard, Michael Sarrazin.

Slaughterhouse-Five, Comedy Drama; Michael Sacks, Ron Leibman.

Chato's Land (C) Western; Charles Bronson, Jack Palance.

Puppet on a Chain (C) Adventure Thriller; Barbara Parkins, Sven-Bertil Taube.

The Burglars (C) (WS) Suspense Drama; Omar Sharif, Dyan Cannon.

The Sandpit Generals (C) (WS) Drama; Alejandro Rey, Guilherme Lamounier.

The Public Eye (C) (WS) Romantic Comedy; Mia Farrow, Topol.

The Resurrection of Zachary Wheeler (C) Drama;



TV arrives aboard USS Severn

T^{HE INTRODUCTION} of television to the shipboard way of life has had a definite impact on both morale and command-to-crew communications. For the most part it has created a greater mutual understanding of purpose of mission for many.

Such is the case aboard the oiler uss Severn (AO 61), first Atlantic Fleet Service Force unit to install

USS LaSalle's own TV station

overall plan is to improve the quality of shipboard life.

LaSalle's television station, which is operating with the call letters WSAL, can broadcast videotape, motion picture film, and live programs in black and white over two channels to some 14 television screens located throughout the ship.

The station receives 55 to 60 hours of filmed programs each week from the American Forces Radio and Television Service while deployed in the Indian Ocean.

The station aboard *LaSalle* is, by necessity, small and limited in its broadcast abilities. Yet, it signals an important beginning in the Navy's efforts to improve and widen the amount of information and entertainment made available to ships' crews.

Leslie Nielson, Bradford Dillman.

Duck You Sucker (C) (WS) Action Drama; Rod Steiger, James Coburn.

The Revengers (C) (WS) Western; William Holden, Ernest Borgnine.

Revenge Is My Destiny (C) Drama; Chris Robinson, Elisa Ingram.

George (\tilde{C}) Comedy; Marshall Thompson, Jack Mullanev.

Carry On Henry (C): Comedy; Sidney James, Kenneth Williams.

The Nightcomers (C): Melodrama; Marlon Brando, Stephanie Beacham.

 \hat{T} wins of Evil (C): Horror; Peter Cushing, Dennis Price.

a closed-circuit TV system for the purpose of education and entertainment.

Severn's initial program, a discussion between a crewmember panel and the ship's squadron commander, was so well received that the Force Commander, Rear Admiral Roy G. Anderson, was invited to participate in a similar get-together during an onboard visit at the Newport, R. I., naval base. As the participants discussed subjects ranging from Navy grooming standards to the pay raise, crewmembers viewed TV sets located on the mess deck, crew's lounge, CPO and PO1 lounges, and the wardroom.

Although not yet a part of the vast American Forces Radio & Television Service, WSEV-TV is representative of the systems, no doubt, that will eventually be installed in other ServLant units as funding



IC1 Morrison checks CWO Parson's shot on his WSAL monitor.

Frenzy (C): Suspense Drama; Jon Finch, Barry Foster.

Dr. Jekyll & Sister Hyde (C): Horror; Ralph Bates, Martine Besivich.

War Between Men and Women (C): Comedy; Jack Lemmon, Barbara Harris.

Boxcar Bertha (C): Drama; Barbara Hershey, David Carradine.

Cancel My Reservation (C): Comedy; Bob Hope, Eva Marie Saint.

Night of the Blood Monster (C) (CS): Horror; Christopher Lee, Maria Rohm.

Cactus in the Snow (C): Comedy-drama; Richard Thomas, Maggie King.

The Stepmother (C): Drama; Alejandro Rey.

becomes available. The Severn system cost \$2000.

Furthermore, there are no provisions for showing regularly scheduled TV programming such as that seen on commercial networks. However, the oiler's closed-circuit equipment is used to pass command messages, report local news and sports events, and relay career counseling information, training and education programs and Project Awareness commentaries, on such subjects as drugs, marriage and minority relations.

There's a bit of irony in the fact that AO-61 was commissioned about the time television was initially recognized as a communications medium. That was some 28 years ago.

It was a long time coming-the announcement that "WSEV-TV is on the air."





Navy Industrial Environmental Health Center Works Toward Clean and Safe Environment



T^{HE} PEOPLE AROUND PORT EVERGLADES, FLA., like to go fishing and so does the crew of YAG 61, better known as the *Monob* (for mobile noise barge). Although the barge is assigned to the Naval Ship Research and Development Center at Carderock. Md., it is homeported in southern Florida and spends much of its time on-station in the Bahamas where it serves as a scientific test site.

When the barge returns to Port Everglades, how-

NDUSTRIAL HEALTH and environmental pollution have become areas of intense awareness in recent years. The Navy, in its concern over these problems, has established the Navy Industrial Environmental Health Center. The center is located in Cincinnati, Ohio, and is under the command and support of the Bureau of Medicine and Surgery.

The duties and responsibilities of the center vary widely. Principal among these duties is that of protecting the health and well-being of the Navy community from hazards which may be encountered in its living and working environment.

In order to cope with the wide range of problems encountered by the center, its military and civilian staff have a diverse background in training and experience. The eight Navy and 16 civilian personnel include occupational health physicians and nurses, industrial hygienists, chemists, sanitary engineers, and an administrative staff. The majority of the staff spend a large portion of their time traveling to Navy stations and ships around the country in order to monitor occupational and environmental hazards.

The specialties of the center's staff overlap a great deal, but each member has an area of primary interest. The medical personnel are responsible for evaluating occupational health programs and making recommendations for improvement. The industrial hygienists are responsible for monitoring and evaluating ever, its crewmembers like nothing better than grabbing their fishing gear and heading into the Gulf where, with luck, they can haul in a few for the supper table. But recently, there has been a dearth of fingerlings and *Monob's* crew, along with the citizens of Port Everglades, decided something should be done. Marine predators, they concluded, were taking an inordinate toll among the area's young fish simply because the youngsters had no place to hide. Fish sometimes abound in other ocean areas because there is a protective reef in which they can hide from predators until the fingerlings are too large to be a mouthful for other fish. The obvious solution, therefore, seemed to point toward providing a reef.

The concerned fishermen decided they could not only build a reef but also cut down on air pollution by, instead of burning used tires, fastening several together, weighting them with concrete and sinking them two miles offshore. Holes were punched into the tires so that small fish could pass in and out and -voila, instant reef.

D^{BIVERS} from the nearby naval ordnance facility collected and weighted tires; loaded them into their trucks and transported them to the dock. When all the reef makings were assembled, they were sufficient to make a respectable installment on a structure which was eventually to be three miles long and bear the name of Virgil Osborne, a retired Navyman who conceived the idea in the first place. The weighted tires were then loaded aboard the *Monob* and taken to a preselected site in the Gulf and

industrial exposure which may be of potential harm to the worker. This may include exposure to toxic chemicals, extremes of heat or cold, excessive noise, poor lighting, radiation hazards or any other industrial hazard which may result in harm to the worker. The sanitary engineers and pollution control personnel carefully monitor materials which the Navy discharges into the environment. This often takes the form of extensive air and water pollution monitoring.

N ADDITION to the field personnel, the center utilizes its own chemists and laboratory in order to analyze samples brought in and to work out procedures for field monitoring. (It can also call upon other laboratories so that samples can be quickly and accurately analyzed in any situation.) The center has a mobile laboratory van which can be driven anywhere in the U.S. for on-site analysis. The center has the latest environmental monitoring equipment, most of which is portable and can be easily taken to monitoring sites. It also provides training and education. Several times a year it offers workshops in industrial hygiene and occupational medicine. There are at present two fulltime occupational health residents fulfilling a year of on-the-job training to complete their residency training.

In 1965, managers in NAVORDSYSCOM saw the need for the type of services available from the center and After the tires had settled to the bottom, where they are now presumably providing protection for young fish, the crewmembers of the *Monob* and the fishing citizens of Port Everglades looked forward to the day when "the youngsters" would grow up and could be invited home for dinner.



Facing page, far left: The heavy modules are rolled into place. Facing page, right: The Mobile Noise Barge (YAG-61) gets underway in the turning basin at Fort Lauderdale, Fla. Above: Overboard go the modules at the reef site as crewmen begin the "drop" to provide marine life a "home."

established the group. With subsequent growth and increased utilization, its support was assumed by BuMed. NavOrd stations, however, continue as principal clients.

Although the Navy is far from solving its environmental and industrial hazards, the creation and utilization of the Navy Industrial Environmental Health Center is a big step toward the ultimate goal of a clean and safe environment.

Noise Pollution Study

A COMPUTERIZED PROGRAM to predict the atmosphere's acoustical ray paths and sound dispersion in the air has been developed at the Naval Research Laboratory. The program may help predetermine noise (or the lack of it) at future airport sites by simulating the locations at which a plane's engine noise would strike the earth. The site at which noise pollution is the least could then be selected for a future air terminal.

The program was written for the CDC-3800 computer and accepts data in the form of temperature or sound speed versus height profile. Other data may also be entered.

...more than a city ...more than a song

SAN JOS



T^{HE} CITY OF SAN JOSE in California is a leader in the fruit canning and packing industry. The city also is a giant in track and field athletic championships, and it's the town featured in Dionne Warwick's sizzling song that 204,000 people call home.

But to Navymen of the Seventh Fleet, the name San Jose is associated with a variety of items of importance to the ships of the Fleet and their crews-ranging from steaks, ice cream, watermelon, sodas, movies and popcorn, to wrenches, mail, jet engines, lumber-and 30,000 other items. The fast combat store ship San Jose is a "general store"-a supermarket on the high seas.

The 16,500-ton ship is the seventh and newest addition of her class to the Navy's floating supermarket chain. Nearly twice the length of a football field, she was designed to deliver refrigerated stores, dry provisions, technical spares, including aviation parts, and general stores type material to the Fleet at sea, thereby increasing Fleet endurance, and improving living

Above: USS San Jose (AFS 7). Left: A UH-46 Sea Knight helicopter airlifts groceries from the San Jose flight deck, bound for a waiting flattop. conditions for shipboard Navymen. San Jose fills this order with precise delivery of men, equipment and supplies-vital necessities to the operating naval task forces, which are constantly on the move.

THE COMMISSIONING OF San Jose in October 1970 added additional versatility to the Navy's seagoing supermarket concept. And today, despite her youth, her exploits during early childhood are setting a precedent in modern logistic support. Employing the services of Helicopter Squadron Three, Detachment 103, along with a new transfer system called STREAM (Standard Tension Replenishment Alongside Method), San Jose can deliver more groceries in an hour than 100 shoppers can gather at a civilian supermarket in an entire afternoon.

An automated propulsion system. featuring airconditioned control room, bolsters engineering efficiency, allows direct control from the bridge, and significantly reduces the size of the engineering crew.

A digital computer keeps track of the supply department's \$5 million inventory.

In the crew's mess, there's green plush carpeting, wood-grained paneling, a low-hanging overhead with fancy electrical fixtures, color TV sets and bright, colorful paintings. Combined with tasty menus and soft music, the accommodations rival anything afforded by luxury liners and elite restaurants.

Under Captain James H. Morris, the 400 crewmembers of the Pacific Fleet Service Squadron Seven ship have made lots of friends, not only among other Navy ships, but also in their travels as seagoing ambassadors. This has earned their ship a reputation already as she pulls into a foreign port. And she's always on the go.

After visits to Acapulco, Mexico; Vancouver and Esquimalt, British Columbia; Seattle, Wash.; and San Francisco, Calif., San Jose sailed from Alameda in September 1971 on her first deployment to the Western Pacific.

Traveling to Subic Bay, Singapore, Kachsiung, Hong Kong, and operating on Yankee Station off the Vietnam coast, she maintained a busy schedule making deliveries to combat units during numerous "swings on the line."

The skipper calls his crew "fantastic."

"This is my 14th ship," he said, "and I've never seen anything like it. The men all give 100 per cent. There's a special enthusiasm and special pride on this ship."

He points to the ship's high reenlistment rate as evidence of the Spirit of San Jose-100 per cent for career petty officers and 76 per cent for first-term eligibles, for an 88 per cent average.

A young petty officer said, "We have frequent rap sessions on the helo deck, and there is communication from the commanding officer on down to the newest seaman apprentice."

Even a "salty" seaman, after boarding San Jose, is ready to admit that the ship-like her namesake cityis superlative.

-Story and photos by JOC Glenn McDonald, USN.



Above: Data processing technicians program information for the ship's supply department computer. Below: A warehouseman rechecks his inventory in the huge refrigerated storage area below decks. Bottom: Captain James H. Morris addresses his crew on the fantail of the ship.







COMPUTERIZED AM

THE NAVY'S GROWTH in the age of computerization reached command facilities of amphibious warfare flagships with the introduction of a new air coordination system called the Amphibious Flagship Data System—AFDS—an outgrowth of the Naval Tactical Data System.

The new amphib system is operated by the Tactical Air Control Squadron assigned to a flagship and is designed to provide positive radar control of all aircraft in an amphibious operation.

In this way, the air staff of an amphibious task force can keep abreast of the overall picture of air operations. Previously, all guidance techniques used to control fighter and attack aircraft were performed by

SPACE AGE COMMUNICATIONS AT SEA

C^{AN} A COMMUNICATIONS SATELLITE bring happiness to the men in the radio shack of uss Oklahoma City (CLG 5)? According to the ship's communicators it helped, for use of the satellite dramatically improved the reliability of the transmission path and increased the number of error-free messages.

uss Oklahoma City has one of the more sophisticated communications systems in the Navy. Her message center, in addition to employing the communications satellite, also has a computerized message processing and distribution system. According to the communicators' reckoning, Oklahoma City can handle more messages than any other ship in the Fleet.

The heart of the system, which handles more than 3000 narrative messages a day, is the central processor which includes an all-purpose computer, a magnetic disc file and a high-speed line printer. An entry operator assigns action cognizance and internal routing to incoming messages and feeds them to the central





T WHITNEY

manual methods.

Five tactical air control squadrons are trained in the use of the new computer systems installed aboard two amphibious flagships-uss *Blue Ridge* (LCC 19) and *Mount Whitney* (LCC 20). TACRONS 11, 12 and 13 support the Pacific Fleet amphibious effort while 21 and 22 operate with the Gator Navy in the Atlantic Fleet. Each of the TACRONS is made up largely of experienced naval aviators and air control men specially indoctrinated in amphibious warfare, and usually consist of 12 officers (including a liaison officer from the Army and one from the Marine Corps) and 28 enlisted controllers and support personnel.





Far left: USS Oklahoma City (CLG 5). Left: LTJG Vance Lee adjusts the vital, multipurpose computer. Above: CDR William Curry describes Oklahoma's unique communications system. Above right: RM3 D. R. Charbeneau handles an incoming message. Below: A satellite that intercepts and transmits communications signals.





processor, which routes them to various printers located throughout the ship. The line printer, which operates at almost incredible speed, can provide an instant copy of the message while, at the same time, punching a teletype transmission tape, when one is required. All messages are routed to the magnetic disc file for a three-day storage period, after which they are transferred to a microfilm file where the messages are kept for up to two years. If required, an old message can easily be recovered from the storage device and quickly routed.

Except for about 50 hours, the communications system has been in constant operation for about two and a half years, thanks largely to the efforts of Lieutenant (jg) Vance Lee, the ship's Message Processing and Distribution System Officer. The lieutenant also credits the system's reliability to its own ruggedness which helped it survive gunfire shock and the other hazards of naval shipboard environment.

MALE NURSE A GROWING CAREER OPPORTUNITY



"W^{ITH LOYALTY} will I endeavor to assist the physician in his work and devote myself to the welfare of those committed to my care," pledged Paul J. Howerton early last summer as he was graduated from the St. Joseph Hospital School of Nursing in Memphis, Tenn.

Five minutes after his graduation, Paul Howerton took another oath-this time to "support and defend the Constitution of the United States"-and was commissioned an ensign in the U. S. Navy. After completing Nurse Corps Indoctrination in Newport, R. I., Ensign Howerton joined 14 other male nurses in August to serve the health needs of patients at the Naval Hospital in Millington, Tenn.

Paul Howerton had originally hoped to enter medical school and become a physician, knowing that the health care field would satisfy his desire to help others and his wish to know that his life work would be of benefit to the world in which he lives. When a person becomes ill he looks to the medical professions for help, and his cure or relief of pain is ordinarily a clear success. ENS Howerton appreciates this rapid feedback that work in health care offers, as opposed to other fields where results are often delayed.

Paul's desire to become a doctor was halted by financial limitations so he turned to nursing as an alternative in the health care field. After completing three years of nursing school, he received assistance from the Navy for his final year. With the pay of a hospitalman, along with commissary and exchange privileges, and quarters allowance, Paul and his wife had no monetary worries during his senior year.

CURBENTLY WORKING in the intensive care unit at the modern naval hospital, ENS Howerton is assisted by three Navy hospital corpsmen in serving heart patients and others in need of extensive medical care. He is also capable of serving on a surgical support team and setting up field hospitals for emergency situations, such as hurricanes or other disasters, where local medical facilities are inadequate to cope with the situation.

Added opportunities for travel, and the variety and responsibility of his work are only three of the reasons why Paul chose not to work as a civilian nurse. However, with previous experience in civilian hospitals behind him, ENS Howerton found that the Navy's

Left: One of Ensign Howerton's duties as a member of the Nurse Corps is the administration of restricted drugs to patients, a job the hospital corpsman is not authorized to accomplish. pay and benefits give him an income that is 20 to 25 per cent higher than his contemporaries earn. He can also go back to school to earn any related degree –with the Navy footing the bill and his income continuing.

Beyond these financial and educational advantages, he prefers the work situation offered by the Navy. Comparing his present duties to experiences in civilian hospitals, ENS Howerton believes that the Navy's medical system allows for a better nurse to patient ratio-resulting in improved relationship.

SINCE MOST CIVILIAN health insurance policies pay only for inpatient hospital care, many people bring minor ailments into the hospital for financial reasons. In Armed Forces hospitals, however, medical care is a service benefit so financial pressures are not significant; accordingly, most minor ailments are handled by the outpatient departments, so there are fewer patients inside the hospital. This enables the staff to devote more time to each patient—and do a better job.

As ENS Howerton put it, "You can go home knowing that you did everything you could do for the patient-not just everything you had time to do."

While the profession of nursing has been traditionally overworked and underpaid in the civilian world, Paul thinks that the future holds an upgrading of working conditions and professional standing for nurses. As doctors' patient loads increase almost daily, they are forced to rely increasingly on a skilled staff of administrative and support personnel. This need, in turn, has elevated nurses' training to a higher level of competence in recent years, since the nurse and other paramedical people have begun to handle problems that previously were the exclusive domain of the physician.

ENS Howerton also believes that the presence of male nurses will become more frequent in the future as the current trend continues. St. Joseph Hospital School of Nursing was chartered in 1919 to provide training for both men and women, but the first male was graduated in 1957. In Paul's class there were only four male students in a class of 26, but this year's enrollment at St. Joseph's has reached a 70 to 30 female to male ratio. An increasing number of male nurses are appearing in the Navy, as hospital corpsmen often elect to go through the Naval Enlisted Nursing Education Program (NENEP) in order to receive a degree and a commission.

ENS Paul Howerton is one of many men and women in the Navy Nurse Corps whose invaluable assistance and professional skills have made medical care for servicemen and their families the equal of any available in the United States today.

-Story and Photos by PH2 Michael Diehl

Top: Ensign Howerton works in the intensive care section of this modern medical facility. Middle: Continuing technical study is essential in maintaining a nurse's demanding skills and duties. Bottom: Ensign Howerton indoctrinates another nurse on some of hospital's sophisticated electronic monitoring equipment.



CHRONOLOGY OF THE SEA SER THE DEASER AND



ICE **LY NAVY** THE BIRTH OF THE NATION

WITHIN A FEW YEARS—three, to be exact—the Navy will celebrate its bicentennial. And the following year, the entire nation will celebrate its two hundredth anniversary. Though far removed in time, and perhaps in thought, Americans of today will find their imagination wandering back to the days when the 13 original colonies first took up arms to seek their independence.

Great tales have been told and retold about the war that resulted and the manner in which untrained colonials marched out to meet the finest professionals of England and Europe on the field of battle-they, themselves, were stirred by tales of glory and heroism which echoed from Concord Bridge and Lexington. There were highlights and brief moments of exaltation for the colonials following battles at Breed's Hill, Saratoga, Trenton and the like, and there were heartache and near despair to be found in other events which took place on the Heights of Harlem and at Valley Forge.

What, then, tipped the balance? Why were these loosely united (and at times divided) people able to achieve their goal?

T^{HE} ANSWER—and one of the secrets of that struggle as well—lies in the fact that these 13 colonies sat on the edge of a huge body of water, the Atlantic Ocean. When England, in 1763, decided to tighten her control of North America after winning Canada from France, she was to initiate an effort that would end some two decades later with her defeat. She misjudged, or underestimated, one of the first lessons of war—to secure and maintain control of one's supply lines—and the American colonists played havoc with her along a supply route that was thousands of miles long.

There were many factors involved in achieving final victory, but no one can underestimate the "influence of seapower" on the course of history.

Out of countless bays, inlets and the mouths of rivers and creeks, privateers took to the war. Led at first by men like Jeremiah O'Brien—who just plain had it in for the British—the colonials figured that anything made of wood which floated on the water and flew the grand ensign was fair game and ripe for the picking. Later, on 13 Oct 1775 to be precise, a youthful Continental Navy came into being and the struggle at sea became a full-fledged war between the Americans, and their French allies, against their English cousins.

It might be said to have been primarily a privateers' war when viewed from the American side of the fence; the 13 ex-colonies could never muster more than a 27-ship navy in all that long war—but they were allied with an important seapower. And this was the beginning of the United States Navy.

WITH YORKTOWN (which was a classic case of a general facing the enemy with his backside to the water and an unfriendly fleet) came the peace and independence in 1783. (The formal birth of the United States took place when Washington was chosen President in 1789.)

The Navy went on crisscrossing the oceans, showing and protecting the flag, and fighting for the freedom of the seas in incidents, skirmishes and outright battles. Today's Navy inherits the great names of the men, the early battles and the ships that were involved –the names John Paul Jones, Ranger, Oriskany, Truxtun, Bainbridge, Bonhomme Richard, and others, are still with us and echo each day on the radar set of history.

As the nation reaches its 200th year in 1976, the Navy will be marking its 201st year, still on the line and ready for any eventuality. Below, and in future issues of ALL HANDS, will be presented a thumbnail history of the Navy in chronological order. Of course, only the highlights of the service are hit.

Yet, presented in this brief form, one can see that it's been a busy 197 years plus for the senior sea service. A chronology can give only a hint of how things were. Perhaps a painting may brighten the message as one witnesses, let's say, the scene where the frigate uss *Randolph* heads into battle against the British *Yarmouth* and *Randolph* blows up. (Freedom is not won easily-or preserved without hardship.)

A chronology, as the briefest of sketches, can serve a purpose by, first, marking and duly noting a recorded fact and, second, whetting the appetite of the reader to do more research on his own-hopefully, this presentation serves both ends. 12 Jun-Jeremiah O'Brien, with a sloop and a party of Maine woodsmen, took the British cutter Margaretta off Machias, Me.

12 Jul-O'Brien, again-this time he captured two British ships in the Bay of Fundy.

7 Sep-Two days after leaving Beverly, Mass., Hannah returns with the British ship Unity as a prize.

13 Oct-Second Continental Congress establishes the Navy.

27 Oct-Naval Committee presents Congress with a bill to acquire 13 ships.

30 Oct-John Adams joins Naval Committee–Congress authorizes two additional vessels.

5 Nov-Congress appoints Esek Hopkins as C-in-C of the fleet.

28 Nov-Navy Regulations, drafted by John Adams, accepted.

29 Nov-British brig Nancy is captured by the Continental schooner Lee.

13 Dec-Thirteen more ships added to fleet by Continental Congress.

14 Dec-Former Naval Committee, now Marine Committee, increased to 13 members (one from each of the colonies) and headed by John Hancock.

22 Dec-Commissions are approved for first regular officers of the Navy.

1776

1 Jan-British had 89 ships with 2576 guns to Continental Navy's 14 ships with 332 guns.

5 Jan-First squadron of the new Continental Navy puts to sea.

6 Jan-Congress orders appointment of surgeons and surgeon's mates for new Navy.

15 Jan-Eighteen men out of Newburyport, Mass., capture a supply ship of the British.

17 Feb-First war cruise of the Continental Navy begins.

3 Mar-Continental Navy conducts an amphibious landing at New Providence in the Bahamas.

23 Mar-Privateers are authorized by Continental Congress.

4 Apr-Brig Lexington takes first enemy warship.

6 Apr-British frigate Glasgow attacks ships of Continental Navy.

7 Apr-Brig Lexington captures British ship Edward. 8 May-Schooner Wasp captures British Betsey.

28 Jun-Charleston, S. C., is attacked by a British fleet.

6 Jul-Sloop Sachem captures British privateer called the Three Brothers.

13 Jul-Brig Reprisal captures British Peter.

27 Jul-Brig Reprisal is attacked by British ship Shark.

5 Sep-Navy adopts its first uniform.

7 Sep-"American Turtle," first submarine, attacks British.

11 Oct-Date of first battle of Lake Champlain.

12 Nov-The Alfred and the Providence team up to

capture British transport Mellish.

15 Nov-New pay scale for the Navy adopted by Continental Congress.

16 Nov-U. S. Flag is saluted for first time by a foreign power at St. Eustatia.

20 Nov-America of 74 guns is authorized by Congress.

29 Nov-Brig Reprisal arrives in France.

31 Dec-A total of 140 American ships were captured by British from 10 Mar 1776; American ships captured 342 British ships during same period.

1777

23 Jan–Congress authorizes building of two frigates. 3 Mar–Cabot captured by British ship Milford.

30 Apr-Ship Hannah (first ship of American Navy) is captured by British squadron.

7 May-The cutter Surprise is captured by British Prince of Orange.

21 May-Ships Hancock and Boston sail from the port of Boston in company with nine American privateers.

7 Jun-The Hancock captures the British frigate Fox.

14 Jun-Basic design of present day national ensign is adopted by Congress.

4 Jul-The first "Stars and Stripes" flag flies from mast of a Continental warship.

7 Jul-The Hancock and her prize, the frigate Fox are both captured by a British squadron.

25 Jul-Subsistence of naval officers while in foreign ports is authorized by the Congress.

4 Sep-The frigate Raleigh disables the British ship Druid.

19 Sep-British Alert is taken by brig Lexington.

31 Dec-British lost a total of 464 ships to new nation during the year.

1778

14 Feb-French fire first official salute to the U. S. flag at Quiberon.

 $\overline{7}$ Mar-Frigate Randolph blows up while engaging British ship Yarmouth.

1 Apr-British squadron captures a Continental ship, the Virginia.

10 Apr-Ranger, skippered by John Paul Jones, leaves France for raid on British coast.

17 Apr-Ranger captures a British brig while on raiding cruise.

19 Apr-The British Lord Chatham and three smaller vessels are captured by Jones in Ranger.

22 Apr-Jones, raiding Whitehaven, attempts to capture the Earl of Selkirk.

24 Apr-Ranger captures British Drake.

27 Sep-British Experiment, Wallace, and Unicorn are all taken by frigate Raleigh.

14 Nov-Pursers for ships of 14 guns and larger are ordered by Congress.

1779

14 Jan-Alliance sails from Boston carrying Marquis





Top: New England armed vessels on Lake Champlain, Oct 1776. Above, right: First salute to the American flag by a foreign power, Jones' Ranger. Above: Bon Homme Richard and Serapis. Below: John Paul Jones from portrait.

de Lafayette home to France.

4 Feb-John Paul Jones takes command of Bon Homme Richard in France.

6 Apr-British Hibernia and seven other vessels are captured by three American ships: the sloop-of-war Ranger and the frigates Queen of France and Warren.

7 May-American ship Providence captures British Diligent.

18 Jul-American ships sloop-of-war Ranger, frigate Queen of France and sloop-of-war Providence set out to attack British shipping.

25 Jul-Penobscot Bay in Maine is scene of amphibious expedition against British.

23 Sep-Frigate Bon Homme Richard captures British Serapis in famous fight.

31 Dec-British lost a total of 516 ships in 1779.

1780

4 May-Navy adopts its first official seal. 12 May-British capture frigate Queen of France,













Above, left: Navy uniforms, 1797. Above: The Battle of Tripoli. Below, left: Benjamin Stoddert, first Secretary of the Navy. Bottom: Constellation and Vengeance, February 1800.

sloop Providence, frigate Boston and sloop-of-war Ranger.

1 Jun-Trumbull engages British privateer Watt.

8 Oct-Saratoga captures British Charming Molly.

9 Oct-Saratoga disappears off Delaware Cape.

31 Dec-British lost 596 ships to Americans during the year.

1781

7 Feb-Appointment of Secretary of Marine is authorized.

2 Apr-British Mars and Minerva are taken by Alliance.

15 Apr-Confederacy captured by British ships Roebuck and Orpheus.

29 May-Alliance captures two British ships, Atlanta and Trepassy.

9 Aug-British ship Iris captures the frigate Trumbull.

29 Aug-Office of Agent of Marine is founded.

31 Dec-British lost 625 ships, yet capture 317 American ships in 1781.

1782

8 Apr-The Pennsylvania state ship Hyder Ally captures British warship General Monk (formerly Continental ship George Washington).

3 Sep-The nation's first 74-gun ship, the America, is turned over to France.

19 Dec-The South Carolina is captured by squadron of British ships.

1783

24 Mar-The Congress recalls all armed vessels sailing under American colors.

15 Apr-All naval prisoners of war are ordered released by Congress.

19 Apr-General George Washington proclaims American Revolution ended. At the end of the war British naval strength: 469 vessels with 174 of them mounting 60-150 guns. The American naval strength during war reached a peak of 27 ships averaging 20 guns.

1784

1 Nov-First Secretary of Marine, Robert Morris, retires.

1785

3 Jun-Continental Navy's last ship, frigate Alliance, is ordered sold; Navy demobilized until 1794.

25 Jul-The merchant schooner Maria, of American registry, seized by Algerian pirates.

30 *jul*-Five days later, another American merchant ship, *Dauphin*, is captured by Algerian pirates.

1787

30 Sep-Columbia sailed from Boston, Mass., for Pacific; she was the first American merchant ship to circumnavigate the globe.

1790

9 Aug-The Columbia arrives at Boston completing first circumnavigation of the globe by a U. S. ship.

1791

6 Jan-The Committee on Mediterranean trade-in the Senate-reports that U. S. trade in that area was impossible to protect without the existence of a naval force there.

1792

18 Jul-The "Father of the American Navy," John Paul Jones dies in Paris, France.

1793

8 Oct-Three American trade ships, *Thomas*, *Hope* and *Dispatch* are taken by Algerian pirates.

11 Oct-The merchant ships George, Olive Branch and Jane taken by Algerian pirates.

23 Oct-Still another merchant ship, the President, is taken by pirates.

23 Nov-The Minerva, another American merchant ship, taken by Algerian pirates.

1794

27 Mar-The present-day Navy is established by Congress.

5 Jun-The new Navy announces the list of its first officers.

3 Feb-The Navy's Supply Corps is established.

1796

15 Mar-Congress is urged by President Washington to authorize completion of warship construction for the new Navy.

4 Nov-A treaty of peace with Tripoli is signed by U. S.

25 Dec-The Commerce, an American vessel, is attacked by French privateer.

1797

24 Feb-French privateer seizes the American merchant schooner Zilpha.

2 Mar-France flexes her muscles and says Americans serving in any of her enemy's ships would be treated as pirates. Also U. S. ships not having a proper list of crews would be lawful prizes.

7 Mar-A French armed brig takes the American trader Cincinnatus.

10 Mar-The U. S. trade ship Calliope seized by French privateer.

10 May-America launches the new frigate United States.

1 Jul-A set of new Navy regulations is passed by Congress to govern the sea service.

7 Sep-The Frigate Constellation is launched; she's now berthed at Baltimore, Maryland.

21 Oct-The Frigate Constitution is launched; she's now the "flagship" of ComOne in Boston.

1798

18 Jan-All ships trading with the British are considered to be lawful prizes, France declares.

9 Mar-George Balfour appointed first surgeon in U. S. Navy.

27 Mar-Constitution, Constellation and United States are ordered by Congress to be equipped.

17 Apr-Twelve vessels of war are ordered to be bought by Congress.

 $3\bar{0}$ Apr-The establishment of the Navy Department takes place.

1 May-Man nominated to be first Secretary of Navy, George Cabot, declines.

4 May-President Adams is authorized to buy or build 10 vessels.

10 May-The Frigate United States is launched.

16 May-Adams urges Congress to strengthen the new Navy.

18 May-First Secretary of the Navy, Benjamin Stoddert, is appointed, accepts.

28 Jun-Act authorizing prize money for crews of U. S. ships is passed.

7 Jul-French privateer Croyable is captured by American frigate Delaware.

16 Jul-Construction of three frigates on which work was halted begins again by act of Congress.

20 Nov-French Insurgente and Volontaire are captured by U. S. schooner Retaliation. 29 Dec-Secretary of the Navy submits his first annual report.

1799

3 Feb-French privateer Amour de la Patrie sunk by the United States.

25 Feb-One ship-of-the-line and six sloops-of-war ordered by Congress.

2 Mar-Act for government of the Navy passes. Another act authorized pensions, and a third increased the strength of Marine Corps.

12 Mar-Search of suspicious French ships and retaking any armed prizes are ordered by the Navy.

15 Aug-Launching of the frigate Congress.

2 Oct-Navy establishes the Washington Navy Yard. 30 Oct-New Navy's first Chaplain, William Balch, is commissioned.

2 Dec-Launching of frigate Chesapeake.

1800

1 Jan-Two West Indian pirate barges sunk by schooner Experiment.

22 Jan-Capt Thomas Tingey ordered to duty as first superintendent of Washington Navy Yard.

24 Jan-Three French privateers taken between this date and 1 Mar by frigate Adams.

1 Feb-French Vengeance engaged by Constellation. 7 Feb-First American warship, the frigate Essex, to

cross the Equator. 28 Mar-uss Essex rounds Cape of Good Hope; first time for a U. S. Navy ship.

3 Apr-French privateer La Jason captured by brig Adams.

10 Apr-Launching of uss President.

23 Apr-"Act for the better Government of the Navy" passes.

4 Jun-Site of Portsmouth Navy Yard, N. H., is purchased.

17 Jun-U. S. ship Enterprise captures the French privateer Cygne.

1 Jul-uss Essex performs first convoy duty.

4 Jul-French privateer L'Aigle captured by schooner Enterprise.

14 Jul-Frigate Insurgent, with 340 aboard, sails for West Indies from Norfolk and was never seen again.

23 Jul-French privateer Flambeau captured by Enterprise.

3 Aug-French Vengeance captured by Trumbull.

1, Sep-French privateer Deux Amis captured by schooner Experiment.

12 Oct-French Le Berceau captured by USS Boston. 24 Dec-French Amour de la Patrie taken by USS Enterprise.

1801

3 Mar-Navy greatly reduced with passing of Peace Establishment Act.

4 Mar-Navy forced to sell 20 of its ships.

20 May-U. S. sends four warships to Mediterranean

to protect U. S. commerce there.

1 Jul-Gibraltar reached by the U.S. squadron.

1 Aug-uss Enterprise captures the Tripolitan ship Tripoli.

1802

17 Jun-Franklin, an American trade ship, is captured by Tripolitan pirates.

22 Jul-Two Tripolitan gunboats sunk by frigate uss Constellation.

1803

28 Feb-Construction of four ships ordered, Congress lays out \$96,000 for this purpose.

22 Jun-Tripolitan Mashouda is sunk by uss Adams. 26 Aug-Morrocan Meshboha taken by frigate uss Philadelphia.

31 Oct-Tripolitans capture Philadelphia and take her to Tripoli harbor.

12 Nov-Blockading Tripoli harbor is begun by U.S. ships.

23 Dec-Tripolitan Mastico is captured by brig uss Enterprise.

1804

16 Feb-LT Stephen Decatur and raiding party destroy frigate *Philadelphia* in Tripoli harbor.

30 Apr-Tripolitan sloop captured by brig Argus.

3 Aug-Five attacks on defenses of Tripoli harbor begun by U. S. squadron; attacks ceased 3 Sep.

4 Sep-U. S. ketch Intrepid blows up in Tripoli harbor and 13 aboard are lost.

12 Sep-Three ships trying to enter Tripoli harbor are captured by American warships Constellation, President, and Adams.

24 Apr-A Tripolitan gunboat captured by uss Constitution, together with two prizes taken earlier by the pirates.

27 Apr-Combined land-sea assault takes Derne, Tripoli; first U. S. flag flies over foreign soil.

1807

22 Jun-Incident involving Chesapeake and Leopard takes place.

26 Oct-Mary Ann and Violet, two U. S. trade ships, taken by Algerians.

18 Dec-188 new gunboats are authorized by Congress.

1808

17 Apr-Bayonne Decree is issued by Napoleon. It orders that American ships entering French controlled ports in violation of Embargo Act be seized.

1809

3 Mar-New act orders that pursers be bonded.

1810

23 Mar-Ramboiullet Decree, signed by Napoleon, which allows for the sale of captured American vessels.

54



Above: United States and Macedonian, October 1812. Right: Burning of the Philadelphia. Below, right: Essex and Alert. Bottom: Constitution and Guerriere in famous sea battle.



1 May-New act suspends Non-Intercourse Act of 1809, providing for reapplication if Great Britain or France should again interfere with American commerce.

24 Jun-British Moselle fires on U. S. brig Vixen.

17 Dec-Future Admiral David G. Farragut is appointed a midshipman.

1811

26 Feb-Navy hospitals provided by Congressional act.

12 Apr-Point George on Columbia River reached by merchant ship *Tonguin*. A trading post and settlement is established at Astoria, Ore.

6 May–uss President dispatched to protect American shipping off Sandy Hook.

1812

30 Mar-Pursers' bond set at \$10,000 by act.

4 Apr-Ninety-day embargo declared on all U. S. shipping.

13 Jun-British free two seamen impressed from uss Chesapeake.

18 Jun-War declared between U. S. and England; USS Wasp only ship of 18 at sea at start of war.

21 Jun-Squadron departs New York to raid British convoys.

23 Jun-British Belvedere engaged by USS President.

2 Jul-"Free Trade and Sailors' Rights" flag flies from frigate Essex as she engages British.









Above: Hornet and Peacock, Feb 1813. Left: The Battle of Lake Erie, Sep 1813. Below, left: The Enterprise and Boxer. Bottom: Attack and capture of the American Flotilla on Borgne Bay, Dec 1814.





17 Jul-British squadron fails to capture USS Constitution.

26 Jul-British brig Leander taken by uss Essex.

3 Aug-British brig Brothers taken by uss Essex.

13 Aug-Essex vs British Alert, first Naval action of "Second War for Independence."

19 Aug-British Guerriere captured by Constitution. 9 Oct-British warships at Fort Erie attacked by Americans in boats during night.

18 Oct-American sloop-of-war Wasp takes British Frolic-however both ships are later captured the same day by British Poictiers.

25 Oct-British Macedonian taken by frigate United States.

27 Oct-First U. S. Navy cruise into Pacific Ocean begun by uss *Essex* with departure from Delaware Capes.

2 Dec-British brig Recovery captured by USS Argus. 6 Dec-Dorothy, a British schooner, taken by USS Argus.

12 Dec-British packet Norton taken by uss Essex. 17 Dec-Vancise, a British schooner, taken by uss Argus.

29 Dec-British Java taken by uss Constitution.

30 Dec-British ships Abrantes and Mina captured by New York Flotilla.

1813

13 Jan-Blockading Chesapeake and Delaware Bays

begun by English squadron.

14 Jan-British Liverpool and frigate Hero captured by frigate uss Chesapeake.

4 Feb-British Resolute captured by brig uss Hornet. 14 Feb-Frigate Essex enters Pacific Ocean; first U. S. warship in those waters.

24 Feb-British Peacock captured by uss Hornet.

14 Mar-Valparaiso, Chile, reached by uss Essex.

25 Mar-First prize taken by U. S. Navy in Pacific -Essex takes Peruvian ship Nereyda.

9 Apr-British privateer Caledonia captured by Nonsuch.

27 Apr-Navy and Army expedition takes York, Canada.

29 Apr-British Montezuma, Policy, and Georgiana, all captured by boat parties from uss Essex.

27 May-Fort George, Canada, attacked by U. S. Army-Navy forces.

28 May-Five British whalers captured by frigate Essex and her prize, Georgiana.

3 Jun-British on Lake Champlain capture three U.S. sloops.

2 Jul-British Traveller captured by USS President. 4 Jul-British Duchess taken by USS President.

12 Jul-British Jean-and-Ann taken by uss President.

14 Jul-LT John M. Gamble, USMĆ, becomes first Marine officer to command a ship in battle.

18 Jul-Four British ships captured by Frigate President: Daphne, Eliza Swan, Alert and Lion.

31 July-Control of Lake Champlain gained by British fleet.

7 Aug-The British on Lake Ontario engaged by U.S. naval forces.

5 Sep-British ship Boxer captured by schooner Enterprise.

10 Sep-Oliver Hazard Perry achieves, in Battle of Lake Erie, first defeat in history of a British naval squadron.

5 Dec-uss Congress captures British Atlantic.

1814

6 Jan-British, aboard the Bramwell, arrive at Annapolis, Md. with peace offer.

20 Jan-British prize ship Sincerity captured by uss Enterprise.

29 Jan-British Prince Regent captured by frigate Adams.

3 Mar-Aliens are barred from service in Navy ships. 25 Mar-British Woodbridge taken by Uss Adams.

28 Mar-British Phoebe and Cherub taken by uss Essex.

3 Apr-British privateer taken by sloop-of-war Frolic.

29 Apr-Peacock captures British Epervier.

30 May-Master-Commandant M. T. Woolsey, with boats, captures three British gunboats at Sandy Creek, N. Y.

22 Jun-British Leander taken by Rattlesnake.

28 Jun-Wasp takes British Reindeer.

4 Jul-British Regulator taken by sloop-of-war Wasp.

5 Jul-uss Peacock takes British Stranger, Venus, Adiona, and Fortitude.

6 Jul-British Jenny captured by Wasp.

12 Jul-British Adventure captured by brig Siren.

14 Jul-British Chebaoque captured by a gunboat.

20 Jul-British forts on Lakes Huron and Superior attacked by Joint U. S. Army-Navy forces.

28 Jul-British schooner Favorite taken by Adams.

3 Aug-Peacock sinks British Peggy-and-Jane.

22 Aug-American gunboat flotilla in Patuxent River in Maryland destroyed to avoid capture by British who were marching on Washington.

24 Aug-Battle of Bladensburg on road to Washington.

1 Sep-British Avon sunk by sloop-of-war Wasp.

3 Sep-British on Lake Huron capture two U.S. schooners.

21 Sep-British Atlanta captured by uss Wasp.

1 Oct-Pirate ships captured at Barataria arrive in New Orleans, La.

9 Oct-Wasp disappears with 140 aboard.

29 Oct-uss Fulton, first steam warship, is launched. 15 Dec-Navy, by order of Congress, to be supplied with horses by Army.

23 Dec-Army attack on New Orleans supported by uss Carolina.

24 Dec-Treaty ends war with Great Britain.

1815

8 Jan-U. S. wins Battle of New Orleans.

19 Jan-Purser T. Shields, with six boats, captures nine British vessels at Lake Borgne, La.

23 Jan-British William captured by uss Hornet.

29 Jan-LT Lawrence Kearney, with three barges, captures two British tenders.

¹7 Feb-Navy establishes Board of Naval Commissioners.

23 Mar-British Penguin captured by uss Hornet.

20 May-Squadron sails for Med to put down piracy there.

17 Jun-Algerian Mashouda captured by U.S. Squadron.

19 Jun-Algerian Estedio captured by U. S. Squadron.

28 Jun-Final treaty with Bay of Algiers in effect by U.S. Squadron.

30 Jun-uss Peacock-Nautilus, last action of War of 1812.

5 Aug-Decatur collects indemnity of \$25,000 from Bashaw of Tripoli.

9 Aug-Treaty concluded between U.S. and Tripoli. 10 Dec-School for officers is established.

1819

15 Jul–uss Adams arrives at Orinoco River on mission to discourage piracy. Mission led by Oliver H. Perry.

1820

22 Mar-Decatur and Barron duel near Washington,

D. C., results in Decatur's death. (Dueling in Navy outlawed following this incident.)

16 May-Congress visits China, first U. S. warship to visit there.

1822

7 Jan-Six pirate vessels captured by Porpoise; schooner Spark takes Dutch sloop.

8 Mar-Four pirate vessels taken by USS Enterprise. 25 Mar-U. S. Flag raised over Key West, Fla., for first time.

30 Apr-Pirate schooner Ciehqua taken by schooner Alligator.

2 May-Belvedere, a merchant ship, using hidden guns, drives off pirate schooner.

21 Jul-LT David Farragut, with landing party, destroys pirate stronghold in Cuba.

16 Aug-Pirate schooner Palmyra captured by Grampus.

28 Sep-Peacock captures five pirate vessels.

9 Nov-Alligator recaptures five American ships from pirates.

20 Dec-Navy squadron for suppressing Caribbean pirates authorized by the Congress.

1823

8 Apr-Pirate schooner taken by Musquito and Gallinipper.

16 Apr-Peacock captures two pirate vessels.

21 Jul-Cuban town and eight boats captured by USS Greyhound and Beagle.

1824

1 Jul-Brig Castor-merchant ship-taken by pirates in Caribbean Sea.

20 Oct-Four pirate vessels captured by schooner Porpoise.

1825

7 Sep-Lafayette boards frigate Brandywine for return to France following his tour of America.

1826

31 Aug–Sloop-of-war Vincennes sails from New York on circumnavigation of globe–first U. S. warship to do so.

1827

2 Apr-Construction begins at Portsmouth, Va. on first naval hospital.

16 Oct-Six Mediterranean boats and a schooner captured by Porpoise.

1829

4 Jun-uss Fulton destroyed by explosion at Brooklyn Navy Yard.

1830

8 Jun-Vincennes completes circumnavigation of globe.

6 Dec-Naval Observatory established in Washington, D. C., as first national observatory. 26 Aug-Frigate Potomac, first U. S. warship to make an easterly circumnavigation of the globe, begins cruise.

1832

6 Feb-Pirate villages at Qualla Battoo, Sumatra, destroyed by uss Potomac.

1833

20 Mar-U. S. and Siam sign first commercial treaty between U. S. and an Asian power.

9 Sep-Work is completed in Boston on first federal drydock.

1834

23 May-Potomac arrives at Boston after circling world.

1835

19 Nov-uss Vincennes anchors off Apra, first U.S. warship to visit Guam.

16 Dec-Greatest fire in history of New York City; firemen aided by Navymen and Marines.

1838

20 Dec-Pirates at Qualla Battoo, Sumatra, bombarded by brig Adams.

1839

26 Aug-Spanish slaver Amistad captured by line of battleship Washington.

26 Dec-Wilkes Expedition, first U.S. Antarctic exploration, sails from Sydney, Australia, for South Seas.

1840

19 Jan-LT Wilkes discovers Antarctica.

14 Feb-Several officers and mascot dog from uss Vincennes make first U.S. arrival in Antarctic regions on floating ice.

24 Jul-Fiji Islands natives are attacked by landing party under LT Cadwellader Ringgold for having massacred a U. S. shore party.

1841

9 Sep-Congress authorizes first iron ship in U.S. Navv.

3 Nov-Sailors and Marines, sent into Florida Everglades as part of "Mosquito Fleet" against Seminole Indians.

1842

4 Jul-Electrically operated underwater "torpedo" first tested.

31 Aug-Five Navy bureaus set up by Congressional act.

16 Oct-Navy squadron mistakenly seizes Monterey in California.

1 Dec-Mutiny aboard uss Somers.

1843

5 Aug-Paddle sloop Missouri makes first trans-







Top, left: The U. S. frigate Hudson. Top, right: View of the Antarctic. Above: Scorpion, Spitfire, Vixen and Scourge crossing the Tobasco River, Mexico. Below, right: COMO Sloat takes possession of California. Bottom: USS North Carolina, 1825.

Atlantic crossing by ship of her type.

25 Aug-Missouri arrives at Gilbraltar.

5 Dec-Paddle sloop Michigan launched; though the first prefabricated iron ship, Michigan was not considered an "ironclad."

10 Dec-uss Princeton launched. She was the first steam ship with a propeller-previous ones were paddle driven.

1844

28 Feb-Secretary of State, Secretary of Navy killed in explosion aboard uss *Princeton* in Potomac River.

29 Mar-Uriah Levy, first Jewish officer in Navy, is appointed captain.

20 May-Round-the-world cruise begins for frigate Constitution, out of New York.

15 Aug-Navy gains title to Fort Severn, Annapolis, Md.; transferred from War Department.

10 Oct-The Naval School is opened at Annapolis, Md. (now the Naval Academy).









Above: Navy uniforms, 1852. Left: Matthew Galbraith Perry. Below: SecNav George Bancroft, founder of the Naval Academy. Right: First landing of Americans in Japan, 14 Jul 1853, under Commodore Perry on historic expedition.





1846

18 Feb-"Port and starboard" takes place of "larboard and starboard" by general order.

7 Jul-U.S. squadron occupies Monterey, Calif.

11 Jul-First Naval Academy graduate, Richmond Aulick, commissioned a Passed Midshipman.

20 Jul-uss Columbus reaches Tokyo Bay, first ship to visit Japan.

29 Jul-Capture of San Diego by Navymen and Marines.

22 Oct-"Miss Watson of Philadelphia," christens sloop-of-war Germantown, first time a Navy ship sponsored by a woman.

20 Nov-Somers destroys Mexican ship Creole. Forts at Canton, China, attacked by U.S. Squadron; one fort occupied-American flag raised.

6 Dec-LT G. F. Beale delivers first California gold to Washington, D. C.

8 Dec-No losses reported as Brig Somers capsized in squall, Vera Cruz, Mexico.

10 Dec-Tampico, Mexico, object of Naval expedition.

1847

8 Jan-Mexican troops attacked by Navy, Marine and Army forces along San Gabriel River, Calif.

9 Jan-Mexicans defeated by Navy landing parties at Mesa, Calif.

9 Mar-Siege of Vera Cruz.



1 Apr-Mexican ship *Relampago* captured along with the town of Alvarado, Mexico, by screw steamer *Scourge*.

2 Apr-Alvarado, Mexico, occupied by Navymen and Marines.

7 Apr-Chilean ship Argo and Mexican ship Caroline taken by sloop-of-war Portsmouth.

13 Apr-Five-day battle, involving Naval forces, for Tlacotalpam, Talacosa and Tuxpan, Mexico, begins.

30 Apr-Mexican ship Yucateca taken by Boneta.

16 May-Mexican vessel Correo and a launch captured by USS Independence.

14 Jun–Second expedition against Tabasco, Mexico, involving Naval forces begins.

30 Jun-Tamultay, Mexico, taken by Naval forces. 11 Nov-Mazatlan, Mexico, occupied by U.S. Navy.

17 Nov-Frigate Congress and sloop-of-war Portsmouth occupy Guaymas, Mexico, by use of landing

parties.

1848

30 Jan-Naval forces attack Cochori, Mexico. 8 Apr-U. S. flag raised over Sea of Galilee.

1850

24 May-Two ships, uss *Rescue* and *Advance*, depart New York in search of Franklin Expedition, lost in Arctic.

1 Jul-Naval Academy becomes official name of Naval School.

1851

1 Jul-Naval Academy adopts four-year course.

10 Sep-uss Mississippi ferries refugees of "Hungarian Republic" from Dardanelles to Gibraltar.

1.852

5 Feb-Navy dedicates chapel built at Annapolis, Md., first to be built on Naval property.

8 Mar-Treaty talks opened by Commodore Perry at Yokohama, Japan.

31 Mar-U. S. treaty with Japan signed by Commodore Perry.

4 Apr-British, U.S. naval forces fight terrorists at Shanghai.

10 Jun-Naval Academy holds first formal graduation exercises.

13 Jul-uss Cyane bombards San Juan de Nicaragua in answer for ill-treatment of American citizens there.

1855

1 Feb-Water Witch is fired upon by forts while making survey in Paraguay River.

23 Oct-Towns in Fiji Islands bombarded by uss Adams.

13 Dec-uss Roanoke, first frigate with turrets, is launched.

(This chronology to be continued in future issues.)

letters

Medal Eligibility

SIR: I would like to know if a twoweek period of active duty on board a USN ship as a Reservist would make a person eligible for the National Defense Service Medal.—I.P.P. YNC, U.S.N.

• No – according to SecNavInst 1650.1D, Art. 431/12, a short tour of active duty to fulfill training obligations under an inactive duty training program does not fulfill the requirement for the NDSM. However, Reservists ordered to TEMAC or training duty for periods exceeding 30 days are eligible for the NDSM.-ED.

Schooling Overseas

SIR: If I volunteer for overseas duty with a nonrotated ship homeported in Italy or Greece and I pay for the transportation of my family to Berlin, Germany, would I be eligible to send my children to the DOD school in Berlin? –D.W.C. YNC.

•If you are on active duty assigned to a ship homeported in Italy or Greece and elect to transport your family to Berlin at your own expense, your children are not eligible to attend the DOD dependents' school in Berlin at our government's expense. The DOD policy is that if DOD dependents are authorized to accompany sponsors to the area of the sponsor's assignment, such dependents will not ordinarily be entitled to spacerequired, tuition-free education in another area. Since there are adequate DOD-sponsored dependents' schools in Italy and Greece, your dependents will be expected to attend these schools.— ED.

Overseas Retirement

SIR: My retirement is coming up next year. What are the existing Philippine customs, laws, and regulations that pertain to a returning serviceman who wishes to reside there. (I am a naturalized U. S. citizen.) Do I have to pay property taxes for a part, or for the whole, of my household effects even though these have been used, and they are intended for my own use and not for sale?—F.M.C. SD1.

•You are entitled to transportation for your dependents and household goods to any place in the world after retirement. As a naturalized U. S. citizen returning to establish a residence in the Republic of Philippines, you will have the legal status there of a resident alien. Your household goods and personal possessions will be fully subject to applicable Philippine laws concerning import duties and taxes. No exemption arises from the fact that the imported property is for personal use rather than for resale. It should also be noted that liability for duties and taxes would exist even if you were not a naturalized U. S. citizen. Thus, for example, if your wife is still a Philippine national, property owned by her would be subject to taxation too.-ED.

Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, ALL HANDS Magazine (Pers 164), Bureau of Naval Personnel, Navy Department, Washington, D. C. 20370, four months in advance.

• USS Birmingham (CL 62)-15-17 Jun 1973 at St. Charles, Ill. Contact Buck Glans, 1849 Indianapolis Blvd., Whiting, Ind. 46394.

• USS Nashville (CL 43) 14-20 Jul 1973 at Branson, Mo. Contact Audrey and Ed Remler, 5114 W. 69th, Prairie Village, Kan. 66208, or call (913) 432-9725.

• uss Cleveland (LPD 7), commissioning crew. June 1973 at Memphis, Tenn. Contact HMCS Joe B. Havens, USNFR, 3627 University St., Memphis, Tenn. 38127.

• USS Diphda (AKA 59)–July 1973 in Chicago, Ill. Contact Tom Coogan, 12185 Ford Line, Southgate, Mich. 48195.



IC1 Jeremiah H. Paoli





QM2 John L. Draves



EM3 R. F. Pica





CDR Billups E. Lodge



TAFFRAIL TALK

FOR MANY SAILORS, one of the highlights of a yard periodwhether it involves new construction or repairs-is the daily presence of a special breed of men commonly referred to as "yardbirds," and conversations between sailors and these people which often take the form of kidding. It's not unusual to hear a sailor say, "By the time you guys are through working over this ship, she'll probably sink in drydock," to which the yardworker responds: "Seems a shame to waste all this good work on a ship when her crew doesn't know how to sail her." Exchanges are often lively and good-humored, resulting in laughter and occasionally some friendly back-slapping.

But the crew of one ship-uss *Guam* (LPH 9)-got something extra at the end of their precommissioning yard period at the Philadelphia Naval Shipyard. We don't know the exact circumstances in this case, but it's probably a fair guess that some Philadelphia yardbirds, after many such exchanges, decided they wanted the last word-and they got it when they issued the following "official" document to the crew of *Guam*.

LPH Warranty

"The Joint Committee for Yard Development of the Philadelphia Naval shipyard warrants the uss *Guam* (LPH 9), including all equipment and accessories thereon, except perishables, manufactured or supplied by the Philadelphia Naval Shipyard to be free from defects in material and workmanship under normal use and service; Joint Committee's obligation under this warranty being limited to repairing or replacing at its option any part or parts thereof which shall, within ten (10) years after delivery of such LPH to the U.S. Navy or before such LPH has steamed one hundred thousand (100,000) miles, whichever event shall first occur, which shall disclose to the manufacturer's satisfaction to have been defective.

"The provisions of this warranty shall not apply to any LPH which has been subject to misuse, negligence or accident, or which shall have been repaired or altered outside of an authorized LPH dealership in any way so as, in the judgment of the Joint Committee, to affect adversely her performance and reliability, nor to normal maintenance service and the replacement of service items, nor to normal deterioration of trim and appearance items due to wear and exposure."

"This warranty is expressly in lieu of any other warranties, expressed or implied, and of any other obligations or liability on the part of the Philadelphia Naval Shipyard and the Joint Committee for Yard Development."

N THE NOVEMBER ISSUE of ALL HANDS, we inadvertently left off the credit line for the story 'Meet the Champs' and an apology is in order. Our many thanks to JO2 Jim Miller for submitting the story and to PH1 Bill Pointer for his fine accompanying photos. We hope to continue receiving their excellent work and look forward to more adventures from Underwater Demolition Team 21.

The all Hands Staff

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• REFLECTIONS: Respect for the flag, service to the Nation, a deep sense of professionalism and pride in one's self are depicted in this photo of a Navyman saluating as the ensign is hoisted. Photo by PH2 Milt Putnam.







WHEN WE SAY "ALL HANDS," WE MEAN ALL HANDS.