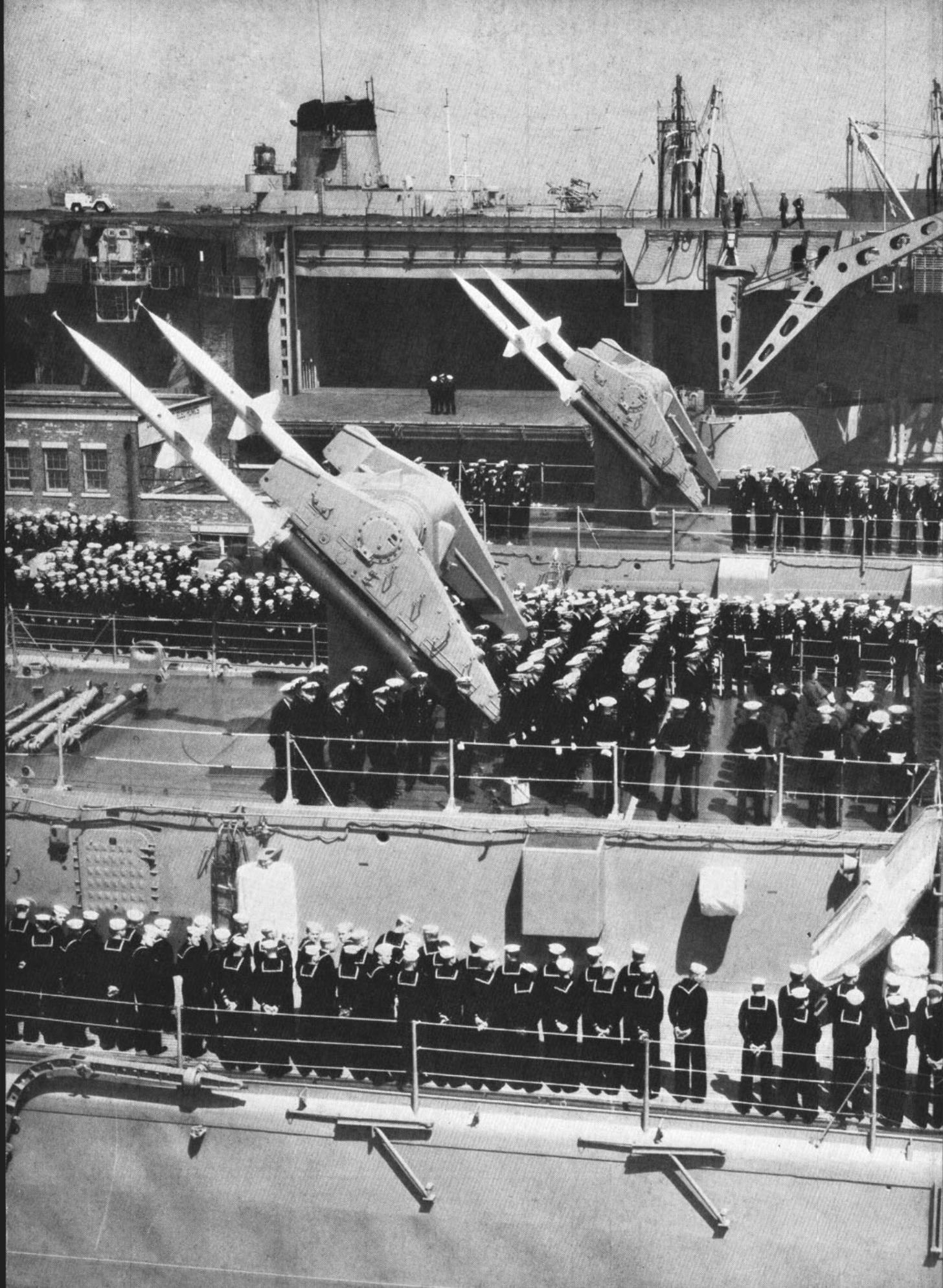


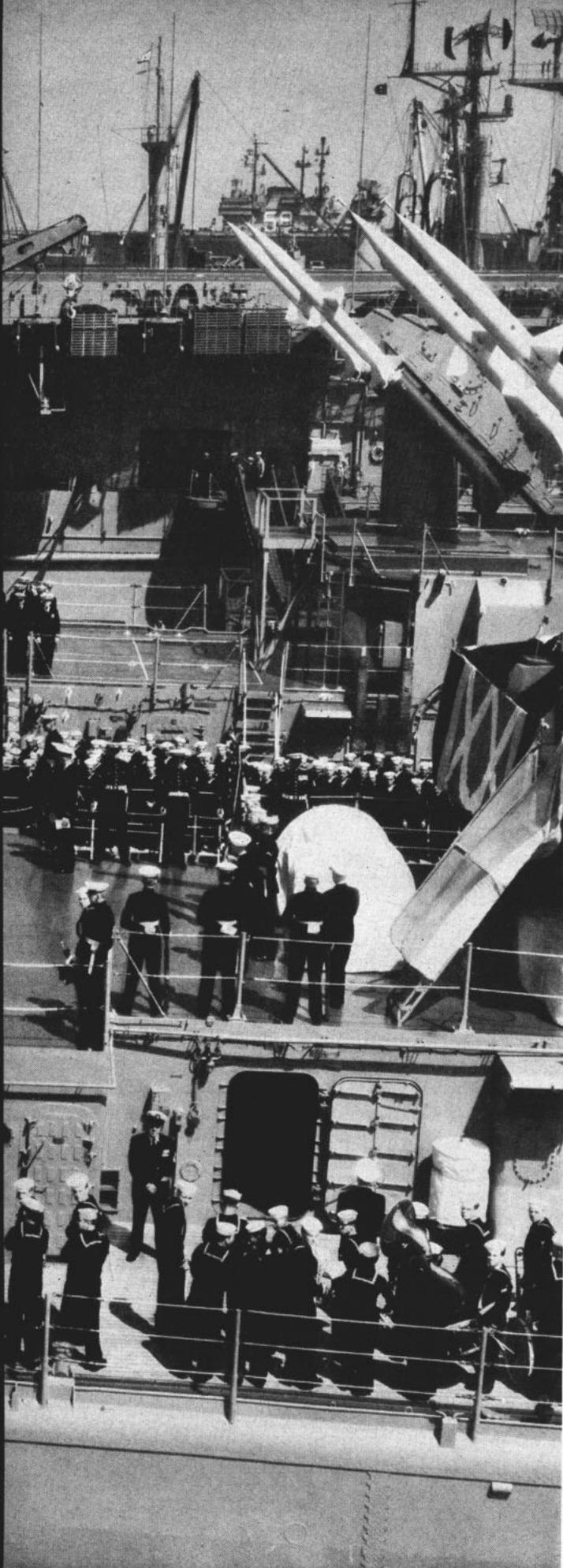
ALL HANDS



This magazine is intended
for 10 readers. All should
see it as soon as possible.
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JUNE 1958





ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

June 1958

Nav-Pers-O

NUMBER 497

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The Chief of Naval Personnel

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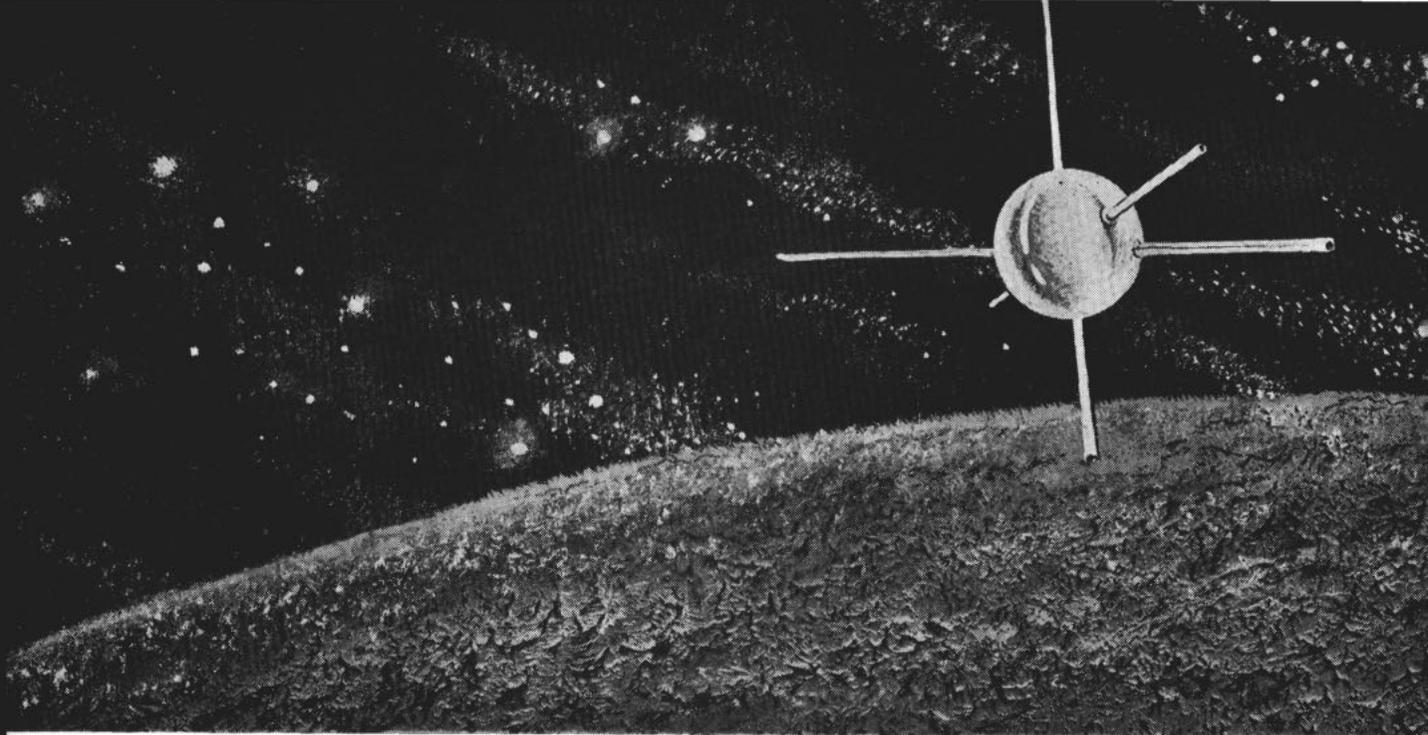
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● FRONT COVER: ON DECK—Destroyermen of USS *Soley* (DD 707) muster for ceremonies at Norfolk at end of four-month cruise in Med. Twenty-eight received Good Conduct medals and nine were advanced to seaman. Here, Captain O.D. Waters, Commander Destroyer Squadron Two, presents Marvin Sizemore, BMC, with his fifth Good Conduct medal.

● AT LEFT: MISSILE MEN MUSTER—Crew members of guided missile cruisers USS *Boston* (CAG 1) and USS *Canberra* (CAG 2) stand at ease while waiting for change of command ceremonies to begin. The *Terrier*-packing cruisers were at Norfolk.



2158 A.D. — VANGUARD

IF BENJAMIN FRANKLIN—whose science was most modern for his day—had put Vanguard I into orbit instead of flying his historic kite, it would still be circling the earth, and today Navy scientists might be speculating on when it would return to earth.

On the basis of early performance, the Navy's Vanguard I test satellite had been dubbed "a very long-lived moon." At first the most optimistic prediction had been that it would stay up for as long as 20 years and that one of its radios might still be sending out signals as many as 10 years from now.

However, on the basis of new calculations, Dr. John P. Hagen, Director of Project Vanguard, now predicts that the Vanguard I test satellite will stay in orbit 200 years—"and probably circle the earth over the heads of your grandchildren and even their grandchildren."

At present Vanguard I is speeding around the earth—which it circles once every 133 minutes—at more than 18,000 miles per hour. On the basis of these figures, in 200 years Vanguard I would have made more than 790,912 orbits around the earth—a distance of about 31,557,402,684 miles. That's quite a stretch. It represents almost 170 round trips to the sun or more than 66,130 round trips to the moon. The sun is 93,003,000

miles from earth, while the moon's average distance is 238,587 miles away.

Getting back to earth, Vanguard I's travels over a 200-year period would amount to over 5,224,735 round trips from New York to San Francisco. That is more than 143 trips from coast to coast (3020 miles) in a single day. Vanguard I travels more than 39,900 miles in each orbit and circles the earth more than 10 times each day.

When Dr. Hagen predicted that Vanguard I will be with us for at least 200 years, he told of the extreme altitudes at which the test "moon" is orbiting. He said that in its elliptical path Vanguard I reaches an apogee (highest altitude) of 2463 miles and a perigee (lowest altitude) of 405.1 miles.

Even at heights of 200, 300 or 400 miles the earth's atmosphere still maintains a drag on satellites that causes them to lose energy and fall back to earth. Since Vanguard I's lowest altitude is 405 miles, Dr. Hagen pointed out that it will stay up for generations because it is relatively free of the earth's atmospheric drag.

Vanguard I—the forerunner of the Navy's fully instrumented scientific earth satellite—weighs only three and a quarter pounds. It's simply a test sphere. The rocket that success-

fully launched it was originally intended to soar aloft without a satellite. The firing was scheduled to be only a test of the newly developed Vanguard launching vehicle. The Navy, however, decided to include a miniature satellite in the test vehicle, "just in case" the firing was successful.

The tiny test sphere is equipped with two radio transmitters, one powered by conventional batteries, the other by solar batteries which draw their power from the sun. The Navy's fully instrumented scientific earth satellite weighs 21½ pounds. It will orbit at considerably lower altitudes than Vanguard I.

Dr. Hagen said that the fully instrumented 20-inch sphere will transmit back to earth 20 channels of information, about five times as much as is being received from the six-inch Vanguard I satellite now in orbit. In spite of its size, Dr. Hagen said, "we are getting all the information scientists hoped for from this satellite."

The 3¼-pound test sphere is accompanied in its space travels by the third stage of the mighty Vanguard rocket. Weighing more than 50 pounds, the third stage—from which the satellite was shot into its orbital flight path—is about five and one half feet long and 22 inches in diameter. By adding the weight of



PATRICK

IS STILL GOING STRONG

the third stage, which is still in orbit, to that of the test sphere, Vanguard I's total orbiting weight would be approximately 55 pounds.

The rocket that put Vanguard I into orbit was officially dubbed "TV-4." It was actually the sixth in a series of test vehicles which date back to December 1956. The TV-4 designation is somewhat confusing because the first test vehicle was numbered TV-0 and the fifth was TV-3-BU, a back-up vehicle for TV-3.

The first test vehicle, TV-0, was a single stage using a *Viking* rocket. It was fired on 8 Dec 1956. TV-1, fired on 1 May 1957, was a two-step rocket using a *Viking* as the first stage and a prototype of the Vanguard's third stage.

TV-2, tested on 23 Oct 1957, consisted of a prototype of the first stage of the actual Vanguard launching vehicle and second and third stage that were dummies, except for some test instrumentation. This was the first rocket to have the external configuration of the complete three-stage Vanguard satellite-launching vehicle. All three of these test firings were regarded as highly successful.

On 6 Dec 1957, in the fourth Vanguard test, Test Vehicle Three—the first to use all three stages of the Vanguard rocket—resulted in an explosion. The rocket lifted off its pad several feet, and in two seconds lost

thrust, fell over and blew up.

TV-3-BU was fired on 5 Feb 1958. After a successful lift-off and 57 seconds of flight, a connection between units of the first-stage control system failed to function and the rocket veered off course with such force that it broke apart.

After these two disappointing failures, the Navy finally succeeded in firing, for the first time, the completed three-stage Vanguard rocket, and at the same time placed the Vanguard I "long-lived" satellite into orbit.

TV 4's HISTORIC FLIGHT was made from the same launching pad at the Cape Canaveral test site where the first two three-stage Vanguard launching vehicles had failed. But this time, things were different.

The Vanguard launching crew had worked through the night on the towering bullet-shaped TV-4 as it stood patiently waiting in its red and white steel gantry. It was about 0100 on the morning of 17 March, while laboring under flood lights, that they began the final six-hour "countdown"—that precisely timed check-off of hundreds of last-minute flight preparations.

By 0610 the situation was well in hand and everything appeared ship-shape. One by one the workmen gradually began sliding down the firemen-like poles of the gantry. And

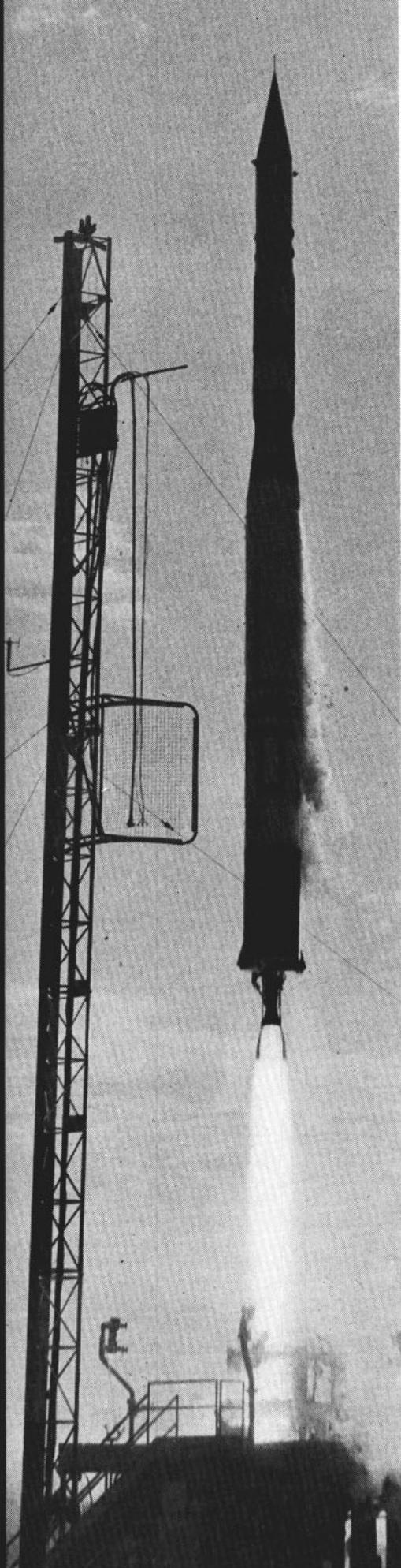
before long, the giant scaffolding began to be rolled back from the 72-foot missile that had been painted bright green in honor of its St. Patrick's Day launching.

The countdown continued to progress without incident. Almost too smoothly, the Vanguard crew thought. But the critical period was still ahead.

At "T" minus 40, just 40 minutes from firing time, the workers began getting tense. The danger period was commencing. It was at this point that the mechanism for igniting the rocket's highly explosive fuel had to be installed. T-39, 38, 37 . . . precious minutes ticked by. The countdown continued without a hitch.

From a nearby meteorology station, a large white weather balloon was sent aloft for a final check on the weather and wind conditions. By now the sun was shining brightly. From all indications, the wind and weather were favorable as the countdown continued slowly but steadily.

At T-25, all personnel were ordered to leave the launching area. The technicians and other members of the Vanguard launching crew took their respective stations in the block house, or stood by and watched from remote observation points. TV-4, pointed skyward, now stood alone—waiting for the big moment.



At T-20, the tense morning stillness surrounding the launch area was broken by a blasting horn which announced that "the smoking lamp is out."

"T" minus 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7 and 6 . . . Then, the nerve-racking count was held. The time was 0706—just six minutes before the scheduled firing . . . "What's the matter?" . . . "So near, yet so far!" . . . "Trouble?" "Will the firing be delayed?" . . . "Does the countdown have to start all over again?" Questions, questions and more questions.

At 0712 they were answered. The countdown had resumed. The six-minute delay was due to a temperamental timing device in the blockhouse for starting the tracking cameras. Everything with TV-4 was still 4.0.

The countdown went on. . . . T-5, 4, 3, 2, 1 and then it began in seconds instead of minutes. Now things were like a beehive as the launching crew went about the myriad details that had to be done in the final few seconds before the firing—the first-stage fuel tanks were being pressurized—valves allowing lox (liquid oxygen) oxidizer to boil off were closed—the pump heater for the lox tanks turned off—and almost before anyone had a chance to realize, the

firing switch had been clicked to "fire!"

At that moment the 11-ton rocket vibrated slightly. A tremendous burst of flame shot out from beneath it. The heat immediately turned the water—which was pouring into the flame deflector to protect the launching pad from the heat—into a gigantic cloud of steam.

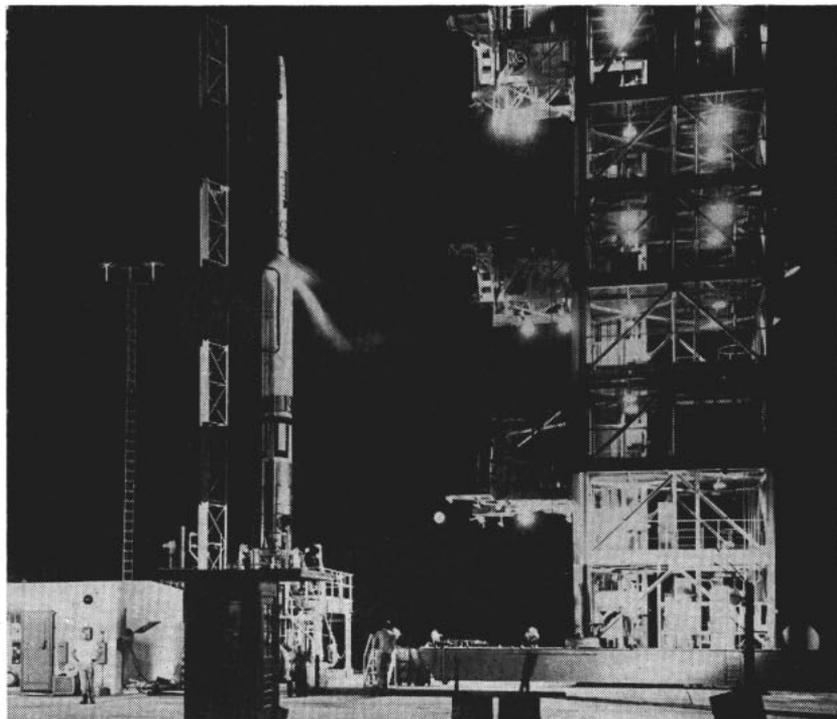
Slowly, but steadily, TV-4, trailing a tail of fire, rumbled up above the snow-white steam cloud. Up, up, up it went. In less than a minute it was almost out of sight. Its long narrow vapor trail began to spread out and zig-zag across the sky as winds coming in from different directions at high altitudes hit it.

Within 145 seconds after take-off, technical observers were jubilant when they noted a tiny spark as TV-4 zoomed out across the Atlantic. This indicated that the second-stage engine—which had never before been tested in flight—had ignited and separated from the first stage.

By 0726 the mighty rocket's job was done. All three of its stages had been expended and the tiny test "moon" that it carried in its nose had been separated from the third-stage shell. The launching of Test Vehicle Four was a success.

The only question remaining was whether an orbit had been estab-

GOING PLACES—Vanguard launching crew worked through the night before final countdown and firing that sent satellite carrying rocket spaceward.



lished. Although placing the 6.4-inch satellite into orbit was not the main purpose for TV-4's firing, naturally, everyone concerned was hoping for one.

Time ticked by. Still no word. Wonderment took over again. "After such a beautiful take-off, why had the Vanguard I failed to go into orbit? What could have happened?" . . . More waiting and more wonderment.

Two hours and 24 minutes after take-off, from the White House in Washington, President Eisenhower announced that Vanguard I's test sphere was in orbit.

The President was "delighted" when told of the Navy's feat, and he immediately congratulated the Navy on its success. Members of Congress, the Secretary of Defense, Secretary of the Army, the Army's Chief of Staff, and a great many others both in and outside of the government joined the President in wishing the Navy a "Well Done" on the successful firing of the complex three-stage Vanguard launching vehicle.

News spread rapidly after the Vanguard rocket soared aloft at 0716. By 0800 almost all naval personnel on duty in the nation's capital—where uniforms are optional for officers—showed up for work in blues.

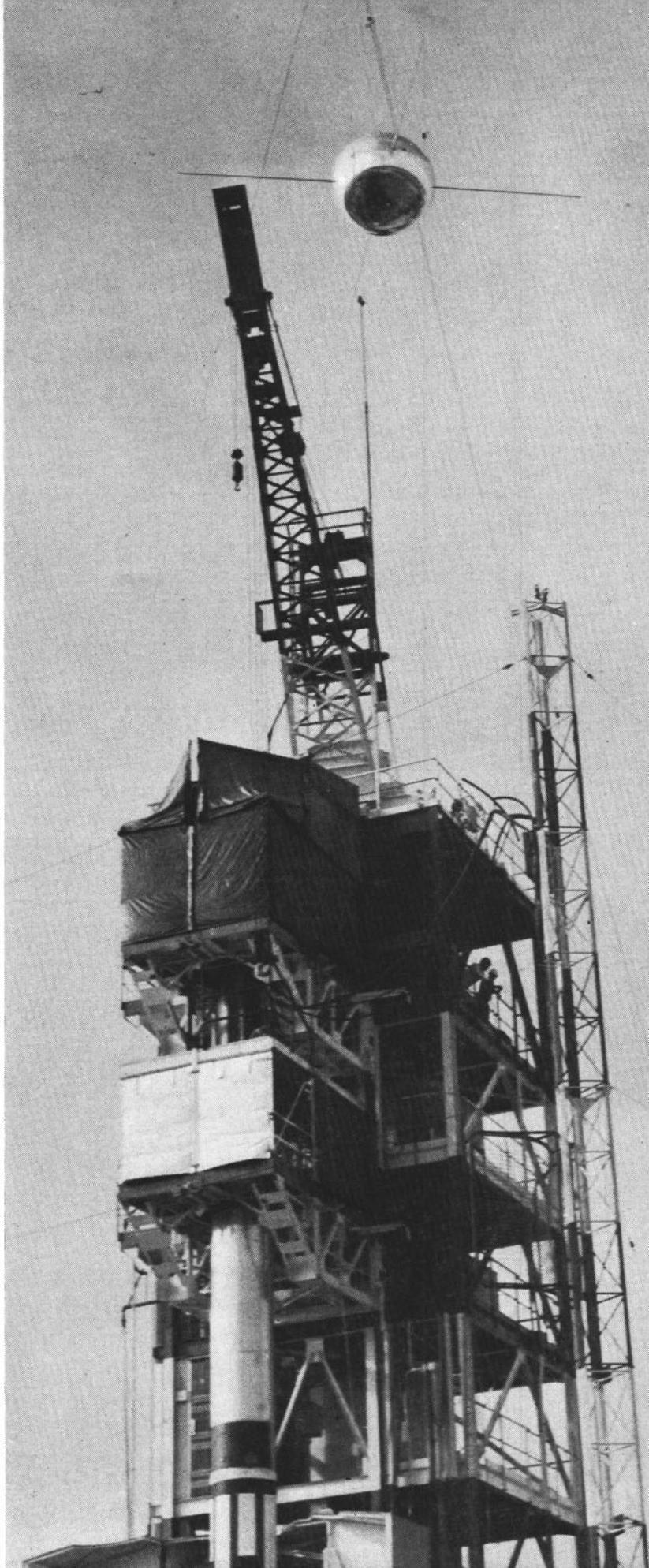
At Cape Canaveral there was much rejoicing by the Vanguard launching crew as the success of TV-4 relieved them of months of accumulated strain and frustration. They celebrated by having a mid-morning "wetting-down" party that was climaxed by tossing J. Paul Walsh, Deputy Director of the Vanguard project, into a swimming pool.

Vanguard's success was also hailed by Dr. Wernher von Braun, Chief of the Army's missile-rocket team at the Army Ballistic Missile Agency at Huntsville, Ala. He said that the Vanguard launching was an unprecedented feat in rocketry, since it was started from scratch two years ago, and building a new, untested, complicated rocket that fast is something "never, never done before."

The Vanguard rocket is credited by the world's scientific community with significant contributions to the art of rocketry. Its first stage is said to be the first liquid-propelled rocket

ON HIGH—Navy's 20-inch satellite is suspended in air over the gantry for free-space radiation measurements.

JUNE 1958





TOPSIDE VANGUARD—Vanguard technicians work on rocket's nose cone containing sphere. Below: Instrument package goes into 20-inch satellite.



designed to get along without stabilizing fins or vanes. As a result of its success, a great many of the new missiles and rockets now under development are being designed that way. The savings in weight, and therefore in power needed to propel the vehicle into space, is considerable.

By using extremely thin air frames for all three stages of the Vanguard rocket, great economies of weight have also been made possible. The first-stage engine, as a consequence, requires only 27,000 pounds of thrust compared with more than 80,000 needed by other U. S. satellite launchers. (For detailed information on the functions of each of the Vanguard rocket's three stages, and other related information, see the December '57 issue of *ALL HANDS*.)

The Vanguard I test sphere, after circling the earth for almost three months, is still being heard "loud and clear." And from all indications, one of its two radio transmitters may still be sending out signals as many as 10 years from now.

The solar radio transmitter is designed to put out at least five milliwatts during the 60 per cent of the time that the Vanguard I satellite will be traveling outside of the earth's shadow. Its six rectangular solar batteries are distributed in a symmetrical pattern over the outside of the satellite so that one or more always will be turned toward the sun when the satellite itself is on the sunny side of the earth.

The solar batteries are one of the main novelties of the Vanguard test satellite. Each solar battery consists of 18 silicon cells—each two centimeters long, half a centimeter wide and one four-hundredths of an inch thick.

The lifetime of the solar batteries—now estimated at 10 years—will depend on how they stand up against meteorite bombardment and other physical hazards of outer space.

Six antennas, jutting vertically from the Vanguard test sphere, transmit the solar- and mercury-powered radio signals. Both sets of batteries are sensitive to variations in heat that will register slight changes of frequency. In this manner both battery systems enable scientists to record temperatures on the inside as well as on the outside of the tiny test satellite.

—H. George Baker, JOC, USN.



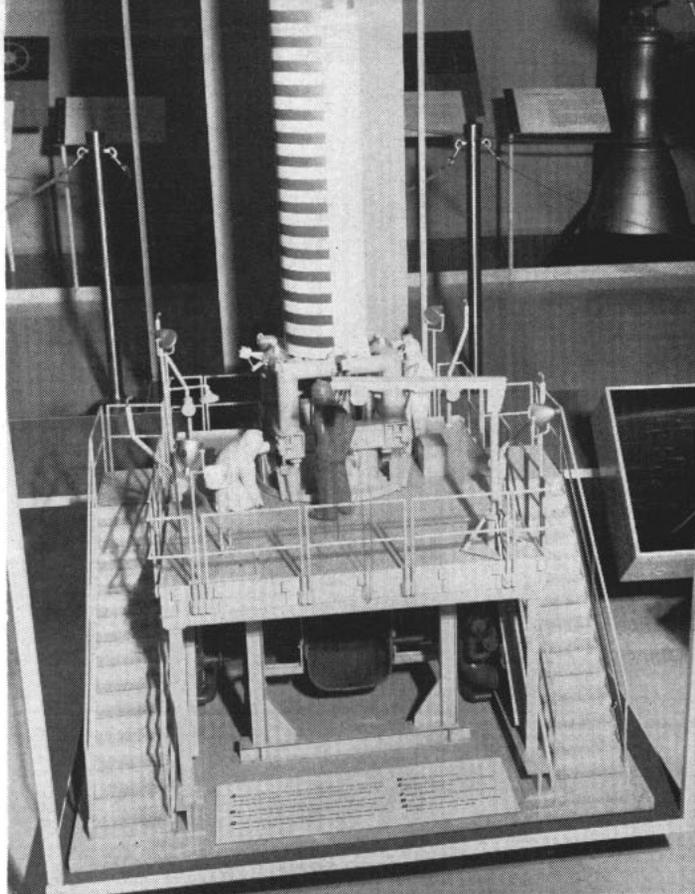
Keeping up with Vanguard

A HIGHLY INTERESTING and important scientific installation lies right in the heart of the nation's capital, unknown to most area residents and visitors alike. The Vanguard Computing Center should be on everyone's "must see" list.

The Center's primary mission is to whip out calculations fast enough to anticipate the path of a satellite traveling around the world.

In addition, the Center houses an exhibit which is open to the public. The pictures on this page will give you some idea of what you are likely to see there.

Top: Whitehat stands at Computing Center entrance. *Top right:* Model of launching platform is the high-point of the exhibit. *Right:* The displays include cut-away models of various components of the Vanguard rocket. *Lower right:* A representative shows two visitors the behind-the-scenes intricacies of the electronic brain. *Bottom:* The console operator sits surrounded by magnetic tape recording machines.





PRE-TESTED—When a Navyman sits down to chow at sea or ashore his food has been checked out by experts.

Here's How to Make Research

IN SPITE OF WHAT YOU READ in the newspapers nowadays, science is not exclusively concerned with guided missiles, rockets, Buck Rogers and trips to the moon. The food you eat, and the manner in which it is prepared is also a matter of scientific concern. It's undoubtedly a matter of concern to you, too, because you'll probably eat a considerable number of the Navy's meals before you take off for Luna.

As in tactical equipment, commis-

sary research never reaches its ultimate goal. There's always room for improvement as new materials and methods are discovered.

The people who are professionally interested in your appetites and good health may be found working at two field activities of the Bureau of Supplies and Accounts:

- The Commissary Research Division, U. S. Naval Supply Research and Development Facility, Bayonne.
- The Navy Subsistence Office,

located in Washington, D. C.

They work together with industry's Food Service Advisory Committee, which is a part of the National Security Industrial Association.

In these two BuSandA activities ideas in recipe experimentation and preparation, automation, work simplification and equipment design are conceived and pursued by engineers, dieticians, nutritionists, chemists, bacteriologists, radiologists and food technologists. This combination of human engineering and functional requirement gives you a system which is the envy of many and the equal of the best mass feeding agencies throughout the world.

Such a system is primarily a matter of painstaking research and close cooperation between naval and civilian personnel. Consider, for example, the various steps involved in testing recipes.

New recipes are tested and food products are prepared in the test galley, which is the original testing laboratory. Commissarymen play a major role in this process by preparing all foods even though they are carefully watched by civilian food technologists.

From the test galley, foods go to the taste panel room where Navy-men and civilian employees rate the products and recipes on an evaluation form. This room is illuminated with simulated true daylight so that

— And There's a Prize for the Best Mess

If your ship or station has the best mess in the Navy, then it may be eligible for an award.

Under the Ney Memorial Awards Program—named in honor of the late CAPT Edward F. Ney, SC, USN, who headed BuSandA's Subsistence Division during World War II—the Navy will honor the commands and commissary personnel of the most outstanding general messes, both ashore and afloat.

Permanent trophy plaques will be presented to the best mess and the runner-up in each category. The commissary officer and one enlisted man from each of the two winning messes will be guests for a four-day visit in August to Grand Rapids, Mich., for the trophy presentations.

In commenting on the Ney

Awards, RADM R. J. Arnold, SC, USN, Chief of The Bureau of Supplies and Accounts, stated that although the Navy has always been noted for good food, the Ney Awards should serve to stimulate competition for even better mess management and food service.

The Ney Memorial Awards winners will be selected from the outstanding general messes that were nominated by the district commandants and type commanders during the month of May. Nominations were based on food preparation, service, sanitation and management.

The details for the Ney Memorial Awards Program were announced through SecNav Inst. 5061.10 and BuSandA Notice 5061 of 21 Apr 1958. So, let's start cooking.

the actual color of the food—an important consideration—is not affected. The members of the panel are separated from each other by a partition so that their reactions will not influence or be influenced by another tester. Each member of the panel must at least like the food “moderately” before it becomes accepted.

Chances are, the recipe for the main course at your last meal is recorded with the Navy Recipe Service at the Commissary Research Division. In the card index system, each recipe and its variations in quantities of 100 portions are preserved.

Upon passage from the taste panel, the recipe or food product frequently proceeds to an operating Navy mess in the “field” to substantiate previous laboratory results.

Taste Good

Since it would be impossible to give every product a practical test, the CRD takes just the most promising to the Fleet. The others are limited to laboratory and simulated experimentation.

In boot camp you probably boarded a mock-up ship to give you some idea of what to expect from the real thing out in the Fleet. Simulation is also employed by the Commissary Research Division—so that its workers become more familiar with the problems which confront the ship’s cooks.

The *Lars* is a mock-up submarine in whose galley experiments continue ’round the clock. One cook, in a space six by nine feet, prepares three meals a day plus a soup and sandwich call in the afternoon for 75 to 100 men. Since only one-third of the crew can be seated at one time, it takes three rotations to perform the cook’s job. During the “off-duty” hours another cook comes on and bakes all the bread, cookies, pies and cakes during the night.

All of this work has a purpose—the feeding technologists and industrial engineers watch and record data on every movement the cook makes. They do this to find out how the equipment may be more efficiently arranged or redesigned to be more useful to the cook. As a result of this study, a new submarine galley, which cuts the cooks’ labor



BETTER AND BETTER—Scale models help design more efficient galleys. Below: Evenness of heat is tested. This study led to 25 per cent more stove capacity.

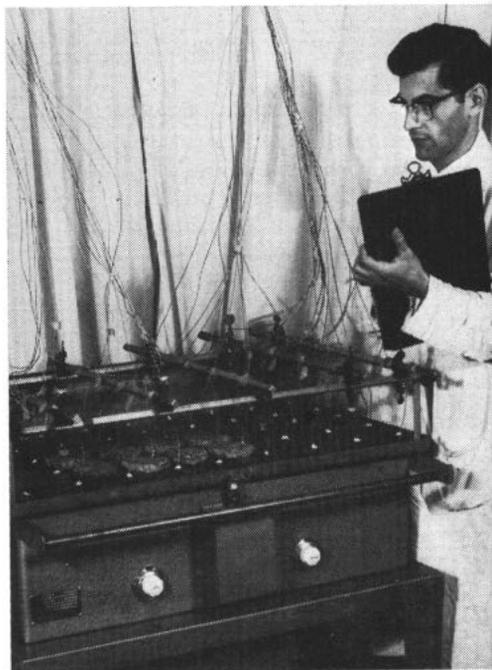
30 per cent and reduces food losses by 20 per cent, was recently developed. The best part of this discovery is the greater variety of better food that the cooks are able to turn out. In addition, a cook, baker and messman can all work at the same time; in the old type kitchen just the cook was a crowd.

As a result of the CRD’s work, you will find these improvements on board the newer subs:

- Because the size of the oven has been changed, meat losses have been reduced from 36-37 per cent to 16-17 per cent, a saving of 20 pounds out of every 100 pounds of meat roasted.

- The deep-fat fryer can be used as a rapid-heating pot for frozen and fresh foods when it is not used for deep-fat frying. The fry kettle can be washed in the sink (which was not possible in the past).

- Hash brown potatoes and simi-



TASTE WILL TELL—Automatic joe pot is given taste test at Bayonne. Navy coffee is now brewed manually but a good automatic one would save hours.





BEHIND THE POT—Cook and Baker School at Newport turns out men with skill to handle Center's recipes.

lar materials can be cooked at an exact temperature on the griddle without using a heat-wasting pan.

- Ice cream can be prepared in each dish without the wasted labor, hardening and dipping which were formerly experienced.

- Twice as much coffee can be prepared in the same space occupied by the old two-gallon urn by squaring the shape of the urn. Since it's also insulated, the cooks don't burn themselves and the galleys are not quite so hot.

- A new coating is used on sinks and on warming table. It resembles the enameling on pots and can be controlled to any temperature.

- Water sources are provided over the range-top and food mixer so that constant trips to the sink are not necessary.

If you're ever part of an Antarctic expedition, chances are you'll be glad that the CRD exists. If you've

already been on a Deep Freeze tour you'll know what we mean. Workers in the preservation laboratory, which specializes in the study of rations for men under emergency and survival conditions, have devised methods of preventing explorers from starving in the Antarctic. Nowadays it's possible to carry enough food to survive in these bitter cold conditions, without total dependence upon another source of supply.

For instance, by compressing flour, approximately four times as much can be stored in a given space. By "squeezing" out the air, the volume is reduced to one-fourth that of regular flour.

The Commissary Research Division, after evaluating basic "trail" rations used in cold climates, has suggested improvements which facilitate handling and consumption of foods in icy temperatures. Some of the considerations were whether or

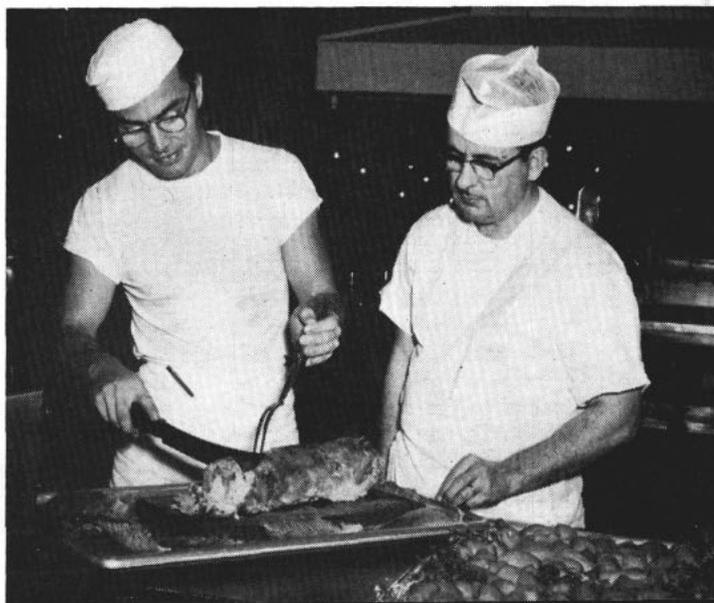
not the ration is difficult to open with mittens and whether instructions were clearly printed on the packages.

They tested the foods by heating or cooking the items under simulated frigid conditions.

Three particular characteristics technologists looked for were: Can the ration be eaten without being cooked (in case the necessity should ever arise)? Can the various furnished utensils be used with the item and how easily can the left-overs from the package be repacked? All of these seemingly minor details are not so insignificant to one surrounded by ice and snow.

You don't have to be in the Antarctic to experience extremely cold weather which greatly stimulates an appetite. If you have ever had to shake the snow or sleet from your cold weather gear, there were men in the same ship or in the same

ON THE SPOT—Navy Field Food Service teams make tests on board ship or station to improve cooking and serving.





NEW GEAR—New type aluminum alloy range and hot plate is tested. *Right:* Automatic potato peelers were tested.

building who wished they were outside. This is a typical problem which constantly confronts Navy food experts: to come up with ways to feed the deck crew and the men in the boilerroom and at the same time satisfy them equally.

You've undoubtedly seen a very hot galley at least once in your Navy career. Now the trend is away from kitchen heat losses which make these areas so uncomfortable. The cooler kitchens are arrived at by insulating kettles. It was found that this reduces wasted heat by 50 per cent and eliminates accidental burns should a man be pitched against the kettle. Other advantages of this innovation are conservation of precious steam and reduction of weight losses of meat.

One of the newest improvements at Bayonne is a simple method of automatic water distribution to the steam-jacketed kettles. Instead of

guess-work and trial-and-error methods, the cook will be able just to set a dial, push a button and presto—the correct amount of water will be delivered to help make a more perfect dish.

If you're a coffee-drinker, you probably place high value on that steaming cup of java—especially after a couple of hours topside in nippy weather. The kitchen scientists have not neglected the old Navy pastime. Soon, on small ships, the touch of a button will be the only labor required to brew enough coffee for a ship's crew.

And that's not all. The coffee will feed into a decanter, the mechanism will be washed and the grounds emptied into a drain chamber—all automatically.

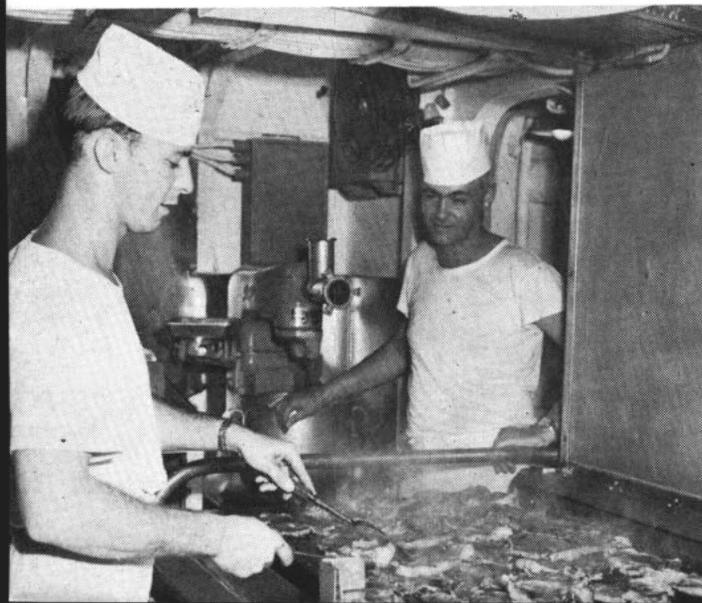
If you've ever worked in the galley you've probably held potato peeler in hand at some time or another. If so, take notice—the Commissary

Research Division has been testing automatic potato peelers to do all the dirty work. Just drop them in and out they come, clean as a whistle.

They say diamonds are a girl's best friend—but if you really want to win somebody's heart, here's a suggestion: Give her a combination food mixer, potato peeler, steam kettle, pressure cooker, refrigerated kettle, proof box, meat grinder, vegetable slicer and oven. The men at Bayonne call this an experimental "kitchen in a corner" which is being designed for submarine use. About the size of a telephone booth, it also can bake and roast. Or there's the extra large aluminum paddle used to stir liquids in 60-gallon pots. We wouldn't advise you to invest in one of these unless you fully realize the several other purposes it could serve.

—William Miller, JOSN, USNR

WHAT'S COOKING—Cooks and bakers throughout the Fleet can prepare better food as a result of CRD's research.





NOTE THIS—Tennessee Ernie Ford sings with Navymen. Rt: Alan Ladd and William Bendix take break during filming.



HATS OFF—Navymen of NAS Oakland cheer Doris Day. Rt: Diana Dors visits DDE. Above: Waves with Teresa Brewer.

Hollywood Visits the Navy

NAVYMEN ARE likely to see stars any time of the day or night whether in boot camp, shore station or on shipboard. The stars referred to are not the celestial bodies that are used for navigation, nor are they the stars a boxer sees just before hitting the canvas. These stars are from the bright lights of show business. They may possess a heavenly body and/or deliver a knock-out performance for Navymen they visit.

People of the entertainment world have for many years taken time off from their busy routine to pay friendly visits to Navymen on board ship or ashore. At times they may present an entire show or at other times it might just be an informal person-to-person visit.

Another occasion for stars to "shine" in the Fleet is when they find themselves cast in the roles of Navymen. In such cases business is



ALL HANDS



STARS shoot movie scenes onboard LST.

— Stars at Sea

combined with pleasure for all as actors ask sailors for technical assistance or use Navy ships and gear to better tell their Navy story.

In either case their visits spread goodwill to Navymen who in turn spread goodwill and friendship around the world. On these two pages is a collection of photographs taken from the files of ALL HANDS that pictures just a small sample of these many visits.

BOB HOPE clowns it up for sailors.



WHISTLE BAIT—Jayne Mansfield and singer Erin O'Brien visit Navymen on Guam. Below: Anita Ekberg poses with Pacific Fleet destroyermen during visit.





tion of the cruise. A second in command of the Squadron movement was named, and a date set for the cruise.

That date dawned a gray and cloudy day that cut down the cruise attendance by some 200. The wind blowing along the docks at the Norfolk Naval Base where four of the ships loaded, gave rise to thoughts of a heaving sea off the Capes. A lot of good natured kidding went along with the loading as the men who had no guests going out for the day welcomed their shipmates and their families with warnings about the state of the sea and what the wind would do to carefully arranged, but still fragile, curls. The same thing was happening at the Little Creek Amphibious Base where the two LSDs were taking on their passengers.

Here and there Navy blue Wave's uniform could be seen. Some 100 of the Waves stationed in the Norfolk area had been invited to make the cruise. Also in the crowd were 27

Navy Family Cruise: It's

SOME WORE RED toreador pants—black slacks—blue Bermuda shorts—or sports dresses—but all of the nearly 1000 dependents and guests aboard the ships of Transport Amphibious Squadron Two were wearing grins when their day long dependent-guest cruise ended.

Even old man weather couldn't dampen the spirit of the visitors who made the cruise out of the Norfolk Naval and Little Creek Amphibious Bases to an area off the Virginia Capes.

A 20-knot wind whistled through the rigging of *uss Chilton* (APA 38) and *Rockbridge* (APA 228), seeking out the dependents with its chilling blast.

Guests coming on board *uss Thuban* (AKA 19) and *Vermilion* (AKA 107) checked the overcast skies for a glimpse of the sun, as did those on the LSDs *Rushmore* (LSD 14) and *Hermitage* (LSD 34).

They were a cheerful and interested group watching for the first time their husbands, sons, or neighbors at work. Despite wind and spray, they crowded the rails of each ship to watch other members of the Squadron go through their paces as different steaming formations, atomic washdown equipment and underway

replenishment gear was demonstrated.

This is believed to be the first time that an entire squadron of ships ever held a dependents-guest cruise. CAPT. G. E. Peckham, Commander of the Squadron, explained that the theme of the cruise was to show our guests "what we do and why we do it."

The idea for the cruise had been in the captain's mind for some months. He requested that he be given two weeks of Squadron training which would include a one-day dependent's cruise.

Plans for the cruise were as complex as a campaign. A group of wives were asked what they wanted to do and see aboard a Navy ship underway. They answered that they wanted to stand watch with their husbands, see where he works and lives, and they wanted to see ships operating as a team, maneuvering or using a "highline or whatever that thing is their husband rides between ships at sea."

All of these items and more too were outlined in Annex B to a ComTransPhibRon Two Operation Order. This official document outlined in terse Navy terms the general situation, mission, and manner of execu-

teenage boys from Richmond, Va., who were going to sea to obtain a first-hand look at what may be their future careers.

When the last guest was safe on board, the ships began slipping one-by-one out into the stream and headed to sea in a column. *Hermitage* and *Rushmore* joined the column as it passed the Amphibious Base.

A tour of any of the ships at this time would have found dependents everywhere. Some were already being led by guides on tours of the ships. Others had gone below to enjoy coffee and doughnuts, rolls or cookies that were available all day, and the more hardy individuals crowded the wings of the bridges as they looked for, and found, a captain's view of all that was going on.

Back on the flag bridge aboard *Chilton*, where CAPT Peckham was directing the movement, one lady was sporting a foul weather jacket with "COMMODORE" printed on the back and another was wearing a blue raincoat complete with brightly shining eagles.

A Wave second class had cornered her male counterpart and was besieging him with a running "What is that? What are they doing now? Do they have to blow that whistle?"

It hurts my ears. But this is fun!"

One of the announced purposes of the cruise was to help implement the "people to people" program by demonstrating the importance of the role of the individual, the ship, and the squadron in maintaining a strong and flexible amphibious force. This program was in full effect. On one ship proud parents who had never seen the ocean before, and had driven all the way from the Midwest for this cruise, watched their son work with the signal gang and for the first time had a reasonably clear picture of what he does and why he does it.

CAPT J. M. Lee, usn, skipper of *Chilton*, greeted the wife of one of the engineering gang CPOs saying, "Your husband would certainly be an important man in any ship's company." Of course she didn't go around the ship bragging about what the CO said, but she didn't come down off 'cloud nine' either. Now she knows why her husband brings home the dirty shirts and why he

While many of *Chilton's* guests were watching the filmed invasion, a real one occurred back in the CPO quarters. Led by an intrepid PO3, a group of youngsters descended into the CPO lounge, set up a motion picture projector, and were ready to watch an "adult western" designed just for children. The displaced Chiefs and their families headed for the weather decks to watch demonstrations taking place there.

During the morning hours of the cruise the six ship Squadron went from one formation to another to show the land-locked guests what ships could do at sea. They demonstrated sinuating evasive steering, an antisubmarine defensive measure.

It was during these maneuvers that you would have noticed a pretty young brunette wearing a scarf on her head, peeking over the port wing of the *Chilton's* bridge, watching the maneuvering with unconcealed interest. Her name, Joan Duffy. She was the wife of LTJG John A. Duffy—who at that moment had the deck.

As she watched her husband dash from one side of the bridge to the other she said, "It's all very exciting watching this maneuvering." She held her breath as one of the LSDs crossed *Chilton's* bow and then added, "I'm enjoying every minute of it, wind and all."

And it was with pride that she watched her husband take bearings

A Picnic

sometimes has grease worn into the skin of his hands.

As the ships cleared the channel and speed picked up for the sea run, the crews were quick to introduce damage control measures to stop the spread of goosepimples. Foul weather jackets soon covered pretty sweaters and many young ladies appeared on deck wearing peacoats and work jackets.

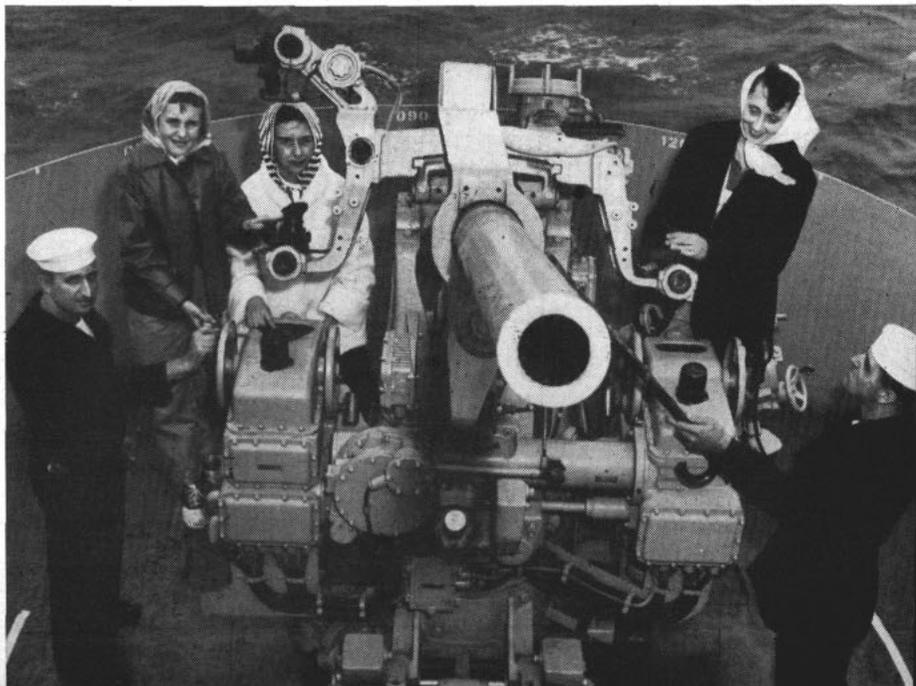
In *Chilton*, the crew's lounge was crowded as the guests gathered to hear a discussion of the Medicare and Survivors Benefits Acts. Chief Gunner's Mate Cameron from the PhibLant Career Appraisal Team was besieged by questions following his discussion, most of them coming from Navy wives who—in the words of one—learned of benefits she'd "never even thought of and had never used."

Similar rights and benefits discussions were conducted in the other ships by a CAT member from either PhibLant or ServLant.

On *Chilton's* mess deck a large crowd gathered to see a film of an amphibious landing. By watching this they were able to obtain an idea of the tasks performed by each of the three types of ships represented in the TransPhib Squadron.



AT SEA dependents of Transport Amphibious Squadron Two learn routine.





BACK IN PORT—Dependents leave *USS Chilton* (APA 38) after a day's cruise with the family's Navyman.

and relay the captain's orders to the steersman. "This gives me a better understanding of his job," she explained before resuming her unofficial maneuvering watch.

Leaving her and crossing through the wheelhouse to the starboard side you would have heard CAPT Lee say to his communication officer, "Next time there is criticism of the radio, better check on the voice behind it. There was a lady's voice on it just now and I bet they could hear her loud and clear all the way over to *Rockbridge*, with or without the radio." Several of the ladies on the various ships and on the flag bridge were manning the inter-ship voice circuits, rogering calls and passing messages with an ease presumably gained through long hours spent on a telephone.

As the formation broke up into two columns of ships, *Hermitage* passed between her squadron mates demonstrating her atomic washdown equipment. Plastic piping installed on the ship's weather decks is charged with sea water at fire main pressure and in the event of a nearby atomic blast the spray would be instrumental in washing off radioactive fallout.

While still in the two abreast formation the use of the highline method of personnel and material transfer was demonstrated. The gear was rigged and the transfer made, accompanied by the clicking of hundreds of cameras. On each ship the action taking place was described over a loudspeaker system, a continuation of broadcasts designed to answer many of the questions asked by the guests, which began shortly after the ships got underway.

As the exercises came to an end, everybody headed for the galley and the wardroom for noon chow. The luncheon menu on *Chilton* included fried chicken, roast beef and apple pie. Over on *Thuban* and *Hermitage* it was grilled steak and strawberry shortcake with whipped cream. *Vermilion* loaded trays with turkey and roast beef while *Rockbridge* served baked Virginia ham. One wife finally understood why her husband's diet never worked. "You starve at home, but stuff yourself here," she said.

In *Chilton's* CPO quarters the invaders had beat a temporary retreat and the wife of one chief commissaryman complained cheerfully about tired feet after being led through the ship on a tour. When chow was piped the shrill whistle startled one wife into exclaiming: "Is that noise necessary?" A chief replied, "Don't blame me, madam. Blame your husband. He's the boatswain's mate."

The Waves visiting the six ships were having a big time learning what their male counterparts do at sea. According to CAPT Peckham, a cruise such as this gives the Waves an insight into their job in the Navy. "After all," he said, "they are part of the sea service and a cruise such as this will better equip them for their Navy duties."

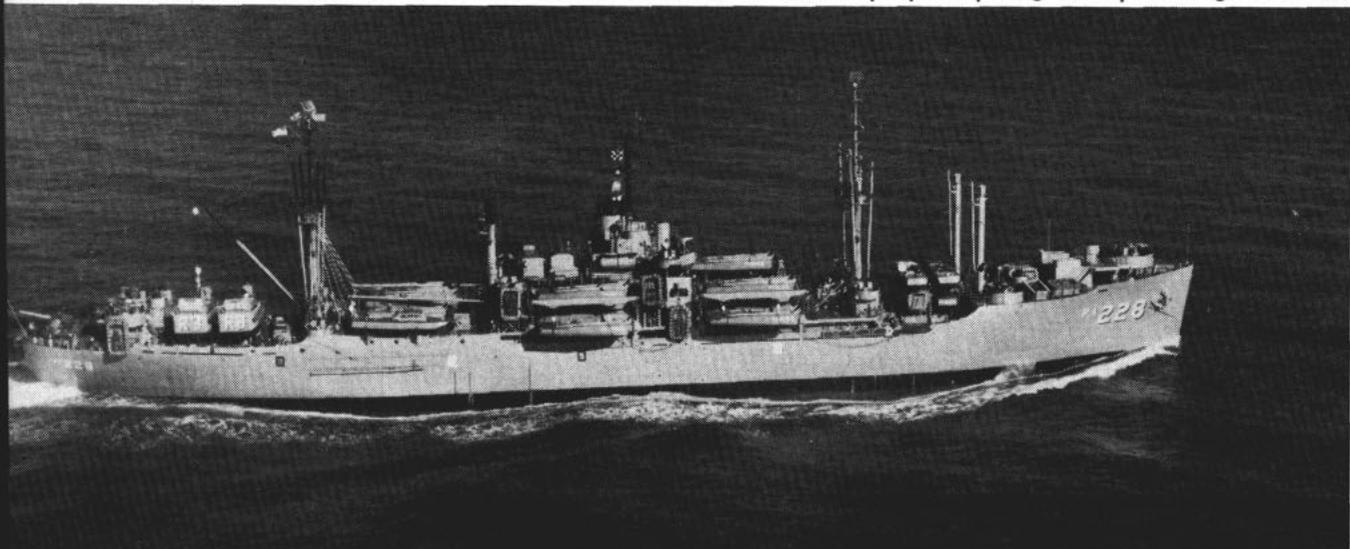
For example LT Rosemarie C. Walsh, USN, who led the Wave group aboard *Chilton*, was recently assigned to ComPhibTraLant operations. The voyage gave her a chance to learn about underway operations from a good teacher, Quartermaster First Class H. N. Dye, USN, attached to the Squadron Flag Allowance, who in turn said she was a good student. They had been attached to the same command once before, the Wave Training Unit, Naval Training Center, Bainbridge, Md. Dye was a drill instructor there.

A Wave guest on *Thuban* said the cruise was an experience that "I'll never forget. I never thought I would really ever sail on a Navy ship."

Another group that was having a big time on the voyage were the boys from Richmond. From the time the ships sailed until they returned to their berths the boys were on the move, exploring every nook and cranny open to them.

One of the boys, Denny Wachter, explained that they were winners of a contest sponsored by Navy Recruiters over WRVA-TV in Richmond. They had each written a letter telling why they would like to go on a cruise and the writers of the best letters were chosen to take part in a "Know Your Navy Quiz." The recruiters sent the boys study material and on the live program they were asked the names of famous

USS ROCKBRIDGE (APA 228) was one of six TransPhibRon Two ships participating in dependent-guest cruise.





ON THE JOB—Better-half watches her man crimp sheet metal. Rt: Mother and Dad learn part son plays to run ship.

ships and admirals, and other questions of nautical interest. The winners made the cruise while those who finished in second place received plastic aircraft carrier models.

Thirteen-year old Denny commented that it was getting "kind of rough out here" when the ship approached the turnaround point 30 miles ESE of Cape Henry. But he still hoped to join up when he becomes old enough.

During the afternoon hours the individual ships put on demonstrations for the entertainment and edification of their guests. On *Vermilion* the guests watched a mock amphibious landing staged on a large board and utilizing 100 model ships and planes. The special lighting and taped sound effects used, made the scenes realistic and thrilling according to viewers.

Another mock invasion demonstration was given in the recreation room of *Chilton*. The ship's guns, hatches, davits and anchor windlass were demonstrated throughout the day. Landing craft familiarization was the subject of the demonstrations on the Squadron's second APA, *Rockbridge*, where a boat display was set up.

On *Thuban* visiting housewives were treated to a demonstration of how to make a modern salad. This was presented by the galley captain. For those seeking a little more excitement the AKA provided guided tours and demonstrated a fire fighting suit.

Both of the LSDs ended their cruise day by ballasting down, opening their stern gates and launching their LCU cargo. This event provided one of the best photographic opportunities of the day and the visitors were quick to respond with their cameras.

Many of these pictures were carried to nearly all parts of the United States by guests who traveled hundreds of miles to make the cruise. Some 215 of the nearly 1000 cruise guests came from areas more than 100 miles from Norfolk. They represented 32 states reaching west to California, south to Florida and north to Maine, and the District of Columbia.

A seaman's mother from Tennessee said she had "an extremely enjoyable day at sea" and Mrs. Tillie Padilla, mother of Edward Joe Padilla, YNT3, from Albuquerque, N. M., announced that she "did not believe that I would ever enjoy anything so much." Mr. and Mrs. William A. Crandall, who made the trip from Van Nuys, Calif., to cruise with their son William A. Crandall, FP3, stated, "We wouldn't have missed this event for the world, and we are certainly enjoying ourselves."

These guests who came from the hinterlands of the USA took home with them souvenirs of the cruise along with many happy memories. Those on board *Thuban* each received a ballpoint pen engraved with a picture of the ship, the date, and the event. They also received cards certifying them to be honorary crew members.

Several other ships gave away boarding prizes. On *Vermilion* an automatic knife sharpener, a flash camera, and a steam iron were awarded to lucky guests. On board *Chilton* five perfume sets, two salad sets, a radio and a wrist watch went to those who held the lucky numbers. Those who held the proper tickets on *Hermitage* took home pen and pencil sets, ball point pens and other items.

Over on *Rushmore* everyone was made an honorary crew member complete with certificates. First to receive a certificate was Mrs. K. M. Worthy, who, as the former Miss Eleanor Blewett, sponsored the ship when it was launched in 1944.

LSD 14 also presented a scroll to Linda Jenkins for winning first place in the steering contest for 13-to-15-year olds. "Mrs. *Rushmore*," Carol Patterson, wife of James Patterson, ET3, USN, and "Miss *Rushmore*," Glenda L. Bailey, PNSA, USN, one of 16 Wave guests, were also presented scrolls after being selected by the ship's recreation committee.

With the completion of all ceremonies, the Squadron returned to port. The dependents left the ships after an eight-hour cruise in which they saw what Navymen everywhere do and why they do it.

—William Prosser, JOC, USN.

NEW SHERIFF—Wife pins on badge to stand watch with husband while learning how Navy operates at sea.





THE BRIDGE—CO looks on as Chief of the Watch checks range of guide ship. RT: Officer of the Deck on watch.



AT SEA — Corry crew members man pilot house (above), enjoy mess time and watch radar in CIC (below).

This Is Corry

FOUR U. S. NAVY ships kicked up a high wake as they steamed at top speed through the chilly Atlantic. They formed a half-circle that covered many square miles. They were visible to each other as tiny dots on their respective radarscopes.

On each of the destroyer-type ships a concave radar antenna swept in a continuous circle, permitting each ship to "see" many miles in all directions.

Their target: hostile aircraft. *Their objective:* to warn convoys and other naval ships of approaching enemy planes or guided missiles. *Their name:* Radar Picket Destroyers.

Typical of these ships is *uss Corry* (DDR 817). Like most of her sister ships, she has been converted from a standard destroyer to a sea-going radar station. These destroyer radar pickets also have marine capabili-





VISUAL CONTACT made with ship, planes during patrol.

— Radar Picket

ties and can do double duty, detecting submarines as well as aircraft.

To accomplish her role as a radar picket destroyer, *Corry's* sensitive radars are connected with her combat information center which is the heart of the ship's detecting equipment. The DDR's CIC is larger than that of a conventional destroyer. Here, CIC men work with gunnery control teams as a unit. They also direct aircraft to intercept enemy air strikes. One of the main objectives of CIC is to report any aerial raiders trying to sneak in to attack the force.

Information picked up by the ship's air defense radar in the combat information center is charted on an illuminated status board. This information is then relayed to the commanding officer and air controller. *Corry's* defense radar is located on her stern. Conventional destroyers do not have this type of radar.

The DDRs have been greatly improved and modernized during conversion. Red leather padded seats, formica table tops and tile decks are a big step from the old type mess, but when it's rough, and a DDR is usually rough, you still have to hold your tray while you eat.

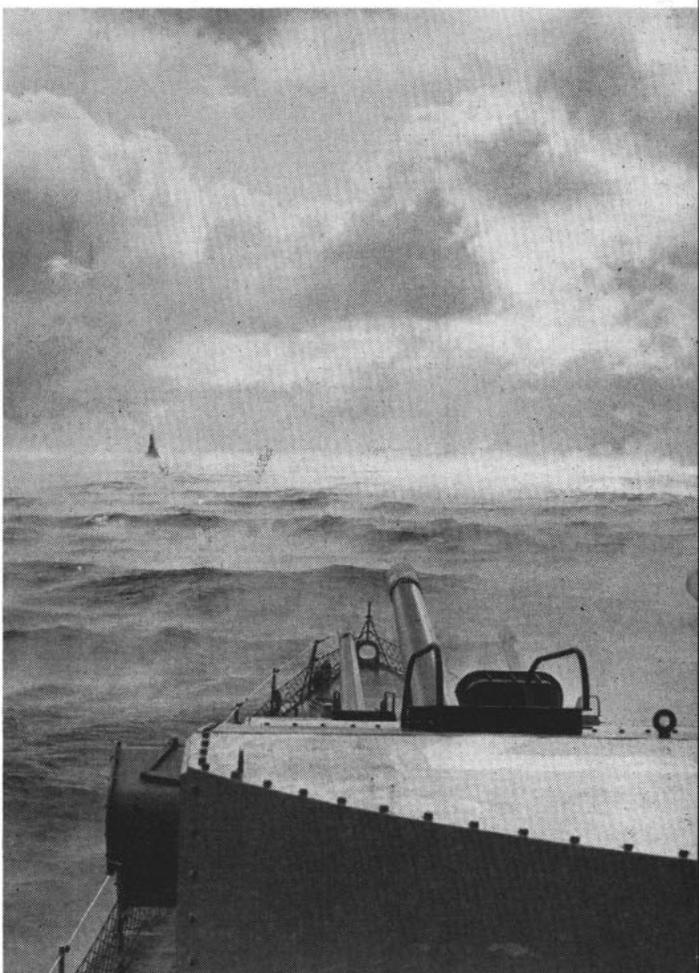
On *Corry*, the messhall doubles as a crew's lounge and movie theater, and if necessary, a hospital space. Here, members of the crew gather after working hours and write letters, talk to their shipmates and drink the always available Navy coffee.

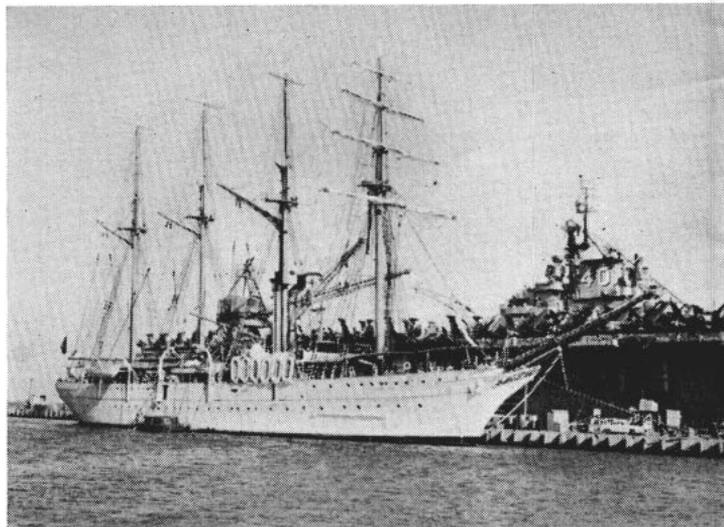
uss *Corry*, commissioned DD in 1946, was converted from her destroyer tasks in 1953. She was the third ship to bear this name. The first was stricken from the Navy under an arms limitation agreement in 1930. *Corry* number two, DD 463, was commissioned in 1943 and saw rugged action in the Atlantic during WW II fighting the U-boats and participating in the Normandy invasion. She sank 6 Jun 1944 after striking a mine while laying down a heavy barrage on the coast of France.

During the present *uss Corry's* 12 years, she has steamed over 250,000 miles as part of the nation's sea-going defense team. —Edward C. Lisle, JOSN, USN.



ON PICKET—Gunner's mate loads ready service box. Below: USS *Corry* follows mate through cold Atlantic.



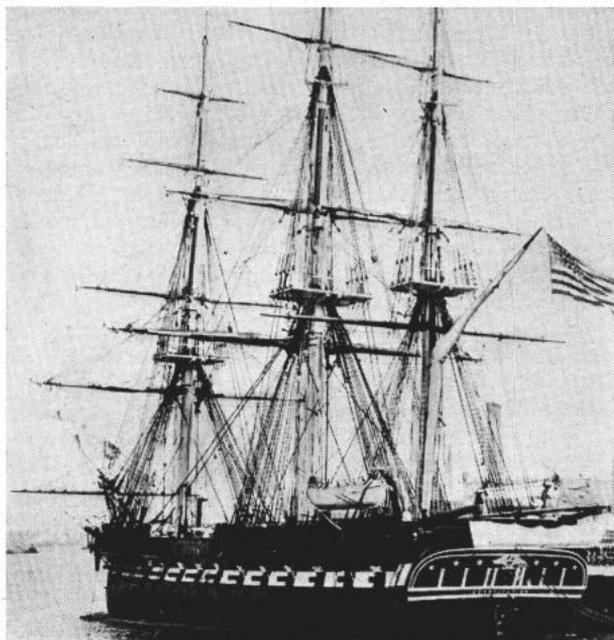


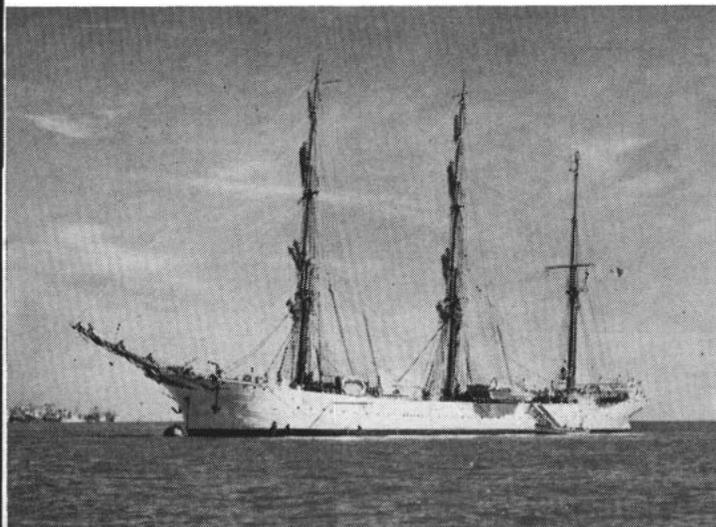
Sailing Ships

IN DAYS WHEN SHIP TALK is about atomic propulsion and how soon it will replace steam, it seems unusual to talk in the present tense about Navy ships still using wind as their source of power. However, there are still a number of these old time canvas spreaders cruising the sea among the high-powered ships of today.

Approximately 10 different foreign navies and the U. S. Coast Guard maintain these sailing ships as training vessels, usually in connection with their naval academies. Some of these windjammers—like Argentina's *Presidente Sarmiento*, launched in 1896—are salty old veterans of the sea but others like the Chilean sailing ship *Esmeralda* are not so old as their canvas-studded masts make them appear, and were launched as late as 1952.

Although the United States Navy no longer has a seagoing sailing ship, there is still one whose name is carried on the vessel lists. She is IX 21, the old frigate

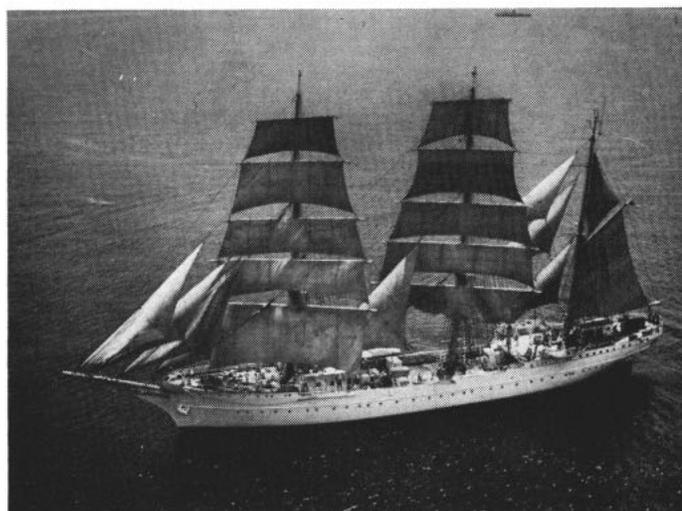




of the World

Constitution, well known by her nickname *Old Ironsides*. *Constitution* is berthed at Boston Naval Shipyard. Here, her historic wooden masts can be seen contrasting with the radar masts of modern Navy ships.

Clockwise from upper left: (1) Argentina's training ship *Presidente Sarmiento* makes way with all canvas spread; (2) *Ne Almirante Saldanha* of Brazilian navy moors alongside *USS Tarawa* (CVS 40) at Hunters Point; (3) *Sagres* shown at anchor at Lisbon is used by Portuguese Naval Academy; (4) Spanish naval training vessel *Juan Sebastian de Elcano* takes part in International Fleet reviews; (5) United States member of the canvas fleet is the Coast Guard training bark *Eagle*; (6) *Esmeralda* of the Chilean navy feels for wind; (7) Steel-hulled sailing ship of Finnish navy was built in 1902. Her name, *Suomen Joutsen* means The Swan of Finland; (8) *USS Constitution*, is now moored at Boston; (9) Italy's *Amerigo Vespucci* trains midshipmen.





BACK IN ACTION—Reservists of Ship Activation Team 13-3 put their training to test demothballing LSM 320.

Reservists Form Ship Activation Teams

MANY OF US THINK of Reservists as part-time sailors who train regularly so that in an emergency they can quickly join the Regulars in combat operations.

This, of course, is true. However, some Naval Reserve training programs emphasize aspects of combat readiness that are quite a bit removed from manning gun mounts or piloting aircraft. One of these is the Ship Activation Team program whose mission is to demothball ships and ready them for sea duty.

Ship Activation Teams are trained to start the demothballing process

while the ship's crew is being assembled. Once the crew reports, the team may move on to another ship and start the reactivation procedure all over again.

Members of Ship Activation Team 13-3, Swan Island, Portland, Oreg., got a chance to put their training to the test recently when they reported for two weeks' active duty for training (AcDuTra) with the Columbia River Group, Pacific Reserve Fleet.

The Reservists—seven officers and 13 enlisted men—were assigned the task of reactivating *uss LSM 320*. It was quite an undertaking for the

men, representative of a variety of civilian occupations. Among the Reservists were a county sheriff, a hardware store operator, a welder, a feed store manager, a statistician, truck drivers, mechanics and electricians. Many of them had not served on full-time active duty, other than training duty, in more than a decade.

The AcDuTra tour marked the first time SAT Division 13-3 had gone aboard a decommissioned ship to reactivate major portions of its space, machinery and equipment. The work promised to be dirty and often frustrating.

Rolling up their sleeves, the officers, chiefs and whitehats started the first phase of their assembly-line technique—the marking of all parts and tools for activation. Then preservative was removed and the areas were cleaned up. The heating, ventilating and electrical systems were put in operation. Guns were assembled and the engines turned over.

Even the ship's whistle was mounted atop the mast and tested. Finally, when the landing ramp was lowered, the Reservists had accomplished their mission.

There are 14 other SAT divisions taking part in similar training operations on both coasts. If and when M-day comes, you'll find these SAT teams hard at work, readying the Reserve Fleets for action.

HOME TEAM—Portland Oregon Reservists spent two weeks on AcDuTra taking active part in Reserve Ship Activation Team program putting ship in service.



LETTERS TO THE EDITOR

More About That Last Shot

SIR: About your last-shot hassle in the February 1958 issue of ALL HANDS:

As I recall, I was on board *uss Eaton* (DDE 510, Ex DD 510) while operating with a few minesweepers (YMS) about the first week of September 1945. We on *Eaton* were covering the YMSs who were sweeping the entrance of the Yangtze River for mines. On our first day on station, we saw a Japanese river gunboat trying to break clear into the open sea. We signalled to the gunboat but it gave no recognition signal and kept on going. We fired a shot across its bow and it stopped.

We sent aboard a prize crew and after we had finished sweeping the mines, *Eaton* and the gunboat proceeded to Shanghai on 8 September. I don't know what happened after that because I was transferred back to the States on the 9th.—Ramon I. Munoz, SDC, *uss Gen H. W. Butner* (AP 113).

• We've learned to be pretty careful when dealing with questions of this sort, so we passed the buck to those better qualified to speak than we—the Division of Naval History. They dug through the records and spoke:

"Munoz is correct as to the area and nature of operations of *Eaton*. However, logs and war diaries of the ship for the period 15 Aug through 30 Sep 1945 do not show that *Eaton* fired her guns in an action of any nature against

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington 25, D. C.

Japanese shipping. The first mention of encounter with Japanese shipping appears in her log and war diary for 9 Sep 1945, when a Japanese vessel was directed to stop and immediately complied."

To back up its statements, Naval History enclosed extracts of Eaton's war diary which cover all Japanese shipping encounters mentioned in her records covering the period 15 Aug through 30 Sep 1945. Here you are:

*9 Sep 1945: At 1324 sighted an unidentified ship standing out of the Yangtze River and steaming to the eastward. Got underway to investigate. At 1400 the ship was identified as an armed Japanese vessel, LSM 144, flying the Japanese ensign. Eaton directed the Japanese ship to stop immediately. The ship acknowledged and anchored, with Eaton lying to, 4000 yards abeam. PC 491 was directed to go alongside Japanese ship and direct her to proceed and anchor in vicinity of *uss Robinson* (DD 562). The ship got underway with Eaton and PC 491 acting as her escort. At 1530 sighted four unidentified ships, hull down, over the horizon. At 1710 *uss Cony* (DDE 508 Ex DD 508) was ordered to intercept ships and instruct them to return to their port. At 1745 *Cony* reported two of the ships to be an SC and an AOG. At 1840 . . . had anchored to observe them for any attempted movement and return in company with them the following morning.*

10 Sep 1945: At 0530, Cony was directed . . . to get underway at dawn with the four Japanese craft and proceed to anchorage. At 0900, Cony with Japanese vessels arrived in the anchorage area.

12 Sep 1945: At 1002 . . . a boarding party of two officers and 12 enlisted men left the ship to board the Japanese ships Ataka, Kasei, No. 1 Koho Maru and Tone Maru to investigate violation of surrender terms by getting underway and leaving their port. The boarding party returned aboard at 1333, having rendered inoperative the armament of the Japanese vessels. At 1900 . . . a prize crew, fully equipped and consist-

ing of three officers and 12 enlisted men boarded the Japanese ship LSM 144 detained at anchor.

13 Sep 1945: At 0955 . . . the prize crew returned aboard from the Japanese LSM 144. At 1445 a communications watch consisting of one officer and three enlisted men boarded LSM 144 for temporary duty.

So that's the official story.—Ed.

Readjustment Pay for Reserves

SIR: Under the present law, it takes at least five years' continuous active duty for Reserve officers who are released from active duty to qualify for readjustment pay. Does any previous active duty count, such as World War II time? If so, does time as a Naval Aviation Cadet (V-5) from February 1943 to July 1944 count as active duty time under this law? If a Reserve officer accepts this readjustment pay after being involuntarily released, does it in any way affect the twenty-year (combination active and inactive duty) retirement he is entitled to at age 60?—R.E.W., LCDR., USNR.

• To qualify for readjustment pay, you must have at least five years of continuous active service during the current tour with breaks in service not to exceed 30 days. This five-year span, plus all earlier periods of active duty is used in computing service creditable for readjustment payment. Service as a Naval Aviation Cadet is creditable from the date of reporting for active duty in that status; however, inactive service as an Aviation Cadet is not creditable for this purpose.

Acceptance of readjustment pay will in no way affect later entitlement to Naval Reserve retired pay upon attaining age 60.—Ed.

Does VA Have Your Address?

SIR: When the Survivor Benefit Act (Public Law 881, 84th Congress) went into effect back in 1956, I reinstated my National Service Life Insurance which had been under waiver since 1951. It is my understanding that the Veterans Administration will mail out dividend checks to NSLI policy holders soon. Can you tell me if the VA is notified by the Navy whenever I have a permanent change of duty station, or is it up to me to keep the VA posted on my current address?—L.D.G., SHC, USN.

• The responsibility for keeping the Veterans Administration advised as to your correct permanent address is left up to you. And, we might add, normally it is best to use your permanent home of record or an address that does not change whenever you receive change of duty orders.—Ed.

Korean Educational Benefits

SIR: On page 26 of your January issue, you carried an excellent story about Korean GI Bill educational benefits.

It contained one error, however, that you may wish to correct in a future issue. The "basic service period" for GI eligibility was given as 29 Jan 1950 to 31 Jan 1955.

The basic service period actually began 27 Jun 1950—not 29 Jan.—J. Norman Lodge, Director of Information, Veterans Administration.

• Thanks for setting us straight. As we keep telling ourselves, "Next time more hits—no typos—no errors."—Ed.

Two Tangs

SIR: I am a high school junior. While doing reference work I came across an article from a Boston newspaper, dated Monday, 15 Oct 1945. It stated the USS *Tang* was sunk by its own torpedo on 25 Oct 1944. A few days later I read in a pamphlet entitled "Atomic Age Submarine" (reprinted from ALL HANDS) this phrase: "Three of these advanced-type Guppy submarines have been launched. They are USS *Tang* (SS 563), *Trigger* (SS 564) and *Trout* (SS 566)."

I would like to know if the Boston newspaper was in error. If it was not, kindly explain the quote from "Atomic Age Submarines."—R. H., Westville, N. J.

• The explanation concerning the newspaper article and the ALL HANDS story is quite simple. Two entirely different submarines are the subjects of the articles to which you refer. Both are named *Tang*. One was SS 306, lost as the Boston newspaper reported, in October 1944. SS 563 is a new type of fast attack boat commissioned in 1951, and assigned the role of continuing the traditions established by the original *Tang*—the SS 306.

The first *Tang* had quite a history. She was lost while blockading the Formosa Strait on 24 Oct 1944. She had 93,824 tons of enemy shipping to her

Full Sea Bag

SIR: There appears to be some doubt on board my ship as to the requirements of a sea bag for all men below CPO. Can you tell me where I can find this information?—M.L.W., BT2, USN.

• Requirements for a full sea bag (minimum outfit) for enlisted men below CPO can be found in Article 1130 of "U. S. Navy Uniform Regulations, 1951." Article 1131 contains a list of optional articles for the sea bag.—ED.

credit when her last torpedo was fired at a crippled transport. The tin fish ran in a circle and 20 seconds later exploded against the sub's stern, sending *Tang* to the bottom.

Her fifth and last war patrol began in September 1944. In mid-October *Tang* sank two heavily-laden freighters. On 23 October she came across a large convoy composed of three cargo ships, a large transport loaded with troops, and tankers. Disregarding the heavy force of escorts, *Tang* made a night surface attack, firing a spread of torpedoes that scored hits on the three cargo ships. The submarine then swung her sights on a large freighter when it was noticed that the troop transport was bearing down to ram the sub.

Evasive maneuvering carried *Tang* clear of the troopship, but she was boxed in by the three blazing tankers on one side and the freighter, transport and several destroyers on the other. Another torpedo attack delivered, despite a deadly hail of bullets and shells, tore into the freighter, and disabled the transport.

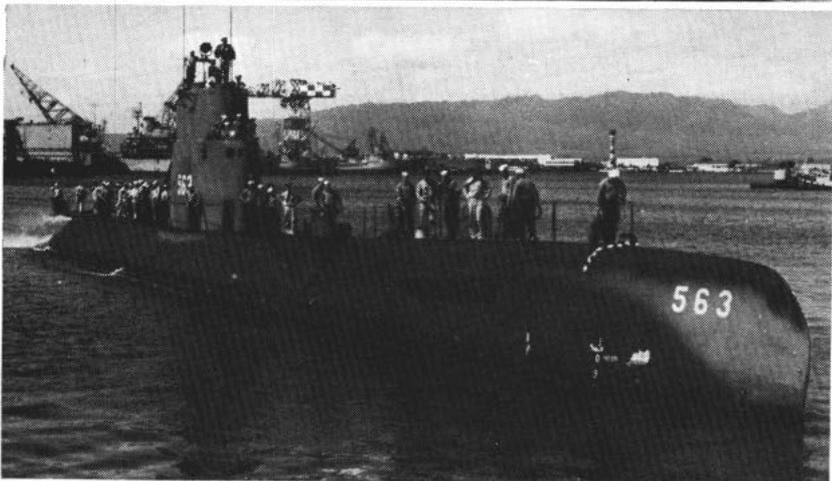
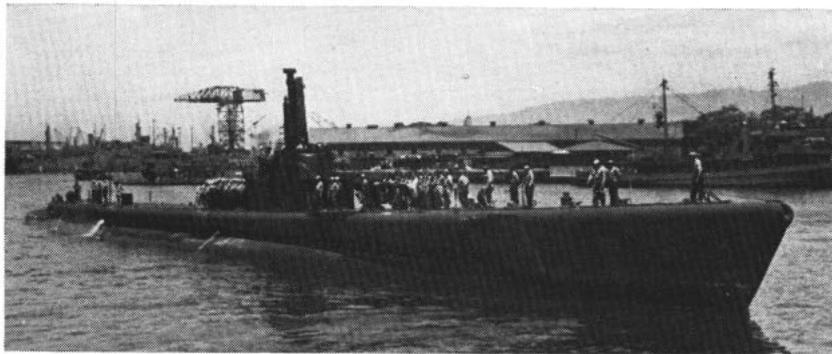
With her tubes empty the submarine broke through the escorts to reload. In the action which lasted only 10 minutes, *Tang* reported scoring hits on seven enemy ships. The three cargo ships were sunk.

Another heavily-escorted convoy crossed *Tang's* path the next day and again the Pacific Fleet boat made a surface attack covered by the darkness of night. The tankers in the convoy all carried planes on their decks and even the bows and sterns of the transports were piled high with plane crates jammed in with the troops. Six torpedoes, fired at a range of less than 1000 yards, exploded as planned, two against a transport, two hit a tanker, and two hit another transport. Again boxed in, *Tang* charged the enemy at full speed. A torpedo hit a tanker which spewed flames, a second stopped a transport; while a third fish struck a destroyer, blasting her ASW intentions. These attacks sank two more cargo ships.

With two torpedoes left, *Tang* moved in on the crippled transport. The first fish ran true and hit the target, but the second ran in the circle of self-destruction. Only nine members of the crew including the skipper, CDR Richard H. O'Kane, USN, escaped to be taken prisoner by the Japanese, and were liberated after the war.

Tang received two Presidential Unit Citations for her war patrols and the Navy decided that her name should live on. SS 563 was christened USS *Tang*, but there the resemblance between the two submarines ends. The new *Tang* is 262 feet long, 49 feet shorter than the World War II boat. Its new diesel-electric power plant gives SS 563 a surface speed of more than 20 knots and it has a rated submerged speed of more than 17 knots. Snorkel equipment gives the atomic-age *Tang* the ability to operate underwater for unlimited lengths of time while the World War II boat was limited by the life of its batteries and the amount of air in the hull.

It is not unusual for a ship to be named after a vessel that was lost in combat. For example, each boat in the *Tang* Class bears the name of a submarine lost during war action: USS *Trigger* (SS 564) for SS 237, lost in March 1945; *Wahoo* (SS 565) for SS 238, lost in October 1943; *Trout* (SS 566) for SS 202, lost in February 1944; *Gudgeon* (SS 567) for SS 211, lost in May 1944; and *Harder* (SS 568) for SS 257, lost in August 1944.—ED.



TWO TANGS—First USS *Tang* (SS 306) shown above sent 93,824 tons to bottom before she was sunk by own torpedo in 1944. *Tang* today carries on name.

Leading a Fast Life

SIR: I spent three years aboard *uss Hunt* (DD 674) during WW II and helped put her out of commission. Since that time, I've heard nothing about her. Is she still mothballed at San Diego? —G.A.L.

• *Hunt* mothballed? Far from it? She's been leading a fast life with other units in *DesLant* since you last heard of her. To bring you up-to-date and to let others know of *Hunt's* background, here's a rundown on her:

Her keel was laid 31 Mar 1943; she was launched 1 Aug 1943 and commissioned at Brooklyn, N. Y., 22 Sep 1943. After shakedown training at Bermuda, she transited the Panama Canal and reported to the Pacific Fleet 9 Dec 1943, where she started her role of operating as a screening ship for fast carrier task forces.

Her "baptism of fire" took place 30 Jan 1944 while bombarding Roi and adjacent islands in the Kwajalein Atoll. This was followed by taking part in carrier air strikes against Japanese shipping and installations at Truk. Then there were strikes against Palau Islands in the Carolines; Hollandia, New Guinea; Marcus and Wake Islands, and the occupation of the Marianas. During the First Battle of the Philippine Sea, she picked up 11 of our pilots and aircrewmen.

Hunt took part in the first carrier strikes against Okinawa and Formosa, and in the air attack on the night of 12-13 Oct 1944, she took 12 enemy planes under fire. This was followed by further strikes against the Philippines, the occupation of Iwo Jima and strikes against the Tokyo Bay area, Kyushu and Okinawa.

On 19 Mar 1945, while screening carriers during strikes against Kyushu and Nansei Shoto Islands, the carrier *uss Franklin* (CVS 13) was hit and severely damaged. *Hunt* immediately began picking up survivors from the crippled carrier and, by maneuvering the ship and employing her two small boats, rescued 429 officers and men during the morning.

14 Apr 1945 was a busy day for *Hunt*. She was part of a radar picket group supporting landings on Okinawa when an estimated 40 Japanese planes started a Kamikaze attack. One of these approached *Hunt* from the port bow at low altitude and hit the destroyer at deck level, passing between the mainmast and forward stack. The port wing sheared off on the mast, bending this tall steel post. The starboard wing sliced into the stack and stuck there with its big red meat-ball glaring down on the deck below. The pilot, with the fuselage of his plane and any bombs he carried, kept right on traveling into the water. *Hunt* remained on station and, within a half-hour shot down a plane making another attack. She re-

mained with carrier groups until 16 June when she received orders to return to the U. S., arriving 6 July. She was placed out of commission 19 Dec 1945, at San Diego.

She was recommissioned 31 Oct. 1951. Later, *Hunt* left San Diego, transited the Panama Canal and reported to *DesLant* 3 Mar 1952. Leaving Newport 1 Jun 1954, she made an around-the-world cruise which took her through the Panama Canal, to San Diego; Yokosuka, Japan; the Philippines; Hong Kong; Singapore; Colombo, Ceylon; Aden, Arabia; transited the Suez Canal, visited Naples, Italy; Barcelona, Spain, and returned to Newport 18 Dec 1954.

Since then she has taken part in convoy exercises, tours of the Mediterranean, midshipmen cruises and the International Naval Review. —Ed.

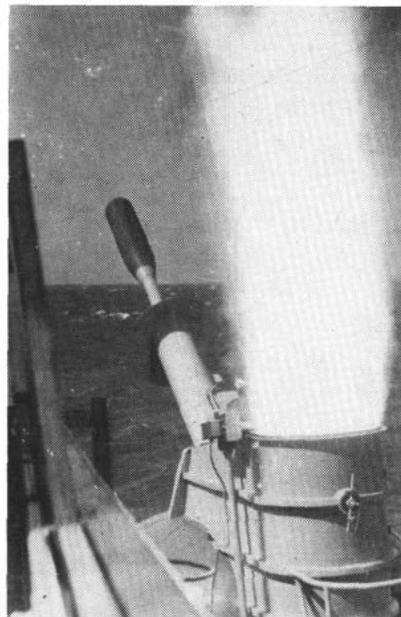
Weapon Able

SIR: Here's a picture taken by one of the crew members of *uss Walker* (DDE 517) during operations off Pearl Harbor, which I'm sure will be of interest to your readers.

The picture taken during a firing of the MK 108 Rocket Launcher (*Weapon A*) shows the rocket after it had traveled approximately 15 feet and is emerging from the launcher. The warhead and the smaller main body of the rocket can be seen above the flare shape blast deflector of the launcher. The stabilizing fins are still in guide tube.

The tremendous power of this ASW rocket propulsion is seen from the flame shooting high above the bridge. Sparks from burning propellant are also observed. This photo was snapped approximately one second after the firing key was closed.—E.W.B., LCDR., usn.

P.S. The picture was taken by Rich-



SHOW STOPPER—Unusual photo of *Weapon Able* was taken aboard *USS Walker* (DDE-517) by spare time photog R. L. Carpenter, SD1, USN.

ard L. Carpenter, SD1, USN, who, in his spare time, performs the chores of "official photographer for *Walker*." He has been commended by Commander Cruiser-Destroyer Force, U. S. Pacific Fleet, for his high performance and his assistance in aiding ships of the Force in their photographic work.

• It is an unusual picture — quite different from most *Weapon Able* shots we have received. And to photographer Carpenter, a Well Done! Keep up the good work and send us more of your pictures.—Ed.



BIG PAL—*USS Remey* (DD 688) pulls alongside carrier *USS Ranger* (CVA 61) while taking part in training exercises in Guantanamo Bay area of Caribbean.

Ship 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, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four or more months in advance.

• *U. S. Naval Cargo Handling Battalion No. 1*—The third reunion is scheduled for 19, 20 and 21 September at the Henry Hudson Hotel, New York City. For further information, write to George J. Clark, Pleasant Ave., R. D. #2, Scarborough, Me.

• *3rd Special Seabees*—The eighth annual reunion will be held 11 and 12 July at the Hotel St. Paul, St. Paul, Minn. Write to R. L. Heutmaker, 56 E. George St., St. Paul 7, Minn.

• *93rd Seabees*—The ninth annual reunion is scheduled for 28, 29 and 30 August at the Aladdin Hotel, Kansas City, Mo. For further details, write to Dale Christy, 4204 East 69th St., Kansas City 30, Mo.

• *302nd Seabees*—The eleventh annual reunion will be held on 18, 19 and 20 July at the Hotel Harrisburger, Harrisburg, Pa. Write to Harry W. Price, Jr., 135 Third St., Lewistown, Pa.

• *579th Seabees*—A reunion is

scheduled for 30 August at the Marine's Memorial, San Francisco, Calif. For further information, write to Dale C. Ryman, 110 Alta Loma, Millbrae, Calif.

• *Shore Patrol B-21 Club*—The Twelfth annual reunion of the permanent Shore Patrol Stationed at Sampson Naval Training Center during World War II will be held on 11, 12 and 13 September at Bear Mountain, Peekskill, N. Y. For additional information, you may write to LT A. Vitola, Peekskill Police Department, Peekskill, N. Y.

• *uss Swanson (DD 443)*—A reunion is scheduled for 28-31 August, in New York City. For further details, write to William J. Clancey, 1407 New York Ave., Brooklyn, N. Y.

• *50th Seabees*—All former members who are interested in holding a reunion are invited to write to William Lamont, 6023 South Fairfield Ave., Chicago 29, Ill.

• *Early Submariners Organization*—Navymen who served in submarines before and during World War I who are interested in holding a reunion at the Submarine Base, New London, Conn., may write to Sylvester L. Cady, Apartment 302, 2235 St. Mary's Ave., Omaha 2, Nebr.

Uniforms in Ready Reserve

SIR: I am writing in regard to my husband's uniforms.

He was discharged about a year-and-a-half ago and is now in the Ready Reserve. At present he weighs about 50 pounds more than he did when he was released from active duty, so his uniforms look simply ridiculous on him.

His hat fits like a beanie. His pants come about four inches above his ankles and, on top of that, he can't even button them. His jumpers are so small they choke him and the sleeves are about three inches short at the wrists. Even his peacoat doesn't fit.

I've been told he has to keep these uniforms, regardless of how they fit. Since he has about eight complete outfits, this seems quite a waste.

Can't these clothes be turned in to the Navy or given to some charitable organization? They're now stored in a trunk and eventually they'll just mildew or rot away.—Mrs. P. T.

• *Evidently, the food you cook for your husband is a lot better than the information you have concerning his uniforms.*

There is no law or regulation which says your husband has to keep them. However, if he disposes of them before his term of obligated service expires, and is called back to active duty in the event of mobilization, he would have to replace them at his own expense. Except for that eventuality,

there isn't much point in hanging on to his old uniforms.

We would suggest that you turn these clothes over to the Boy Scouts of America, since the Sea Scouts are authorized to wear Navy Uniforms and could make good use of them. If, however, you decide to turn them over to an unauthorized agency, you should first remove all distinctive items, such as insignia and buttons, because it is illegal for unauthorized persons to wear distinctive items of the Navy uniform.

That's the long and short of it.—Ed.

Permanent Grades of TOs

SIR: BuPers Inst. 1430.7C states that temporary officers may be advanced within their permanent enlisted rating without quota limitations. It is my contention that this instruction means that after an enlisted man is appointed to a temporary warrant or commissioned grade he can take the examination for advancement and, if he passes, can be advanced by his commanding officer without quota limitations.

My question is concerned with the following example: An enlisted man accepts an appointment as temporary warrant officer from pay grade E-6. Does the commanding officer have to request authority from the Bureau to advance the man to E-7, if he doesn't take an examination after he accepted his appointment? Or, say the man did pass the E-7 examination before his

acceptance of appointment to warrant officer, but was not rated owing to quota limitations. Would his commanding officer have to request Bureau authority to advance the man to E-7.—D.L.S., YN1, USN.

• *You have misinterpreted the instruction concerning advancement of members serving as temporary officers, including temporary warrant officers, to CPOA. Examinations are not required and failure to be advanced as a result of earlier tests does not bear on these advancements.*

The only requirement that must be met before your CO advances you is that of minimum service. You are required to have spent 36 months in pay grade E-6 before being promoted. However, time served as E-6 plus time in temporary officer status may be counted.—Ed.

Barbs from a Bowhunter

SIR: In regard to your article on archery in the January '58 "Sideline Strategy" (page 45), I noticed a couple of errors.

First — In field archery sights on bows may be used. And those using sights shoot in a class referred to as "Free-Style." Rube Powell, a retired Navy chief, holds many National Field Archery records in this free-style division of field archery.

Second — It was stated that in field archery you shoot at targets up to 80 feet away. Come now, let's get this straight. It should be 80 yards not 80 feet.

Of course some people class hunting as a third type of archery. But hunting is actually the main interest of the field archer, with the range being designed to improve his hunting skill.

If it's not too much trouble, I certainly would appreciate it if you would correct these errors so people new to archery won't get the wrong idea.—R. E. Eilers, HMI, USN, President, Kaneohe Bowhunters, MCAS, Navy 990.

• *We're forced to admit that our Sports Editor missed the goal, or bull's eye, by at least 160 feet. Eighty yards is correct.*

We received some of our facts from the Norvair News, published by NAS Norfolk. Its reporter sought out a local archery enthusiast, who provided the information about no sights being used in field archery.

We can't take any sides on the matter, as free-style wasn't mentioned in the article in question. We'll leave that up to you and Norvair News.

Since Norfolk is quite a distance from Hawaii—presumably beyond the range of a missile launched from a bow—there isn't too much danger of bloodshed if the Kaneohe bowmen shoot it out with the archers from Norfolk. So let's you and them shoot it out, huh? Preferably by means of a telegraphic match. We'll hold your coats.—Ed.

More on Sub Ports

SIR: The letters and editorial comments on them in the March issue certainly reflect considerable confusion on the subject of eyeports in submarines.

In one comment, you say "... eyeports, which are usually found on the bridge of all modern submarines..." Eyeports were in the conning tower, not the bridge, and there were usually three of them.

Modern submarines do *not* have eyeports. The dubious advantage of knowing exactly when decks were awash during diving was offset by the obvious danger of the eyeport cracking during a depth charge attack.

The portholes which appeared in your photo of *uss Cuttlefish* (SS 171) were in the forward bulkhead of the non-watertight bridge, above the conning tower. This area was all free flooding.

Eyeports were never of much use, but they did serve to startle a quartermaster once—no mean accomplishment. Just before collision between the old *uss Shark* (SS 174) and the equally old *uss Yorktown* (CV 5), the quartermaster looked out through the conning tower eyeport and shouted: "Migosh! Lookit them bilges!"—LCDR P. A. Smith, USN.

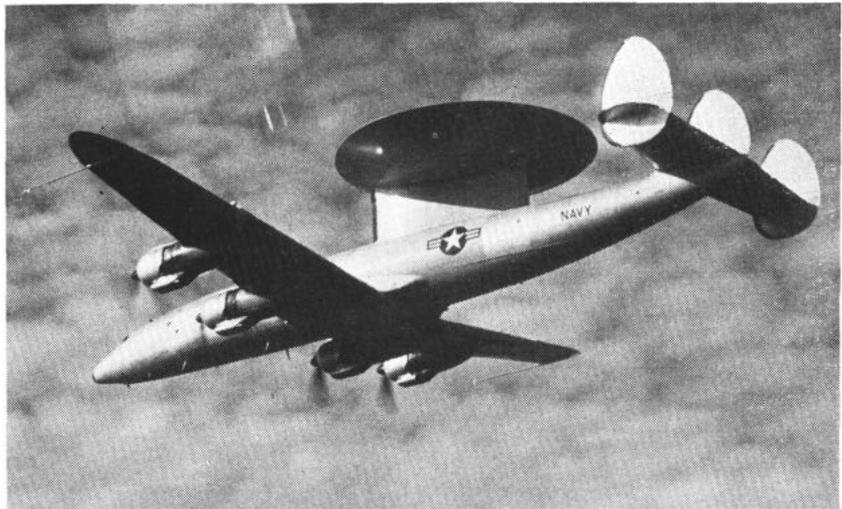
SIR: Sorry, but you still don't have the straight dope on portholes in submarines and you don't have to go back to the R and S boats to find it.

During the war I trained on the old *uss Pike* (SS 173) at New London. She had glass ports (but I suppose "deadlights" is the better term) set in the pressure hull of the conning tower. One of the routine reports on diving was "High ports under."

I was told that the reason for this was that originally there was a set of "low ports" similarly set in the pressure hull of the control room. Visibility through these ports was obviously limited, but I believe fish, seaweed and similar objects could occasionally be seen, just as through a periscope under water. I was also told that the "ports" had been removed from all other submarines but for some reason, were still on *Pike*.

Pike also had a number of other peculiarities for a Fleet boat. She had two fixed torpedo tubes which had been built into the bow outside the pressure hull as a war measure. The torpedoes in these tubes could not be "set" by the gyro setter and, consequently, could only be fired as straight shots.

The portholes pictured in *ALL HANDS* are merely in the free-flooding bridge structure and were common to all early subs. They were removed when the superstructures were cut down during the war to make a lower silhouette during night surface attacks. I believe you will find similar portholes again being



SOME DISH—Navy's 'flying saucer' radar research plane looks as though it has space visitor on back. 'Saucer' planes are developing new AEW gear.

installed in the newest submarines, although they are less conspicuous now. As I recall, *Nautilus* has a couple in the lower level of the sail, for use by the quartermaster when entering and leaving port.

I also spent a few months on *uss Cachalot* (SS 170), sister to *Cuttlefish* (SS 171). She still had direct drive engines which had to be reversed in order to back down. This was accomplished by coming to stop, shifting the camshafts with compressed air, and starting up again in reverse. Needless to say, approaching a pier too fast in this ship was a bit hairy.

Both *Pike* and *Cachalot* had no crew's dinette. Instead, bunks in the after battery were folded up and wooden tables rigged in their place. This may be one of the reasons why these old boats were not too desirable on 90-day war patrols.

They also had riveted hulls and *Pike*

was the last of the unwelded Fleet boats. The modern submariner doesn't know how good he has it.—LCDR John D. Alden, USN. (And not such an old-timer).

• *Let's recapitulate. We have learned that: ALL HANDS is (is not) wrong and we should (should not) apologize for being either (or both). Some submarines do (do not) have portholes, but sometimes they are (are not) called portholes. When they're not called portholes, they're called something else, if they have them. If they don't have them, they're not called portholes. Glad we managed to get this straightened out.*

Nevertheless, in spite of all the arduous research and recollection on the part of our readers, we're happy that the question arose. It's helped us fill in on odd corners of fact (fancy) concerning submarines—portholed and unport-holed. And otherwise. Any other tough answers you want questioned?—Ed.

Origin of Portholes

SIR: One further word on "eyeports," "airports," or what-have-you to be found on submarines.

Without recourse to background material, I believe I am safe in saying that the apertures in question are known to real mariners as "deadlights," that is, "An opaque aperture for the admittance of light, but not capable of being opened." Despite the various shapes of the openings on the bridges of the various boats I've been on, I believe that they all bear the same name.

One further contribution: I recently ran across an interesting explanation for the term "porthole." The article I read stated that it was a practice of the older warships of the British Navy, the old square-

riggers that is, to open their lower deck gun ports in port while alongside a dock. In foul weather, water often washed in through these ports that were near the water line. Therefore, only the ports on the dock—or port—side were opened. Thus the term. It's as good an explanation as I've heard, and may be true.—R. S. Dwinell, EN1(SS), USN.

• *Glad you offered a possible origin of the term "porthole." We have tackled this subject several times but have never found enough concrete evidence to speak with any authority. It's probably one of those terms whose source is forever lost through time's attrition. But it's fun to speculate and, as you say, your explanation is as good as any.—Ed*

Electing Home Address

SIR: Since my 20 years' service is rapidly coming to a close, I have submitted my application for transfer to the U. S. Naval Fleet Reserve and release from active duty. This has been approved by the Chief of Naval Personnel.

Joint Travel Regulations (Para. 4158) authorizes one year from date of release from active duty as the deadline date for performing the travel by me and my dependents, and shipment of household effects. However, no mention is made of the deadline date for electing my home address. Am I permitted to elect my home address within the one-year period after transfer to the Fleet Reserve? Or must I elect my home address at the date of separation?

Can you tell me the latest date I am permitted to elect my permanent address for retirement purposes which would allow me to obtain transportation for me and my dependents at government expense, and shipment of my household effects at government expense, to the elected permanent address from my current temporary address (point of release from active duty.)? —P.T.H., PNC, USN.

• *There is no requirement that a home be selected within any specified period of time. There is a requirement, however, that travel be performed within a one-year period following retirement, (including transfer to the Fleet Reserve or Fleet Marine Corps Reserve). Conceivably, a member and his dependents could perform travel at own expense to a temporary location within the one-year period, and before the expiration of the one-year period, decide to select that temporary location as his permanent home. Upon making the appropriate certification on the retirement or transfer orders as to the place selected as home, payment of travel allowances would be in order.*—Ed.

Honors to Arizona

SIR: About the discussion concerning passing honors to *Arizona*:

We in the Signal Tower are in a position to observe *Arizona* all the time. To the best of our knowledge, ships passing her do render honors. It has been noticed that certain merchant vessels while en route to the Supply Base here at Pearl render honors by dipping their ensigns for a short time while passing her. Colors are held on her every day, just as though she were in commission.

Just thought we'd let all hands know that their memorial is not forgotten.—Henry L. Tobias, SM2, and the Signal Gang, Signal Tower, Pearl Harbor, T. H.

You Made the Right Choice

SIR: Upon receipt of rotation data cards for Segment I, I reported to the personnel office to submit my choices of duty. I asked what would happen if a man did not desire shore duty in continental United States and preferred to submit a choice for MAAG or mission duty. He told me, as I already knew, that I was not eligible to submit such a choice of duty. I then listed my choices of duty in continental United States.

Recently, a PAMI listing of rotation data cards submitted from this command under Segments I & III was received and, much to my surprise and amazement, I noted several personnel listed with such choices of duty as England, France, Germany, Denmark (Codes 2 and 8). I questioned this same PN1 as to how this was possible in the case of these men especially after I had brought up the question and had been told I was not eligible. His answer

was that he had informed the men in question that they were not eligible to make such choices but rather than argue with them, he permitted them to list their choices as mentioned above.

What I cannot understand is how these cards were processed by PAMI ComServLant and not returned for correct submission. Furthermore, the forwarding letter of these listings stated that any errors were to be promptly reported to the Bureaus which this command has not done. I am certain that the Bureau will catch this matter and rectify it but then again, as ComServLant did not do so, it is possible that the Bureau may not and these certain few who did not comply with the instruction through the indifference of the personnel office of this command may wind up getting another tour of overseas shore duty or MAAG or mission duty while the remainder of us on the list who complied and of whom many would have preferred another tour overseas will have to go to shore duty in continental United States. It's enough to make me want to turn in my suit and request transfer to the Fleet Reserve.—P. F., YNC, USN.

• *Aw, c'mon now. Duty in continental United States isn't that bad. You've probably read where they now have television in the States—some of the commercials are real good. Most of the natives speak some form of English.*

Furthermore, assignments to duty at BuPers-controlled overseas activities are still made in accordance with BuPers Inst. 1306.62A. Personnel stationed at overseas activities or non-rotated ships overseas are not eligible for transfer to a BuPers-controlled overseas activity. And you can rest assured that none will be transferred to such duty by the MAAG and Mission Detailing Section regardless of choices as listed on Seavey Data Cards.—Ed.

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The Salty Touch

SIR: Your March cover, showing C. L. Foushee, CDR, USN, and the article about this Navyman who came up the ranks from seaman, on page 27 of the same issue, brought back memories for me. One of the most vivid of them was an incident that took place shortly after *uss Philadelphia* (CL 41) was commissioned back in 1937.

The then Chief Boatswain Foushee assembled the R Division for personnel inspection while underway. The weather being fine, quarters were piped for fair weather parade.

Suddenly, we shipped a fine sea aboard, and the men of the division, mindful of their best whites, scattered like quail.

BOSN Foushee never batted an eyelash and stood firm. As the water streamed down his face, he regarded this latest antic of the modern Navy with a look of disdain that I have never forgotten.—F. G. A., DCWC, USN (Ret.).

• *As we said, CDR Foushee has "proved pretty conclusively that he 'had what it took to stick it out,'" despite the admonition to the contrary which he received when he joined up 43 years ago.*—Ed.

Safety First Last

SIR: Your front cover (February issue) reveals one discrepancy which will cause every electrician and IC electrician to wince.

I refer to the dangling cap to the outlet box. The negligent practice of leaving outlets uncapped—particularly sound-powered telephone outlets—has caused the aforementioned men many hours of needless work for years.—CDR W. E. Fleshman, USN, XO, NATTC Jacksonville, Fla.

• *Right you are. Sorry.*—Ed.

SIR: Safety first, is it? Or last? Your front cover display of February makes it difficult to convince personnel of the importance of safety goggles.—J. W. B., USN.

• *Right. Sorry.*—Ed.

SIR: The front cover of February ALL HANDS shows an open outlet box on the weather deck of a ship. Furthermore, a sailor is shown hammering metal just below the open outlet box. Metal banging against metal can easily produce slivers that could fly into the opening of the outlet, causing a short circuit. Furthermore, damage could be incurred through moisture or corrosion.

The unsafe condition mentioned above is in direct contrast to the teachings of shipboard safety. Such unsafe conditions should not be advertised. Remember: A safe crew means a safe ship.—S. R. Cowell, USNS *General H. F. Hodges* (T-AP 144).

• *Right. Sorry.*—Ed.

SIR: We can't help but wonder how many man days have been lost in the



ALL DECKED OUT—Seaplane tender *USS Currituck* (AV 7) rides at anchor in full dress during civic ceremony. *Currituck* makes her home port at Norfolk, Va.

sick bay by Navymen like the "Iron Man" on the February cover of ALL HANDS.

Is that a bloody thumb along with the mangled middle finger on his left hand? Our guess is, if he doesn't hit himself again, he'll stick his finger into the power outlet someone so carelessly left open.—CPO Quarters, *uss Energy* (MSO 436).

• *Okay, okay. So all right, yet. We have no one to blame but ourselves—we took the picture. We'll be careful of posed shots hereafter.*—Ed.

SIR: In regard to your cover on the February issue of ALL HANDS: All very nice, but I would like to suggest that it might have been more accurate to have shown Fireman Carroll wearing protective goggles. If such protective measures are not being observed on board *uss Hugh Purvis* (DD 709), it is possible that they are not being observed at other duty stations in the Navy. If this is true, it might be well to take a "stitch in time" and circulate a directive concerning the use of goggles and other proper protective equipment which is provided for various hazardous tasks.—J. H. Nelson, LT, MC, USNR.

SIR: Your photographer for the front cover of the February issue should hide his head in shame. Of all the good men and material available for an interesting cover, he selects a fouled-up FN beating on a piece of steel flat bar with, of all things, a blacksmith's chisel and using a vise for an anvil.

I'm sure that the Bureau of Naval Personnel, who also publishes the Training Bulletin, as well as the instructors at BuPers' schools will not be happy at this example of how not to do it.—D. F. Drodgy, ShipRepTech, WO/W1.

• *Now look, shipmates, we said we're sorry and we are. Let's forget the whole thing if you can't forgive us. Okay?*

However, before we drop the subject forever (we hope) there are a couple of items we'd like to mention. First of all, it's not fair that Carroll and Purvis should take the rap for this. Our man, who still shudders at the words "front

cover," told Carroll to pick up a piece of iron and look as though he were working. Carroll very politely posed to help the ALL HANDS photog. Those in authority aboard Hugh Purvis had no opportunity to review the photo before it was published.

Another point we found interesting was the wide range of protest the photo inspired. Some found the open electrical outlet shocking; others took a dim view of Carroll's technique. Many, we were happy to note, were interested in the safety (or lack of it) features. Others, we were equally happy to note, were concerned about the example it might set.

Although some of our correspondents were somewhat rough on poor Carroll who, after all, was simply doing as he was told, they seem to have come out of the incident better than we did. One reassuring feature—people do look at the magazine.—Ed.

More on Conestoga

SIR: One further matter of possible interest in regard to the tug *uss Conestoga*: The tug was originally owned by a Pennsylvania railroad and coal company and towed large coal barges along the coast from Philadelphia to Boston. I remember her very well because at the close of World War I, I was transferred to Director of Tugs, Hampton Roads, when *Conestoga* arrived from the Azores.

I was ordered to report on board *Conestoga* to pilot her from Hampton Roads to the Portsmouth Navy Yard. I was the only one familiar with the channel of the Elizabeth River which had a large amount of traffic in those days, so I took her up the river.

Another chief and I were standing watch as skipkeepers for some little time. If I had had more time on my fourth enlistment, I probably would have sailed with her and, perhaps, would have accompanied her on her last trip.—Charles Conner, CBM, USN (Ret.).

• *Thanks, chief, for further details on one of our favorite mysteries.*—Ed.



HAPPY DAY—Crew members dressed like Arabs wave greetings as ship arrives. Right: Dependents board *Duxbury Bay*.

White-Robed Sailors Arrive from the Persian Gulf

RECENTLY A STRANGE sight in the shape of a gleaming white ship with robed and turban-attired men waving from the flying bridge made its way into Norfolk harbor.

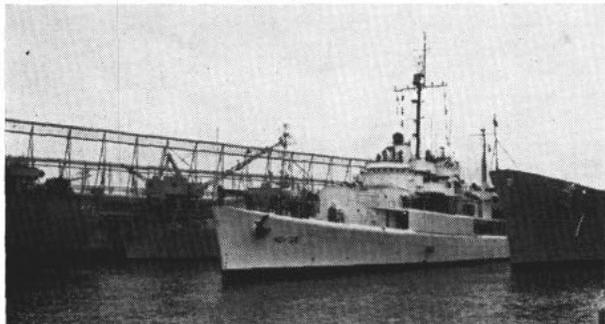
However, to the expectant people who crowded pier number five there was nothing unusual about this arrival. They knew it was *USS Duxbury Bay* (AVP 38) returning from a six-month tour of duty in the Persian

Gulf where she had served as flagship for Commander Middle East Force. To these persons who waited on the pier holding "welcome home" signs the ship was a familiar sight for they were the friends and relatives of *Duxbury's* crew. The four men dressed Arabian style, who waved from the flying bridge, were crew members, happy to be home again and eager to show their family souvenirs purchased in faraway places.

Although the white paint of *Duxbury Bay* contrasted sharply with the conventional Navy gray of the other ships in port, it was old hat to her and other ships that have served as flagship in the hot waters of the Middle East. The paint job, air conditioning throughout, as well as special uniforms, were designed to help Navy-men beat the heat in those far-off waters.

This was the ninth Persian Gulf trip for *Duxbury* since 1950. This time she made new friends in Ceylon when her crew joined other Navy ships in bringing relief supplies to that country stricken by floods.

Taking over the duties of flagship for Commander Middle East Force was *uss Valcour* (AVP 55).



SMALL FRY dependents of *Duxbury's* crew spell out their welcome. Above: *Duxbury* eases into pier at Norfolk.



Take Me to Your Leader

For your information, the Navy is starting a leadership program. In a sense, it broadens the character guidance program of which you have heard. On the other hand, it applies to "hup-toop-free-fow" and to "start your brooms." It applies to handling a ship's boat, to servicing the guns, to scanning with radar.

It applies to the fighting man (or the man ready, able, willing to fight—if you prefer). It applies to leading and being led. Perhaps it most closely applies to the petty officer, the CPO, the junior officer.

The leads on leadership on this and the following two pages come from interviewing, reading, talking, listening and collecting material. Every man, it's pointed out, is a leader. But some of us can improve.

For example, we were briefed on the program by an ex-POW. What he had to say opened our eyes. Inter-reliance; self-leadership; strength of character—these were the terms he used. He used them to describe the men who had survived in POW camps. It was an object lesson to us.

We're giving you some of his ideas, together with the principles of senior officers, past and present. A new manual, Moral Leadership (NavPers 15890), tells more about the program. You take it from there.

ARE YOU A LEADER?

"Who me?" you ask. . . . "I'm the junior chief among 12 other CPOs in the division." . . . "An ensign fresh out of college." . . . "I'm only a PO3—low man on the totem pole."

No matter what your answer may be, you're still in a position which requires leadership. Every Navyman—from the top ranking admiral on down—has that responsibility. But just what is leadership?

The centerspread on the following pages—which has been endorsed by the Navy's top men—summarizes leadership. You'll notice that in the Navy, as well as in every walk of life, you have leaders and you have followers. Leadership is simply the art of influencing human behavior. At the Naval Academy—where many of our naval leaders are molded—leadership is defined as the art of accomplishing your mission by gaining the respect, obedience and loyal cooperation of your men.

Sounds impressive, but what does it all mean?

In everyday words, it simply means the ability to handle men. That's where you come into the picture.

A PO3 or a senior CPO, a division commander or the head of a department, a commanding officer or a task force commander—each, by virtue of his rank or rating and assignment, is required to exercise a certain amount of authority within the framework of the chain of command.

As every Navyman knows, that chain connects each crew member with the skipper of his ship, the division, squadron, type and Fleet commanders and on up to the Chief of Naval Operations. Your individual job may cover just a small portion of a link in that chain, but you still lead men and operations.

No one man runs the Navy. This is done by many men like yourself—each with a higher or lower degree of authority. Although you have your own "command," you do not operate it independently. It is a part of a team operation which includes all other "commands." This chain of "commands" forms a chain of leadership.

The Navy can't function without you—any more than it can function without its senior admirals.

Just how you go about fulfilling your leadership responsibilities, of course, depends upon the situation, the nature of your "command" and the number of men under you. But regardless of the situation, the leadership principles—the rules, characteristics, traits or policies—which you apply in controlling or guiding the actions of your men, would be the same.

Some of the more important leadership principles and techniques are illustrated on the next two pages. You can see how you stack up as a leader.

Your responsibilities as a leader are twofold—the accomplishment of your assigned duties or mission, and your duty to your men. In other words—getting your job done and taking care of your men.

Getting the job done is where knowledge of your job enters the leadership picture. By knowing your duties thoroughly, you're able to *show* your men what to do, as well as *tell* them.

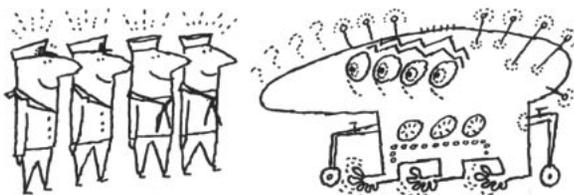
No individual—regardless of his rank or rating—is in a position to undertake any leadership responsibilities unless he knows what his job is and the part he is to play in getting it done. By the same token, he's expected to keep his men informed and explain to them why a task must be accomplished and the part each of them will play in doing it.

As a leader, the Navyman makes this his first duty—briefing, instructing and training his men to the end that they will get the job done.

The second most important responsibility of a leader is considering the welfare of his men. When you know each of your men and their individual differences, you're able to assign them to the jobs for which they are best fitted—and they feel that they share in the responsibility for the work. Leadership means having a sincere interest in everything affecting the men you're responsible for—their gear, their working conditions, their well-being (on duty and off). When a man has a personal problem that the Navy can help him to handle, it helps to know about it. Looking out for the welfare of your men earns their support and cooperation.

A leader (it says here, and we'll have to admit it's true) has a moral responsibility which is more than knowing right from wrong. He sets the standards for his men, because he knows their actions will be governed by his actions. This applies to loyalty, both to seniors and to your ship. It applies to personal appearance and personal conduct—on the job and ashore.

Here's one conclusion that you probably have drawn by now: A good leader is successful because his men *want* to follow him. You said it, boss.



Every Navymen A LEADER



WHO ME?

LEADERSHIP IS THE ABILITY TO INFLUENCE OTHERS

sometimes THE WRONG WAY OR sometimes THE RIGHT WAY

FOLLOW THE LEADER



IT'S AN ART ... IT'S A SKILL TO

YOUR JOB: K=P

KNOWLEDGE IS POWER. Know how your job and unit fit in with other activities aboard ship. Keep studying. Be a source of up-to-the-minute information. Keep your men posted on what the ship is doing, and their part in the operation.



YOU: the inner man

SELF APPRAISAL—When you know yourself you can make improvements. Don't let your weak points get you down. Make the most of your strong points—strengthen the weak ones. Have the courage to say you "don't know" and find someone who does. A man needs to know his job to make quick decisions. Stick by your decisions once you make them.



PASSING THE WORD



KNOW THE NAVY WAY—give orders correctly. Give orders to man in charge, not the group. Follow chain of command—up and down. Insist on attention. Avoid bossy attitude. Show confidence in your ability. Don't waste words—be definite, clear, concise and use simple language. Don't use senior's name to add weight to your order. Don't issue an order you don't intend to enforce.

COOPERATION works both ways



GIVE FULL CREDIT to men when and where credit is due. Accept responsibility for mistakes made by your men. Let your men know you appreciate their good work and see that others do too. Earn the respect of your men by being courteous to subordinates as well as superiors. Don't threaten punishment to make orders more effective. Don't think up jobs just to keep men busy.

KNOW-HOW in giving instructions

KNOW THE "KNOW-HOW" of explaining to others why the job must be done, the Navy's mission, the mission of your ship and the immediate tasks at hand. It is not enough to be able to do the job yourself. Be able to show what you want done as well as explain what you want done. Encourage men in difficult jobs. Build a sense of teamwork by using group action to speed accomplishment. Ask for questions and stimulate discussion.



WHEN THINGS GO WRONG there

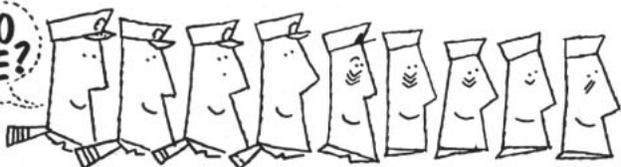
BEFORE you give that blast be sure the man knows why he is being "chewed out." Discipline does not necessarily mean punishment. Punish as a last resort. Avoid making criticism a personal thing. Bowl him out in private—not in front of people he works with.

Consider... cident... Be impar... Use com... Consider... Give the... Support... Know the

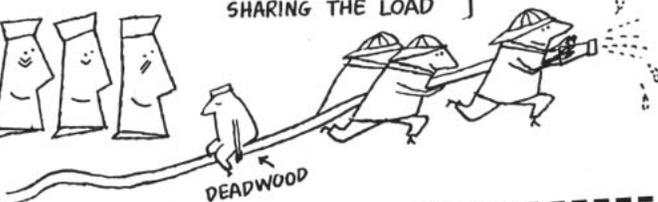


Every Navyman A FOLLOWER too

WHO ME?



GOOD FOLLOWERS } LEADERS
SHARING THE LOAD }



WHO'S WHO: man to man

KNOW YOUR MEN and treat them as individuals. Find out their abilities, capacities, endurance. Show an interest in their health, their personal problems, leisure-time activities—an understanding of your men will help you to keep things running smoothly. If you don't know your men—your men won't know you.



THE MEN you work for

TRY TO UNDERSTAND your boss's problems. Put yourself in his shoes. Respect his position and training. Let him know your full range of experience and talents so that you can do your own job better. Assume responsibility for the work you do, and know how to delegate work to others.



RECOGNITION: what's in it for ^{me} you

COMPLIMENT IN PUBLIC. Don't overflatter. If you are satisfied with their work, say so. Spot poor work quickly—praise good work equally as fast. Express interest in every man's ideas even if you disagree. Grant favors when deserved. Encourage sense of responsibility by emphasizing importance of a job well done. Look after your men—be interested in their promotion. Be proud of your crew.

GO TO BAT for your men

BE GENUINELY INTERESTED in your men's leisure-time activities, their quarters, their health, safety, and family. Assure them that they can turn to you *first* when in trouble and then—come through for them! Insist on the best possible facilities for your men. Be a good listener when it comes to personal problems and really try to help rather than pass the buck. Don't pick on one man. Help them to prepare for advancement.

a right way to right them

Other action was intentional or accidental. Get the whole story. —be fair. Never act in anger. sense. man's past record. in the benefit of the doubt. correct action. reason for discipline.

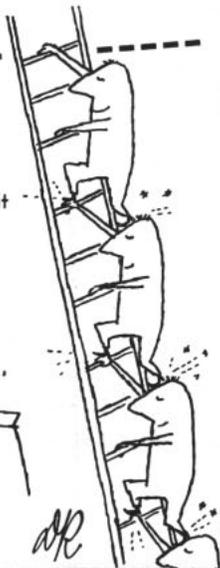


CHAIN REACTION

FOLLOW THE RULES yourself. Insist on chain of command. This good habit works up and down the ladder. Don't confuse popularity with respect. Be honest with your men. Know what's going on around you. Be consistent in your demands. Reward worthwhile action.



KNOCK OFF THAT SMOKIN'



"Discipline is vital in getting order during action by forming the habit of teamwork. Discipline is not punishment but saves lives in an emergency."

★ ★ ★ ★ TODAY'S NAVY ★ ★ ★ ★



HIGH SEAS—USS *Gearing* (DD 710) makes an attempt to refuel from USS *Salamonie* (AO26) during which time crew member was washed overboard.

Now You Can Learn the Tango

A slick new Enlisted Men's Club has come to life at Rota, Spain.

The club is the first Navy-built social center to become available. Officer and Chief Petty Officer Clubs are still under construction.

Anthony T. San Fillipo, RMI, cut the red ribbon stretched across the club's main entrance—signalling the club was in commission. San Fillipo was the senior sailor present.

Dancing crowned the opening day festivities. A mammoth high-fidelity juke box twirled out music ranging from hill-billy waltzes to rock 'n roll, and spiced the offerings with a few lively Spanish numbers. Navy-

men and Marines who brought Spanish señoritas introduced their dates to American culinary favorites such as hot dogs, cheeseburgers, steak and eggs.

Designed to match the prevailing architecture of Spain's Andalucia region, the club building is a classically squarish structure of white stucco, featuring two patio-like terrace sections.

Tentative future plans for the club include frequent informal and some formal dances, dinner and cocktail parties, entertainment by Europe-circuiting bands and floor-show troupes, and exhibitions of the famous Andalucian flamenco dancing.

To the Rescue

A sailor who jumped overboard into mountainous 60-foot waves to rescue a man washed over the side from a destroyer has been awarded the Navy and Marine Corps Medal.

The medal was presented to Lawrence W. Beckhaus, GM2, USN, by RADM John C. Daniel, USN, then Commander, Destroyer Force, Atlantic Fleet, in ceremonies aboard USS *Salamonie* (AO 26). The award, one of the highest peacetime awards given in the Navy, was presented to Beckhaus for his daring rescue of George D. Schack, SN, USN, who was swept overboard from the destroyer USS *Gearing* (DD 710).

The incident occurred while *Salamonie* was performing emergency refueling of *Gearing* off the coast of Spain during an Atlantic storm. Schack, engaged in jettisoning loose gear to lighten the destroyer, in danger owing to heavy weather and low fuel, was tossed overboard when a gigantic wave broke over *Gearing*.

Salamonie was approximately 1000 yards astern of *Gearing* when it received a man overboard message by flashing light and voice radio circuit. Minutes later Schack was sighted on the port bow. The oiler maneuvered to bring him alongside, but was unable to turn sharply enough to get the victim to leeward, and drifted away from the tiring man.

Salamonie turned into the wind for a second approach and was successfully maneuvered to the windward side of the man. Meanwhile, more than 30 lookouts kept Schack in sight.

The heavy seas and 60-knot winds made it impossible to lower a lifeboat. Beckhaus, with the permission of his commanding officer, dived over the side. After a 10-minute swim the gunner's mate reached the exhausted but still conscious seaman.

With the tanker rolling as much as 25 degrees in the trough, *Salamonie's* crew heaved the line in. Both men came on board simultaneously as the oiler took a huge wave that swamped the well deck.

Schack was found uninjured, but was sent to sick bay for shock treat-

YESTERDAY'S NAVY



On 2 Jun 1941 the Navy's first escort carrier, USS *Long Island* (AVG 1), was commissioned at Newport News, Va. On 8 Jun 1880 Congress authorized the President to appoint a Judge-Advocate General of the Navy. On 9 Jun 1942 the Naval Operating Base at Kodiak, Alaska, was established. On 11 Jun 1944 U. S. battleships off Normandy gave gunfire support to Army forces 10 miles inland at Carentan, France. On 21 Jun 1866 Congress authorized the establishment of the Hydrographic Office. On 19 Jun 1864 USS *Kearsarge* sank the Confederate raider *Alabama* off Cherbourg, France.



HELPING HANDS—F. D. Pensinger, FN, USN, (left) receives Navy and Marine Corps Medal for rescue of serviceman. Navy diver Jerry Ard received commendation by CO for attempt to rescue shipmate from bottom of harbor.

ment and Beckhaus returned to duty after prescription by the commanding officer. Schack was later returned to *Gearing* by high line transfer.

RADM Daniel in presenting the medal commented: "In peacetime, operations are continually exposed to extra hazardous conditions. Eight gallant destroyermen were lost overboard this year and but for the outstanding heroism of gunner's mate Lawrence Beckhaus, this number might have been nine.

"To destroyer sailors, weather is always an enemy. To a destroyer low on fuel, the maddened sea can mean loss of the ship and death for all. It is our fervent hope that the construction of the nuclear-powered guided missile destroyer, free from its de-

pendence on oil, will lessen these hazards.

"It is in this circumstance that a heroic man of the gallant *Salamonie* volunteered to hazard his life for that of another sailor. On behalf of the Secretary of the Navy, it gives me the greatest pleasure to make this citation."

Standing before Schack's parents and Beckhaus' wife and four children, RADM Daniel pinned the medal on and read the citation which concluded: "By his outstanding courage, initiative and determined efforts throughout, Beckhaus upheld the highest traditions of the United States Naval Service. Signed Thomas S. Gates, Secretary of the Navy."

RADM Daniel shook hands with Beckhaus and concluded, "You have my gratitude and that of every destroyerman."

More Helping Hands

"Giving the other guy a hand" won't be found in many Navymen's job code, but nevertheless they manage to get around to it with reassuring frequency. Consider, for example:

Frederick D. Pensinger, FN, USN, of *uss Mullany* (DD 528), who was awarded the Navy and Marine Corps Medal for rescuing a fellow serviceman from drowning in San Diego Bay.

Last year, as a liberty party returned to the ship after midnight in stormy weather, Pensinger saw two men fall overboard as they climbed from a water taxi. He jumped in after the men, who seemed to be poor swimmers. In spite of the dark-

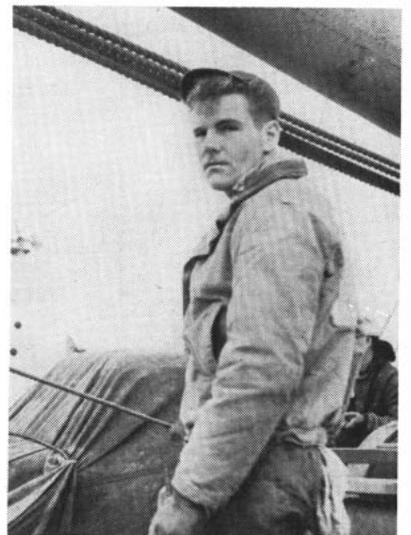
ness and the swift current running, Pensinger was able to reach and save one man. The rescued man stated in an interview that the other victim had expended himself and was unconscious before he could be reached.

Then there is Jerry Ard, SN, USN, a qualified Navy diver, who was commended by his commanding officer aboard the heavy cruiser *uss Rochester* (CA 124) for his attempt to save the life of a drowning shipmate.

It was again night and a light rain drizzled over Keelung Harbor, Taiwan, when the Officer of the Deck sounded "man overboard!" Ard was rushed to the scene, hurriedly fitted out with a lightweight spider-



RESCUED—G. D. Schack, SN, USN, washed overboard by large wave while jettisoning ship's loose gear.



RESCUER — L. W. Beckhaus, GM2, USN, received Navy and Marine Corps Medal for rescue in high seas.

TODAY'S NAVY

harness diver's mask operating on an auxiliary compressed air hose, and slipped into the floodlit green strip of water between ship and pier where the man was seen to go down.

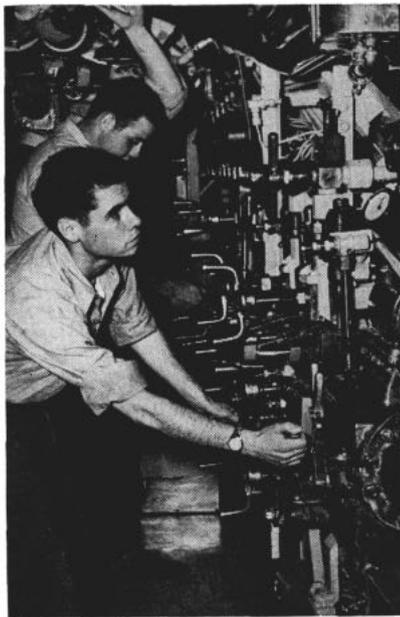
Underwater, Ard worked in total darkness at a depth of 33 feet, following a systematic search pattern over the muddy, debris-cluttered harbor bottom, often cutting his arms and legs. His commendation noted that he made the dive "without benefit of protective clothing and with risk of serious bodily injury to himself in contaminated waters."

Fifteen minutes later, Ard surfaced with the body of his shipmate.

Now a second class deep-sea diver, Ard has been interested in diving since he was six, when he saw a motion picture about it. He began to learn the art in earnest last March in San Diego when he took a ten-week course at the Navy training school. He has since performed every type of dive except bell and helium-oxygen descent, spending much of his liberty time increasing his special skill.

Divingest Submarine

uss *Spikefish* (SS 404) claims to be the Navy's divingest submarine. The reason: more than 9000 dives. This is almost 1500 more than her nearest rival, says *Spikefish*.



BALLAST TANKS empty, 'U-drive-it' Reservists secure air blower completing final stage of sub's surfacing.

The New London-based submarine recorded her 9000th dive during operations in the North Atlantic while conducting ASW exercises with HMCS *Lanark*.

Spikefish is commanded by LCDR Harry H. Caldwell, USN, and is assigned to Submarine Squadron Two.

Visits Vice Versa

Men of uss *Saint Paul* (CA 73) have learned that a lot of good will can be created in one week by a U. S. Navy ship in a foreign port when all hands turn to. It can be fun, too.

The crew of the heavy cruiser were hosts to nearly 10,000 visitors during a stay in Osaka, Japan's second largest city.

At various times during the week, a "Welcome aboard!" was extended to 4000 grade school children, 200 children from a local orphanage, 20 newspaper men, 75 Japanese navy personnel, 1800 Japanese army and air force personnel, and some 4500 Osaka citizens.

In addition, some 200 guests attended an official ceremony aboard the cruiser.

As the visitors came aboard, they were split into small groups and given guided tours of the ship. The children were treated to ice cream, cake and cartoon movies. The Seventh Fleet Band gave four performances during the week.

Sports also provided an interchange of culture, as the Osaka police put on a demonstration of judo and kendo aboard the flagship for the *Saint Paul* crew. The basketball team dropped the Osaka Mita Club 79-44, and the baseball squad stopped the Osaka Harbor team 9-8 and split a doubleheader with the Osaka Friends.

Many *Saint Paul* sailors took advantage of guided tours. Palaces, shrines, pagodas and temples in the Osaka, Kyoto and Nara districts kept the sailors and their cameras busy recording the remains of an ancient civilization.

All-Service Airfield

The airfield at Naval Air Station, New Orleans, La., has been dedicated as Alvin Callender Field in ceremonies on 26 Apr 1958.

It is the first airfield originally planned and constructed as a joint operating field for all the services. The airfield will perpetuate the memory of the New Orleans aviator, Alvin Andrew Callender, who lost his life in aerial combat during World War I as a member of the Royal Flying Corps.

Units of the Air National Guard, Air Force Reserve, Marine Air Reserve, Coast Guard, and naval aircraft will use the new field.



BACK HOME—Destroyerman Bob Shamblin of USS *Brough* (DE 148) greets family as ship returns to Newport, R. I., after six months cruise to Antarctica.



LONG TIME—Edson H. Peek, ADC, put on civilian clothes after retiring from a Navy career of 30 continuous years.

Navy Notables

Over the past few months, many men in the Navy have retired, shipped over and received Good Conduct awards. In this group were five men whose total time in the Navy, if stretched out continuously, would date back long before the Navy Department was organized or the first ships of the Continental Navy went to sea to defend our country.

One of the more notable "notables" retiring was Chief Boatswain Patrick J. (Pappy) Byrne who left the Navy 31 March after a 40-year career in which he flew more than 140 types of planes and logged more than 22,600 hours in the air.

The 62-year-old Byrne, whose name has become a legend among naval aviators, is regarded as a pioneer in seaplane aviation. He helped establish almost every Navy seaplane base in the world.

The venerable Byrne's days in the air began even before he entered the Navy. In 1915 he was flying a Burgess-Dunne seaplane with the late General Howard S. Borden of Rumson, N. J. On 14 Dec 1917, Byrne joined the Navy, kept his hand in flying and, in October 1920, was designated Naval Aviation Pilot #10.

Mr. Byrne fondly recalls the early years of flying. As one of the pioneers he first flew in planes which had nothing like the maze of complicated gauges and dials that confront the aviator of today. Back in those times there was merely an oil pressure gauge.

Chief Boatswain Byrne (LCDR,

Ret.), in those early days of aviation, used a string tied to the bow of the plane to tell whether the plane was slipping, skidding or flying straight ahead. He judged his airspeed by the singing of the plane's wires. An ardent believer in "the seat of the pants" theory of flight, Byrne believes that flying in that era required a natural inclination on the part of the pilot. "Today they say we were crazy," said Byrne. "But that was the ONLY way to fly in those first years." Instead of a radio, telegrams were used to notify an airfield impending arrival of an "aeroplane."

In place of radio beacons at night and overcast days, they used their noses. He remembers more than once flying down the east coast at about 200 feet knowing only by the smell of coffee that he was over Brooklyn, and only by the odor of fish packing



STRAIGHT THROUGH—Harry Morris, TMC, who first went to sea in *Alliance* retired after 55 years straight service.

plants that he was over the Delaware coast. The fumes of sulphuric acid from paper mills were a welcome smell for they signified the end of the flight at Charleston, S. C.

Another air-minded gentleman has joined the ranks of the retired after completing 30 years on continuous duty. He is Edson H. Peek, ADC, who recalls the days when pilots were so rare that part of a petty officer's duties was to taxi the aircraft to the point of take-off. In those days the pilot was so important that his time could not be wasted taxiing.

Enlisting when he was 17, Peek completed boot training and was assigned to the battleship *USS New Mexico* (BB 40) as a mechanic on the early amphibian OL-6. Later he was assigned to Pensacola where, as an aviation machinist's mate second



'PAPPY' PILOT—Patrick J. (Pappy) Byrne, retired after 40 years with more than 22,600 hours of flying time.

class, he assisted with the making of many a famous pilot-to-be.

By 1936 he had joined the famous fighter outfit known as the "Hi Hat Squadron." This outfit was equipped with sleek bi-planes which were then the pride of the Navy.

Times have changed but Chief Peek still has vivid recollections of those days that marked the beginning of "Air-a-dales and Atoms."

Another retiree (and still another "Pappy") is Harry "Pappy" Morris, TMC, who tossed in the towel after serving 55 years of continuous active Navy service. He shares with FADM William D. Leahy, the longest continuous active naval service on record.

Chief Morris joined the Navy when he was 14 in April 1903, and served



RE-UPS AGAIN—Chief Quartermaster L. C. Corning of *DesLant* re-enlisted for two years to make career even 40.



FLYING LOW—Formation of carrier based Fury jets skim over the water during operations at sea.

in 41 different ships including cruisers, battleships, destroyers, aircraft carriers, and submarines. After receiving his initial instruction at the Newport, R. I., training station in 1903, Chief Morris boarded the frigate *Alliance*, a sister ship of *Constitution* and *Constellation* of Revolutionary War fame.

An accomplished diver, he was sent to Pearl Harbor shortly after the Japanese attack which initiated our entry into World War II, to help raise the battleships *USS West Virginia* (BB 48) and *California* (BB 44).

Since WW II, Morris has been stationed in San Diego. While assigned to duty with the shore patrol, he saw the need for a court liaison representative who could serve as a link between the Navy and civil law enforcement bodies of the area. Details regarding procedures to be followed were worked out with the cooperation of the Eleventh Naval District Director of Discipline office and with judges and other civil authorities.

The 70-year-old Morris is one of the very few men who is still entitled to wear the figure-of-eight knot insignia that identifies a former apprentice boy. He retired 1 Feb 1958.

Wilmer C. Hitesman, ADC, who

is attached to Attack Squadron 55, received his 10th Good Conduct award. The award became due 10 Mar 1958.

During his long tenure in the Navy, which began 25 Jan 1918, Hitesman has had seven letters of commendation. Among these is one from the Secretary of the Navy for saving the life of a shipmate from drowning on 12 Apr 1939.

With more than 39 years in the Navy behind him, Hitesman has other awards which include the Korean Presidential Unit Citation Badge, China Service Medal, Commendation Ribbon, Presidential Unit Citation, Navy Unit Commendation, World War I Victory, American Defense, American Area, Asiatic-Pacific Area (three stars), World War II Victory, National Defense Service Medal, Korean Service (three stars), and United Nations' Service Medal.

Then there's the story of Laverne C. Corning, QMC, who spent his first 18 years in the Navy on continuous sea duty and settled down to finish his "20" in a shore billet—that was in 1935.

On 23 Jan 1958, he reenlisted and started his 39th year. Corning first enlisted in the Navy 14 Apr 1917 and moved up through the ranks to

become a Lieutenant during WW II. In 1950 he reverted to chief.

Corning is a destroyerman, attached to DesLant, who has seen every part of the world except Australia.

In recalling his 38 years of service, he remembered being put on report only once. "That was in my first hitch," he said. "I was caught for having non-regulation lashing on my hammock and received four hours' extra duty."

But the DesLant Chiefs have their own version. "It had nothing to do with his hammock," they say. "He was put on report for having rust on his bow and arrow."

Naval Air Weapons Meet

Air units of the Pacific Fleet collected four of the six perpetual trophies awarded during the third Annual Naval Air Weapons Meet held at the El Centro Auxiliary Naval Air Station.

This year's meet saw 15 squadrons seesawing for the lead in air-to-air gunnery, heavy attack bombing, all weather lead Collision Rocketry and air-to-ground light attack competition right up until the last round of ammunition and final bomb were



HOT SHOT—Bullpup, Navy's air-to-ground guided missile can hit bullseye, a four-inch target two miles away.

expanded. It was the largest gunnery meet ever held by the Navy and it offered the keenest competition yet seen.

Fighter Squadron 111 based at NAS Alameda was awarded the Earl Trophy for winning the air-to-air phase of the gunnery competition.

VF-13 based at NAS Jacksonville, and Marine Fighter Squadron 232 from MCAS Kaneohe, Oahu, T.H., were tied for second place requiring a last day shoot-off which moved VMF 232 to second place.

VF-111's winning team flew FJ-3 *Fury* jets, while VF-13 was flying F9F-8 *Cougars*, and the Hawaii-based Marines (VMF-232) used FJ-4s. Other air-to-air competitors included: VMF-333 of Miami, Fla., flying FJ-3s, and VFTU-223 from NAS Beeville, Tex., flying F9F-8s.

CAPT Charles O. Hiatt, usmc, of VMF-232 made the highest individual score in the air-to-air competition for day fighters.

Each aerial combat team was made up of four pilots and an alternate, plus a ground crew of 30.

Attack Squadron 126 of the Miramar Naval Air Station was awarded the Kane Trophy for winning the air-to-ground light Attack Team competition. VA-126 used F9F-8Bs during the meet. Other light attack entrants included VA-145, also from Miramar, flying AD *Skyriders*; and two Marine Attack Squadrons, VMA-311 from El Toro, and VMA-533 from Cherry Point, N. C., both flying *Cougars*.

CAPT J. W. Detroy, usmc, of the Marine Attack Squadron 311 based at MCAS El Toro, received the Herman Trophy for the individual air-to-ground light Attack champion-ship.

In the all-weather air-to-air lead collision rocketry phase, VF-213 from NAS Alameda won the James V. Forrestal Memorial Trophy in competition against VF-102 from Jacksonville. Both squadrons flew F4D *Skyrays*. Individual honors in this category went to LCDR D. M. Longton, usn of VF-213.

Heavy Attack Squadron Five based at Sanford, Fla., won both the ADM Apollo Soucek Trophy and the Skywarrior Trophy for being the champion heavy attack crew and placing first in the heavy attack competition. They competed against AH-8 from NAS Whidbey Island. Both squadrons flew twin-jet A3D *Skywarriors* in the bombing competition.



BRIDGE PILOTS—Crew members of USS *Etlah* man controls of flying drones.

World's Smallest Sea-Going Aircraft Carrier

The net-laying ship *uss Etlah* (AN 79) claims to be the "world's smallest aircraft carrier." Her planes are only nine feet long.

She's a drone-launching and recovery-ship. She launches the small radio-controlled drone aircraft from a portable launcher on her bow and acts as control ship during "flight operations."

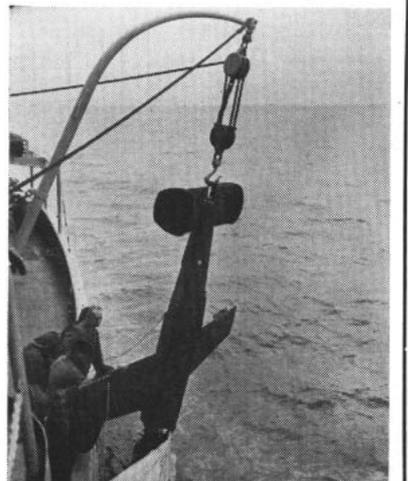
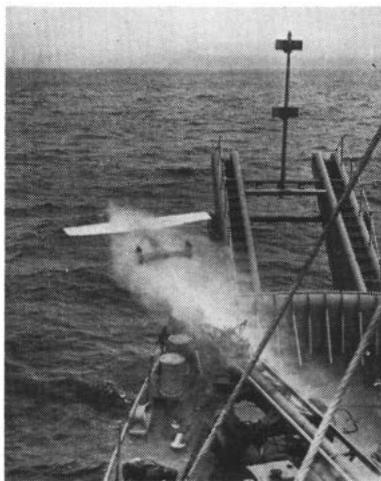
With her "plane squadron," UTRON Five's KD Unit, aboard, *Etlah* arrives at the assigned operating zone, heads into the wind like her big sisters and launches her

drone for gunnery drills.

The drone-controlling officer takes over and sends the drone on "attack" runs on a firing ship. These runs duplicate actual patterns used by attacking aircraft and provide good training for ships' gunnery crews.

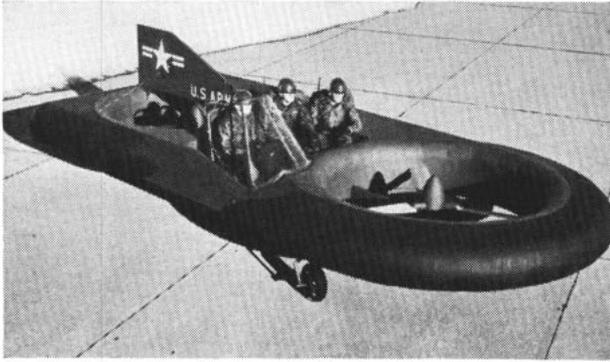
When the exercise is completed, there is no "carrier" landing. The control officer releases the drone's parachute and the "plane" is recovered from the water, repaired if possible, and made ready for another gunnery exercise.

IN AND OUT—Drone leaves USS *Etlah* (AN 79) catapult at approximately 65 knots. Right: Target drone recovered from sea after landing by chute.



SERVICESCOPE

Brief news items about other branches of the armed services.



SKY SCOOTER—Airborne jeep being developed by Army will do most jeep tasks and has characteristics of copter.

AVIATION GASOLINE improves when stored in pits carved out of ice. The Army Corps of Engineers learned this after storing the fuel in a tunnel driven into the Arctic icecap to a distance of nearly 1200 feet.

The fuel, which evaporates rapidly and takes on other impurities under normal climatic conditions, can be stored indefinitely in the pits under the icecap. Scientists have determined that the fuel not only retains all of its properties but is even improved after an extended storage period.

The pits, four feet wide and five feet deep, were located at several points in the ice tunnel, 150 to 400 feet back from the entrance. Each pit was covered only with plywood board and sealed by ice slush when the engineers suspended work on the icecap in the fall of 1956. When work was resumed in the Arctic in the spring of 1957, scientists found the fuel, none of which had evaporated, in even better condition than it had been when placed in the pits seven months before. They said the fuel contained less moisture as a result of the low and constant temperatures.

The Engineer Arctic Task Force returned early this year after finishing its work for the 1957 season. The tunnel was started in the spring of 1955 and the '56

and '57 summer seasons saw it extended to 1170 feet. Various sized rooms have been cut into the ice, one of which is 33 feet wide and 104 feet long. These rooms were cut out to study the feasibility of using such excavations for military purposes.

An automatic coal-cutting machine was used during the last trip to the Arctic to extend the tunnel. The cuttings were removed by a battery-operated, narrow gage locomotive and cars installed during the 1956 season.

Wooden pegs have been frozen into the ice to detect room and tunnel deformation, and the amount of deformation is checked periodically by measuring the distance between the pegs. Scientists on the project say that the rate of closure is affected by the amount of ice over the opening and physical properties of the ice. It was pointed out that the Arctic tunnel passes through five different types of ice.

Scientists on the project have already concluded that under-the-ice installations could be used for storage fuel dumps, air raid shelters or even living quarters. Temperature under the ice remains almost constant at about 15 degrees Fahrenheit.

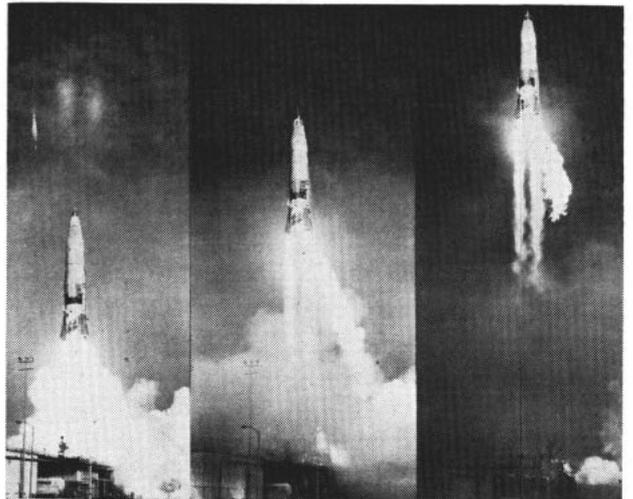
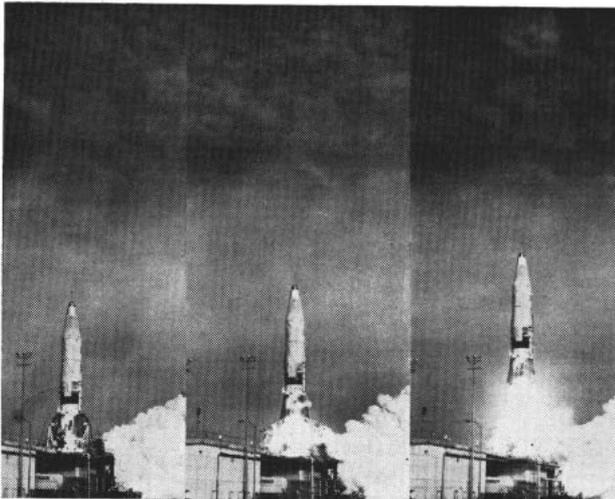
★ ★ ★

A NEW AWARD in the field of flight safety, the Koren Kolligian, Jr. Trophy has been announced by the Air Force. It is to be awarded annually to the USAF pilot or aircrew member who most successfully copes with an emergency situation in flight. The trophy is a bronze statue on a white marble base symbolizing an Air Force jet pilot.

The trophy is awarded in the name and memory of First Lieutenant Koren Kolligian, Jr., USAF, lost in a flight off the Farrallon Islands (San Francisco), Calif., in 1955.

The award is established to recognize outstanding feats of airmanship by aircrew members who by extraordinary skill, exceptional alertness, ingenuity, or proficiency averted aircraft accidents or minimized the seriousness of accidents in terms of injury, loss of life, aircraft damage, or other property damage.

ON THE UP AND UP—Sequence photos show Air Force's *Atlas* ICBM blasting skyward at Cape Canaveral, Fla.



AN INFRARED "EYE," so sensitive that it will detect evaporation from one droplet the size of a pinhead in an average living room, has been developed by the Army Chemical Corps. It will be used as a protective device against chemical warfare agents.

Intended for use by troops in the field, the new device, known as LOPAIR (for long-path infrared), will flash a warning light and sound a horn when a tiny amount of contaminant in the air as far as one quarter of a mile away from the point where the "detector head" crosses an invisible infrared beam. LOPAIR will detect contaminants even if they are colorless and invisible to the naked eye. In combat, it would warn soldiers to put on their protective masks. LOPAIR can also be used in air pollution studies and industrial establishments.

The current model of the alarm consists of two separate parts. One unit, called the "detector head," is mounted on a tripod and contains the source of infrared light, a mirror that directs the beam along the path, and a detector to analyze the beam when it returns.

The other unit, which also may be mounted on a tripod, is a special self-aligning mirror that is placed at the other end of the path and returns the beam to the detector. The detector part weighs 39 pounds and the mirror unit weighs 15 pounds. Each unit can be carried easily by one man, and the complete alarm can be set in operation in less than five minutes. Storage batteries supply the power.

★ ★ ★

A PORTABLE WATER-COOLING TOWER has been developed for use with the Army's mobile liquid carbon dioxide generating plants in the field. The unit permits re-use of about 20 per cent of the water consumed by the plant each minute. It is being tested with 300-pound-per-hour plants at Fort Belvoir, Va.

The unit consists of a tower section and an operating platform mounted on a semi-trailer. A 240-gallon per minute recirculating water pump, pressure gauges, thermometers, electrical control panel, water filters and a water treatment tank are mounted on the operating platform in front of the semi-trailer.

★ ★ ★

THE ARMY HAS BEEN INSTRUCTED by the Secretary of Defense to continue to develop its anti-ICBM missile system, *Nike-Zeus*.

This is a missile system designed to intercept intercontinental ballistic missiles equipped with nuclear warheads aimed at the United States.

Nike-Zeus is a part of the family of Army missiles known as *Nike*. Forerunners of the anti-missile missile are *Nike-Ajax*, which is in position around major strategic and industrial areas of the United States, and *Nike-Hercules*, which will supplement *Ajax*. *Hercules* is designed to destroy whole flights of incoming bombers, regardless of their speed or altitude. *Nike-Ajax* sites are convertible to *Nike-Hercules*.

Nike-Zeus is named after the supreme deity of Greek mythology. Zeus, whom the ancients revered as, among other things, a punisher of wrongdoers.

The Army is also developing *Plato*, a mobile system for protection of field armies against ballistic missiles. It will use the *Zeus* missile.



AIR FORCE pilot stands by his sleek F-102A Delta Dagger wearing high altitude partial pressure suit.

A SUN COMPASS with improved accuracy, versatility and operational range has been developed by the Corps of Engineers' Research and Development Laboratories, Fort Belvoir, Va.

The new universal sun compass provides a means for land navigation at all north or south latitudes, and can be used with many navigational stars. A clock mechanism provides for the mechanical tracking of the sun or stars. Its predecessor was limited in its daytime operation from the equator to 45 degrees north or south latitudes and it could be used only with the North Star.

The compass is provided with a weatherproof carrying case, and is designed to permit rapid mounting of case and compass on vehicles. The compass is also readily removable from its case for mounting on a vehicle or for other uses.

Specialist training for operation of the compass is not required. Unit training in advanced map reading, supplemented by approximately two hours of instructions, or earlier experience, in star identification, and one hour in actual operation of the sun compass will be enough for the average soldier.

Although simple in design, light in weight, and compact, the improved compass is of rugged construction.

★ ★ ★

AN EXPENDABLE ALUMINIZED SUIT for the protection of fire fighters has been tested by the Army.

Early reports on the tests indicate that men wearing the suit over duty uniforms were able to stand within two feet of a forest fire for two to three minutes without discomfort, although the heat was so intense that exposed portions of helmet liners were blistered. The suit is made of flame-retardant treated aluminized kraft paper. It consists of a parka with hood, a face mask, a pair of leg sleeves and a pair of mittens.

THE WORD

Frank, Authentic Advance Information On Policy—Straight From Headquarters

• **GOING OUT ON 20?**—If you are approaching the end of 18 years of service and are planning on going out on 20, this is a reminder that you may want to take a good look at the provisions of the Uniformed Services Contingency Option Act.

This act, which applies to all officer and enlisted personnel, allows you to provide an income for your survivors by electing to receive a reduced amount of retired pay. You may provide an annuity equal to one-half, one-fourth or one-eighth of the reduced amount of retired pay. The act provides for four types of annuities.

If you want to provide this benefit for your survivors, you must make the election before you complete 18 years of service for basic pay purposes. These 18 years, you will notice, are not limited to "years of satisfactory federal service."

Complete information may be found in BuPers Inst. 1750.1B.

• **BUPERS MANUAL**—Thirteen major revisions, covering a wide variety of subjects, have been incorporated in the *BuPers Manual* as Change No. 28 to that publication. The changes include:

Revisions in Navy Personnel Claims Regulations.

Instructions for preparing the revised Officer Leave Record, Form NavPers 329 (Rev. May 1957).

A revised sample of the Enlisted Classification Record.

Revised exhibits showing entries to be made on the Administrative Remarks Page of enlisted service records.

A revised sample of the Armed

Forces of the United States Report of Transfer or Discharge (DD-214).

Up-to-date information on the classification of officer and enlisted personnel.

New instructions requiring authority from the Chief of Naval Personnel before enlisted personnel with limited duty designators may be permitted to extend their enlistments, reenlist or obligate themselves for additional active duty.

A definition of submarine designators and clarification of procedures for qualification in submarines.

Inclusion of information on the release to inactive duty of Naval Reservists and Fleet Reservists in the instructions for separation of enlisted personnel for the convenience of the government.

Instructions for the early separation of enlisted personnel which include the release to inactive duty of Naval Reservists and Fleet Reservists.

Instructions for immediate reenlistment in the Naval Reserve of members of the Reserve on inactive duty.

Directions covering physical examinations for personnel entering active duty in the event of mobilization.

Revised requirements for wearing of the uniform by officer and enlisted Naval Reservists.

• **UNIFORM CHANGES**—New enlisted insignia, discontinuation of certain distinguishing marks, and indefinite retention of the officer/CPO blue raincoat are among the latest changes to *Uniform Regulations* approved by the Secretary of the Navy.

Two new insignia have been approved for future wear. The general service rating of Photographic Intelligenceman will have a specialty mark of a stereoscope together with a graphic solution of a photographic problem. The new exclusive emergency insignia for Telecom Censorship Technician will have as a specialty mark the block letter K enclosed in a diamond.



The distinguishing marks discontinued as no longer needed are those for Aviation Utility; Bombsight Mechanic; Master Horizontal Bomber; Ordnance Battalion; and Seaman Gunner.

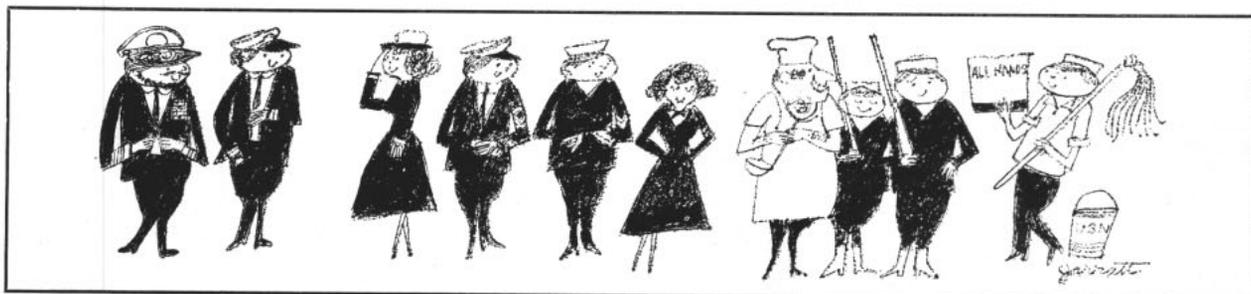


The raincoat decision will allow chiefs and officers to continue to wear their "trench-coat" style blue coats indefinitely as an optional item of uniform. It was originally scheduled to be discontinued as of 1 Jul 1960.

The changes will be promulgated in future changes to *U. S. Navy Uniform Regulations*.

• **NEW PAY GRADES**—Two new pay grades for enlisted personnel—E-8 and E-9—have been established by Public Law.

The new law, passed by the 85th Congress, authorizes a maximum of one per cent of the Navy's total enlisted strength for pay grade E-9 and two per cent for E-8. At maximum strength, according to current plans, 75 per cent of CPO requirements may be in pay grade E-7, 19 per cent in pay grade E-8, and six per cent in pay grade E-9.



"UP AND DOWN the line . . . All Hands Magazine is for you and nine other naval personalities. Pass it on."

E-8 and E-9 billets will be distributed among all ratings in proportion to the number of petty officers in each rating. Candidates for advancement to E-8 and E-9, including TARs, will be required to meet the minimums of time in rate and time in service described below, and must be recommended by their commanding officer to compete in a regular service-wide advancement examination.

Candidates who successfully complete the written examination will then have their records reviewed by a Selection Board at the Bureau of Naval Personnel, which will make the final selections.

The minimum eligibility requirements for advancement to E-8 are:

- Currently serving as permanent appointment in pay grade E-7.

- Four years' service in pay grade E-7 and 11 years' total naval service.

For advancement to E-9, the minimum eligibility requirements are:

- Currently serving as permanent appointment in pay grade E-7.

- Six years' service in pay grade E-7 and 13 years' total naval service.

The first service-wide examinations for pay grades E-8 and E-9 will be administered in August 1958. These examinations will be in three sections, the first covering technical qualifications of the particular rating, the second covering military knowledge and leadership, and the third specially designed to test the individual's comprehension and reasoning ability.

The scores achieved on the first two sections of the examination will determine whether or not the individual is considered by the Selection Board. The score achieved in the third part will be used as an additional factor in selecting personnel to be advanced. The selection will be based on overall technical and military ability as well as factors now considered for enlisted advancements.

Candidates for pay grades E-8 and E-9 are advised to review the training courses and study materials specified for their rating in "Training Courses and Publications for General Service Ratings" (NavPers 10052 series) as the best means of studying for the examinations. Resubmission of training courses is not required.

Pay grade E-9 will be called *Master Chief Petty Officer* (as, for example, BMCMS); and E-8, *Senior Chief Petty Officer* (BMCS).

Further details may be found in implementing instructions to be issued at an early date, which will be described in ALL HANDS.

• **AUGUST EXAMS** — Now that June is here it's time once again to begin thinking about those advancement examinations for pay grades E-4, E-5 and E-6. They're only about two months off. These all-important tests will be held on the following dates for advancement to the pay grades indicated below:

- E-4 (PO3)—Thursday, 7 Aug 58

- E-5 (PO2)—Tuesday, 12 Aug 58

- E-6 (PO1)—Thursday, 14 Aug 58

In preparation for this annual event you may want to check BuPers Notice 1418 of 4 Apr 1958, which lists the directives pertaining to the over-all advancement in rating program and gives a bibliography of the notices and instructions affecting individual ratings.

Because there are many vacancies in all pay grades, except E-7, of the newly-formed Nuclear Weapons Man rating, all personnel (except E-7s) who meet the eligibility requirements contained in BuPers Inst. 1440.22 are being encouraged to compete for horizontal change of rating to NW, or for simultaneous conversion and advancement to NW rates. Bureau authority for such examinations is not required for those who meet the qualifications outlined in Paragraph 4 of Instruction 1440.22.

• **RHODE ISLAND KOREAN BONUS** —Information on the Korean Veterans' Bonus from Rhode Island was not included in last month's round-up because the deadline for submitting applications had expired.

Since then, however, the deadline has been extended until 31 Oct 1958.

To qualify, you must have:

- Served on active duty in the armed forces during the period 25 Jun 1950 to 27 Jul 1953.

- Been a resident of Rhode Island for six months immediately before entering into active service.

- Been discharged or released from the service under conditions other than dishonorable.

The Korean Veterans' Bonus Board is at Armory of Mounted Commands, 1051 North Main St., Providence 4, R. I. Remember that deadline.

QUIZ AWEIGH

If you have been keeping pace with recent developments in today's fast changing Navy, you'll have smooth sailing with this month's Quiz Aweigh.

1. On 17 Mar 1958 the Navy launched its first test satellite. It is traveling farther out in space than any other man-launched object. This baby moon has been dubbed (a) Explorer I, (b) Vanguard I, (c) Moonlet I.

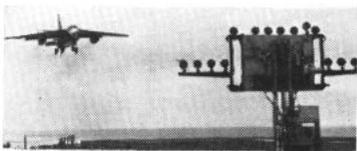


2. Weighing about three and a quarter pounds, this tiny 6.4-inch test sphere is expected to stay in orbit for as long as 200 years. The six rectangular vent-like openings forming a symmetrical pattern around the miniature satellite are (a) erosion gauges, (b) microphones, (c) solar batteries.

3. Here's a real eye-opener. Slated for construction as part of the Navy's 1959 Shipbuilding Program, it will be the Navy's first (a) DD(N), (b) DLG, (c) DLG(N).



4. This ship will be able to travel at full speed for prolonged periods and will have an unlimited cruising range—a far cry from the average conventional type destroyers that are capable of cruising at 12 knots for about (a) 3000 miles, (b) 5000 miles, (c) 7000 miles.



5. The plane pictured above is making a landing aboard one of the Navy's angled deck carriers. The result of some nine years of naval research, the landing is being made by (a) Automatic Carrier Landing System, (b) Mirror Landing System, (c) Landing Signal Officer System.

6. The plane making the landing is an (a) A3D Skywarrior, (b) F4D Sky- ray, (c) A4D Skyhawk.

Check your answers on page 50.

THE BULLETIN BOARD

Preliminary Exam for EMs Applying for Naval Academy Will Be Given in July

Men in the Navy and Reservists on active duty who qualify and have obligated service to 1 Jul 1959, may take the preliminary examination for assignment to the U. S. Naval Preparatory School as candidates for appointment to the U. S. Naval Academy if they enlisted by 1 Jul 1958. The preliminary examination will be given throughout the Navy on 7 Jul 1958.

Only those men who have excellent records and who are believed to be suitable candidates for appointment to the Naval Academy and ultimate commissioning shall be recommended. Other qualifications are:

- Be of officer caliber.
- Be a male citizen of the United States.
- Be not less than 17 nor more than 22 years of age on 1 July of the year in which the Naval Academy entrance examination is held.
- Have completed at least three years of a high school course, or the equivalent, and have received credit for the satisfactory completion of two years of either algebra or geometry or have received credit for the satisfactory completion of one year each of both algebra and geometry.
- Have a combined GCT-ARI score of not less than 105.
- Be able to meet the physical requirements for admission to the Naval Academy.
- Not married nor ever have been married.

Applicants are required to take the preliminary examination to determine their degree of aptitude in subjects involved in the Naval Academy entrance examination. Candidates who successfully meet these initial requirements are then transferred to the Naval Preparatory School at Bainbridge, Md., for the session beginning in September.

The 160 Regulars from the Naval Preparatory School who finish high-



est in the Academy entrance examinations given in March are appointed to the Academy. The two-year-active-duty Reservists from the school and the inactive-duty Reservists compete for the 160 Reserve appointments in a similar manner. Those standing below the first 160 in the competitive list for their component, but who pass the entrance exam, become eligible for admission if eligible candidates fail the physical exam, or for other reasons, do not enter the Academy.

Correspondence Courses for Aerographers, Lithographers

New Enlisted Correspondence Courses, now available are:

Aerographer's Mate 1, NavPers No. 91643.

Lithographer 2, Vol. I, NavPers No. 91473-1 (May be retaken for repeat Naval Reserve credit.)

Enlisted Correspondence Courses will be administered (with certain exceptions) by your local command instead of by the Center.

If you are on active duty, your division officer will advise you whether the course for which you have applied is suitable to your rate and to the training program you are following. If it is, he will see that your application (NavPers 231) is forwarded to the Correspondence Course Center, which will supply the course materials to your command for administration.

Those on inactive duty will have courses administered by the Center (Form NavPers 580).

Navy's First Photographic Intelligencemen Selected, More Will Have Opportunity

The establishment of the Photographic Intelligenceman (PT) rating, for enlisted personnel on active duty, was announced in BuPers Notice 1223 of 2 Oct 1957. The qualifications for advancement in this rating were included in Change 10 to the *Manual of Qualifications for Advancement in Rating* (NavPers 18068, Rev.).

Personnel were considered if they fulfilled the basic qualifications for the PT rating and requested a change to this rating in equal pay grade (without examination), and held Naval Enlisted Classification special program codes 9960, 9961, 9962 or 9963.

These requests were screened and authorizations for the change in rating were made available in April. Only very limited numbers of outstanding applicants were chosen: 14 in E-7, 18 in E-6, 4 in E-5, and 1 in E-4.

The first examinations for the PT rating will be given in August 1958 for pay grades E-6 and below, and in February 1959 for pay grade E-7.

Those below E-7 who were not authorized for direct change in rating (although they did meet the basic requirements) still have an opportunity to change by successfully competing in the August 1958 exams. However, individual authorization to compete is required from the Chief of Naval Personnel in each instance and, according to earlier directives, these applications should have reached the Bureau by 15 May 1958. BuPers Note 1440 of 7 Feb 1958 carries further information on this.

E-7s whose previous requests to change to this rate were not approved but who do meet the requirements will have another opportunity by successfully competing in the February 1959 exams. They, too, will need individual authorization from the Chief of Naval Personnel to compete. Applications from E-7s should reach the Bureau not later than 1 Oct 1958.

Future requests for change in

rating to PT will be in accordance with the procedures outlined in BuPers Inst. 1440.5B.

Other changes taking place in the rating structure include the disestablishment of the emergency service ratings BMG, BMS, BMR, CSG, CSR, CSB, SDO and SDS. For those Naval Reservists and Fleet Reservists on active duty who are in these categories, their ratings will be changed in equal pay grade between 1 Mar 1958 and 1 Jul 1958. Changes to be made include:

- Boatswain's Mate, Shipboard (BMG); Boatswain's Mate, Stevedore (BMS) and Boatswain's Mate, Rigger (BMR) — all changed to Boatswain's Mate (BM).

- Commissaryman, Ships Cook (CSG); Commissaryman, Butcher (CSB) and Commissaryman, Baker (CSR)—all changed to Commissaryman (SC).

- Steward, Cook (SDG) and Steward, Stateroom Steward (SDS)—changed to Steward (SD).

Even though these men will have new ratings, their special skills will not be lost since their NECs will carry the necessary identification.

Naval Reservists and Fleet Reservists on inactive duty who carry these ratings will have them changed later by commands holding their records.

The latest change in the rating structure, which combines the Metal-smith (ME) and Pipefitter (FP) ratings into a new general rating of Shipfitter (SF), has been approved by the Secretary of the Navy.

This means that all rates of the general service and emergency service ratings of ME and FP have been disestablished, and the rating of SF

in pay grades E-6 and E-7 has been established. It also means that the ratings of Shipfitter M (Metalsmith) and Shipfitter P (Pipefitter) in pay grades E-4 and E-5 have been established. It boils down to the fact that although you might be an SF(M), once you move up to become an E-6 or E-7 in the SF rating, it will be up to you (with the help of course books) also to have the knowledge of an SF(P).

The normal path of advancement in the Shipfitter general rating will be to Warrant Ship Repair Technician and/or to LDO, Hull.

Dependents Info Center Starts Second Year at Norfolk

"I must have another dependents identification card — I've dyed my hair a different color."

This was just one of nearly 15,000 requests replied to by the Dependents Information Center at the Naval Base, Norfolk, Va., during its first year of operation. Now moving toward its second birthday, the Center will soon rack up another large number of assists to active duty and retired military personnel and their dependents.

Something of an innovation, the Dependents Information Center answers all sorts of queries from servicemen (regardless of branch of service) and their dependents. It maintains listings of housing for rent and property for sale by members of the armed forces. And, it also has information on overseas living conditions, pay, allowances, benefits, social security, recreational facilities, medical services. As well as information on Navy Exchanges, commissary stores, schools, churches, shipment of household effects, domestic help and baby sitters.

In addition, the Center offers the free service of a notary public; issues identification cards to dependents, widows, Reservists and retired personnel; helps newcomers to find their way around the base, the city and the state; and maintains liaison with Navy Relief, the Red Cross, Navy Wives clubs, Travelers Aid and other agencies in the area.

The man in charge of the Center is John M. Brook, MMC, usn. His civilian assistant is Myron O. Wilcox, a retired CPO. Financially, the Center is supported by Fifth Naval

District Special Services funds.

The Center has been in business since 15 Aug 1956, when it was established on an experimental basis. It is the only such Navy facility on the East Coast.

On the West Coast there is a counterpart of the Norfolk Center located at San Diego, Calif.

Do You Have any Comments Or Recommendations on Traffic Laws of the Sea?

The Navy's Rules of the Road Committee, established early this year by the Chief of Naval Operations, is seeking recommendations and comments from naval sources concerning proposed future changes to the traffic laws of the sea.

The committee, under the guidance of RADM L. P. Ramage, usn, consists of representatives from the Office of the Chief of Naval Operations and the Bureau of Ships, Military Sea Transportation Service, and the Office of the Judge Advocate General of the Navy. The committee was established to insure Navy participation in matters relating to the Rules of the Road.

First effective in 1897, the International Rules were modernized to some extent by the International Conference on Safety of Life at Sea, 1948, but many questions involving technological and operational advances (such as radar), although considered, were not solved at that time. Some significant changes, however, were made as a result of the 1948 conference but, by and large, shipping is still governed by rules written some 70 years ago.

Anticipating a 1960 international conference which will consider further changes, the committee is now gathering recommendations from naval sources.

In a recent OpNav Notice, the committee has asked that comments, suggestions or recommendations for changes to Rules of the Road be submitted by letter to the Chief of Naval Operations (OP-341E).



"But I thought this was the line for the third class exam."

Press, Radio and Television Services for the Armed Forces

HOW ARE THE DODGERS doing this year? What's new with the Army? Does the Air Force have a new type fighter? What's going on in the rest of the world?

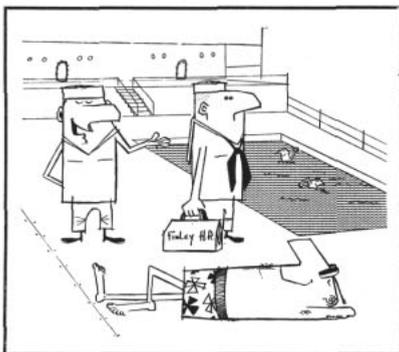
Questions like these and hundreds more are answered every day through the world-wide facilities of the Armed Forces Press, Radio and Television Service (AFPRTS). This organization is a service of the Department of Defense Office of Armed Forces Information and Education designed to keep the American serviceman fully informed on current events and his rights and responsibilities as a member of the military service even while he is serving on isolated duty stations far from home.

To accomplish this, AFPRTS takes advantage of the three principal means of mass communication—press, radio and television.

The Armed Forces Press Service (AFPS) publishes a weekly newspaper clipsheet which carries the latest in sport, political, military and general news as well as pin-up art, crossword puzzles and other features to station papers all over the world.

AFRS, the radio service, broadcasts over shortwave transmitters in New York, N. Y., and Los Angeles, Calif., the best programs available, including drama, comedy, news and most important of all, to many Navy-men, sporting events and news from the world of sport.

Fernando Mercado, SKSN, USN



"Our ship has been completely modernized."

The top rated commercial television shows are secured by the Department of Defense for rebroadcast from the 23 Armed Forces Television Stations girdling the globe. Each program is shipped via air transport to the overseas military stations.

Press Service

Senior member of the three military media outlets is the Press Service. Few military newspapers are published that do not carry one or more AFPS stories or some of the entertaining features included in the clip sheet. They are identified whenever they appear by (AFPS) at the beginning or end of the story.

The ancestor of AFPS was the Camp Newspaper Service (CNS) set up by the Army in August 1942.

Stencils, photographs and cartoons were sent out to stateside and overseas papers. "Miss Lace" gained world-wide fame through her appearance in CNS and the cartoon "The Wolf" also became famous.

In 1943 the Army News Service (ANS) began filing world, domestic and sport news which was transmitted overseas by Signal Corps telegraph. A branch office was opened on the West Coast to facilitate radio transmission to the Pacific area.

In March 1945 the Navy entered the picture with the Ship's Editorial Association sending material to 1200 Navy and Marine Corps newspapers. In 1946 ANS and CNS were merged to be joined by SEA in '49.

The AFPS clipsheet today is printed on a glossy paper with type set in newspaper-size columns and topped with ready-set headlines. Pictures are included along with comic strips, cartoons, gags, puzzles and various columns which can be cut out by a military editor and used "as is" in the station paper.

Radio Service

Although the AFPS Clipsheet is prepared and sent out from the New York editorial office the radio service originates both in New York (Atlantic service) and in Los Angeles (Pacific service). Live and recorded programs are broadcast over ten 50,000-watt short-wave transmitters on different frequencies and beamed to the 167 Armed Forces radio stations in various parts of the world for rebroadcast on standard broadcast frequencies and to anyone who owns a short-wave set.

A well balanced program schedule brings to the military listener news and sports along with musical, dramatic and educational presentations. AFRS news is taken from the wires of the three major news services and is complemented by such public affairs offerings as "Meet the Press" and "Capitol Cloakroom."

The AFRS sports department allows no major athletic event to pass without live or tape recorded coverage. Sport features including interviews with players, coaches and prominent officials are aired when sporting events are not being broadcast. Boxing is a regular feature (two fights a week plus championship

Armed Forces Radio Service Schedule

TRANSMITTER	TIME (GMT)	FREQUENCY	BEARING	BEAM AREA
AFRS New York				
WDSL 1	1730-2245	21.65 megs	55°	Europe
WRUL 2	1730-2245	15.35 megs	3°	Greenland
WRUL 3	1730-2245	17.71 megs	160°	Caribbean
WBOU 6	1730-2245	15.27 megs	42°	Europe
WBOU 5	1730-2245	17.78 megs	42°	Europe
AFRS Los Angeles				
KCBR 1	0130-0630	21.74 megs	296°	Philippine-Marianas
KCBR 2	0100-0700	15.13 megs	306°	Japan-Korea
	0730-1500	9.70 megs	306°	Japan-Korea
KCBR 3	0100-0700	17.85 megs	306°	Japan-Korea
	0730-1500	11.87 megs	306°	Japan-Korea
KCBR 4	0630-0730	15.29 megs	296°	Philippine-Marianas
KCBR 5	0100-0630	15.315 megs	321°	Alaska-Aleutians
	0700-1200	5.57 megs	321°	Alaska-Aleutians
	1215-1500	15.315 megs	110°	Caribbean

NOTE: A short conference period held during the first 10 minutes of transmitter operation is used to announce the daily schedule and important news, sports and entertainment features. Printed schedules are also sent to most military commands.

events) on the AFRS schedule the year around. During the summer months the emphasis is on baseball and after the World Series comes football, hockey and basketball.

As an example of this sport coverage take a look at the February schedule. In addition to boxing, AFRS carried the clash between the Boston Celtics and their 1957 rivals, the New York Knickerbockers. A week later (9 Feb) the Millrose Track Meet, one of the top attractions in the East was scheduled for the dash, hurdle and pole vault fans and on 10 Feb AFRS hockey fans heard a play by play account of the game between the Montreal Canadiens and the New York Rangers.

The entire AFRS schedule is broadcast to the Atlantic area over the five New York transmitters while an equal number in Los Angeles carry the program to Pacific military personnel. Call signs, times, frequency and bearing of the transmitters are listed in the box on preceding page.

AFRS transmitters are on the air seven days a week, 52 weeks a year, broadcasting the best in radio programs. Letters from a missionary in the Belgian Congo, a doctor in Barbados, a seaman in the Mediterranean, a private in the Middle East, a Merchant Mariner in the Indian Ocean and a civilian explorer in French Equatorial Africa—that is a cross section of the hundreds received each season by AFRS.

Television Service

The Armed Forces Television Service (AFTVS) now has a chain of 23 stations scattered around the world which it services with filmed programs. Some 250,000 military personnel and their families view the programs as well as live productions originating in the studios of each station, which are on the air 50 to 60 hours weekly.

AFTVS had its beginning on Christmas Eve, 1953, when the first program was broadcast from a pilot station at Loring (then Limestone) Air Force Base. This station continued operation until 1956 when a commercial station began operating in the Loring area.

In late 1954 a 50-watt station began broadcasting at Lajes Field in the Azores and another went on the air at Wheelus Field, Tripoli, Libya.

The next year a station was installed at Keflavik Airport, Iceland, and a short time later another went on the air in Greenland. Eventually it is expected that AFTVS will have 35 to 40 TV stations in service.

A typical AFTVS program shipping document shows 90 filmed programs being shipped to a military TV station. The running time of the shipment was 55 hours and included such stateside favorites as the Bob Cummings Show; Jimmy Dean; Climax; \$64,000 Question; World News Roundup; Meet the Press; Perry Como; Twenty One; Steve Allen; Wednesday Night Fights; and Highway Patrol.

Some of the program prints are

WHAT'S IN A NAME

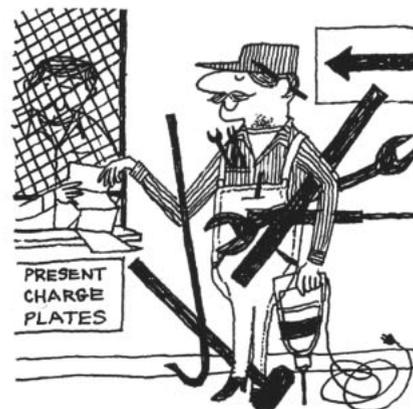
Charge Plates

To many Navymen the charge-plate is an infernal gadget which the little woman uses for running up bills when she goes on a shopping spree—but at the Boston Naval Shipyard charge-plates are being used to save money for Uncle Sam.

At the yard and its South Boston Annex there are 21 tool cribs, handling some 32,000 different kinds of tools worth more than three million dollars. The complex job of keeping track of them has now been made simpler and less expensive, thanks to the charge-plate.

When someone wishes to borrow a tool, he merely takes his plate to the nearest crib, where the plate is used to stamp a four-part chit charging the item to his "account."

The first part of the chit is kept for the crib's records, the second is the borrower's receipt and the last two are used by Central Tool Control to keep tab on the thousands of tools on loan to the 8000 workers at the yard.



purchased by AFTVS but the majority are received without charge from the networks and sponsors. The stations are kept informed of forthcoming programs and receive tips on successful operation of a TV station through the AFPRTS weekly "Tele-Tips."

Most of the Armed Forces network stations represent an investment of less than \$50,000. In some cases this may rise to \$55,000 owing to extraordinary antenna and installation costs. Usually the stations are operated by military personnel as an additional duty, but because of the increasing schedule lengths, this is rapidly being changed.

In addition to the stations already mentioned, AFTVS has transmitters at Kindley Air Base, Bermuda; Dhahran Field, Saudi Arabia; Kagnew Station, Asmara, Eritrea; Ramstein and Spankdahlem Air Bases, Germany; Thule and Sondrestrom Air Bases, Greenland; Goose Bay Air Base, Labrador; Harmon Air Base, Newfoundland; Eniwetok, Marshall Islands; Clark Air Base, Philippine Islands; Kadena Air Base, Okinawa; Seoul, Korea; Fort Clayton, Canal Zone; Ramey Air Base, Puerto Rico; U. S. Naval Station, Guantanamo Bay, Cuba; Fort Greely, Big Delta, Alaska; U. S. Naval Station, Kodiak and Adak, Alaska; and Port Whittier, Alaska.

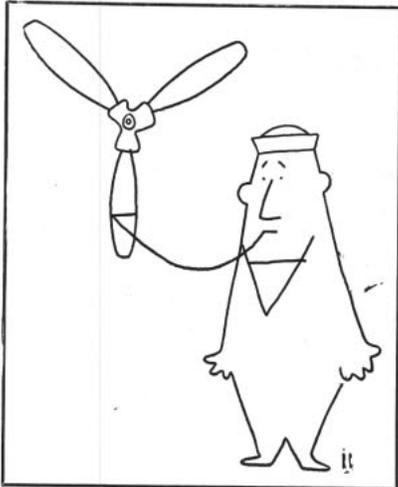
The Navy operates three of the stations, the remainder being operated by the Army or the Air Force.

Enlisted Men Selected For NROTC Enroll at Prep School

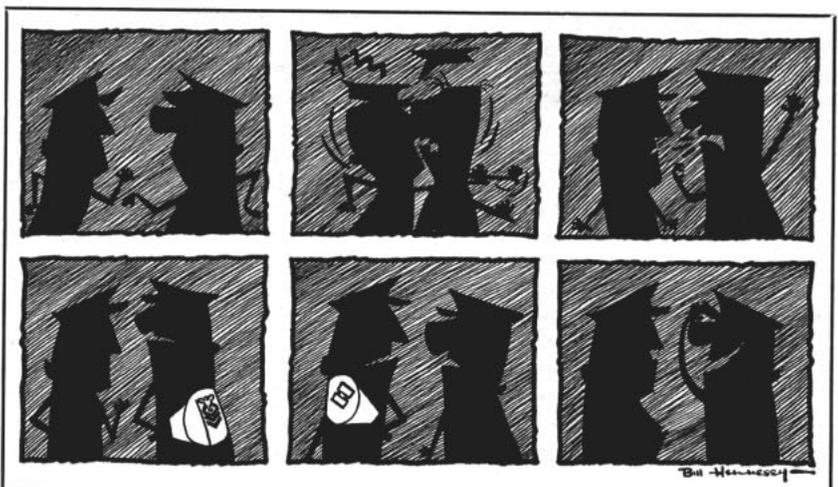
Approximately 300 active duty Navy and Marine Corps personnel have been provisionally selected for enrollment in the NROTC program and have been ordered to the Naval Preparatory School at Bainbridge.

Those who received the provisional nod were selected on the basis of test scores attained in the Navy College Aptitude Test conducted on 14 Dec 1957. They have survived a preliminary screening of enlisted service records, but face final screening at the Prep School.

Intense refresher training and the careful screening will result in further attrition. Candidates finally selected will be appointed Midshipmen in the Naval Reserve and will report to college in September.

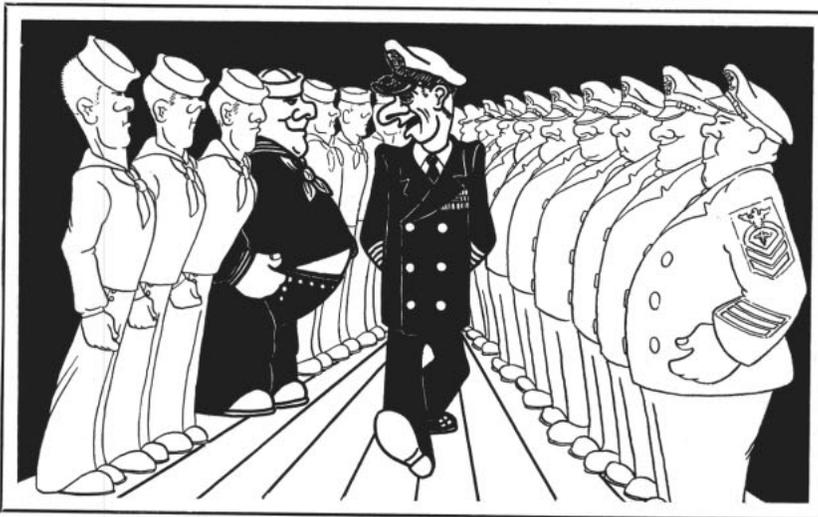


FIRST —R. Carola, JO3, USNR



SECOND —W. R. Hennessy, AN, USN

Here Are the Winners in the All-Navy Cartoon Contest



THIRD "Report to my office after inspection, Cranch. It's time to promote you to Chief!"
—M. A. Anderson, HMC(SS), USN

ROBERT CAROLA, JO3, USNR, of the Naval Air Test Center, Patuxent River, Md., has been awarded first prize in the third annual All-Navy Cartoon Contest.

This marks the second consecutive year that Carola, the sports editor and staff artist for *The Tester*—the station paper for the huge naval air station—has taken top honors in the All-Navy Cartoon Contest. Last year he captured second place.

Carola's prize-winning entry, showing a novel tooth extraction, was selected from more than 800 entrants by a panel of well-known civilian cartoonists and newspaper representatives. Judges considered the simplicity of Carola's cartoon as an important factor in its success.

Journalist Carola entered a total of five cartoons in this year's contest. Although an artist, Carola had never done any cartooning before entering last year's contest. After tasting success in the cartooning field, the All-Navy finalist is currently working on a cartoon book depicting Navy life.

The talented artist entered the Navy in 1956 and upon completion of recruit training was assigned to VR-1 based at Patuxent River. Carola is no newcomer to art. He graduated from the City College of New York where he majored in Advertising Design and Illustrations and won awards for his artistic achievements. Before coming on active duty for a two-year stint, he was employed by an art studio and an advertising agency.



FOURTH "Your face is familiar, Jenkins. Haven't I busted you before?"
—J. F. Melvin, HM1, USN



FIFTH —J. W. Rogers, HM3, USN

Following his selection as the Navy's top cartoonist, Carola was given a free trip to New York City where he appeared on a nation-wide television show, and was honored by the Navy and the Newspaper Comics Council, Inc. Rear Admiral Chester C. Wood, usn, Commandant of the Third Naval District, presented him with the All-Navy Cartoon Contest Trophy on behalf of the Chief of Naval Personnel.

In addition to the trophy, the Navy presented him with a scale model of the aircraft carrier *Forrestal*, and the Newspaper Comic Council and an art school awarded him a \$300 scholarship to a cartoonist's correspondence course.

The other All-Navy trophy winning finalists in the third annual cartoon contest were:

- **Second Place:** William R. Hennessy, AN, usn, NAS Brunswick, Maine.

- **Third Place:** Muirrel A. Anderson, HMC (SS), usn, uss *Fort Snelling*, LSD 30.

- **Fourth Place:** Joseph F. Melvin, HM1, usn, USNRTC, U. S. Naval Base, Brooklyn, N. Y.

- **Fifth Place:** Jack W. Rogers, HM3, usn, U. S. Naval Hospital, Oakland, Calif.

The annual All-Navy Cartoon Contest is open to all naval personnel on active duty and their dependents. Entries are restricted to comic (gag or situation) cartoons which have a Navy theme or background, must be in good taste, and suitable for general consumption.

It is planned to have a similar contest again this fall. The dates for the 1958 contest will be published in a 1710 series BuPers Notice.

Sleeve Marks Okayed for Air Squadrons, Staffs, MCBs, UDTs

"Unit Identifying Sleeve Marks" have been authorized for wear by Navy enlisted personnel below grade E-7 attached to afloat staffs, aviation squadrons, mobile construction battalions and underwater demolition teams.

Formerly known as "Ship-Name Sleeve Marks," the unit marks have been authorized for some time for enlisted personnel below E-7 serving in commissioned ships. The authorization for afloat staffs, air squadrons, MCBs and UDTs is a recent decision

and will be officially promulgated in Change 5 to *U. S. Navy Uniform Regulations*.

The proper procedures for commands to follow in procuring appropriate unit identifying sleeve marks are covered in Naval Clothing and Textile Office Inst. 4200.1 of 21 Jan 1958 and NCTO Inst. 4200.2 of 27 Mar 1958.

In another action the Naval Clothing and Textile Office announced that white hats, authorized for wear by enlisted personnel, will no longer be obtainable in 1/8 size increments. When present stocks are exhausted the white hats will be issued in 1/4 sizes only.

The size change was made after a service evaluation found that stitching processes and subsequent laundering practically eliminated the 1/8 differential.

Early Separations Will Start This Month for Certain Navymen

Beginning 1 Jun 1958, separation will take place one month ahead of schedule for enlisted personnel who don't intend to remain on active duty after their obligated service is up.

The early separation is authorized by BuPers Inst. 1910.16, which applies to both Regulars and Reserves (including TARs) who would normally complete their active obligated service on or after 1 Jul 1958. It does not affect those transferring to the Fleet Reserve or Retired List, Regulars planning on immediate reenlistment at the end of their present hitch, or Reserves who wish to

continue on active duty beyond the date when their active obligated service would normally expire.

Early release for Navymen serving with deployed units may be delayed until return to the continental United States. However, the instruction does not permit retention beyond the normal EAOS.

The early separations have been authorized so that the Navy can meet budgetary requirements and manpower ceilings, and still make room for the high-quality recruits usually available during the months of June, July and August.

All the Latest Facts on How to Get Rid of The Rat

The Medical Department correspondence course, *Insect, Pest, and Rodent Control* (NavPers 10705) has been completely revised and reissued under the title, *Insect and Rodent Control* (NavPers 10705-A) and is now available to Regular and Reserve officers and enlisted personnel. Included in the course is information pertaining to insects and rodents, their living habits, manner in which they spread disease, and diseases with which they are associated. Included are methods for preventing and correcting infestation.

This course consists of two assignments evaluated at six points credit for purposes of Naval Reserve retirement and promotion. Naval Reservists who previously completed NavPers 10705 will receive additional credit for satisfactory completion of NavPers 10705-A.

All-Navy Cartoon Contest

—W. F. Carney, YN2, USNR(TAR)



List of New Motion Pictures Available for Distribution To Ships and Overseas Bases

The latest list of 16-mm feature movies available from the Navy Motion Picture Service, Bldg. 311, Naval Base, Brooklyn I, N. Y., is published here for the convenience of ships and overseas bases. The title of each picture is followed by the program number.

Those in color are designated by (C) and those in wide-screen processes by (WS). Distribution began in April.

These films are leased from the movie industry and distributed free to ships and most overseas activities under the Fleet Motion Picture Plan.

Gun Glory (1039) (C) (WS):

QUIZ AWEIGH ANSWERS

Quiz Aweigh is on page 43.

1. (b) *Vanguard I*, naturally.
2. (c) *Solar Batteries*.
3. (c) *DLG(N)*—Nuclear-powered guided missile frigate.
4. (b) *5000 miles*.
5. (b) *Mirror Landing System*.
6. (a) *A3D Skywarrior*.

Drama; Stewart Granger, Rhonda Fleming.

Flood Tide (1049) (WS): Drama; George Nader, Cornell Borchers.

Copper Sky (1041) (WS): Drama; Jeff Morrow, Coleen Gray.

The Long Haul (1042): Drama; Victor Mature, Diana Dors.

All At Sea (1043): Comedy; Alec Guinness, Irene Browne.

Panama Sal (1044) (WS):

Drama; Elena Verdugo, Edward Kemmer.

Last Stagecoach West (1045) (WS): Western; Jim Davis, Mary Castle.

Undersea Girl (1046): Melodrama; Mara Corday, Pat Conway.

Chicago Confidential (1047): Drama; Brian Keith, Beverly Garland.

The Quiet American (1048): Drama; Audie Murphy, Michael Redgrave.

The Monte Carlo Story (1049) (C) (WS): Drama; Marlene Dietrich, Vittorio de Sica.

Wayward Girl (1050) (WS): Drama; Marcia Henderson, Peter Walker.

Man on the Prowl (1051): Melodrama; Mala Powers, James Best.

Raiders of old California (1052):

That's What the LAO Said—Advice Is More Useful than Sympathy

No matter how good our intentions, it seems that the best of us sooner or later run into a situation beyond our control. If our problem is concerned with legal matters, it's wise to find out what the Navy has to offer in the line of legal help. Here's a summary of the Navy's legal assistance program, originally prepared by LCDR Nathan Cole, Jr., USNR, for the JAG Journal:

Every major shore activity, every large staff and most large combatant ships have a Legal Assistance Officer (LAO). Smaller activities have a "referral officer," who can direct you to the nearest legal assistance officer or, if there is not one in your vicinity, can help you locate the nearest civilian Committee on Legal Services to the Armed Forces. If you are near an Army or Air Force activity, you are entitled to legal assistance from these sources if it is available.

Your Navy legal assistance officer will be a licensed attorney. He also occupies a unique position in the Navy: He is outside the chain of command so far as his legal assistance work is concerned. He may be professionally consulted by anyone—from seaman recruit up. He holds anything you may tell him in absolute confidence. He cannot disclose your confidence without your permission nor may

he be ordered to do so by a superior. He may correspond unofficially with other legal assistance officers if your problem requires such correspondence. He may refer you to a local practicing attorney if the situation indicates.

Legal assistance is intended to help you with your personal problems by providing legal advice and legal papers such as wills, powers of attorney, affidavits, and similar documents. Although a legal assistance officer cannot represent you in court, nor become your personal attorney, he can recommend a course of action to take and can draft letters and documents for your signature.

Legal assistance does not include strictly official matters nor does it provide counsel for courts-martial, investigations, or appearances before various boards. Official matters such as personnel or disbursing problems should be taken up with the Bureau or Office concerned, and qualified counsel for courts and boards are provided by the command concerned.

Here are a few points to remember if you want to get the most out of this service:

- If in doubt, ask for advice *before* you take action. Advice is more useful than sympathy.
- Talk to your man in person.

A telephone conversation is usually unsatisfactory. Your question may be one that cannot be answered immediately.

- Take all the letters, documents and papers with you. Your legal officer prefers to see the papers themselves instead of depending upon your recollection.

- If in doubt, see your legal officer. Don't worry about bothering him because your problem is relatively small. Legal problems are sometimes like fires—it's easier to deal with them when they're small.

- Tell both sides of the story, and all of the story. It might be embarrassing to admit you were foolish, but here you are at least protected by the privacy of his office. If you hold out on him, he simply can't act in your best interests.

Legal assistance is, of course, free. If, after talking it over with your legal assistance officer, you decide that a civilian attorney is needed, the attorney will have to be paid although he will sometimes adjust his fee to fit your financial condition. If you are completely without funds, Legal Aid or free civilian legal service may usually be found. Legal Aid is normally available only where there is a real need and you are absolutely unable to pay.

Western; Jim Davis, Arleen Whelan.
Witness for the Prosecution (1053): Drama; Tyrone Power, Marlene Dietrich.

No Down Payment (1054) (WS): Drama; Joanne Woodward, Sheree North.

Stopover Tokyo (1055) (C) (WS): Drama; Robert Wagner, Joan Collins.

Darby's Rangers (1056): Drama; James Garner, Etchika Choreau.

The Violators (1057): Drama; Arthur O'Connell, Nancy Malone.

Eighteen and Anxious (1058): Melodrama; William Campbell, Martha Scott.

Kiss Them for Me (1059) (C) (WS): Drama; Cary Grant, Jayne Mansfield.

Under Fire (1060) (WS): Drama; Rex Reason, Henry Morgan.

The World was his Jury (1061): Drama; Edmond O'Brien, Mona Freeman.

Pursuit of the Graf Spee (1062): Drama; John Gregson, Anthony Guayle.

The Deep Six (1063) (C): Drama; Alan Ladd, Diane Foster.

Scholarships Offered for Navy Sons and Daughters

Two new scholarship funds—one for young men who plan to enter the Naval Academy, and the other for the daughters of Navy or Marine Corps officers or USNA faculty members—have been established by Navy women's clubs.

The first, a self-aid scholarship grant set up by the Naval Officers Wives Club of Washington, D. C., is designed to help an outstanding young man between 16 and 20 to prepare for the Naval Academy and a career as a naval officer. It will amount to at least \$500. The scholarship is good for one year and may not be renewed. However, there are plans to offer additional grants in following years and, if necessary, the value of the grant or grants will be increased.

Recipients will be selected on the basis of need, mental and physical superiority, leadership qualities and evidence of a desire to make the Navy a career. An applicant must present a doctor's certificate that he is fully qualified to pass the physical examination for the Academy.



"It's the most difficult job on the base!"

Application blanks may be obtained from the Secretary of the Naval Officers Wives Club Scholarship Fund, Mrs. Mell A. Peterson, 3306 Cameron Mills Rd., Alexandria, Va., or from the Dependents Aid Section, Pers G-221, Personnel Affairs Division, Bureau of Naval Personnel, Washington 25, D. C. The completed forms for the 1958 award must be in the hands of the Scholarship Selection Committee by 15 June of this year.

The other scholarship, established by the Naval Academy Women's Club, Annapolis, Md., is for four years and amounts to \$300 per year. It will be awarded annually to a natural-born, legally adopted daughter, or step-daughter of a Naval Academy faculty member or of a

Regular Navy or Marine Corps officer on active duty, retired or deceased.

This grant will be made on the basis of scholarship, character and need. All other factors being equal, preference will be given to the daughters of deceased personnel.

Application forms may be obtained from the Bureau of Naval Personnel (Pers G-221), Washington 25, D. C., or from the Naval Academy Women's Club, Annapolis. When completed, they should be sent to the Personal Affairs Division (Pers G-221), Bureau of Naval Personnel. The annual deadline for receiving applications will be March 20th.

Further information is available from the Scholarship Chairman, Mrs. Perley M. Clark, 102 Conduit Street, Annapolis, Md.

CPOs and PO1s Selected For Warrant Officer

Six first class and 13 chief petty officers have been issued temporary appointments to Warrant Officer, W-1.

These appointments are from an eligibility list established by a selection board convened 5 Feb 1957.

Regular Navy appointments were broken down into the following designators: Boatswain (7132), five; Electrician (7542), two; Machinist (7432), nine; Aviation Electronics Technician (7612), three.

Navy-Marine Memorial Stadium Begins to Take Shape

The Navy-Marine Corps Memorial Stadium at Annapolis, Md., is beginning to take shape.

Construction was started on the 28,000-seat memorial on 1 March, even though the Stadium Fund still lacked some \$500,000 of the three-million-dollar goal. With the present schedule holding, the new stadium should be completed by August 1959, in time for Navy to play the season's first home game.

The new stadium, designed as a memorial to the Navy and Marine Corps, will replace the old, inadequate Thompson Stadium, which has been in use at the Naval Academy since 1912.

Although the fund-raising campaign was started only a year ago, the new stadium has been in the

planning stage some 18 years. The stadium site, 101 acres of land bordering on Taylor Avenue in Annapolis, Md., was purchased by the Naval Academy Athletic Association in 1939. World War II halted the project until the present Superintendent of the Naval Academy proposed to renew the stadium efforts last year.

There are no government funds for construction of such a project. All funds for the 28,000-seat stadium are being raised through contributions by individuals and organizations throughout the country. However, as always, service personnel and friends of the service are swelling the Stadium Fund coffers to the point where it is almost in the downhill stretch.

General Line and Science Programs Outlined at Naval Postgraduate School

Starting in July the General Line School will become known as the General Line and Naval Science School but will remain a part of the Postgraduate School in Monterey, Calif.

The newly designated school will have two educational programs—the Bachelor of Science Program and the General Line Program.

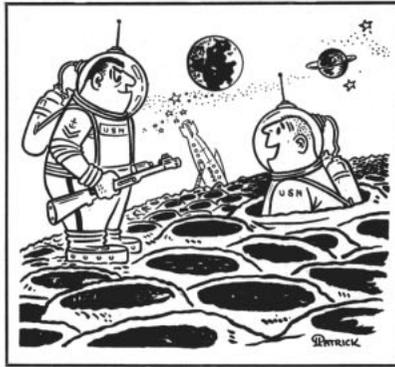
Bachelor of Science Program

This program will open its doors in August to 48 selected officer students. It will offer both academic and professional education. The course leads to the degree of Bachelor of Science (Undesignated) for those who successfully complete it. The curriculum is specifically tailored to meet the needs of the Navy and the academic requirements of individual students qualifying for the Five Term College Training Program.

The program will continue to offer the professional General Line courses prescribed for line officers who have three to seven years' commissioned service. In addition, the enlarged curriculum will offer courses in the scientific-engineering and social-humanistic areas which will be sufficient to support a fully accredited baccalaureate degree.

Although the new program is being staffed at the present time to accommodate approximately 50 officer students a class, it is anticipated that it may eventually educate all officers eligible for the Five Term College Training Program which was established by BuPers Inst. 1530.48 Series.

To be eligible for admission as a candidate for the Bachelor of Science program, you must have a minimum of 45 semester hours of acceptable college credits, or its equivalent. Credits earned from an accredited college, USAFI courses, correspondence courses, extension courses, or service schools may be submitted for evaluation. At least 18 of the 45 credits you offer must be in the required area of the curriculum. The remaining 27 semester hours of credit may be in general college level courses. But you will get no advance credit for any course in which your final grade was less than "C."



"O boy! . . . Ready-made foxholes!"

Once you are admitted to the General Line and Naval Science School, you will have your academic and service background reexamined and advance credits reevaluated. As a result of this examination you might find it necessary to take certain refresher courses without credit in order to prepare yourself for more advanced courses. Most students will require two to two-and-a-half years of study to complete work for a degree.

In January of this year, the Chief of Naval Personnel convened a board to select officers for the August class. Orders for those selected to attend the first class have already been issued. Future selections will be by administrative action of the Chief of Naval Personnel. All applicants to the Five Term College Training Program who need professional education will be considered.

General Line Program

If you haven't completed a normal sea duty tour since being commissioned, your chances of getting into this program are pretty slim. But if you have completed a normal sea tour, and have three to seven years' commissioned service, this nine-and-a-half month course will help you prepare for more responsible duties in the operating forces. This program is designed for unrestricted line officers.

Here is the priority to be given for this program:

- Officers commissioned without having had midshipman training who have not attended postgraduate instruction.
- Officers commissioned without midshipman training who have attended postgraduate instruction.
- Officers commissioned upon

successful completion of midshipman training.

Further information regarding courses and how you can establish qualifications for exemption can be found in BuPers Inst. 1415.1 and 1520.43A.

Pointers on Correspondence Courses for Officers Headed for Promotion

It's quite possible that, when you enter the selection zone for promotion, you may find courses which you need for promotion examination exemption are delayed in reaching you or are not available. It has happened to others and, quite possibly, may happen to you. Here are a few suggestions (from the Bureau's Training Division) that may help you avoid this embarrassing situation:

- **Plan your course program.** BuPers Inst. 1416.1C lists the courses for your rank and designator and the *List of Training Manuals and Correspondence Courses*, NavPers 10061-G, gives the number of assignments for each course. For most courses administered by the Correspondence Course Center, you may plan on approximately six working hours to complete each assignment. With this information, you can roughly estimate how long it will take to finish the course program.
- **Apply for courses early.** Don't wait until you are in the selection zone to apply for courses. There may be a temporary shortage of course material or mail may be delayed. Course materials are sent by surface mail and may be delayed in reaching you because of changes in your duty station or your location. Allow plenty of time for such eventualities.
- **Complete your assignments on time.** You may submit assignments as soon as they are completed, but you *must* submit at least one assignment per month to satisfy requirements established by the Bureau of Naval Personnel. Failure to meet Bureau requirements may result in disenrollment. This will entail additional time for reenrollment.
- **Where time is of the essence, apply for more than one course.** Normally, students are not encouraged to apply for more than one course at a time. But under certain circumstances, for example, changes

in duty station which might result in delayed mail, students may apply for more than one course. Remember, however, that requirements for submission of assignments remain unchanged.

• **List an alternate course on your application form.** NavPers Form 992 (Rev 10-54 or later) has spaces for listing a first and second choice. List a second choice so that you will have a course to work on if you cannot get your first choice. This will save time in filling out another application and waiting for the course.

In short, you are responsible for planning and completing your own course program. Plan your study program early to allow for possible delays in getting courses. Complete assignments on time, and don't wait until you are in the selection zone before you apply for courses.

Advancements to CPO Will Be Made in Five Increments

The Chief of Naval Personnel has authorized 3381 advancements to Chief Petty Officer in five increments, as a result of the February 1958 servicewide examinations.

These advancements will fulfill the current and projected personnel requirements for the ensuing year. The number of advancements that can be authorized depends upon the number of personnel who transfer to the Fleet Reserve, retire or are discharged from the naval service. The failure of eligible personnel to request transfer to the Fleet Reserve have reduced the requirements for CPO advancements this year.

Also reducing the need for new chiefs has been the reduction in forces and budgetary limitations. Consequently the number advanced to CPO as a result of the 1958 examinations is considerably less than in 1957.

However, it is contemplated that when final action on the proposed pay bill is completed, requests for retirement and transfer to the Fleet Reserve will return to normal. This will be reflected by increased advancements as a result of the February 1959 examinations.

Sixty-nine of this year's advancements will be effective on 16 May 1958; 856 on 16 Jul 1958; 839 on 16 Sep 1958; 820 on 16 Nov 1958; and 797 on 16 Jan 1959.

HOW DID IT START

Depth Charges

Depth charges are about the oldest anti-submarine weapon of them all, yet they are still an important part of the ASW picture.

Developed by the British in World War I, they first went into action in the summer of 1916, about the same time as the hydrophone. The "ash cans" (called that because of their appearance) and the new listening device gave sub-hunting ships their first fairly effective means of locating and destroying enemy subs underwater. The first successful depth-charge attack was made on the night of 6 Jul 1916 against the minelaying submarine UC-7. A British patrol craft was credited with the kill.

Before long other nations—among them the United States, Russia and Germany—had gone into the ash can business. And, even though depth-charge attacks weren't always successful, they did cause considerable wear and tear on the submariner's morale. For instance, on 6 Sep 1918 practically the entire crew of one German U-boat shot themselves to death one-by-one during a prolonged depth-charge attack by American sub chasers.

One of the big troubles with the early depth charges was that there just weren't enough to go around. In early 1917 British destroyers were only allotted four of them — two filled with 300 pounds of TNT and two containing 120 pounds. However, by the end of that year the allowance rose to 20 to 30 for each DD. It was estimated that they could destroy a submarine within 14 feet and damage one within 28 feet. As with modern depth charges, this destruction or damage was caused by a tremendous pressure wave generated by an explosion. Because water cannot be compressed, this wave strikes the hull of a submarine like a weight of hundreds of tons.

By the end of World War I there were two principal methods for launching depth charges. One was to roll them off the fantail from an inclined rack much like those still carried today on the latest destroyers. This system was quite effective for covering the area beneath an attacking ship, but by itself it didn't permit a wide enough drop pattern. So, to spread out the pattern (thus increasing the chances for a kill) the Y-gun was developed. This handy item, which could simultaneously hurl charges about 50 yards out to port and starboard, came along in 1917.

After World War I depth charges didn't receive very much attention. There were a few minor advances during the 1920s and '30s, but there weren't any major ones until the Second World War. The



first of these was the K-gun, which began to replace the Y-gun in 1941. This piece of equipment could be installed along a ship's topsides as needed and didn't interfere with a ship's gear the way the Y-gun had. Thus, more effective patterns were made possible.

So far as the depth charge itself was concerned, there wasn't much change in the old World War I style ash can until 1943, when the Bureau of Ordnance perfected the streamlined Mark 9 model. Capable of sinking faster and straighter than the old cylindrical charges, and packed with "torpex" instead of TNT, the Mark 9 considerably improved the effectiveness of a depth-charge attack.

The Mark 9, still carried aboard some ships today, is equipped with a hydrostatic fuse not much different from those used on the earliest depth charges. This ingenious mechanism can be preset to detonate the charge when it reaches a certain depth. The fuse "knows" from water pressure when it has gone down far enough.

Since the advent of the Mark 9 other types of fuses have also been developed. These, plus modern sonar, have helped remove much of the guesswork that a depth-charge attack formerly involved.

Today, although most of the depth charges developed during World War II still meet the Navy's needs, development of new types is not being ignored. For example, the experts are now working on one lightweight depth charge for use by patrol craft and picket boats against small sneak craft; and another, so light it can be thrown like a grenade, to deter frogman attacks on harbor defense installations or anchored ships.

The emphasis nowadays may be on antisubmarine rockets, torpedoes and nuclear depth bombs, but there's still plenty of room for the depth charge in the ASW picture.

Roundup on Officer Candidate School Programs Open to You

IF YOU ARE a college graduate on active duty and have been wondering how to go about applying for a commission in the Navy, this article is for you. It covers the different officer candidate school programs that are available to those who wish to become an officer.

The *Officer Candidate (OC) Program* provides a course of training for selected college graduates leading to a commission as a Reserve Officer in the line, restricted line, or staff corps. Selected enlisted applicants are designated as officer candidates within their present pay grades, but not lower than E-2.

The *Aviation Officer Candidate (AOC) Program* is for selected college graduates who meet the requirements for flight training. Selected enlisted applicants are designated as aviation officer candidates within their present pay grades, but, like the OCs, not lower than E-2. AOCs who successfully complete the four months' officer indoctrination course, if qualified, are commissioned as Reserve Officers. Upon successful completion of flight training in a commissioned status, they are designated as Naval Aviators.

The eligibility requirements for all phases of these programs are as follows. Detailed requirements for the individual programs can be found in BuPers Inst. 1120.29:

- Must be a citizen of the United States. (Applicants for naval intelligence, air intelligence/photographic intelligence, or naval security group duties must be citizens by birth.)
- Must be a graduate of an accredited college or university with a baccalaureate degree with a minimum of 120 semester hours or its equivalent.
- Must be physically qualified in accordance with standards contained in the Manual of the Medical Department.
- Must be on active duty at a permanent-duty station and must have been serving on that station for at least two months. (Naval Training Centers for recruits and service schools of two months or more in duration for eligible qualified enlisted men and women are considered permanent-duty stations for these programs.)
- Must have at least six months



"How was your leave?"

of obligated service remaining under current enlistment upon receipt of orders to the school. If you have less than six months remaining, you are authorized to extend or reextend your enlistment. But the agreement to extend must be executed before you are transferred to the school.

Here is a rundown on the various programs:

Officer Candidate School Program (Men)

This program is open to all enlisted men—Regular Navy and Naval Reservists on active duty. Successful candidates will become Ensigns in the Line, Staff Corps and Restricted Line, with a very limited number of LTJG commissions available in the Restricted Line and Medical Service Corps.

Men selected for the Officer Candidate School will be ordered to report to the U. S. Naval Schools Command, Newport, R. I., for a four months' indoctrination course. (There is an exception to this. If you are selected for Aviation Experimental Psychology, you will receive your indoctrination at the U. S. Naval Air Station, Pensacola, Fla.)

If you successfully complete the indoctrination course, you will be appointed Ensign, USNR. A limited number of qualified candidates may be appointed in the grade of LTJG in the restricted line, and Medical Service Corps.

Line officers will be ordered to appropriate billets. But staff corps and restricted line officers will be given additional training under the supervision of the cognizant bureau or office.

You will be required to serve on active duty in commissioned grade for three years from the date you

accept your appointment, if required by the needs of the service, and to retain your commissioned status in the Naval Reserve for a total of six years following the date of your original appointment.

Officer Candidate School Program (Women)

Enlisted women of the Regular Navy and enlisted women Reservists on active duty are eligible to apply for this program leading to commissions as Ensign or LTJG in the Line (1105) or Staff Corps (3105).

Women selected for the Officer Candidate School will be ordered to the U. S. Naval School, Officer, Women, U. S. Naval Schools Command, Newport, R. I., for eight weeks of officer candidate training.

When you successfully complete the course, you will be appointed Ensign, USNR, in the line, Supply Corps or Medical Service Corps. A limited number may be appointed to LTJG in the Medical Service Corps or the line.

Classes for this program convene in July, November, and March of each year. The deadlines for receipt of applications in this Bureau for each class will be 10 May, 10 September, and 10 January. If your application is received after the deadline date, it will automatically be considered for the next class.

Aviation Officer Candidate School Program

This program, open to enlisted married or single men in the Regular Navy and Reservists on active duty, leads to a commission of Ensign.

When selected to this school, you will be ordered to the Aviation Officer Candidate School, Naval Air Station, Pensacola, Fla., for four months' indoctrination and preflight training.

Upon completion of the course and preflight training, you will be appointed Ensign, USNR. After being appointed, you will undergo approximately 14 months of flight training leading to the designation of Naval Aviator.

Upon successful completion of flight training, you will be obligated to serve on active duty in a commissioned rank for a period of three-and-a-half years, if required by the needs of the service, from the date of completion of flight training.

You will be further obliged to retain your commissioned status in the Naval Reserve for a total period of six years from the date of original appointment. This will include your period in flight training.

Processing Procedures

Here are the procedures for processing applications for all programs:

- You must make a written request to your commanding officer showing a desire for appointment to commissioned grade.

- Your commanding officer will make the initial review of your qualifications.

- You must take a physical examination.

- You will have to take mental tests prescribed for the program for which applying, and attain acceptable scores.

- Your application file will be assembled.

- You will be interviewed by a board of officers.

- Your commanding officer will review your completed application file.

- Your commanding officer will make his forwarding endorsement on your application.

Change of Rate

You will report to the appropriate school in your present rate. After reporting, the commanding officer of the school will have your rate changed to "Officer Candidate (OC)" or to "Aviation Officer Candidate (AOC)" in your present pay grade. As an example, a YN2 reporting to OCS would become an OC2, USN or USNR. A YN2 reporting to AOC would become an AOCNCP (E-5), USN or USNR.

Disenrollment

If you fail while at the school, you will be reverted to your former rate in the Regular Navy or Naval Reserve and made available for general assignment. Reverted candidates will be required to serve out their original or extended period of obligated service or such other period as may be required by the Secretary of the Navy pursuant to law. However, if you are unsuccessful and you would normally be released to inactive duty, you may, if you so desire, sign an agreement to remain on active duty.

Unsuccessful OCS candidates may reapply for an OC program, or for AOC program, after one year following the date of their disenrollment.

Unsuccessful AOCs in preflight may reapply for the program after one year following the date of their disenrollment, if the disenrollment is not the result of flight failure.

Dependents

Since the course of instruction at the officer candidate school at Newport is of less than 20 weeks' duration, transportation of dependents and household effects at government expense is not authorized. And if you are thinking of doing it at your own expense, remember, you are going to school to study. Besides, there is insufficient housing at Newport.

NOW HERE'S THIS

Knows When to Run

A naval officer in Bakersfield, Calif., has written a letter to the Commandant of the Eleventh Naval District which seems to be pretty convincing proof of that old adage about the ill wind. He says:

"The writer was recently informed by a friend, who wishes to remain anonymous, but whose integrity is unimpeachable, of the following effect of a sonic boom:

"The wife of this man possesses a small French clock, which she has kept on her dressing table for sentimental and ornamental value only, because it has not run for some years. But, when a sonic boom recently struck this area the clock started. It has now been running and keeping good time for several weeks.

"Since most of the publicity about the sonic boom concerns the deleterious effects, it was felt that the Commandant would be interested to learn of a beneficial result of the boom, even though the plane which caused it has not been identified. However, it is considered neither desirable nor feasible to use supersonic service aircraft solely for the purpose of starting clocks."

The officer's concluding remark is regarded as jeta's suggestion.



Things are different for those going to Aviation Officer Candidate School, Pensacola, Fla. If you are entitled to dependents' travel as authorized in *Joint Travel Regulations* and *Naval Travel Instructions*, you are authorized to bring your dependents to Pensacola at government expense.

DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current *Alnavs* and *NavActs* as well as current *BuPers Instructions*, *BuPers Notices*, and *SecNav Instructions* that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since *BuPers Notices* are arranged according to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes. Personnel interested in specific directives should consult *Alnavs*, *NavActs*, *Instructions* and *Notices* for complete details before taking action.

Alnavs apply to all Navy and Marine Corps commands; *NavActs* apply to all Navy commands; *BuPers Instructions* and *Notices* apply to all ships and stations.

Alnavs

No. 6—Announced the first successful flight of the Vanguard test satellite and extended congratulations to all hands concerned.

No. 7—Restricted the distribution of certain canned goods.

No. 8—Stated that applications are desired from officers with 1100 designators in grades from lieutenant through commander for new post-graduate curriculum sponsored by MSTs.

No. 9—Restricted the issue and use of certain drugs.

No. 10—Announced the convening of a selection board to consider the promotion of USN warrant officers.

No. 11—Required that all commands take action to implement the 11 Apr 1958 decision of the court of military appeals.

Instructions

No. 1301.3—Discusses the distribution of 11XX and 17XX officers based on the numbers of officers of each grade available for detailing.

No. 1326.1B—Establishes a uniform procedure for the administration of the allocation, issue, use and reporting of temporary flight orders for Navy enlisted personnel.

No. 1520.43A—Redesignates the General Line School as the General Line and Naval Science School and

provides information concerning the two programs which it offers.

No. 1520.61—States the policy concerning the participation of commissioned officers (naval and Marine Corps) and midshipmen in the annual Rhodes Scholarship competition.

No. 1620.1B—Sets forth the policies and procedures applicable to complaints of insufficient support and similar subjects affecting dependents of naval personnel.

No. 1820.2A—Provides information concerning the transfer to the Retired Reserve without pay of members of the Naval Reserve.

No. 1910.16—Authorizes one month early separation of enlisted personnel serving an active duty.

Notices

No. 1540 (17 March)—Announced Change No. 1 to BuPers Inst. 1540.2C, which is concerned with assignment of enlisted personnel to submarine training and duty.

No. 1926 (18 March)—Announced Change No. 1 to BuPers Inst. 1926.1C, which is concerned with the extension of and release from active duty of Naval Reserve officers and certain USN officers.

No. 1742 (26 March)—Provided information for commanding officers and voting officers for the administration of the Absentee Voting Assis-

ance Program and outlined steps to be taken to encourage maximum participation.

No. 1120 (28 March)—Announced the selection of applicants for temporary appointment to the grade of ensign, USN, for limited duty officer and warrant officer W-1.

No. 1430 (28 March)—Listed the bibliography to be used in preparing for advancement in the Photographic Intelligence rating.

No. 1531 (28 March)—Requested nomination of candidates for assignment to the U. S. Naval Preparatory School, Bainbridge, Md., in preparation for appointment to the Naval Academy.

No. 1001 (3 April)—Provided information regarding selection for transfer to TAR status and assignment to duty in the TAR program.

No. 1520 (3 April)—Invited applications from Supply Corps officers for assignment to the Freight Transportation and Traffic Management Course, Oakland, Calif.

No. 1418 (4 April)—Announced the schedule for servicewide examinations for advancement in rating to pay grades E-4 through E-6 to be conducted in August.

No. 1306 (16 April)—Described use of codes in rotation and assignment of enlisted personnel.

No. 1440 (17 April)—Announced the disestablishment of certain MM emergency service ratings.

No. 1520 (17 April)—Announced the selection of officers for the July 1958 submarine class and announced eligibility for the January 1959 class.

No. 1540 (17 April)—Made available information regarding Diver, First Class, training.

Atlantic Fleet Welcomes New Piers Joining the Navy

Three new piers have moved into the Navy's picture—two are in use and the other is well along the way.

On 14 February, the 60,000-ton supercarrier *uss Ranger* (CVA 61) moved alongside Pier 12, the Norfolk Naval Base's newest and largest berthing space.

This huge pier is 1300 feet long and 150 feet wide. It is the first of three planned docking facilities to be added to the north end of the base. Construction of the project, authorized by Congress, began in May 1956.

In addition to filling 102 acres of new land for the pier complex, Navy constructors put in a 3200-foot bulkhead and a 1500-foot breakwater at the end of the new land.

Further up the Atlantic seaboard, in Newport at Coddington Cove, R. I., work continues on the largest Navy-built pier on the Atlantic Coast. The last of 3182 steel pilings were pounded into the waters last fall as one more step toward completing the 1530-foot Pier Two.

The 200-foot wide structure will be big enough to accommodate 26 destroyers and two destroyer tenders. It lies 800 feet north of Destroyer Pier One completed in 1956.

The new pier will not be just a place to moor. On it will be a complete marine terminal building, 860 feet long by 100 feet wide. The building will include covered storage space, administrative offices, a snack bar, waiting rooms, a telephone center and a film exchange.

Another important feature is that utilities will be built into the new pier. Ships alongside will be able to get electric light and power, telephone connections, water, fuel and steam without running their own plants.

As the finger of Destroyer Pier Two extends further and further

U. S and Canadian Fleets Team Up for ASW

ASW units from the U. S. Atlantic and Canadian Fleets teamed up this spring for two weeks of antisubmarine operations off the coast of Florida.

Dubbed "ASWEX," the exercise was designed to provide training in defense against nuclear-powered and conventional submarines. It was conducted under the over-all direction of VADM Frank T. Watkins, USN, Commander Antisubmarine Defense Force, U. S. Atlantic Fleet.

The operation was divided into two phases—the first, dealing with the support of convoy operations, and the other with hunter-killer operations centered around the antisubmarine support carrier and land-based patrol planes.

Acting as the "enemy" during the operation was the New London-based atomic submarine *uss Sea-*

wolf, SS(N) 575; and *uss Trumpetfish* (SS 425) and *uss Clamagore* (SS 343), both based at Key West, Fla.

Teamed-up against the underseas raiders were 34 surface ships, carrier- and land-based aircraft, and blimps. More than 10,000 naval personnel took part in this, the first large-scale antisubmarine warfare operation held by the Atlantic Fleet this year.

Taking part in ASWEX were the antisubmarine carriers *uss Leyte* (CVS 32) and *HMCS Bonaventure*; the frigate *uss Mitscher* (DL 2); Destroyer Squadrons 20 and 28; Escort Squadrons 10 and 14; the Canadian Escort Squadrons One and Three; the ammunition ship *uss Suribachi* (AE 21); the refrigerator ship *uss Denebola* (AF 56); Patrol Squadron Five and Airship Squadron Two.

This Is Lowdown on Transportation for Man's Best Friend

I'm about to be transferred overseas, writes W.E.W., AC1, and the youngsters insist on taking the dog along. I'm all for it, but not so sure it can be done. Can you give us the latest word concerning the shipment of a dog—or for that matter—any pet? Can our Hero (and I didn't name it—the kids did) travel with the family or does (if he goes at all) he have to travel in the baggage? How about travel by air? Can dogs be shipped on a space available basis?

LET THERE BE peace in your family. You can take him with you—under certain conditions, of course. The rules say you may ship your dog if you are authorized travel at government expense in connection with a permanent change of station. To become technical for a moment, he may be shipped "from an appropriate port of embarkation to the port serving your overseas duty station, between ports serving your overseas duty station, or from the overseas port of embarkation" to the appropriate continental United States port, providing there is no cost to the government.

Hero can be shipped provided he (or she) falls into the category of a household pet which is kept for personal enjoyment and not intended for resale or commercial purposes. Household pets are usually defined as dogs, cats and certain birds including canaries and java sparrows. Birds of the parrot family cannot be shipped. Monkeys may be considered as household pets but, pet or not, you'll have to leave your elephant at home.

Hero cannot be shipped via government aircraft. He may be transported only on a passenger ship of the Military Sea Transportation Service. Pets transported

aboard MSTs ships are limited to those which can be placed in installed cages or portable crates that can be stowed in areas designed for that purpose. The space allotted for pets is usually on the weather deck. Cats and dogs are not permitted in staterooms. Birds may be kept in your quarters, but you will be responsible for their care.

The number of pets which can be carried aboard any MSTs ship is controlled by the master of the vessel. The movement of pets may be further restricted by military departments and/or overseas commanders for reason dictated by circumstances. Some of the pamphlets about living conditions overseas contain brief items about shipping pets. These pamphlets may be obtained from the Chief of Naval Personnel (Attn: Pers G221) for the areas in which you are interested.

While transportation aboard MSTs ships is furnished, all costs for food and care after delivery to the port of embarkation, during the voyage, and after arrival at the port of debarkation must be paid by you.

Before you can ship your pet, you must fulfill the following requirements:

- Sign a statement of agreement and provide a certificate that you have taken the necessary steps to insure that your pet satisfied the import requirements of the United States or other country that you plan to enter.

- Furnish proof that your pet has been thoroughly examined by a registered veterinarian within two weeks of sailing and found to be free of any sickness or disease.

- Provide a suitable crate or cage, food for the voyage and proper utensils for feeding and watering, which can be easily

cleaned and are resistant to rust and corrosion.

- Properly tag the crate with your identification and deliver it to the loading port one day before loading. (Delivery to the port of embarkation will be at your expense.)

- Provide a suitable collar or harness, muzzle, and chain or leash for your dog. You must accompany Hero at the time of embarkation. He must be on a chain or leash and muzzled at the time of embarkation and debarkation, and during exercise periods at sea.

- Arrangements for care ashore, boarding, clearance, transportation to and from the port, consignment, and other pre-embarkation and post-debarkation requirements will be your sole responsibility and expense.

- An application must be submitted in advance to the Commandant of the appropriate Naval District for complete shipping information, before delivering Hero to the port of embarkation.

In spite of the pleasure you and your family may receive from Hero, the expense, inconveniences and restrictions which are involved in his transportation should be considered before you decide to take him with you. (We're aware there will be certain unpleasant repercussions if you decide to leave him, but that's your problem. Are you man or mouse?) You might also consider that there are certain quarantine restrictions placed on animals imported into various countries. The cost for the care and feeding while in quarantine must be borne by you.

You should also know that the government is not responsible for the physical well-being of Hero or any other pet while in its custody and is not liable for injury or loss.

seaward, destroyer men welcome the sight and realize that those long liberty boat rides in icy weather will be coming to an end.

Across Narragansett Bay at the Naval Construction Battalion Center, Davisville, R. I., the Bureau of Yards and Docks has completed a pier of a different type. It will provide addi-

tional berthing space for loading personnel and cargo destined for overseas projects being built by the Navy's Seabees.

This pier is 1200 feet long with a 250-foot wide paved strip extending 600 feet across its seaward end. The rest of the pier is 500 feet wide.

The berthing facility is built of

cellular (steel sheet piling) construction with hydraulic fill obtained from a 3000-foot channel dredged to deep water. A railroad spur running the length of the paved section is reinforced with steel H-piles. In addition to the spur the pier has facilities for water distribution, electrical power and lighting service and telephones.

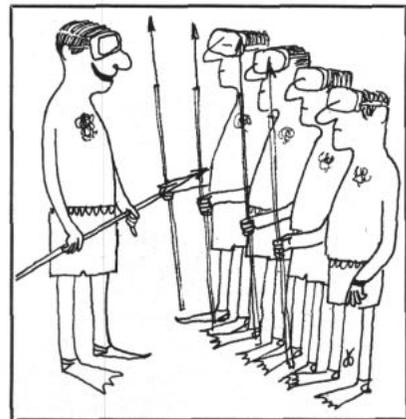
THE SALTY TOUCH of the under-seas Navy is predominant in this month's Navy Library selections. But there are also adventure yarns that are sure to be popular.

The Enemy Below, by Commander D. A. Rayner, RN. This book, which is now available with the hard cover, will soon be ready for distribution as a paper back. It is a compactly written novel concerning a single combat engagement in a desolate part of the Atlantic, between enemy ships—a destroyer and a submarine—captain vs Kapitan, men of equal skill and determination.

Symbolically, the Captain of the British destroyer "*Hecate*" is playing chess when his radar alerts him to a submarine ahead. Almost simultaneously the kapitan of the German submarine is warned of what seems a false echo trailing him to his goal, the armed cruiser "*Cecile*."

The British captain's deadly calculations are based on exact knowledge of how and why a U-boat will maneuver, how and where her radar can detect the echo as another boat, under what circumstances she can place her torpedo. The German, accustomed to the illogic of the enemy, cannot believe it is a real menace, but his instincts too are sound, and eventually a depth charge from "*Hecate*" and a torpedo from *U-121* precipitate the absolute battle of absolute equals which is played out to a violent and startling conclusion.

Fire On The Beaches, by Theodore Taylor. Pearl Harbor found both the east and west coasts of this country almost without defense and with no means of countering submarine attacks, which had already begun in



"Seventeeeee count manual. . . ."

the Atlantic and which started in the Pacific 7 Dec 1941. All during 1942 German wolf-packs and the fewer Japanese submarines roamed the seas almost at will, striking down an incredible number of merchant ships, killing thousands of seamen and passengers, until convoy escort, our own submarines and the air arm at last put an end to the menace.

Fire On The Beaches tells the story of German and Japanese submarine warfare against American merchant shipping in the last war. It is one of heroism, frustration, defeat and victory, with little emphasis on horrors or on the obvious moral. It should appeal to readers of modern American history and delight those who enjoy true tales of adventure and heroism on the high seas.

U-Boat Killer, by Captain Donald Macintyre, RN. This book, too, will soon be available for distribution as a paper book. It is a first-hand account of the "hunt for, the stalking of and the finally killing of a U-boat" which, to the author, is the "perfect expression of a fighting sailor's art" with a minimum of dramatics and a maximum of modesty. His ships, *Bickerton*, a tiny can, *Hesperus*, an aristocrat, and *Walker*, an old warhorse, and his men are very much a part of his story of life with the convoys, of the evasive and attacking tactics developed against the submarines, of changing phases of the war at sea.

Victory At Sea 1939-1945, by LCDR P. K. Kemp, RN (Ret.). This book is based on documents and records, allied and enemy, and written with the approval of the British Admiralty, the Admiralty Archivist and Head of Historical Section. It provides a running account of World War II's sea war and an over-all survey of campaigns and actions and major naval operations as they "fitted into, and in their outcome influenced, the major strategical pattern."

It tells about the decline of the British Navy after World War I, the lateness in reactivating and the status when war struck.

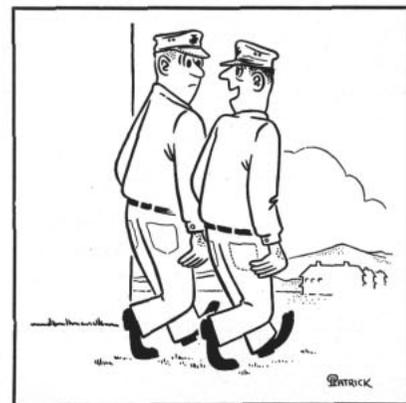
Here are the attempts to hold the sea ring of safety against the enemy, the penetration of the U-boats, and the hard fought battle of the Atlantic

with its long toll of losses, and the two "happy times" of the Germans.

Escape Of The Amethyst, by C. E. Lucas Phillips. In 1949, as H.M.S. frigate *Amethyst* proceeded peacefully up the River Yangtze she was unknowingly sailing to fame as the cause of an international incident and the subject of an epic in naval history. Brought to the brink of destruction when a Chinese Communist shore battery illegally opened fire, *Amethyst* and her novice crew were held captive under incredible conditions of physical hardship and emotional tension.

They Came To Cordura, by Glendon Swarthout. An almost forgotten segment of our military history provides the substance for this story of Pershing's punitive expedition into Mexico, when the bandit Villa was terrorizing the border. The time was 1916; the American forces were undermanned, badly equipped, inexperienced in guerrilla warfare—and outnumbered and outmaneuvered by the Villistas.

Shackleton And The Antarctic, by Margery and James Fisher. At the turn of the century, the South Pole had the emotional value now attached to Everest, and the man who penetrated its reaches, Ernest Shackleton, was hailed as a hero and knighted. He has been the subject of biographies earlier than this one in an attempt to discover what it is that makes an adventurer. Anxious to leave no facet of the man's life unrecorded and unexplained, Margery and James Fisher have amassed documents and letters touching on every phase of the Irish-born explorer's life. The authors bring to light Shackleton's motives in undertaking the polar journeys; what he was like at home, under command and in command.



"Didja learn any new words from the D.I. today?"



introduction to SPACE

A few days after the first Vanguard was successfully launched, the following report, *Introduction to Outer Space*, which had been prepared by the Science Advisory Committee to the President, was made public. It's something of a blueprint of the future, expressed in nontechnical language. Because it helped answer a lot of our own questions, ALL HANDS presents it here in somewhat abbreviated form in the hope it will also help you answer some of your questions.

THE BASIC LAWS governing satellites and space flight are fascinating in their own right. And while they have been well known to scientists ever since Newton, they may still seem a little puzzling and unreal to many of us. Our children, however, will understand them quite well.

We all know that the harder you throw a stone the farther it will travel before falling to earth. If you could imagine your strength so fantastically multiplied that you could throw a stone at a speed of 15,000 mph, it would travel a great distance. It would, in fact, easily cross the Atlantic Ocean before the earth's gravity pulled it down. Now imagine being able to throw the stone just a little faster, say about 18,000 mph. What would happen then?

The stone would again cross the ocean, but this time it would travel much farther than it did before. It would travel so far that it would overshoot the earth, so to speak, and keep falling until it was back where it started. Since in this imaginary example there is no atmospheric resistance to slow the stone down, it would still be traveling at its original speed, 18,000 mph, when it got back to its starting point. So around the earth it goes again. From the stone's point of view, it is continuously falling, except that its very slight downward arc exactly matches the curvature of the earth, and so it stays aloft—or as the scientist would say, "in orbit"—indefinitely.

Since the earth does have an atmosphere, of course, neither stones nor satellites can be sent whizzing around the earth at tree-top level. Satellites must first be lifted

beyond the reach of atmospheric resistance. It is the absence of atmospheric resistance that makes the satellite possible. It may seem odd that weight or mass has nothing to do with a satellite's orbit. If a feather were released from a 10-ton satellite, the two would stay together, following the same path in the airless void.

There is, however, a slight vestige of atmosphere even a few hundred miles above the earth, and its resistance will cause the feather to spiral inward toward the earth sooner than the satellite. It is atmospheric resistance, however slight, that has set limits on the life of all satellites launched to date.

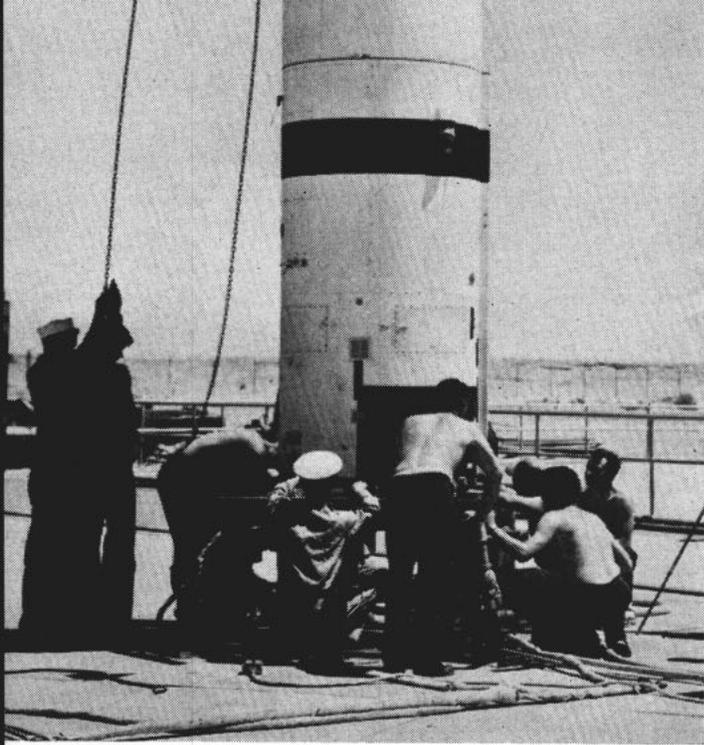
Beyond a few hundred miles the remaining trace of atmosphere fades away so rapidly that tomorrow's satellites should stay aloft thousands of years, and, perhaps, indefinitely. The higher the satellite, incidentally, the less speed it needs to stay in orbit once it gets there (thus, the moon's speed is only a little more than 2000 mph), but to launch a satellite toward a more distant orbit requires a higher initial speed and greater expenditure of energy.

The Thrust into Space

Rocket engineers rate rockets not in horsepower, but in thrust. Thrust is just another name for push, and it is expressed in pounds of force. The rocket gets its thrust or push by exhausting material backward. It is this thrust that lifts the rocket off the earth and accelerates it, making it move faster and faster.

As everyone knows, it is more difficult to accelerate an automobile than a baby carriage. To place satellites weighing 1000 to 2000 pounds in orbit requires a first-stage rocket, engine, or engines, having a thrust in the neighborhood of 200,000 to 400,000 pounds. Rocket engines able to supply this thrust have been under development for some time.

For launching a satellite, or other space vehicle, the rocket engineer divides his rockets into two, three, or more stages, which can be dropped one after the other



'SPACE PIONEER'—Navy Viking rockets like one being readied here, were stepping stones to satellite launching.

in flight, thus reducing the total weight that must be accelerated to the final velocity desired. (In other words, it is a great waste of energy to lift one huge fuel tank into orbit when the tank can be divided into smaller tanks—each packaged in its own stage with its own rocket motor—that can be left behind as they become empty.)

Weight Limiting Factor—To launch some of the present satellites has required rockets weighing up to 1000 times the weight of the satellite itself. But it will be possible to reduce take-off weights until they are only 50 to 100 times that of the satellite. The rocket's high ratio of gross weight to payload follows from a fundamental limitation in the exhaust velocities that can be achieved by chemical propellants.

If we want to send up not a satellite but a device that will reach the moon, we need a larger rocket relative to its payload in order that the final stage can be accelerated to about 25,000 mph. This speed, called the "escape velocity," is the speed with which a projectile must be thrown to escape altogether from the gravitational pull of the earth. If a rocket fired at the moon is to use as little fuel as possible, it must attain the escape velocity very near the beginning of its trip. After this peak speed is reached, the rocket will be gradually slowed down by the earth's pull, but it will still move fast enough to reach the moon in two or three days.

The Moon as a Goal

Moon exploration will involve three distinct levels of difficulty. The first would be a simple shot at the moon, ending either in a "hard" landing or a circling of the moon. Next in difficulty would be a "soft" landing. And most difficult of all would be a "soft" landing followed by a safe return to earth.

The payload for a simple moon shot might be a small instrument carrier similar to a satellite. For the more difficult "soft" landing, the carrier would have to include, as part of its payload, a "retro-rocket" (a decelerating

rocket) to provide braking action, since the moon has no atmosphere that could serve as a cushion.

To carry out the most difficult feat—a round trip to the moon—will require that the initial payload include not only "retro-rockets" but rockets to take off again from the moon. Equipment will also be required aboard to get the payload through the atmosphere and safe back to earth. To land a man on the moon and get him home safe again will require a very big rocket engine indeed—one with a thrust in the neighborhood of one or two million pounds. While nuclear power may prove superior to chemical fuels in engines of multi-million pound thrust, even the atom will provide no short cut to space exploration.

Sending a small instrument carrier to Mars, although not requiring much more initial propulsion than a simple moon shot, would take a much longer travel time (eight months or more), and the problems of navigation and final guidance are formidable.

A Message from Mars—Fortunately, the exploration of the moon and nearby planets need not be held up for lack of rocket engines big enough to send men and instrument carriers out into space and home again. Much that scientists wish to learn from satellites and space voyages into the solar system can be gathered by instruments and transmitted back to earth. This transmission, it turns out, is relatively easy with today's rugged and tiny electronic equipment.

For example, a transmitter with a power of just one or two watts can easily radio information from the Moon to the earth. And messages from Mars, on the average some 50 million to 100 million miles away at the time the rocket would arrive, can be transmitted to earth with less power than that used by most commercial broadcasting stations. In some ways, indeed it appears that it will be easier to send a clear radio message between Mars and earth than between New York and Tokyo.

This all leads up to an important point about space exploration. The cost of transporting men and material through space will be extremely high, but the cost and difficulty of sending information through space will be comparatively low.

Will the Results Justify the Costs?

Since the rocket power plants for space exploration are already in existence or being developed for military need, the cost of additional scientific research, using these rockets, need not be exorbitant. Still, the cost will not be small, either. This raises an important question that scientists and the general public (which will pay the bill) both must face: Since there are still so many unanswered scientific questions and problems all around us on earth, why should we start asking new questions and seeking out new problems in space? How can the results possibly justify the cost?

Scientific research, of course, has never been amenable to rigorous cost accounting in advance. Nor, for that matter, has exploration of any sort. But if we have learned one lesson, it is that research and exploration have a remarkable way of paying off—quite apart from the fact that they demonstrate that man is alive and insatiably curious. And we all feel richer for knowing what explorers and scientists have learned about the universe in which we live.

It is in these terms that we must measure the value of launching satellites and sending rockets into space. These ventures may have practical utility, some of which will

be noted later. But the scientific questions come first.

The View from a Satellite

Here are some of the things that scientists say can be done with the new satellites and other space mechanisms. A satellite in orbit can do three things: (1) It can sample the strange new environment through which it moves; (2) it can look down and see the earth as it has never been seen before; and (3) it can look out into the universe and record information that can never reach the earth's surface because of the intervening atmosphere.

The satellite's immediate environment at the edge of space is empty only by earthly standards. Actually, "empty" space is rich in energy, radiation, and fast-moving particles of great variety. Here we will be exploring the active medium, a kind of electrified plasma, dominated by the sun, through which our earth moves. Scientists have indirect evidence that there are vast systems of magnetic fields and electric currents that are connected somehow with the outward flow of charged material from the sun. These fields and currents the satellites will be able to measure for the first time. Also for the first time, the satellites will give us a detailed three-dimensional picture of the earth's gravity and its magnetic field.

Physicists are anxious to run one crucial and fairly simple gravity experiment as soon as possible. This experiment will test an important prediction made by Einstein's General Theory of Relativity, namely, that a clock will run faster as the gravitational field around it is reduced. If one of the fantastically accurate clocks, using atomic frequencies, were placed in a satellite and if it should run faster than its counterpart on earth, another of Einstein's great and daring predictions would be confirmed. (This is not the same as the prediction that any moving clock will appear to a stationary observer to lose time—a prediction that physicists already regard as well confirmed.)

There are also some special questions about cosmic rays which can be settled only by detecting the rays be-

fore they shatter themselves against the earth's atmosphere. And, of course, animals carried in satellites will begin to answer the question: What is the effect of weightlessness on physiological and psychological functions? (Gravity is not felt inside a satellite because the earth's pull is precisely balanced by centrifugal force. This is just another way of saying that bodies inside a satellite behave exactly as they would inside a freely falling elevator.)

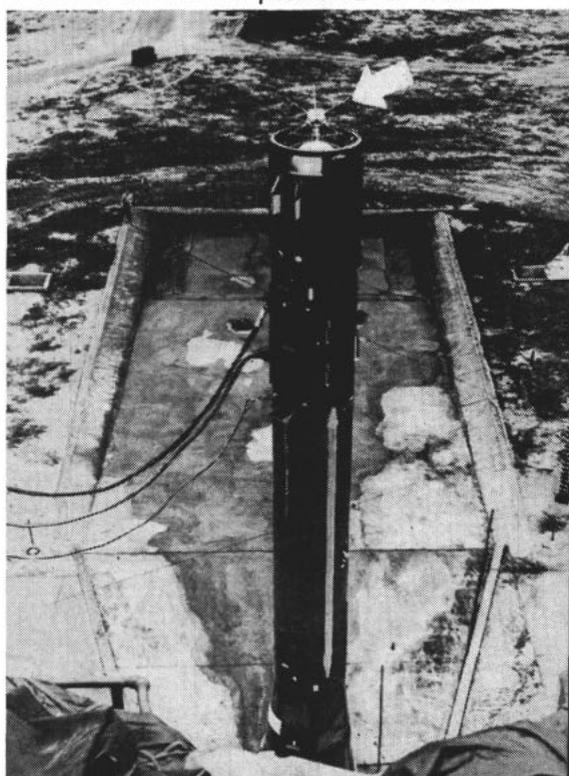
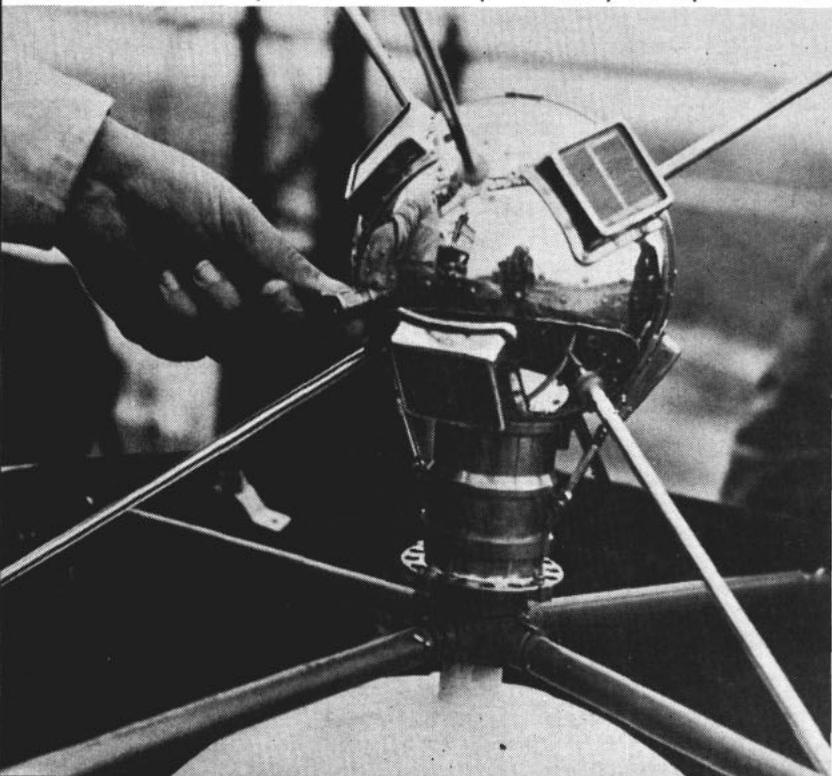
The satellite that will turn its attention downward holds great promise for meteorology and the eventual improvement of weather forecasting. Present weather stations on land and sea can keep only about 10 per cent of the atmosphere under surveillance. Two or three weather satellites could make a cloud inventory of the whole globe every few hours. From this inventory meteorologists believe they could spot large storms (including hurricanes) in their early stages and chart their direction of movement with much more accuracy than at present. Other instruments in the satellites will measure for the first time how much solar energy is falling upon the earth's atmosphere and how much is reflected and radiated back into space by clouds, oceans, the continents, and by the great polar ice fields.

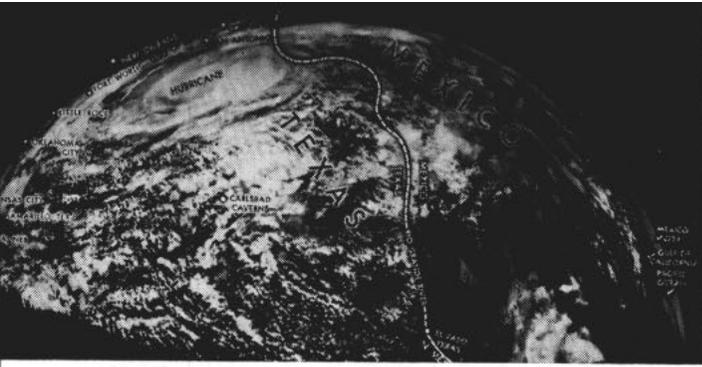
It is not generally appreciated that the earth has to send back into space, over the long run, exactly as much heat energy as it receives from the sun. If this were not so the earth would either heat up or cool off. But there is an excess of income over outgo in the tropical regions, and an excess of outgo over income in the polar regions. This imbalance has to be continuously rectified by the activity of the earth's atmosphere which we call weather.

By looking at the atmosphere from the outside, satellites will provide the first real accounting of the energy imbalances, and their consequent tensions, all around the globe. With the insight gained from such studies, meteorologists hope they may improve long-range forecasting of world weather trends.

Finally, there are the satellites that will look not just

IN ORBIT—Navy's test satellite is squared away for trip. *Left:* Radio is turned on. *Rt:* It's positioned in rocket.





LOOKING BACK—Composite photo made by cameras in rockets shows what earth looks like from 100 miles up.

around or down, but out into space. Carrying ordinary telescopes as well as special instruments for recording X-rays, ultraviolet, and other radiations, these satellites cannot fail to reveal new sights forever hidden from observers who are bound to the earth. What these sights will be, no one can tell. But scientists know that a large part of all stellar radiation lies in the ultraviolet region of the spectrum, and this is totally blocked by the earth's atmosphere. Also blocked are other very long wave lengths of "light" of the kind usually referred to as radio waves. Some of these get through the so-called "radio window" in the atmosphere and can be detected by radio telescopes, but scientists would like a look at the still longer waves that cannot penetrate to earth.

Even those light signals that now reach the earth can be recorded with brilliant new clarity by satellite telescopes. All existing photographs of the moon and nearby planets are smeared by the same turbulence of the atmosphere that make the stars twinkle. Up above the atmosphere the twinkling will stop and we should be able to see for the first time what Mars really looks like. And we shall want a really sharp view before launching the first rocket to Mars.

A Close-Up of the Moon

While these satellite observations are in progress, other rockets will be striking out for the moon with other kinds of instruments. Photographs of the back or hidden side of the moon may prove quite unexciting, or they may reveal some spectacular new feature now unguessed. Of greater scientific interest is the question whether or not the moon has a magnetic field. Since no one knows for sure why the earth has such a field, the presence or absence of one on the moon should throw some light on the mystery.

But what scientists would most like to learn from a close-up study of the moon is something of its origin and history. Was it originally molten? Does it now have a fluid core, similar to the earth's? And just what is the nature of the lunar surface? The answer to these and many other questions should shed light, directly or indirectly, on the origin and history of the earth and the surrounding solar system.

While the moon is believed to be devoid of life, even the simplest and most primitive, this cannot be taken for granted. Some scientists have suggested that small particles with the properties of life—germs or spores—could exist in space and could have drifted on to the moon. If we are to test this intriguing hypothesis we must be careful not to contaminate the moon's surface, in the biological sense, beforehand. There are strong scientific reasons, too, for avoiding radioactive contamination of the moon until its naturally acquired radioactivity can be measured.

... And on to Mars

The nearest planets to earth are Mars and Venus. We know quite enough about Mars to suspect that it may support some form of life. To land instrument carriers on Mars and Venus will be easier, in one respect, than achieving a "soft" landing on the moon. The reason is that both planets have atmospheres that can be used to cushion the final approach. These atmospheres might also be used to support balloons equipped to carry out both meteorological soundings and a general photo survey of surface features. The Venusian atmosphere, of course, consists of what appears to be a dense layer of clouds so that its surface has never been seen at all from earth.

Remotely controlled scientific expeditions to the moon and nearby planets could absorb the energies of scientists for many decades. Since man is such an adventurous creature, there will undoubtedly come a time when he can no longer resist going out and seeing for himself. It would be foolish to try to predict today just when this moment will arrive. It might not arrive in this century, or it might come within one or two decades. So much will depend on how rapidly we want to expand and accelerate our program. According to one rough estimate it might require a total investment of about a couple of billion dollars spent over a number of years to equip ourselves to land a man on the moon and to return him safe to earth.

The Satellite Radio Network

Meanwhile, back at earth, satellites will be entering into the everyday affairs of men. Not only will they be aiding the meteorologists, but they could surely—and rather quickly—be pressed into service for expanding world-wide communications, including intercontinental television.

At present all trans-oceanic communication is by cable (which is costly to install) or by shortwave radio (which is easily disrupted by solar storms). Television cannot be beamed practicably more than a few hundred miles because the wave lengths needed to carry it will not bend around the earth and will not bounce off the region of the atmosphere known as the ionosphere. To solve this knotty problem, satellites may be the thing, for they can serve as high-flying radio relay stations. Several suitably equipped and properly spaced satellites would be able to receive TV signals from any point on the globe and to relay them directly—or perhaps via a second satellite—to any other point. Powered with solar batteries, these relay stations in space should be able to keep working for many years.

Military Applications of Space Technology

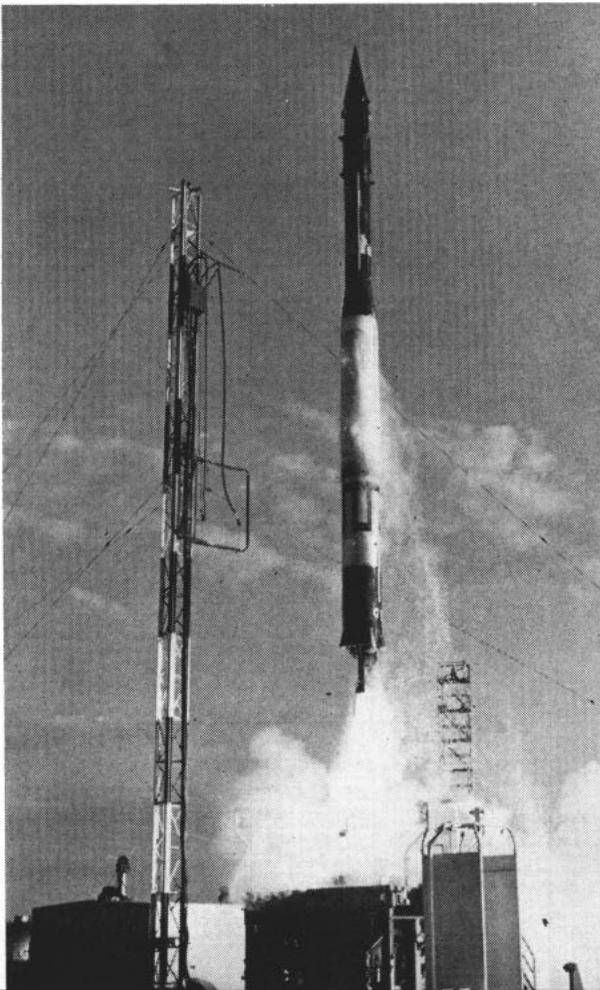
The development of military rockets has provided the technological base for space exploration. It will probably continue to do so, because of the commanding military importance of the ballistic missile. The subject lies outside our present discussion. We ask instead, putting missiles aside, what other military applications of space technology can we see ahead?

There are important, foreseeable, military uses for space vehicles. These lie, broadly speaking, in the fields of communication and reconnaissance. To this we could add meteorology, for the possible advances in meteorological science which have already been described would have military implications. The use of satellites for radio relay links has also been described, and it does not take much imagination to foresee uses of such techniques in long-range military operations.

The reconnaissance capabilities of a satellite are due, of course, to its position high above the earth and the fact that its orbit carries it in a predictable way over much of the globe. Its disadvantage is its necessarily great distance, 200 miles or more, from the surface. A highly magnifying camera or telescope is needed to picture the earth's surface in even moderate detail. To the human eye, from 200 miles away, a football stadium would be a barely distinguishable speck. A telescopic camera can do a good deal better, depending on its size and complexity. It is certainly feasible to obtain reconnaissance information with a fairly elaborate instrument, information which could be relayed back to the earth by radio.

Much has been written about space as a future theater of war, raising such suggestions as satellite bombers, military bases on the moon, and so on. For the most part, even the more sober proposals do not hold up well on close examination or appear to be achievable at an early date. Granted that they will become technologically possible, most of these schemes, nevertheless, appear to be clumsy and ineffective ways of doing a job. Take one example, the satellite as a bomb carrier. A satellite cannot simply drop a bomb. An object released from a satellite doesn't fall. So there is no special advantage in being over the target. Indeed, the only way to "drop" a bomb directly down from a satellite is to carry out aboard the satellite a rocket launching of the magnitude required for an intercontinental missile. A better scheme is to give the weapon to be launched from the satellite a small push, after which it will spiral in gradually.

THREE-TWO-ONE-FIRE and a Vanguard rocket soars from launching pad to place Navy test satellite in orbit.



But that means launching it from a moving platform halfway around the world, with every disadvantage compared to a missile base on the ground. In short, the earth would appear to be, after all, the best weapons carrier.

This is only one example; each idea has to be judged on its own merits. There may well be important military applications for space vehicles which we cannot now foresee, and developments in space technology which open up quite novel possibilities. The history of science and technology reminds us sharply of the limitations of our vision. Our road to future strength is the achievement of scientific insight and technical skill by vigorous participation in these new explorations. In this setting, our military strength will grow naturally and surely.

A Space Timetable—Thus we see that satellites and space vehicles can carry out a great variety of scientific missions, and a number of military ones as well.

The timetable below suggests the approximate order in which some of the scientific and technical objectives mentioned may be attained.

The timetable is not broken down into years, since there is yet too much uncertainty about the scale of the effort that will be made. The timetable simply lists various types of space investigations and goals under three broad headings: Early, Later, Still Later.

Scientific Objectives

Early

1. Physics
2. Geophysics
3. Meteorology
4. Minimal Moon Contact
5. Experimental Communications
6. Space Physiology

Later

1. Astronomy
2. Extensive Communications
3. Biology
4. Scientific Lunar Investigation
5. Minimal Planetary Contact
6. Human Flight in Orbit

Still Later

1. Automated Lunar Exploration
2. Automated Planetary Exploration
3. Human Lunar Exploration and Return

And Much Later Still: Human Planetary Exploration—In conclusion, we venture two observations. Research in outer space affords new opportunities in science, but it does not diminish the importance of science on earth. Many of the secrets of the universe will be fathomed in laboratories on earth, and the progress of our science and technology and the welfare of the nation require that our regular scientific programs go forward without loss of pace, in fact at an increased pace. It would not be in the national interest to exploit space science at the cost of weakening our efforts in other scientific endeavors. This need not happen if we plan our national program for space science as part of a balanced national effort in all science and technology.

Our second observation is prompted by technical considerations. For the present, the rocketry and other equipment used in space technology must usually be employed at the very limit of its capacity. This means that failures of equipment and uncertainties of schedule are to be expected. It therefore appears wise to be cautious and modest in our predictions and pronouncements about future space activities—and quietly bold in our execution.

TAFFRAIL TALK

AT TIMES, this modern, technical age becomes too much for us. While plowing through the mass of printed matter which crosses our desk each day we ran across the following:

"The main winding was of the normal lotus-O-delta type-plaed in penefermic semi-boloid slots in the stator, every seventh conductor being connected by . . ."

We shook our editorial head, wiped our glasses and stared over at the Pentagon for an undetermined period. When we awoke we looked again but the words were still there. We tried skimming and found this:

" . . . when n is the diathetical evolute of retrograde temperature phase disposition and c is Cholmondeley's annular grillage coefficient . . . in 1942 it was found that the use of anhydrous mangling ping pins enabled a kryptomastic boiling shim to be tankered."

As this gem of clarity was found in USL's *Echo* we suspected that we were having our leg pulled by experts but in this time of transmogrification of the English language, who can ever be sure? After all, it was *Echo* who gave us the hot scoop on how to figure the distance of a satellite above the earth (*ALL HANDS*, December 1957, p. 64) and then, when our readers found their figures orbiting every which way, left us to think up our own alibis. An unfriendly act.

★ ★ ★

Do you have trouble remembering names? If so, head for NTC San Diego where you can call nearly anybody Smith, Johnson, Jones or Brown and get away with it.

There are nearly 400 members of the Smith family there, including 27 Roberts (seven of these have the same middle initial, "L"); 13 are called Charles, six of whom have the middle initial "E"; and 20 with the first name of James.

The Johnson group stands 306 strong and 24 of these answer to Charles. Some 224 Joneses and 195 Browns are also included on the daily diary.

A postman in the middle of this group of kingsize family reunions not only has to ring twice, but in some cases, a dozen or more times.

★ ★ ★

We have often wondered what the other nine Navymen are doing while they wait for their turn at the current issue of this magazine, each copy of which is designed for 10 men. Now we know!

According to one BuAer department, they must be reading "ASB Notes," a technical information newsletter published monthly concerning a Bomb Director Set. Their November cover pictured nine "Henry" type comic strip characters reading "ASB Notes" while the tenth pored over a copy of *ALL HANDS*.

And that reminds us that this is the last page. You should be finished with the magazine, unless you read Japanese style, so *pass it along* to a shipmate.

The All Hands Staff

The United States Navy

Guardian of our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keystones of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

ALL HANDS the Bureau of Naval Personnel Information Bulletin, with approval of the Bureau of the Budget on 23 June 1955, is published monthly by the Bureau of Naval Personnel for the information and interest of the naval service as a whole. Opinions expressed are not necessarily those of the Navy Department. Reference to regulations, orders and directions is for information and does not by publication herein constitute authority for action. All original material may be reprinted as desired if proper credit is given *ALL HANDS*. Original articles of general interest may be forwarded to the Editor.

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The Bureau invites requests for additional copies as necessary to comply with the basic directive. This magazine is intended for all hands and commanding officers should take necessary steps to make it available accordingly.

The Bureau should be kept informed of changes in the number of copies required.

The Bureau should also be advised if the full number of copies is not received regularly.

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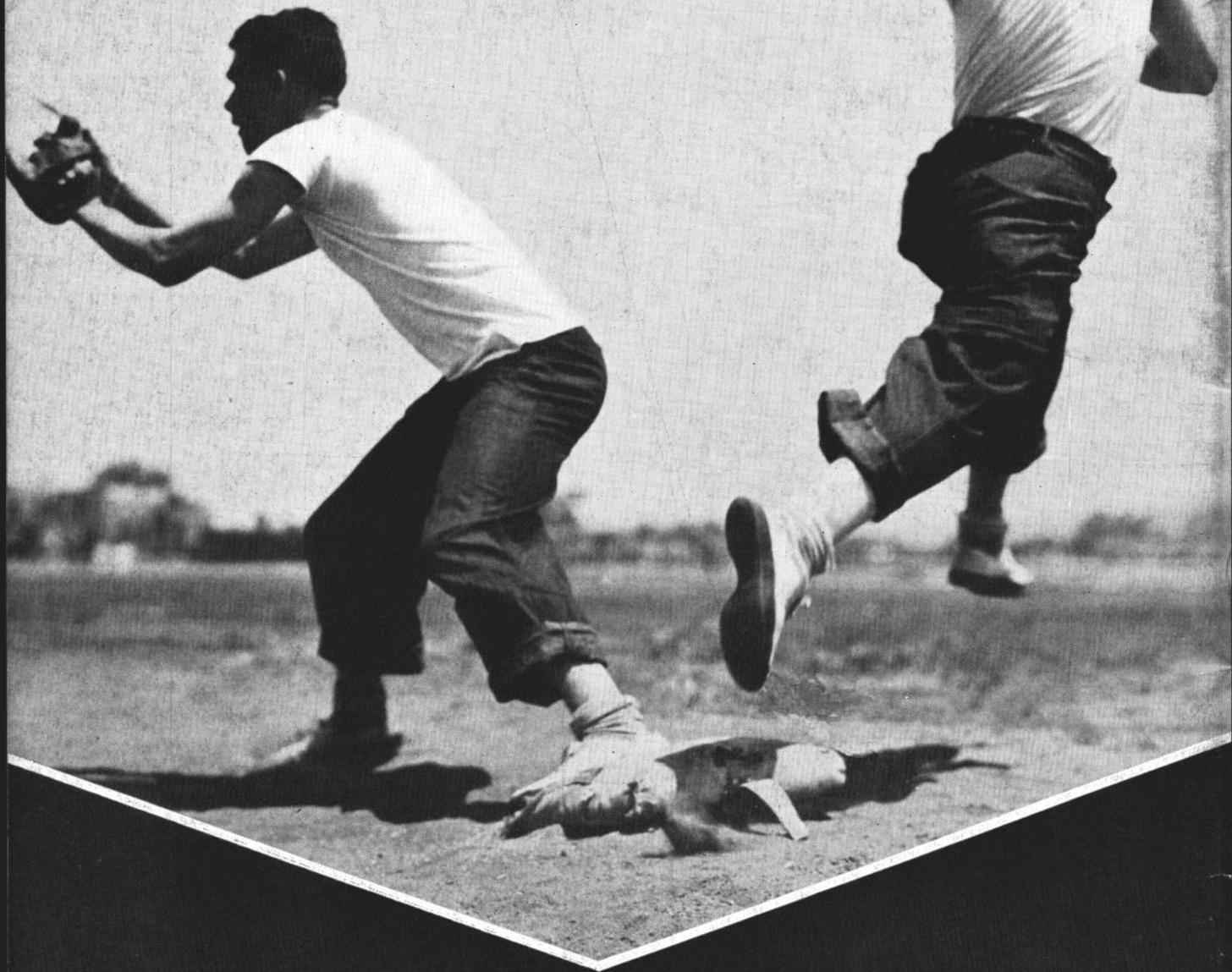
Distribution to Marine Corps personnel is effected by the Commandant U. S. Marine Corps. Request from Marine Activities should be addressed to the Commandant.

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● **AT RIGHT: NUMBERS UP**—Ship's designator is spelled out by crew as *USS Wilkinson (DL 5)* enters San Diego harbor. The king-size destroyer carries the latest in ASW weapons as she cruises Pacific.



A HIT!



TEAMWORK COUNTS
on duty
or off