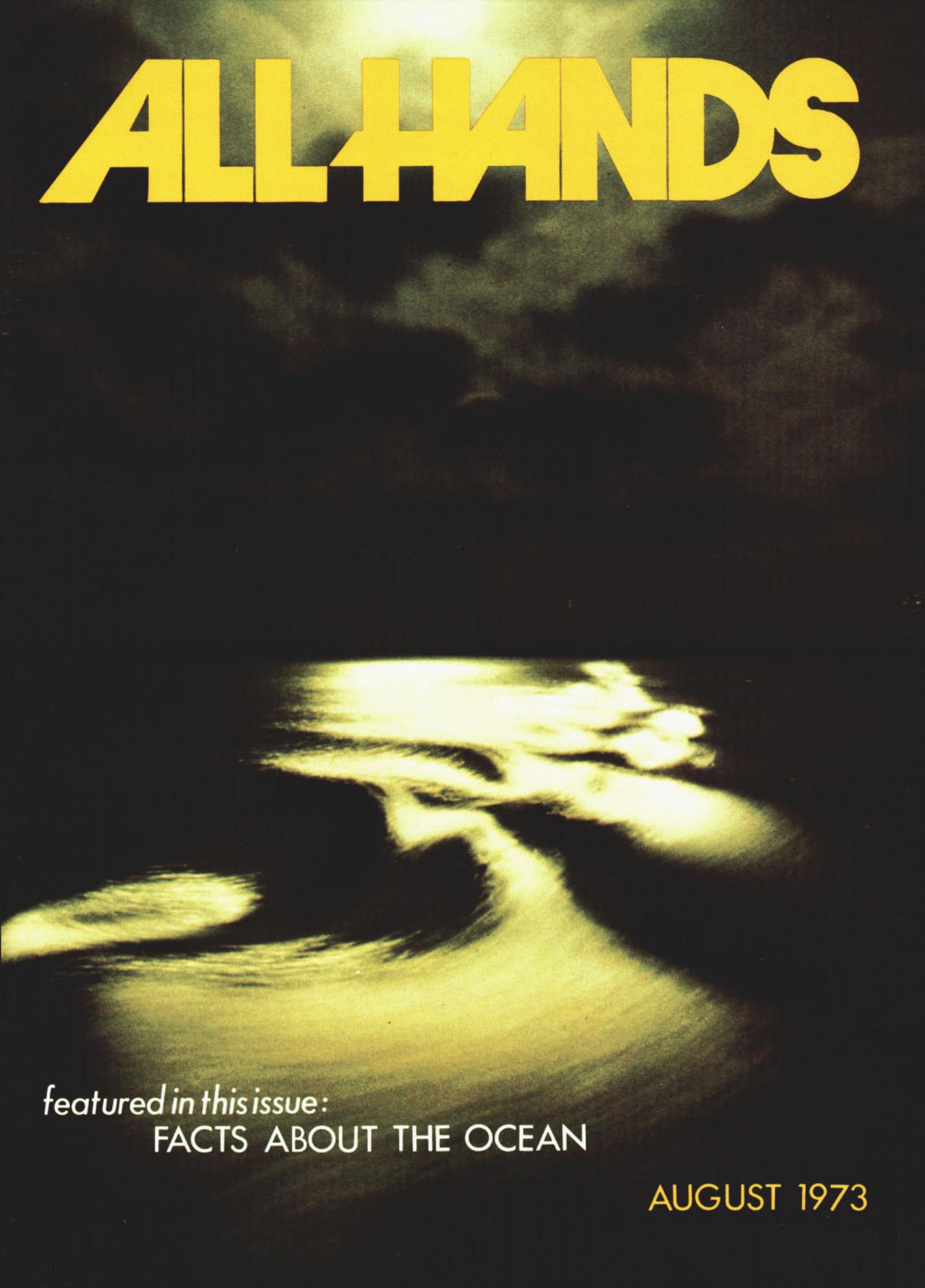


ALL HANDS



featured in this issue:

FACTS ABOUT THE OCEAN

AUGUST 1973



ALL HANDS

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TABLE OF CONTENTS

Features:

Some Facts About the Ocean	2
Prepare for Typhoon— Refueling for an Emergency	8
Some Facts About Hurricanes	9
Defense Mapping Agency— Customer Liaison Visits	10
Specifications for a Navy Diver	14
Navy Diving School	17
Small Boats, Large Craft—Be Your Own Skipper	18
Military Photographer of the Year	22
Aiding Underwater Search & Salvage Operations —USS Apache (ATF 67)	26
"Old Ironsides" to Be Overhauled	30
Federal Benefits Based Upon Type of Discharge	31

Navy News Briefs

Gas Turbine System Technician (GS) Rating Approved, Openings Available for Entry into Legalman Rating, 19th Edition of "Blue-jackets Manual" Published, ACNP for Women Post Disestablished, Fees for Duplicating Service Record Items Increased, Skylab Went AINav for Record-Breaking Flight, NESEP now under Chief of Naval Training Command, Booklet Outlining Veterans' Benefits Now Available, Alcohol Abuse Counselors Join Fleet 34

Bulletin Board

Close-Up of a Vital Navy Job: Parachute Rigger (Aircrew Survival Equipmentman)	38
Answers to Questions About the Survivor Benefit Plan	40
Now a More Efficient Portsmouth Naval Hospital	44
Drug Detector Dogs	46

Special Report

The Role of Black Sailors in the Major Wars of America	54
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Departments

From the Desk of MCPON	36
On the Scientific Front	51
Letters to the Editor	62
Navy Humor	63
ALL HANDS Photo Contest	64

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• FRONT COVER: MOONSHINE ON THE WATER—The mysteries of the Seven Seas have filled the imagination of man since the beginning of time. In this issue, ALL HANDS puts forth some interesting, little-known facts about the waters that surround us. See page 2 for story. Photo by JO1 J. D. Randall.

• AT LEFT: "PARA-COMMANDER REVERSAL"—Photo by PHC Chip Maury, USN, Military Photographer of the Year. This negative print of a parachutist is one of the 1972 Military Pictures of the Year. See story on page 48.



MEMBER



**SOME FACTS
ABOUT THE...**

Very few Navymen have stood on the fantail of a ship and looked out over the ocean without experiencing a sense of awe. There is ample reason for wonderment if one considers nothing more than the oceans' size—for water covers more than 70 per cent of the world's surface. The sea is the spawning place of weather, and it contains riches which would make Ali Baba's cave look like a 10-cent store, not to mention that it is a veritable warehouse sheltering oddball facts of all shapes and sizes.

Speaking of both weather and oddball facts, most Navymen know that, in the Caribbean and North Atlantic, hurricanes harass Navy vessels and other shipping from June to November. Typhoons, on the other hand, sweep the western North Pacific. There is no typhoon season. Although 90 per cent occur between early June and late December, typhoons have occurred in every month of the year. Fewer sailors know that North Indian cyclones give ships a bad time in May and again in October and November or that, off northwest Australia, the willy-willies rough up the Indian Ocean from November to April.

Severe tropical storms are known by different names throughout the world but they all belong to the cyclone family. A cyclone is a rotating windstorm enclosing an area of comparatively low pressure.

Fully developed tropical cyclones are circular or elliptical in shape. Although they vary in size, they usually cover an area up to 300 miles in diameter. At the center is a small area about 10 or 20 miles in di-

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ameter known as the "eye" of the storm. Here the pressure is extremely low and there is little or no wind. The waves in the "eye" are confused and mountainous. The skies are sometimes clear or partially overcast. Surrounding the calm center are the strongest winds of the storm, at times reaching a velocity of 150 knots. Gusts may exceed this velocity for brief intervals.

Each year the National Weather Service gives feminine names in alphabetical order to members of



the tropical cyclone family as they occur. In the Atlantic, a new alphabet has begun with the first hurricane of the year. There have been rarely, if ever, more than 21 hurricanes in a season.

There is no such limitation, however, on typhoons. Four separate alphabets are prepared to identify typhoons in the Western North Pacific which occur much more frequently than cyclones elsewhere. The first typhoon in the North Pacific during each season is assigned the name directly following the last name used during the previous season. When all 84 names have been used, the entire North Pacific list is repeated, starting with the first name in the first set.

For several hundred years, many hurricanes in the West Indies were named after the particular saint's day on which the storm occurred. There was, for example, hurricane "Santa Ana" which struck Puerto Rico with exceptional violence on 26 Jul 1825, and hurricane "San Felipe" (the first) and "San Felipe" (the second) which hit Puerto Rico on 13 September in both 1876 and 1928.⁴

During World War II, the practice of naming cyclones with feminine names became popular in map discussions among weather forecasters and with Navy and Army Corps meteorologists. It soon became evident that the use of girls' names, in written as well as in spoken communications, was shorter, quicker and less confusing than the more cumbersome latitude-longitude identification system. Weathermen also found that using easily remembered names greatly reduced confusion when two or more tropical storms occurred simultaneously.

The words for both hurricane (West Indian) and typhoon (Chinese) were derived from expressions

which mean "big wind." As destructive as the big wind sometimes was, there must have been more than one sailor who would have gladly substituted a wind of any description for the dead calm of the horse latitudes. The equine latitudes (if you'll pardon the expression) are those areas of the sea where, during the early days of the West Indian trade, ships loaded with horses for the Indies were sometimes becalmed for weeks at a time. When that happened, it was often necessary to dispose of all or part of the cargo to conserve water and provisions. The horses were forced overboard and left to swim until they drowned.

Horse latitudes is the nautical term for the two belts or regions in the neighborhood of 30 degrees north and 30 degrees south latitude. These regions are noted for their high pressure areas, extended calms and light, baffling winds which, in the days of sail, caused many a captain to have a headache.

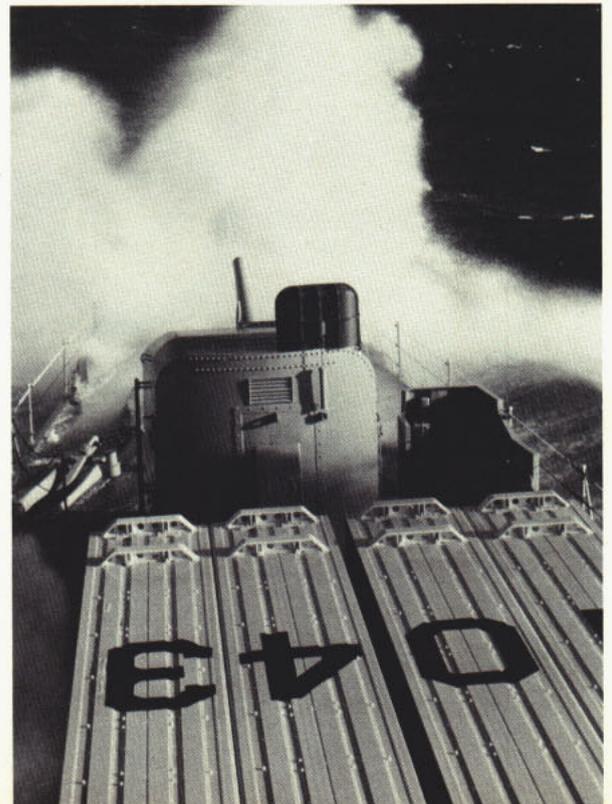
Also, in the days of sail, weather was all-important and sailors scanned the skies for telltale signs of impending changes. As with many of the seaman's activities, terms peculiar to the sea came into use and weather was no exception. Thus it was that mackerel skies and mare's tails became the description of particular cloud formations.

Mackerel skies described the mottled cirrus clouds foretelling a change of weather. Their name, of course, was derived from the resemblance of the clouds to the pattern on a mackerel's back.

Similarly, the term mare's tail became descriptive of the spreading cirrus clouds. The foreboding of these cloud formations is indicated in the seaman's lines:

*Mackerel skies and mare's tails
Make tall ships carry low sails.*

When mackerel skies and mare's tails indicated



storms, the Navy was ready to measure them. Before the advent of more scientific methods, it used the Beaufort Scale which, in fact, is still used at times by the modern Navy to estimate wind velocity. The scale originated nearly 170 years ago when in 1805, Sir Francis Beaufort, an admiral of England's Royal Navy, devised a system by which wind force could be measured and its strength indicated by numbers from zero through 12. Most subsequent scales have been based on Beaufort's. An adaptation of the scale is used by U. S. weather forecasters.

Of course, more scientific deductions as to wind conditions can be obtained from an anemometer (that commonly seen instrument with four small hollow hemispheres or cups which revolve around a vertical rod, the wind velocity being measured by a device which registers the revolutions of the cups).

However anemometers can and often do get out of order. On the other hand, all vessels don't have anemometers. Lacking this instrument, or the use of it, the speed of the wind can be closely estimated by observing the effect it produces on the surface of the water. Different degrees of sea disturbances can be matched on the Beaufort Scale with the indicated forces of wind required to produce these conditions:

0—Sea smooth like mirror; calm, less than one knot.

1—Ripples with appearance of scales formed, but without foam, crests; light air, one to three knots.

2—Small wavelets, still short but more pronounced, crests have glassy appearance and don't break; light breeze, four to six knots.

3—Large wavelets, crests begin to break, foam of glassy appearance, perhaps scattered whitecaps; gentle breeze, seven to 10 knots.

4—Small waves becoming longer, fairly frequent whitecaps; moderate breeze, 11 to 16 knots.

5—Moderate waves taking a more pronounced long form, many whitecaps (chance of some spray); fresh breeze, 17 to 21 knots.

6—Large waves begin to form, white foam crests more extensive everywhere (probably some spray); strong breeze, 22 to 27 knots.

7—Sea heaps up and white foam from breaking waves begins to be blown in streaks along direction of wind; moderate gale, 28 to 33 knots.

8—Moderately high waves of greater length, edges of crests break into spindrift (sea spray), foam blown in well-marked streaks along direction of wind; fresh gale, 34 to 40 knots.

9—High waves, dense streaks of foam along direction of wind, sea begins to roll, spray may affect visibility; strong gale, 41 to 47 knots.

10—Very high waves with long, overhanging crests, resulting foam in great patches blown in dense white streaks along direction of wind, surface of the sea on the whole becomes heavy and shock-like, visibility affected; whole gale, 48 to 55 knots.

11—Exceptionally high waves (small and medium-sized ships might, for a time, be lost to view behind waves), sea completely covered with long white

patches of foam along direction of wind, everywhere edges of wave crests are blown into froth, visibility affected; storm, 56 to 63 knots.

12—Air filled with foam and spray, sea completely white with driving spray, visibility very seriously affected; hurricane, above 63 knots.

(Beaufort's scale was further divided into six hurricane forces: 12, 64 to 71 knots; 13, 72-80 knots; 14, 81-89 knots; 15, 90-99 knots; 16, 100-109 knots; 17, 110-118 knots.)

There's no doubt that the seven seas can be blown into quite a froth and, speaking of the seven seas, any Navyman who has taken a globe and counted them, may have wondered how the expression began.

Actually, the seven seas are usually considered to be referring to the greater percentage of the world's ocean area but the expression should not be taken literally as applying to seven actual existing bodies of water.

A purely imaginary enumeration of the seven seas could include the Arctic, Antarctic, North and South Pacific, North and South Atlantic and the Indian



Oceans. This enumeration, however, could never have held true originally since the term "seven seas" was part of the vernacular of several countries long before some of these oceans were known to inhabitants of Europe and Asia.

"Seven Seas" appears in the literature of the ancient Hindus, Chinese, Persians, Romans and other nations of history, but in each case refers to different bodies of water. Moreover, in some instances, it refers only to mythical seas.

In modern times, Rudyard Kipling popularized the phrase "The Seven Seas" by giving the title to a volume of his poems published in 1896. Kipling, at that time, explained that the term might be regarded as a reference to the seven oceans mentioned above, although he realized that the expression was very old and a figurative name for all the waters of the world.

One of the more entertaining creatures of the seven seas is the porpoise. Or is it a dolphin? Dolphin or

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porpoise, one thing is certain, the animal is a cetacean (an aquatic, air-breathing mammal).

The slender, smooth, fish-like bodies of the dolphin family members are, in the majority of species, bluish black above and a whitish color beneath. The skin is devoid of both scales and hair. The cetaceans have a flat, horizontal tail which terminates in paired flukes and is their chief means of locomotion. They are extremely gregarious and congregate in large herds or schools either to laze about in the surface waters or to feed upon salmon, mackerel, herring or small squid. Cetaceans have varying but large numbers of small, sharp teeth in both jaws.



A common characteristic of the family is the practice of expelling tall streams of vaporized air through a valvular opening near the back of the head. When rising to the surface, the mammal discharges warm air from its lungs with considerable force. As the watery exhaust contacts the cold air, it condenses into visible vapor. This is the spout associated with the well-known cry of the whaling trade, "There she blows!", for whales are, of course, cetaceans, too.

Sailors are apt to use the names "dolphin" and "porpoise" interchangeably. This is completely understandable inasmuch as the two closely related mammals are so similar in general appearance that, from a distance, it is difficult to distinguish between them.

Closer examination will reveal that the basic difference in appearance lies in the snout or beak. The dolphin has a flattened snout protruded into a more or less distinct beak about six inches long. The porpoise, on the other hand, is characterized by a rounded or

blunt snout. The head of both, however, has a professorial appearance heightened by a sparse moustache of five to seven hairs on each side of the mouth and eyes framed in heavy black "spectacles."

The most playful of the animals is the common bottlenosed or harbor dolphin. It is common to the northern Atlantic and Pacific oceans but prefers to remain in the waters of inlets and tidal estuaries rather than the open sea.

The beak-nosed dolphin grows slightly larger than its porpoise cousin, ranging up to 12 feet in length. It is equally as agile as the porpoise in the water and is native to all seas and some rivers. It is especially abundant in the Mediterranean and many parts of the Atlantic but less numerous in the Atlantic coastal waters where the porpoise is the best-known species.

Seagoing mammals are fun to watch during the daylight hours but nights at sea can be downright weird at times, what with phosphorescent water and especially during stormy weather when St. Elmo's Fire can be seen.

St. Elmo was an early bishop of a diocese in central Italy. He was venerated by mariners centuries ago because, at sea during a bad storm, he was taken seriously ill and told the frightened mariners on board that he was dying but that he would appear to them if they were destined to be saved from the storm. After his death, according to the legend, a light appeared on the masthead and was named after him.

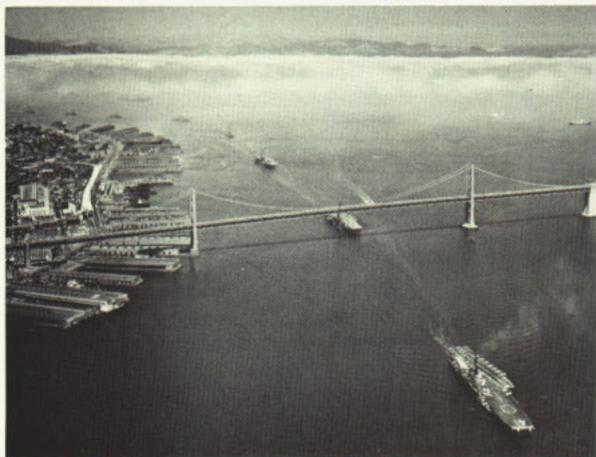
Speaking scientifically, however, the phenomenon is caused by differences of electrical potential between the atmosphere and objects on the earth's surface. It occurs in the form of glowing flames of electrical discharge at the ends of masts and yard-arms and sometimes even on the fingertips of the observer, who would feel nothing more than possibly a slight tingling sensation. These discharges are usually accompanied by a crackling or hissing sound.

The phenomenon is by no means confined to the sea. In fact it is frequently observed on mountaintops. The land-based sailor is apt to see the ghostly lights on the high projecting points of steeples and lightning rods of churches and other buildings. He may also see them coming from aircraft.

Possibly the greatest phenomenon occurring in the sea is its wealth of food and minerals. The sea's mineral wealth is almost beyond belief. Geologists estimate that 40 per cent of the western world's oil supply lies beneath the continental shelves. Other experts have estimated that the world's oceans contain about 15 billion tons each of copper and manganese, seven trillion tons of boron, 20 billion tons of uranium, 500 million tons of silver and 10 million tons of gold.

To use a more graphic illustration—if all the minerals of the sea were precipitated, the amount obtained would produce a volume equal to 20 per cent of the earth's rock volume above sea level.

Although offshore oil drilling has been in progress for many years, comparatively little has been done to



take advantage of other mineral wealth which is more or less readily available. Manganese nodules weighing up to 1700 pounds are known to exist on the ocean floor in concentrations of up to 10 pounds per square foot. Less available are the silica, aluminum, manganese, nickel, cobalt, copper and vanadium which lie in the red clay of the abyssal plains which are in very deep water.

Research on how to obtain this mineral wealth is certainly appropriate at this time, for the United States' mineral resources already are heavily mined. The mineral deposits which remain in this country require expensive refining methods to produce a usable product. It is also worth noting that only 11 of the 77 minerals considered essential to supporting our economy are produced in the United States.

As the world's population increases, man will increasingly be forced to use the sea as a greater source of food. And why not? A tremendous amount of food is there for the taking. The sea can provide about 4000 tons of vegetable matter per year, per square mile, whereas, according to one expert, one square mile of good wheat land in the midwest usually yields from 600 to 700 tons of wheat during the same period.

At the present time, sea farming methods provide about 30 million tons of seafood each year. By far, most of this food is taken from the world's oceans either in nets, traps or by lines and comparatively little is deliberately cultivated.

Although seafood cultivation could hardly be compared to the volume of food produced through land animal husbandry, there is no reason why seafood cultivation could not be carried out on a large scale.

Harvesting food which is the product of a controlled sea environment would provide a nutritious diet for the world's hungry populations and new strains of sealife could be developed for use by mankind. Man could also shorten the seafood chain by devising ways of directly using the vegetable products of the sea.

Practically the only use of this vast store of vegetable matter is through our consumption of carnivorous fish which, in turn, have eaten and grown on

plankton-eating fish. The sea's vegetable matter reaches man slowly when it takes this route for it takes about 24 pounds of eel grass for a plankton-eating fish to gain a pound. By the time a cod, for example, gains a pound of usable weight, 1000 pounds of eel grass have been consumed (via plankton-eating fish).

Although little has been done actually to harness the energy of the sea or to use it as a source of fresh water, research has been conducted in these fields.

As a power source, the motion of the ocean's waves could possibly be harnessed to provide a never-ending source of energy which would lessen our dependence on coal, oil and nuclear fission as power sources.

Ocean currents are another potential source of apparently limitless energy. The Cromwell Current, for example, flows from west to east along the equator at about 3.5 knots and is around 200 miles wide and 700 feet deep. Its rate of flow has been estimated at about 30 million tons of water per second. This, in terms of water moved, can be compared to more than 1300 Mississippi Rivers.

If this, and other of the oceans' currents were harnessed, the world's power problems undoubtedly would come to a screeching halt.

The sea could also be tapped as a source of fresh water for industry, drinking and irrigation. Methods of desalinizing ocean water have already been used in various parts of the world. The Navy, for example, has plants which supply fresh water to its installations at Guantanamo Bay and McMurdo Sound. There is reason to believe that improved methods of desalinizing ocean water will be developed and used on a scale which will make deserts bloom.

Science speculates that all life came from the sea. With its abundance of mineral wealth, its possibilities for furnishing power and food for a world which sorely needs both, and its mysteries which hint of things yet undreamed by man, it appears that life on earth may well turn to the sea for its sustenance through the centuries to come. It is small wonder that the world's oceans have inspired awe in the souls of men since the beginning of time. □



PREPARE FOR

TYPHOON

- REFUELING FOR AN EMERGENCY

Typhoon—that's a word that can raise the blood pressure or produce a cold sweat in the saltiest of seamen aboard the most veteran ships. It isn't difficult to imagine the tension, then, that one word caused aboard *USS Wichita* (AOR 1) during her first Western Pacific cruise.

Wichita was nearing the end of a seven-month deployment, servicing ships of the Seventh Fleet from the Gulf of Tonkin to the coast of Japan, when Typhoon Joan was born. This area is in the middle of "typhoon country," so the fact that a big storm was blowing up wasn't a big surprise. But that didn't make it any easier on the crew.

By the time Joan had grown strong enough to be dangerous, *Wichita* was in the Tonkin Gulf "topping off the tanks" of 13 ships, including two aircraft carriers. Topping off—or making certain all fuel tanks in the warships are full—improves the stability of the ship and makes sure she is ready for action when the storm passes. Stability is a particular problem with smaller ships, such as destroyers, which pitch and roll considerably in rough weather.

Anyone who has been in the western Pacific during one of these storms knows what one of these typhoon rolls can be like. Typhoons are hurricane-like storms,

peculiar to the oriental waters for a number of reasons. There are usually a large number of them each year—on the average of 20—and they normally cover vast areas of water and land. Some have been reported to cover as large an area as the eastern U. S.

Deriving the name from the Chinese term *t' ai fung*, meaning "great wind," typhoons peak in number around the late summer and early fall. By the people who are most affected by them, they are looked upon as both blessings and curses. The destruction they cause can be immense and widespread. For example, Typhoon Vera which ripped through Honshu, Japan, in 1959, killed nearly 4500 people—one of the largest typhoon tolls in modern history. Yet, typhoons often bring needed relief to drought-ravaged lands, saving the crops of many farmers and refilling cracked and dusty streams.

In the case of *Wichita* and Typhoon Joan, the ship pumped nearly two million gallons of oil to ships of the task force in less than 15 hours. When the last hose had been secured, there was no time for anything but fast moving to stay ahead of the storm.

Thanks to *Wichita*, 13 ships had the fuel to evade the storm's fury because of the oiler's speed and efficiency. □





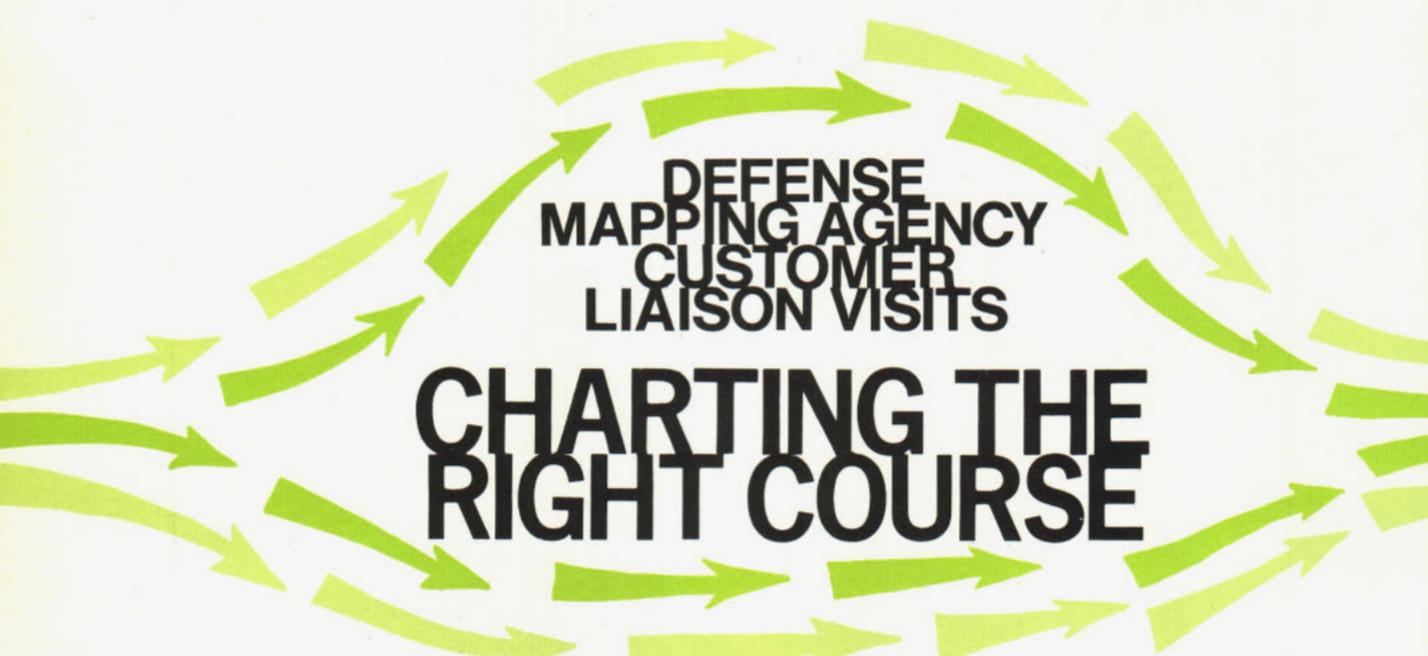
SOME FACTS ABOUT HURRICANES

The hurricane season officially started 1 June and officially ends 30 November, although hurricanes occasionally occur at other times of the year. Most of the giant tropical cyclones—with winds of 74 to 150 miles per hour or more—strike U. S. coastal areas in the months of August, September and October. They are a threat chiefly to states bordering the Gulf of Mexico and to those on the Eastern Seaboard.

Although the United States has not had a major hurricane disaster since 1969 when hurricane Camille killed more than 300 people, the threat is always present and constantly growing. Tropical storm Agnes, which was responsible for the deaths of 117 people and the loss of \$3 billion in property damage in June

of 1972, was not a killer hurricane as such, but a complex combination of tropical cyclone and conventional storm which fused and produced tremendous rainfall over the northeast in a matter of only a few hours. River flooding which followed in the wake of Agnes was the real killer.

Average annual toll from North Atlantic tropical cyclones during the past half-century has been about 100 lives lost and \$150 million in property damage. Adequate warning systems have developed over the years to lessen the amount of damage and the severe loss of life such as that which was experienced in 1900 when a hurricane struck Galveston, Tex., killing (by drowning) 6000 people. □



DEFENSE
MAPPING AGENCY
CUSTOMER
LIAISON VISITS

CHARTING THE RIGHT COURSE

Editor's Note: In its December issue ALL HANDS Magazine carried two articles on charting which concerned bathymetric charts and how navigational charts are made at the Defense Mapping Agency Hydrographic Center (DMAHC), formerly a part of the Naval Oceanographic Office. These articles briefly mentioned the customer liaison visits to Fleet activities and Merchant Marine organizations which had been inaugurated a short time before. These visits will be continued by DMAHC which was created in July 1972 to coordinate triservice mapping as well as to cooperate with the National Ocean Survey and the U. S. Coast Guard.

The following article is a sequel to the two earlier pieces. It concerns the part played by teams being sent by DMAHC to brief Navy and Merchant Marine navigators regarding DMAHC's products and services and to obtain "customer reaction" so that improvements can be made.

In New London, Conn., a team of specialists in navigational and charting matters from the Defense Map-

ping Agency Hydrographic Center climbs down the hatch of a nuclear submarine to visit the ship's navigators. At another location, much the same thing is happening aboard an aircraft carrier in Mayport, Fla., while still elsewhere a seminar is being conducted in New York for Merchant Marine officers and operational managers of shipping companies.

These groups are known as Customer Liaison Teams. Through them the Defense Mapping Agency Hydrographic Center contacts those people who actually use its nautical charts, publications and navigational information services.

Twice each year a team of specialists travels to selected U. S. naval bases and seaports to visit mariners and establish closer relationships with the users of DMAHC navigational products and service.

The team also provides information on how DMAHC efforts work to ensure that up-to-date charts and publications can be maintained aboard ship with a minimum of effort. The teams also acquaint users with recent improvements in DMAHC productions and services, including information on procedures for obtaining charts and publications as quickly as possible.

These visits are very informal and frank appraisals of DMAHC's products and services are invited.

The Customer Liaison Program began unofficially in 1967. The first call was a trial customer liaison visit to Fleet activities around New London and Newport. The team making the call consisted of an experienced marine information specialist and a cartographer. This first visit was highly successful and a number of important questions concerning products and services were answered by the team. Equally as important, misconceptions, of which DMAHC was unaware, were corrected. After consultations with Fleet commanders, the Customer Liaison Visit Program was officially inaugurated in 1968 and visits to Norfolk, San Diego, Long Beach and Charleston areas were scheduled. Reception by commanding officers, watch officers and

ing a chart. Slides are used throughout the presentation.

A set of slides is usually shown next dealing with new designs and redesigns of existing charts, including improvements in bathymetric information on charts. The lecturer stresses the significant features of each chart, such as more detailed nautical information and bathymetric curves, wreck information, electronic lattice curves and bathymetric profiles (a cross-section of the ocean bottom along a predetermined line). He explains how such profile views of the ocean floor will aid navigators in interpreting the bottom contours and visualizing the terrain of the ocean floor.

The presentation then deals with DMAHC's effort in trying to furnish navigators with the latest chart coverage on a worldwide basis in the fastest possible time.



quartermasters was enthusiastic and, because many questions were asked relating to the distribution of navigational materials, Customer Liaison Visit Teams were augmented in 1968 to include a distribution specialist.

The visits became so popular that, between the program's inception in 1967 and July 1970, 12 customer liaison teams briefed more than 5000 men from more than 450 naval units and staffs in Newport, New London, Norfolk, Charleston, Mayport, Key West, San Diego, Long Beach and San Francisco. Three of the teams also briefed management officials and Merchant Marine officers of about 75 United States steamship companies in New York, San Francisco and Port Arthur.

The visit of a Customer Liaison Team is in no way related to an inspection. It is thoroughly coordinated with force and unit commanders concerned in advance of the visit so that maximum utilization may be given in the time available. This is stressed in each briefing's opening remarks to dispel any apprehension the audience might have entertained in this respect. In his introductory remarks, a team member makes it clear that the group is present to help the navigators. The briefing continues by acquainting the audience with some of the things DMAHC is doing to reduce the navigational workload aboard ships and give navigators more effective charts and publications.

The first portion of a three-part briefing deals with the correction, types and uses of various charts. Since navigators are DMAHC's prime customers for marine charts, this part of the briefing starts by showing a composite slide illustrating the basic steps in construct-

The lecturer points out that this is being accomplished by DMAHC through production of modified facsimile reproductions of various foreign charts throughout the world. A slide reproduction of such a chart flashes on the screen and the briefer tells his audience the symbols on this chart have been changed to agree with the standard symbols used on U. S. produced charts. He explains that this makes modified facsimile reproductions easier to use because navigators are accustomed to standard charting symbolization.

Using the same chart slide, the audience's attention is called to the metric soundings on the foreign chart and the briefer reminds them that, as of January 1970, all new nautical charts have been constructed with soundings in meters rather than fathoms.

This announcement usually brings a few moans from the audience—prompting an explanation of why the Navy has switched to metric soundings. He also explains that future sounding equipment aboard ships will permit the navigator to read soundings either in fathoms or meters at the discretion of the operator.

Special purpose charts are an important item with DMAHC and a slide is shown of such a chart. The audience can see it is a Fleet Operating Area Chart and the lecturer points out the use of different colors indicating what type of exercise should be performed in that area. One slide depicting a small-scale chart is shown and the lecturer explains that the chart was constructed automatically by a high-speed, precise plotter. He points out that automatic data processing is beginning to play an important part in the cartographic field. Various chart components such as projections and electronic navigational curves

DEFENSE MAPPING

are being quickly and accurately constructed by the use of such automated equipment.

The next portion of the presentation deals with navigational information services such as the "Notice to Mariners," "Daily Memorandums," "Radio Navigational Warnings" and the advance dissemination of "Notice to Mariners" information by radio.

The "Chart Normally Used" concept in relation to information published in the "Notice to Mariners" for updating nautical charts is then discussed, along with the annotation of "Sailing Directions." The lecturer explains that, at one time, the "Notice to Mariners" paragraphs (there are over 5000 per year) referenced in heavy black type every chart on which a changed navigational aid appeared. If a buoy had been moved, for example, it made no difference under the old system whether or not the navigator would "normally be using" a particular chart (or charts). If the aid appeared on the chart referenced, it was printed in heavy black type indicating that the change should be made. Now, however, the "Notice to Mariners" only uses the heavy black type reference for the chart (or charts) that you would "normally" be navigating on when using the particular aid which was changed.

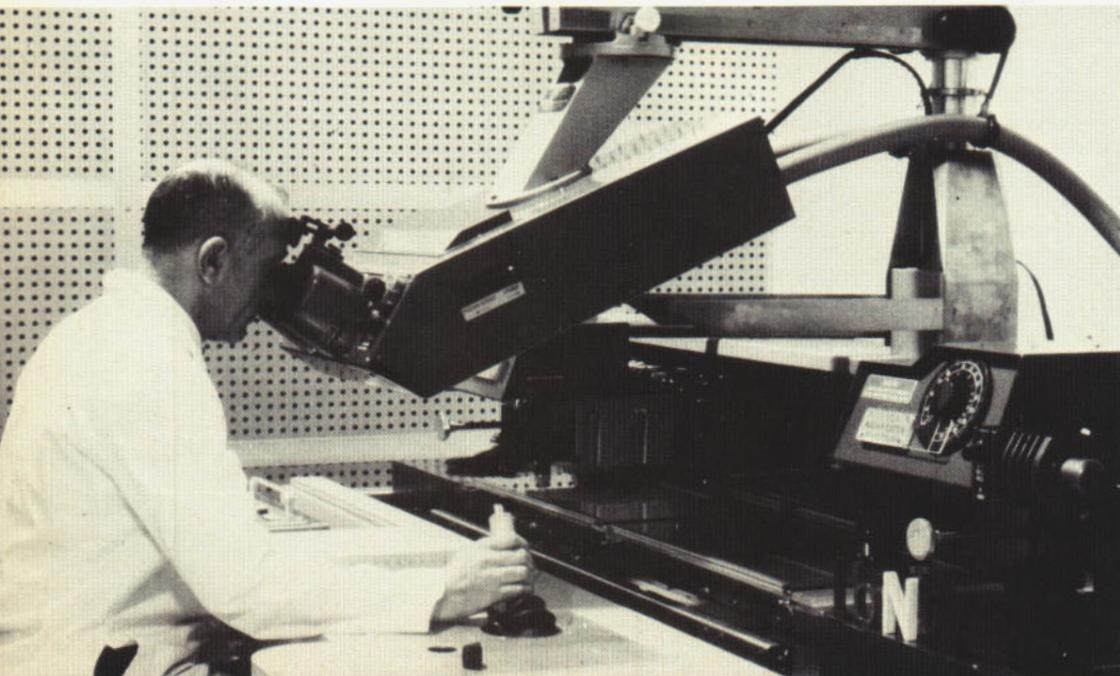
The following few examples are somewhat complicated to explain, but are included for the benefit of those responsible for navigational duties and maintenance of charts.

For example, employing the "chart normally used" concept, a "Notice to Mariners" paragraph established 21 buoys in the Persian Gulf to mark a new approach channel. The specialist giving the presentation notes that four charts, all covering the area, were referenced in the "Notice to Mariners" paragraph but only two were printed in heavy black type. The lecturer points out that the two charts referenced in the heavy black type are the charts you would "normally be using" while transiting the new channel and are, there-

fore, the only charts which would have to be changed. The other two charts referenced in this example are on a smaller scale; although they cover the area, these charts would not normally be used to navigate this new approach channel. Therefore, instead of actually plotting the 21 buoys on the smaller scale charts, the area of the correction should be encircled and annotated with the "Notice to Mariners" number, the paragraph number, and the year. Thus, if for some reason the chart had to be used to navigate the approach channel, the user would immediately know that corrections had to be applied. In this example, correcting two charts instead of four saved about one and one-half hours. There are over 5000 paragraphs, correcting charts, published in the "Notice to Mariners" each year. That's a lot of paragraphs—and an even greater number of hours saved.

Continuing in the economy vein, the lecturer calls attention to the revised correction concept for maintaining DMAHC's "Sailing Directions," which also saves time aboard ship. He emphasizes that the former practice of cutting out a "Notice to Mariners" paragraph and pasting it upon the affected page of the "Sailing Directions" didn't meaningfully or understandably correct the "Sailing Directions." Paragraphs in the "Notice to Mariners" are usually written to correct charts and where the same information affects a "Sailing Directions" the affected text should be suitably annotated so that when using that section of the "Sailing Direction" the chart which has been corrected can be referred to. After looking at the chart, it will be evident how the text of the "Sailing Direction" has been changed. Since navigators no longer have to paste paragraphs in the "Sailing Directions," DMAHC now prints the "Notice to Mariners" on both sides of the paper instead of only one side as before. This reduced by almost half the overall bulk of the Notice and thus saved valuable storage space in the chart-room.

If the "chart normally used" and "annotated" methods are followed, the navigator should at all times have sufficient information to have correct charts and publications for any given area and, at the same time, navigational personnel aboard each ship can



save more than 200 manhours per year by using such methods to correct charts and publications.

The third portion of the presentation deals with the DMAHC Distribution System and the method and procedures employed in getting charts and publications to their ultimate users. The distribution responsibilities of the DMAHC not only include charts and publications produced by DMAHC but also procurement of charts and maps produced by other U. S. charting agencies and those of foreign governments needed by naval operating forces and commands. The distribution specialist explains how these products are stocked within a distribution system to meet operational and mobilization requirements of the Navy, Marine Corps, Coast Guard and other Department of Defense activities. He points out that these products are available for sale in the general maritime community.

The distribution system is then described. DMAHC maintains over 76,000 different items with an inventory of over 150 million copies of charts and publications. To distribute this vast amount of material, a worldwide system has been developed which consists of two major depots in Philadelphia, Pa., and Clearfield, Utah, six field offices, and 170 commercial sales agents. Before a chart leaves either of the two depots the chart is corrected through the most recent "Notice to Mariners." Through the use of a "Notice to Mariners" stamp, the lecturer explains how to determine the date of the latest corrective information which the depot applies to the chart.

The method of correcting charts still in the distribution depots to make them as up to the minute as possible is in itself a sizable and important task. For example, more than 54,000,000 corrections were made last year to charts on hand. Of this total, more than 24,000,000 corrections were applied by a new screenpress process. This process is designed to make all required corrections in a very short time to charts in stock with only two press runs. Obliterations are made in white and corrections are applied in green. This correction process provides navigators with more accurate up-to-date charts.

But updating charts isn't exclusively the responsi-

bility of the Defense Mapping Agency Hydrographic Center. Users play a part in keeping charts current and the lecturer calls this to their attention. A "Chart Correction Record" system used by the Navy and, to a certain degree, by the Merchant Marine, is fully discussed by the lecturer.

It would be difficult to estimate the intangible benefits provided mariners by customer liaison visit teams even though it is apparent they are undeniably extensive. The briefing by these teams has unquestionably proven to be an effective tool for indoctrinating the unseasoned navigator and refreshing the memory of the experienced. The question and answer period following the briefing has been the means of resolving many minor problems.

The face-to-face approach characteristic of such visits affords mariners the rare opportunity to express their opinions to a representative of the Washington scene concerning the navigational products and services the navigators use. They are encouraged to express their needs and criticisms on every ship and to recommend improvements whenever possible. All such recommendations are reviewed by DMAHC upon the return of each team and are carefully evaluated by managers and specialists. The action contemplated by DMAHC is then furnished to each unit visited on any trip through a copy of the trip report made to the Director, DMAHC. In many cases, recommendations received during a team visit have been responsible for a change to charts, publications or services.

The Defense Mapping Agency Hydrographic Center is proud of the accomplishments attributable to its Customer Liaison Program. From every indication, the program has fulfilled its basic purpose—to establish a closer relationship between producer and user of nautical charts and publications. The program has also helped bridge an information gap which is often an inherent element of a farflung producer-consumer relationship.

—Robert Neil

Far left: The DMA uses sophisticated optical equipment to compile its detailed nautical charts. Center: A customer liaison team composed of Lester Bernstein and John Chanslor prepares to brief Navy navigators. Below: Chanslor and Bernstein discuss chart maintenance with the crew of a minesweeper.



Specifications for a

NAVY DIVER

Skill, Stamina & a Sense of Curiosity

"Diving candidates should be rugged individuals." That's what the manual says and it's easy to see that the Navy abides by its standards. Navy divers are trim men with well muscled bodies.

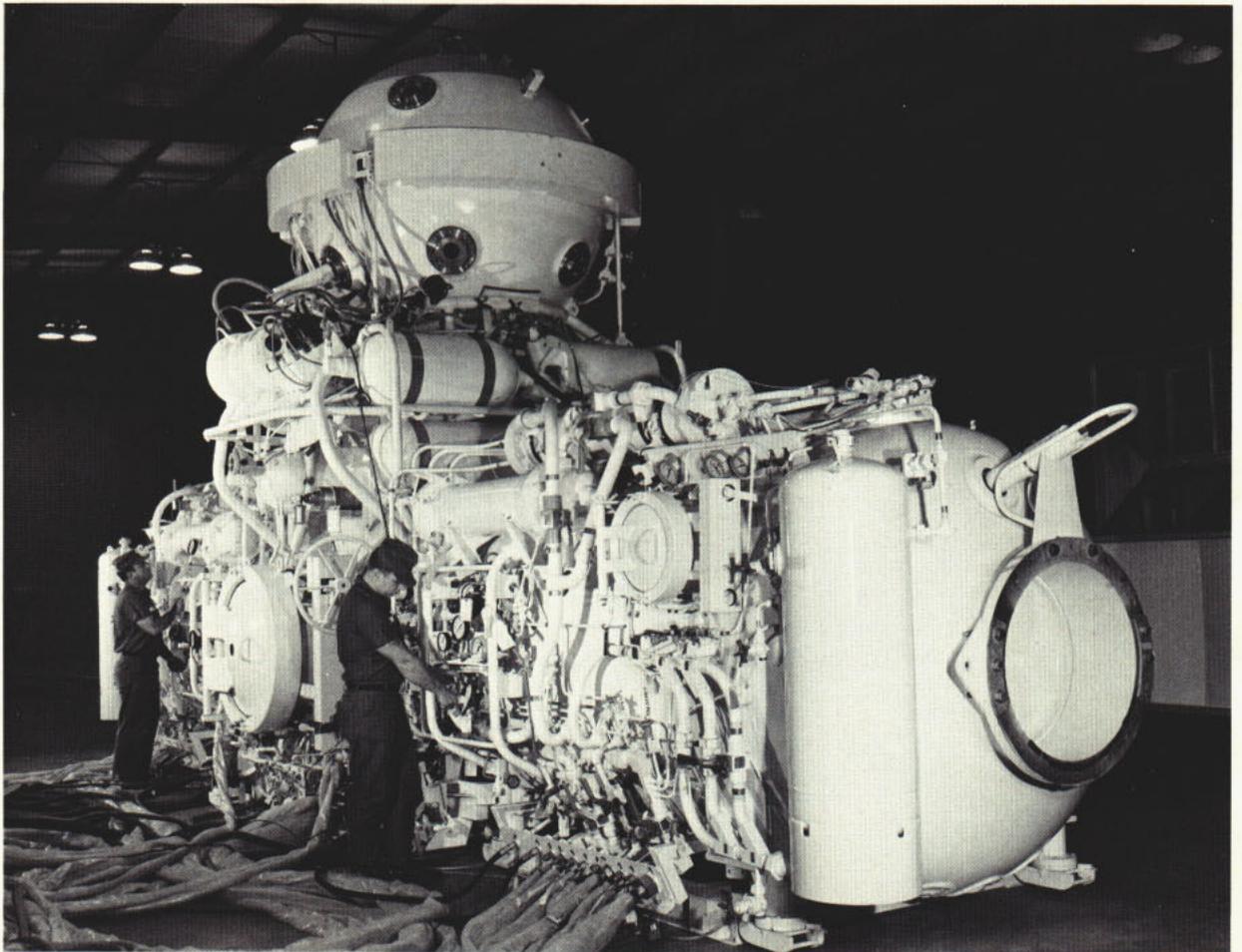
Divers must be tops in endurance and strength. Even their temperament must be exceptional for, as the manual states, "The special nature of diving duties requires a careful appraisal of the candidate's emotional, temperamental and intellectual fitness."

When observed in a group, it is easy to see that great care has been taken in selecting men with the right temperament for divers seem unflappable. And a good thing, too, for underwater work is no place for nervous Nellie.

Although the manual doesn't specifically mention

it, divers should also be adventurous men for there is always an element of danger for the unwary. The diving rating is not the place for a man who doesn't know what he is doing or who has a careless nature. A diver's work can be so varied that it might be said that his rating not only fits him strictly for diving but also for other work as well.

Scuba is a skill a diver masters early in his career. He graduates from familiarity with his equipment to underwater swimming in sheltered places to actual ocean dives. Once he has mastered the scuba technique, he finds he is ready to branch out. If he doesn't have a built-in sense of adventure, however, he might as well hang up his flippers and look for more sedentary work.



A scuba diver, for example, can be a UDT/SEAL swimmer. Just to qualify, he must, among other things, be able to swim a 1000-yard compass course and dive to a depth of at least 130 feet. An explosive ordnance technician must also dive to at least 130 feet and remain on the bottom for at least 10 minutes. He must also be capable of solving an EOD problem in water between 30 and 130 feet deep.

The use of explosives is an integral part of the training of UDT/SEAL men. Ordnance disposal men are, of course, concerned with getting rid of explosive ordnance while SEAL team swimmers are in the business of carrying on hostilities inshore.

Although EOD and SEAL work is one step beyond diving qualification, it is, nevertheless, a destination for qualified scuba men. Explosive ordnance disposal groups train men in the detection of hazardous ordnance material and how to render it safe. EOD men also dispose of all types of U. S. and foreign surface and underwater conventional explosives. Teams are also trained in underwater diving demolition of explosives and rendering nuclear weapons safe.

Before a SEAL team is sent into an area that may be booby-trapped, EOD men provide reconnaissance of the coastline and deactivate any mines or other explosives they can find. When the SEALs go in, their job is making things explode around the enemy's ears.

SEAL teams are used to extend the Fleet's control of the seas to the control of inland waterways and to conduct combat support or to engage in combat operations in coastal rivers or delta waterways.

Scuba divers are also employed as salvage divers which also requires a sense of adventure and employs a considerable number of new techniques.

Hard-hat divers, in addition to having to complete a ship salvage course, must be capable of withstanding pressure equal to 200 feet of water while breathing captured air and know how to scuba dive. Of course, they also must be proficient in salvage work techniques and equipment usage including explosives.

Salvage diving has made tremendous strides during the past few years and several noteworthy experiments have been conducted in order to test new methods and new tools. Not long ago, the only salvage diver around was one who wore a cumbersome hard hat and diving suit weighted with lead so he could walk on the bottom. He was "connected" to the surface through vulnerable breathing and communication lines which, among other drawbacks, severely limited his access to submerged hulls.

Saturation diving is another technique which has greatly increased the capabilities of divers. Before the concept of saturation diving came into use, several experiments which were widely publicized took place. There were for example *Tektite* and Sealabs I and II.

The Sealab and *Tektite* experiments have shown that

divers can actually live in an underwater habitat, leaving it to do their work in salvage operations. They can also, of course, do other work which requires them to remain at substantial depths for long periods.

During Sealab II, for example, astronaut/aquanaut Scott Carpenter lived for 30 days in the helium-charged undersea sealab habitat which was also occupied by other divers for lesser periods of time. The premise behind saturation diving is that a diver can gradually be placed under pressure and given a breathing mixture (which leans heavily upon helium) and kept in that environment indefinitely. When he leaves his pressurized environment to enter the water, he finds the water at the same pressure as his dry environment and therefore he requires none of the lengthy compression or decompression periods which would otherwise reduce work time on the bottom to a few minutes between periods of decompression. By using an underwater habitat, divers are able to return to their dry surroundings to rest from the cold and tiring work of salvage operations.

A number of underwater tools were tested during the sealab experiments. Those used on land which require their user to exert leverage for operation don't



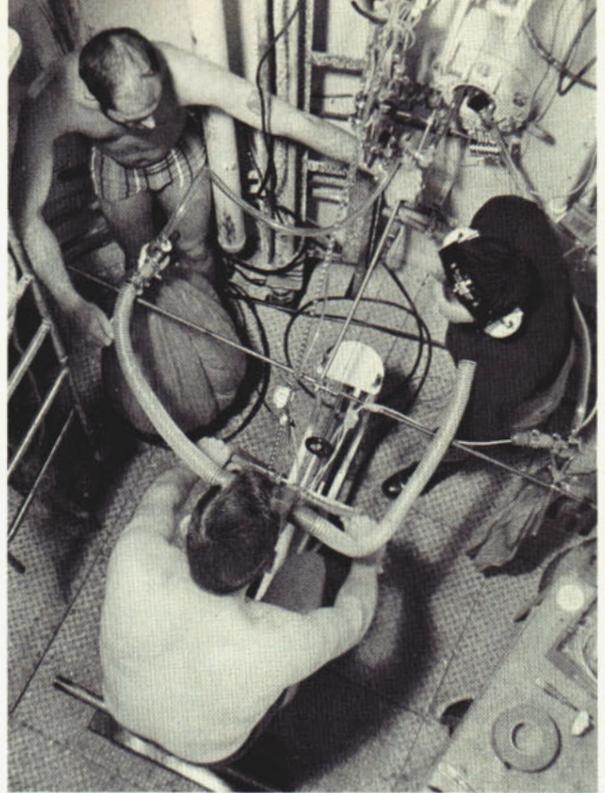
Left: Two divers adjust controls on the Deck Decompression Chambers which serve as living quarters for divers during salvage missions. Right: The MK-12 semiclosed mixed gas diving suit being tested by EDU for possible use in the future.

necessarily work well in an underwater environment where there is virtually zero gravity. Tools which are used underwater have a great deal in common with those used in outer space, and new tools continue to evolve.

Of course, underwater habitats as elaborate as that used during Sealab II are often neither appropriate nor available for ordinary salvage jobs and it was inevitable that an adaptation would be evolved for use by saturation divers.

The new technique calls for a compression chamber located on the deck of a ship. Divers are provided with sufficient living accommodations within the deck chamber and they are slowly introduced to the pressure at which they will work. When the desired pressure is reached, the diver is taken below the surface to his work site in a pressurized bell in which he can also return to the decompression chamber for rest after working for a long period of time in the cold water. When he is again ready to return to the depths, he need not undergo another period of compression. In short, the principle is the same as that employed by Sealab. The difference lies in the fact that the habitat remains on the deck of the surface ship with the divers remaining pressurized as they "commute" to work in elevator-like capsules.

The diving fraternity is not without its built-in medical system. The men classified as medical deep-sea diving technicians are designated by the Chief of the Bureau of Medicine and Surgery after they have completed a prescribed course of instruction at the



Above: Divers testing the breathing of different gas mixtures in EDU's chamber complex, in continuing research on diving.

Naval School, Diving and Salvage, at Washington, D. C.

To qualify, men in this branch of diving must know diving physics, and show special proficiency in mixing and analyzing synthetic breathing mixtures and in computing pressures of gases required to operate underwater cutting torches at various depths.

They must also be acquainted with diving physiology, know how to use standard decompression tables and be able to recognize the symptoms of decompression sickness and how to treat common diving accidents.

Medical and deep-sea diving technicians should also demonstrate proficiency in the use of the decompression chamber and be aware of the advantages and limitations of helium-oxygen surface-supplied air.

Generally speaking, divers are never satisfied with what they have accomplished and constantly try to improve upon their capabilities. In Washington, D. C., there is an experimental diving unit which is devoted to learning just how far into the depths a man can go and how he can maintain himself there.

The men who make up the experimental unit are, like their colleagues in other branches of diving, completely unflappable. They have seen emergencies arise and they have learned that there are ways to cope with them.

The experimental divers' confidence is necessary, for theirs is the way of the unknown. Their headquarters is filled with an impressive array of exotic equipment all closely watched because the lives of men depend upon the readings indicated by the

Conquering the bends

Platelets are disks without nuclei which are associated with the clotting qualities of human blood. They are being investigated by the Naval Submarine Medical Research Laboratory at the Naval Medical Center in Groton, Conn., and Boston's Naval Blood Research Laboratory.

Platelets are sometimes altered in poorly controlled dives resulting in "bends." The object now is to find whether there is a platelet alteration in the blood of divers whose dives are properly controlled.

Before a diver descends to a depth of 100 feet, blood is removed and a centrifuge separates the platelets which are tagged by radioactive isotopes. The blood is then retransfused into the diver. After each dive, a blood sample is again taken to determine what reduction and/or alteration in the isotope tagged platelets may occur.

The presence or absence of blood bubbles or "bends" symptoms after the dive is correlated with the platelet data and various other information. Preliminary analysis suggests that there was an anticipated platelet alteration but a consistent effect on blood clotting was not evident.

Navy Diving School

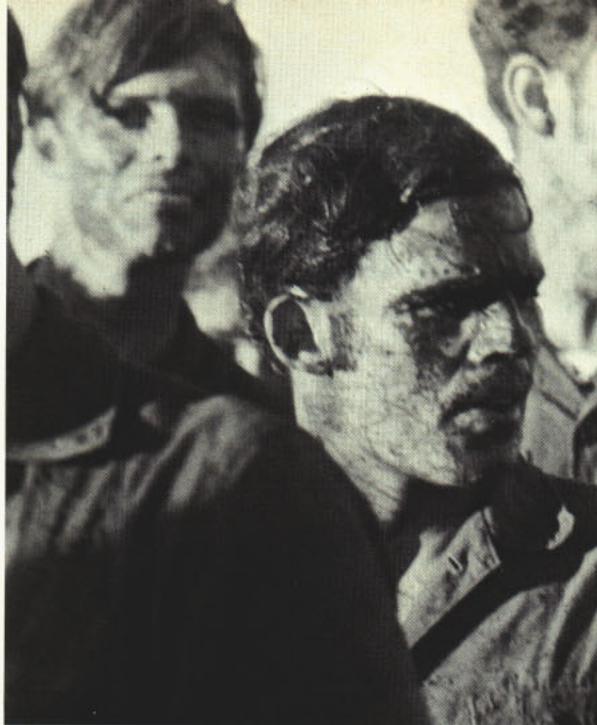
Don't bother reading this if you are not interested in becoming a Navy Diver.

Even if you're just slightly interested, you'd probably be wasting your time; because, to become a Navy diver you have to really be something special.

Diving is one of those naval occupations for which the Navy must employ men with special qualities, and of those individuals who believe they possess such qualities and apply for diving school, about 40 per cent drop out within the first two weeks of the 10-week course. They convince themselves that becoming a fraternal member of a time-honored Navy profession isn't worth the sweat, muscle aches and mental pressures that go along with the training effort.

Fortunately, just the opposite applies to the 60 per cent of applicants who are more than interested in excelling. After passing the concentrated physical fitness, coordination and mental alertness training phases at the end of the first two weeks, they enter a four-week phase of scuba diving followed by a two-week session in shallow water maneuvers. The last four weeks they spend suiting up for hard-hat deep-sea diver training and meeting additional rigors required of a second class diver.

Not all the training is spent in the water. Throughout each phase, students attend classroom sessions to study such subjects as first aid, physics and underwater cutting and welding. Then there are the qualifying tests. In scuba training, one must qualify at a depth of 130 feet; in hard hat, 150 feet. Trainees also must perform a "compass" swim and complete at least



one dive at night.

The instructors attached to the diving school are all trained divers, first class and above. These instructors know the qualities a diver must possess. A trainee often becomes befuddled over the methods an instructor may employ. He may find himself stomping through a puddle of mud or acting out guerrilla war games with fellow trainees. But the instructor knows the tension, stress and physical fatigue one is likely to encounter in a diving operation. His aim is to test the hopeful diver's durability.

So, if, after applying for and receiving orders to a Second Class Divers' School either at San Diego, Norfolk or Pearl Harbor, you spend part of your time stomping through mud puddles, think positive. It's all part of becoming something really special: a Navy diver.

—Story and photo by JO3 Cherie Campbell, USN.

gauges and upon which valves are turned.

Pressure of inside tanks is maintained to simulate depths a little beyond which divers normally work. Inside the tanks, men pedal bicycles and do other prescribed exercises in addition to eating, sleeping and carrying out other normal functions of life.

All this activity, of course, is to determine the reaction of men working and living under great pressure. The experimental unit also wants to know the man's reaction to breathing gases which would normally be supplied when actually doing diving work at the depths indicated on the tanks' gauges.

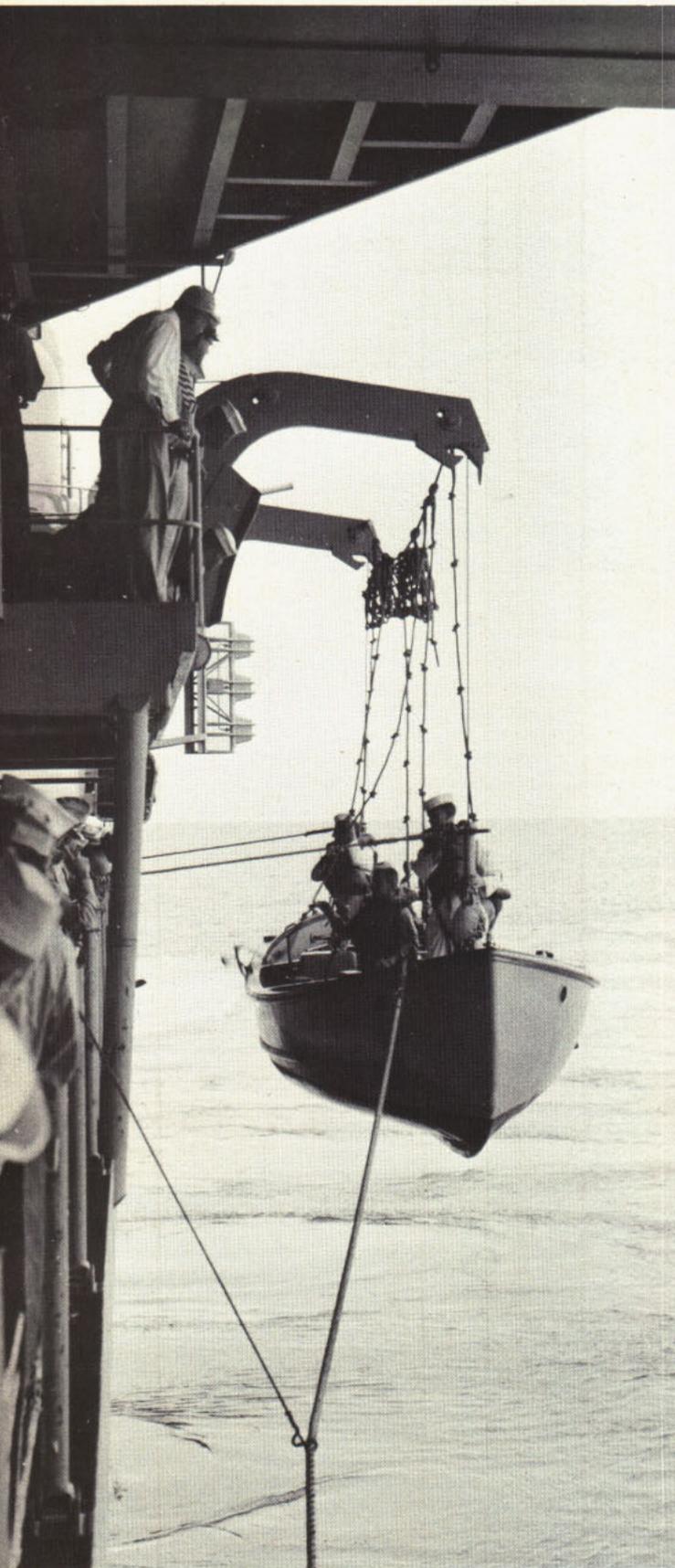
These are also the men who test new equipment. Theirs was the job, for example, of making certain the new MK X was safe when it entered the Fleet for general use by divers.

Although most Fleet dives are made in the vicinity of 200 feet or less, the experimental diving unit and

Fleet units have reached 1000-foot depths and continue work toward the goal of 2500-foot depths. Simulated dives have been made to 1600 feet in depth using the MK X. But such great depths are not yet for every Navy diver.

One might wonder whether it is a sense of adventure and working in an unusual environment that entice a Navyman to enter a rigorous field such as diving. According to the divers themselves, it is curiosity which first brings most of them into the diving fraternity. Perhaps, too, it is the ruggedness which all Navy divers must possess before they become divers besides the sense of adventure which seems to be a built-in characteristic of every Navy diver. Interested? See your career counselor for details. If you are in a source rate you might make it. Junior officers and doctors are also needed.

—Robert Neil



Want to be
your own skipper?

SMALL BOATS LARGE CRAFT

- Old, but good
- Available, sometimes,
from Surplus Sales

Cards, cards, cards—drawers of them stored neatly by the Naval Ship Systems Command—chronicle the life and activities of perhaps tens of thousands of boats. These craft served the Navy well in their day—some aboard ships, many as combat boats which carried fighting Marines to the exploding beaches of World War II and conflicts since.

Others are proud boats which have carried senior naval officials and heads of state on ceremonious visits between ships and ports in different parts of the world. Still others are liberty boats which have transported happy sailors ashore. In fact, almost every kind of boat is represented from the eight-foot dinghies (the smallest on file) to the largest with a length of 135 feet.

All are listed on NavShips cards, some of which date back to the days when entries were made in the neat, cursive script of the 19th century rather than in type.

What happens to these boats?

Their history often reads like a biography, on a large scale, of the larger seagoing vessels with which they have been associated. As the craft ages, her assignments become less impressive until a final note in the cards indicates she has been transferred or sold—often to an official organization or activity, sometimes to a commercial concern which finds still more work for her to do, or occasionally to an individual like yourself.

Unlike the old gray mare which is put out to pasture after long and faithful service, the Navy's small boats frequently continue to go on working at least as hard as when they were serving the Fleet. Many, such as tugs, were bought by commercial interests as long ago as 30 years or more. They still go daily to sea and return with catches of fish destined for commercial canneries or to be sold fresh in the marketplace.

During the past years, an average of four or five hundred boats have annually been "retired" from the Navy, but not before they have done yeoman service. And then they may be called upon to start a new career, at a somewhat less demanding pace.

But naval and other military activities have first selection opportunities to put this obsolete or surplus equipment to good use. In many cases, such equipment has been found a valuable addition to the Special Services facilities for recreational use. A basic purpose of this article is to make activities aware of its availability.

To explain how the system works, when a boat is found to be beyond "economical repair" as far as the Navy is concerned, it is transferred to a Property Disposal Officer at the local Supply Center. He will then review any requests from government agencies, service-connected schools, etc. In other words, the boats

are first offered to organizations within the Department of Defense for use as recreational boats or for similar purposes. If DOD passes up the opportunity to acquire the boat, she is then offered to other government agencies, such as the Department of Health, Education and Welfare which offers the not-so-young boat to state organizations that want her. Next in line are such organizations as the Sea Scouts, the Boy Scouts of America and other groups of this nature that have been granted a charter by Congress to obtain donated excess government equipment.

Under these circumstances, the boats are transferred as gifts—no charge is made for turning them over to these quasi-official and civic organizations.

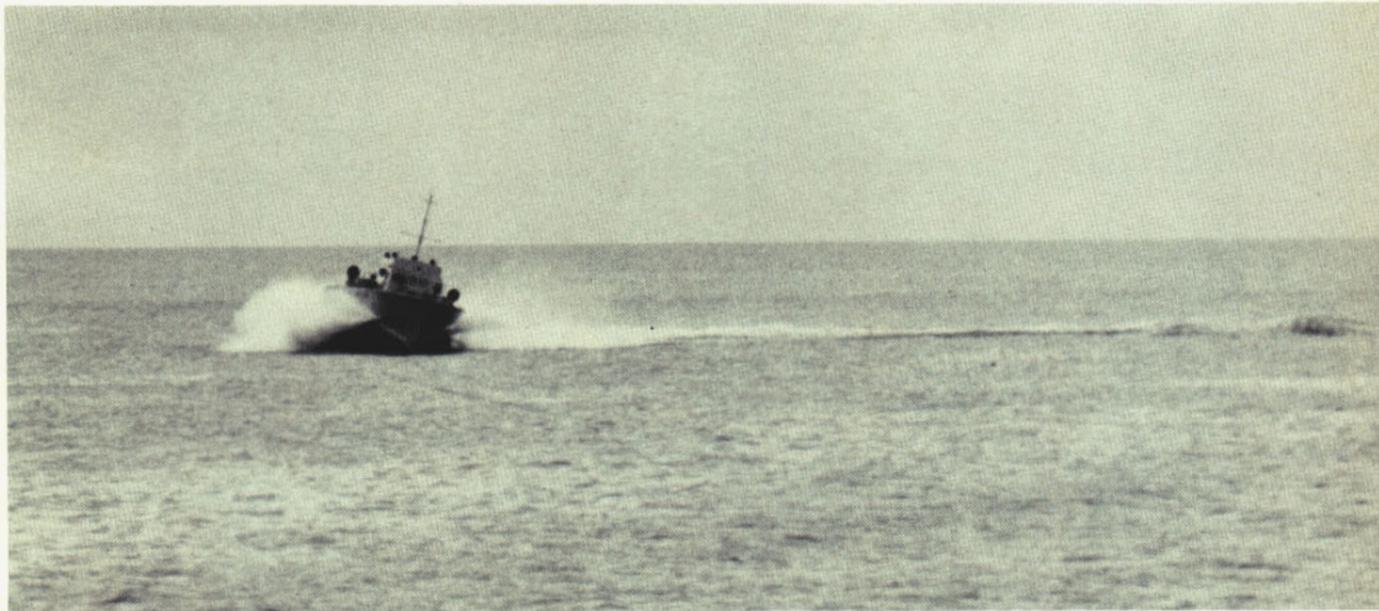
Then, if the offer for official or semiofficial use is not accepted, the boat is put up for public bid. In such cases their transfer is handled by the Defense Property Disposal Residency (its current address is P. O. Box 100, Portsmouth, R. I. 02871).

Here's where the individual Navyman or group of former members of the Navy enter the picture. What seagoing man does not secretly have the goal of being skipper of his own craft? It does not come easy—for both money and hard work are involved.

To become the proud owner of a surplus craft, a prospective buyer must write to DOD Surplus Sales, P. O. Box 1370, Battle Creek, Mich. 49016, and ask to be put on the bidders' list. He then receives periodic mailings which list and describe the boats available for sale and if the prospective customer is interested, he can submit his bid, subject to the terms supplied by the sales agency. If his is the highest responsible and responsive bid, he may have himself a boat.

(→)

This 60-foot bomb target boat was built in Stamford, Conn., and delivered to the New York Naval Shipyard in January 1942. The same year, she was assigned to the Naval Air Operational Training Center at Jacksonville and gave yeoman service until declared surplus. While in use as a target, she was radio controlled.



Not everyone, of course, knows this procedure and NavShips receives a number of letters each and every year requesting that the writer be given a boat for such worthwhile endeavors as "watching for smugglers" or setting up a "mobile school" for surfboard riders.

One correspondent expressed a desire to obtain an obsolete boat and thereby save the Navy the trouble and expense of dismantling it.

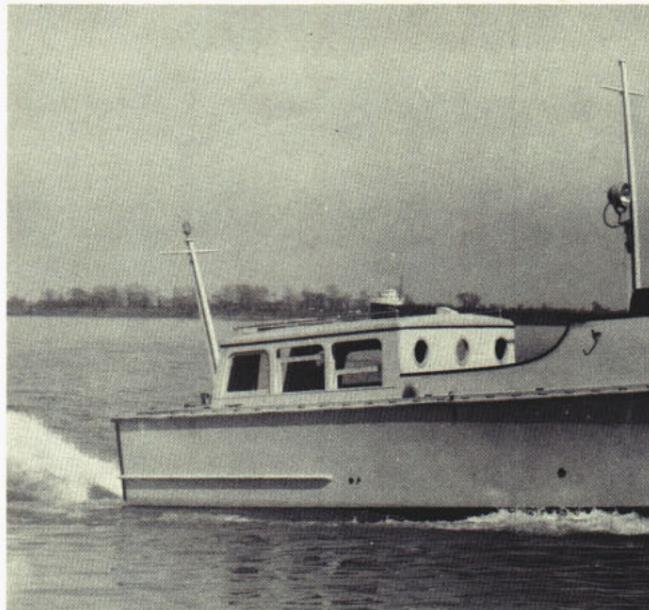
Unfortunately, the correspondent didn't have any experience in renovating boats and wanted one that was in a usable condition. He could not meet the criteria required—cash, or a combination of know-how, work *and* cash.

NavShips sent its regrets, saying: "Any time the Navy decides to dispose of any boats or ships, you can be sure that they have seen better days and are in pretty poor condition. Surplus boats are normally catalogued and advertised for sale by sealed bids. The successful bidders are then required to pay all costs of removing the boats from the Navy storage lots. Many of these surplus boats are sold to individuals who can repair them or are financially able to have the repairs done. Others are sold to wholesalers who strip the boats for all usable equipment or for resale."

One letter received by the Navy landed in the periphery of NavShips' Inventory and Logistics Section which researches and replies to letters requesting information on a former Navy boat. The correspondent requested, instead of a boat, a copy of a book which reproduced standard designs for boats of the U. S. Navy between 1900 and 1915. His hobby was building scale, steam-powered models and he enclosed a photograph of an almost unbelievably beautiful model of a steam cutter he had built from drawings. (NavShips supplied some suitable designs.)

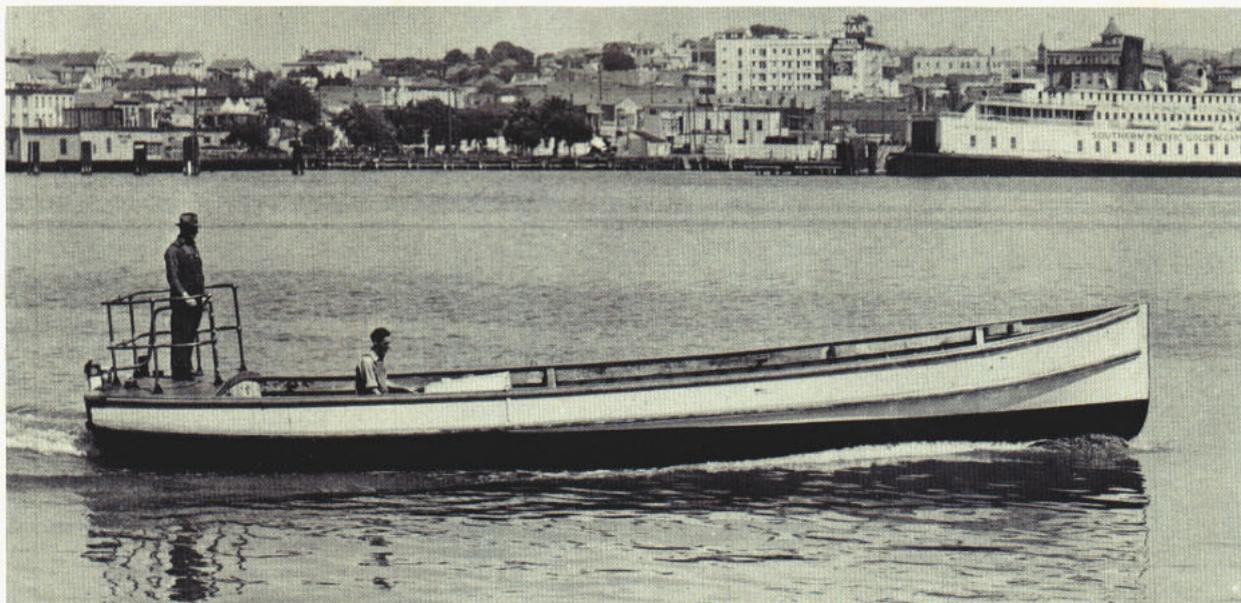
NavShips receives hundreds of letters similar to these each year.

Some of the Navy's records chronicle the departure from the service of prestigious boats used by U. S.



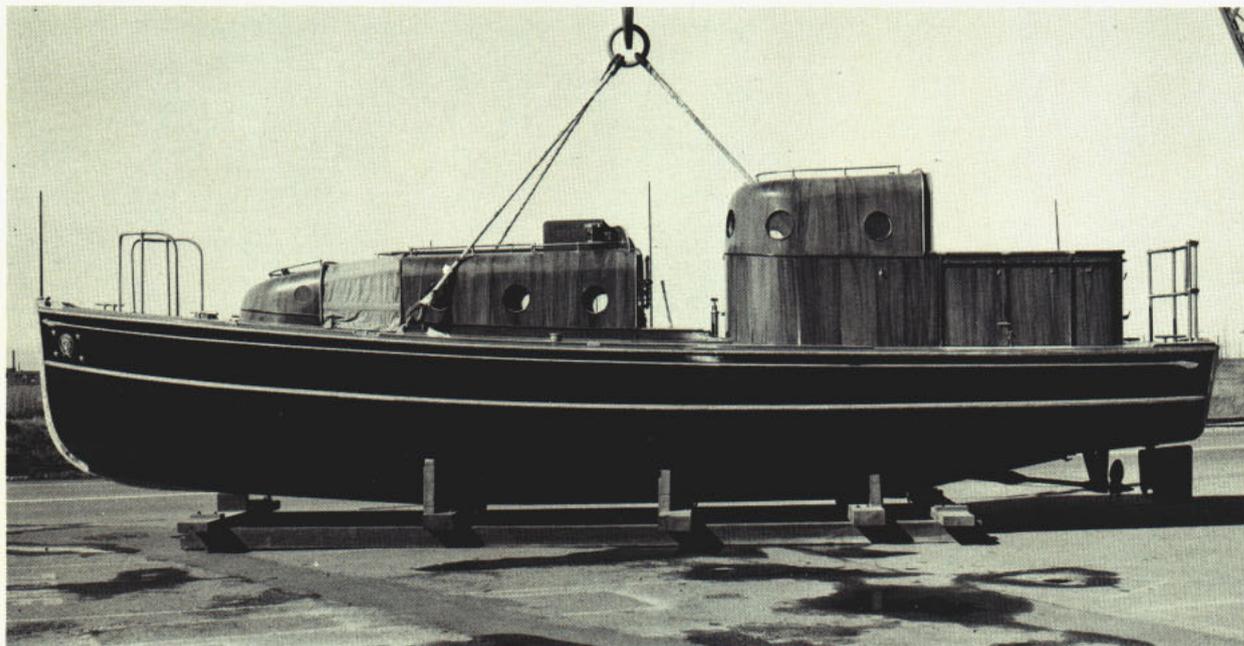
A 36-foot motor launch built at the Mare Island Naval Shipyard in 1931 at a cost of \$2895. In 1933, the launch was issued to a naval storage activity to replace another boat which had been wrecked on the breakwater at San Pedro's Terminal Island. In 1943, the craft was turned in to Mare Island's shipyard for storage and reissued the same year for use aboard USS *Amycus* (ARL 2). In 1949, 18 years later, the boat was declared surplus at Long Beach and transferred to the city's Sea Scouts.

This 36-foot picket boat is typical of many which were used throughout the globe by the Navy during World War II. This particular craft was built in 1942 and was assigned to Advanced Base "BLOT 30" at Casablanca, Morocco. In 1949, she was sold to the French Government; she had served her purpose.





This was a 40-foot motorboat completed in 1938 by the Mare Island Naval Shipyard. She was employed as a Presidential barge for Franklin D. Roosevelt. Before the boat was removed from Presidential status in 1961, she served aboard USS Houston. In 1961, she was issued to the Naval Station at Charleston to fill an allowance for a gig. In 1966, the boat was turned in to the Norfolk Naval Shipyard and, in 1968, was transferred for disposal to surplus sales, the end of her Navy role.



presidents. For example, the 94-footer which made headlines when the late President Kennedy rechristened her *Honey Fitz*, was disposed of through the Defense Property Disposal Residency.

Another presidential craft of the Nixon administration—a 65-footer named *Julie*—has been disposed of more recently.

Williamsburg, which was last used by the late President Truman, was classed as a ship and, as such, was not disposed of in the manner common to small craft. She was transferred to the National Science Foundation for use as a research vessel.

A special boat which was used by President Roosevelt is shown above.

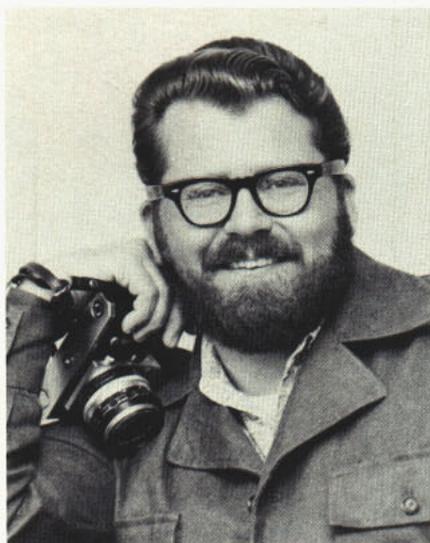
Among the other craft that are beyond “economical

repair” are those ranging from dinghy to amphibious landing craft. These are more likely to be the choice of the average purchaser.

The Defense Property Disposal Residency supplies catalog bulletins to interested agencies or individuals who ask to be placed on the list. Each person is advised to inspect the boats personally at the applicable location before submitting his sealed bid. If successful, the bidder has a limited time to remove the boat. All sales are final and must be paid for in full prior to removal.

One final note: Most of the boats available through this means are in need of extensive repair and require many hours of labor before being considered capable of passing Coast Guard inspection. □

MILITARY PHOTOGRAPHER OF THE YEAR



Above: PHC Donald P. Maury, Military Photographer of the Year. Right: and facing page: Photos from the picture story "My Nurse Wore a Goatee" by PHC Maury.



Navyman Donald P. "Chip" Maury has his own formula for getting good photographs: take your camera with you wherever you go, and go where few other people have been. With camera in hand, he has become an expert in the unusual sports of scuba diving and skydiving and in the process, has developed his talents enough to be named the Military Photographer of the Year for 1972.

The award was the top honor given at the 10th Annual Military Pictures of the Year competition which is sponsored by the National Press Photographers Association (NPPA), and the University of Missouri in cooperation with the Department of Defense.

It is probably the most prestigious award that a military photographer can receive. In company with Chief Maury at the awards ceremony during Journalism Week at the university were the NPPA News Photographer of the Year and the Magazine Photographer of the Year, selected in a nationwide competition which ran concurrently with the military competition.

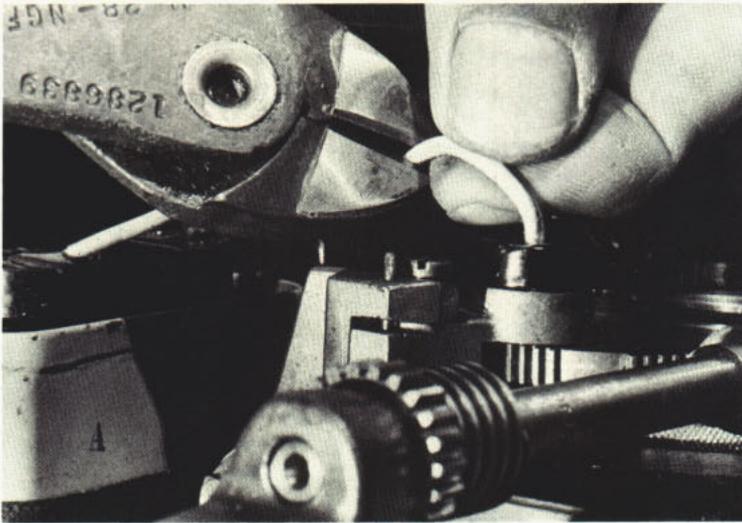
The contest consisted of eight categories and was open to all active duty military photographers and

journalists from all of the armed services. Different from a traditional interservice photo contest, the Military Photographer of the Year competition is open only to those who work in a photojournalist capacity—the military's professionals.

The categories in which a contestant could enter were: news, portrait/personality, sports, picture story, feature, pictorial, general interest and portfolio. The portfolio entry was the most difficult since it included a picture story and at least four of the other categories—and was the one that decided the Military Photographer of the Year award.

Chief Maury did more than take first in the portfolio competition. He also placed first in the news category, third in the general interest slot, and landed an honorable mention in the portrait/personality group.

As a chief photographer's mate assigned to the staff of Pacific Stars and Stripes in Tokyo, Japan, he is much more than a "handshake" photographer. To take the pictures he needs, Chip has undertaken some ambitious, and sometimes dangerous, assignments. While working on a photo story on the Army's First



For more of PHC Maury's photos, see the inside front and inside back cover pages

Left: Photo from the picture story "Navy Explosive Ordnance Disposal" by PHC Maury. Below: "Ghost Riders" by PHC Maury, one of the 1972 Military Pictures of the Year.

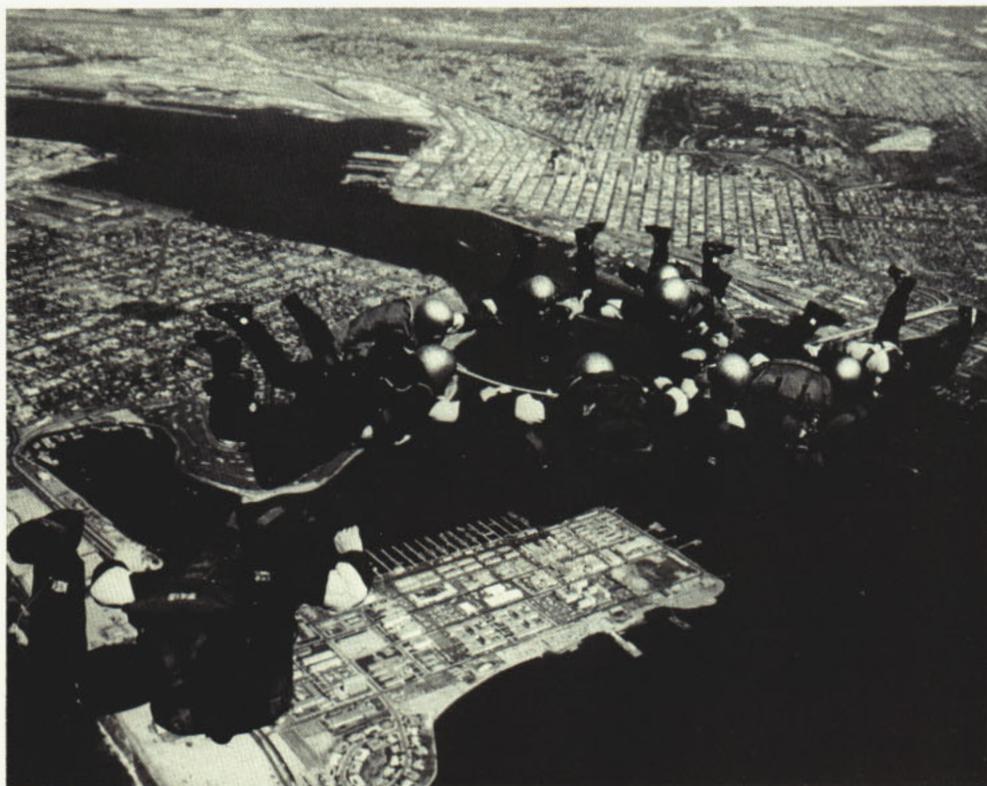


Special Forces in Okinawa, he needed a picture of a skydiver in free-fall. No practical telephoto lens could cover the distances so he solved the problem from the other end, and started skydiving with his camera in hand. Now, with more than 1000 jumps to his credit, he's considered a specialist in this field.

The exhilaration of the free-fall led him deeper into the photography end of the sport. In 1961, he applied for assignment to the Navy's "Chuting Stars" parachute exhibition team at Pensacola, Fla. For the next three years he toured the United States as an air show parachutist and as the team's free-fall photographer. Later, Chip would cover the national parachute cham-

pionships every year (from 1966 to 1971), and travel as the U. S. team's free-fall photographer to the Ninth World Parachute Championships in 1968 at Graz, Austria.

Nor was free-falling adventure enough. Looking to expand his experience even more, he volunteered for duty with Underwater Demolition Team 11. During this assignment he underwent training in scuba diving and completed three combat tours in Vietnam as the team's photographer. The outcome was a 108-page photo-essay entitled "Faces of UDT" which earned him a year's study at the Navy's Photojournalism course at Syracuse University in New York.



From his acquaintance with people in this field—many of whom were qualified parachutists—the “UDT/SEAL Parachute Team” was formed. Eventually this became the Navy Parachute Team on which Chip served as a chutist, air show coordinator, photographer, and information officer.

For the past four years, Chief Maury has won prizes each year in the Military Photographer of the Year Contest—finally reaching the top this year. His name has also appeared on winners’ lists in many prominent contests outside the military organization. In 1969, he took first place in the black and white category of the Nikon-International Photography Contest. In 1971, Chip’s first place in the “Skindiver” magazine contest brought him a scholarship to Brooks Institute of Photography in Santa Barbara, Calif. From 1970 to 1972, he received one of 10 equal prizes awarded each year in the annual maritime photo contest sponsored by U. S. Naval Institute Proceedings.

A native of Philadelphia, the 34-year-old Maury is currently residing with his wife and their twin seven-year-old daughters at the Grant Heights Family Housing Facility on the western edge of Tokyo. His enthusiasm for adventure still keeps him traveling much of the time, and has brought him a well deserved reputation for being a “talent on the move.” At the very least, he is probably one of the few photographers who does his work on the way down.



Top: Feature Photograph, “A Star Over San Diego” by PHC Maury.

Above: News photograph, “One Moment . . . the Last Tour” by PHC Maury.

Aiding Underwater Search & Salvage Operations-

USS APACHE (ATF 67)

The Navy's oldest operating ocean tug, *uss Apache* (ATF 67), is rarely seen alone nowadays. If she is spotted, you will probably find two other ships, *uss White Sands* (ARD 20) and the bathyscaph *Trieste II*, in the immediate vicinity too.

Together, the three ships form the Integral Operating Unit (IOU) which is a special trio for search and salvage operations. The bathyscaph does the deep-water diving and is carried in the well decks of *White Sands*—but it is *Apache* which puts the group on the map, or perhaps, all over the map.

Powered by four 12-cylinder diesel engines which drive direct-current generators, she is capable of producing more than two million watts which is fed into four electric motors that drive her propeller shaft. *Apache* can put out more than 3000 horsepower which can tow just about any size ocean vessel.

All this power is needed, too. As the lead ship, her job is to tow *White Sands* and *Trieste II* to where the diving needs to be done. *White Sands* is a converted floating drydock which means that she is huge. Although fitted with three 500-horsepower engines when adapted to support the bathyscaph, she is still only capable of moving around the diving area at a slow pace. The sides of the ARD extend 30 or 40 feet above the waterline which, combined with her tremendous beam, offer plenty of wind resistance.

"In high winds and bad weather towing becomes extremely difficult," explains Lieutenant Michael D. Barker, commanding officer of *Apache*. "If we have more than 10 knots of wind from either side, *Apache*



must use a large amount of rudder to maintain a true course and this cuts down on our forward speed.”

Whether or not old *Apache* could do the job was put to test not long after the IOU was formed in 1969. With *Trieste* safely tucked in the well of *White Sands*, *Apache* took the two in tow and set a course for the Azores from San Diego. The group made it there without problems and soon inspected the wreckage of the nuclear submarine *Scorpion* (SSN 589). It was one of the longest tows in naval history and earned them the Navy Unit Commendation given by the Secretary of the Navy.

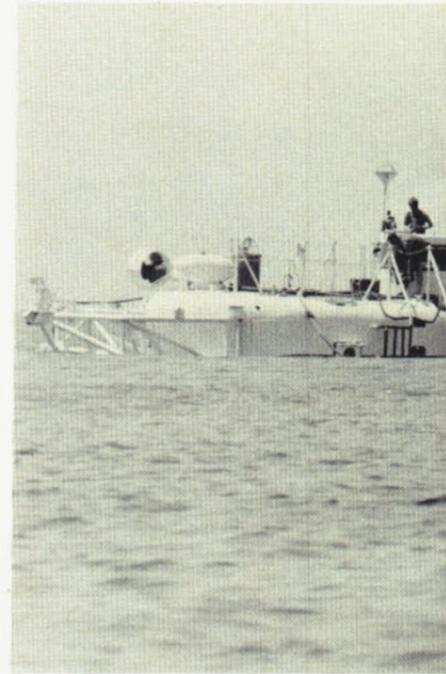
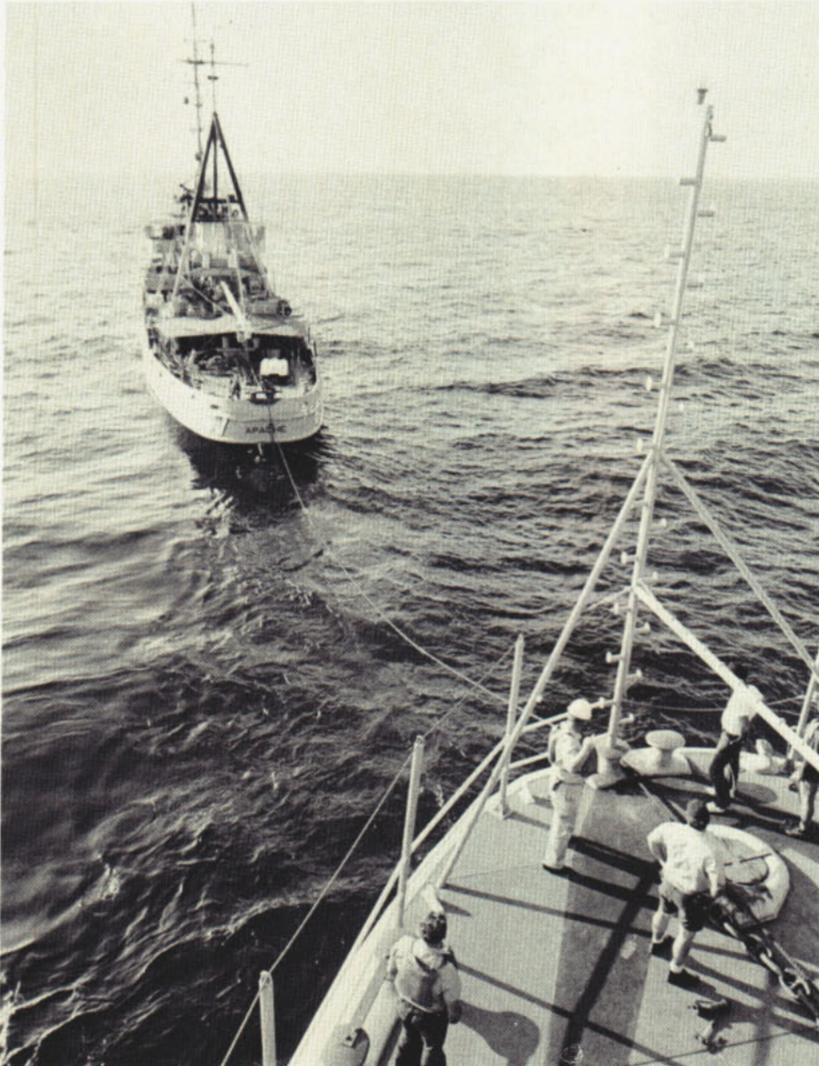
Even in her early years, *Apache* saw plenty of action and proved herself to be more than an ordinary support ship. Operating in the western Pacific during World War II, she participated in numerous assault landings including those on Guadalcanal, Saipan, Guam and Luzon. As a noncombatant ship, she did well to shoot down five attack enemy aircraft during the invasion of Luzon in the Philippines. After World War II, *Apache* was decommissioned, but the Korean conflict stepped up the demand for more sea support

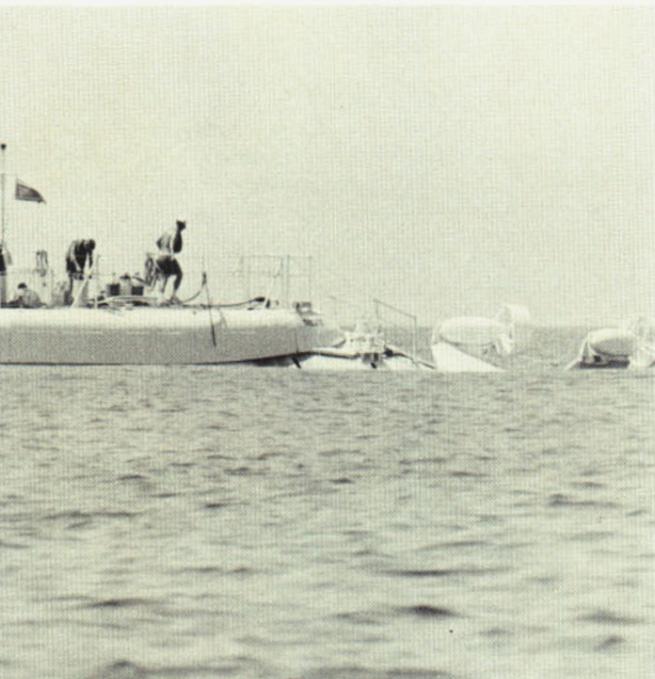
and she was brought back into service.

Not too long ago, *Apache* helped complete some impressive deep-water operations. Not far from the Hawaiian Islands, a Marine Physics Laboratory electronics package was recovered from the ocean depths. It was the deepest ocean-floor recovery ever made with *Trieste* diving down about 16,400 feet—a little more than three miles down.

The IOU is currently conducting operations in the vicinity of the Coronado Islands near San Diego. A Navy fighter plane that crashed in the area is being searched for and new “pilots” for the bathyscaph are being trained in the process.

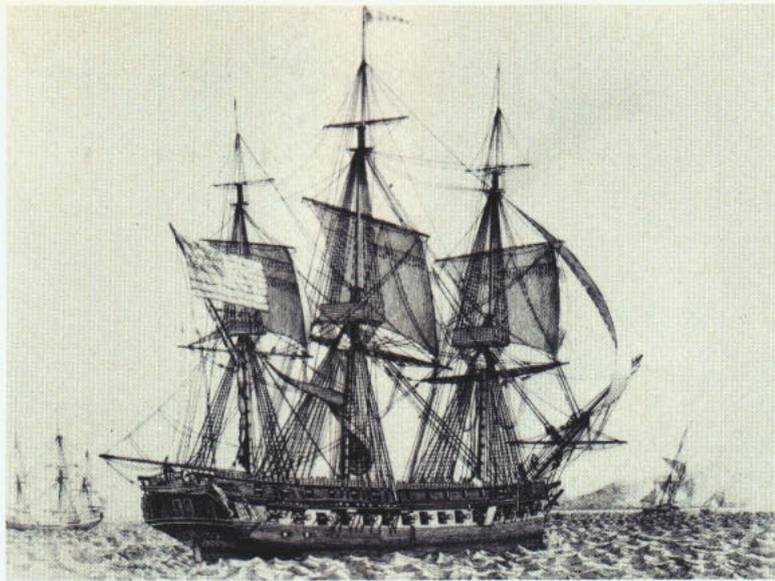
The bathyscaph is surely the newest and most sophisticated craft of the IOU. However, it is much the same position as an orbital workshop with no booster—if it cannot be placed where it is made to function, little exploration will take place. Without *Apache* to provide the bathyscaph and her mother ship with almost unlimited mobility, undersea salvage and exploration would move ahead at little more than a snail's pace.





Far left: USS Apache prepares to tow USS White Sands with the bathyscaph Trieste aboard. Left: The bathyscaph Trieste. Above and below: The three units, Apache, White Sands and Trieste, called all together the Integral Operating Unit (IOU), head for the open seas near San Diego Bay.—Photos by PHCS V. McColley, USN.



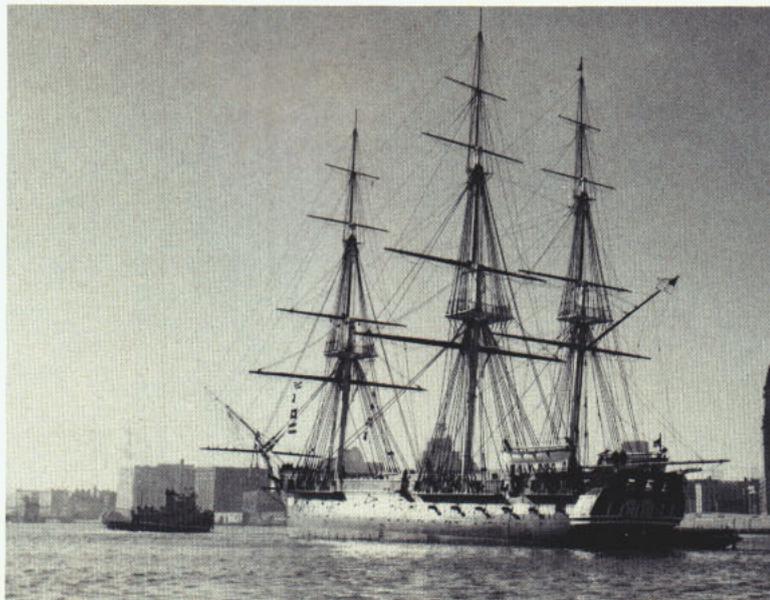


'OLD IRONSIDES' TO BE OVERHAULED

The U. S. Navy's oldest commissioned ship, the frigate *USS Constitution*, is now undergoing a complete overhaul of her decks, timbers and planking. So that the 176-year-old frigate is available for visiting during the upcoming Bicentennial, she will come out of drydock temporarily from April 1975 until late 1976. After that, the reconstruction will continue during the winter months until June 1978.

"Old Ironsides" will be rebuilt with the utmost care. Wood, principally white oak, will be specially cut in the mid-Atlantic states and seasoned for two to three years before being used, a practice employed during original construction. Ship rebuilding techniques will also match the skills of the earlier shipwrights. Even though wooden-hulled ships of this size are rare today, the methods of repair and reconstruction which were perfected in the past centuries have been carefully documented, and will be used once again.

Constitution, besides being a floating museum, is also the flagship of Rear Admiral Richard E. Rumble, USN, Commandant of the First Naval District.



FEDERAL BENEFITS BASED UPON TYPE OF DISCHARGE

As a service to our readers, ALL HANDS, on the next two pages, presents a comprehensive chart detailing the types of discharges awarded to members of the Naval service based upon conduct and/or performance rendered. They range from the very best, Honorable, to the worst, Dishonorable.

Completion of service obligation and the receipt of an honorable discharge should be one of the goals of every man and woman in the Naval service. Being the best type of discharge, it's natural that the Honorable Discharge reaps the most benefits for its holders and acts as a key which opens doors of opportunity. These same doors are closed or partially closed to those holding other types of discharges or being discharged for cause such as unfitness or misconduct.

Considerable prejudice in civilian life may be encountered wherein the type of service rendered or the character of discharge received may have a bearing. Most veterans' organizations exclude all but holders of honorable discharges from membership. The stigma of receiving less than a fully honorable discharge is borne out by numerous persons who request a change in the character of their discharge. Typical statements contained in the reasons for these requests are: "unable to get a job," "would like to get married but don't feel that I can with this type of discharge," "I don't want to go through life with this type of discharge," "every time I get a job and my employer finds out about my discharge, I lose my job," etc.

Although young men with other than honorable discharges may find employment, the prospects for advancement to a position of higher responsibility or trust are nevertheless severely jeopardized. Such persons are generally unacceptable for a performance bond, for office or position under city, county, state and federal governments and for many other positions the average citizen takes for granted.

Because of all the benefits one may derive from receiving a fully honorable discharge and the stigma attached to one less than honorable, good conduct and performance result in numerous post-service rewards. These benefits become obvious as one studies the attached chart. Although such information is common knowledge to most military personnel, it never hurts to have such a chart at hand to glance at now and then, particularly for counseling purposes.

Let us all remember that favorable consideration for veterans' benefits, the possibility of favorable future employment and honor among friends and family are advantages which often are not fully realized until they are lost forever by receipt of a discharge which is less than fully honorable.



FEDERAL BENEFITS BASED

BENEFITS

The purpose of this chart is to show the effect of the type of discharge upon possible eligibility to various rights and benefits. No attempt is made to set forth other requirements of eligibility which must be met.

Prepared by ALL HANDS Magazine

APPLICABLE STATUTE OR REGULATION

PUNITIVE UCMJ

DISHONORABLE

DD Form 260N

GENERAL
COURT
MARTIAL
CONVICTION

BAD CONDUCT

DD Form 259N
(Conditions Other Than Honorable)

GENERAL
COURT
MARTIAL
CONVICTION

SPECIAL
COURT
MARTIAL
CONVICTION

UNDESIRABLE

DD Form 258N
(Conditions Other Than Honorable)

MISCONDUCT
3420240

UNFITNESS
3420220

SECURITY
3420200

I. BENEFITS ADMINISTERED BY THE VETERANS ADMINISTRATION

Benefit	Applicable Statute or Regulation	Dishonorable	Bad Conduct	Undesirable
1. Wartime disability compensation	38 USC 310			
2. Wartime death compensation	38 USC 321			
3. Peacetime disability compensation	38 USC 331			
4. Peacetime death compensation	38 USC 341			
5. Dependency and indemnity compensation to survivors	38 USC 410, 416			
6. Educational assistance	38 USC, Chapter 34			
7. Pensions to widows and children	38 USC 531-544			
8. Hospital, domiciliary and nursing home care	38 USC 610			
9. Outpatient medical and dental care	38 USC 612			
10. Drug Dependency Treatment (hosp. and necessary followup care)	38 USC 610, 612			
11. Prosthetic appliances	38 USC 613			
12. Seeing-eye dogs, mechanical and electronic aids	38 USC 614			
13. Burial benefits (flag and expenses)	38 USC 901, 902			
14. Special housing	38 USC 801			
15. Vocational rehabilitation	38 USC, Chapter 31			
16. Orphans' and widows' educational assistance	38 USC, Chapter 35			
17. Home and farm loans; business loans*	38 USC 1801 et seq.			
18. Autos for disabled veterans	34 USC 1901-1903			
19. Clothing allowance (prosthetic users)	38 USC 362			

II. BENEFITS ADMINISTERED BY THE MILITARY DEPARTMENTS

Benefit	Applicable Statute or Regulation	Dishonorable	Bad Conduct	Undesirable
1. Mileage	Joint Trav. Reg. ¶ M4157			
2. Headstone marker (Sec. Army administers)	24 USC 279a et seq. AR 290-5, ¶ 25			
3. Payment for accrued leave	37 USC 501			
4. Transportation for dependents and household goods	Joint Trav. Reg. ¶ M7009, M8259			
5. Burial in national cemetery (Sec. Army administers)	24 USC 281; AR 290-5, ¶ 20			
6. Retain and wear uniform home	10 USC 771a			
7. Award of medals, crosses and bars	10 USC, Chapter 567			
8. Admission to the Naval Home	BuPers Man 6210280			
9. Travel in kind	Joint Trav. Reg. ¶ M5300 et seq., M4150	•	•	•
10. Cash allowance (\$25)	10 USC 771a	•	•	•
11. Suit of civilian clothes (not to exceed \$30)	10 USC 771a	•	•	•
12. Board for Correction of Naval Records	10 USC 1552	•	•	•
13. Death gratuity	10 USC 1480			
14. Navy Discharge Review Board	10 USC 1553		•	•
15. Use of wartime title and wearing of uniform	10 USC 772e			•

III. BENEFITS ADMINISTERED BY OTHER FEDERAL AGENCIES

Benefit	Applicable Statute or Regulation	Dishonorable	Bad Conduct	Undesirable
1. Civil Service employment preference (Civ. Ser. Com.)	5 USC 2108			
2. Credit for retirement benefits (Civ. Ser. Com.)	5 USC 8331 et seq.			
3. Reemployment benefits (Sec. Labor)	50 APP. USC 459			
4. Naturalization benefits (Immigr. & Natl. Services)	8 USC 1440			
5. Employment as District Court bailiffs	28 USC 755			
6. D. C. police, fireman, and teacher retirement credit	D. C. Code Tit 4, 523; Tit 31, 728			
7. Housing for distressed families of veterans (HUD)	42 USC 1571 et seq.			
8. Preference in purchasing defense housing (HUD)	42 USC 1592a and 1592n(h)			
9. Preference for farm loans (Sec. Agric.)	Available under various statutes. Basic statute is 7 USC 1983a		•	•
10. Preference for farm housing loans (Sec. Agric.)	42 USC 1477		•	•
11. Unemployment benefits	38 USC 2001 et seq.			
12. Social Security wage credits for WW II service (Sec. HEW)	42 USC 417			
13. Employment preference in Farm Credit Banks	12 USC 640 1			

* Business loans are available only to veterans of World War II and Korea.

UPON TYPE OF DISCHARGE

TYPE OF DISCHARGE									
ADMINISTRATIVE									
GENERAL DD Form 257N (Under Honorable Conditions)				HONORABLE DD Form 256N (Benefits listed may also be applicable to personnel receiving General Discharges for these reasons)					
DISCONDUCT 3420240	UNFITNESS 3420220	SECURITY 3420200	UNSUITABILITY 3420180 <small>APPLICABLE TO HONORABLE DISCHARGES IN THIS CATEGORY ALSO.</small>	MINORITY 3850260	DEPENDENCY OR HARDSHIP 3850240	CONVENIENCE OF THE GOVERNMENT 3850220	DISABILITY 3850280	FULFILLMENT OF SERVICE OBLIGATION 3810400	EXPIRATION OF ENLISTMENT 3840260

KEY

- ELIGIBLE
- NOT ELIGIBLE
- N/A
- ELIGIBLE ONLY IF
ADMINISTERING AGENCY DETERMINES THAT FOR ITS PURPOSES THE DISCHARGE WAS NOT UNDER DISHONORABLE CONDITIONS.

I. BENEFITS ADMINISTERED BY THE VETERANS ADMINISTRATION

DISCONDUCT	UNFITNESS	SECURITY	UNSUITABILITY	MINORITY	DEPENDENCY	CONVENIENCE	DISABILITY	FULFILLMENT	EXPIRATION	BENEFIT
•	•	•	•	•	•	•	•	•	•	1. Wartime disability compensation
•	•	•	•	•	•	•	•	•	•	2. Wartime death compensation
•	•	•	•	•	•	•	•	•	•	3. Peacetime disability compensation
•	•	•	•	•	•	•	•	•	•	4. Peacetime death compensation
•	•	•	•	•	•	•	•	•	•	5. Dependency and indemnity compensation to survivors
•	•	•	•	•	•	•	•	•	•	6. Educational assistance
•	•	•	•	•	•	•	•	•	•	7. Pensions to widows and children
•	•	•	•	•	•	•	•	•	•	8. Hospital, domiciliary and nursing home care
•	•	•	•	•	•	•	•	•	•	9. Outpatient medical and dental care
•	•	•	•	•	•	•	•	•	•	10. Drug Dependency Treatment (hosp. and necessary followup care)
•	•	•	•	•	•	•	•	•	•	11. Prosthetic appliances
•	•	•	•	•	•	•	•	•	•	12. Seeing-eye dogs, mechanical and electronic aids
•	•	•	•	•	•	•	•	•	•	13. Burial benefits (flag and expenses)
•	•	•	•	•	•	•	•	•	•	14. Special housing
•	•	•	•	•	•	•	•	•	•	15. Vocational rehabilitation
•	•	•	•	•	•	•	•	•	•	16. Orphans' and widows' educational assistance
•	•	•	•	•	•	•	•	•	•	17. Home and farm loans; business loans*
•	•	•	•	•	•	•	•	•	•	18. Autos for disabled veterans
•	•	•	•	•	•	•	•	•	•	19. Clothing allowance (prosthetic users)

II. BENEFITS ADMINISTERED BY THE MILITARY DEPARTMENTS

DISCONDUCT	UNFITNESS	SECURITY	UNSUITABILITY	MINORITY	DEPENDENCY	CONVENIENCE	DISABILITY	FULFILLMENT	EXPIRATION	BENEFIT
•	•	•	•	•	•	•	•	•	•	1. Mileage
•	•	•	•	•	•	•	•	•	•	2. Headstone marker (Sec. Army administrators)
•	•	•	•	•	•	•	•	•	•	3. Payment for accrued leave
•	•	•	•	•	•	•	•	•	•	4. Transportation for dependents and household goods
•	•	•	•	•	•	•	•	•	•	5. Burial in national cemetery (Sec. Army administrators)
•	•	•	•	•	•	•	•	•	•	6. Retain and wear uniform home
•	•	•	•	•	•	•	•	•	•	7. Award of medals, crosses and bars
•	•	•	•	•	•	•	•	•	•	8. Admission to the Naval Home
•	•	•	•	•	•	•	•	•	•	9. Travel in kind
•	•	•	•	N/A	N/A	N/A	N/A	N/A	N/A	10. Cash allowance (\$25)
•	•	•	•	N/A	N/A	N/A	N/A	N/A	N/A	11. Suit of civilian clothes (not to exceed \$30)
•	•	•	•	•	•	•	•	•	•	12. Board for Correction of Naval Records
•	•	•	•	•	•	•	•	•	•	13. Death gratuity
•	•	•	•	•	•	•	•	•	•	14. Navy Discharge Review Board
•	•	•	•	•	•	•	•	•	•	15. Use of wartime title and wearing of uniform

III. BENEFITS ADMINISTERED BY OTHER FEDERAL AGENCIES

DISCONDUCT	UNFITNESS	SECURITY	UNSUITABILITY	MINORITY	DEPENDENCY	CONVENIENCE	DISABILITY	FULFILLMENT	EXPIRATION	BENEFIT
•	•	•	•	•	•	•	•	•	•	1. Civil Service employment preference (Civ. Ser. Com.)
•	•	•	•	•	•	•	•	•	•	2. Credit for retirement benefits (Civ. Ser. Com.)
•	•	•	•	•	•	•	•	•	•	3. Reemployment benefits (Sec. Labor)
•	•	•	•	•	•	•	•	•	•	4. Naturalization benefits (Immigr. & Natl. Services)
•	•	•	•	•	•	•	•	•	•	5. Employment as District Court bailiffs
•	•	•	•	•	•	•	•	•	•	6. D. C. police, fireman, and teacher retirement credit
•	•	•	•	•	•	•	•	•	•	7. Housing for distressed families of veterans (HUD)
•	•	•	•	•	•	•	•	•	•	8. Preference in purchasing defense housing (HUD)
•	•	•	•	•	•	•	•	•	•	9. Preference for farm loans (Sec. Agric.)
•	•	•	•	•	•	•	•	•	•	10. Preference for farm housing loans (Sec. Agric.)
•	•	•	•	•	•	•	•	•	•	11. Unemployment benefits
•	•	•	•	•	•	•	•	•	•	12. Social Security wage credits for WW II service (Sec. HEW)
•	•	•	•	•	•	•	•	•	•	13. Employment preference in Farm Credit Banks

- GAS TURBINE SYSTEM TECHNICIAN (GS) RATING APPROVED

A new general rating -- Gas Turbine System Technician (GS) -- has been approved by the Secretary of the Navy and will be incorporated into the Navy's general rating system next year. The rating was established because of the increasing number of gas turbines into ship classes, such as the DD 963 class. Instructions for applying for this rating, billet conversions and training will be out by January 1974.

- OPENINGS AVAILABLE FOR ENTRY INTO LEGALMAN RATING

Persons in the yeoman 3rd class rating who are interested in working with the Judge Advocate General Corps are being urged to apply for entry into the legalman rating. Legalmen will assist members of the JAG Corps in matters such as military justice, discharges, admiralty law, courts-martial, investigations, legal assistance and a number of other law-related areas. If you're interested in this kind of work, contact your personnel officer or write to the Legalman Project Officer, Office of the Judge Advocate General (Code 81), Washington, D. C. 20370.

- 19th EDITION OF "BLUEJACKETS MANUAL" PUBLISHED

The 19th edition of the Bluejacket's Manual -- a book which explains many aspects of the U. S. Navy -- has been published by the United States Naval Institute in Annapolis. Beginning in July, this new book has been distributed to all new recruits. The authors of this current edition spent more than 14 months revising and updating the previous editions and have included chapters in communications, electronics and the 3M system, as well as the topic of drugs, Black history and minority groups. Since its first edition in 1902, more than 12,000,000 copies of the Bluejacket's Manual have been sold or distributed.

- ACNP FOR WOMEN POST DISESTABLISHED

In furtherance of completing integration of women into all facets of the Navy, the post of Assistant Chief of Naval Personnel for Women has been abolished to eliminate any arbitrary grouping that contradicted such integration. All of the functions of this office have been transferred to the cognizant offices within the Bureau of Naval Personnel and other commands, such as Navy Recruiting Command and Navy Training Command. In order to ensure coordination of policies relating to women, however, a central point of contact has been set up in the office of Assistant Chief of Naval Personnel for Human Goals (Pers-6). This office, the Equal Opportunity Division (Pers 61, phone (202) OX4-1430 or Autovon 224-1430) will maintain and review the Navy Women's Equal Opportunity Program, coordinate program initiatives concerning Navy women, and respond to any inquiries in these areas of interest.

- FEES FOR DUPLICATING SERVICE RECORD ITEMS INCREASED

As a reminder for those who need parts of their service record duplicated, the fees for this service have been increased. Although the new fees have been in effect for a year, there are quite a few people unaware of

briefs navy navy navy navy

the changes. One area of record duplication which has been a particular problem is that of military membership. Requests received for address of record, statement of verification of service or report of separation, and fitness reports are still being accompanied by the outdated fees. To be furnished an address of record, send \$2, not \$1.50. Civil relief certificates are now \$3 and the charge for copies of five most recent officer fitness reports is \$2. Please make a note of these changes -- it could save you some valuable time.

- SKYLAB WENT ALNAV FOR RECORD-BREAKING FLIGHT

By now everyone knows that the latest Skylab crew, despite great problems in getting their equipment to work, have broken the record for continuous time spent in outer space. What a lot of people don't realize is that the crewmembers were all part of the U. S. Navy. Captain Charles "Pete" Conrad, the Skylab commander, Commander Paul Weitz, the Apollo spaceship pilot, and Commander Joseph Kerwin, the crew physician, brought their spaceship down within six miles of the recovery area in the Pacific Ocean on 22 Jun 73, thus completing 28 days and 50 minutes in space. Some 38 minutes after splashdown they were hoisted onto the recovery ship, USS Ticonderoga (CVS 14).

- NESEP NOW UNDER CHIEF OF NAVAL TRAINING COMMAND

The Navy Enlisted Scientific Education Program (NESEP) is now the responsibility of the Chief of Naval Training, having shifted from the Chief of Naval Operations on 1 Jul 73. Concurrently, the Chief of Naval Operations is now responsible for the solicitation and processing of application for NESEP and will also designate the initial selectees for the program. Applications for NESEP for the fall of 1974 are now being accepted and should be submitted no later than 1 Sep 73, in accordance with OpNavNote 1530 of 9 Apr 1973.

- BOOKLET OUTLINING VETERANS' BENEFITS NOW AVAILABLE

A 35-page "best seller," formally entitled "Federal Benefits for Veterans and Dependents," has been printed in its 10th edition by the federal government. It carries the latest GI Bill changes and other up-to-date information about veterans' and dependents' benefits. There is also a listing of Veterans Administration offices and hospitals and locations of the 44 VA drug abuse treatment centers. Copies of the booklet are available from the Superintendent of Documents, Washington, D. C. 20420, for 30 cents each.

- ALCOHOL ABUSE COUNSELORS JOIN FLEET

The Navy has expanded its Alcohol Abuse Control Program to include 100 Collateral Duty Alcohol Counselors to help coordinate the local command efforts. All of these people are recovered alcoholics who are particularly aware of the problems involved in rehabilitation. They will assist in the implementation of the alcohol abuse control program, serve as counselors to their shipmates and help coordinate a "referral network" of nearly 1000 other recovered alcoholics acting as volunteer counselors.

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

"Coming To Grips with BEQ Management"



MCPON JOHN D. WHITTET

Will the Navy ever come to grips with the problem of BEQ management?

The people who head the Navy's just recently established BEQ management office here in BuPers certainly think so!

The new office and the recently established BEQ management school are integral parts of a com-

prehensive effort to improve the quality of our BEQs through training experienced and highly motivated enlisted men and officers. Both the management office here in BuPers and the school at NATTC in Memphis, Tenn., are the direct result of recommendations made by a BuPers BEQ study group and approved by the Chief of Naval Operations.

Together with field assistance teams, a new BEQ management system has been created to provide long-needed assistance to individual commands and BEQ managers. The goal is to develop a Navywide standard for all types of BEQ operations. The management office in BuPers has been established primarily to provide policy and guidance. On-the-spot assistance will be provided by well-trained, experienced BEQ managers acting as field assistance team members. But more about these field assistance teams later.

There is probably no single person who can do more, or less, to promote a well managed bachelor enlisted quarters (BEQ) than the BEQ manager. This is evidenced by the fact that the Navy has new buildings which are only marginally fit to live in and old buildings which are immaculate. Unfortunately, BEQ managers have often lacked the experience, command support funds, training and motivation necessary to get the job done.

The BEQ management school has been established to train BEQ managers and BEQ officers. Developed over a nine-month period by the Chief of Naval Train-

U.S. Navy aids victims of

TUNISIAN FLOODING

With massive flooding along the mighty Mississippi in the U. S. this spring, there was little space left in the American press for the annual flood news from other parts of the world. That, of course, doesn't mean that floods didn't occur elsewhere. When they did,

U. S. Navy men and women were on the scene to offer effective aid.

For example, Navy and Marine Corps members joined military men from three other nations in three days of rescue operations in March to relieve thousands of stricken flood victims in Tunisia's Medjerda River Valley. Helicopters from the U. S. Navy and Marine Corps, the Tunisian Army, and the Libyan and Italian Air Forces swooped down to save stranded victims clinging to trees and rooftops in the inundated region. For some, the Navy made it in the nick of time, rescuing victims while they were standing waist-deep in the muddy waters of the flooded river.

Rescue missions during the three-day period included delivery of household items, food, water and medical supplies. As the flood waters receded, potable water became scarce and had to be flown in, and plans were made to avert the possibility of epidemic outbreaks of diseases usually associated with flood disasters.

Both food and shelter for the victims were also scarce. For some families, a blanket provided the only protection from the elements. The Navy dis-

ing in cooperation with NTC, San Diego and NATTC in Memphis, the curriculum has been thoroughly tested. Two separate pilot courses were run under the direction of NTC San Diego and enthusiasm ran high among both students and staff. The course curriculum includes an administrative workshop, management principles, human behavior, legal responsibilities, front desk procedures, security, maintenance, budget planning and an operations workshop. Classes run for three weeks and are limited to 25 students per class. The instructors are experienced BEQ managers who really know what they are talking about.

Applications for school seats are encouraged. The school is now listed in the Navy Formal Schools Catalog under course #A-500-0030 and class reservations can be made by calling NATTC Quota Control at autovon 966-5524. School seats are limited to those Navymen, E-5 and above, who are or will be assigned to a BEQ management position and have at least one remaining year of shore duty.

While each command must sponsor the costs involved in the transportation of the personnel it sends to the class, NATTC provides adequate billeting so that per diem costs are minimized. Further information is available by calling the BuPers number at autovon 224-5645 and 224-4315 or by calling NATTC at autovon 966-5536 or 966-5537.

The BEQ management field assistance teams, mentioned earlier, are also part of the new BEQ manage-

ment system. An extension of the BuPers office and the BEQ management school, the teams will be able to provide individual attention to command problems. Composed of highly qualified, experienced BEQ managers in pay grades E-7, E-8 and E-9, there will be one three-man team on each coast. Modeled after the food service and steward instruction and demonstration teams, the BEQ field assistance teams will schedule their visits in a way that will allow time for base mission indoctrination, demonstrations, training and evaluation. I want to stress the fact that these men are not authorities from Washington, but seasoned BEQ managers who know what your problems are. Their purpose is to assist and support your command rather than inspect its operation. The teams will be available on a request basis and will be funded by BuPers. It is hoped that commanding officers will request the services of these teams when they become operational this fall.

Since fiscal year 1966, over 500 million dollars has been spent on building and rehabilitating BEQs. Building design has changed dramatically from large open bay type barracks to compartmentalized rooms.

Together with these new management steps that I have outlined, I, too, am confident that we are finally coming to grips with the age-old problem of producing and managing quality living quarters for individual Navymen.

patched three of its ships from the Sixth Fleet—uss *Forrestal* (CVA 59), uss *Ponce* (LPD 15), and uss *Sampson* (DDG 10)—to the port of Tunis to help with the rescue operations, and there a team of doctors and hospital corpsmen from *Forrestal* joined with an international force of doctors establishing emergency medical aid stations at refugee relocation centers on the rim of the disaster area.

Food came from a variety of sources. Italy, France, Libya and the U. S. organization, CARE, contributed in massive amounts, and the men of *Forrestal* baked more than 1000 loaves of bread for the victims. Still others purchased thousands of candy bars from the ship's store to hand out to the children as they were being rescued.

Literally plucking children and adults from perches, the rescue task force flew more than 100 individual sorties. At one point a Navy helo landed with 31 victims aboard from just one trip into the disaster area. In all, U. S. Navy and Marine Corps helicopters from *Ponce* and *Forrestal* logged 227 flight hours and were responsible for rescuing more than 1290 victims.

In one particular instance, an English couple tour-

ing the area in their camper were rescued from a mound of dirt surrounded by flood waters by a "Jolly Green Giant" Marine helicopter. They had been stranded for four days. On safer ground minutes later—and after many "thank yous"—they backed their Land Rover and trailer out of the hatch of the huge aircraft and proceeded on their way.

Hardest hit was the delta region northwest of Tunis, but the entire basin from the mouth of the Medjerda River to its source near the Algerian border had been severely damaged. More than 76 tons of supplies were flown into the flooded Tunisian villages to supplement the meager supplies rescued from the flood waters. Patrols and war games were sidelined while U. S. air controllers, loadmasters, airport traffic and ground controllers, and many others worked side by side with the military men of other nations providing disaster aid.

The three Sixth Fleet ships left the area after 72 hours of concentrated rescue and relief operations. The director of those operations, Tunisian Army Colonel Balma, summed up the Americans' role in the operations with one word: "Magnifique!"

Close-up of a vital
Navy job:

PARACHUTE RIGGER

(Aircraft Survival
Equipmentman)



In the days before steam, one of the most important men in a ship was the sailmaker. In fact, the sailmaker had one of the first Navy ratings, dating back to the start of the U. S. Navy, or 1797. His tools—heavy straight and curved needles, palms and beeswax, leather and heavy cloth. His working space wasn't the best, a dimly lit and confining compartment below decks. But if his work didn't get done, often the ship didn't travel.

The sailmaker is no longer with us, of course, and his job of making the ship go now rests with the engineering force, but his skills of working with cloth have been passed to modern-day descendants,

the boatswain's mate aboard ship and the parachute rigger, also known by his correct title of aircraft survival equipmentman in the aviation community.

At Naval Air Station Norfolk, Va., 20 riggers attached to the paraloft perform jobs ranging from sewing various man-made materials into flight bags and tie-down straps, to modifying, inspecting and repacking over 20 different types of parachutes. Although these men use modern sewing machines for most of their sewing, one can often see a rigger squinting his eyes trying to thread a curved needle—not unlike his counterpart nearly 200 years ago.

"Generally speaking," PR1 G.

Mac McBride explains, "these men maintain all aviator survival equipment for base, transit and fleet aircraft crews who request it.

"Although the bulk of our work involves checking liferafts and vests for leaks and then patching them if necessary, two other crews work with chutes and with oxygen regulating equipment."

PR1 McBride says the work on the flotation gear "is the most time-consuming because it takes about a day or two to check for leaks. After that the pieces must be patched and again checked. The loft checks about 600 vests per month and about 200 rafts per month. This keeps the guys in the raft shop pretty busy."

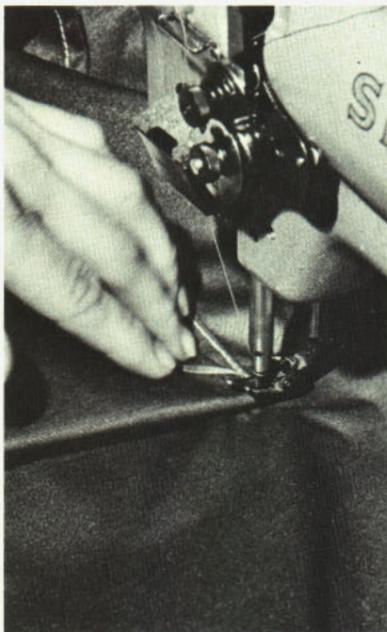
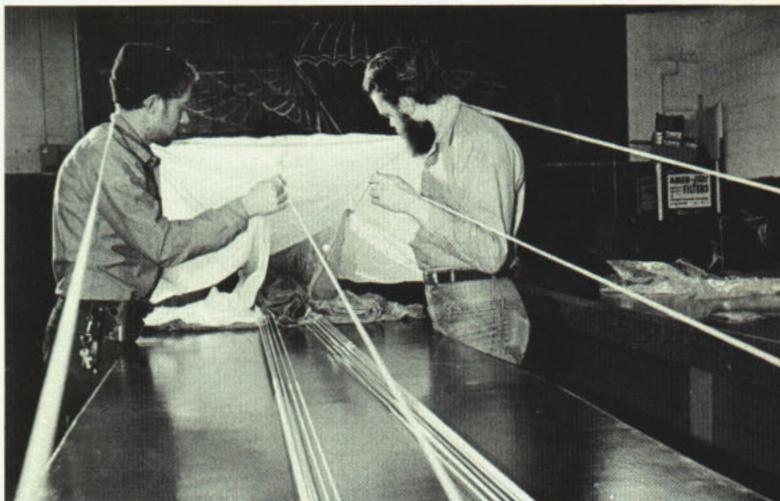
Another thing that keeps the men busy is the maintenance, repair and repacking of parachutes which, he says, "is the second heaviest workload encountered by the men." To a layman seeing the mass of shroud lines, rip-stop chute material and the rest of the paraphernalia, the task of packing all this into a pack measuring 1.5 feet by 3.5 feet and less than five inches thick seems an impossible job.

Most people have trouble repacking a raincoat into its original plastic case, but a 12-week stint at PR "A" school—mandatory for all PRs—makes parachute packing seem like simplicity itself. One of the keys to the mystery is teamwork.

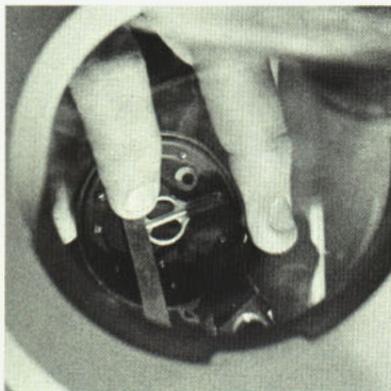
Two men working together, knowing that a mistake here can cost a shipmate his life, have a set routine with their four hands that allows for no mistakes—no margin of error. They can easily sort out each shroud line and canopy panel and place them in order. Within 30 minutes, these two will have packed a 20-foot diameter canopy and its hundreds of feet of shroud lines into a small, neat packet.

It took many years for this life-saving device to evolve to its present form. Leonardo da Vinci experimented with a tent-roof affair in 1495, but it wasn't until 1783 that a French physicist—Sebastien Lenormand—made a successful jump from a tower with his own specially designed parachute. In 1923 the American Armed Forces made it mandatory for all aviators to wear parachutes, and since the earliest days of naval aviation there have always been a number of men assigned to pilot safety. Although the days of the sailmaker have vanished in this modern Navy, the aircrew survival equipmentman—using the same power force that sailed the great, early ships of the U. S. Navy, the air and wind—now sail men from their aircraft to the safety of the earth.

—Story and Photos by
PH1 John R. Sheppard



Above: Aircrew Survival Equipmentmen check parachute before packing. Left: Modern fabrics make sewing easier and the final product better. Below: Routine maintenance of an oxygen regulator. Bottom: Checking, folding and repacking a parachute.



ANSWERS TO QUESTIONS ABOUT THE

SURVIVOR BENEFIT PLAN

Since the new Survivor Benefit Plan, Public Law 92-425, went into effect on 21 Sep 1972, many questions have been received by the Chief of Naval Personnel from retirees, active duty personnel, wives and widows of active or retired service members. The questions cover a wide range of topics, and requests for further clarification have been made about almost every provision of the new law.

The following are questions about the new Survivor Benefit Plan most frequently raised by active duty personnel contemplating retirement in the near future.

Joining the Plan

Q. *When should I decide to include myself in the Survivor Benefit Plan (SBP)?*

A. Coverage under SBP is automatic unless a choice not to participate is submitted in writing. Other types of coverage are available though, and the type wanted, other than that which is provided automatically, should be stated in writing 30 days before retirement.

Q. *When must a decision be made by a member who has neither a spouse nor a dependent child on the date of retirement or transfer to the Fleet Reserve, but later marries and wishes to participate in the SBP because of the marriage?*

A. The decision to participate in the SBP must be made within one year of date of marriage.

Types and Amounts of Survivor Annuities

Q. *How many types of annuities are there?*

A. There are four kinds of annuity: one for spouse only, one for spouse and children, one for children only, and one for a person named as having an insurable interest in the member.

Q. *What is meant by an "insurable interest"?*

A. If by the member being alive, the person named can reasonably expect to receive some kind of financial benefit, an insurable interest exists. Generally speaking, any near relative would have an insurable interest in the member.

Q. *May a member choose which type of annuity he wants?*

A. Yes. If the member has a spouse and children, his participation in the SBP will automatically provide coverage for both. However, he may elect coverage for spouse only or children only. If the member has spouse only or children only, coverage will automatically be provided for whichever class of beneficiary is involved. Only a member who is unmarried and has no dependent children may elect to provide an annuity for a person with an insurable interest.

Q. *May a member who has named a person with an insurable interest as the recipient of an annuity change his election to provide the annuity for his spouse should he later marry?*

A. Yes. The change of election, however, must be submitted to the Navy Finance Center within one year after the marriage takes place.

Q. *How much annuity will the spouse/children receive?*

A. The monthly annuity payable to the spouse/children is 55 per cent of the base amount selected by the member. However, the annuity for the spouse is subject to change under certain conditions.

Q. *What is meant by "base amount"?*

A. Base amount means the full monthly pay to which the member was entitled when he or she elected into the plan, or a lesser amount designated by the member. If the member selects full

pay as the base amount, the base amount will be changed should he subsequently be advanced on the retired list, transferred from the temporary disability retired list to the permanent disability retired list, or whenever a cost-of-living increase takes place. If a member selects a lesser base amount, such an amount will be adjusted only for the reason of a cost-of-living increase. It is important to realize that adjustments in annuity payments due to cost-of-living increases are made because there has been a change in the base amount, not in the percentage taken from the base amount.

Q. *How much annuity will the person with an insurable interest receive?*

A. For this type of annuity, there is a cost (see fourth question under heading "Costs of Survivor Annuities") which is subtracted from the member's gross monthly pay. The amount of annuity paid is 55 per cent of the member's gross monthly pay after this cost has been subtracted.

Q. *Is the annuity to a surviving spouse ever terminated?*

A. If the widow or widower either remarries before the age of 60, or dies, the annuity is paid only through the previous month. Remarriage after the age of 60 does not terminate the widow's or widower's annuity.

Q. *Can the payment of an annuity be resumed if the remarriage of a widow or widower is terminated by annulment, divorce, or death?*

A. Yes. Payment of the annuity will be resumed as of the first day of the month in which the marriage is terminated.

Q. *If a widow's or widower's remarriage is terminated by death and the widow or widower is entitled*

SURVIVOR BENEFIT PLAN

to an annuity from that marriage would he or she be entitled to both annuities?

A. No. The widower or widow cannot receive two annuities, but may select which one of the two he/she would like to receive.

Q. *Will the annuity under the SBP be paid if upon a member's death the widow or widower is also entitled to Dependency and Indemnity Compensation (DIC) from the Veterans Administration?*

A. Full payment under the SBP is not given. What is given is the amount by which payments under the SBP exceed those of the DIC.

Q. *Is an annuity subject to garnishment or any other type of restriction?*

A. No, the payment of an annuity is not subject to garnishment, and, other than as offset by the amount of DIC or social security benefits that may be payable, there are no restrictions that can be placed on a payment.

Costs of Survivor Annuities

Q. *What is the cost of an annuity for a spouse only?*

A. The cost is two and one half per cent of the first \$300 of the base amount, plus 10 per cent of the remainder of the base amount. Ultimately, the actual amount received as payment depends upon the base amount.

Q. *How much will an annuity for spouse and children cost?*

A. The cost is practically the same as that for a spouse only, an additional charge of generally one-half of one per cent is made for the children. When there are no longer any eligible children, the cost is reduced to that of a spouse only.

Q. *How much will an annuity for children only cost?*

A. Based on the age of the retiree and age of the youngest child, the monthly cost will be about three per cent of the base amount. This cost, however, will be terminated when there ceases to be an eligible dependent child.

Q. *How much will an annuity for a natural interest person cost?*

A. The monthly cost is 10 per cent of the gross monthly pay plus an additional five per cent of such pay for every five years that the beneficiary is younger than the member. The total cost, however, may not exceed 40 per cent of the member's gross monthly pay.

Q. *Will the monthly cost be affected by cost-of-living increases in retired and retainer pay?*

A. Yes, the cost will be affected.

Q. *Will the monthly cost be affected if retired pay is adjusted because the member is transferred from the TDRL to the PDRL, or because the member is advanced to a higher grade on the retired list?*

A. The cost will be affected only if the gross pay was designated as the base amount.

Q. *For how long will costs be paid?*

A. There will be a cost throughout the member's lifetime except when participation in the SBP provides coverage for children only or when the member is serving on active duty in a retired or Fleet Reserve status. There will also be no cost when the member has waived his retired or retainer pay for Civil Service benefits and elected to participate in the civilian plan, or is discharged from the TDRL without being placed on the PDRL.

Q. *Will the costs under the SBP be subject to with-*

holding tax?

A. No. The Internal Revenue Service ruled in December 1972 that deductions from retired pay for participation in the SBP are not included in gross income for Federal income tax purposes and are not subject to withholding tax.

Q. *If a member is not receiving retirement pay because he or she has waived compensation from the Veterans Administration, is the payment of costs under the SBP still required?*

A. Yes, monthly costs are still necessary and will be paid by personal check or money order. Interest will be charged for delinquent amounts owed.

Q. *If a member's wife dies first or there is a divorce, will the costs under the SBP be discontinued?*

A. No, the costs will continue until his death, but a subsequent spouse may be covered.

Payment of Annuity

Q. *When does an annuity become effective?*

A. The annuity is considered effective the day after the member's death occurred.

Q. *How long will an annuity be paid to children?*

A. In the case of a child who is unmarried and not attending school, annuity will be paid until age 18. For a child who is unmarried and pursuing a full-time course of study, payments will come until age 22. A child who is unmarried and incapable of self-support due to a physical or mental disability which occurred before the age of 18, or before the age of 22 while pursuing a full-time course of study, will receive an annuity as long as he or she remains unmarried and incapable of self-support.

Q. *How long will the annuity be paid to a natural*

interest person?

A. Payment of an annuity will continue for the lifetime of that natural interest person.

Miscellaneous

Q. *What is the status of elections made by active duty personnel under the old Retired Serviceman's Family Protection Plan (RSFPP) before the enactment of the new Survivor Benefit Plan?*

A. The new Survivor Benefit Plan replaces the old RSFPP for all military personnel who retire with pay on or after 21 Sep 1972, and all elections made under the old RSFPP are void.

Q. *Where may I obtain additional information about the SBP?*

A. Your command should have a pamphlet entitled "Survivor Benefit Plan for Retired Members of the Uniformed Services" (NAV TRA 46605) which contains all the necessary information. The publication may also be ordered through the Navy supply system under the stock number of 0503-003-0250.

Q. *What form should be used in electing coverage under SBP?*

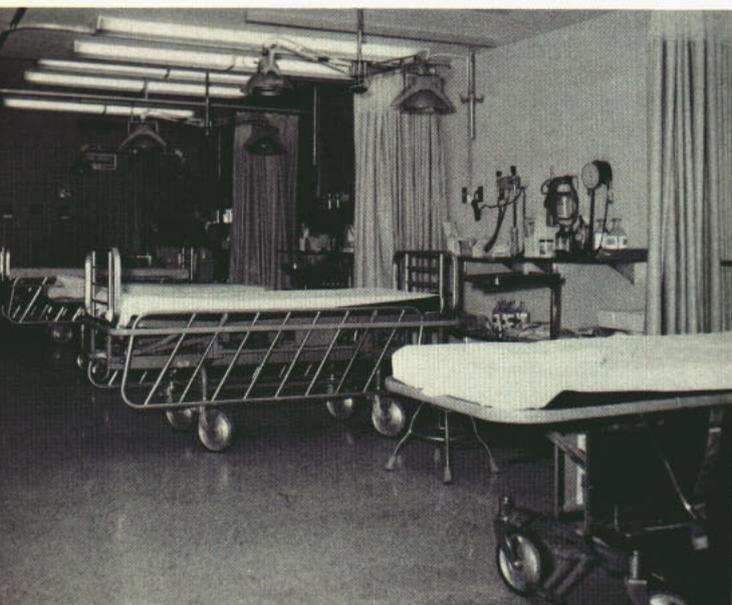
A. The Survivor Benefit Plan Election Certificate (DD Form 1883) is the appropriate form to use. If your command does not have any available, they may be ordered from the Navy supply system under the stock number 0102-068-0300.

Q. *Must I fill out an election certificate if I accept full coverage?*

A. You are not obligated to do so, but, if there are eligible minor children in your family, it will save the Navy Finance Center the step of writing to you to obtain identification information (names and ages) of your children.

**NOW A MORE
EFFICIENT**

Portsmouth Naval Hospital



Emergency

“There has been a disaster in the area and at least 20 patients are on their way to your hospital. You can expect to receive them momentarily.”

The Naval Hospital, Portsmouth, Va., may never hear this message, but if a mass casualty situation occurs, the hospital is now better than ever prepared to handle the casualties. The reason—an emergency room renovation project.

Immediate benefits are being reaped from the improvements in the day-to-day operation of an

emergency room, which provided initial care for about 7000 patients with acute injuries and illnesses during a recent three-month period. “Before” and “after” pictures of the emergency room arrangement tell the story.

The pre-renovation scene shows two operating rooms and two small, and often crowded, doctors’ offices with fixed examination tables where patients were seen. Doctors carried otoscopes and ophthalmoscopes with them; manometers for taking blood pressure were usually kept on a table or desk; and most other equipment was brought into the office as required.

The “after” picture is much different—and much better. A spacious, bay-like area containing four treatment cubicles with one gurney (movable bed) per cubicle has replaced the doctors’ offices as the focal point for treatment. Most required equipment is just a step or less away. Each cubicle has suction devices, oxygen, an otoscope, an ophthalmoscope and a manometer—all of which are wall-mounted. In addition, each has intravenous solutions, overhead intravenous poles, overhead blood-drawing equipment and a call button for summoning additional assistance. There is also greatly improved illumination.

One operating room has been eliminated and the second refurbished with modern, sophisticated equipment. Again, ease of access to equipment is a major advantage. The operating room now has wall-mounted nitrous oxide, oxygen and suction devices which are movable on overhead tracks, overhead intravenous poles, a defibrillator for use in treating cardiac arrest, an anesthetic machine and x-ray view boxes.

Doors at both ends of the large area housing the cubicles permit an uninterrupted circular flow of patients during a mass casualty incident. Medical teams would initially examine patients injured in such a contingency in an adjacent lobby set up as a triage area for assigning priorities for medical treatment. Those requiring immediate resuscitation from shock or life-threatening injuries would be taken through one door, treated and removed through a second. Contrast this with the “before” picture and its potential for doorway congestion as one patient is brought into a doctor’s office while a second is being removed through the same portico.

What is the expansion potential of the emergency room where normally no more than four people are treated simultaneously? The answer plays a prominent role in the Portsmouth Naval Hospital’s preparedness for a mass casualty situation. Each treatment cubicle can accommodate a second gurney and a double overhead light per cubicle permits illumination to be adjusted appropriately. The whole area has sufficient space for additional gurneys or equipment. For example, x-ray equipment could be brought into the space when preliminary x-ray studies are indicated without seriously crowding the medical teams.

Substitution of gurneys for fixed examination tables means one less bed transfer for patients who are to

be admitted or who require x-ray examinations.

Although improved preparedness for mass casualty situations was a motivating factor in undertaking the renovation project, hospital officials emphasize that the improvements have produced a more pleasant atmosphere for all patients plus improving conditions under which they are treated.

Pharmacy

"I'm really pleased," an elderly gentleman said as he walked away with his medication. "My prescription was filled about 15 minutes after I handed it in." At the time, there were very few empty seats to be seen in the pharmacy's ample waiting room.

Empty waiting rooms are what the recent improvements at the Portsmouth (Va.) Naval Hospital are all about—especially in the pharmacy. Behind the streamlined services lie revised stocking, storage and staffing procedures, made possible by an extensive renovation project. A brief look at the route taken by a routine prescription filled at the pharmacy helps bring the picture into sharper focus.

The prescription is handed to a clerk at the check-in window who screens it and passes it to the first available pharmacist or pharmacy technician working along a conveyor belt "line." This person provides the medication called for in the prescription and places both on the belt. At the end of the line a clerk types the label and the medication is handed to the patient.

Bottleneck No. 1 used to occur at the check-in window. With only a single window open, long lines sometimes developed during periods of heavy activity. Consequently a second window was added for the peak periods.

A second bottleneck occurred when the volume of prescriptions overwhelmed the pharmacists, technicians and clerks manning the line. This was resolved by pulling personnel from other areas where their schedule could be rearranged and putting them to work in the Outpatient Dispensing Department. Eight pharmacists/technicians can fill prescriptions faster than four; two clerks can turn out labels faster than one. Adding personnel, however, raised the question—where will they work without overcrowding? The answer lay in adding a second counter with appropriate aisle space and shelving along the line and mirror-imaging stock on both sides.

The fewer steps a pharmacist/technician must take to reach medications, the faster he can fill prescriptions. With this in mind, pharmacy officials divided medications into three categories—fast-moving, moderate-moving (issued several times a day), and slow-moving. Fast-moving items are stored above and be-

low the line with an additional supply just a few steps away. Those classified as moderate-moving are immediately behind the pharmacists/technicians while slow-moving items are one aisle away.

The pharmacy at the Naval Regional Medical Center's Boone Clinic Branch Dispensary which opened last year at the Little Creek, Va., Naval Amphibious Base served as a model for the renovation project. Modern design concepts incorporated in the Boone Clinic pharmacy have lived up to the expectations in speeding up service.

Prepackaging, particularly for fast-moving items, had previously been introduced as a speed-up measure. A further refinement was added by storing quantities of each prepackaged medication in individual plastic boxes. When the line supply runs out, the pharmacist/technician replaces one plastic box with another from the back-up supply.

Other aspects of renovation include addition of a refrigerator along the line, construction of office space for the stock control clerk, installation of a three-speed motor on the conveyor belt which allows variations according to the amount of activity, installation of an alarm system on the pharmacy door and the addition of neoprene padded matting on the walk areas. Pharmacy personnel were especially pleased by this last improvement.

The Portsmouth Naval Hospital pharmacy fills an average of 1300 to 1500 prescriptions each day. On some days, that figure exceeds 2000.

Facing page: The new and spacious treatment cubicles of the emergency room, with each area having its own wall-mounted equipment. **Below:** These well organized shelves in the pharmacy contain prepackaged medication in individual plastic boxes to help speed up the process of getting a prescribed drug.



HIDE AND SEEK BUT IT'S NO GAME

DRUG



Back in November 1972, the Navy had a Marijuana Detector Dog (MDD) who was quite advanced—he also had the technical ability to detect the seemingly odorless narcotic, heroin. Up to that time, the Navy had been slightly skeptical as to the feasibility of training dogs to detect heroin—which is quite a bit different from “grass.”

But, with the successful training of one heroin detector dog by Chief Aviation Ordnanceman Billy Smith, USN, the Navy decided on a pilot training program to determine the feasibility of training German Shepherds to detect heroin.

Three new teams, each comprised of one dog and one handler, were authorized to commence unique training courses at two different locations. Two of the teams were sent to the Washington, D. C., Metropolitan Police Department's K-9 Division, and a third team was trained under the direction of the U. S. Treasury Department, Bureau of Customs at San Antonio, Tex.

Two of these dogs and their handlers, Master Chief Machinist's Mate (SS) Joseph Gomez and Aviation Structural Mechanic (Hydraulic) 1st Class Donald Bolton, attended a four-week course, in Washington, D.C., during which the dogs were trained to seek out samples of heroin, ranging from 86 per cent (the purest form normally obtainable on the streets) to the smaller six and four per cent samples.

To say that the teams attended daily “classroom” sessions would be an academic nicety, for their classrooms weren't of the chalk and blackboard variety of one's schoolday memories. One classroom, for instance, was an abandoned garage full of bound stacks of old newspapers, a crib mattress and, stuck in a corner, the remains of an old automobile engine.

It was in this type of environment that the teams conducted their daily routine of “hide-and-seek” with drugs. An instructor planted samples of the drug in various inconspicuous locations. One heroin “plant” was concealed inside a bag of dry cement. These plants simulated those found under actual working conditions, ranging from boiler rooms to office spaces.

During the training, the handler places his dog with the command “Heel,” just outside the door of the room. With the command “Search,” the dog springs enthusiastically into action.

DETECTOR DOGS

According to Officer Murray, of the Washington, D. C., Metropolitan Police Department, a dog initially noses around the room to make sure there is nothing that will bite him. With the once-over completed, the dog gets down to the business of searching. Should the animal have difficulty, the handler calls him back and then starts a more controlled and systematic search. In this method of searching, the handler directs the dog to specific areas, thereby limiting the animal's area of search. First the team investigates the edges of the room and then it turns to the room's center. This method of search ensures the most efficient use of time and energy.

It is during this "systematic search" that the handler must be able, as Petty Officer Bolton puts it, "to communicate on the dog's level." The man must learn to rely more on the dog's sensitive faculty of smell and less on his own reason. "It is when a handler tries to outthink the dog's nose that he gets into trouble," Bolton continues.

This bond of trust is an important factor in the team's success. "A dog lives by his nose," adds Officer Murray, "as he doesn't have good eyesight." Sergeant Pitzer, former police department narcotic detector dog trainer, contributed some interesting figures from a report on the comparison of animal and human psychology by the University of Michigan. "A dog uses 86 per cent of his olfactory ability during a normal working day. Man, on the other hand, utilizes roughly 64 per cent. It is the man, then, who must be educated to use his dog's ability as a supplement to his own."

Communication is also very important to the success of the team. It is so important, that the personalities of man and dog are laboriously matched when they arrive at Fort Gordon, Ga., for the 13 weeks of basic instruction at the U. S. Army Military Police School. Men must learn to read their particular dog's "body language." They must be highly perceptive to the dog's movements, for even something as subtle as a slight hesitation can be an indication of a drug find.

Chief Gomez likens working with his dog, Rinty, to "working with a five- or six-year-old child. You have to get down to that level to communicate with the dog. When you're looking for marijuana, the dog is just making a game of it." The dogs are initially train-





ed in a game-like atmosphere. It begins as a game of toss and catch with a sealed package of marijuana between the dog and the handler. This game of toss and catch is soon expanded to encompass hide-and-seek. The dog quickly learns to pick up the location of the drug merely by its scent.

The detection of heroin's more subtle scent is real work for the dogs. Unlike marijuana, with its pungent scent, heroin registers such a faint odor that it is considered by some authorities to have no scent at all. The dogs really have to concentrate in order to detect its odor.

To maintain the game spirit, some handlers have invented ways in which to perpetuate the dog's interest. Petty Officer Bolton, for example, found that his dog, Ski, enjoys climbing. He has taught Ski to jump on his back in order to reach the tops of lockers, bookcases and storage cabinets. Petty Officer Bolton claims that it enhances the effectiveness of his dog. "It seems to make him more excited and he works better."

"The dogs work for nothing but praise," Chief Gomez noted as he roughhoused with his dog. "We don't use food as a reward. I just tell mine what a good dog he is. That is all he needs to hear." The dog's main motivation is to please his master and all he needs is praise and affection in return. "You can't give your dog enough praise," he added.

According to Mr. Cahill, the civilian trainer of the Washington, D. C., Metropolitan Police Department's

K-9 Division, it takes both training and experience before the teams are considered to be working at peak efficiency. "We can only give the teams basic training—not experience," he says. "Teams become more proficient as they gain time and experience on the job."

Ski and Rinty are just two of the 28 marijuana detector dogs in the Navy and are among the four dogs which are now certified as having the dual capability of detecting both marijuana and heroin. Barely a year old when purchased by the Bureau of Naval Personnel from the DOD Military Working Dog Center at Lackland AFB, Tex., the dogs are sent, upon completion of team training, to heavily concentrated military areas.

Master Chief Gomez has returned to the Naval Amphibious Base, Coronado, where he was previously working as Assistant Chief of Base Security. Petty Officer Bolton has returned to Naval Station Rota, Spain, where he will be the only Navy MDD handler in his area. Stationed at 18 CONUS and 10 overseas areas, the teams work in conjunction with local security department officials and naval investigative agents.

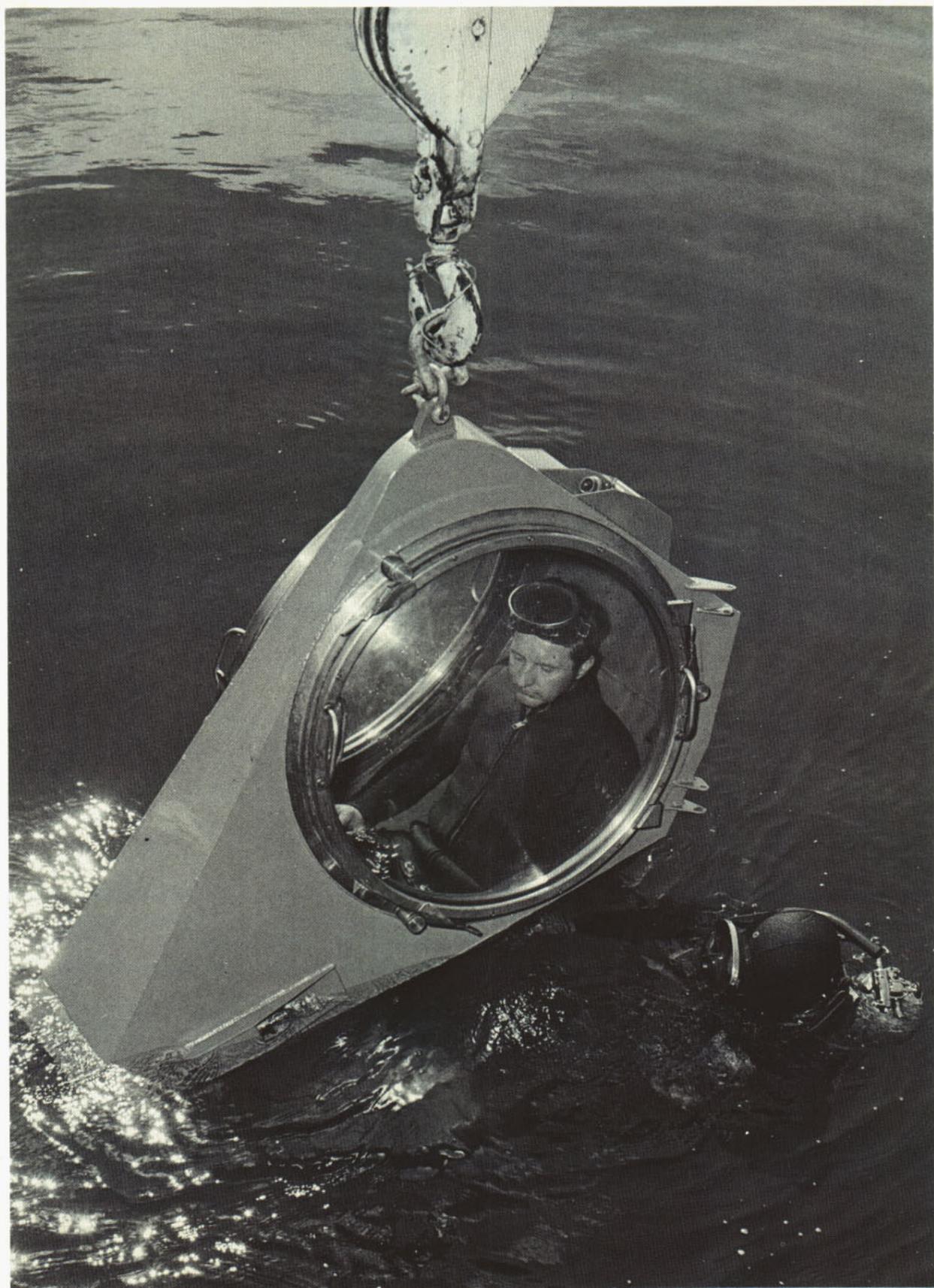
This form of drug detection may be looked upon as "just a big game" by the average canine admirer, but to the hardworking canine detector teams it's "all business."

—JOSN Mary Savage, USN



Left: MMCM(SS) Joseph Gomez and "Rinty" find a packet of drugs concealed in a telephone booth. Above: During routine training, "Rinty" finds drugs in a briefcase. Right: AHM1 Donald Bolton encourages "Ski" to dig out his find.





ON THE SCIENTIFIC FRONT

Underwater Observation Capsule Designed to Inspect Ship Hulls

An underwater observation capsule was successfully tested at San Diego's Naval Undersea Center aboard the research vessel *Cape*. The compartment was part of NUC's Hull Inspection Platform (HIP). During the tests, a prototype nicknamed "dragonfly" was lowered by crane into the water alongside *Cape* and a safety diver monitored the tests. A two-hour unmanned submersion on the bottom of San Diego Bay was also undertaken before manned tests took place.

When the system is completed, the pod will be attached to an articulated arm assembly similar to the "cherry picker" type mounted on a self-propelled steel pontoon platform.

When the five-foot observation compartment is lowered into the water, it will provide a movable platform for inspecting ship hulls and underwater structures. The boom can be controlled either from the compartment or the catamaran type platform.

Deployed, HIP, with its capsule, can place an operator/observer in a shirtsleeve environment at a depth of about 24 feet. Most inspection tasks, however, will not call for depths below 16 feet. The capsule can be placed under a ship's hull or an overhanging structure as much as eight or 10 feet.

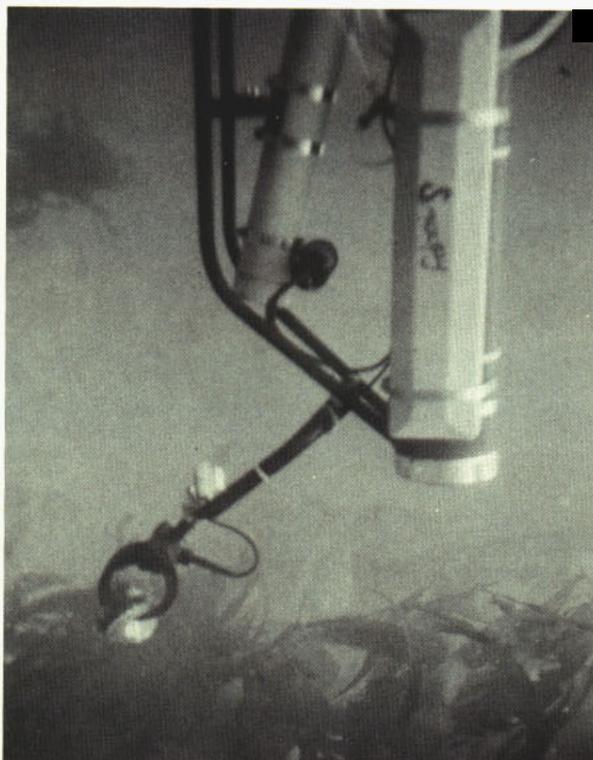
The observation pod weighs 550 pounds and has acrylic port-hatches on each side allowing virtually unobstructed visibility. The compartment's air control and communication lines are connected to the

platform. In addition to the system's primary function, it can be adapted for fighting underdock fires, light salvage or direct supervision of marine engineering.

Modified Underwater Television System Now Has Arm and Claw

Snoopy, the underwater television system used by San Diego's Naval Undersea Center, has been modified. It is now more portable than it once was.

The highly useful submarine TV vehicle was given a sturdier, lightweight frame made of anodized alum-



Left: Engineer Larry McKinley prepares to submerge in the "dragonfly," which will be used to inspect ships' hulls and other underwater structures. Right: The new grabber arm of the submarine TV vehicle "Snoopy" picks up a large seashell in 50 feet of water off Catalina Island.

inum. This made *Snoopy* four feet long and 15 inches high—about six inches shorter in each direction. The small size and light weight of the vehicle (50 pounds) allow it to be operated easily from small surface vessels or packed with its controls in a shipping container for airlift to any part of the world.

Snoopy is equipped with a light and small television camera which enables it to be operated through remote control. The operator watches underwater landscapes through a television monitor mounted in his surface control console. Depth is controlled by varying the buoyancy or displacement of the vehicle.

Snoopy's capabilities were also increased by the addition of an arm and claw, a compass and an automatic depth control. The latter permits the underwater camera to hover at any depth which the operator selects using a dial on his hand-held control box.

The new claw permits *Snoopy* to accomplish other tasks in addition to its underwater viewing capability. Its arm can pick up small objects or place instrumentation, such as beacons, on the ocean floor at depths to 100 feet.

Undersea Catamaran to Simulate Deck of Submerged Sub for Training

A new underwater device was recently delivered at Coronado, Calif., to Naval Inshore Warfare Command Pacific. It was designed and engineered in Hawaii by the Ocean Sciences Division of the Naval Undersea Research and Development Center's ocean technology department and assembled at NUC's San Diego headquarters.

Called a submersible training platform (SUBTRAP), the undersea craft has a pair of three-and-a-half-foot diameter fiber glass pontoons, on either side of a steel mesh deck. Side rails above the decking contain six sealed buoyancy tanks which keep the platform in an upright position. The rails also contain floodable variable ballast tanks. Control of SUBTRAP is accomplished from the surface by selective flooding and/or blowing air into the ballast tanks to raise, submerge or trim the platform.

SUBTRAP is designed to be towed by a surface ship. It can hover in a stationary position at depths to 100 feet or be towed slowly while underwater.

SUBTRAP will be used for diver training, some of which could be of an unconventional nature. For example, a class of 40 scuba divers could ride the platform down rather than going over the side of a boat as they usually do.

The platform also has salvage possibilities. SUBTRAP can lift a two-ton object from the seafloor and its ability to hover near the bottom makes it a good



search platform from which divers could locate sunken objects.

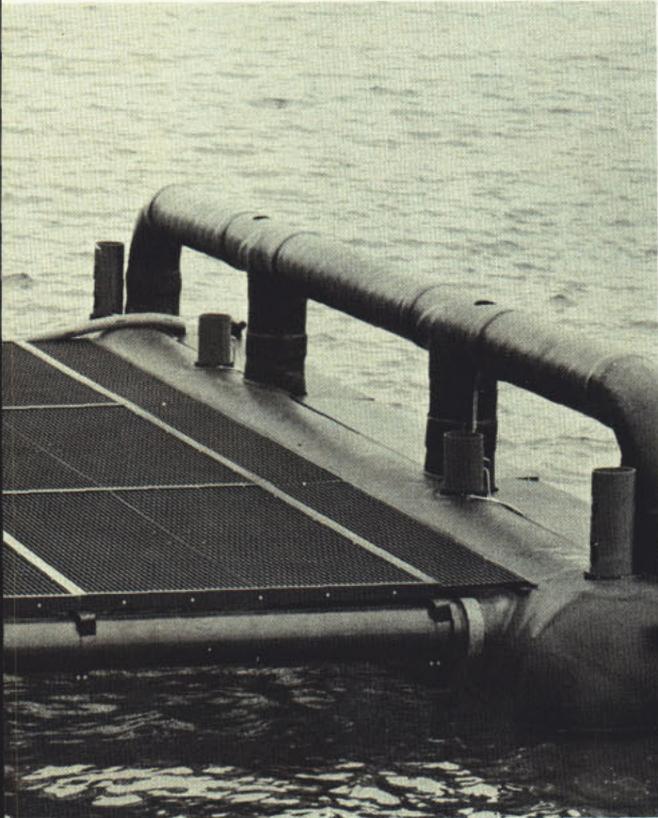
A second platform similar to the 24- by 36-foot SUBTRAP is being assembled for early delivery to the Atlantic Fleet.

Skywave Radar Proves Successful Monitoring Wide Area Sea States

Skywave radar has successfully observed sea conditions over an area extending hundreds of miles from shore-based antennas in experiments conducted by the Commerce Department's National Oceanic and Atmospheric Administration.

NOAA engineers believe the technique to be an ideal method for remotely sensing sea states and other oceanic conditions out to great distances from land. For example, according to NOAA, one skywave radar site in Kentucky could observe the ocean's surface behavior along the entire Atlantic coast and some 1200 nautical miles out to sea.

Below: Navy divers prepare to submerge the Submersible Training Platform (SUBTRAP), which will be used to simulate the deck of an underway submarine for the purpose of training divers.



The radar-scanning technique would also help in predicting destructive wave activity along the coast, permit routine computations of average wind conditions over the scanned areas and provide a means of locating and tracking ships and small craft in distress anywhere within the radar's range.

While more familiar types of radar send out signals along a line of sight then "listen" to the returned echoes within the signal's path, skywave radar beams high frequency radio signals toward the ionosphere. The signals are then reflected earthward at great distances from the radar. Echoes (backscatter) returning to the transmitting site over the same path can be used to infer the ocean wave heights, length and direction of travel.

Naval Aviators May Learn to Fly By Vibrating Instruments They Can Feel

Pilots who wonder how they can watch a multitude of dials and still look outside their cockpit may have relief in sight. The Office of Naval Re-

search is investigating the feasibility of conveying some flight information by means of coded vibrations to the body rather than by sight alone.

Tiny transducers attached to the pilot's body are being considered for transmitting signals concerning an aircraft's behavior thereby reducing a pilot's dependence on the maze of instruments that are part of a military aircraft cockpit.

Watching a plane's instruments is a fatiguing task, complicated by the fact that the pilot must also maintain visual contact with the scene outside. In shifting his attention back and forth, the pilot is apt to overlook some vital information.

A substantial percentage of midair collisions, in fact, have been blamed on the pilot's failure to maintain sufficient surveillance of the external scene.

To test whether or not body stimulation can be substituted for sight, transducers have been attached to the hand, back, chest and other sensitive areas of the pilot's body. A "vocabulary" of vibrations, tiny electrical currents and other similar stimulation has been developed to inform the pilot concerning such flight parameters as roll, pitch or angle of approach. Actual tests using tactile stimuli will first be used in a cockpit mockup and eventually in real flight situations.

Tests Study Use of Inflatable Bags To Aid Downed Helicopters in Water

The use of inflatable air bags as a means of preventing helicopters from capsizing after being ditched at sea is being studied by the Office of Naval Research. Because a chopper's large rotor and engine make it inherently top-heavy and unstable, a tilt of a few degrees from vertical can cause the craft to flip over when ditched. Careful tests and analyses have shown that this frequently occurs in less than a second after the aircraft hits the water.

The concept of air bags to stabilize helicopters on the water's surface was investigated by the Navy as far back as 1958. Until recently, however, materials and technology were not sufficiently advanced to permit the development of an effective system.

Recent experiments have used a helicopter "stability" model which was repeatedly dropped at various angles into a tank full of water. Air bags stowed in tubular structures projecting from the sides of the model were inflated before it hit. Preliminary results showed that the air bags stabilized the model to roll angles of about 30 degrees from the vertical without overturning.

Information from the tests will be used to plan and conduct further studies using an actual helicopter and eventually to deploy and incorporate an air bag system in Navy helicopters. Such a development promises to benefit not only the Navy but also other agencies such as the Air Force, Coast Guard and local police departments that operate choppers over water.



the ROLE of BLACK SAILORS in the MAJOR WARS of AMERICA

The following article is one in a continuing series appearing in ALL HANDS concerning Black American Navy-men. This report was written, in an extended off-duty project, by Chief Storekeeper Leonard W. Hailey, USN, who is himself a Black American. Chief Hailey, currently serving in USS Moale (DD 692), has completed 17 years of active naval service, during which he has seen a variety of duty, ashore and afloat, including service in USS Furse (DD 882), Everglades (AD 24) and Opportune (ARS 41). As a member of the ship's crew or at shore activities, he was commended for salvage operations afloat and a job well done in deployment to Da Nang, Vietnam, and contributions to the Naval Support Activity, Brooklyn, N. Y. He has been authorized to wear the Fleet Marine Force Combat Operations Insignia, and the Navy "E" for services with Mobile Construction Battalion One, and wears the Expert Pistol Medal along with his other awards.

Chief Hailey's report highlights the role of Black American sailors from the period of the Revolution to the Vietnam conflict. For earlier articles in this series, check the following reports appearing in ALL HANDS: "Black American in the Navy," November 1969; "Navy Charter on Race Relations and Equal Opportunity," April 1971; "Black Heritage from the Days of Columbus to the Present," September 1971; "Squadron Commander," June 1972; and "The Story of Four Ships and the Men They Honor," February 1973.

the ROLE of BLACK SAILORS

AMERICA was born of courage. It was discovered by fearless men who sailed uncharted seas in search of the unknown. This country gained independence because gallant men dared to place the search for freedom above life itself, and challenged a superior enemy to win it. The experience of settling America and the burden of defending it have been shared by men of many continents.

Blacks are among those who helped build the nation, defend it in war and move it forward in peace. Over the centuries they have fought in every major

dom took precedence. If a sailor was a slave, he was emancipated after three years of military service.

Among the Blacks who distinguished themselves in this war was James Forten, a 14-year-old powder boy who participated in the victory over several English vessels. He was later captured by the British and made a prisoner of war. Forten was placed on board the English ship *Amphyon*, where he was offered liberty and a life of ease in England by the captain, with whose son he had become very friendly aboard ship. When tempted by such prospects he would always say, "I am a prisoner for the liberties of my country and I shall never prove traitor to her interests." Forten was finally sent to the prison ship, *Old Jersey*, where he was detained by the British for about 14 months. After the war he went on to become a wealthy sailmaker in Philadelphia.

Other Blacks who distinguished themselves in the Revolutionary War were Captain Mack Starlin and Caesar Terront. Captain Mack Starlin, the only Black naval captain in Virginia's history, made night raids on British vessels in Hampton Roads. Apparently Starlin was from a state that had not promised freedom to slaves after serving their country, because he was reclaimed by his master after the war and died in slavery.

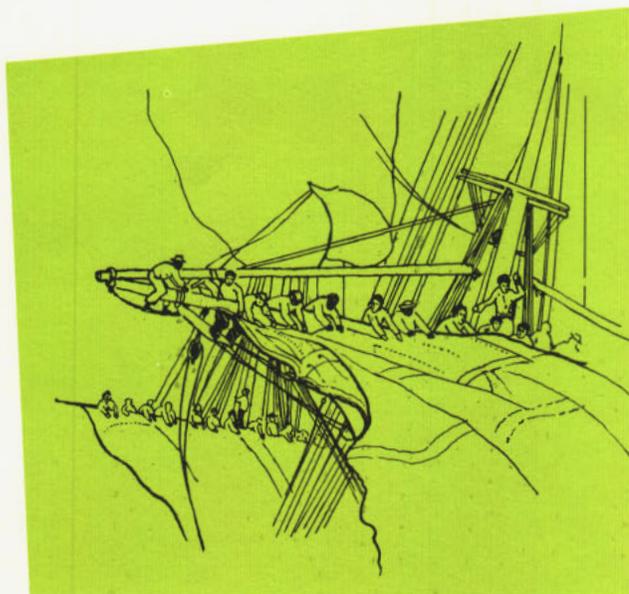
Caesar Terront was piloting the Virginia vessel, *Patriot*, when it captured the British brig *Fanny*. He was cited for his gallantry in action and his freedom was later purchased by the Virginia legislature.

The Continental Navy was limited because of its small size. But the American privateers played an important and courageous role in the harassment of British shipping, capturing or slowing down the movement of supplies needed to fight a war across 3000 miles of ocean. No British shipping was secure while they sailed the seas.

The tiny official Navy that fought for America's independence quickly disappeared after the Revolution. Its last ship, *Alliance*, was sold in 1785 and little remained for more than a decade except fighting traditions.

After the Revolutionary War, the absence of naval strength soon proved nearly disastrous. Barbary pirates of North Africa in the 1790s began capturing American merchant ships and imprisoning their crews. The imprisonment of American crews was also practiced in the quasi-war with France beginning in 1799, followed by "indenturing" American seamen by the British in the early 1800s. Again, as in the Revolutionary War, a fleet had to be created with a war in progress.

In 1794, public sentiment had moved Congress to authorize the building of six frigates to protect America's interests. The program was later cut in half. Two of the ships built, *Constitution* and *United States*, were 44-gun "super frigates," more powerful than any ships of the foreign navies. Along with the smaller *Constellation*, they were launched in 1797 and were ready for



American conflict, even when subject to discriminatory treatment and second-class status.

At the outbreak of the Revolutionary War in 1775, the United States was not yet in existence and the united colonies had no navy. Thus, vessels previously used for traffic and trade had to be outfitted with equipment for war at sea. Many of these warships, some of which were captured or destroyed by the British, were manned by men of color.

In the Navy's first sea fights of the Revolutionary War, 1500 Black Americans served their country—manning boats, working sails, loading guns and piloting coastal vessels. The Navy needed men desperately and ship commanders were often forced to rely on Blacks to help man the ships because of shortages or desertions among the crew. Most of the 13 states promised freedom, money and land to Blacks in the service; therefore, many volunteered to serve their country. Although some had patriotic motives, free-

sea in 1798. Here was the beginning of the permanent Navy of the United States.

Benjamin Stoddert, the first Secretary of the Navy, banned the deployment of Black sailors aboard ships, thus disrupting a nonracial enlistment policy, which had been in effect for many years. Nevertheless, a few Blacks slipped past the ban, including William Brown, a gunpowder loader on *Constellation*, and George Diggs, quartermaster of the schooner *Experiment*.

In the early days of the 19th century, America struggled to influence the world political scene and establish itself as a nation of power. A nation dependent on imports from abroad, America began supplying France with goods declared contraband by the British, who were then fighting France. American ships were often fired upon, boarded and searched by British seamen to halt the flow of such goods to France.

In June 1807, *Chesapeake*, a United States navy vessel, was attacked by the British man-of-war *Leopard*, almost in the harbor at Norfolk, Va. American resentment reached its peak when three American sailors were killed, 18 wounded and four seized and held on charges of desertion from the British navy. One of them was executed; the other three, all Blacks—Daniel Martin, William Ware and John Strachan—were able to prove they were Americans and were

released.

These were some of the events leading up to the second war with England.

The War of 1812, the fledgling Navy's next test in defending the newly formed United States, was waged primarily at sea. During this conflict with the British, one of every six U. S. sailors was black. Commander Perry, the most famous naval figure associated with this war, was initially dissatisfied with the men that were sent to him by his superior. Among them were "blacks, soldiers and boys," and at first he criticized them sharply. Commodore Chauncey was irritated at his subordinate's sharp criticism and declared:

"I have yet to learn that the color of the skin or the cut and trimmings of the coat affect a man's qualifications or usefulness. . . ." Chauncey praised his men and said, "I have nearly 50 Negroes aboard this ship and many of them are among my best men."

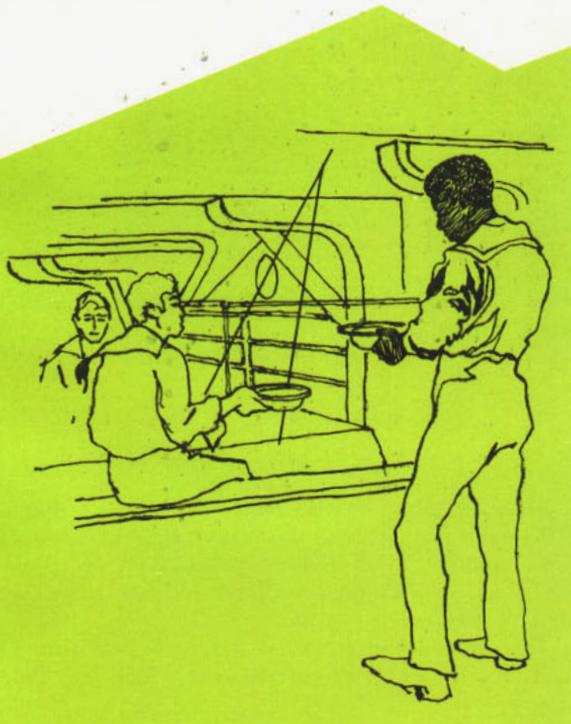
After Perry won the key Battle of Lake Erie, he gave unstinted praise to the Black members of his crew and declared that "they seemed absolutely insensible to danger," despite the circumstances under which they served. For example, crews had to endure the lack of fresh water aboard ship, which impaired the health of many sailors and caused widespread discomfort. The white and Black seamen messed together and shared the same sleeping quarters. There seemed to have been complete absence of prejudice against the Blacks as shipmates among the crew.

Other naval officers spoke of the gallantry of Black sailors. Nathaniel Shaler, the commander of the schooner *Tompkins*, said the name of John Johnson, a Black seaman aboard his ship, should be registered in the book of fame. As Johnson lay dying after he had been struck by a 24-pound shot, he exclaimed, "Fire away my boys; no haul the color (the American flag) down." Another Black, John Davis, who was struck in much the same way, begged Commander Shaler to be thrown overboard, saying he was only in the way of the others. "When America has such tars, she has little to fear from the tyrants of the ocean."

No event in the story of Blacks in the New World is more important than the American Civil War. Black slavery, both as a moral issue and as the focal point of the Southern economic system and cultural pattern, was an important causal factor leading to the war. Military necessity, as in previous wars, gave the Black the opportunity to do his share of fighting. It was not until the Civil War that the Black was made a permanent part of the military establishment.

In September 1861, the Navy Department authorized the enlistment of Blacks "when their services can be made useful under the same forms of regulations applying to other enlistments." Afterwards, Blacks served with the Navy in various capacities.

During the Civil War, one out of every four Union sailors was a Black. Some were slaves and some were



the ROLE of BLACK SAILORS

freedmen. They served as gunners, loaders, coal heavers, stewards and firemen. On the docks, they unloaded supplies and other equipment. Black river and harbor pilots were among the best operating in the States.

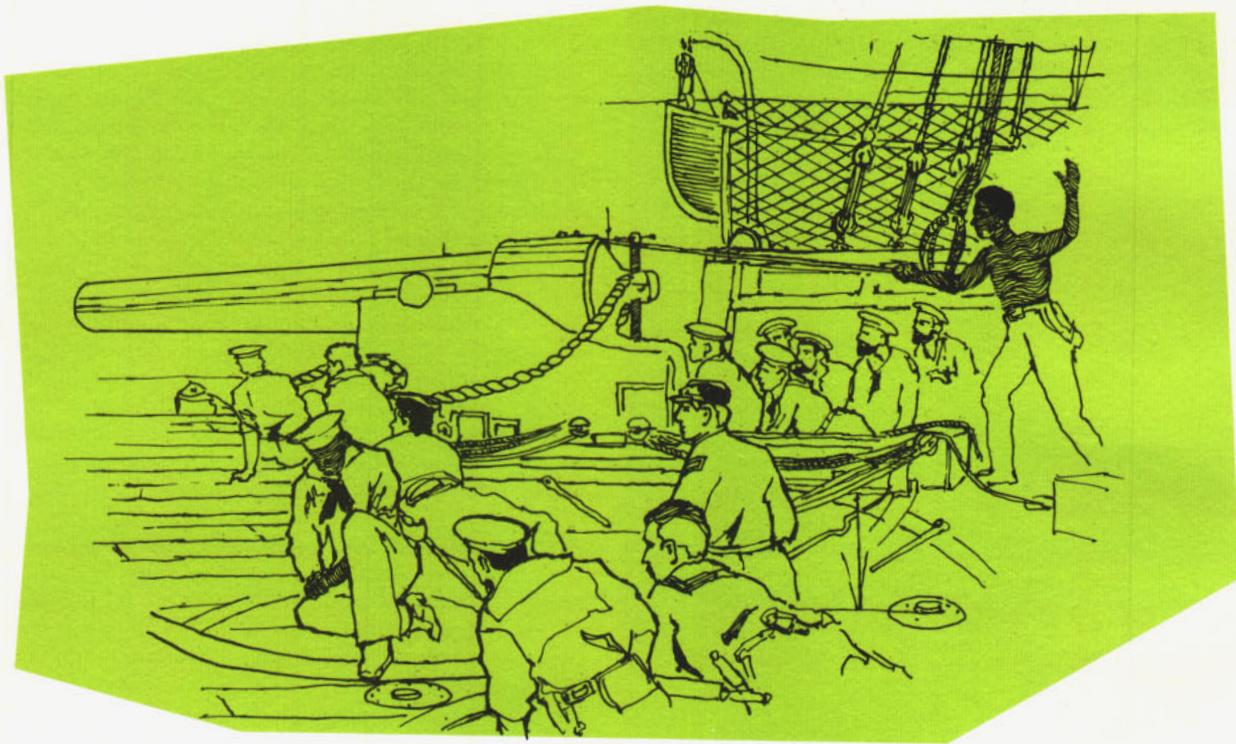
No definitive record exists to determine the number of Black seamen that fought on the side of the Confederacy during the Civil War. To accept Blacks in the military service would be an acknowledgement of their equality with whites; therefore, Confederate public opinion was against arming them. However, the Confederate government recognized their value and hired Blacks in noncombatant roles. Of the 400 workers in the naval arsenal in Selma, Ala., in 1865, for example, 310 were Blacks.

On the night of 13 May 1862, when the ship's officers were ashore, Robert Smalls, a Black pilot, with an escape party of 15 slaves, got the Confederate gunboat *Planter* underway and delivered it to the Union Navy in accordance with a previously arranged plan. He and his crew enlisted in the Union Navy and

gress and served five terms as a representative from South Carolina.

During the Civil War, Robert Blake and Joachim Pease, both Union sailors, won the Congressional Medal of Honor for valor in combat conditions. Pease, a Black gun loader aboard *uss Kearsarge*, was cited for "marked coolness, good conduct, and qualities even higher than courage and fortitude." It has been said that James H. Lee fed the powder and Pease loaded the cannon that delivered the mortal blow that sank *Alabama*, a Confederate warship, off the coast of France.

Blake was sailing on board the U. S. steam gunboat *Marblehead* off Legareville, on the Stono River, on Christmas Day in 1863, when the gunboat was involved in an engagement with the enemy on John's Island. Serving the rifle gun, Blake, an escaped slave, carried out his duties with great courage throughout the engagement which resulted in the enemy's abandonment of its positions, leaving a caisson and other equipment behind.



were rewarded by Congress for their bravery. Smalls was invited to Washington to meet the President. For their brave acts, Smalls and his crew were awarded half the cash value of the ship and its cargo by President Abraham Lincoln. Smalls served throughout the war as the commanding officer of *Planter* until it was decommissioned in 1866. He was later elected to Con-

Black casualties in the Union Navy numbered about 800, about a quarter of the Navy's total of 3200 victims. Another 2000 Black seamen died of disease, which killed more men—on land and sea—than every kind of weapon.

The surrender of the Confederacy in 1865 brought to a close a period of enslavement which had lasted

for almost 200 years. This meant victory for the powerful military forces of the North and an indestructible Union. To find the perfect balance between freedom and security was perhaps the greatest problem that arose in the post-Civil War years.

Toward the end of the 19th century, Cuba was involved in an effort to gain its independence from Spain. In January 1898, the American battleship *Maine*, with at least 30 of the Navy's 2000 Black sailors among its crew, was ordered to Havana to protect American life and property. On 15 Feb 1898, an explosion of undetermined origin sank *Maine* in the Havana harbor with a loss of more than 250 officers and enlisted men. Twenty-two Black Americans were among those killed, four were injured and four escaped injury. With the loss of life for 22 of their comrades, Black Americans were anxious to help bring independence and freedom to Cubans, many of whom they knew were Blacks and mulattoes.

The United States Navy struck its first blow of the Spanish-American War in the Philippines—not Cuba. Commodore Dewey led his squadron into Manila Bay and obliterated the Spanish fleet that was anchored there. No American lives were lost and only seven men sustained wounds. Sea battles soon started in the Atlantic and the Spanish suffered a crushing defeat, with their ships either sunk, burned or captured. The American fleet was virtually untouched.

Daniel Atkins, a Black American sailor aboard *uss Cushing*, risked his life to rescue a young officer who had been swept overboard when a lifeline broke. Unfortunately, the officer was dead. Atkins was praised for his gallant conduct and awarded the Medal of Honor.

After an explosion ripped *uss Iowa*, Robert Penn, another Black American sailor, moved hot coals from the steam boiler to a safe place to prevent another explosion. For this act, performed at the risk of serious injury, Penn also earned the Medal of Honor.

Spain sued for peace, signed the armistice and withdrew from the Western Hemisphere. The United States emerged as a world power.

Next came World War I. After four neutral unarmed American merchant ships were sunk, accompanied by a heavy loss of life, the United States declared war on Germany in 1917. The declaration won widespread support from a nation that was eager to "save the world for democracy." Thousands of Blacks volunteered although for Black Americans there was at that time precious little "democracy" in a segregated society. Of the 10,000 Black Navy volunteers, all but a few were assigned to the messman branch. It was obvious that segregation was becoming a part of the Navy's policy. In all fairness to the Navy, it should be stated that reaction and discrimination in the service were but a reflection of the national social pattern.

As the opportunities for Blacks were cut off, so were their chances during World War I to do excep-

tional and valorous service for their country. Thus, a long and honorable history of bravery and heroism came nearly to an end. Few records if any are to be found that show extraordinary service in the line of duty comparable to that shown by Black Navy personnel in previous wars. A man cannot show valor if he is not allowed to share the risk.

During those early wars the situation in this regard had been different in the United States Navy. For example, the names of Blacks were put on ships' lists without any mention of color. They shared eating and sleeping quarters with white sailors, and worked and fought side by side. Although they could not become commissioned officers, Black sailors could rise high enough as petty officers to captain a boat.

When the size of the Navy was curtailed in the



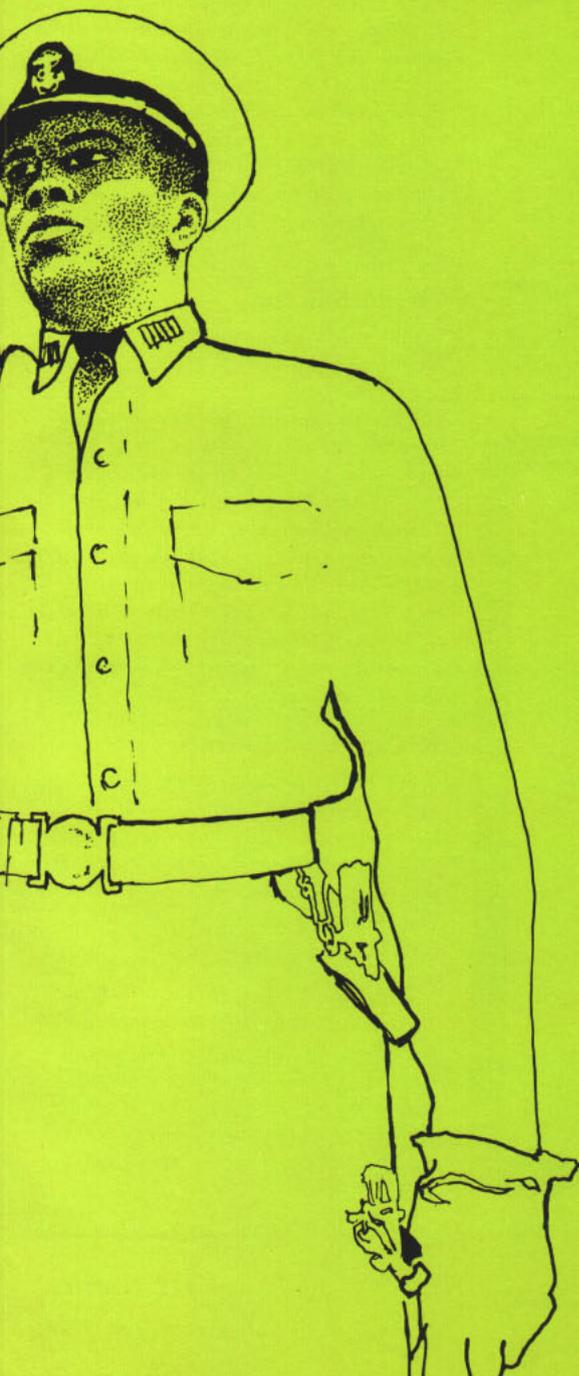
the ROLE of BLACK SAILORS

general disarmament movement following World War I, enlistment of Blacks was nearly discontinued. It was not until 1932 that active recruiting of Blacks began and in June 1940, there were only 4000 Black Americans in the Navy, a majority of whom served as messmen.

World War II blasted its way into the American scene on the infamous morning of 7 Dec 1941, when Japanese fighters flew over Pearl Harbor and rained a hail of bombs and bullets on the slumbering United States naval base there. During this attack, Doris Miller, a Black mess attendant aboard *uss West Virginia*, helped his wounded captain to cover, manned a machine gun with no previous experience, and destroyed at least two attacking airplanes.

For his courage and gallantry Miller was awarded the Navy Cross and advanced to mess attendant first class. Miller was honored as one of the first heroes in World War II. Although it finally cost him his life, Doris Miller's courage won more than the Navy's highest award for himself. His example helped trigger a drive for greater opportunity in the military services





for others of his race. Miller was killed in 1943 when the aircraft carrier *uss Liscombe Bay* was torpedoed and sunk by a Japanese submarine.

During the battle for the Solomon Islands in the western Pacific, Leonard Roy Harmon on board *uss San Francisco*, an aircraft carrier, rendered valuable assistance in evacuating the wounded and caring for them at the dressing station. He was killed by enemy gunfire while trying to protect a shipmate. *uss Harmon*, a destroyer escort, was named in his honor and launched in 1943. For his courage in combat, he was awarded the Navy Cross.

After the beginning of the war, Blacks protested the discrimination the Navy had shown toward them because they were still assigned, for the most part, to the messman branch. To meet the requirements of combat conditions, every man aboard ship was trained to be utilized at battle stations in emergencies. Thus, Blacks were trained at many jobs remote from their ratings and welcomed the opportunity afforded them to join their shipmates in actual combat.

In 1942, the Secretary of the Navy announced that the Navy would accept the enlistment of Blacks for general service and as noncommissioned officers. By 1944, approximately 165,000 Blacks served in the Navy.

Today, Blacks are active participants in all aspects of Navy life. The 36,000 Blacks now serving with their shipmates are divided among all pay grades (from seaman to admiral), all ratings and all jobs. Their way, however, was paved by a long tradition, dating back to the first days of the Revolutionary War. Blacks have fought in every major American conflict and come away with a substantial share of its citations and decorations. Courage, not color, has distinguished Blacks and whites who fought for survival against a common threat from man or nature.



SKC Leonard W. Hailey, USN

letters

Transfer to Fleet Reserve

SIR: I am currently stationed at HQS AFSOUTH, Naples, Italy, and married with four dependents. My home of record is in the Republic of the Philippines. I put in my application for transfer to the Fleet Reserve and plan to effect this transfer in Naples. After my separation, I plan to travel to my "home of record" and then go back to CONUS with my family after a short vacation. Will travel straight to my "home of record" from Naples be construed as travel on a space-required basis for myself and my family? How will this affect my one-year privilege for choice of "home of selection?"—J. T. N. PNI

●Travel to your home of record in the Republic of the Philippines and then to a home of selection within the continental United States is not authorized at government expense upon your transfer to the Fleet Reserve. A member on active duty, upon being transferred to the Fleet Reserve, may select his home and be entitled to transportation from his last duty station to that home of selection. Travel

to a selected home must be completed within one year after termination of active duty. Your entitlement to travel at government expense will be limited to travel from Naples, Italy, to your selected home, via the most direct and least expensive route available.

Specifically, you have no entitlement to travel to your home of record unless you so designate that home of record as your home of selection after your transfer to the Fleet Reserve. If so designated, no further travel will be authorized at government expense, and travel from the Republic of the Philippines to the continental United States would have to be at personal expense, or via Military Airlift Command (MAC), on a space-available basis.—ED.

Tax Liability

SIR: Could you please explain tax liability of resident and nonresident aliens in regard to service in the U. S. Navy?—R.T.C., DK2, USN.

●The tax liability of an alien depends on his status as either a resident alien or a nonresident alien. The resident alien is one who has either applied for U. S. citizenship, indicated his intent to remain in the United

States for an indefinite period or who has moved his family to the U. S. and established a home for them. When he takes leave outside the U. S., his income remains taxable as income earned within the U. S. in the same manner as that of any other U. S. citizen who takes a vacation outside the States.

The nonresident alien on the other hand is taxable only on income earned within the United States. If he is attached to an activity within the U. S. or serving on board a vessel normally operating within the U. S., all pay earned while so assigned is considered as pay from U. S. sources, whether it is for duties performed or leave taken, and is subject to taxation. If the nonresident alien member is assigned to a shore base located outside the United States, on which the enlisted members are entitled to sea duty pay, his pay is considered as being earned outside the United States, whether it is for duties performed or leave taken and is not subject to taxation.—ED.

PNs for Sub Duty

SIR: Are personnelmen eligible now for submarine duty?—F. C., PN2, USN.

●Personnelmen who have served a minimum of 24 months in their current billet and are otherwise eligible for submarine duty (IAW Ch. 10 of TransMan) may now request submarine duty. Owing to the shortage of high-caliber YNs, PNs are actively being recruited for submarine duty at this time. A forthcoming change to the TransMan will reflect this policy change.—ED.

AdCop Requirements

SIR: My question deals with the ADCOP program. Must a man have five years' service upon acceptance and admission to the college? And is that five years for pay purposes or five years of active duty?—R.L.H. ETR2.

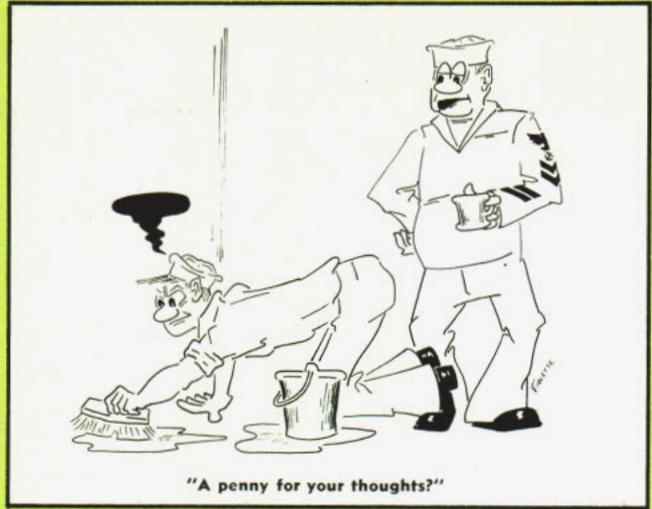
●BuPers Notices 1510 of 15 Jul 1970 and 23 May 1972 state applicants must have at least five years of continuous active naval service as of 1 September of the fiscal year in which attendance at the ADCOP college would commence. No waivers are granted.—ED.



QM1 Thomas J. Blessing



MT1 Edward Violette



LTJG Frederick W. Well



IC1 Jeremiah H. Paoli



MMFN Brian D. Smith



on the serious side

All Hands PHOTO CONTEST

Ever since George Eastman invented the box brownie, American Navy men and their cameras have been inseparable. Fact is, there are few parts of the world—let alone few of its famous structures or natural wonders—which have not been recorded on film by men and women of the Navy, their families and their dependents.

Now ALL HANDS Magazine offers all Navy men and women—those on active duty or retired—and their dependents, a chance to cash in on their photographic expertise. The awards for the three top winners: First Prize will receive a three-year subscription to ALL HANDS; Second Prize will receive a two-year subscription; and Third Prize will receive a one-year subscription.

Three categories have been set up, although the top three prizes will cover any or all categories:

- A Navy theme: Navy men and women on the job, Navy scenes, or ships and units in action.
- Navy life: recreation—liberty—travel.
- The Navy family.

Entries can either be a single photo or slide, a series, or they can take the form of a pictorial story. All entries must be current work—that is, photos which have been executed during the 1973 calendar year.

Each contestant may submit as many entries as desired.

Submitted photo work can be either black and white photo prints, color slides or transparencies, or Type C color prints. Black and white photos should be at least 8" x 10" in size, and printed on glossy paper. All entries must be accompanied by an identifying sheet (attached to the edge of each photo or slide by tape) listing the contestant's name, rank/rate, social security number, present duty station and complete mailing address—plus an identifying caption of the photo or picture story. In cases of dependent children submitting work for consideration, their name, age, and the name and location of the school attended should also be listed.

All photographs should be mailed flat and protected by heavy cardboard or other stiffener; the same applies to slides and transparencies. Do not write on the backs of photographs—put all pertinent information, along with any titles, on the attached identification sheet.

Winners will be announced as soon as practicable after the contest closes, and winning photographs will appear in ALL HANDS. Other photos—though they may not win a prize—will receive honorable mention and also will appear in ALL HANDS from time to time.

Deadline: Entries must be mailed prior to 31 Dec 1973.

All entries become the property of ALL HANDS and will not be returned to the contestants. Send your entries to:

ALL HANDS Photo Contest
ALL HANDS Magazine
Bureau of Naval Personnel (Pers 164)
Navy Department
Washington, DC 20370

The All Hands Staff

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AT RIGHT: "NAVY DIVER"—Photo by PHC Chip Maury is a personality portrait and one of the 1972 Military Pictures of the Year. See story on page 48. 



ATTENTION!

shutterbugs...

All Hands

PHOTO CONTEST

..... categories!

1. A NAVY THEME
2. NAVY LIFE
3. THE NAVY FAMILY

<< SEE PAGE 64 FOR DETAILS >>

