

NAVAL AVIATION

NEWS



SIXTH FLEET AVIATION

44th Year of Publication

APRIL 1963

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COMPUTERS WITH HAWKEYE WINGS

Scheduled for fleet introduction early next year, the E-2A Hawkeye represents startling changes in the Airborne Early Warning capability of the U.S. Navy. As part of its mechanical 'personality,' the Hawkeye gives USN carrier aviation its *first* turboprop engines, reversible propellers, pressurized cabin, nose-tow catapult gear. Among its five tons of avionics are two digital computers. Grumman claims that one Hawkeye, airborne over New York City with a five-man crew, could maintain surveillance of all air traffic in that area, plus Boston . . . Albany . . . Washington.

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FORTY-FOURTH YEAR OF PUBLICATION APRIL 1963

■ IN THIS ISSUE

- Might in the Med** 6 *Exercises and training make the Sixth Fleet a sharp, potent force.*
- VAH-1 to A-5A** 11 *Veteran squadron phases easily into new supersonic operations.*
- Overseasmanship** 12 *A remarkable man sells an old product with winning salesmanship.*
- Keeping a Weather Eye** 14 *Cdr. Jack Hunt describes the work of the Navy's Hurricane Hunters.*
- Magnetism** 18 *A quick recap of Project Magnet is given by Sam Polson, JO1.*
- Biggest Photo Lab** 20 *The Navy's Photographic Center celebrates its 20th year of service.*
- Evolution of Carriers** 27 *Wartime Japanese construction cannot balance wartime attrition.*
- Tactical Handbooks** 36 *A new concept in doctrinal publications is described by LCdr. Roland E. Aslund.*

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■ COVERS

Sixth Fleet representatives did a thorough job in reporting air operations. Not only did they send in the article, but they also prepared a montage for the front cover. Above picture of Hawk-eyes over Long Island was submitted by Grumman Aircraft Engineering Corp.



NAVAL AVIATION NEWS

Navy Gets a Dividend VA-44 Splits into Two Squadrons

Attack Squadron 44, based at NAS JACKSONVILLE, split its missions and divided its aircraft to form two separate units.

The jet training phase of the parent squadron moved to NAS CECIL FIELD and retained the title of VA-44 while the propeller-powered attack training phase became Attack Squadron 45 and remained in Jacksonville.

Cdr. Luther H. Elliott, former Executive Officer of VA-44, assumed command of VA-45 while Cdr. M. C.

Griffin continued commanding VA-44.

The move to Cecil involved some 500 men. About 145 men remained at Jax to form the new squadron.

VA-25 Moves to Lemoore Is One of Five Units Transferred

Attack Squadron 25 was the first of five squadrons to complete a change in permanent duty station from NAS MOFFETT FIELD to NAS LEMOORE. The squadron arrived at its new station in January with 12 A-1 Skyraiders (AD) and 123 men. Of the remaining squadrons—VA-95, VA-115, VA-122

and VA-196—the last is scheduled to complete its move by June 30.

These squadrons represent more than 850 officers and men. Upon completion of the move, units based at Lemoore will include five attack carrier air groups, staffs, 22 attack squadrons and three replacement air group squadrons.

NAS LEMOORE, commanded by Capt. H. M. Avery, was built from the ground up as a support station for carrier-based units.

USAF Award to Navy Unit 'Outstanding' Ribbon to VR-7 Det.

One of the Air Force's most coveted peacetime decorations, the Air Force Outstanding Unit Ribbon, has been awarded to Detachment Alpha of the U.S. Navy's Air Transport Squadron Seven. This marks the first time that a naval unit assigned to MATS has been selected for the award.

About 25 naval officers and 140 enlisted men assigned to the detachment, under command of Cdr. K. L. Jones during the 12-month period mentioned in the citation, will be eligible to wear the very distinctive red-white-and-blue ribbon.

VR-7 Alpha was cited for exceptionally meritorious service under the most adverse conditions while operating with the 1503d Air Transport Wing from January 1 to December 31, 1961.

The unit was cited for "conclusively demonstrating the Air Force's capability for instant reaction in support of treaty obligations and national policy, and for making an immeasurable contribution to the combat effectiveness of the United States and SEATO air, land and Marine forces deployed throughout the Asian area."

In that period, VR-7 Alpha flew C-54 Skymasters operating from Tachikawa Air Base, Japan, on support lifts.



THE TOP NINE OF THE NINE (VAH-9) at NAS Sanford pose with some of the practice ordnance they will drop in the attempt to maintain their status as the top three crews of Heavy Attack Wing One. HATWing One crews compete on a monthly (as well as annual) basis and are scored in terms of the total number of runs, the score on each run, the difficulty of the target and the number of runs made on that target during the month. The top nine shown are: LCdr. Frank Cramblett, his B/N, Arthur Critser, AT1, and third crewman, T. L. Foley, ADJ2; Lt. Wade E. Markley, B/N for Cdr. G. W. Kimmons, and third crewman, J. J. Soulerin, ADJ2; and W. G. Downer, ADJ1, third crewman, Lt. John McCracken, B/N for Cdr. J. L. Shipman.



WHEN USS GREENWICH BAY (AVP-41) completed its fourteenth cruise in the Middle East and Southwestern Asia since 1949, Capt. P. A. M. Griber, commanding, passed the "sack" to Capt. J. M. Miller, commanding officer of USS Duxbury Bay (AVP-38). The occasion for the passing-of-the-sack ceremony, with Capt. Griber wearing the traditional Arabic beaddress, was the rotation of flagship duties which took place in



Aden early in February. The white seaplane tenders serve as flagship of RAdm. B. J. Semmes, Jr., Commander Middle East Force. Since leaving Norfolk on August 4th, the Greenwich Bay has steamed over 20,000 miles while visiting ports in Jordan, Eritrea, Sudan, Saudi Arabia, Kuwait, Iran and India. After the exchange, Duxbury Bay headed for Persian Gulf, and Greenwich Bay began the voyage home to Norfolk, Va.

BuWeps Orders Hawkeyes Work Will Be Done at Bethpage

The Bureau of Naval Weapons has issued an \$89,950,152 contract to Grumman Aircraft Engineering Corporation, Bethpage, Long Island, N.Y., for long lead time items and procurement of E-2A *Hawkeye* aircraft. Work on this contract will be performed in Bethpage as on present contracts.

The first E-2A, a carrier-based, early warning and intercept control, twin-engine aircraft, was accepted by the Navy from Grumman in October 1960. Designed to protect task forces from airborne attack, the E-2A system can detect and evaluate the full nature of the attack in advance of the minimum time lead necessary to intercept high mach-number attacking aircraft.

VX-6 Makes Record Flight Logs 3600-Mile Trip in 10.6 Hours

The longest non-stop flight in Antarctic history was made in *Deep Freeze 63* by a C-130 *Hercules* assigned to Air Development Squadron Six. An internal bulk fuel delivery tank recently fitted into the *Hercules* increased the range of the aircraft.

In late February, the plane launched from McMurdo Station on a 3600-mile flight that crossed the geographic south pole to the vicinity of the Shackleton Mountain Range. The

plane then swung southeastwards to the Pole of Inaccessibility and returned to McMurdo. The flight was completed in ten hours and 40 minutes. The Pole of Inaccessibility is the farthest point inland from all coasts of the continent.

Pilot of the C-130 was Cdr. William H. Everett, who is commanding officer of VX-6. Also aboard was RAdm. James R. Reedy, Commander Naval Support Force, Antarctica, in charge of Operation *Deep Freeze*.

Previous non-stop distance flight in the Antarctic was conducted during an exploratory flight in *Deep Freeze I* (1956) by a VX-6 *Neptune*, 3206 miles. It also launched from McMurdo.

P-2 Spots Hi-Jacked Ship Pilot Finds Venezuelan Freighter

A long-range P-2 *Neptune* (P2V) from VP-5, piloted by Navy Lt. W. E. Bridgeman, was the first to spot the hi-jacked freighter *Anzoátegui*. Bridgeman sighted the ship on February 16.

The freighter was commandeered by armed crew members, later given asylum in Brazil.

The aircraft tracked down the Venezuelan freighter by making wide sweeps of the Caribbean. Planes from Patrol Squadrons 5, 23, 44, and Airborne Early Warning Squadron Four were searching for the hi-jacked *Anzoátegui*.

After the ship was sighted, aircraft from NS ROOSEVELT ROADS followed her until Brazilian authorities gained control of the ship.

During the search and surveillance, planes normally based at Roosevelt Roads operated from Surinam and Trinidad.

Marine Unit Joins NORAD VMF(AW)-531 Has Key West Duty

Marine fighter interceptor men are on full-time duty with the North American Air Defense Command for the first time in the history of the U.S.-Canadian organization.

Flying the fastest operational fighter in the world, the 1600-mph F4B *Phantom II* (F4H), Marine All-Weather Fighter Squadron 531 began air defense duty under NORAD February 1 at NAS KEY WEST, Fla.

Other Marine units have an augmentation role, standing by to support NORAD in an emergency, but this is the first under operational control of the command on a full-time basis.

VMF(AW)-531 is replacing Navy VF-41 which was transferred from Key West to Oceana, Va., and Navy VF(AW)-3 which was decommissioned April 1.

Headed by Maj. Oric E. Cory, acting C.O., during the hospitalization of LCol. Robert E. Foxworth, the Marine unit is assigned to 32nd NORAD.



GRAMPAW PETTIBONE

Pesky Beast

The crotchety old *Beechcraft* keeps provin' to pilots who have enough experience to know better that you can't take the "Bug-Smasher" for granted. In spite of its advanced age, the *Beech* is still an aircraft that has to be flown skillfully, with full knowledge of its systems and quirks of character. Here's a pretty good example:

Two Marine aviators took off in an RC-45J (SNB-5P) intent on some GCA practice at a nearby naval air station. While en route they checked all systems thoroughly, including the autopilot, which is not standard equipment on most *Beeches*. After ten minutes or so, the autopilot push-pull switch located on the panel directly behind the prop controls was disengaged, although the autopilot amplifier switch was left ON.

The initial GCA approach was normal in all respects and carried through to a touchdown. The pilot let it roll out about 500 feet on the runway, then added takeoff power. Almost immediately the *Beech* commenced to nose up in an extremely tail high attitude. The pilot heard the props hit the runway as he exerted all the back pressure he could muster on the yoke. The plane became airborne and reached an altitude of 50 or 60 feet, but with such severe engine vibration present that he relanded it immediately.

The flight controls were apparently locked and only freed after the engines



were secured. As the props stopped, eight inches of each tip could be seen, bent back 90 degrees. No wonder they vibrated!



Grampaw Pettibone says:

When he checked the props full forward on the roll-out, this pilot engaged the autopilot by bumping the OFF-ON switch with his knuckles. If he'd shut off the power amplifier switch, this never would have happened. Another "I didn't know it was loaded" story. This was a kind of a pre-loaded booby-trap though — this item is **NOWHERE** on the pilots check-off lists!



You'd think by now they would have mended my ways! But they havent! Im still a B....!

Pre-Planned

Two helicopter pilots carefully planned for the round-robin, cross-country flight they intended to make in their SH-34G (HSS-1) helo. Lift-off was planned shortly after lunch. Their route had been decided upon, time and distance between check points calculated. Since the entire route fell within the local flying area, they filed a local VFR flight plan.

At the weather briefing, the duty forecaster advised them that the local weather was "partially obscured, 200 feet scattered, 500 feet overcast with one mile visibility in fog." Weather conditions were expected to improve to 800-1200 feet overcast and 2-4 miles in fog with occasional drizzle or rain. They were warned to "stay clear of the hills to the north of Allentown. Too much fog and haze there."

Preflight, start and rotor engagement were normal. Clearance was requested and granted at 1330 and they lifted off, heading due west on the first leg of their planned hop, cruising at 300-400 feet above the terrain.

Their home station was situated on the western edge of a coastal plain with steadily rising ground and mountain ridges to the west and northeast and some high ridges due north. To the east and south, all was fairly flat coastal area.

They hit the first checkpoint right on the button, a relatively simple thing, for it was only a short distance out, and headed north for the second checkpoint, Allentown. The ceiling picked up a little here and they climbed to 1000 feet MSL which placed them 600-700 feet above the hilly terrain.

Passing Allentown, they again altered heading, this time to 352° magnetic and continued as per their plan, still cruising at 1000 feet MSL. Four minutes out on this leg they entered a dense fog bank which they had been unable to discern through the haze. Their instant reaction was to do an immediate climbing 180° turn to get back out of this stuff.

ILLUSTRATED BY *Calam*

While still in the turn and at an altitude of 1500 feet indicated, the rotor system struck some TREES! At almost the same instant, they came out of the fog bank and could see they were in among the trees and headed right into a steep ridge whose top faded into the clouds!

The pilot immediately lowered the collective and wrapped on the throttle in an attempt to remain airborne. There was no response from the stricken helo, so he quickly flared to kill off groundspeed and settled it into the trees in a level attitude. It came to rest solidly planted on a very steep hillside with the nose pointing up-hill. They cut the switches and stepped out gingerly—not a scratch. Pretty lucky, if you can call it that.

 **Grampaw Pettibone says:**

Great balls of fire! These whirly-heads must have had plugs in their ears during the weather briefing. They headed for the worst weather area like bees to honey. Their flight planning was perfect—they hit the ridge right on course and right on time. Seems the only thing they forgot was to check minimum en route altitudes. Cruising at 1000 MSL, if they'd missed this one they'd have gotten another, for the highest terrain on their planned route was 2498 feet MSL. Kinda hard to clear VFR, even with a 1200-foot ceiling. 'Course the real frosting on this outing was—the pilot was his outfit's Aviation Safety Officer! It just about froze me up solid!

OpNavInst 3710.7A says that no naval aircraft may cruise at less than 500 feet above the terrain unless the specific mission requires a deviation. CAR 60 says you must maintain a 500-foot vertical separation below any ceiling. Looks like even the helos must observe the 1000-foot minimum for VFR flying outside of an airport control zone or be in violation of one rule or the other.

Deadly Perch

A three-man crew from night check had towed an A4D-2N out to the designated high power turn-up area for final engine calibration checks.

The pilot-cockpit access ladder was in position along the port side of the aircraft. On the A4D this gives a flat platform at the top of the ladder which is flush with the bottom of the port side jet intake duct.

A jet mech was in the cockpit with

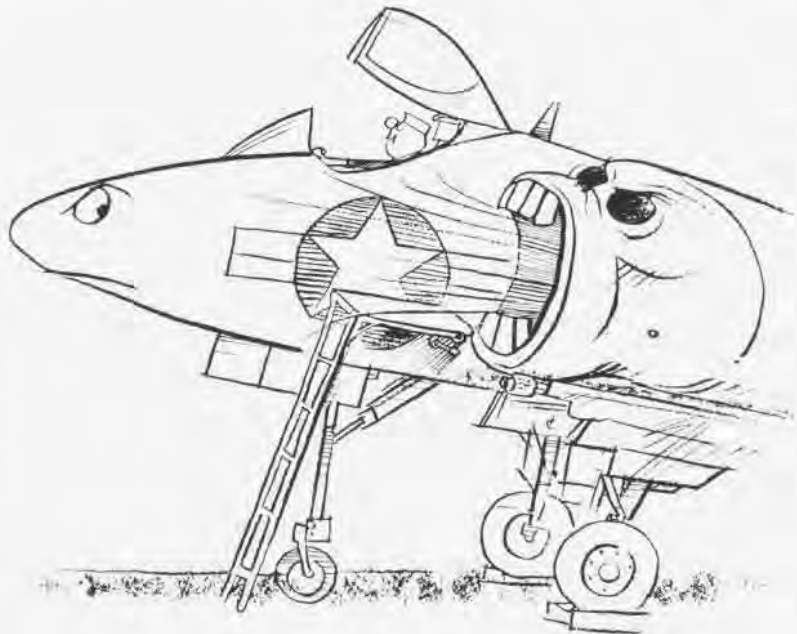
Just remember that the close ones are only good when you're playing horseshoes and pitching pennies.

the canopy open and had just turned the engine up to 100 per cent when he noted the oil pressure gauge had begun to indicate erratic readings.

He motioned to an electrician who was sitting on a starting tractor nearby, and this man immediately climbed the ladder and peered into the cockpit as the mech shouted an explanation of the problem. The engine was still at 100 per cent.

hangar to call for an ambulance and medical assistance while the other alternated between watching the injured man and the increasing amount of smoke pouring out of the tail-pipe. Obviously there was a good-sized residual fire burning in the engine.

The injured man said he could hold on, so his buddy left him on the platform, drove the starting tractor into position, and as the third man re-



The electrician moved back a little to see the malfunctioning gauge better while the mech monitored the engine instruments carefully. Suddenly the engine seemed to stall and coughed as though starved for air. The electrician was gone!

Glancing back at the intake the mech saw only the man's head, hands and left foot protruding from the duct! The mech in the cockpit quickly slammed the throttle back to cut-off and leaped out onto the platform. With the help of the third man, who had been sitting on the starting tractor, the unfortunate electrician was pulled out of the intake and propped up on the ladder platform. Both men were reluctant to move him further in the face of his obviously serious injuries.

One man now ran for the distant

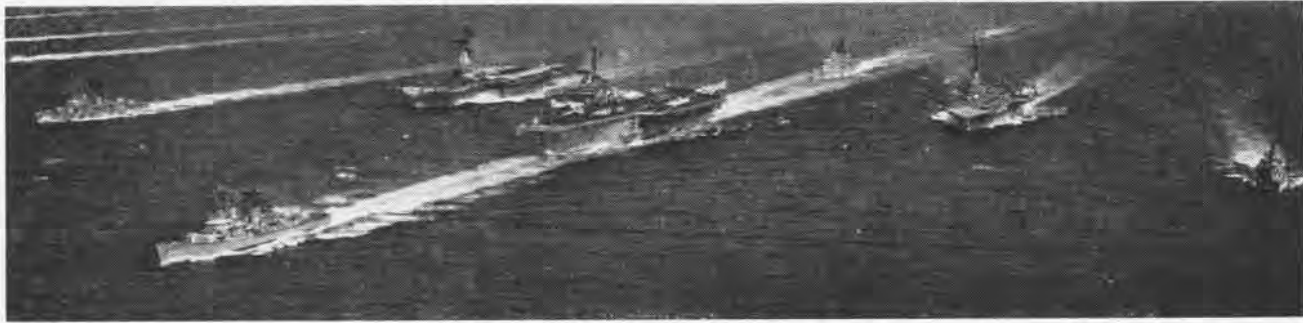
turned, they gave the engine a dry run and the fire was extinguished.

The ambulance arrived within minutes and the man will survive his unforgettable experience although several months of hospital care lie ahead of him.



Grampaw Pettibone says:

Great jumpin' Jehosophat! Imagine anyone nonchalantly walkin' up a ladder to face a roaring, shrieking mouth full of steel-alloy teeth, beset by tons of air rushing into that gaping hole, and then be so idiotic as to turn around and back up towards it! He musta had his brains sucked out on the way up the ladder! That engine pulled him in like a bug up a vacuum cleaner and it could have been just as fatal! Now hear this: NEVER, NEVER stand in front of a live intake!



SELDOM SEEN is a massed formation of the entire striking force of the Sixth Fleet (Task Force 60). This picture was taken as two attack carriers, an anti-submarine carrier, a guided missile cruiser and numerous destroyers practiced close-up maneuvers in the Mediterranean.

AVIATION IN THE SIXTH FLEET

THE MEDITERRANEAN SEA has become one of the forward areas of democracy. The Sixth Fleet is stationed there to help maintain the peace by deterring any threat the communist bloc may try to impose on countries which believe in the freedom of man.

This great expanse of water touches the shores of more than a dozen countries of different languages, customs

and cultural backgrounds. It has been and still is the lifeline of countries which produced our western civilization. The history of the area shows that the balance of power and the rulers wielding it passed from shore to shore, spreading ideas, traditions, religions and knowledge that are now the foundation of most western nations.

The geography of the Mediterranean

area has, throughout history, presented many advantages and disadvantages from a strategic point of view. From the days of the Phoenicians to the end of WW II, military commanders have been concerned with the many great challenges posed by its strategic location between three continents—Europe, Asia and Africa. Today, it challenges Naval Aviators with the Sixth Fleet.

The advantages of stationing a carrier striking force virtually in the backyard of friends and potential enemies are obvious. VAdm. David L. McDonald, Commander of the Sixth Fleet, recently made the following statement: "We are, by being in the Mediterranean, more favorably disposed toward an area of likely conflict. This means that we have gained the extremely important element of *access* to possible target areas in the region of NATO's southern flank."

The greatest strategic area of interest to the Sixth Fleet is the southeastern part of Europe, western Asia and the northern areas of the Middle East. The Mediterranean Sea gives the Fleet the necessary mobility and flexibility while shifting its striking forces in tactical operations incident to carrying out its NATO and national responsibilities. The two elements of access and mobility, then, are the strong points in the projection of sea power into this vital area.

But just being there is not enough. The Fleet, its officers, men and equipment have to be ready for any emergency. It must be able to respond quickly to orders that may come from London, Paris, Naples or Washington. Exercises and maneuvers, bilateral and



USS ENTERPRISE, with two of the Free World's best combat aircraft embarked, the F-4 Phantom II and A-5 Vigilante, contributes significantly to the Sixth Fleet's great striking power.

NATO-oriented, conducted continually throughout the year are the key to a successfully trained and versatile Fleet.

Although the Sixth Fleet has taken advantage of some of the characteristics of Mediterranean geography, there are some major disadvantages placed upon Naval Aviators who fly aircraft from the two attack carriers of the Fleet. The disadvantages imposed on pilots offer many unusual requirements that make today's air operations in the Mediterranean unique.

There is very little sea room, for instance, in the Mediterranean in comparison with the Pacific or Atlantic. There is even less air room. Unlike his fellow aviators who operate with the Seventh Fleet and are able to fly almost unlimited distances in several directions, the Sixth Fleet aviator is prone to be affected by a slight feeling of claustrophobia when he first reports to the Med. He must constantly be aware of other countries, other air forces and an increasingly heavy commercial air traffic.

Whereas the surface units enjoy all the traditional freedom of the seas, that same freedom ends abruptly for high performance aircraft when approaching any of the independent nations that border the 2000-mile inland sea. Each of the countries around the Mediterranean has its own adaptation of the International Civil Aviation Organization (ICAO) rules and regulations governing air traffic, and each

has areas into which military aircraft are restricted from flying, except under very limited conditions.

Further, commercial air lanes criss-cross the Mediterranean, creating traffic problems as complex as those on the East Coast of the United States, greatly reducing the air space available for military operations. In the past two years, the number of new air routes has increased. It has been predicted that many more will be established in the near future.

The air space over the Mediterranean has been divided into control areas known as Flight Information Regions, and each region, or FIR, is under the control of a particular country. While air control within these regions is not a major problem when conducting Sixth Fleet air operations, it is another factor that must be taken into account by ComSixthFlt while planning training exercises. There are many reasons why the Sixth Fleet should and does cooperate to the fullest possible extent with air controllers in these regions. Not the least of these are air safety and cooperation in the interest of better international relations.

In the organization of the Fleet, carriers and embarked air groups are assigned to Task Force 60 whose commander is the currently embarked carrier division commander. Normally two attack carriers, including at least one of the *Forrestal* class, are assigned to the Fleet. Two cruisers and about 20 destroyers are assigned in support

of the CVA's. Task Force 60 is, in turn, organized into two operating task groups, which become Task Group 60.1 and 60.2, often referred to as the "Blue" and "Gold" groups. A carrier is assigned to each group.

A typical air group embarked in each CVA deploying to the Sixth Fleet is composed of two fighter squadrons, three light attack squadrons, one heavy attack squadron and several "splinter" detachments of specialized aircraft. Each air group will include some aircraft from the following: The F-3 *Demon*, F-4 *Phantom*, F-8 *Crusader*, A-1 *Skyraider*, A-3 *Skywarrior*, A-4 *Skyhawk* and A-5 *Vigilante* as well as special mission types.

To afford incoming air groups a smooth transition into the Sixth Fleet team and make them familiar with their operating environment, a cycle of indoctrination exercises is scheduled for about a six-week period. These give pilots a "feeling" for flying conditions associated with the crowded air space and tightrope flying conditions of the Mediterranean area.

First on the slate is type training involving an individual carrier and its embarked air group. Warm-up operations include bombing with practice ordnance on targets such as Pachino on the east coast of Sicily or Avgo Nisi to the north of Crete. New pilots get a thorough introduction to communication procedures, Sixth Fleet operation orders and the fast pace of operations.

Newly reporting units are exercised



THIS QUIET HARBOR in the Mediterranean is one of the many used by the Sixth Fleet for anchorages where such fleet business as turn-over, pre-sail and Fleet Commander's conferences are held to transact the business which such a large and varied operating unit necessitates.



THESE F-8 Chance Vought Crusaders from Fighter Squadron 11 practice formation flying over the Mediterranean. Throughout their deployment, they must be ready for any emergency.

at task force and task group levels, the former combining Task Groups 60.1 and 60.2. Most deployments afford personnel an opportunity to participate in not only bilateral exercises but also in at least one major NATO exercise, so that familiarity is gained in working with NATO operation orders and procedures. Although the Sixth Fleet remains national in character, it is earmarked for assignment to NATO in event of a war of NATO scope.

Frequently the Sixth Fleet conducts exercise "strikes" into friendly countries to test U.S. strike capability and give allied countries an opportunity to improve their defensive forces. In a recent bilateral exercise with the French, for instance, the Sixth Fleet

conducted strikes of both a conventional and nuclear nature against inland targets and the French opposed with fighters. Valuable benefits were derived from this exercise in which Sixth Fleet pilots tested their skills against French aircraft, flown by Frenchmen, and not against just another fighter from a U.S. carrier. The effectiveness of these exercises stems from the mental processes generated by the fact that neither pilot knows just what to expect from the other.

Through much work at conference tables, both on board the Fleet flagship, USS *Springfield*, and ashore in host countries, many low-level, dead-reckoning navigation routes have been

established. These are of considerable value in rounding out the training of attack pilots for low-level flying. An interesting aspect of this practice, commented upon by pilots assigned to the Sixth Fleet, is the benefits they derive from learning the characteristics of these routes. Air Groups which come from the Jacksonville or Norfolk areas, for instance, soon become familiar with the terrain in those areas. However, in the Mediterranean, it is a different story. Pilots must fly completely new, unfamiliar routes. Many report that such flights have resulted in additional navigation and communications experience and familiarization training. The short deployment period plus the increasing number of available routes and targets serve to keep pilots especially alert since they generally fly the same course only a few times during any one cruise.

Often the Fleet is operating in an area where target facilities are not available or practical and towed spars are used for practice bombing and rocket firing. Scoring of hits is usually accomplished best by the towing ship. Recently ships, other than carriers, have provided towed spars, thus allowing more flexibility in scheduling and more opportunities for practice.

Task force protection is another type of exercise. Although the Sixth Fleet will probably never be called upon to strike an enemy force containing aircraft carriers, there is a continuing threat to our carriers from land-based aircraft. As a result, it has become necessary to do a certain amount of day-to-day repetitious training to maintain skills, such as air-to-air intercepts, bombing, rocket and missile launching and strafing, all of which have to be done on a regular, continuing basis in order to maintain proficiency and readiness.

A typical exercise of this type might see Task Group 60.1 defending its own carrier against attacks flown by aircraft from Task Group 60.2 and shore-based air opposition. When the defending task group has been located by the attackers, the defensive measures used include combat air patrol aircraft, surface-to-air missiles and anti-aircraft weapons, with backup provided by the close-in firepower envelope of surface-to-air missiles and anti-aircraft guns. Rotation of attackers' and defenders' roles further develops skill and team-



FIGHTER LAUNCH on USS Independence is typical of deck activity during a training exercise in which the carrier and its air group participate.



THE FAMED Phantom II fighter, a recent addition to the Sixth Fleet's air arm, is already one of most valuable weapon systems in the Fleet.

work among pilots, air controllers and missile crews.

Quite often, prior to a strike or exercise, and apart from readying the aircraft for launch, a practice loading of conventional weapons takes place. The overall time consumed in such an exercise is tabulated and computed in the final tally of the time required for launch *after* the initial operation order has been received. Recently the need to improve the speed of handling conventional weapons has required some new planning to schedule such exercises. It has required study and re-evaluation of techniques not often used in the past few years while emphasis was placed on nuclear weapons. The deck crews gain invaluable experience during these weapon-handling exercises and continually try to improve speed.

The primary ASW force of Task Force 60 is composed of destroyers which provide screening support, although at infrequent intervals a hunter/killer anti-submarine group deploys to the Mediterranean for special training. Last summer the USS *Randolph*, with Commander Carrier Division 20 embarked, was integrated into task group offensive and defensive operations.

The Fleet continually drills in anti-submarine warfare, employing the several U.S. submarines assigned to the Sixth Fleet. Submarine-opposed replenishments and sorties from Mediterranean ports are routine exercises designed to test participating units in simulated wartime operations.

Of the 50-some ships normally assigned to the Sixth Fleet, only the Fleet

flagship and two or three auxiliaries are permanently home-ported in the Mediterranean. The deployed units rotate from the East Coast, exchanging places two or three times each year with ships already in the Mediterranean.

The Fleet replenishes, refuels and rearms at sea from the Underway Replenishment Group, Task Force 63, the service force of the Sixth Fleet. Without the important capability of underway replenishment, day or night, this powerful Fleet would need to rely on outside sources for its support. This is not feasible for a force deployed thousands of miles from the continental United States. Major replenishments, which occur about once a month, involve the transfer of stores and food which are used at the rate of about 50 tons a day. Fuel for ships and aircraft, received more frequently, is used at the rate of hundreds of thousands of gallons a day.

A Mediterranean deployment means hard, intensive training balanced by recreation and liberty opportunities ashore. Normally a carrier spends about half of its deployment in the liberty ports located around the Mediterranean. During the time at sea, ComSixthFt tries to provide about 12 flying days each month. Since a great deal of time is devoted to night flying, most of these flying days go into the night.

Indicative of the tempo of Fleet operations in recent years is the number of pilots who become "centurions" on a deployment. As recently as four or five years ago, a pilot who made 60 to 70 landings was considered to have had a busy deployment. This past year nearly every squadron had reported a high percentage of pilots reaching the



HUNTER-KILLER PACK of E-1B Tracers and S-2 Trackers warms up on the flight deck of USS Randolph preparatory to being launched against 'enemy' subs during Sixth Fleet training exercise.



THIRSTY SHIPS, *USS Shangri La* at right and *USS Beatty* at left, refuel outside sources for replenishment, and the steady flow of logistics from the Sixth Fleet oiler, *USS Neosho*. The Fleet does not rely upon from the United States to the Mediterranean is constantly maintained.

100 mark in takeoffs and landings. In a Marine fighter squadron recently embarked in *Independence*, nearly every pilot reached the centurion mark during the six-month deployment period.

Creating impressive statistical records, however, is not the primary goal of the Sixth Fleet staff planners, but high quality performance is. Through the process of constant analysis and review of exercise results, new criteria are incorporated into each subsequent exercise. Thus there is a constant improvement in Fleet aviation.

The steadily increasing quality of

pilot performance is helping to meet the challenge posed by the Mediterranean Sea's geography, its international environment of unique flying conditions, and the Sixth Fleet's high tempo of operations. Navy personnel and the American public alike can take pride in the continual improvement of carrier operations in the Mediterranean as the result of the program being conducted by the Sixth Fleet.

The worth of continuous training was well expressed by a Sixth Fleet pilot in *Naval Aviation News*, December 1961 (pp. 11-13), when he de-

scribed the end of a long flight:

"Finally the tailhook grabs the number four wire, and the healthy tug of the harness straps against your shoulders tells you you're home. . . . Visions of a lengthy sleep fill your mind, but you take a moment to face into the wind and enjoy a deep sense of satisfaction. You did pretty well today. It was only practice, of course. But your confidence is up and, although it's an unhappy forethought, you're certain that if the real bell rings, you'll be able to get there and do the job."

VAdm. David L. McDonald

Commander Sixth Fleet and Commander Naval Striking Forces, Southern Europe

A native of Georgia, VAdm. McDonald was appointed to the Naval Academy from that state in 1924. He was graduated and commissioned an Ensign on June 7, 1928, was designated Naval Aviator in 1931, and attained the rank of Rear Admiral on January 1, 1956.

His early service included sea duty in the battleships Mississippi and Colorado, in VF-6 of the carrier Saratoga, and in the aviation unit in the cruiser Detroit; and shore duty with the Navy Rifle Team at National Matches, and as instructor at NAS Pensacola. From June 1938 to October 1941, he served with VP-42, based at Seattle, Wash., and later in Alaska and on the Aleutians.

At the outbreak of WW II, he was serving as Flag Secretary to Commander Aircraft, Atlantic Fleet. From May 1942 to March 1944, he was Flight Training Officer on the Staff

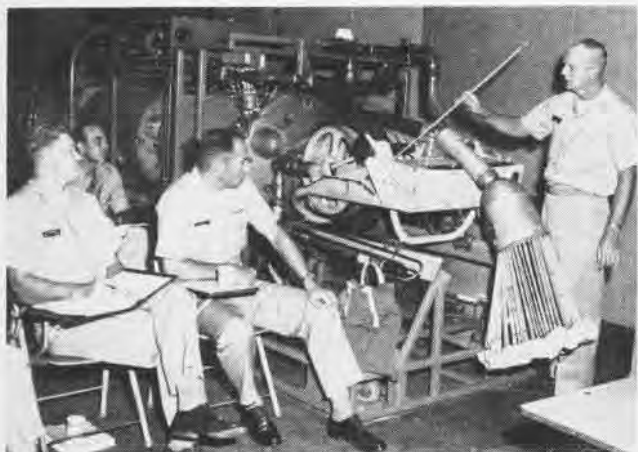


of Commander Naval Air Operational Training Command at Jacksonville. Toward the end of hostilities, he was Air Officer and Executive Officer of USS Essex and Operations Officer on the Staff of ComAirPac. He was awarded the Bronze Star Medal with Combat "V", two Letters of Commendation with Ribbon and Star, and is entitled to wear the Ribbon for the Presidential Unit Citation awarded USS Essex.

In July 1947, he reported to BuAer to serve as Director of Military Requirements. He later served as Aide to Assistant SecNav (Air) and to the Under Secretary of the Navy. He commanded the carrier Mindoro for a year in 1951-52. After a tour of duty as Assistant Chief of Staff for Operations to the Commander in Chief, Pacific Fleet, he became Commanding Officer of the carrier Coral Sea.

In November 1955, he was assigned as Director of Air Warfare Division, Office of the Chief of Naval Operations. From November 1957 until October 1960, he was assigned to Allied Commander, Europe. He was next ComCarDiv Six, and in July 1961, reported in the rank of Vice Admiral to assume his present position, Commander of Sixth Fleet.

VAH-1 MAKES TRANSITION TO VIGILANTE



INSTRUCTOR DESCRIBES A-5 FUEL SYSTEM TO MAINTENANCE OFFICERS



VAH-1 ADJ'S INTRODUCED TO A-5 COMPONENTS AND EQUIPMENT

HEAVY ATTACK Squadron One (VAH-1), the *Tiger* squadron, said goodbye to the trusty A-3B *Skywarrior* (A3D-2) and welcomed the new supersonic A-5A *Vigilante* (A3J-1) at Naval Air Station Sanford, Fla., in January.

Ever since its commissioning in November, 1955, VAH-1 has been demonstrating why it is called the *Tiger* squadron. It was the first Fleet operational squadron to fly the A-3 *Skywarrior*. Late in 1956, VAH-1 was on the line and ready for action during the Suez crisis. In 1961, the *Tigers* were winners of the ComNavAirLant Battle E award.

When ashore, VAH-1 is a component of Heavy Attack Wing One under the command of Capt. Joseph M. Tully. When deployed, it is part of CVG-7 based aboard the attack carrier USS *Independence* (CVA-62).



O'GARA AND HANEY FIRST TO FLY NEW A-5

The squadron returned in August 1962 after completing another accident-free deployment. VAH-1 claims to have established an all-Navy record for A-3B flight hours flown during any one month while operating aboard a carrier: 885 hours were flown in only 17 operating days.

Immediately upon return from this

cruise, the squadron began classroom training for the *Vigilante*. The pilots, bombardier/navigators and ground crew personnel underwent extensive ground and flight training at VAH-3 (A-5A RAG Squadron) at Sanford. All the flight crews are seasoned, experienced Fleet qualified pilots and bombardiers, some on their second, third and fourth tours in Heavy Attack. Upon completing training in maintenance, the weapons system and flight training, the flight crews were ready to step into the *Vigilante*.

The first flight in the new "bird" after acceptance by the squadron was made just four and one-half hours later by LCDr. P. E. O'Gara and Ens. P. I. Haney, Bombardier/Navigator.

VAH-1 is the second Fleet squadron at Sanford to receive the new Mach 2 bombers. The outfit will be deployed later this year aboard the *Independence*.



NOT ONLY DID PILOTS ATTEND INDOCTRINATION SESSIONS, BUT FLEW FLEET MIRROR LANDING HOPS AT SANFORD TO INSURE PROFICIENCY

OVERSEASMANSHIP SPELLS DIPLOMACY

OVERSEASMANSHIP training is the support which the Chief of Naval Personnel provides for the Navy's People to People program. Up and down the Atlantic Coast from Maine to Mayport, U.S. Navy ships, large and small, from aircraft carriers to destroyer escorts and submarines, are learning the art of friendliness in a new, challenging way. Officers and men of 90 ships have the word on what to expect abroad. "Overseasmanship" is an art—and a method.

Chief evangel of the program* is Mr. Dave Rosenberg who, working with his boss, Cdr. J. P. Dickson, USNR, is forging a weapon they hope may help conquer the world with mutual respect and understanding.

The program on USS *Franklin D. Roosevelt* was presented by Mr. Rosenberg, who is Deputy Head and Projects Assistant of the People to People Section of the Educational Services Branch of the Bureau of Personnel. He is a man of wide experience with people and life in foreign countries. We on *FDR* were lucky enough to obtain his services during our transit to the Mediterranean last September.

As one of our *FDR* journalists, Dave Joachim, puts it—and I certainly agree: "No circus ever had a headliner like Dave. To him, the last audience is as important as the next. Despite the wild laughter and applause that Dave earns, he is never quite satisfied that he's a success until he hears back home that his method works.

"How does he hear about it? Sometimes it's a picture of happy South Americans waving 'Yankee Sailors, Please Stay' banners. Or it's a story of a few Marines who warmed a cold Norwegian night with patience and courtesy. . . . Dave is an incurable extrovert with countless talents. Combining his genuine interest in people with an uncanny flair for making the ordinary exciting, Dave is determined to make his business a booming success."

* The "Overseasmanship" training program has been thoroughly described by Cdr. J. P. Dickson, USNR, in the BUPERS Naval Training Bulletin, Winter Issue 1962-63, pp. 26-33.



AN 'INDIAN' SUIT from South America is a timely reminder we aren't the only Americans.

Success he is sure to have, for Mr. Rosenberg equips the men in his audience with the basic tools for public relations and personal enjoyment—and they work.

During his time on *FDR*, Mr. Rosenberg addressed large groups in a tremendous effort to familiarize the crew with the cultures of the countries we would visit. He gave clear guide-



SAILORS of USS *Roosevelt* entertain a tiny Kalyucian during Greek village festivities.

lines for appropriate conduct ashore. Because of his firsthand knowledge of Europe and his dynamic showmanship, the response of the crew was enthusiastic throughout his presentations. Crew members were thus able to go on liberty with practical information on local customs, traditions and idiosyncrasies of the people. They knew what to eat and drink and how to exchange basic greetings in the native tongue. Dave is fluent in several languages.

He spoke three times daily to hangar bay assemblies until the entire crew had been systematically rotated through his lectures at least once. In addition, each night he made an appearance on *FDR*'s closed circuit TV system. On several occasions, the live audience in the TV studio kept him performing until 0500!

Mr. Rosenberg, who hails from Boston, developed his "Overseasmanship" skills early. As a young man he played in small orchestras at wedding parties for Poles, Swedes, Hungarians and other Europeans having fun in their new land. He learned to dance their native dances.

In New York as a Navy man in WW II and later in Washington, he continued to pursue his interests and went right on developing his repertoire of dances and information about people. When his Navy enlistment expired, he remained in Washington working on hobby handbooks. He became Art Director for *All Hands*.

Since 1947, he has been Director of the National Capital Folk Festival of All Nations in Washington, D.C. He has also been Cultural Programs Chairman for the President's Christmas Pageant of Peace since 1954. He is constantly sought as an entertainer, and one year put on a show at the request of Gen. Omar Bradley at Fort Myer, entitled, "New Year's Eve around the World." He is currently a consultant to the Cultural Programs Committee, 1964-65 World's Fair, New York.

In 1958, aboard the USS *Northampton* making a cruise to northern Europe, Capt. (now RAdm.) H. G. Bowen, Jr., had Rosenberg come along

By Capt. W. E. Clarke, USN
Commanding Officer
USS *Franklin D. Roosevelt* (CVA-42)

NAVAL AVIATION NEWS



CELEBRATIONS everywhere involve dance in some form. Dave Rosenberg relates basic USA steps to patterns men in Fleet will see and do.



CAPTAIN of the USS *Roosevelt* watches Mrs. Clarke take part in a folk dance staged by villagers of Kalyvia for men of the attack carrier.

with permission from BUPERS. He gave the crew firsthand information from his bulging files and was started on the way to the hundreds of presentations he has made on "Overseasmanship." In 1961 BUPERS gave him a new job, essentially the one he'd already been doing on his own time and money.

To illustrate his lectures, Mr. Rosenberg relates anecdotes of personal—sometimes embarrassing—experiences he has had with people and customs in foreign lands. He came aboard *FDR* with two dozen boxes of souvenirs and exhibits collected during his travels. These hundreds of items ranged from torrero caps to international road signs. He held them up for all to see and explained them in lively detail.

He also had with him a large collection of travel movies which were shown every day on TV and in the hangar bay of CVA-42. By popular demand, he showed his bullfighting film twelve times. After each showing, he gave an account of bullfighting he had witnessed and an animated demonstration of the torrero's technique.

His compelling desire to tell as much as possible during his short stay with us led him to accept frequent invitations from crew members to eat in the general mess. A rapt audience formed wherever this red-headed, mustachioed, people to people expert went.

He also furnished us with additional ideas on possible people to people projects for our ports-of-call. Since his visit, we have put "Overseasmanship" ideas into practice on a large scale, working through contacts in U.S. Con-

sulates, USIS offices and the USO.

Serving as a talent scout, Mr. Rosenberg provided the names of a few men interested in forming a ship's glee club. With these as a nucleus we now have a 60-voice outfit which, we are ready to affirm, rivals the Pensacola Naval Cadet choir. They call themselves the Seafarers-42 and are directed by LCdr. Vern M. Yates of Carrier Air Group One. They have regaled crowds in the small streets and large boulevards of each of the ship's liberty ports—Rhodes, Athens, Cannes, Istanbul, Palermo, Naples, to mention a few.

Their repertoire includes some 60 songs—old standbys, Navy tunes, sea chanteys, and music from Broadway shows. They now have special show uniforms bearing the ship's emblem. Their first formal engagement was a concert at the Thermai Hotel in Rhodes after just four rehearsals. Their accompanist is Ens. Allen Jerger.

At the University of Genoa, Italy, in January, the band and the glee club of USS *Franklin D. Roosevelt* gave a concert which elicited tremendous applause. The band's rendition of "La Sorella," a well-known marching song, brought a thunderous response from the audience. Massive rhythmic clapping carried the march to an emotional conclusion, and the audience began crying for an encore even before the song was finished. The Seafarers-42 also drew audience participation with "He's Got the Whole Wide World in His Hands." As with "La Sorella," the students clapped to the rhythm.

Other People to People projects have

included visits to the ship by special groups, orphans' parties, a mass blood donation, and schoolhouse paintings. But more important than all of this is the fact that the most fruitful "Overseasmanship" was conducted, not on an organized level, but on the level of the individual sailor.

One of the most vivid examples of the kind of thing Mr. Rosenberg encouraged—and it was a highlight of the cruise—was a festival at the village of Kalyvia, near Athens.

After a day spent painting the local school house, our men were invited to join the villagers at the town square where I had the honor of laying a wreath on their war memorial, flanked by a *Roosevelt* Marine honor guard and the band playing the Greek national anthem. Our glee club then gave an impromptu concert, and the village children demonstrated folk dancing.

After this came a dinner, at which a hundred *Roosevelt* men sat in alternate seats with Kalyvians. Mrs. Clarke, who was in Athens at the time, and I were invited to the head table with the town dignitaries. Speeches were made through interpreters and then dinner was served. The menu was local goat steak, American hot dogs (from the galleys of *Roosevelt*) and large quantities of delicious home-made wine.

Dave Rosenberg had taught us the wisdom—and fun—of tackling good will projects.

We agree with our teacher's memorable dictum: The nicest words in any language are "Please!" "Delicious!" "It's beautiful!" and "Thank you!"

Airborne Early Warning Squadron Four

THEY HUNT THE HURRICANES

By Cdr. Jack Hunt, USNR

HELLO, MIAMI Hurricane Control, this is *Hurricane Hunter Viking* investigating storm *Ella*. We have just begun penetration of wall cloud at 500 feet altitude. The rain is pounding against the fuselage with a deafening roar. We are being bounced around by extreme turbulence. Routine situation report follows. Are you ready to copy? Over."

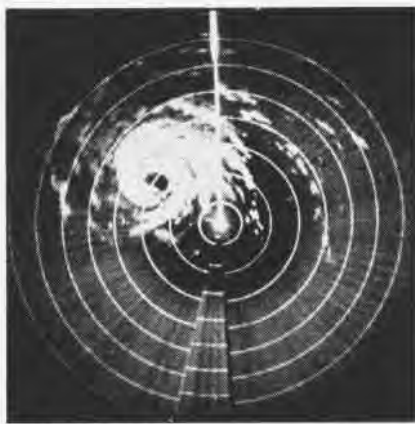
This insouciant statement begins another routine message from the Meteorological Officer aboard a specially configured Lockheed *Super Constellation* airplane of the Hurricane Hunter squadron, based at Naval Station, Roosevelt Roads, Puerto Rico.

The officers and men of Airborne Early Warning Squadron Four (VW-4), under the command of Cdr. Russell E. Blalack, are engaged in what has been called the most dangerous type of flying in the world—hurricane surveillance. For six months each year, during the hurricane season, the squadron investigates all suspicious storm areas and maintains constant surveillance of all tropical storms and hurricanes in the Caribbean Sea, the South Atlantic Ocean and the Gulf of Mexico.

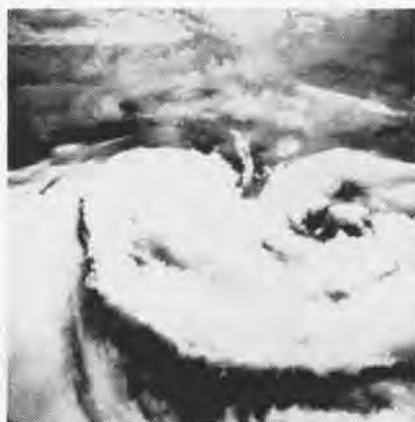
The end of the official 1962 hurricane season marked completion of 20 seasons of hurricane hunting which had first been undertaken by the Navy in 1943. Statistics show that Navy's *Hurricane Hunters*, working with the Hurricane Warning Center, have been directly responsible for reducing hurricane storm damage by billions of dollars. The program has virtually eliminated the former high rate of fatalities that were standard in the pre-hurricane-hunting years.

The record is a proud one. In the 20 years, Navy has flown 15,903 hours of weather reconnaissance, 5720 hours of flying into tropical storms and hurricanes, and a grand total of 579 penetrations into full force hurricanes.

Today, VW-4 acts as the eyes of the National Hurricane Center, Miami, Fla. The Fleet Weather Facility under the command of Cdr. Max A. Eaton, working in close proximity to the National Hurricane Center, has opera-



THE SUPER CONNIE can transmit its radar presentation by the use of a television method.



A HURRICANE'S dread beauty is shown in this picture taken from an altitude of 38,000 feet.



SEVENTY-KNOT WIND produces this rough sea. Picture taken by a pilot flying the storm.

tional control of the *Hurricane Hunter* squadron and directs flight activities to give optimum coverage.

To accomplish its mission, VW-4 operates eight EC-121K (WV-2) and WC-121N (WV-3) aircraft. In addition to the main base at NS ROOSEVELT ROADS, a detachment is stationed at NAS JACKSONVILLE, Fla. Three times a week, or more often if necessary, reconnaissance patrol flights are conducted over selected areas in the Gulf of Mexico and the Caribbean Sea. On these flights the crew members become proficient in the complex data-gathering functions while flying in relatively smooth air. It also serves as an indoctrination flight for news reporters who seek to become familiar with the aircraft and the specific jobs of the crew. This flight is now a prerequisite for press personnel who want to fly in an actual hurricane penetration flight.

VW-4 is not limited to hurricane hunting. It has many other missions. One is the responsibility of tracking for the *Mercury* shots and furnishing other NASA support. Some of the squadron's tasks are classified while others include search and rescue and, in at least one instance, the tracking of a stolen ship—the *Santa Maria*.

The VW-4 insignia includes the gold acrographer's mark, the red and black flags symbolizing the hurricane and a blue eye which represents the storm's center. A large gray cloud over blue water with high waves stands for all kinds of weather.

While the other missions are considered important and carried out with enthusiasm, the real challenge to the squadron is the one which gives the squadron its name "Hurricane Hunters."

When a *Hurricane Hunter* approaches the vicinity of a storm, he uses radar to determine any weak spots in the wall cloud.

Usually, the softest area is the southwest quadrant of the storm. The pilot enters the storm at an altitude between 500 and 1000 feet, keeping the wind on the port quarter. The low-level penetration is made in order to obtain

surface information and pass it on to Navy surface units.

The average penetration will take approximately a half hour of very rough flying. Tons of rainwater hit the aircraft every minute. The entire flight must be conducted on instruments. Altitude must be maintained according to a radar altimeter because the atmospheric pressure drop from the perimeter of the storm to its center is so great that a pilot flying according to a pressure altimeter reading would fly straight into the sea. Furthermore, this pressure drop has a marked effect on the engine performance. Power settings must be continually changed to compensate for the rapid pressure change.

Once inside the storm, the *Hurricane*

the storm. Operation *Storm Fury* has been set up as a joint Navy-Weather Bureau project to test the theories advanced by the scientists. The Navy will play the biggest role in this experiment; the *Super Constellation* will be used as the control center to direct the tests as they are run. Plans call for as many as six airplanes to be flying in, or above, the hurricane simultaneously. Various aircraft will be assigned different tasks ranging from observation and photography to seeding of the storm. With its fine CIC capability, the WC-121N will fly in the center of the hurricane to control and direct the activities of all other aircraft.

In commenting on the success of the 1962 hurricane hunting season, Cdr. Blalack said: "As a unit of the Joint

Navy Airborne Early Warning Squadron Four (VW-4). Other early warning squadrons based throughout the world provide an early warning for the continental United States and our Navy fleet units against air attack, but VW-4 is the only squadron that provides early warning against the approach of destructive tropical storms and hurricanes. We do it for civilians throughout the world as well as for our Navy ships and squadrons. This squadron has been providing these services since 1953, and is the seventh Navy aircraft squadron since 1943, to be assigned the mission of hurricane reconnaissance."

(VW-1, based at Guam, conducts typhoon reconnaissance in the western regions of the Pacific Ocean.)



RED AND BLACK flags signal hurricane. Eye represents hurricanes VW-4 will encounter.

Hunter makes a gradual climb to 10,000 feet in clear, smooth air. While circling inside the eye, the crew makes visual and electronic observations and transmits the information to the Fleet Weather Facility, so that characteristics of the storm can be determined and detailed forecasts sent out. When the necessary work has been done, the pilot gets a radar indication of the soft area and makes a high level exit while the crew continues to make observations and send out reports. In a *Super Constellation*, a *Hurricane Hunter* can stay on station for hours and make several hurricane penetrations during the flight.

To the surveillance facet of hurricane hunting, a new and challenging phase has been added. Many top weather scientists are convinced that hurricanes can be modified and possibly partially controlled by the introduction of chemicals into the heart of



CDR. BLALACK (front center) and Early Warning Squadron Four are one of the elite groups of Naval Aviation. They ably carry on the proud tradition of twenty years of hurricane hunting.

Hurricane Warning Service, the Navy has been performing aerial hurricane reconnaissance since 1943. Various Navy aircraft squadrons have been assigned this vital task, and through the years, many different types of aircraft have been used. Patrol-bomber aircraft, seaplanes, and anti-submarine warfare aircraft have been used. Radar reconnaissance aircraft and even jet and propeller fighter planes have also flown into hurricanes to collect weather information. Volumes of tropical weather information have been collected, and many improvements in hurricane forecasting have been made as a result of these flights. But, of more immediate concern to the civilian population and to the Navy, early warning of the approach of destructive tropical storms and full fledged hurricanes has been provided—and in good time.

"The official title of the present day *Hurricane Hunters* is most appropriate:

In contrast to the hurricane reconnaissance today, the patrols which began in 1943, were crude indeed. The flights then were made by aviators who had never flown into the center of a storm nor did they have the advantage of talking with pilots who had penetrated a storm. There were no such pilots. As pioneers, these first hurricane hunters bravely sought out the hurricane and, with their limited knowledge, tried to obtain pertinent data for the weather central.

The pilot approaching a hurricane would try to forget all he had learned about the dangers of flying into storm clouds, tighten his seat belt as if to gain some degree of confidence, put the crew on the alert and head into the storm. In a few minutes, the plane would be shaking so badly that the pilots could not read the instruments, the engines would begin to sound erratic, nerves would be on edge, and



IN 1943, the Miami Joint Hurricane Weather Central was established, and the PBM Mariner seaplane was used for reconnaissance flights.



AS TIME MARCHED ON, another type aircraft was used to hunt hurricanes, the PB4Y-2 Privateers. It was suited for flight on rugged missions.

a glance at any of his crew members would give the pilot anything but confidence.

The pilot would execute a 180° turn and fly *back* through the rough air. Once outside the storm, he would relax momentarily, then prepare for another partial penetration. By repeating this partial penetration maneuver again and again, the *Hurricane Hunter* would circumnavigate the entire storm. He would then head for home base while each crew member nursed his black and blue marks and silently offered a prayer of gratitude for having survived the ordeal.

While the information they obtained was valuable as were the observations made by the crews while they were being bounced around, today's *Hurricane Hunters* know that these pioneers

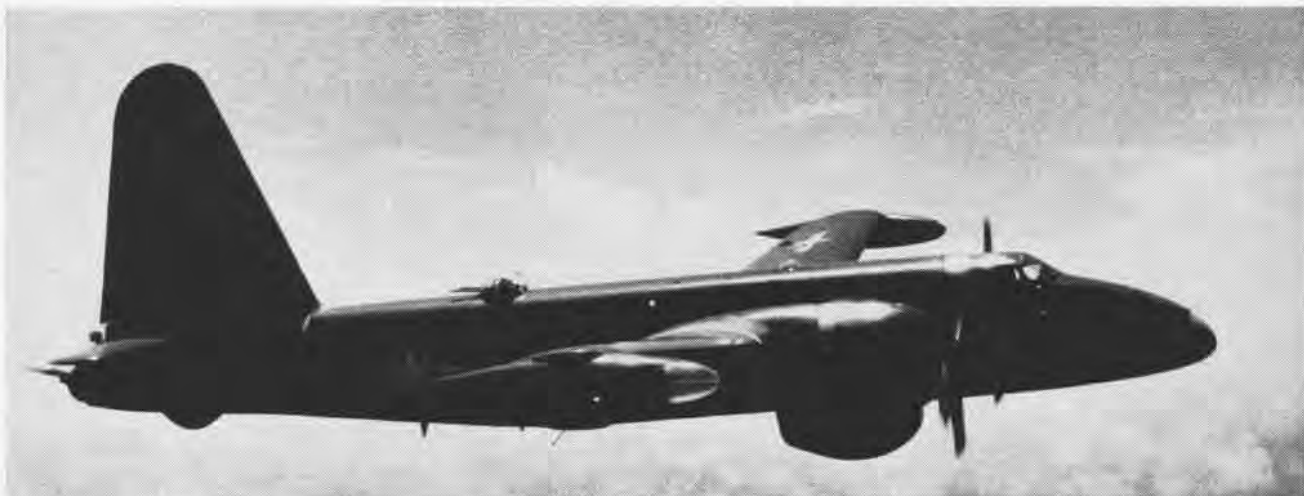
were fighting the battle the hard way—each partial penetration was made into the roughest part of the storm. They also know that had the early pilots only continued, they would have penetrated the calm eye of the hurricane. It was not until 1948 that the eye of a full-sized hurricane was penetrated. This was a tremendous advance.

In 1947, VX-4, under COMOPDEVEFOR control, joined forces with VPM-3 (Meteorological Squadron Three) to investigate the new concept of tracking hurricanes by airborne radar. Six experimental radar flights were flown that year. This new method of hurricane reconnaissance was born.

Various types of aircraft have been used in hurricane surveillance. Before 1945 all hurricane surveillance flights were made in seaplanes, usually PBM's.

In 1945, VPB-144 was given the task of hurricane hunting in PB4Y airplanes and the aviators gave up flying boats for two extra engines—a fair exchange. Thus by 1946, a new method of hurricane reconnaissance was considered so successful that the regular weather squadron VPM-3 was formed and based at NAS MIAMI, where it worked in cooperation with the Joint Hurricane Center.

By 1953 the *Hurricane Hunters* had improved the penetration technique by use of radar to the point that it had begun to seem routine. Eighty penetrations had been made by the big four-engined PB4Y-2's, but the *Privateers* were wearing out and the Navy was replacing them with the P-2 *Neptune* (P2V). At first the pilots were reluctant to give up the security



THE NEXT AIRCRAFT to be put into service for weather reconnaissance was the Lockheed P-2 Neptune which went on duty in 1953. On

September 15 of that year, a P2V entered the eye of Hurricane Edna and suffered only the usual peeling paint on leading edges of the wings.

offered by the two extra engines. No one really wanted to make a two-engine penetration into a full grown hurricane.

Finally, on the afternoon of September 15, 1953, a P-2 *Neptune* entered the eye of Hurricane *Edna*, approximately 240 miles north of San Juan, Puerto Rico. When they were safely back from the flight, the pilot and copilot reported a very successful flight in which they encountered 75-knot winds en route to the hurricane eye at wave top level. They described the circular climb in the 23-mile-wide eye

Ancient Order of Hurriphooners." Since that time, a few civilian reporters, photographers, weather experts and crew members have been initiated into the sacred order.

Tragedy has struck only once in the 20 years of hurricane hunting. In September 1955, a P-2 *Neptune* took off from San Juan on a routine hurricane surveillance flight and proceeded to the vicinity of the hurricane. Several routine reports were received and then—silence. A full-scale search and rescue mission was undertaken, but no trace was ever found. Each year,

ron has been able to keep every hurricane under constant surveillance since 1958.

To honor the tremendous service rendered to the people of the state of Florida and in recognition of the bravery of the men who are the *Hurricane Hunters*, the Florida State Chamber of Commerce bestowed the Premium State Award upon every officer and man of the *Hurricane Hunter* squadron. This award has been in existence for some 25 years, but because of the esteem in which it is held, has been awarded only five times since its establishment.



SLEEK STORM SEEKER, this giant Super Constellation is based at U.S. Naval Station, Roosevelt Roads, Puerto Rico. This big 70-ton flying laboratory carries a crew of 28 to 30 men. The radar used is second to none; with one sweep, it covers an area of some 196,000 square miles.

as something like a ride on a motorcycle in a motor drone. An inspection of the airplane after the flight revealed that the *Neptune* had suffered only the usual peeled paint on the leading edges of the wings—a characteristic mark of most planes making low level penetrations of hurricanes.

At the end of the season in 1954, VW-4 inaugurated a very exclusive organization known as the "Century Club." Only those individuals who had been aboard a Navy *Hurricane Hunter* airplane that had made a low-level penetration into storms with winds in excess of 100 knots (115 mph) could become members. Each member received a membership card and a coveted scroll from the "Not So

on September 26th, an airplane of VW-4 flies over the last known position of the ill-fated *Neptune* to drop a wreath in memory of the brave men who died in the continuing effort to warn people everywhere in time for them to get ready to withstand the onslaught of the mighty hurricanes.

By mid-season 1958, all the P2V's had been phased out and replaced by EC-121K *Super Constellations*. The *Hurricane Hunter* again had the assurance that four engines give. In addition, the new aircraft has increased range capability and carries tons of useful electronic gear. Upon the introduction of the new airplanes, the annual total number of hurricane hunting flight hours tripled and the squad-

During the week of November 25, President Kennedy congratulated Airborne Early Warning Squadron Four's *Hurricane Hunters* for 20 years of aerial hurricane surveillance. The Governors of three of the hardest hit hurricane states, Florida, Louisiana, and Massachusetts, also expressed their appreciation.

United States Representative Charles E. Bennett of Florida said the pilots and crewman of VW-4 "are demonstrating the courage to meet the challenge of this country. There are more challenging plateaus in this period than ever before, but this nation will solve them through the type of dedication exemplified by *Hurricane Hunters*, Airborne Early Warning Squadron Four."

MAPPING THE OCEANS IN PROJECT MAGNET



PAISANO DOS is the name given this EC-121K Warning Star (WV-2) assigned to NAS Patuxent and operated as an airborne geophysical laboratory during Project Magnet. Data gathered will be used to improve international navigation and learn more of inner and outer space.

THERE'S a tired old adage to the effect that "a man may work from sun to sun, but a woman's work is never done." If naval aircraft, like naval ships, can be referred to in the feminine, there are two busy ladies working out of NAS PATUXENT RIVER. Their improbable names are "Paisano Dos" and "Kiwi Special." The first is an EC-121K *Warning Star* and the second is a C-54 *Skymaster*. They comprise the entire flying inventory of Project Magnet.

"Paisano Dos" is used primarily for long-range aeromagnetic surveys while her sister ship, the "Kiwi Special," is employed on shorter-ranged, more-localized hops.

Project Magnet had its beginning in 1951 when the Hydrographic Office established an airborne geomagnetic survey program to gather data necessary for charts. On land, this information was relatively easy to obtain on a continuing basis. The ocean areas,



O-IN-C of Project Magnet Navy men is LCDR John B. Childers at controls of EC-121K.

By Sam E. Polson, JOI

which comprise 70 per cent of the earth's surface, presented quite another problem.

On December 1, 1962, "Paisano Dos" returned to Patuxent after an extended survey trip that took her over the antarctic continent. Back home, the crew took its longest breather of the year. It lasted until January 22 when the sleek, specially equipped aircraft launched for a monumental six-week survey that ended in March when the aircraft touched down at NATC PATUXENT. During the round-robin, the plane made scheduled stopovers at Trinidad, Uruguay, South Africa, the Malagasy Republic, Australia, New Zealand, Tahiti, Mexico and San Francisco. After leaving Uruguay, "Paisano Dos" made an unscheduled refueling stop in Argentina before continuing on to South Africa.

Exotic trip? Perhaps, as the itinerary might suggest; but actually, it was plain hard work. Neither of the two aircraft is on deck for long, except for scheduled maintenance. The very nature of their mission will not permit them to be idle.

The Navy's Oceanographic Office (formerly Hydrographic Office) has the responsibility of charting the seas beyond the territorial waters of the U.S. An important factor in preparing navigational charts is the accurate presentation of data on the earth's magnetic field. Because this field is a restless, moving one, the declination

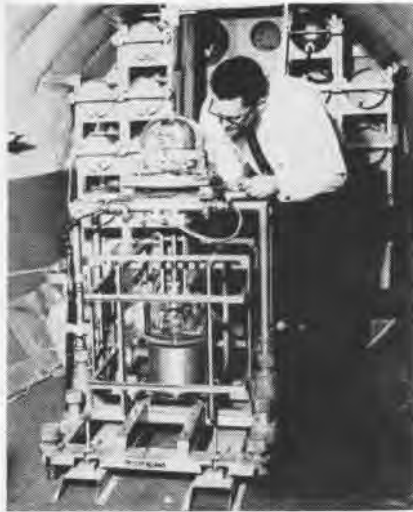
chart must be updated every five years and some 27 related charts every ten years. The next set of charts is due to be published in 1965.

In the early 1900's, magnetic surveys were carried out by non-magnetic sailing ships. These ships surveyed approximately 140 million square miles of ocean surface before the last such vessel, the *Carnegie* (built for the Carnegie Institute of Washington), was destroyed by fire in 1929.

The information obtained by these ships was obsolete by the 1950's because of the nomadic nature of the magnetic field. Magnetic Anomaly Detectors, developed during WW II for the detection of submarines, made it possible to equip aircraft with a practical airborne magnetometer, modified for geophysical work. Limitations of this gear prompted further studies and a universal magnetometer was developed, the Vector Airborne Magnetometer, Type 2A (VAM-2A). This gave



CIVILIAN geophysicist Leonard Dennis is at magnetic control center during the flights.



ADJUSTING Vector Airborne Magnetometer is James H. Crowe, of the Oceanographic Office.

Navy Hydrographic Office the ability to measure accurately the variations in the magnetic field, and Project *Magnet* was in business. The first VAM-2A was installed in a P-2 *Neptune* (P2V), and a systematic survey of the North Atlantic Ocean was undertaken, from 25° North to the Arctic Circle (NANews, September 1955, pp. 9-11).

The arctic flights were made at 9000 to 13,000 feet, though weather sometimes forced them higher. The results were accurate, well within the limitations prescribed by survey specifications.

In 1954, the *Neptune* was retired and Project *Magnet* obtained a C-54 *Skymaster* the following year. Much more sophisticated equipment was installed at Corpus Christi in the newly acquired aircraft. The rear fuselage section was demagnetized, and in the fall of 1955, the plane was ready for service.

The *Skymaster* was sent south in 1956 in an effort to get magnetic readings over the antarctic continent. Adverse weather and other delaying factors frustrated attempts and the plane got no further south than New Zealand.

In August 1958, the Project acquired its first "Willie Victor." The crew named it "El Paisano," after a southwestern (U.S.) bird, more familiarly known as a roadrunner. In November it made its first survey flight, a 4200-mile non-stop flight from Adak, Alaska, to Pittsburgh, Pa. The following year "El Paisano"

completed a 25,000-mile survey in the South Pacific and the ocean areas around Australia, in addition to several other surveys.

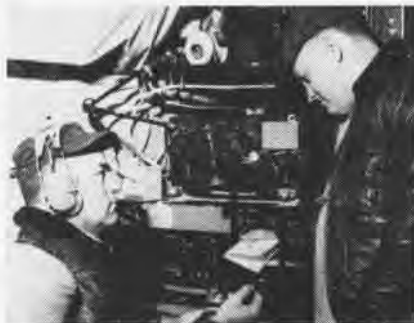
But the desire for antarctic data had not died. During Operation *Deep Freeze 61*, it was planned to use "El Paisano" for charting the magnetic field in the south polar region. In November 1960, as the Antarctic flying season got underway, "El Paisano" approached NAF McMurdo Sound for a refueling stop. While landing on the snow and ice surface of the McMurdo runway, the plane crashed. There were no serious injuries, but the "Willie Victor" was a strike.

"Paisano Dos," replacement for the WV-2, was obtained in 1961. Scientific equipment was installed, checked, and this aircraft was operational in 1962. The undaunted officers and men of *Magnet* returned to the Antarctic and obtained the magnetic readings. In this flight, the aircraft flew non-stop from McMurdo to Punta Arenas, Chile, a 3100-mile dash over the South Pole.

Originally, the Project men were assigned to Fleet Air Service Squadron 102 and operated out of NAS NORFOLK. They are now assigned to the Operations Department, NAS PATUXENT. This move placed the men and aircraft in proximity to the Naval Oceanographic Office headquarters at Suitland, Md.

With LCdr. John B. Childers serving as Officer-in-Charge of the unit, Project *Magnet* consists of 16 officers and 26 enlisted men, in addition to civilian geophysicists detailed from the Oceanographic Office. Since there is no formal Navy school or training group to prepare personnel for the specialized duty with *Magnet*, each man assigned is carefully screened and hand-picked.

While making their magnetic sur-



READING radio message taken by Jack C. Strickland, AT1, is James L. Roach, AT1.



PERISCOPIC sextant is installed by Lt. Joseph A. Ryan, helped by Lt. Henry I. Demers.

veys, Project *Magnet* aircraft also measure cosmic radiation. Scientists believe the earth's magnetic field has a definite influence on the extremely high energy particles (cosmic rays) emanating from outer space. The knowledge obtained from simultaneous measurements of the earth's magnetic field and cosmic radiation will enable scientists to describe the earth's magnetic field at great distances from the earth.

The data collected by Navy geophysicists during these flights is absolutely necessary for accurate charting. But this data changes constantly, keeping the Navy manned and operated aircraft flying year in and year out. For the Project *Magnet* men, liberty towns are a welcome break in the long, monotonous over-water flights. But even these have their problems. Mail sometimes is slow in reaching them, and money often becomes an involved transaction that would put a strain on any bookkeeper's skill.

Consider the most recent flight of "Paisano Dos." During the long-range flight just completed, in order to buy souvenir postcards, the men changed their American dollars into West Indian dollars in Trinidad, into pesos in Uruguay, into pounds or rands in South Africa, into Malian francs in the Malagasy Republic, into Australian pounds and New Zealand pounds in those two countries, into CFP (*Colonies Francaises du Pacifique*) francs in Tahiti, and into pesos in Mexico, before plunking down a dime for a color card of historic Washington Monument in D.C.



1943

1963

UNITED STATES NAVAL PHOTOGRAPHIC CENTER



"A REVIEW of the U.S. Naval Photographic Center covers drastic and complex changes in technique, equipment and materials. Photography has become a vital part of Navy's planning, an instrument for training, scientific research and testing."—Capt. H. W. Crews, Commanding.



CAMERA CREWS photograph live action scenes either on the 5000-square-foot sound stage or on location. Here they are engaged in fully checking equipment in preparation for actual shooting.

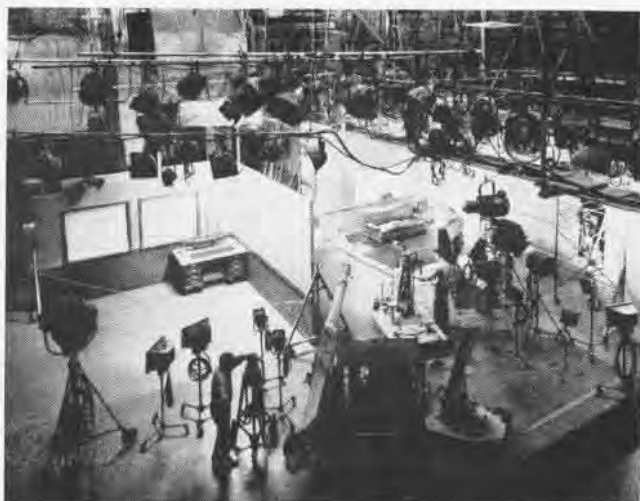
IN 1943, color film was new; radio, rather than television, was the mass communication network; and the U.S. Naval Photographic Science Laboratory opened its doors. Now known as the U.S. Naval Photographic Center, the institution in the last 20 years, has been a pacesetter in its field.

Eastman Kodak designed the building and supervised the procurement of the latest photographic and sound equipment. Another "partner" was the Hollywood U.S. Naval Photographic Services Depot which acted as liaison between the Navy and the Motion Picture Industry.

In World War II, motion pictures and audio slide-films constituted the new approach to training that the Navy demanded. Hundreds of training aids and instructional films were produced to cover every conceivable subject from battlefield surgery to fly-



NAVAL PHOTOGRAPHIC CENTER has full capability for TV and Video Tape productions. The TV video production console is an impressive one.



THE SOUND STAGE is large enough so that while one scene is being photographed, another scene can be set up and readied for shooting.

ing Navy's fighters from carrier decks.

WW II was the first major conflict to be thoroughly documented by film. Hundreds of thousands of feet of film recorded the end of exploding *Zekes* and *Tonies*, depicted the ordeal of the Fleet as it fought the *kamikaze* onslaught off Okinawa and the beach-head battles in Normandy, photographed the crossing of the Rhine and the final solemn ceremony in Tokyo aboard the USS *Missouri*. Navy photos in Still Picture files are valuable reference material now and in years to come.

But the end of the war did not stop the fast pace Navy had set. With radically new ships, submarines, missiles and airplanes becoming operational, there was even greater need for

films with which to train personnel.

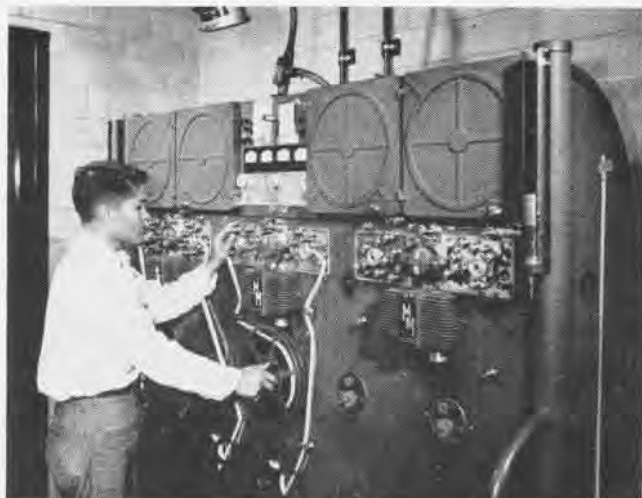
The success of the Naval Photographic Center is attested by the more than 45 prizes and awards won between 1945 and 1962. NPC films have been exhibited all over the world and won awards of merit at the International Exhibitions at Venice and the Film Festivals in Edinburgh. The Center's pictures have been acclaimed by the Academy of Motion Picture Arts and Science, the New York Film Critics, the American Film Festival, the Film Council of America and many, many others.

The Research and Development Department has achieved its own measure of renown by the many invaluable contributions it has made to the ad-

vancement of photography, such as the development of the Navy Rapid Paper Processor which can process 27 feet of paper per minute or the engineering of color film processing machines with automatic agitation. Also engineered was a rapid-cycling intervalometer which permitted low-level aerial photography with increased sharpness.

The National Broadcasting Company and the Naval Photographic Center joined forces to produce the outstanding historical documentary of television, "Victory at Sea," a series of 26 programs, each 30 minutes in length.

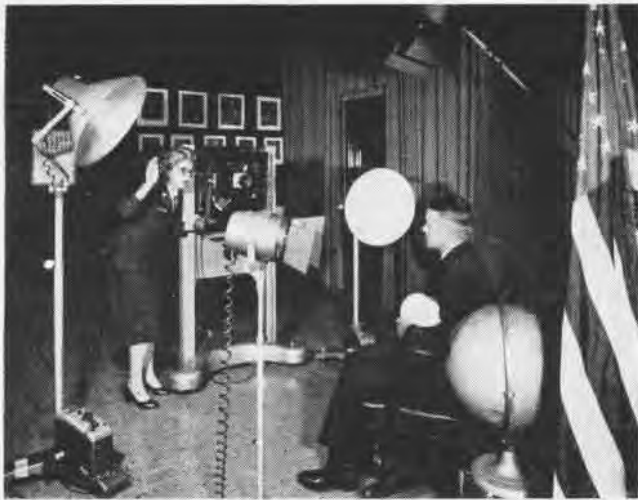
The Naval Photographic Center serves in many capacities. In coming years its staff will continue to serve, proud that pictures are their product.



GEORGE KENNISON, PH2, prepares a reel of 16mm film to be printed. At NPC, there are numerous standard, electronic, specialized printers.



THE FILM DEPOSITORY holds approximately 70 million ft. of film. These are available for newsreels, entertainment, documentaries and training.



IN A SPECIAL STUDIO, black and white or color portraits are made. Lt. Merle E. Miller is shown being photographed by E. G. Fredette, PH1.



IRVIN O. KEMP checks a formula in the well-equipped laboratory which is available to Methods and Process Division to carry on its work.



E. J. SHERRILL, PH2, uses stainless steel, nitrogen-burst type agitation system to process black and white or color prints and films.



S. K. SPENCER, PH1, uses the color densimeter probe to take a reading on a color negative while working in NPC's color printing dark room.



MANY TYPES of equipment are tested and evaluated under actual working conditions as is a color printing enlarger used by J. Somers, PH1.



A MODERN, completely equipped black and white finishing room handles incoming, outgoing jobs, including washing, drying, sorting prints.

UNIQUE NAVY SQUADRON 'RETIRES ON 20'

COMMISSIONED in WW II, effective in the airlift that kept West Berlin supplied and free, and later yet, swift in the operation that evacuated Hungarian refugees, a unique Navy squadron proudly made the final entry in its logbook the last day of March 1963.

VR-6 is not a typical Navy squadron. Its unusual mission derived from the fact that as a Military Air Transport Service (MATS) unit, it operated under U.S. Air Force organization and procedures.

In an Air Force wing, the airplanes are assigned to a Chief of Maintenance who makes a monthly "contract" with the operating squadron to provide them with aircraft. Operating squadrons are not involved in maintenance at all.

Six years ago, VR-3 and VR-6, sister squadrons in the Atlantic division of MATS, were reorganized into this framework. VR-3 became the operating squadron while VR-6's primary mission became maintenance.

The record shows that VR-6 achieved great proficiency in its maintenance role. In June of 1962, it piled up a squadron all-time high of 188 on-time station departures with no chargeable maintenance delays.

Although serving as a maintenance unit for the past five years, VR-6 was not always "grounded." When first commissioned in 1943 at Dinner Key, Fla., the squadron operated Martin PBM *Mariner* seaplanes on missions to the Caribbean, Canal Zone and North-east Coast of South America.

Moving to the Asiatic wing of NATS (Naval Air Transport Service) in September 1945, it turned in its flying boats for C-54 *Skymasters* (RSD). Three years later, in 1948, VR-6 was among the first Navy squadrons included in MATS.

VR-6 was initiated into the Berlin Airlift rather abruptly in October 1948. Leaving the summer climate of Guam on only two days notice, the squadron picked up lock, stock and *Skymaster* to move half way around the globe to wintry Rhein Main, Germany.

Ten days after the announcement of the move, VR-6 planes had begun arriving at Rhein Main. On the tenth



VR-6 MEN WORK ON ONE OF OUTFIT'S C-118'S

day, a VR-6 pilot, Lt. Richard Gerzeuski, made the first Navy flight into the isolated city of Berlin. During the first two months of their participation in the airlift, VR-6 and VR-8 together chalked up a total of 31,621 tons of supplies flown into Berlin in 3036 sorties.

After the Berlin Airlift of 1948-49, VR-6 was briefly based at NAS PATUXENT RIVER and four months later moved to Westover AFB, Mass., where it remained until 1955 when it moved to McGuire.

One of the squadron's last achievements during its career as an operating VR squadron was during its second year at McGuire when it participated



VR-3 CREW START FOR CONGO IN VR-6 CRAFT

in the airlifting of Hungarian refugees in Operation *Safe Haven*.

During its five years as a maintenance squadron under Air Force procedures, VR-6 got in on the "ground floor" on something which looks more and more like a "coming thing"—AFM 66-1. The Navy is now beginning tests of the maintenance management information aspects of the AFM 66-1 system. This information system is a maintenance cost accounting system based on man-hours. (See "Naval Aviation Looks at AFM 66-1," *NANews*, March 1963, pp. 34-36).

Basically, the system provides information on manpower, checks on hours spent per job, provides stock usage data, and aids in computing equipment utilization. It also notes why work was needed and who provided it.

VR-6 began using the 66-1 system in August of 1959. The program was adapted for the squadron's use and guided by Lt. Richard C. Stover. Except for a minor updating in 1961 to bring it up to current Air Force directives, the program has operated in essentially the same way since it began.

Capt. Thurlow G. Doyle, Commanding Officer of VR-6, summed up his squadron's experience with the maintenance information system this way: "We at VR-6 have found the Air Force 66-1 maintenance system to be extremely valuable in the planned utilization of equipment and labor. When I assumed command of the squadron in February 1960, the system, which had been in operation in the squadron for six months, was operating smoothly and already paying off. Although it took a while at first for us to become familiar with the 66-1 system, it has proven its great value to our maintenance mission over the past three years.

"Should the Navy adopt the 66-1 system, I believe that the resultant increases in efficiency, and in the effective utilization of maintenance manpower and equipment which this system has consistently made possible, would more than justify its use."

With the decommissioning of VR-6, its mission, support of VR-3, will be assumed by Air Transport Wing 1611.

Helo Mercy Flight Flown Sick Icelandic Farmer Evacuated

When a farmer on the northwestern peninsula of Iceland contracted pneumonia and required hospitalization, the Icelandic Lifesaving Association contacted the U.S. Navy and requested helicopter assistance. The farmer was isolated by some hundred miles of snowbound roads. Mountainous terrain, air turbulence and reduced visibility complicated the mercy mission.

At the U.S. Naval Station, Keflavik, Operations Officer Cdr. J. W. Morris organized the mission. He assigned Lt. P. N. Pflimlin and Ltjg. D. E. Price as pilot and co-pilot of a station-based helo slated to make the flight. Lt. C. J. Timber, flight surgeon, went along to attend the patient. A C-47 Skytrain (R4D), with Cdr. Morris aboard, provided cover and carried supplies of fuel and oil.

On the return flight, the helo's instruments stopped registering when both the main and alternate inverters failed. The flight continued as the

C-47 radioed navigational information to the helo pilot. On the final leg of the flight, the helo followed the coastline and returned to Keflavik without further incident.

Guppy Crew Saved at Sea HS-4 Crew Makes Night Rescue

At 0230 the morning of January 30, while operating from the deck of USS Yorktown (CVS-10), an ASW helicopter from Helicopter Squadron Four rescued three men from the ocean. It was a dark, moonless night, and the feat was made possible by the outstanding teamwork of two copter pilots, LCdr. D. H. Picht and Lt. F. L. Pinson, and their crewman, Paul Lawson, AX-1.

The rescue occurred after a Guppy (EA-1E) aircraft, piloted by Ltjg. W. S. Kirsch, crashed alongside the ship. The pilot and two crewmen narrowly escaped before their plane sank.

At the time, the Sea Bat was on a carrier controlled approach five miles astern of the ship. LCdr. Picht re-

quested permission to depart his approach and attempt rescue.

Then he and Lt. Pinson brought the helo down to a 35-foot hover close to the downed aviators. With LCdr. Picht on the copilot's side flying completely by instruments, Lt. Pinson and Lawson talked the helicopter over the men.



'SEA BAT' AND THE SUCCESSFUL RESCUE CREW

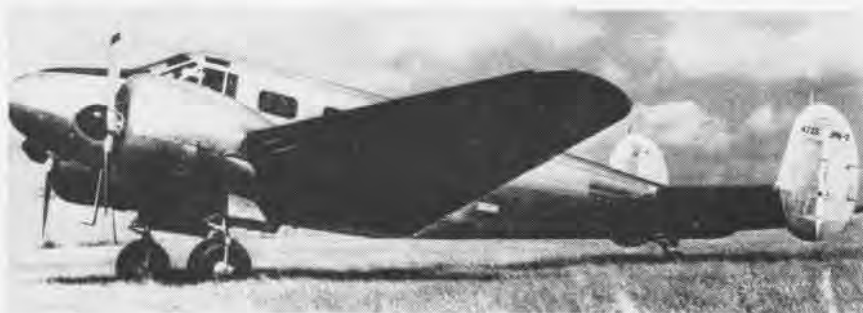
Lt. Pinson directed the landing light, so that Lawson could lift the men aboard the copter. Once they had the three downed men aboard, the helicopter lifted and landed them safely aboard "the Fighting Lady."

DFC, Air Medal Awarded Nevada Rescue Operations Cited

The Distinguished Flying Cross and Air Medal were presented A. K. Babbitt, ADC, and Lt. Charles R. Goetz respectively, for rescue operations conducted in March 1962 when a Navy twin-engine Beechcraft crashed in mountains south of Austin, Nevada.

Chief Babbitt received the DFC for locating the downed aircraft in extremely rough terrain. By use of volume build and fade of signals from the crashed aircraft, he succeeded in locating it. He made repeated landings and takeoffs at 10,000 feet elevation, several thousand feet above the altitude considered maximum for the CH-19E.

Lt. Goetz, also attached to NAAS FALLON, received the Air Medal for participating in the rescue of the injured survivors. He also piloted a CH-19E (HRS-3) Sikorski helicopter.



THEN AND NOW pictures with a new twist is the discovery of Advanced Training Squadron Six upon finding a picture of the squadron's oldest TC-45J Twin Beech. Examination of logs of Navy BuNo. 4725 showed that it rolled off the assembly lines at Wichita, Kansas, in October 1941 (top). Originally manufactured as a JRB-2, it was, according to company records, reconfigured as an SNB-5 in 1951. It found its way to VT-6 (bottom) in March 1961 after three previous service tours with Navy and Marine Corps activities on both coasts. Available Navy records cover the aircraft's history only since June 13, 1946, but it is estimated that the aircraft has flown approximately 17,000 hours. VT-6 uses it to train student Naval Aviators in techniques of multi-engine operation, instrument flight and all-weather flight navigation.



CDR. E. P. CARLSON, VU-3 C.O., congratulates Harvey D. Self, ADR2, for being designated Distinguished Pistol Shot by Adm. W. R. Smedberg II, Chief of BuPers. Self is holding the recent awards he won in competitions.

Supply Supermarket Opens Quonset Has Self-Service Center

The increasingly popular system of issuing supplies supermarket style is now tried by NAS QUONSET POINT. Under this system, items for which there is a constant demand are stocked, individually priced, and displayed in counter-high bins.

The objective of the supermarket is to simplify the requisitioning and issue of material, to reduce the number of high priority requisitions normally processed through the Supply Department. It also reduces the number of returned items and the number of items stocked by "customers."

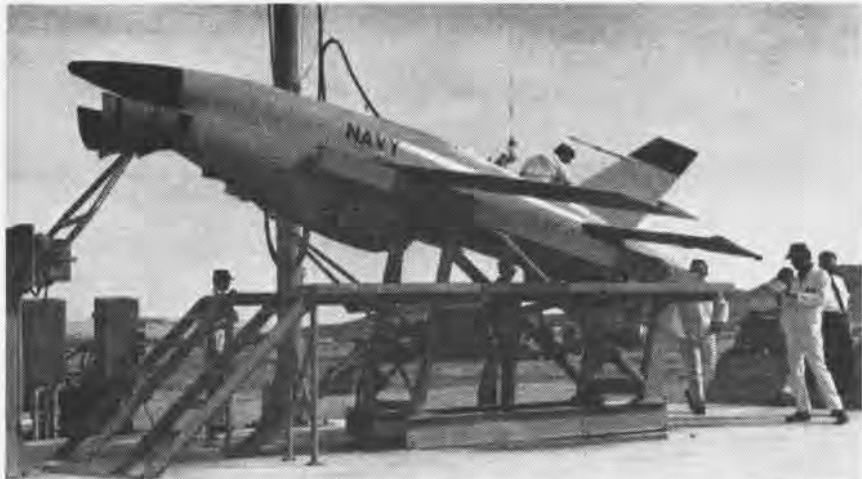
FAI Okays Speed Record Russian Amphibian Record Broken

The *Federation Aeronautique Internationale*, the official world governing organization for all aviation records, has approved two records for the U.S. Coast Guard and Cdr. Wallace C. Dahlgren.

Flying a Grumman *Albatross* amphibian on August 13, 1962, Cdr. Dahlgren eclipsed two Russian speed records for amphibians carrying 1000-kilogram and 2000-kilogram loads. He flew his amphibian with a 2000-kilogram load (4410 pounds) over a 1000-kilometer (540 nautical miles) closed course for an average speed of 373.32 kilometers per hour (201.5 knots).

Results of this single flight wiped out speed marks held by Russia of 130 knots for the 1000-kilogram load, and 150 knots for the 2000-kilogram load.

Four other records claimed by Grumman *Albatross* during the past year are awaiting FAI certification.



RYAN Q2C 'FIREBEE' JET-POWERED DRONE IS EASED ONTO PLATFORM AT CHINA LAKE

READY! AIM! FIREBEE!

THE NEWEST generation in the Ryan *Firebee* family of aerial targets zipped over the Mojave Desert test ranges at NOTS CHINA LAKE in February, marking its maiden voyage from the station's newly installed ground launcher.

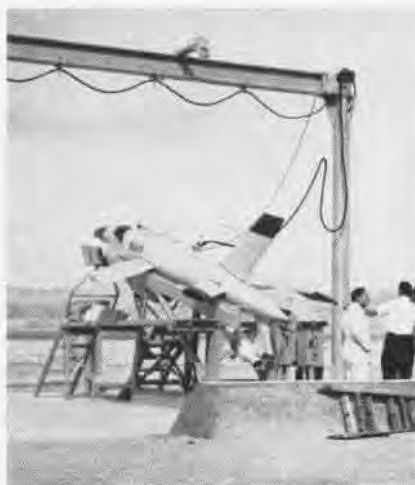
Designated Q2C, the glistening red, jet-powered drone flies higher and faster than any other operational target. The Q2C was placed in operational use by the Navy as a ground-launched target at Point Mugu last September. In its first flight at China Lake, the new breed *Firebee* was launched from one of two platforms installed since ground was broken last autumn at the West Coast test station.

A jet-assisted takeoff was used in launching the tiny craft as it climbed to 52,000 feet at speeds up to Mach .97. The flight, tracked on the ground by monitor-control units and in the air by a NAF-based F-4 *Phantom*, lasted 49 minutes.

LCdr. Larry W. Gire, Launch Officer, said the new version *Firebee* was parachuted to the ground from 15,000 feet, "practically like new."

Basic mission of the drone, according to officials, is to provide realistic targets for air defense training and weapon systems evaluation.

The new *Firebee* has an altitude capability in excess of 60,000 feet and has speeds of near-sonic range.



TECHNICIANS CONFER BEFORE LAUNCHING



Q2C'S SHARP RATE OF ASCENT IS NOTED

KRAZY KRUSADER KAPERS



IN-FLIGHT REFUELING HOG—Sometimes a pilot really wishes he had filled it up this full. But it's doubtful if this U-bird will still be able to reach its advertised maximum range and outstanding rate of speed.



CLAWING FOR THE RAMP—With a last determined effort he may make it. Then he'll discover that he forgot the hook. Results of modern photographic techniques have been well advertised in the Cuban affair in which Navy and Marine Crusaders played a major role. Pictures show what photographers with mirrors can do in a lighter vein of work.

VS-30 Logs 30,000 Hours Safety Mark Reached in January

Air Anti-Submarine Squadron 30 (VS-30) logged its 30,000th accident-free flight hour at NAS KEY WEST in January.

Flying the S-2A and S-2D Trackers, VS-30's training includes monthly trips to the USS Lexington at Pensacola for carrier landings and coordinated anti-submarine exercises with destroyers and helicopters based at Key West.

C.O. is Commander G. F. Bean.

Navyman is Decorated Given 'Outstanding' USAF Award

The U.S. Air Force Outstanding Unit Award was presented Jack S. Page, AK1, by RAdm. Joseph M. Carson, ComFAirJax, for the Secretary of the Air Force. Page won the award while attached to the USAF's 1707th Air Transport Wing, Tinker AFB, Oklahoma City.

In issuing the award, the Secretary cited the 1707th and its personnel for "exceptionally meritorious service from 1 January 1961 to 31 December 1961." Page served with the U.S. Air Force unit from March 1960 to August 1961.

The unit trains U.S. officers and men en route to duty with the Military Air Transport Service. Foreign students are prepared for equivalent duty in their service.

The citation accompanying the award commended "the outstanding professional ability and effectiveness; an accident-free record of over 15,000 flying hours achieved despite frequent inclement weather, inadequate airfields and a continuing input of foreign students with a limited knowledge of the English language and graduating all classes on time."

In addition to his normal duties, Page was also responsible for instructing students in how to load and stow cargo on the ground and in the air.

Norfolk O&R Cuts Cost Beneficial Suggestion is Adopted

The Navy Department will realize \$131,000 annually on a recently adopted Beneficial Suggestion submitted by Walter W. Dobbins and Alfred L. Dioquino, O&R Department employees at NAS NORFOLK. They received \$1000 for their idea.

The two found that an unusual number of J-57 engine compressor blades were being scrapped owing to

rust and corrosion. They decided that, by Lea-compounding the blades without removing an excessive amount of metal, or changing the contour of the blade, 75 to 80 percent of the blades could be made re-usable. This simple restoration process can be accomplished for 25 cents, while the cost of a new blade is approximately \$10.00.

Since this method has been in use, scrapping J-57 blades for rust and corrosion is not a routine matter.

40,000th Safe Hour Flown VMGR-352 is Congratulated by CG

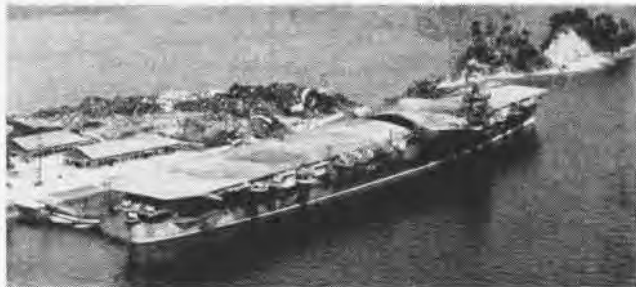
The achievement of logging its 40,000th hour of safe flying by Marine Inflight Refueler/Transport Squadron 352 elicited a message of congratulation from MGen. F. C. Tharin, Commanding General of the Third Marine Air Wing.

"It is indicative of and clearly reflects effective supervision at all levels of operation," the General wrote.

Last August, VMGR-352 was awarded the CNO Aviation Safety Award for compiling the outstanding safety record among squadrons with similar missions. The squadron is commanded by LCol. J. E. Worlund, Jr., and is stationed at MCAS EL TORO.



JAPAN'S SECOND aircraft carrier to be named *Amagi* was of the *Unryu* class; the first was sunk at Midway. She accommodated 65 planes.



KATSURAGI CAME under attack at Kure, first by planes of TF 58 and then by TF 38. Note the buckled flight deck aft of island structure.

Evolution of Aircraft Carriers

THE END OF THE 'BOKUBOKAN' IN WW II

'Japan is beaten, and carrier supremacy defeated her. Carrier supremacy destroyed her army and navy air forces. Carrier supremacy destroyed her fleet. Carrier supremacy gave us bases adjacent to her home islands. . . . Carrier supremacy demolished the island air bases and eliminated the air force which was using them. Carrier supremacy made the island naval bases untenable for such shipping as escaped our subs. Carrier supremacy permitted us to give close, tactical air support to the troops who stormed the island fortresses.'—VAdm. Marc A. Mitscher, USN, quoted in *Naval Aviation News*, October 1945

WHEN JAPAN struck Pearl Harbor on December 7, 1941, she had the strongest aircraft carrier force in the Pacific. This supremacy lasted until June 1942, when the Battle of Midway was fought and won by the U.S. Thereafter, the *bokubokan* ("mother ship for aircraft"), though an effective and dangerous fighter, was an ever weakening force; ships sunk by U.S. planes and submarines were not replaced in sufficient numbers and strength. The study of the Japanese maritime wartime construction is a study of desperation in the face of an inevitable defeat.

At the outbreak of war, Japan had six fine *bokubokan*, the carriers *Akagi*, *Kaga*, *Soryu*, *Hiryu*, *Shokaku* and *Zui-kaku*, in addition to three lighter carriers, the *Zuibo*, *Hosho* and *Ryujo*. The keels were already laid for others and some conversions were being made. At that time, the U.S. had only seven carriers, widely dispersed. At the Battle of Midway, Japan lost *Kaga*, *Akagi*, *Hiryu* and *Soryu*—and never fully recovered from this decisive defeat.

Japan's first wartime constructed carrier was the *Taibo* ("Big Lucky Bird"), a 29,300-ton ship authorized under the 1939 estimates. Built at Kawasaki Dockyard, she was laid down in July 1941, launched in April 1943,

By Scot MacDonald

and delivered in March 1944. She had a cruising range of 10,000 miles at 18 knots, but could reach 33 knots with ease. Kawasaki claims her to have been the most heavily protected flattop in the world at the time of her delivery. And well she might have been; her armor was impressive.

Taibo had 3¾ inches of plating on the flight deck between her two ele-

vators, covering a distance of some 164 yards. The platforms on these elevators were two inches thick and weighed 100 tons. Such weight required a low center of gravity for the ship, resulting in a very short distance between the water line and the flight deck, the same height as that of the *Hiryu*, a carrier some 12,000 tons lighter.

In designing and constructing this carrier, the slanting, low smokestacks of her predecessors were abandoned and



CARRIER TAIHO, foreground, accommodated 53 aircraft. She was sunk 180 miles north northwest of Yap 3 months after commissioning. *Shokaku* class carrier in background (1) with BB *Mutsu*.



CONVERTED TRANS-PACIFIC liner, the *Iunyo*, was originally the *Kashihara Maru*, displaced over 24,000 tons standard, had 12 five-inchers and accommodated 53 aircraft. Sister ship, *Hiyo*, was ex-*Izumo Maru*. Both were badly damaged by U.S. subs, *Hiyo* sunk by CVL-24 planes.

she returned to the "stack in island" type, the stack emerging high on the island and inclining outwards at 26°.

Taibo was an excellent carrier, but she had a short life: three months. On June 19, 1944, during the Battle of the Philippine Sea, she was hit by a torpedo from the U.S. submarine *Albacore*, damaging gasoline pipes and crippling her bow elevator while it was in the down position. Though her speed and maneuverability were not seriously affected, she did lose the ability to launch aircraft because of the elevator difficulty. Gas fumes spread through the ship. In a few hours she exploded and sank.

Five modifications of the *Taibo* class were ordered in the 1942 program, but none was laid down, owing to shortages and crowded shipyards.

The *Unryu* ("Cloudy Dragon") class was next to enter the scene. This ship was constructed under the 1941 estimates. Seven sister ships were ordered in the 1942 program. Two were never named and never laid down.

Unryu was a modification of the *Soryu*'s, the plans simplified for quicker construction. She displaced 17,150 tons standard. Sister ships *Katsuragi* and *Aso* were slightly heavier, displacing 17,400 tons, while *Ikoma*, *Kasagi* and *Amagi* were heavier yet, 18,300 tons. They had a speed of 34 knots, except for *Katsuragi* and *Aso* which, because of shortages, were equipped with destroyer type engines and could

only reach a relatively slow 32 knots.

Not one of these ships took an important part in any engagement. Both *Unryu* and *Amagi* were completed in August 1944 and were used for transport duty. Exactly 105 days after her commissioning, *Unryu* was sunk by a torpedo from the submarine *Redfish*. *Amagi* suffered two attacks from U.S. carrier-based aircraft while the ship was at Kure. The second attack, on July 24, 1945, capsized her.

Katsuragi also came under attack by U.S. carrier planes four days later, also at Kure. She suffered minor damage because she was protected by camouflage. After the war, she was used for repatriation and was scrapped in 1947.

Neither *Aso*, *Kasagi* nor *Ikoma* was completed by the end of the war. *Aso* was launched November 1, 1944, *Ikoma* on October 17, and *Kasagi* two days later. They were 60% to 80% complete when work on them was halted because of material shortages. *Aso* was used as a target ship for Kamikaze training attacks and did not survive this abuse. *Ikoma* was moored at Shodo Jima where she sustained bomb damage toward the end of the war. She and *Kasagi* were scrapped. Seven more *Unryu* class ships were added to the 1942 program, but they never got beyond the paper work.

The Japanese wartime carrier construction program, though ambitious, was not at all successful. What few successes they did enjoy were short

lived. Since the pressure was on—especially after the Battle of Midway—it was natural that they would turn to quick conversions. In this area, too, the results were discouraging.

The submarine depot ships *Taigei*, *Tsurugisaki*, and *Takasaki* were the first to be converted. They became the *Ryubo*, *Shobo* and *Zuibo*.

Ryubo's structure was weak when she entered the yard for conversion. While being strengthened and given carrier characteristics, she was hit by several bombs from one of the B-25 bombers led by Jimmy Doolittle and launched from the USS *Hornet*. This, of course, delayed completion. When conversion was completed, she displaced over 15,000 tons standard. She had a speed of 26.5 knots, was armed with eight five-inchers, and accommodated 31 aircraft. *Ryubo* saw much action, participating in the battles of the Philippine Sea and Leyte Gulf in 1944. In March 1945, she was moored at Kure, bombed by carrier-based U.S. aircraft, and gutted by fires.

Shobo and *Zuibo* both displaced over 13,000 tons standard upon completion of conversion. *Zuibo* was completed in December 1940, while *Shobo* was completed nearly two years later. Both had a speed of 28 knots, were armed with eight five-inchers, and accommodated 30 aircraft.

Shobo's first battle was her last: she was sunk by carrier-based aircraft of the *Lexington* and *Yorktown* on May 7, 1942, during the Battle of the Coral Sea. *Zuibo* was not much luckier. Her contributions to the Battle of Midway and the Aleutians campaign were negligible. At the Battle for Leyte Gulf, she was sunk by carrier-based aircraft.

The conversions of the *Ise* and *Hyuga* from battleships proved to be one of the most puzzling experiments undertaken by the Japanese after the



IN WAR PAINT here, the light carrier *Ikoma* was laid down at Kawasaki dockyard in 1943 but was never completed. Work on her stopped January 1945. TF 38 planes damaged her the next July.

Battle of Midway. Their aft turrets were removed and abbreviated flight decks were installed. A large hangar, an elevator, and two catapults were added, permitting the ships to launch all her aircraft in 20 minutes.

The planes scheduled for these ships were sent to Formosa before the ships were completed. The conversions were employed in the Battle of Leyte Gulf. By this time, Japan had run out of aircraft to supply them, and the ships were used solely in their capacity as battleships. They were later sunk, in July 1945, by U.S. carrier-based planes.

Another conversion, that of the *Ibuki* from an improved *Mogami* class cruiser, also had a rough time of it. She was authorized under the 1941 program, but shortly after her launching in May 1943, work on her was halted for six months while authorities haggled with the possibility of reconverting her into a fast oil tanker—much needed by the Japanese navy. The decision made, work renewed, this time at a furious pace. Four of her eight boilers were pulled out and this space used for the storage of fuel oil. A hangar and two elevators were installed, and a bridge was placed on her starboard side. She was capable of 29 knots and could carry 27 aircraft. But work stopped again, this time when the construction of small submarines took priority in the shipyards. She was never finished; at the end of the war the *Ibuki* was scrapped.

The most ambitious conversion and the most disappointing career was that of the *Yamato* class battleship *Shinano*. Laid down as a battleship but not completed when hostilities broke, the possibility of converting her to a carrier was entertained. This possibility became a necessity after the Battle of Midway. Survivors of this battle pointed out serious deficiencies in car-



THE RYUHO was officially classified as an aircraft carrier of the Zuibo class but characteristics differed considerably. During her conversion, she was damaged by Hornet-based B-25 bombers.

rier construction and designers at the Naval Technical Bureau listened well. Heavier armored flight decks were needed to protect them from dive-bombing attacks. Fuel and ammunition stowage spaces needed redesign.

Originally, plans for the conversion of the *Shinano* called for her to act as a "hotel ship," supporting land- or other carrier-based planes; she was not to carry aircraft of her own. This plan was changed and by September 1942 the new design was completed and construction began.

Shinano, basically, was to be a CVB. Heavy emphasis was placed on armor. Large bulges below the water line were to minimize torpedo damage. At the water line, an eight-inch thick belt of armor was retained. Four-inch thick armored deck had already been installed before conversion started and this deck became the hangar deck. Rolling metal curtains opened up the forward two-thirds of this deck for night operations and rough seas. The remaining third was closed completely when the curtain was rolled into place. Her flight deck and elevators were designed to withstand 1000-lb. bombs. With this weight, *Shinano* displaced

68,000 tons during her trials at sea.

The Battle of Midway also called attention to the ship's ventilation system. All ducts were protected with 1½-inch armor. Wood was eliminated from the ship wherever possible. A fire-resistant paint was introduced, and a bubble fire-extinguishing system was installed.

The carrier was launched on November 11, 1944 and commissioned November 19th. On the 20th, yard workers still aboard, crewed by green hands, she got underway for Kure where the air complement was to board.

It was at this point that USS *Archerfish* picked her out on radar while surfaced. The submarine maneuvered for position and waited until the carrier and her three-destroyer escort crossed her line of fire. *Archerfish* fired six torpedoes; four hit the carrier. Slowly, she flooded and listed; by 1018 the following morning, all hands were ordered to abandon ship. A few minutes later, *Shinano* capsized and sank—with half her crew still aboard.

For many in the Japanese Navy, the powerful *Shinano* was the last hope. With her sinking, Japanese carrier aviation died, never to operate again.



JAPAN'S MOST ambitious conversion was the CVB *Shinano* from the hull of a *Yamato* class battleship. Pre-surrender burning of the Imperial

Naval Technical Bureau archives destroyed existing photographs of top secret ship. This 1950 drawing was made by LCdr. Shizuo Fukui, IJN.

AT SEA WITH THE CARRIERS



TURNING INTO THE WIND to launch an A-1 Skyraider, USS Lexington (CVS-16) herself launches a new career as Training Command aircraft carrier. Lex reached her 20th anniversary in February.

ATLANTIC FLEET

Lexington (CVS-16)

While steaming in the immediate area of Pensacola, the Navy's newest training carrier was the scene of great activity during her first day's operation. Pilots from VS-30 and VX-1 flew the S-2 Trackers (S2F) during carquals. A touch of sophistication was offered by Lex's steam catapults. The recently retired Anietam operated hydraulic cats.

On February 17, Lex celebrated the 20th anniversary of her commissioning. (For other carriers celebrating two decades of service this year, see below.)

The 48,000th arrested landing aboard was logged by a T2J-1 attached to VT-4. This record number does not include the 27,471 logged aboard before Lex joined the mothball fleet in October 1946. Lexington was recommissioned in 1955.

Lake Champlain (CVS-39)

A ship-based journalist, D. H. Boxmeyer, SN, studied the crew and discovered aboard a Navyman AWOL

from the Red army and an even more potentially dangerous person, a sailor who memorizes the almanac.

The ex-Red-army sailor, Dietmar Kubb, SFM3, born in East Prussia, was drafted in the army in 1955, escaped East Germany to West Berlin and worked briefly in Bremen. Sponsored by the Council of American Churches, he flew to New York the next year to take a job as an apprentice sheet metal worker in Bay City, Mich. He joined the U.S. Navy in 1961.

Leonard Mascia, SN, working in Champ's print shop, is the man with the phenomenal memory. He absorbs each year's almanac and, he confided to Boxmeyer, gains great satisfaction in entering "discussions," armed with a formidable amount of homework.

Independence (CVA-62)

Three days after Independence entered Norfolk Naval Shipyard for overhaul January 7, she celebrated her fourth anniversary. Capt. L. V. Swanson, commanding, sliced into the first of three cakes served on the hangar deck to celebrate the occasion.

Some of the improvements to be made during overhaul will be the enlargement of the Air Intelligence space,

the installation of an Electronic Data Processing Machine Center, overhaul of machinery spaces, main engines, boilers and pumps, the increase of berthing spaces, redesignation of an 03 level void to PLAT System Equipment Room. Another 03 level void will become the Optical Landing System Equipment Room.

During the birthday celebrations aboard, Independence's annual Leadership Awards were given to Ltjg. J. F. Hayward (recently transferred) and G. F. McCarty, FPC. Capt. Swanson made the presentations of the awards.



THE NAVY'S first angled deck carrier, USS Antietam, retires after eighteen years service.

Saratoga (CVA-60)

The 30,000th carrier control approach was landed by Marine pilot Maj. Richard B. Smith, Jr. Approach controller was E. N. Cate, AC1, and final controller M. E. Williams, AC2.

Forrestal (CVA-59)

In the March 1963 NANews, a tentative list of the first Navy jet pilots was published. Herein is published the name of the holder of a brand new title, First Jet Quadruple Centurion on one aircraft carrier. Lt. William Westerman made his 400th Forrestal landing as a Rampager of VA-83. Other pilots have probably racked up more jet landings on different carriers but, from available records, Westerman is the first to make all 400 landings on one carrier. It took him three Med cruises to rack up the record. While he was doing this, other Ram-



A FORRESTAL-BASED A-3B Skywarrior (A3D-2) trails an in-flight refueling boom as a Royal Navy Scimitar nuzzles up to the nozzle. An A-4 Skyhawk (A4D) of VA-83 watches the hook-up.

paggers also contributed to logging the squadron's 19,000th accident-free flying hour.

A Pentagon official recently wrote Capt. L. R. Geis, commanding *Forrestal*, commenting on a football game prediction he made during a closed TV interview while aboard.

"I can find no way of altering the result of the game," he wrote, "or of avoiding responsibility for a rather gross error in judgment which may well have inconvenienced (or even impoverished) some of those who heard my prediction.

"Since such inconvenience or impoverishment is a direct result of my own error, I feel that some restitution is called for. Although regulations of leave and liberty are the sole responsibility of the Commanding Officer, I would consider it a personal favor to me if you would grant a special 48-hour 'Cotton Bowl Liberty' to all hands, on an orderly, not-to-interfere basis."

The letter was signed by Fred Korth.

Essex (CVS-9)

When an S-2D *Tracker* developed a malfunction in its port engine during its first test hop, the plane made a quick landing aboard *Essex*. The emergency barricade rig was set in a record 54 seconds. Said *Essex's* air boss, Cdr. Sherman Brent, "Training and drills do pay off." Pilots of the *Tracker* gratefully agree.

Franklin D. Roosevelt (CVA-42)

Ltjg. Wallis Logan of VF-14 scored the ship's 118,000th landing, in an F-3B *Demon* (F3H-2), 11 operating days after the 117,000th was logged. It was Logan's 70th arrested landing on the *FDR*. Capt. Walter E. Clarke, C.O., helped cut a celebration cake.

Randolph (CVS-15)

The patriotism of a Norfolk resident gained the attention of *Randolph* offi-



BOILER MAD? Re-up happy, Marvin J. Green, BTC, takes oath in shut-down *FDR* boiler.

cers who discussed it one day while cruising in the Caribbean during the recent Cuban affair. Noting that Mr. Clayton M. R. Wigg had flown the U.S. flag daily in front of his residence for the past seven years, they presented the patriotic gentleman with a brand new American flag. *Randolph* provided a color guard for the occasion.

PACIFIC FLEET

Ranger (CVA-61)

Michael Street, ABH3, believes in drills. He is a Fly-2 Director aboard *Ranger*. Three hours after the ship conducted a successful man-overboard drill, Street was caught in the jet wash of a *Phantom II* and blown over the port side. Five minutes later he was returned to the ship by helo, wet, uninjured, and a great believer in man-overboard drills.

Battle Efficiency E's were presented



STEAM CATAPULT in *USS Lexington* permits this Grumman S-2D *Tracker* (S2F-3) to be launched in two and one-half seconds from signal.



BON HOMME RICHARD'S 50,000th steam catapult launch is done by this A-4C *Skyhawk* (A4D-2N) piloted by Ltjg. J. J. Kogut of VA-192.



THE MOBILITY of seapower is demonstrated by this view of two formations of Navy F-4B Phantom II (F4H-1) jet aircraft photographed against the Philippine countryside. These ten Phantoms were launched from the 7th Fleet aircraft carrier USS *Ranger* in the South China Sea.

to VF-91 and VA-93 by RAdm. Louis J. Kirn, ComCarDiv Five, during a personnel inspection of Air Group Nine. This was VF-91's second consecutive award and is the first time that a PacFleet jet fighter squadron has scored such an accomplishment.

In the X,000th landing department, Ltjg. Donald G. Hoech of VA-93 engaged number four cross-deck pendant to register the carrier's 51,000th landing. The 52,000th was made by Lt. Terry E. Emery of Fighter Squadron 21 in an F-8C *Crusader* (F8U-2).

Ranger is laying claim to the tonnage-per-hour record for underway replenishment. Operating off the coast of southern Japan February 21, *Ranger* took aboard subsistence stores from the refrigerator ship USS *Bellatrix* at a rate of 166 tons per hour.

Verified by *Bellatrix*, the rate beats the last known record of 164 tons an

hour—established in November 1962 in the Sixth Fleet—by two tons. The tricky, high-speed operation was accomplished by some 645 *Ranger* men manning four replenishment stations and striking stores below. Loads arrived at each station on an average of every two minutes.

Kitty Hawk (CVA-63)

If there is a pleased photographer anywhere in the U.S. Navy, chances are you'll find he is *Kitty Hawk's* Richard W. Smith, PHC. Two of a series of on-deck photographs caught the eyes of NANews' art director, as well as *All Hands'*. The photos, similar, graced the front covers of each for the December 1962 issues. *Kitty Hawk's* PIO commented: "Making the covers of these two in the same month is to a photographer's mate what two

consecutive perfect games are to a bowler, if a comparison can be drawn." Capt. Walter L. Curtis, Jr., C.O., presented Chief Smith copies of the covers, mounted and framed.

Ltjg. Ray G. Barnes of VA-113 landed his A-4C *Skyhawk* (A4D-2N) on *Kitty Hawk* and became the carrier's first jet Centurion. The 7000th landing aboard was made by Lt. William H. Beck of the same squadron, at night, also in a *Skyhawk*. The 10,000th landing was made by an F-4B *Phantom II* piloted by Lt. William C. Gideon with Lt. William C. Mercer as RIO. Both are assigned to Fighter Squadron 114.

Bon Homme Richard (CVA-31)

Completing a seven-month deployment with the U.S. Seventh Fleet in the Far East, *Bonnie Dick* returned to her home port, San Diego. During the

tour, the ship's Carrier Air Group 19 logged more than 15,000 flight hours. After a month in San Diego, the carrier sailed for Bremerton, Wash., and a yard period.

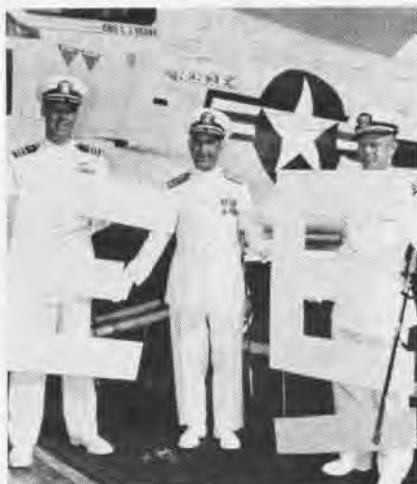
Bennington (CVS-20)

Two months before President Kennedy recalled Theodore Roosevelt's hiking order of the early 1900's, the Marine detachment aboard *Bennington* left the ship one day, at break of dawn, for a 50-mile hike that ended the following afternoon. Hiking approximately 25 miles the first day, the Marines, with rifle and field marching pack on their backs, marched into the bivouac area after covering the distance in seven hours. Next morning, the detachment returned to the ship by a different route, hiking the same distance. The hike was repeated the following week for those who missed it the first time.

Bennington emerged from a six-month overhaul at Puget Sound Naval Shipyard March 18 and claims to be "the Navy's best equipped antisubmarine carrier." Improvements include the newest Bow Sonar System, an extensive rearrangement of the Combat Information Center, the addition of new, powerful anti-aircraft and height-finder radar systems and the installation of a tactical navigational display system.

Constellation (CVA-64)

First annual Mrs. Christian Herter Leadership Awards have been presented



RADM. KIRN (C) presents *Battle E* awards to C.O.'s of *VA-93 (L)* and *VF-91* aboard *Ranger*.

aboard *Constellation*. Recipients were Ltjg. N. L. Griffith of Weapons Department, and M. L. Berger, AGCA, of OM Division. Runners-up were W. D. Smart, BTCS, and H. B. Holder, BM1. Winners were presented a suitably engraved wrist watch and the Commanding Officer's (Capt. S. W. Vejtasa) commendation.

The award is the result of a presentation made by Mrs. Herter at the time of the ship's commissioning. She sponsored the *Constellation*. In her desire to encourage and recognize leadership within the carrier's crew, she presented the ship with a Leadership Plaque.

Last year, *Constellation* established the Mrs. Christian Herter Award for leadership. The ship's Awards Board screened nominees selected by department heads and division officers. Only

junior officers and petty officers are eligible for the award.

Coral Sea (CVA-43)

Emerging from overhaul at Naval Shipyard, Hunter's Point, *Coral Sea* has undergone a few changes. A more powerful radar system alters the silhouette of the island and gives the carrier greater tracking ability. Port and starboard extensions have been added to the flight deck. The movable port addition will aid the ship when entering smaller ports.

Additional compartments have been constructed throughout the ship. New living spaces were installed on the starboard side of the 02 level.

Rested, renovated and ready, *Coral Sea* has rejoined the Fleet.

Coming Events

As noted above, USS *Lexington* celebrated the twentieth anniversary of her commissioning date, February 17, 1943. During that year, 1943, a total of 15 CV's were commissioned. That same year, 24 CVE's were added to the Fleet. There are no escort carriers carried as such in the Navy's register anymore. And of the 15 CV's commissioned that year, only five remain operating with the Fleet today.

These aircraft carriers celebrate their twentieth anniversaries this year: USS *Yorktown* (CVS-10), April 15; USS *Intrepid* (CVS-11), August 16; USS *Wasp* (CVS-18), November 24; and USS *Hornet* (CVS-12), November 29.



COVER BOY—Chief photographer's mate Richard W. Smith accepts framed magazine covers from Capt. W. L. Curtis, Jr., C.O. of *CVA-63*.



WINNERS and runners-up in *Constellation's* leadership awards line up for presentations: (from left) Griffith, Berger, Smart and Holder.

WEEKEND WARRIOR NEWS



CAPT. L. L. BANGS, NAS Olathe C.O., presents Cdr. A. B. Cogan, VP-881 C.O., CNAResTra's plaque honoring unit's Berlin call-up.



ARCHEOLOGIST turned navigator, Lt. Harle (R) on training duty works with VP-16's Ltjg. Jim Owen (L) and Lt. Bing Downing (C).

Archeologist as Navigator

For 50 weeks of each year, James C. Harle, a Ph.D. in Indian Archeology, resides at Oxford University where he is the Assistant Curator of the Oriental Section of England's noted Ashmolean Museum. The remaining two weeks of the year, Dr. Harle turns in his scholar's cap and gown to become a professional air navigator for the United States Navy. Lt. Harle was assigned this year to NS ROTA, Spain, with temporary assignment to Patrol Squadron 16.

Lt. Harle's first two days in the squadron provoked many a "double take" when he spoke. His strong British accent was unusual for a U.S. Navy officer. He is, however, an American educated at Princeton and a veteran of the Pacific Theater during WW II. He has lived in England the last seven years. Lt. Harle says his Oxford associates insist he speaks with a "typically American accent." But the many flight crew members of VP-16 who flew with him say this just isn't so—and they have a tape recording of his voice, taken on a routine training mission, to prove it.

Patrol Squadron 16, Detachment 13, commanded by Cdr. C. E. Rodgers, provided an excellent environment for Lt. Harle to undertake his naviga-

tional duties. He was impressed by the tremendous advances in sophisticated electronic equipment. Some of the "younger salts" were impressed by Lt. Harle's navigational feats that were a tribute to his personal skill rather than electronic wizardry.

Upon his return to Oxford, Lt. Harle shed his Navy uniform and repacked his luggage for a trip to India to pursue his archeological investigations.

Grosse Ile Reservists at Quonset

Eighty-five Naval Reservists from NAS GROSSE ILE, Michigan, took their two-week training duty at NAS



PERSONNELMAN James J. Stotz, Public Information Office, NAS Willow Grove, points to new sign erected in the interest of highway safety to serve as warning that everyone must do his part to make automobile travel safe.

QUONSET POINT early this year. The 25 officers and 60 enlisted men are members of Air Anti-Submarine Squadron 735, commanded by Cdr. Vernon H. Peterson. Their host at Quonset was VS-32, which is attached to USS *Lake Champlain* (CVS-39).

The Michigan Reservists received training based on the "buddy system," in which Grosse Ile and Quonset Navy men holding the same positions worked together on problems. This was VS-735's first training period at Quonset Point.

Marines Honored at Glenview

In February, Marines at NAS GLENVIEW honored their Reserve Marine of the Year and their top squadrons in safety and attendance. Cpl. Walter A. Guyer received a trophy as Marine Reserve of the Year, presented to him by Mr. Casimir A. Mroz, commandant of a local detachment of the Marine Corps League. VMF-611 was named the winner of the first annual safety and achievement trophy; Marine Air Control Squadron 22 was honored with a plaque for the best drill attendance in 1962.

The presentations were made in the station drill hall before members of the five squadrons at the base.

Of the Marine Reserve of the Year,



CAPT. W. A. MILLER, JR., NARTU Lakehurst C.O., gives oath to Engle brother and sister.

Col. Robert F. Conley, C.O. of the Marine Air Reserve Training Detachment, said, "This Reservist exemplifies that spirit of patriotism and devotion to duty for which the Marine Corps has become famous."

Michael W. Lindstrom, commander of Marine Post 273 of the American Legion of Chicago, presented the safety trophy to LCol. J. G. Harrington, Commanding Officer of VMF-611.

The attendance award, presented by Mr. J. Norval Burch of the Chicago Central Committee, Navy League, was accepted by LCol. H. P. Pearce, Commanding Officer of MACS-22.

Senator Williams at Lakehurst

United States Senator Harrison A. Williams visited NARTU LAKEHURST and toured the classrooms and flight lines of the facility.

Senator Williams was impressed by the "stay in school" policy of the Naval Air Reserve which permits high school juniors and seniors to participate in the Reserve one weekend each month and 14 days in summer.

Before leaving the NARTU, he witnessed the administering of the oath of allegiance to William L. Engle, Jr., and his sister, Nancy Jeanne. Enlisting together in the Naval Air Reserve, they became the Lakehurst unit's first brother and sister team to affiliate with the Weekend Warriors.

Witnessing the occasion (picture above) were, left to right, the enlistees' younger brother George; their mother, Mrs. Engle; Senator Williams, a close family friend, and their father, William L. Engle, Sr.

Training at New Orleans

Early this year two squadrons, VF-701, commanded by Cdr. Joseph P. Seymour, from NAS DALLAS, and

VR-811, commanded by Cdr. Richard Gerzeuski, from NAS MINNEAPOLIS, trained at NAS NEW ORLEANS.

During its 14-day duty, VR-701 completed two three-day flights to Panama, transporting personnel and supplies to designated areas. A total of 22 officers and 17 enlisted men participated.

The Minneapolis squadron of 17



MARINE OF THE YEAR at Glenview, Cpl. W. A. Guyer receives trophy from Casimir A. Mroz.

officers and 32 enlisted men flew three C-54 (R5D) aircraft. They made air-lifts to various cities in the south as well as an overseas jaunt to Panama.

Seattle Recruiter's Son in Reserve

Michael C. Russell was three years old when his father, Charles A. Russell, ADR1, became a recruiter at NAS SEATTLE. Over the past 14 years Recruiter Russell has counseled many young men on the benefits offered in the Naval Air Reserve. His most re-



CAPT. W. P. TANNER, Jr., Los Alamitos C.O., is handed shovel by Cdr. J. W. Hurnblad, C.O. of Naval Air Reserve Electronic Training Unit, to break ground for extension to the building that the unit is housed in.



MICHAEL C. RUSSELL, 17, receives oath as a reservist as his Recruiter father looks on.

cent recruit is his son, now 17 years old. LCdr. J. D. Warrior administered the military oath of allegiance.

The new reservist has been assigned to VS-892 at NAS SEATTLE. Although primarily interested in becoming a Photographer's Mate, he is credited for following in his father's steps by recruiting his close friend, Richard E. Metz, who enlisted the same day.

Russell considers his son's enlistment one of the highlights of his career as recruiter at NAS SEATTLE.

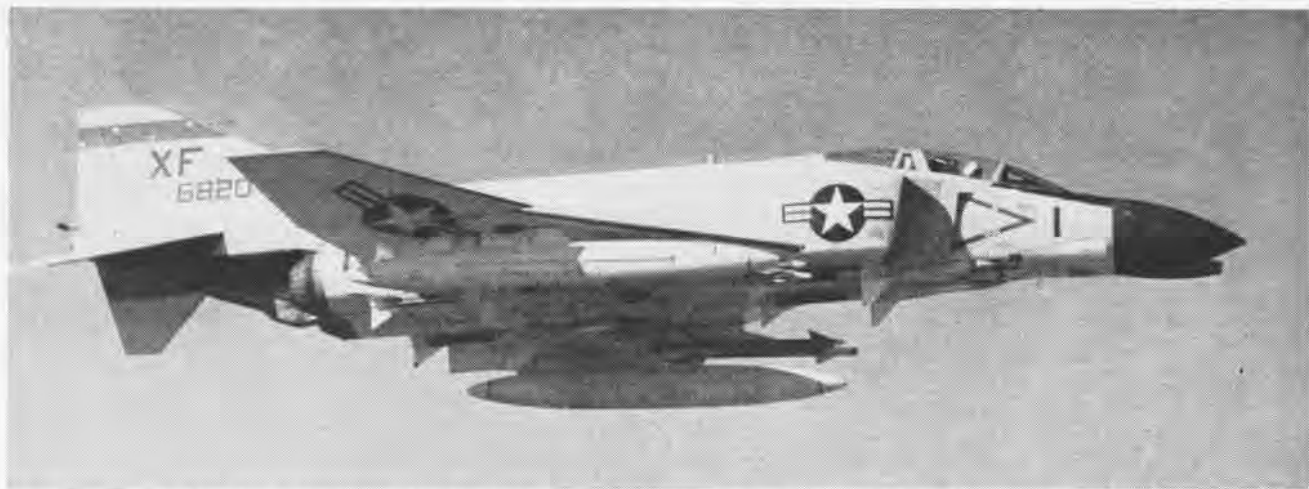
BuPers Admiral for Reserves

Secretary of the Navy Fred Korth, in implementing the report of the Naval Reserve Evaluation Board (Johnson Board) has directed RAdm. William C. Hughes, USNR, to report as Assistant Chief of Naval Personnel for Naval Reserve and Naval District Affairs about July 1.

This action will put in Washington a Naval Reserve flag officer as Assistant to the Chief of Naval Personnel.

Active Duty Squadron Splits

VP-872, one of the recalled Naval Air Reserve squadrons during the Berlin crisis, lost five pilots to other Alameda squadrons in moves that were attributed to the recent active duty stint. Three 872 officers—Cdr. Robert Thomas, Cdr. Edward Marcinak and LCdr. John Drach—were recently elevated to commanding officer billets in VP-879, 873 and 876, respectively. Two others, LCdr. James Gilchrist and LCdr. Norman Howery, have become executive officers for VP-874 and VP-971. Another officer, LCdr. Stanley Onderdonk, has assumed duties as X.O. of 872. Cdr. Edward Roberts, 872's C.O., said the recent active duty experience "will prove a tremendous asset to the new squadrons."



WEAPONS SYSTEM TACTICAL HANDBOOKS ARE DESIGNED TO PROVIDE CREWS WITH TACTICS TO MATCH THE POTENCY OF THEIR AIRCRAFT

VX-4 Reports on:

DEVELOPMENT OF TACTICAL HANDBOOKS

HOW MANY of you *Phantom II* drivers know your airplane well enough to quote answers to questions such as these: "What is the economical bank angle on CAP station?" or "What is your initial run-out altitude for a 40,000-foot supersonic bogey?"

These same questions and thousands of others can also be asked of *Crusader* and *Demon* jockeys. If you, as a pilot of any of these airplanes, have a certain publication handy, you can stump the experts.

There is one, and only one, place where all the answers to the tactical employment of these three airplanes, the F-4A/B, F-8D/E and F-3B can be found, the applicable Weapons System Tactical Handbook (WSTH), usually called simply the Tactical Handbook.

It probably isn't quite correct to call it a handbook—singular. It is published under two covers. For user convenience, the bulk of the material is published in the Confidential section, while the more highly classified material is published in a Secret supplement.

What is the Tactical Handbook? Let's answer it this way: What the NATOPS Manual is for routine operations, the Tactical Handbook is for employment of the aircraft as a weapon system.

The Tactical Handbooks, designed to be used in conjunction with the

LCdr. Roland E. Aslund

Flight Manuals and NATOPS Manuals, represent a new concept in doctrinal publications. When used with the other two of the "Big Three," the Tactical Handbooks provide all the information required to employ the weapon system tactically and achieve all the combat potential inherent in it.

More specifically, Tactical Handbooks for fighters contain such items as detailed procedures for CAP stationing; low, middle and high sub and supersonic intercepts; how to get the best results from the radar; aircraft performance data; probabilities of intercept; tables of intercept capabilities; attack and re-attack capabilities; ECM and counter-ECM procedures and many related and carefully detailed presentations—all in one handy volume.

The WSTH contains everything from detailed explanations of *each* piece of the Tactical Package—how you use it from start engines to stop engines—to how it fits into the whole picture of fleet air warfare. The USN jet jockey who truly masters the wealth of information contained in the WSTH volume just can't help becoming a top-notch fighter pilot.

Who needs the Tactical Handbooks? Though the Tactical Handbooks are intended primarily for the Tactical

Team, the pilot (and RIO) and air controller, staff people and operations and planning personnel will also find them of value. Air controllers should find the volumes an invaluable aid for mastering the concept of interceptor employment.

The idea for fighter Tactical Handbooks developed about the same time NATOPS was getting started—early 1961. Tactical Handbooks, devoted to special weapons delivery, had been in existence for attack aircraft for some years. These original volumes proved so useful that it was decided to extend the coverage of the attack manuals to include conventional ordnance tactics and to develop similar manuals for fighter aircraft.

Early in 1961 representatives of Operational Test and Evaluation Force (OPTEVFOR), which has overall responsibility for Tactical Handbooks, met with VX-4. Since VX-4 already had the mission for performing the operational evaluation of the Navy's fighter aircraft and airborne missiles, it was logical for the squadron to be given the job of preparing the Tactical Handbooks for fighters.

Tactical Handbooks evolve through a two-stage development process. First VX-4 develops a preliminary handbook based on the best information available from its projects and other such

sources. The preliminary handbooks are then issued by COMOPTEVFOR to the Fleet.

Fleet squadrons evaluate the preliminary books for about a year. During this evaluation, every aspect of the proposed tactics is tested. If Fleet squadrons can develop better tactics, these are forwarded for inclusion in the revised manuals.

The results of the fleet evaluation of preliminary manuals is collected by OPTEVFOR and forwarded to VX-4 for use in developing the "revised" Tactical Handbooks. After approval by COMOPTEVFOR and CNO, these fleet-tested versions of the books are issued to the Fleet by COMOPTEVFOR as supplements to NWIP 41-2, the Fighter Aircraft Manual.

Issue of the revised manuals does not end the process. As new and better tactics are developed by the Fleet, they are evaluated by VX-4 for OPTEVFOR—which has continuing responsibility for keeping the Tactical Handbooks up-to-date—and issued by COMOPTEVFOR as changes. Streamlined administrative procedures are used, so that new tactics can get to the Fleet in time to be of value.

Material for the preliminary handbooks is largely derived from the various evaluation projects conducted by VX-4. This squadron is responsible for continuing *Sparrow* missile evaluation, *Sidewinder* 1A and 1C evaluations, and F-8D/E and F-4A/B aircraft operational evaluations. VX-4 also has specific responsibility for developing tactics for fighter aircraft.

In carrying out its evaluation projects, the squadron examines every operational aspect of the missile, the aircraft and the armament system, from shorebased training to shipboard simulated combat missions. In addition to the information generated at VX-4, extensive research and liaison are conducted with various test activities, ordnance development agencies, and tactical research agencies for data which will help develop the most useful handbook possible.

The task of producing the first preliminary manuals proved to be a massive undertaking, requiring practically a total-squadron effort. Every tactical consideration from launch to recovery had to be covered. To be useful to its intended users, the manuals had to be comprehensive and detailed, yet read-

able. Methods of training had to be defined; the fleet anti-air warfare environment had to be considered; past and present projects had to be screened for needed data; flights had to be planned and flown to fill in gaps in available information.

The campaign was launched with the *Phantom II* preliminary handbook. LCdr. J. G. Wissler, Project Officer, was assisted by LCdr. B. Tesch, Lt. G. F. Keene, and Capt. C. F. Schwab, USMC. Literally thousands of man-hours went into preparing rough-roughs, smooth-roughs, rough-smooths, revising and updating charts, diagrams, explanations, etc. "Murder boards"—

progress of each chapter and appendix. Yeomen were kept strapped to their typewriters. Handbook writers turned to working the night shift to escape from daytime disturbances. Several writers impounded an exclusive hideaway for daylight writing—visitors and phone calls barred. In short, every effort was made to get the handbooks to the Fleet before the information required up-dating.

Developing the handbooks was a tedious job but a rewarding one when fleet squadrons and units report that these publications are helping them do their job.

At this time, the revised handbooks



VX-4 DEVELOPS PRELIMINARY TACTICAL HANDBOOKS FOR ALL U.S. NAVY FIGHTERS

review boards—were convened daily to screen material for correctness and readability.

While the smooth typing of the F-4A/B preliminary Handbook was in progress, Lt. Keene and LCdr. Tesch put their heads together and began turning out an almost equal volume of information for the *Demon* WSTH. Capt. Schwab assisted with ECM, and LCdr. W. S. Lewis handled conventional weapons.

Meanwhile, LCdr. C. A. Karvala launched the offensive on the F-8D (FSU-2N) handbook. LCdr. C. J. Talmadge and Capt. E. G. Givens, USAF, rounded out the *Crusader* team.

To keep the whole project moving on schedule, a large "howgozit" board was placed in the squadron's project office to keep tabs on and check the

—revised in the light of fleet squadron experience—have been submitted to CNO for approval and official sanction as the "Tactical Bible" for the aircraft concerned. In the meantime, VX-4 continues to up-date the manuals with the help of information submitted by squadrons.

In the squadron, we are proud of our part in this program. We believe the Tactical Handbooks can make a great contribution to the fighting power of the Fleet. We also realize we cannot do the whole job ourselves. In the final analysis, the Tactical Handbooks can be only as good as the users make them. They will be the best if only you and your buddy do your part to make them the best. Read it! Fly it! Evaluate it! Write up your suggestions—but don't slam it if you haven't tried it.



USS SALISBURY SOUND (AV-13) is commanded by Capt. J. L. Holloway, III, and is currently employed as flagship for Commander Patrol Force 7th Fleet, RAdm. B. M. Streat, W. Pacific.

TENDER MEN AREN'T SO TENDER

THERE IS A NEW sound in the seaplane tender *Salisbury Sound*: it is the clanging of a bell. When this particular bell rings, all hands do not go to general quarters, but you can be sure there will be plenty of instant fighting aboard.

It all began when the *Sally* joined the Seventh Fleet for her recent tour, and revived the traditional smoker—with vigor. In the summer of 1962, she served as flagship for Commander Patrol Force Seventh Fleet in WestPac. Men aboard decided to channel some of their physical fitness effort into an organized program—a smoker, with more mayhem than smoking.

At the first call for contestants, there were more volunteers than an evening's entertainment could accommodate. After filling out ten boxing matches, two wrestling bouts, and a pair of judo exhibitions, the remaining

fighters were given the ring for a blindfold free-for-all.

The crew, and apparently the contestants, loved it. In four months, no less than three smokers were staged. On each occasion there were more applicants than spots on the evening's card—even though the program never ran less than ten bouts.

Each successive smoker improved in professional atmosphere and quality as the fighters gained experience and the ship's athletic locker acquired the equipment and trimmings—largely scrounged from the recreation stocks of overseas bases where interest in the manly art of the clobber-klatzsch was directed to other recreational pursuits.

Even heavy seas and a pitching deck failed to interfere with the enthusiasm of the fighters—and in many cases provided the element of chance which often became the equalizer in favor of a good pair of sea legs against a more skillful fighter.

With such pugilistic enthusiasm in the *Salisbury Sound*, Capt. J. L. Holloway, III, C.O., decreed that there are no losers aboard, no failures, no defeats; there are only winners and runners-up. The tender men are laying claim to being aboard "the fightin'est ship in the Navy."

VF-114 Logs High Month C.O. Cites Squadron Maintenance

VF-114, which flies the potent but

complex F-4 *Phantom II*, racked up its highest total of monthly flight time since 1958. Most of the flights were launched from a Condition CAP status, while the squadron, a component of CVG-11, was deployed to WestPac in USS *Kitty Hawk* (CVA-63).

Cdr. J. J. Konzen, VF-114 Commanding Officer, attributes his squadron's success to its high degree of maintenance ability (see "VF-114 and Scheduled Maintenance," *NANews*, Feb. 1963, pp. 16-18).

VT-29 Logs Safety Record Has 50,000 Accident-Free Hours

Training Squadron 29 at NAS CORPUS CHRISTI logged its 50,000th accident-free hour in late January. The record hour was reached during a navigation training flight piloted by LCdr. J. H. Kampe and Lt. E. T. Mauer.

The accumulation of VT-29's accident-free flying dates as far back as March 1959 when the squadron was known as ATU-501. Since that time, the squadron pilots have transitioned to five different aircraft and at the present time are flying three different types. Most of the 50 squadron pilots are qualified commanders in all three types now being used, the TC-47K *Skytrain* (R4D-7T), the TC-117D (R4D-8T) and ten T-29B Convair planes on loan from the U.S. Air Force.

During the accident-free flying period, the squadron trained 2693 navigators. Of these, 589 were Naval Aviation Observers and 2104 were student pilots. This amounts to 75,000,000 navigation training miles and 193,896 student hours. Thirty-six per cent of this time was flown at night.

Cdr. R. W. Grill is C.O. of VT-29.



THE WINNER is introduced to RAdm. Streat by Capt. Holloway (C), after a slugfest smoker.



CDR. W. D. McFARLANE, instrument ground training officer, and LCdr. G. R. M. Pearson, instrument training officer, look over VA-44's monthly "Instrument Refresher Newsletter" which is sent to Jacksonville area squadrons.

Editor's Corner

This column is born of a desire to give to Naval Aviation News readers the PERSONAL SIDE of the news. Its main ingredient will be PEOPLE . . . the men who fly, who maintain the aircraft, who man the air stations and staffs around Naval Aviation's world-wide network of ships, stations and ports.

MYSTERY AT SEA—VF-14 has a conch shell (large South Sea island type) which is traditionally blown as a "call to order" at squadron meetings. While on its Med cruise on the *FDR*, the shell "slipped away" from its usual place and was the subject of a ship-wide search. Just as VF-14 was ready to give up the search, the squadron telephone rang. A long blast on the horn was heard, but no human voice. Since then, at daily intervals, the squadron has been receiving similar calls . . . and the long wail is heard again. The caller has been dubbed "the Mad Horn Blower" and (as of February 14) was still being sought.

The Torpedo Caper—The Ordnance Department at Cubi Point, which prides itself upon a long record of safety in a dangerous business, had one of those infrequent "un-routine" incidents that will one day evolve into a sea story. After a routine air drop of a torpedo on a target, a crash boat stood by to pick up the "fish." Everything was routine up to the point where torpedo and target met. To the boat crew's amazement, the target disappeared momentarily, then went "skipping gaily" across the South China Sea behind the torpedo. The target finally broke away, but the torpedo kept right on; it headed straight for the pick-up boat. In an account in the *Cubi Air Scoop*, it was reported, "A slight degree of anxiety arose among the crew of the boat." The boat maneuvered. So did the torpedo. Finally the torpedo caught up with the boat and rammed it near the fantail . . . twice, once on each side. At that point, the crew realized that the torpedo was unarmed and could not explode. The torpedo caper did not end there, however. When the motor had finally exhausted itself in the cat-and-mouse game, the crew lifted the fish out of the water. Just as the crew began to relax, with the "mixed-up" torpedo suspended in a hoist, the motor came to life again, full speed, and gave a final "thrill" to the boatmen. The errant torpedo finally was strapped to the deck and left to run out its "extra" life. "All in a day's work," reported one of the crew members.

STANDING PROUD DEPARTMENT: The C.O. of the *FDR*, writing home to the "Roosevelt Family," described one anxious moment in this fashion:

"About midnight one night while waiting to recover one of our propeller aircraft, our winds had reached 65 knots (1 knot equals 1½ miles per hour) with sleet and rain. The pilot was low on fuel, so no time could be wasted getting him aboard and, with the assistance of our outstanding radar team, he was able to effect a safe landing. Flight deck crewmen's faces were actually being cut by the driving sleet, but every man knew what was at stake." (Another reason why we're called "the world's finest team.")

Television doesn't affect me. In a Chaplain's column ("Parson to Person") in the *NAS MAYPORT (Fla.) Mirror*, Chaplain John F. Biddle published a short message, "Are We Softsoaping God?"

"DUZ you DREFT along with the TIDE? VEL, now is the time for all to CHEER up. If you want real JOY, the TREND is to BREEZE to church regularly on Sunday morning. But too many WOODBURY their heads in the pillow or work in the backyards like a HANDY ANDY, forgetting that the Lord's Day was made for LESTOIL.

"Where the Lord reigns, the DOVE of PEACE will never have to send out an SOS. Don't trust LUX chances by neglecting worship on Sunday. Shall we DIAL you and remind you of those IVORY palaces over yonder? This is not just a lot of BAB-O. Worship will add to your LIFE-BUOY, so why not be faithful and WISK yourself out of bed Sunday mornings, dress up SPIC AND SPAN and DASH like a COMET to God's House of prayer? Sing PRAISE to God and bring a cleanser to your soul and PLEDGE yourself, and PRIDE of conscience will be yours. Then life will become full of ZEST."

To which, the Editor supposes, one might say, "I like the TONE of your message, BON AMI. It won't take a 20-MULE TEAM to get me to church."

RANDOM FACTS. *It's a fact:* Someone in E Division on the *Independence* figured out that at local domestic rates the ship's monthly electricity bill would average \$58,488.95. No bill is paid, of course, because the carrier makes its own power. The bill was computed by averaging out the kilowatt hours used by *Independence* over a four-year period. *It's a fact:* First pilot to land aboard *Enterprise* using the Pilot Landing Aid Television (PLAT) was Lt. Reginald PLATT III of VRC-40. Platt for PLAT.

Rambling about: At a press demonstration of the new E-2A *Hawkeye* recently, Navy pilots were observed shaking their heads in disbelief. The demo pilot taxied up to the line, turned his aircraft smartly, and then backed up into a ramp space. It was a first look at what may become common on our carriers—reversible propellers.

20 YEARS AGO . . . the average Naval Aviation Cadet entering the Iowa Pre-Flight School was 5 feet 9 inches tall, weighed 156 pounds, had a 36-inch chest and a 29.75-inch waist, could do 17 pushups and 5½ chinups. Just three months later (statisticians reported) he was a half-inch taller, had gained two pounds, had expanded his chest by a half inch, reduced his waistline by three-quarters of an inch, could do 24 pushups and "almost 9" chinups. (An apropos 1943 admonition by Grampaw Pettibone: "Do a thing right and you get results; do a thing wrong and you get consequences.")

LETTERS

SIRS:

Page 23 of the February 1963 issue of NANews carries a picture of Lt. H. V. Spade, outfitted in a Mk. IV Full Pressure Suit, climbing into a *Phantom II*.

Great jumpin' Jehosaphat! It appears that the back lobe of his flotation garment is rolled up under his harness. If he were to attempt to inflate his flotation garment, he would note failure of this compartment; it would not unroll and inflate. This would reduce his prospect of survival.

The Aviation Physiology/Full Pressure Suit Training Unit, NAS CECIL FIELD, Fla., has investigated this rolled lobe configuration at the request of personnel who desire to wear the garment in this manner. Upon activation of the CO₂ cartridges and/or use of the oral inflation tube, the rear lobe would NOT unroll and inflate.

We are, therefore, recommending in the interest of safety and survival that the rear lobe should not be rolled.

P. W. SCRIMSHAW, SR.,
LCDR., MSC, USN

NAS CECIL FIELD

SIRS:

Naval Aviation's famed *Blackbirds* are back in the air, persistent as ever and again sporting the green derby, cigar and boxing gloves. In ceremonies February 15, Attack Squadron 45 was recommissioned for the second time at NAS Jacksonville. VA-45 is to serve as ComNavAirLant's A-1H (AD-6) Replacement Air Group Squadron.

Past history is on hand for the squadron's 1950-58 existence. It would be appreciated if any old plaques, especially the wood carving, were returned. Information concerning the original VA-45 will also be appreciated. We are eager to collect the facts.

LT. EDWARD F. BRONSON

NAS JACKSONVILLE

VA-45 PIO



VA-45 BLACKBIRD INSIGNIA IS FAMILIAR

EVOLUTION OF AIRCRAFT CARRIERS

A GROWING number of queries to the editor concerning previously published installments of the Evolution-of-Aircraft-Carriers series prompts the recap printed below. Back issues of *Naval Aviation News* may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., at a cost of \$.25 per copy. Check or money order should be made out and mailed to the Superintendent. Future installments of the 15-part series will be published as space permits:

The Aeroplane Goes to Sea—February 1962, pp. 22-28.

Decisions Out of Jutland—March 1962, pp. 25-31.

Langley, Lex and Sara—May 1962, pp. 24-29.

Carriers from the Keel—June 1962, pp. 32-37.

Flattops in the War Games—August 1962, pp. 22-27.

Last of the Fleet Problems—September 1962, pp. 22-26.

The Japanese Developments—October 1962, pp. 23-27.

The Early Attack Carriers—November 1962, pp. 22-26.

Emergence of the Escort Carriers—December 1962, pp. 15-19.

CVB's: the Battle Carriers—January 1963, pp. 26-28.

The End of the 'Bokubokan' in WW II—April 1963, pp. 27-29.

SIRS:

As of 1 January 1963, VMGR-352 compiled a total of 40,260 accident-free flight hours. This total covers the period since May 1959. During this period, the squadron operated three aircraft types: R5D (C-54), R4Q (C-119) and GV-1 (KC-130F).

We respectfully challenge Navy and Marine Corps squadrons, past and present, to find anyone surpassing this record.

Kindly address replies to Aviation Safety Officer, VMGR-352, 3rd MAW, MCAS El Toro, Santa Ana, California.

N. J. ADAMO, CAPT. USMC
Aviation Safety Officer

NATOPS NOTICES

NATOPS conference at Dallas originally scheduled in April has been postponed to September.



LTJG. C. W. STEVENS, CHC, USNR, was formerly a jet fighter pilot with VF-121 at NAS Miramar in 1953-54. While attending a Chaplains' Seminar at San Diego, he was given a ride by Cdr. Chandler (R), VF-114, in an F4B.

Grumman Fighter Retired Test Pilot School Turns in Tiger

For the first time in 14 years, the U.S. Navy Test Pilot School at NAS PATUXENT RIVER does not have a Grumman fighter plane.

The last active TPS Grumman fighter was retired recently when LCdr. F. A. W. Franke ferried a YF-11A *Tiger* (Y/F11-F) to NAF LITCHFIELD PARK, Ariz., for storage.

Affectionately known as the "Teakettle 628," the plane was the final member in a succession of Grumman fighters assigned to the school since 1948. This was the year the Test Pilot Training Division was established. Since then the school has graduated 774 test pilots, most of whom flew test flights in these aircraft.

Atsugi Reenlistment High Contracts Total Nearly 100 Years

The Flag Administrative Unit of Commander Fleet Air Japan, NAS ATSUGI, had an 81.8% over-all reenlistment rate during 1962.

Of the 125 people involved, career personnel reenlistment totaled 100% and those on their first enlistment, 60%. Contracts signed totaled nearly 100 years of service.

Cdr. Orrin K. Larsen, C.O. of the unit, is also personnel officer for the combined staffs of Commander, Fleet Air Western Pacific, Fleet Air Japan, and U.S. Naval Air Bases, Japan.



The 'Red Ripper' tradition goes back to February 1, 1927 with the commissioning of VF-5 which flew the Curtiss 'Hawk.' Over the years, the Red Rippers have known many aliases—VF-55 in 1927; VF-5B, '28; VB-1B, '28; VF-5B, '30; VF-4, '37; VF-41, '41; VF-4, '43; VF-1A, '46; VF-11, '48. On VF-11's decommissioning Feb. 15, 1959, VF-43 became VF-11, inheriting the emblem and proud tradition. Cdr. Hugh H. Lowery is the 35th Red Ripper C.O.





TWELFTH GRAY EAGLE

On April 1, 1963, a new name was inscribed on the revered Gray Eagle Trophy, an award which passes 'hand by hand' to the active duty Naval Aviator with the earliest pilot designation date. While the trophy describes the recipient as 'The Most Ancient Naval Aviator,' age and rank are not considerations in making a selection. Newest in the line of Venerable Gray Eagles is Vice Admiral Wallace M. Beakley, USN, who was designated November 24, 1926. His name joins those of Ellyson, Towers, Ramsey, Stanley, Townsley, Preil, McQuiston, Pride, Combs, Brown and Akers.