NAVAL AVIATION NEWS

44th Year of Publication

JUNE 1963

NavWeps No. 00-75R-3

THE VIRTUES OF SIMPLICITY

'Equipment designed to do a delicate or complicated job can't be fabricated from a piece of angle iron and an old inner tube. At the same time the virtues of simplicity are so great that we cannot fail to take advantage of them whenever we can. Whenever we simplify to reduce costs, training time and maintenance we will generate increases in combat readiness.'—Adm. George W. Anderson, Jr., CNO. Like the Blue Angel Leader (above) Naval Aviation is ready to try new ways to meet today's challenges. Read 'New Aircraft—New Methods' on pages 32 through 34.

■ FRONT COVER

This photograph of an RF-8A photo Crusader, piloted by Lt. S. M. Ruby, was taken by the wingman, Lt. E. S. Christensen, with a K-17 aerial camera. Both pilots and planes are assigned to VFP-63 Det. Mike. Lt. Ruby took the picture appearing on the February 1963 Naval Aviation News cover.

NAVAL AVIATION NEWS

FORTY FOURTH YEAR OF PUBLICATION JUNE 1963

■ IN THIS ISSUE

■ THE STAFF

Issuance of this publication was approved by the Secretary of the Navy on 3 March 1961

Published monthly by Chief of Naval Operations and Bureau of Naval Weapons to disseminate data on aircraft training and operations, space technology, missile, rocket and other aviation ordnance developments, aeronautical safety, aircraft design, power plants, aircraft recognition, technical maintenance and overhaul procedures. Send mail to Naval Aviation News, OP 05A5, Navy Department, Washington 25, D.C. Office located at 3704 Main Navy Bldg.; telephone Oxford 62252 or 62259. Annual subscription rate is $2.50 check or money order ($1.00 additional for foreign mailing) made payable and sent to Superintendent of Documents, Government Printing Office, Washington 25, D.C. Single copy costs $.25.

NAVAL AVIATION NEWS

SecNav Praises VAP-62

Citation Covers Nearly 3 Years

The citation reads, ". . . for outstanding and meritorious service in the performance of classified aerial photographic reconnaissance missions of paramount importance to the security of the United States . . . ." The time covered is from January 18, 1960 through October 25, 1962, a period of two years and 10 months.

The Navy Unit Commendation was awarded VAP-62 partly because of the work done by the squadron during the Cuban build-up.

But VAP-62 has had over 20 detachments serving on five continents of the world and has been operating with both the U.S. Second and Sixth Fleets. Units of the squadron furnished aerial coverage for all NASA *Mercury* and *Saturn* shots from Cape Canaveral. They have also provided photographic assistance from the Atlantic Missile Range on *Polaris* missile launches and other projects which find pictorial recording necessary.

Last year, the squadron provided weather reconnaissance for the Marine Corps' Project *Highboy* in which the first trans-Atlantic flight was made in the A-4 *Skyhawk*. In Project *Tirec*, squadron planes provided simultaneous photography of ice-bound areas northeast of Nova Scotia to coincide with the *Tiros* weather satellite.

Other work done by the squadron includes projects for CNO, the U.S. Coast and Geodetic Survey, Army Mapping Service, Navy Oceanographic Service, Army Corps of Engineers, U.S. Department of Agriculture, and NATO.

Pointing up efficiency of squadron personnel is the fact that VAP-62 has flown 10,000 accident-free hours.

ENS. DAVID G. MITCHELL, *USNR, has been selected as the Outstanding Naval Aviation Cadet of 1962 for accumulating the highest over-all scores in flight proficiency, academic subjects, and officer-like qualities. Invited to the White House April 9, he was congratulated by the President and the Chief of Naval Operations, Adm. George W. Anderson, Jr. Ens. Mitchell was also complimented for his achievement by SecNav, Fred Korth. Commissioned last September, Mitchell was assigned to physiological aspects of NASA's Gemini program before reporting to Training Squadron Three in Pensacola, where he is serving as a jet fighter instructor.*

Britannia Award Given

Beaufort Pilot Wins 1962 Trophy

In formal ceremonies April 11, at Cherry Point, N.C., Marine 2nd Lt. Delbert M. Bassett received the United Kingdom's 1962 Britannia Award. He

RADM. BUSH GIVES AWARD TO LT. BASSETT

is a pilot with VMF-251, MCAS BEAUFORT, S.C.

The award is given annually to the U.S. Navy or Marine Corps flight student who attains the highest overall weapons score in aerial gunnery and missile tactics. RAdm. J. F. D. Bush, Commander, British Navy Staff in Washington, D. C., presented a scroll to Lt. Bassett. His name will be inscribed on the Britannia Trophy, a model of the British Royal Navy *Vampire* jet. The trophy is kept on permanent display in the Headquarters of the Chief of Naval Air Training, Pensacola, Florida.

The Britannia Award was established by the Admiralty in appreciation of assistance rendered in training British Naval pilots by the U.S. Navy between 1952 and 1956. Lt. Bassett won the award while flying an AF-9J *Cougar*.

VF(AW)-3 is Deactivated

Special Ceremonies at San Diego

One of the nation's crack air defense units "scrambled" for the last time recently when it participated in impressive deactivation ceremonies at NAS NORTH ISLAND. Two pilots of All-Weather Fighter Squadron Three

GEN. GERHART, CAPT. SWEATT INSPECT UNIT

climbed into their Douglas F-6A *Skyray* (F4D) interceptors and roared aloft in a final demonstration of the readiness they have maintained for eight years.

VF(AW)-3 assumed the defense mission in February 1955, flying Douglas *Skynights*. These twin-jet fighters were succeeded in 1957 by the *Skyrays*. At decommissioning, the squadron was commanded by Captain Robert A. Sweatt.

Known as the *Blue Nemesis* squadron, VF(AW)-3 has earned numerous honors in recognition of all-round proficiency as a fighter unit. Among major awards have been the Western Air Defense "A" Achievement for two successive years, 1959 and 1960; the James Forrestal Memorial Trophy, highest award in the all-Navy weapons meet in 1959; the CNO Safety Award in 1960 and 1961; the Air Defense Command "A" award in 1961; the CNO Aviation Safety Award, 1960; and the Certificate of Commendation from the Night Fighter Association in 1962.

Army, Navy and Air Force high-ranking officers attended the formal deactivation program. Distinguished guests included Gen. John K. Gerhart, Commander in Chief, North American Air Defense Command; VAdm. P. D. Stroop, ComNavAirPac; LGen. Robert M. Lee, Commander ADC; RAdm. T. A. Ahroon, Commander Naval Forces, CONAD; Jackson R. McGowen, vice president and general manager of the Douglas Aircraft Division, and other military and civil officials.

Officers and men of VF(AW)-3 were honored as a unit for the last time following the inspection and presentation of the Navy Unit Commendation by VAdm. Stroop. A fly-over of the massed troops by crack units of the Air Defense Command was made in a farewell to their sister service unit.

INTRUDER IN NEW ROLE—*With the A-6A well along in its development, the first special version of Grumman's new all-weather attack plane has made its initial appearance. Bumps and pods house avionics equipment. The EA-6A aerodynamic prototype is shown here on its first flight.*

WW II Battle Celebrated

Australia Honors Coral Sea Victory

Adm. John H. Sides, Commander in Chief, U.S. Pacific Fleet, was guest of honor at the annual celebration of the Battle of the Coral Sea in Australia. During his 12-day stay in that country, April 29-May 10, Adm. Sides visited seven cities, including the capital city of Canberra.

The attack aircraft carrier USS *Coral Sea* (CVA-43), named in honor of the battle of that name, and the guided missile destroyer USS *Buchanan* (DDG-14), led a squadron of five other U.S. Navy ships in a visit to Australia in April and May. The five ships were USS *Somers* (DD-947), USS *Hanson* (DDR-832), USS *Southerland* (DDR-947), the submarine USS *Bluejack* (SS-581) and the oiler USS *Manatee* (AO-58). More than 5000 Pacific Fleet sailors were aboard these ships.

The visits were made in connection with the annual observance of the Battle of the Coral Sea (May 4-8, 1942) which is credited with stopping the enemy advance through the Pacific.

VMR-353 Decommissioned

Completes over 14 Years of Service

Marine Transport Squadron 353 (VMR-353), 2d Marine Aircraft Wing, was decommissioned this spring after completing over 14 years of service. MGen. Richard C. Mangrum, 2d Wing Commanding General, BGen. Norman J. Anderson, Deputy Chief of Staff for Air, and Maj. Donald S. Thornbury, Commanding Officer of the Unit, attended the ceremonies.

First formed at San Diego in 1943, VMR-353 served in the Pacific during WW II. Since 1958 the squadron has been based at Cherry Point, N.C. During the Cuban Quarantine, it assisted in the evacuation of dependents from Guantanamo Bay.

VMR-363 was the last active Marine Corps squadron to fly the dependable C-119F "Flying Boxcar."

VADM. W. M. BEAKLEY, *Deputy CinC, Atlantic Fleet (L), receives the "Gray Eagle" trophy from RAdm. Frank Akers (Ret.) at NAS Norfolk on April 24th. Adm. G. W. Anderson, Jr., CNO, was speaker on the occasion honoring "oldest aviator on active duty."*

GRAMPAW PETTIBONE

Hot Flash

A section of A-4C (A4D-2N) aircraft departed a Texas base, headed out for El Paso on the second leg of a planned Nav training hop. This leg was to be a VFR low-level training flight and they leveled off as planned at an altitude of 1000 feet with the wingman stepped up in a chase position. Immediately after takeoff, the wingman made one brief radio check with the leader on tactical frequency and they headed out on course.

Twenty minutes later the wingman was experiencing quite a bit of discomfort from the rubber lip strap of his new oxygen mask and unstrapped the left side of the mask to relieve the pressure. As he pushed the lip strap with his left gloved hand, a sheet of white flame shot in front of his face from the mask! In intense pain as the flame burned his cheeks, nose, eyelids, and set fire to his eyebrows, he tried to beat out the fire with his left hand but was unsuccessful. The mask itself was burning fiercely. He could only push the mask aside as he attempted to release the mask clip on the right side with his other hand.

While this frenzied activity was underway, the A-4C careened wildly along its course without the pilot's guiding hand. The badly burned pilot suddenly realized the plane was out of control and was headed for the ground. He pulled back on the control stick, felt a shudder as the A-4C stalled and instantly reached up and pulled the ejection curtain.

The ejection sequence of the RAPEC seat worked perfectly although the automatically actuated bail-out bottle continued to feed the fire in his mask as he descended. He struck the ground only three or four seconds after his parachute opened and tore both his helmet and the smoldering mask off immediately.

Quickly unsnapping his chute fasteners and getting his bearings, the pilot hiked down a nearby road to a more heavily travelled highway where he was picked up within a few minutes and given a ride to a nearby town where medical assistance was available. Other than the burns, which will need about 30 days to heal, he had no injuries.

His leader had seen the flash of the exploding plane and orbited while he called for help on the radio. Dyess AFB answered his MAYDAY and sent help to guard the wreckage and bring in the injured man.

Grampaw Pettibone says:

Great balls of fire! A short in his mask microphone triggered off this miserable blaze. In an oxygen-rich atmosphere, the rubber of the mask and his oil-soaked left glove burned rapidly and intensely. Subsequent testing of the oxygen regulator which was recovered intact from the wreckage revealed it had an abnormally high rate of flow. When the insulator material below the diaphragm of the mike failed, the mask ignited. It just took one 28-volt flash to do it.

Many would say "Why not turn the oxygen *off?*" That's just plain second guessin' and would be a hard-to-do job with a fire like that in your face. He did O.K. by my book.

Meanwhile, replace your beat-up lookin' mikes and go easy on the hard knocks. It's a small instrument, but it sure can cause really big trouble.

Flathatter

Two UH-2SC *Helos* (HUP-3) were cruising cross-country returning from the Bay area to their Southern California base. They had filed a DD 175 VFR for an intermediate fuel stop and with clear skies and unlimited visibility it was one of those ideal flying days seldom seen in the winter months.

For the first 1.5 hours the flight was conducted according to plan, cruising at 500 feet above the terrain and in a loose formation. The lead was changed several times while en route. After the flight leader again resumed the lead, the wingman gave way to impulse within 30 seconds of the lead change and descended to approximately 30 feet above ground level to fly up a river bed which wound its way through the countryside.

His descent was undetected by the flight leader who continued on course at the proper altitude.

Meanwhile the wingman cruised up the river, both he and his crewman keeping a sharp lookout for wires or other obstructions. This was sport.

Suddenly a set of high tension wires "looking as big as barrels" loomed up dead ahead and hanging only about 40 feet above the water! The pilot applied full AFT cyclic right to the stops and hard UP collective and the *Helo* zoomed up in a 30-degree climb, over the wires but losing airspeed. It rolled rapidly to the left in a 45- to 60-degree bank at an altitude of 150-200 feet and commenced to descend swiftly, the nose falling through to a nose level attitude as it fell.

The pilot was working like a beaver throughout these maneuvers with cyclic and collective in an attempt to regain control, but to no avail. At an altitude of 15 to 20 feet, descending, he successfully flared the aircraft with full AFT cyclic and full UP collective, and it struck the water tail first with very little forward motion.

The pilot cut the engine and all switches and both crewmembers fired

Very pistol flares and day smokes. There was no one in sight and only the sound of running water broke the stillness so they gathered up some gear and waded ashore.

Just as they clambered up the bank, the flight leader flew overhead and orbited as they waved and signalled they were O.K. Since there was no place to land safely, the flight leader headed off for the nearest military base to get help. Rescue and the subsequent investigation and salvage were routine from there on.

Grampaw Pettibone says:

Let me say it again! OpNav-Inst 3710.7A, Section 7, paragraph 2, which states that "no naval aircraft shall be operated below an altitude of 500 feet above the terrain unless landing or taking off or the mission demands otherwise" is just as binding on helo pilots as anyone else. It's best to remember it yourself rather than have a Board read it to you, just before they clip your wings for good. That's too late.

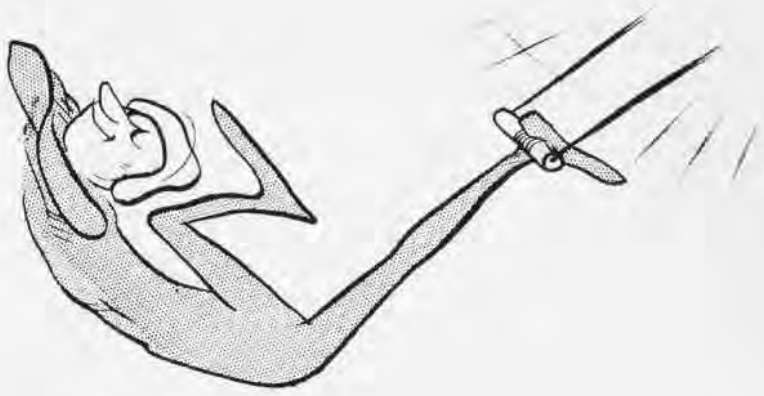
Loner

A young A-4B pilot who had been more or less grounded with a bad shoulder for a full six months had been trying to requalify himself in the A-4B aircraft after getting back in a Group 1 status while awaiting reassignment.

On his own he reread the flight handbook, got a good hour in the OFT on emergency procedures and managed to get scheduled and flew a total of 7.3 hours in a local A-4B outfit's aircraft.

From another attack pilot, he borrowed a chart of a low level navigation route in the local area (within 250 miles radius, that is) and studied it pretty thoroughly but did not prepare a flight log. The next day he managed to have an A-4C(A4D-2N) assigned for an afternoon hop, a local area fam, and called aerology for the local weather forecast. He got just that, nothing in the way of weather along his proposed route having been requested. Local weather was 1500 broken, visibility 10 miles and no change expected before 1600 local time.

At the ready room and as he was suiting up, he was given a report of severe weather with heavy thunderstorm activity but interpreted this to be well to the west of his course. The local area weather reports now included scattered thunderstorms as well.



One heel!

He took off at about 1300 local with 9200 pounds of fuel and immediately headed right out on his planned low level route. For the first hour everything went as planned, fuel flow at 1000 feet altitude and 340 knots indicated was 3000 PPH and the broken overcast was a pretty steady 3000 feet MSL.

Ahead of him was a band of rain and low ceilings which seemed to go clear down to the ground and had a solid line of thunderstorms right in it. He was in a small hole, had about 5000 pounds remaining, so he climbed at full power in a tight spiral to 30,000 feet in an attempt to top the weather. The cloud still towered 'way above him and it was real trouble staying VFR, so he started an idle descent, still in a spiral, and leveled at about 1000 feet above the terrain. During the climb and descent, he tried to lock on several stations with his Tacan but was unsuccessful. However, he had the *aft* antenna selected and had been in a continuous turn during these attempts to orient himself. His ARA-25 UHF homer was never tried.

He made brief but poor radio contact with an Air Force base weather service and was able to request and receive weather at his home base. It was still good, but there were severe thunderstorms reported in the area. This was not news to him. He'd seen them.

The pilot now decided to retrace his course remaining VFR and, with 4000 pounds of fuel remaining, estimated he could make it with 800 pounds to spare. All went well for 250 miles, except for a higher fuel consumption than anticipated, but when only 100 miles from home, he hit a band of rain and low ceilings which stretched across his route. He turned 60° to the left and flew for three minutes, then 90° right for three minutes, attempting to circumnavigate the weather. Fuel state was down to 800 pounds and he was no longer sure of his position. The pilot now began to request help on the radio, first on traffic control frequencies and finally on Guard channel.

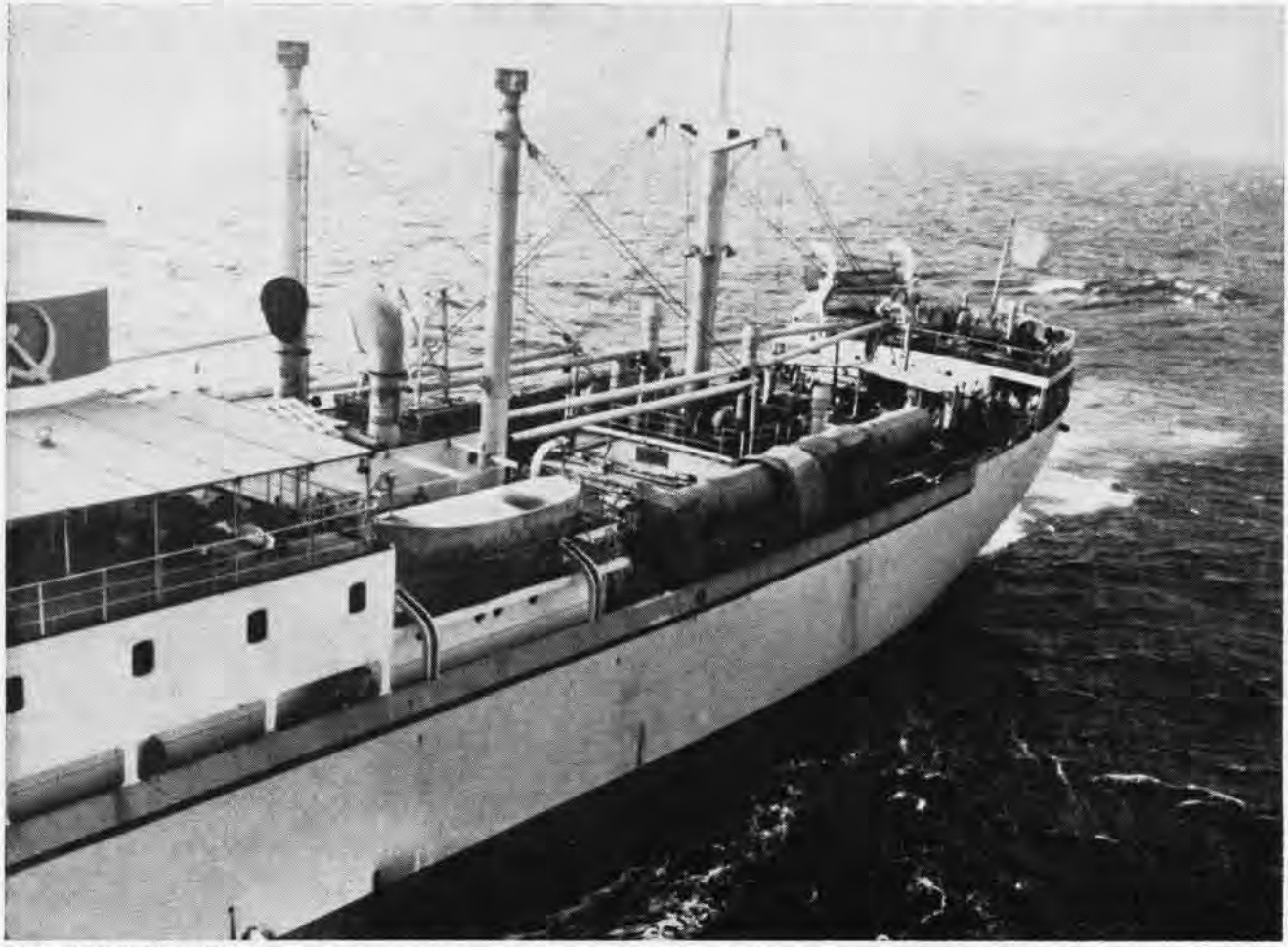
He was answered by an AFB tower and got a Tacan lock-on 90° to the right of his course at 54 miles. Soon after, he also made radio contact with his home field, and radar gave him a DF steer at 40 miles. Just a few minutes later, at 1532 local time, as his fuel state dropped below 200 pounds and at an altitude of 3000 feet, he notified the home base of his intention and ejected! The ejection and subsequent recovery of the uninjured pilot were uneventful. The salvage job and investigation took more time.

Grampaw Pettibone says:

Great jumpin' Jehosophat! If this young feller sat down and planned it that way, he couldn't have broken more rules or pulled more bonehead moves. A *loner* like this is just about the most dangerous situation any command has got to contend with. Many squadrons require no less than a two-plane section—*all* the time. This helps kill the urge to bust the rules and usually assures at least *one* good head in the group. Refresher training *should* be more organized and closely controlled. We can't *afford* this kind of non-professional approach to flying complex and *expensive* aircraft.

HOVERING FOR INSPECTION

An exclusive HS-3 report on departing Russian freighters



HS-3 HELICOPTER CREW *hovers close enough to see passengers stretched out under deck canvas, close enough to reveal a second "skintight" cover over exposed missile that ship was carrying away from Cuba. Wasp-based unit was assigned photography mission.*

By Lt. Jerry M. Pierce

In retrospect, it is clear that during the Cuban quarantine crisis many thousands of people played important roles in bringing about the ultimate result—removal of offensive missiles from Cuba through the imposition of effective seapower forces.

Among them were the pilots of Navy, Marine and Air Force photo recon aircraft, whose quick sorties over Cuba territory (four to seven minutes on the average) resulted in the discovery and continued surveillance of the missile sites through high speed photography. Their stories are well known.

Imposition of the quarantine gave Helicopter Anti-submarine Squadron Three (HS-3) a chance to prove its adaptability and versatility—a story less well known but still worth the telling six months after it happened.

Our story is that of low speed photography and a very close look at the Russian ships and personnel as they departed Cuban waters after the USSR had agreed to dismantle the missile sites.

The men of HS-3 first had an inkling that something was up when they heard that the USS *Wasp* (CVS-18) was arriving at Norfolk three days earlier than it had been routinely scheduled. The anti-submarine carrier arrived in Norfolk at 0800 on October 26 and departed ten hours later for the Virginia Capes operating areas. After two days of ASW exercises with SH-3A *Sea King* helicopters and the *Trackers* of VS-28 and VS-31, *Wasp* headed southward to assist in the quarantine.

Early in November, *Wasp* and her embarked air group became part of the Task Group 136.2 and commenced round-the-clock, all-weather flight operations. We had a chance to put our relatively new Sikorsky helicopters to the test—finding Russian sub-

marines. We worked closely with the S-2 Grumman *Trackers* as a team and made contact with Russian submarines. As Adm. George Anderson, Jr., Chief of Naval Operations, declared afterwards, we had a "marked degree of success" in tracking down submarines.

But while ASW is our main business in HS-3, we were only beginning to use our versatile aircraft and our adaptable personnel.

On November 7, Cdr. J. M. Wondergem, C.O., of HS-3, called his pilots and aircrewmen together for a briefing on what duties they would perform in addition to ASW. It was then that the squadron learned of an agreement between the USSR and America to have departing ships photographed as a means of "on site" inspection.

Following are three accounts of ship-inspections, out of the many "too numerous to mention." The words are those of pilots and crewmen who were on the scene:

November 8, 1963. It had been a day of routine ASW operations aboard USS *Wasp* until mid-afternoon, when we were told to get ready for photo-inspection duty. Special crews were designated and a flight schedule was made out assigning alert hours for the special mission crews.

A couple of hours before sunset, the first alert crew was called out to investigate a report of a ship some 80 miles from *Wasp*. Cdr. Wondergem, with his co-pilot, LCdr. T. L. Ray, were first up. With them in the helicopter were Capt. Middleton, Chief of Staff, ComCarDiv 14, a Russian language expert, photographer, signalman and a crewman.

Approach to the ship was made with a certain degree of apprehension, since this was the first encounter with a Russian ship departing Cuba. A voice from the after station of the helicopter reported the spotting of guns on the fantail of the freighter and the SH-3A was brought to a hover at a safe distance. Word was sent by flashing light in Russian, requesting permission to take photographs as had been agreed. The reply was quickly received, by light in English. A closer approach (for photos) revealed that a number of personnel on deck were observing the helicopter's maneuvers. When one of the pilots waved to the passengers, an enthusiastic response was received from the ship and all apprehension vanished. The "guns" previously reported turned out to be portable field kitchens. One of them was in use, readying the evening meal. Everyone seemed in high spirits.

Because of the friendliness and cooperation displayed, it was decided to hover and send a message of appreciation and a gift to the captain of the ship. Capt. Middleton sent his tie-clasp as a token. As the helicopter was about to leave, word was received (by light) to hover again for a return gift. The delivery sack was lowered again. When it was retrieved, a bottle of vodka was found inside.

The crew of the helicopter returned to *Wasp*, with members of this first encounter happily discussing how the vodka could be put to its best use.

November 9, 1962. It was 0430 when Lt. Kelsey Goodman and his co-pilot, Ltjg. Jack Rowles, were summoned to the ready room for another possible encounter with a departing ship. With 29-knot winds whipping the ocean, the helicopter made its rendezvous without incident and commenced a photo-shooting hover about 100 feet from the ship. Later, the pilot moved in much closer to attempt communication through a loud speaker system. This did not work, so flashing lights were tried. We asked them to remove the covers from the missiles. A couple of the men left the bridge. While waiting, we had a chance to look at the men on the ship. All of them seemed to be laughing and kidding. They were dressed in a variety of outfits.

There were no military uniforms visible. Most men were in short sleeved shirts, some with shorts, but most were wearing long trousers. There was at least one woman aboard. (One member of our crew said, "She was definitely not a great beauty—or maybe I hadn't been at sea long enough for her to appear attractive!")

We dropped a note to the forecastle, again asking that the missiles be uncovered. We had some trouble making the drop because of the high winds. However, two men went aft and pulled away the canvas. They were unsmiling as they worked. The missiles had a second cover, a tight one, under the canvas cover. While we

CLOSE-UP VIEW *of Russian freighter Almetyevsk, which carried trucks and personnel, was made by Cdr. K. L. Morse and his crew.*

CDR. WONDERGEM, *right, and members of first group to photograph departing missiles examine "exchanged memento" from Russian ship.*

were hovering, a man was trying to eat a meal on a picnic bench on the deck. Our rotor wash kept blowing the paper tablecloth around but he did not look up. We saw no threatening gestures from anyone.

The ship, flying the Russian flag and bearing the hammer and sickle on its funnel, appeared to be riding quite high in the water. We made many hover maneuvers around the ship at various altitudes. We noticed at least one man taking photographs of our helicopter as we were photographing the ship and its cargo. He even switched from side to side as we changed our position.

November 11, 1962. It was just after the noon hour meal that Cdr. K. L. Morse and his co-pilot, Ltjg. N. D. Taylor headed for a rendezvous with a *Tracker* aircraft who had spotted the freighter *Almyetyevsk* in an area of rain more than 100 miles from *Wasp*. At 1340 the helicopter crew caught a glimpse of the ship as it headed into a heavy squall. We followed. After a few photographs, we had to leave the ship because of bad weather conditions. We got out into a clearer area and waited for the ship to come right through the squall areas.

It was 1400 when we joined up on the ship again. We moved in on the starboard side for a closer look. A total of 13 vehicles was counted, some of them busses, others classified as testing or guidance control equipment carriers. Two other things attracted our attention. First, there appeared to be about a cord of wood on the deck, presumably firewood meant for the cook stoves. The second thing that caught our eye was a small scrap lumber structure at the rail edge of the main deck which closely resembled an outdoor "head."

We departed the scene after a half hour of shooting pictures, leaving the job of escorting the ship to the Destroyer Leader *Willis A. Lee* (DL-4).

HS-3 made many other missions with similar assignments and similar results. At no time was any hostile move made toward them nor was any personal antipathy shown by the men on deck. The squadron's crews interpreted the men's smiles as a sign they were happy to be returning to their homes.

Throughout the HS-3 assignment, the squadron worked on a 24-hour basis, creating maintenance problems that were consistently heavy. "Time off" became a meaningless term, since the important work demanded flyable aircraft at all times. Cdr. Wondergem noticed that more and more "off-duty" men were working during their rest periods when they could have been sleeping. "They all felt a moral obligation to do that 'something extra' that assures a successful mission," the C.O., said.

At one point the crew of maintenance men accomplished three transmission changes within a 72-hour period, a squadron record that may even be a Fleet mark for the relatively short period the SH-3A has been in use. Additional flying hours—under the pressure of the quarantine—meant additional maintenance chores for all personnel, too.

With the results of our ASW work —working very effectively with other elements of the ASW forces—and the photographic missions, everyone in HS-3 felt a special pride in the part they played in the highly sensitive quarantine work.

Everyone in HS-3 agrees, "It was an effective and satisfying operation."

HS-3 PILOTS *gather in front of one of their SH-3A Sea King helicopters, used as ASW and photo aircraft during Cuban crisis. Squadron C.O., Cdr. J. M. Wondergem, was pilot of Sea King which plucked U.S. Astronaut Carpenter from Atlantic waters May 24, 1962.*

AIR COMBAT READINESS FACTORY

SIXTH FLEET AIRCRAFT CARRIER, USS FRANKLIN D. ROOSEVELT, AND MASSEY (DD-778) TAKE TIME TO REFUEL FROM ELOKOMIN (AO-55)

By LCdr. T. A. Loomis, USN

THE NAVY, to the confusion of the uninitiated, consists of several overlapping organizations, rather than a single, clear, unvarying structure. Ships and other operational units transfer to and from geographic fleets and tactical organizations as needs arise. But with regard to responsibility for combat readiness, every Fleet unit has a home, and that is its Type Command.

Type Commands exist under the theory that maintenance, supply, manning and training of tactical units can best be done by types. Thus, for all aviation units in the Atlantic and Mediterranean, Naval Air Force Atlantic is "home."

Having as his mission the achievement and maintenance of combat readiness of every aviation unit in his area, Commander Naval Air Force Atlantic is thus the producer of the air striking power product which the Tactical Fleets put to use.

But when combat-ready operational units leave his command, ComNavAirLant's responsibility does not end completely. He continues to supply the operating unit with men, material and technical assistance wherever they go.

Consider these situations:

• An Atlantic Fleet attack aircraft carrier lies at a Norfolk pier awaiting an upkeep period following a Mediterranean deployment. Twelve hours later, she is steaming past Cape Henry sailing under emergency orders and heading towards Cuba.

• In a flurry of activity, dozens of other Atlantic Fleet carriers, squadrons and units move to forward bases, ready for any contingency within a brief span of time. Five weeks later, the Cuban crisis eases and the aviation units begin returning to their home ports.

• Two Russian reconnaissance bombers fly over an attack carrier in the international waters of the Atlantic, closely escorted by *Phantom II* and *Crusader* fighters.

• A squad of Marines leaps from a helicopter onto the island of Vieques in a vertical assault rehearsal and takes position behind "enemy" lines. The silhouette of the amphibious assault ship *Boxer* lies low on the horizon.

• A shipyard catapult specialist departs the continental U.S. by MATS flight and 24 hours later lands aboard an attack carrier somewhere in the Mediterranean with vitally needed technical knowledge. Hours later the carrier's #2 catapult is back in operation.

• The firefighting parties of a U.S. seaplane tender visiting Beirut, Lebanon, help the local fire department extinguish a fire aboard an oiler.

These widely separated incidents have one thing in common. In each instance, the ship or unit was manned, trained, supplied and otherwise made ready by Naval Air Force Atlantic.

The far-flung activities of the units the Naval Air Force supports encompass nearly half the globe, extending from an aerial exploration mission leaving McMurdo Station in the Antarctic to a P-2 *Neptune* on government ice patrol north of the Arctic Circle; from a MAD-equipped S-2

Tracker locating a sunken barge, filled with deadly chlorine gas, somewhere in the Mississippi River to a seaplane tender showing the American flag in the Indian Ocean.

To furnish units prepared to carry out such varied responsibilities, Commander Naval Air Force, Atlantic, has definite administrative, training and logistic tasks to fulfill. Whatever the operating forces require in terms of aviation, ComNavAirLant must be ready to provide. Units of the Naval Air Force are involved in the widespread operational missions of the Second Fleet in the Atlantic, the Sixth Fleet in the Mediterranean and the Middle East Force in Asia Minor.

OF THE IMPORTANCE of the mission of Naval Air Force, Atlantic Fleet, its Commander, VAdm. Frank O'Beirne, says, "A poorly maintained aircraft, a partially trained pilot, an incompetent mechanic or an inadequately equipped aircraft carrier is always the loser in a combat situation.

"Our mission, then, is to stay ahead of the opposition: to provide modern, highly trained, battle-ready naval air units for the tactical use of the operational commanders . . . anywhere in the Atlantic or Mediterranean. This is a great and continuing responsibility, but the Naval Air Force, U.S. Atlantic Fleet, has not been found lacking."

ComNavAirLant is involved administratively with more than 150 subordinate commands. These include 16 ships (12 of them aircraft carriers), 110 aircraft squadrons, 2000 aircraft and 60,000 men. As an air type commander in the Atlantic, VAdm. O'Beirne reports directly to the Commander in Chief, U.S. Atlantic Fleet, at his nearby headquarters in Norfolk, Virginia.

CinCLantFlt splits the Fleet up into several forces. Some of these, such as NavAirLant, are "type" commands, each composed of ships or forces of a specific category. CincLantFlt's subordinate operational commands are the Second Fleet, the Anti-Submarine Warfare Force, the Amphibious Force, and the Fleet Marine Force. The type commands furnish weapons, material and manpower which the operational commands require.

In order to carry out his mission of administering, equipping, training and logistically supporting combat aviation

EA-6A AERODYNAMIC PROTOTYPE IN FLIGHT

forces for the use of the operational commanders in the Atlantic, Adm. O'Beirne has a number of subordinate commanders ashore and afloat. These are Fleet Air Commands, Carrier Divisions, Patrol Wings, other special purpose forces and overseas bases.

The shore-based Fleet Air Commands provide training facilities, coordination of maintenance activities and logistic support for the operating forces. Located along the Atlantic Coast and on neighboring islands, these Fleet Air Commands have AirLant's temporarily shore-based squadrons as their chief charge. Commander Fleet Air Norfolk, RAdm. Forsyth Massey, for example, directs the activities of three seaplane tenders, five utility squadrons, two anti-submarine warfare air groups and three tactical support squadrons.

Other AirLant ComFAirs are based at Jacksonville, Fla.; Patuxent River, Md.; Quonset Point, R. I.; Keflavik, Iceland; Argentia, Newfoundland; Azores; Mediterranean, and Caribbean (at San Juan).

Adm. O'Beirne's subordinates, with respect to aircraft carriers, are Carrier Division Commanders. Under the command of each carrier division commander are one or more aircraft carriers. Two of the three CarDivs—Two, Four and Six—are always available for Second Fleet duty while the third serves with the Sixth Fleet in the Mediterranean.

The Atlantic Fleet's six attack carriers are *Enterprise, Forrestal, Saratoga, Independence, Franklin D. Roosevelt* and *Shangri La.* In company with supporting destroyers and cruisers, these carriers with their fighting aircraft constitute the Navy's main batteries.

A glimpse of the future was recently seen when the nuclear-powered attack carrier USS *Enterprise* and the nuclear-powered guided missile destroyer USS *Bainbridge* rendezvoused while en route to Sixth Fleet duty in the Mediterranean.

A nuclear task group composed of such ships as *Enterprise, Bainbridge,* and the guided missile cruiser *Long Beach* gives the Navy a surface force unsurpassed in cruising range striking power and mobility. The improved engineering equipment of these ships, the defensive surface-to-air *Terrier* and *Talos* missiles and the advanced electronics systems for streamlined command and coordination of the activities of all units, will enable striking forces to control the seas and skies in any area bordering the Atlantic and Mediterranean.

Among the aircraft on the decks of the attack carriers is the recently arrived, long range, heavy attack bomber, the A-5 *Vigilante.* This twice-the-speed-of-sound bomber can deliver a wide variety of weapons to targets inland from its mobile sea base.

The fighter counterpart of the *Vigilante* is the F-4B *Phantom II,* the newest interceptor in the Fleet. The *Phantom II,* which holds eleven world records and has held six others, is also used by Marine and Air Force squadrons. It can achieve air superiority with its *Sparrow* and *Sidewinder* air-to-air missiles while retaining the potential to deliver conventional bombs on a distant target.

Adm. O'Beirne recently spoke of the tremendous capabilities of the A-6A *Intruder* in Fleet introduction ceremonies at NAS OCEANA. He stressed the function of carriers and their aircraft: "Our aircraft carriers, the men and planes aboard them, serve one principal wartime purpose. That purpose is to deliver the maximum load of ordnance on the designated targets. The new A-6A *Intruders* serve this purpose admirably. They can carry a bomb load equal to that of any other current naval aircraft and can carry it a greater distance, and deliver it under severe weather conditions with greater accuracy than any other aircraft ever built."

Another area of primary concern to ComNavAirLant is anti-submarine warfare. The anti-submarine carriers

Wasp, Essex, Lake Champlain, Randolph and *Intrepid* are assigned to Carrier Divisions 14, 16 and 20. One additional CVS, the *Lexington,* is operationally assigned to the Chief of Naval Air Training at Pensacola, Fla., for training fledgling aviators. As the Russian submarine threat has grown, so have the capability, readiness and equipment of the ASW forces in the Atlantic. At least one of the hunter-killer groups composed of a carrier, two fixed-wing aircraft squadrons, one helicopter squadron, five destroyers and one or more submarines is always at sea off the eastern seaboard, engaged in training exercises and watchfully waiting.

The SH-3A *Sea King*, holder of three world records, one of them for speed, is AirLant's newest ASW teammate. Its ability to approach a contact area at high speeds to dip its full-scan, long-range sonar far below the ocean surface and its endurance while hovering on station, make this jet-turbine-powered helicopter a powerful adjunct to the anti-submarine forces.

The new S-2D *Tracker* looks and listens for submarines over and under hundreds of square miles of ocean. Equipped with powerful radar, specialized sonobuoys, echo-ranging depth charges, sniffer equipment and magnetic anomaly detection gear, the *Tracker* provides rapid search over a wide area with its localization and identification tactics.

The air ASW effort is not, however, confined to the hunter-killer group. Land-based aircraft form an important segment of the total anti-submarine effort. All land-based patrol plane activity in the Atlantic is coordinated by RAdm. George P. Koch, Commander Fleet Air Wings, U. S. Atlantic Fleet (see NANEWS, May 1963, pp. 7-8). Under the direct supervision of these patrol wings, 16 P-2 *Neptune*, P-3A *Orion* and P-5B *Mariner*-equipped squadrons participate in round-the-clock anti-submarine and long-range surveillance operations.

The P-3A *Orion* is the first completely new, long-range patrol plane since 1945. Its 4000-mile range and greatly increased electronic capabilities make the Lockheed *Orion* able to search out the most elusive underwater needle in a larger ocean haystack.

The activities of the Naval Air Force Atlantic are not confined to the training missions of the attack carriers or the anti-submarine warfare mission of the *Essex*-class carriers. They include the support of many other functions which range throughout the spectrum of land, sea and air warfare.

The Airborne Early Warning Wing Commander at Argentia, Newfoundland, for instance, provides squadrons of *Warning Stars* for duty on the seaward extension of the Distant Early Warning (DEW) line. These *Warning Stars* carry powerful radar high over the North Atlantic constantly alert for aerial attack across the northeastern approaches.

Another airborne early warning squadron performs the life and property saving service of hurricane hunting in the seasons when storms prevail.

Other special purpose functions of NavAirLant make a list almost too long to mention. Daily on-board-delivery flights to all carriers provide high priority material spares and replacement personnel. Long range logistics flights deliver essential cargo and personnel to overseas bases for further distribution among the deployed forces afloat.

NavAirLant provides an aircraft squadron for deployment in the Antarctic in support of Operation *Deep Freeze*. The squadron carries out many flights for purposes of arctic research and exploration.

At periodic intervals, massive air support was organized in support of Project *Mercury* recovery missions. Attack and anti-submarine carriers, long-range patrol planes, helicopter detachments and other units deployed for the instant recovery of our astronauts from the sea following their orbital missions.

After their redesignation to LPH, the carriers *Boxer* and *Valley Forge* pioneered the development of U.S. Marine vertical attack under the Commander of Amphibious Forces, Atlantic. Today, Atlantic amphibious assault ships *Boxer, Okinawa* and *Thetis Bay* receive technical assistance from NavAirLant. Aviation ratings who help man these ships also are assigned by the Naval Air Force Atlantic.

Various NavAirLant utility squadrons perform vital services throughout the Fleet. The familiar "angels," the helicopters observed hovering near the starboard quarter of each carrier dur-

NORTH AMERICAN'S A-5 VIGILANTE IS HOISTED ABOARD SARATOGA

S-2D TRACKER OF VS-30 SCOUTS THE SEAS FOR LURKING SUBMARINES

ing air operations, serve the purpose of aircrew rescue in the event of an aircraft accident at sea.

Helicopter detachments on the carriers, cruisers and service force ships, also distribute mail, deliver high priority cargo, and transfer other high priority cargo between ships, and even transport chaplains from large ships to destroyers in company to conduct divine services on Sunday.

The modern UH-2A *Seasprite* has provided a significantly increased capability in the rescue and utility field with its higher speed, greater lifting capacity and provisions for all-weather, day or night operation.

Other utility squadrons provide target towing services and drone aircraft for Fleet gunnery exercises, jet fighters for radar intercept practice, and helicopters for drone recovery.

The Commander of all this widespread air activity could not hope to personally supervise and direct so many units and activities. The matching of resources against operational requirements, the training and assignment of aviation personnel and the maintenance of the ships and aircraft, is a tremendous task. The staff of Commander Naval Air Force is organized to advise and assist Adm. O'Beirne and to supervise, coordinate, inspect, and technically assist this far-flung organization.

NAVAIRLANT STAFF is divided, under the Chief-of-Staff, into five groups, plus an additional eight special assistants. The basic Divisions are Personnel, Communications, Supply, Material and Readiness. The special sections are: Flag Secretary, officers from the Medical, Dental and Chaplain Corps, Leadership and Career Appraisal Officers, Public Information and Legal Officers.

The Personnel Division controls the assignments of NavAirLant's 60,000 officers and men. By selective assignment, the Personnel Division contributes to the readiness level within the operating units and, at the same time, tries to accommodate the personal preferences of the people being assigned.

The Communications Division processes more than 22,000 mesages each month. This stream of words furnishes a constant interchange of information between ships, squadrons and shore installations of NavAirLant and other naval commands and activities. In addition to operating the Communications Center, the Division monitors the communications effectiveness of NavAirLant units and assigns and coordinates the use of all air navigation frequencies within NavAirLant.

The Supply Division oversees annually $65 million worth of ship and aviation operating funds, controls an afloat stock of parts worth over $100 million and distributes all aviation supplies in the Atlantic Fleet. NavAirLant aircraft carriers must maintain an on-board level of aviation supplies above the requirement for 150 days and general supplies for more than 90 days. Viewed against the background of diminishing support funds, delayed procurements and increasing technical limitations, the size and complexity of the supply task is apparent.

The Material Division is responsible for the effective utilization of supplies and equipment within NavAirLant. Within this Division, the Ships' Material Section plans the technical improvement of carriers and tenders. Shipyard periods, overhauls and repairs of these ships are planned months in advance to achieve maximum economy and efficiency. The Section screens installations and alterations to obtain optimum effect for each dollar spent on AirLant ships.

Also within the Material Division is the Air Material Section which is responsible for the material readiness of 2000 aircraft. This section coordinates the Fleet Introduction Program for new aircraft and, as a matter of routine, monitors all elements of aircraft material readiness, safety and maintenance.

The Readiness Division is responsible for training standards, ships' operations and movements, the actual filling of requests for AirLant units by the many operational commanders. The readiness of 200 commands must be maintained, and through the efforts of the staff—indeed, through the work of all officers and men in the Naval Air Force Atlantic—readiness is held at the highest possible level. The combat readiness of all units is the Command's primary job. The measure of readiness in terms of flexibility and mobility determines the impact the operating forces will have.

VICE ADMIRAL FRANK O'BEIRNE, USN

Commander Naval Air Force, United States Atlantic Fleet

A 1926 Naval Academy graduate, VAdm. O'Beirne is well suited by education and experience to command the intricate organization of the Naval Air Force Atlantic. He attended the Naval Postgraduate School, the University of Michigan and the National War College. He holds the degrees of Bachelor of Science and Master of Science in Engineering. Designated Naval Aviator in June 1929, he has been constantly associated with Naval Aviation ever since then.

Early in his career, he served in the battleships *Nevada*, *West Virginia*, and *California*, and the aircraft carriers *Lexington*, *Saratoga*, and *Enterprise*. At the opening of WW II, he was commanding officer of VP-22 which participated in the defense of Pearl Harbor on December 7, 1941. The squadron then transferred to Fleet Air Wing 10, operating from Java. The squadron received the Presidential Unit Citation for operations in the Dutch East Indies.

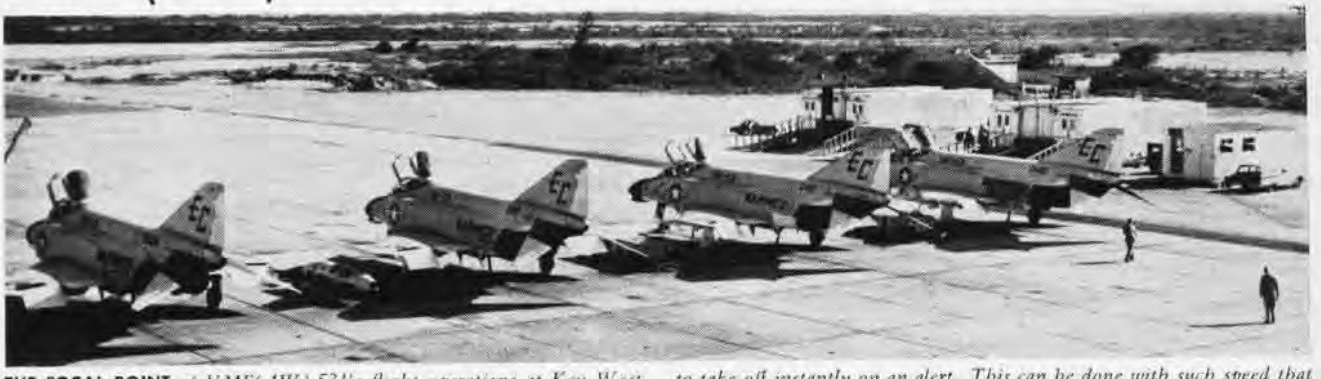
During the remainder of WW II, his service included command of the seaplane tender *Childs*, assignment as Naval Intelligence Officer on General MacArthur's staff, work on the Joint War Plans Committee, CNO, and command of the escort carrier USS *Breton*. His post-war assignments included duty with DCNO(Air), two years as Assistant U.S. Naval Attache in London, and heading the Continental and Inter-American Defense Section of CNO's Strategic Plans Division.

In April 1952 he assumed command of the carrier, USS *Midway*, and a year later became Chief of Staff to ComCarDiv Four. In 1954, he commanded Carrier Division 18 and Hunter-Killer Group 2 in the Atlantic.

From October 1957 to August 1958, he was ComCarDiv Three in the Pacific. He then returned to Washington and assumed duties as Director of Operations, Joint Staff, J.C.S.

On September 30, 1960, aboard the ASW carrier, USS *Randolph* (CVS-15) at the Norfolk Naval Base, he became Commander Naval Air Force, U.S. Atlantic Fleet.

VMF(AW)-531 'SCRAMBLES' FOR NORAD



THE FOCAL POINT *of VMF(AW)-531's flight operations at Key West is the "hot pad." Here the Phantoms are poised and ready at all times to take off instantly on an alert. This can be done with such speed that they can be airborne within 150 seconds from the time of the alarm.*

IN FLIGHT GEAR *pilots and radar observers read or take naps in bunks in alert shack.*

VMF(AW)-531 has become the first Marine fighter squadron to join NORAD (North American Air Defense Command). Commanded by LCol. F. F. Foxworth, the squadron reported to NAS KEY WEST in early February for temporary duty.

Utilizing the "hot pad," a runway apron on which four *Phantom* fighters stand poised at all times, VMF(AW)-531 is able to launch her F-4 planes within 150 seconds after the initial alarm signal is given by controllers.

Pilots, radar officers and ground crews stand 24-hour duty in alert shacks situated 50 feet away from the waiting *Phantoms*. The F-4's are maintained in continuous ready status, including full armament loads, to insure realistic accomplishment of intercept flights. 'Round-the-clock readiness is essential in NORAD's vital mission.

C.O. FOXWORTH *briefs his superior, Col. J. A. Feeley, Marine Aircraft Group 24 C.O.*

NORAD COMMANDER *at Key West, LCol. E. E. McTaggart, USAF (c). and other officers, observe flights of interceptors on center's radar.*

'SCRAMBLE' SIGNAL *from the NORAD control center jolts the "hot pad" into action as pilots and radar observers race to their airplanes.*

NAVY GETS ITS FIRST PARAMEDIC TEAM

The genesis of the Navy's first Paramedic team is told by the author shortly before receiving orders to his current assignment at NAS Miramar.

By Lt. David B. Davis, II, MC

"WHAT, ME JUMP?" This was my reaction while watching a film of a pilot bailing out of an airplane during my training as a flight surgeon. I had no idea that in two years parachuting would be routine for me.

My first contact with parachuting came in mid-1961 when 20 members of the Philippine Air Force were being trained as paramedics at nearby Clark Air Base. During this time, PRCA Eugene H. Woods was consulting with our Assistant Medical Officer, Lt. Raymond D. LaChance, here at Cubi Point. He urged the formation and training of a rescue team and casually mentioned he'd like to receive the same training as the Filipino paramedics.

No more thought was given the idea until several months later when we were called to fly to Palawan, an island several flying hours south of Luzon, where a Philippine Air Force plane had crashed with seven men aboard. We were in an HU-16C and had to turn back an hour out of Palawan because of an oil leak. It was another full day before the crash site was reached by surface ship. Six of the seven men perished.

Then I realized the value of a U.S. Navy paramedic team in the Philippines. I talked with Dr. LaChance and Chief Woods. They were enthusiastic. The next several months were spent convincing our command of the need for the team. In March 1962, T. D. Carpenter, HM1, and myself voluntarily took two weeks training at Clark under SSgt. B. E. Davis, USAF. It was at our own expense.

In the next two months, we requested CNO approval of a voluntary or official paramedic unit. We also wrote to BUPERS asking for U.S. Navy parachutist designation. During this time, Dr. LaChance, Chief Woods, Robert B. Lamb, HM3, and P. R. Duncan, PR2, got in their six jumps, again at no cost to the Navy.

Two major problems then confronted us: (*1*) we had no equipment, and (*2*) not being designated Naval Parachutists, nor having orders to jump, we could not jump militarily. The first problem was solved mostly by the most effective method of supply, cumshaw. We ended up with 12 T-10 chutes and reserves, jump helmets, medical jump bags for the medical personnel, and general purpose survival bags for the non-medical personnel. We felt we were slowly becoming a well organized unit, under the circumstances.

The second problem was more difficult. We all agreed that we wanted to continue para-rescue work with or without hazardous duty pay. Only the enlisted men could draw this, for Dr. LaChance and myself were on flight pay. We signed waivers and joined the area's sky diving club where we continued our jumping.

The next six months were ones of suspense for us. We slowly gathered favorable endorsements on our letter to CNO; five were necessary before it could reach its final destination. In the meantime, we stepped up our training in survival. We became a small, close-knit group, working efficiently and effectively together.

Our first chance to work as a team came in August 1962 when a seaplane from a nearby Naval Station crashed into a mountain about 60 miles from Cubi Point. This was during the peak of the rainy season, with 145 inches of rainfall in five months. Weather was bad! It was two days before the wreckage was spotted. We were fortunate at that time to have Marine Helicopter Squadron 261 temporarily at Cubi.

We were dispatched to the scene of

the accident immediately, and, although we were able to land within 50 yards of the wreckage, we were ready for any type of penetration. Three of our team were let out at the site. Miraculously, one crew member remained alive! We gave him first aid, made him a litter, and placed him aboard the helo with a corpsman to accompany him back to Cubi. The two of us remaining, along with Lt. Victor Hanson, MC, HMM-261's Flight Surgeon, did what we could at the site.

The weather soon closed in on us for the next four hours, so we set up a camp. We continued efforts to identify the remaining personnel. Because of our group training and the organization of our equipment, we functioned much more effectively as a team than in any previous air crashes we had investigated, and we could report this when we finally returned.

In October 1962, the word we had been waiting to hear was received. CNO officially recognized us and we would become an official mission and task of the Naval Air Station. We were also all designated Naval Parachutists, at long last.

With this wonderful word of encouragement, and a letter of commendation for each of us, we increased our training to a peak tempo. We began adding jungle jumps to our training, jumping at increasingly shorter intervals. All of our spare time was spent repacking chutes. We jumped every type of aircraft we could find. We believe we are the first to jump with static lines from the UH-43C (Dr. LaChance and Chief Woods were the

first two in the group to qualify.)

We adopted the Air Force Rescue Manual and wrote one of our own for jungle type work peculiar to the area. We continually revised and added equipment as we learned more about the "trade." We made night jumps, jungle jumps, high-wind jumps, equipment jumps (which are all routine), and we began to check out everyone as a jumpmaster. At this writing, three of us have over 50 jumps each. Our training is continuous.

The basic organization of the team calls for six members: two doctors, two corpsmen, and two parachute riggers. The group is subdivided into small teams as fits the need of the occasion. The role of the medical officer and corpsmen is self-explanatory. The parachute rigger's primary job is survival training and care of the equipment. All members of the team, however, are taught jungle survival. Each team member has a jump bag for which he alone is responsible. The two medical officers have essentially identical jump bags weighing 20 pounds each. They contain varied medical supplies, including a small surgical kit, Dextran (for intravenous use), anti-malarials, burn treatments, etc. Each member of the team carries a minimum amount of personal survival gear which includes a machete, insect repellent, mirror, flares, knife, food concentrates, etc. The hospital corpsmen carry a medical bag similar to the medical officers, but differing slightly in its contents.

Each parachute rigger jumps with a general purpose survival bag weighing 45 to 50 pounds, depending on the equipment. He carries primarily survival supplies: tent, C-rations, machetes, signal paulin, etc. This bag is dropped on a 25-foot line below the rigger after his chute opens.

Jungle jump suits are available, but they have not been used in practice tree jumps because of the excessive heat. In tree jumps, each man carries a 120-foot rope to lower himself to the ground. This, plus approximately 35 feet of reserve chute line, allows a man to hang over 150 feet from the ground and still lower himself to safety. This tree let-down technique is also being developed for use with the helicopter sling to give additional line in using the helicopter.

In addition to all this equipment, there is also a combined aircraft accident investigation/medical kit, and a larger medical survival drop container (about 50 pounds) ready for immediate use. These contain a larger variety of supplies. The survivor drop container is delivered by cargo chute. We also have on hand other ready containers to paradrop re-supply medical and survival items at a moment's notice. All our equipment is prepared for paradrops in event it is not necessary for the team to parachute into the area. Each kit contains instructions on self-medical aid, survival and signaling.

Now that we have received approval from CNO, we are beginning to acquire more and better equipment. We are replacing our T-10 chutes with newer steerable ones. A medical officer, Dr. LaChance's replacement, is being trained as a Paramedic Team member by the other members of the team. He is Lt. Robert L. Thompson, MC. In the future, all replacements will be trained as parachutists before being sent to Cubi Point. However, being a parachutist does not make one a paramedic. The training is relentless and difficult, but extremely satisfying.

In addition to our training program, we are trying to seek new and better methods in rescue work. We're not satisfied with all the widely accepted techniques because many of them do not work well in the terrain and climate conditions we have to cope with in this area.

Paramedic rescue work is a new and little advertised field in the Navy. VX-6 has the only other Navy Pararescue unit to our knowledge. Most of our training and information came from the Air Force and their manuals. We feel, however, that in many areas, such as the Philippines, there is a definite need for better trained Navy rescue teams, trained not only in paramedic work, but in all other aspects of the rescue and recovery field.

It has not been an easy road becoming a paramedic. We did much of our training on a voluntary non-pay basis, training before and after work, and on weekends. But the results are already beginning to show: one life has been saved. At the present time, we have yet to record a single team member injury. We do have bruises to show for our efforts, but these are small payments for the satisfaction we get in performing tasks we volunteered to do.

Marine 'Best Instructor'

Selected out of 2800 in NATTC

Marine Corps Staff Sergeant Thomas W. Swisher has been selected as the best instructor out of 2800 in the Naval Air Technical Training Command. He was given a trophy by the Chief of Naval Air Technical Training, RAdm. Joseph C. Clifton, after

RADM. CLIFTON COMMENDS SGT. SWISHER

taking top honors in the 20,000-man command's annual "Schoolmaster of the Year" contest.

Competition has been going on for months throughout the seven subordinate commands of NATTC, and seven finalists made teaching presentations before two separate panels of judges in the finals. Panels were composed of military and civilian education specialists in the Memphis area. Sgt. Swisher, representating the Naval Air Technical Training Center, Glynco, Ga., won their nod.

The other six contestants were Charles E. Garrett, PRC, NATTU PENSACOLA; Frederick K. Martin, AGC, NATTU LAKEHURST; Robert W. Carr, BMC, NATTU PHILADELPHIA; Marine Sergeant D. P. Miller, NATTC JACKSONVILLE; Kenneth E. Gray, ATC, NATTC MEMPHIS; and Marine SSgt. Harry S. Brubeck, Naval Air Maintenance Training Group.

Gemini Spacecraft is Placed

Prime Contract Goes to McDonnell

The National Aeronautics and Space Administration has signed a $456.6 million prime contract for Project *Gemini* spacecraft with the McDonnell Aircraft Corporation, St. Louis, Mo.

Development of the two-man spacecraft began at McDonnell in December 1961, under the technical direction of NASA's Manned Spacecraft Center.

Manned *Gemini* missions to begin in 1964 will develop docking and rendezvous techniques in space with a previously launched *Agena* vehicle in preparation for the *Apollo* lunar mission which will land U.S. atronauts on the moon. *Gemini* also will provide experience in manned space flight for as long as two weeks.

Under the contract, the firm will provide 13 flight-rated spacecraft. Twelve are to be used for space flight; the 13th is to undergo ground testing.

New Iwakuni Taxiway Laid

Marston Matting Saves Fuel, Time

A 400x50-foot "instant" taxiway was laid at MCAS IWAKUNI, Japan, under the supervision of the only two air wing engineers in the Marine Corps. Starting the project at 0800, a construction crew composed of members of MABS-17 laid the taxiway in one day, using Marston matting.

The taxiway was laid in an effort by the Wing Engineer Office to cut down the waste of fuel and time caused by the necessity of taxiing planes down the runway before takeoffs and back up after landing.

The matting used is a modified version of the old pierced steel matting used in WW II and Korea, and is easier to lay because of a new joining system. It is reinforced with strips of aluminum welded to the back and top. It has a non-skid coating sprayed on at the factory to keep aircraft from skidding in inclement weather.

Mayport C.O. Commended

Cited for Service in Cuban Crisis

In April, a Gold Star in lieu of a second Navy Commendation Medal was presented to Capt. Richard L. Kibbe, Commanding Officer of NS MAYPORT, Fla.

RAdm. Joseph Carson, Commander Fleet Air Jacksonville, made the presentation on behalf of the Honorable Fred Korth, Secretary of the Navy.

Capt. Kibbe was cited "for meritorious achievement during the period October 21 to November 22, 1962, while serving as Commanding Officer of Mayport" during the Cuban crisis.

Adm. Carson read the citation which stated that "Capt. Kibbe skillfully directed his command in providing logistic support for an unusually large number of ships using the Mayport facility. Constantly mindful of the importance of the missions of these vessels, he gave unsparingly of his time and effort towards meeting these commitments, contributing greatly to the smooth operation that provided a most significant service to the Fleet."

VADM. WILLIAM E. GENTNER *(c) enters the Headquarters of Allied Forces, Southern Europe, with Adm. James S. Russell, AFSouth, Commander in Chief. As 6th Fleet Commander, Adm. Gentner also commands Naval Striking and Support Forces, Southern Europe, NATO command which 6th Fleet would operate during training exercises and war. His flagship is USS Springfield.*

Parachute Rigger Now a JG

Has both Army and Navy Service

Master Chief Parachute Rigger E. Earl Kearley, USN, School Supervisor of the Parachute Rigger School, NATTC, NAS LAKEHURST, N. J. and the senior Parachute Rigger of the U.S. Navy, is now a Lieutenant (junior grade). The oath was administered by his C.O., Cdr. Jesse E. Miller.

Ltjg. Kearly, who has a total of over 19 years of service, served as a medic with the Army's 17th Airborne Division in World War II. He jumped with the only American division to parachute into Germany during that war.

He joined the Navy as a Seaman First Class at Birmingham, Ala., in July 1946, and then won consistent advancement in the parachute rigging field. His assignments have included in addition to service at Lakehurst, duty with VR-2 and USS *Kearsarge*, and at NAS JACKSONVILLE.

Flight Gear Inspection

VP-31 Checks Survival Articles

To maintain the active safety and standardization program of Patrol Squadron 31, a flight gear inspection was held.

Inspectors were the Commanding Officer, Cdr. Grant L. Donnelly; the Flight Surgeon, Lt. William Connelly; the Aviation Safety Officer, LCdr. Tom Bandurraga; the NavAirPac SP-2 (P2V) Standardization Evaluator, LCdr. George Carlson; and the NavAirPac SP-5 (P5M) Standardization Evaluator, LCdr. Paul Jenkins.

The uniform for the inspection was flight suit with the regulation flight boots. Each individual carried his flight helmet under his left arm. Items checked were ID tags, personal survival kits, gloves, survival knife, and flight jacket. Results of the inspection were considered outstanding.

CDR. DONNELLY HEADS SAFETY INSPECTION

MOBILE ARRESTING GEAR BRINGS VMA-225 SKYHAWK TO A QUICK STOP ON SATS STRIP

VMA-225 SNARES 'FIRSTS' IN SATS TEST

AT NAS CHERRY POINT, a Second Marine Aircraft Wing squadron snared two "firsts" during a field exercise at Bogue Field, N.C., this spring.

Marine Attack Squadron-225 (VMA-225), commanded by LCol. E. A. Harper, became the first East Coast squadron to operate independently from a SATS (Small Airfield for Tactical Support) environment. It set up its field position next to the airstrip.

The unit also became the first Marine squadron to hold night take-offs and landings from the small airstrip.

VMA-225 started its first flight operations immediately upon arrival at Bogue Field. Supporting the attack squadron were personnel and equipment from Marine Wing Headquarters Group Two and Marine Aircraft Group 24, based at MCAS CHERRY POINT; and Marine Aircraft Group 26, based at MCAF NEW RIVER, N.C.

During daylight hours, VMA-225's *Skyhawk* pilots conducted ordnance training flights and mid-air refueling operations with the KC-130F *Hercules*.

After a little rest, some hot food and briefings, the pilots were ready for night training operations.

Taking off from a 3000-foot matted runway, the *Vagabond* pilots took off in groups of four to begin night ordnance and refueling exercises.

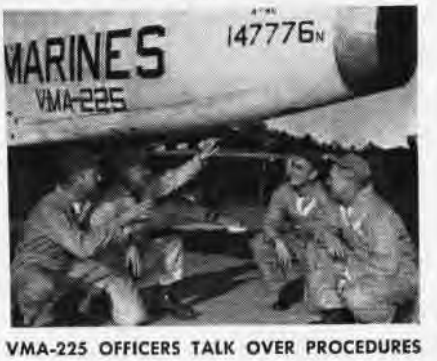
In a SATS situation, the landing is made as follows: As the plane touches the ground, the aircraft's six-and-a-half foot tail hook picks up a one-inch cable off the matting. This cable is attached to a machine (the M2 Expeditionary Arresting Gear) which absorbs more than 18 million foot-pounds of energy in bringing the aircraft to a halt within approximately 310 feet.

Although weather conditions were not favorable for flying at all times, day and night operations were conducted throughout most of the 10-day SATS exercise.

Training was highlighted by pilots demonstrating their proficiency in ordnance drops and rocketry, night navigation, close air support, and all-around airmanship.

In describing the squadron's state of readiness after the operation ended, Col. Harper said, "The exercise developed the confidence of our pilots. It also gave them more experience, increased their capabilities, and corrected deficiencies which result when a unit is operating from an area that isn't ideal."

The SATS site at Bogue, in addition to being a completely operational airfield, was literally a "tent city" offering almost every facility and service available at a permanent installation. During the course of a normal working day, 2nd Wing Marines at Bogue enjoyed a regular mail call, special services and barber facilities.



VMA-225 OFFICERS TALK OVER PROCEDURES

More Helicopter Pilots Needed

ELLYSON FIELD EXPANDS TRAINING

REFLECTING THE GROWING importance of the helicopter in the areas of anti-submarine warfare and limited warfare, the Navy's only helicopter training squadron will extend its flight training syllabus to include night and instrument training requirements in July.

Two-hatted Capt. William G. Stearns, Jr., Commanding Officer of Helicopter Training Squadron Eight and its base field, ALF ELLYSON FIELD, Pensacola, Fla., announced the program extension and said, "We will now be able to turn out an infinitely better product."

The "product," of course, is a Naval Aviator trained to fly helicopters under Fleet-operating conditions. Extension of the flight program means an increase from 60 hours to 80 hours in the Ellyson Field flight course. The extra 20 hours will be devoted to night and instrument training, an environment relatively new to helicopter flying. Heretofore, helicopter pilots usually picked up night/instruments training in Fleet operational squadrons.

Ellyson Field, in Navy parlance an auxiliary landing field or ALF, covers a 585-acre tract 16 miles northeast of historic NAS PENSACOLA, the home of naval air training since WW I, and known to Naval Aviators everywhere by the single, graphic title, "Mainside."

SIKORSKY SH-34G *whirls low over the main entrance bearing the Ellyson Field motto.*

Nine miles to the southwest—between "Mainside" and Ellyson—is the city of Pensacola, rich in historical lore dating back to 1559 and a brief colonization by the Spaniard Don Tristan de Luna. The white sand shores of the Gulf of Mexico lie but a few miles south of Ellyson, across flat and sandy land spotted with the pine and scrub oak typical of the area.

Ellyson Field perpetuates the memory of Cdr. Theodore G. Ellyson, the Navy's first aviator, who won that honor in April 1911, when he soloed a Curtiss seaplane at Hammondsport, N.Y., under the instruction of aviation pioneer Glenn Curtiss.

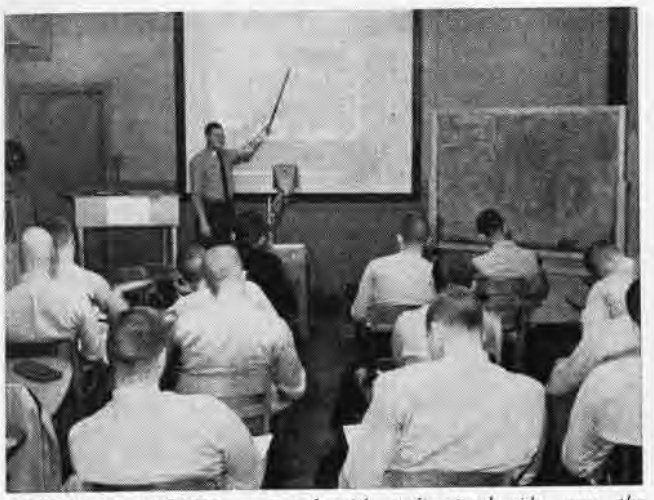
The field was opened in 1941 as a primary training base and for the next ten years served a variety of missions. Deactivated after WW II, it was even used (in 1947) as a Brooklyn Dodgers training school. Reactivated in December 1950, Ellyson began training its first class of helicopter students in January 1951. Since then it has hatched more than 6000 helicopter pilots for the Navy, Marine Corps and Coast Guard.

As a training unit, Ellyson comes under the command of RAdm. Magruder H. Tuttle, a former Navy football captain, who is Chief of Naval Air Basic Training, with headquarters at NAS PENSACOLA. Adm. Tuttle, in turn, reports to VAdm. Fitzhugh Lee, Chief of Naval Air Training, also at Pensacola, who heads the Navy's largest shore command. Under this command comes a complex of basic, advanced, technical, and reserve training units throughout the United States.

At Ellyson, total personnel averages about 1100, including 900 enlisted men, 115 officers (65 of them instructors), and about 60 civilians, equally divided between civil service

ELLYSON FIELD *has been the training site for more than 6000 Navy, Marine Corps and Coast Guard helicopter pilots during past 12 years.*

CAPT. STEARNS *and staff: seated LCdr B. B. Lunsford, Cdr. E. H. Moyer; Cdr. Roy Bramblett, Lt. D. C. Blish and LCol. W. R. Rozier.*



MODERN CLASSROOMS, *equipped with audio-visual aids, give the instructor the tools he needs to drive home lessons in the ground school.*

IN LINK TRAINER, *Lt. A. H. Wagner, U.S. Coast Guard, takes instruction from H. R. Sheets, TD3. Ellyson has four other Link trainers.*

and "blue collar," or public works, employees.

The students, numbering between 160 and 170, range from young Naval Aviation Cadets (NavCads) to captains with thousands of hours of fixed-wing time in their logbooks. Most of them are already officers with at least 200 hours of fixed wing training. Students have also come from Allied nations, chiefly Japan, Chile, Italy and Argentina. All leave Ellyson as qualified helicopter pilots while those with no previous naval air training receive, in addition, their Navy "Wings of Gold" as Naval Aviators.

A recent graduate was Capt. Michael J. Hanley, Jr., a lanky one-time captain of the Naval Academy basketball team and a Naval Aviator since 1942. Capt. Hanley, a staff member of the Joint Chiefs of Staff at the Pentagon, has since become commanding officer of the helicopter carrier *Thetis Bay*.

The present course at Ellyson calls for 60 flight hours over a ten-week period—30 hours in primary trainers (the Bell TH-13), followed by 30 hours in the "heavies" (the Sikorsky UH-19F, SH-34G and UH-34D, called by everyone at the field the Horse, Hiss and Huss based on their former designations which were HO4S, HSS-1 and HUS-1, respectively.)

"We have an extremely high level of standardization," says Capt. Stearns. "Our standardization pilots do nothing but make sure that our instructors (all former Fleet pilots) are standardized, that they can pass rigid check flights before instructing."

Ellyson's instructors are all Ellyson graduates who have served in the Fleet as either Navy or Marine Corps pilots and have at least 1000 helicopter hours. Upon their return to Ellyson, they are given an intensive ground school course before taking over as instructors, first in the Bells and later in the Sikorskys.

A glance through one of the many instruction manuals used by instructors and students gives a hint of the effort packed into the 60 flight training hours. The manual for one helicopter alone (the Sikorsky SH-34G) contains 126 single-spaced typewritten pages, covering everything from flight line operations to cross-country procedures.

To promote safety and teach pre-

THE ELLYSON FIELD *tower is manned by Daniel Tillet, AC3, at flight data control panel and Air Controlman Jerry Logsdon, local control.*

AFTER TRAINING *flights, instructors are required to write up report for students' flight jackets, thus recording progress of embryo pilots.*

cision flying, various markings cover Ellyson's paved flight areas. Yellow lines guide the copters out to cross-hatched areas used for takeoffs and landings. Farther out on the runways are squares and figure eights over which low level coordinated maneuvers are taught. One of the most difficult maneuvers, most students say, is "air-taxiing" the little Bells which are fitted with skids rather than landing wheels.

Students require about ten hours to solo the Bell, then log another 20 hours before moving up to the Sikorskys. The latter would require six more hours before solo. However, the "heavies," being of the pilot, co-pilot type, are always flown dual.

LCDR. DAN SAMEK, *Maintenance Officer at Ellyson, talks with Jack Barton, Sikorsky rep.*

Training flights utilize not only Ellyson Field, but also five outlying, or satellite, fields. These lie from three-and-a-half to seven miles from the main base, vary in size from 160 to 640 acres, and include both paved and turf landing areas. Two smaller fields are used for the Bells, three for the "heavies." They are the sites of auto-rotations, low flying, run-on landings, quick stops and precision approaches.

The number of helicopter pilots trained at Ellyson in fiscal 1962 showed a 50 per cent gain over the previous year, an upward trend that shows every sign of continuing.

Despite the 70-odd helicopters and the ample flight fields available, Ellyson is hard-pressed to keep pace with its rising training schedule.

"We must fly from 900 to 1000 hours a week to stay solvent," says Capt. Stearns. "We need only a 500-foot ceiling to operate, so we can fly when the fixed wing ships are grounded. Still, high winds or fog keeps us on the ground occasionally. Normally, we fly a five-day week, 200 hours a day. But the weather and our growing backlog of students necessitates a six-day week to meet our commitments."

VETERAN NAVY *pilot, Capt. M. J. Hanley (L), and instructor, Capt. Larry Flanagan, USMC.*

Ellyson Field's safety record won for the base special air safety awards from the Chief of Naval Operations in 1960 and 1961 when HT-8 was judged the Navy's safest aricraft squadron, competing against both fixed wing and helicopter units. Its record for 1960, with 40,048 flight hours logged, was .498 accidents for every 10,000 flight hours. In 1961, with a total of 31,848 hours, the ratio was .626.

"We live by the most rigid safety rules," says Capt. Stearns. "Our pre- and post-flight checks are very strict. The students and instructors climb all over those birds and that helps keep our accident rate low."

In one of Ellyson's three big brick hangars is an honor roll board listing the total number of consecutive accident-free instruction hours flown by each instructor. Listed in green are seven of the current staff who have topped 1000 hours. Marine Corps Capt. Walter Hofheinz, with 1850 hours, heads tht list. The others are Capt. John Karin, USMC, with 1444 hours; 1st Lt. Wayne Sherman, USMC, 1358; LCdr. Willard Erwin, USN, 1354; Capt. Donald Webb, USMC, 1230; Capt. Robert Chereson, USMC, 1112, and LCol. George Brigham,

USMC, 1036. Like all instructors who have exceeded 1000 accident-free instruction hours, the seven received commendations from Adm. Tuttle.

As for improving the "product" turned out at Ellyson, Adm. Tuttle believes it is a question of how much to do at Ellyson and how much to do in the operational squadrons. "The less we do here, the more they must do there," he says. "It depends on the tempo at Ellyson. In normal times the instructors can give more time to a student, but in times like these there just are not enough hours. Ideally, we would like to give students a little more time."

Toward this end, Ellyson's flight training program will be increased to 80 hours as of July 1. "To do this job," Capt. Stearns says, "we are already training our instructors and adding new ones."

Will the helicopter training program continue to grow? "I don't foresee any decrease in the expanded program," replies Adm. Tuttle. "This is due to the increased Marine Corps requirements, the expanding ASW forces and the utility of the helicopter for such jobs as plane guard, guerrilla warfare and generally increased mobility. This growing use of the helicopter is true for all military services."

Meanwhile the job continues at Ellyson. For the students the pay-off comes in a neat, white chapel not far from the station's main gate. There, with increasing frequency, Capt. Stearns presents helicopter certificates and Wings of Gold to little groups of graduates.

The ceremonies are dignified but intimate, with parents, wives and girl friends making up the bulk of the onlookers. At such times, Capt. Stearns becomes "Chappie" Stearns, wise counselor and loyal friend, as he wishes them well.

"You've been receivers up until now," he told a group the other day. "But now you will be leaders and doers, yourselves acting as teachers and, I hope, using good old common horse sense. The challenge is there. People spend years learning only one of the many specialties that you now possess. You can now be a leader, or a middle-of-the-roader, or a slider; your senior officers are going to put you in one of those slots."

For the wives he added: "You must share the load, especially in times of separation, or of selling furniture and moving across the country. If you fail to accept the challenge, you're letting down the service team. . . . So the challenge is a dual one—for both wives and husbands."

With that, the new pilots were on their way, following the thousands who had gone before them to fly helicopters wherever duty called—from Arctic to Antarctic, from Korea to the Caribbean. They would have a common heritage, the ship-shape station Ellyson.

Arched high over the Ellyson Field main gate is a sign which announces, "The Best Helicopter Pilots in the World are Trained Here." With the augmented program effective in July of this year, a departing student may add his own personal postscript, "Even better than that."

TRAINING FOR THE FLEET *requires that there be during the helicopter flight course occasional visits to the Naval Air Training Command's carrier for qualification flights. Here, four Sikorsky SH-34G helicopters fly past USS Lexington which recently replaced USS Antietam.*

AT SEA WITH THE CARRIERS

NEARLY TWO YEARS *of detailed work was put into this scale model of Independence by Ltjg. Greg Feher, presented to C.O., Capt. Swanson.*

GRADE CHILDREN *of Kalyvia, Greece, enjoy swings built and erected by the officers and men of FDR and Attack Squadron 12 based aboard.*

ATLANTIC FLEET

Independence (CVA-62)

In Norfolk Naval Shipyard while the *Independence* underwent major overhaul, Capt. L. V. Swanson, commanding, praised his 320-man deck force. "Among the achievements worthy of note," he said, "are two areas of accomplishment which rate more than passing mention. In order to save the *Independence* $8000, which was the shipyard's estimate for cleaning and preserving the ship's chain lockers, the deck force demonstrated real 'can-do' spirit and did the job themselves. Finally, owing to the imagination and initiative of the deck force and the aid of the shipyard planning section, a new replenishment station has been designed which should give *Independence* increased cargo-handling capabilities and will undoubtedly set the standard for other CVA's in AirLant."

While still in the yard, two of the ship's 5" 54-caliber gun crews were awarded a gunnery E for excellent shooting during competitive exercises throughout 1962.

Randolph (CVS-15)

Cdr. Ben C. Tate leaves the *Randolph* this month for the Industrial College of the Armed Forces. Behind him (if abbreviated titles of previous jobs is an indication) is a "Randoo" career with the sweep and dash of a yo-yo. Aboard, at various times, he has been an X.O., C.O., C.O. again, Ops Officer, and X.O. for a second time. But not all in the same command.

It all began in 1958 when he first reported to the *Randolph* as Executive Officer of VS-36. Next time aboard, he commanded the same squadron. Still later, he returned to CVS-15 while commanding CVSG-58. This was followed by billets in the *Randolph* as Operations Officer and Executive Officer. His five-year association with the *Randolph* was interrupted only once, by a tour on the staff of Commander ASW Forces, Atlantic Fleet.

Enterprise (CVAN-65)

King Paul and Queen Frederika of Greece visited the nuclear-powered *Enterprise* while the carrier visited Athens. They were luncheon guests of Commander, Sixth Fleet. Crown Prince Constantine and Princess Irene accompanied their parents on the visit.

The 16,000th carrier arrested landing was made aboard USS *Enterprise* when Ltjg. Russell C. Coit of Attack Squadron 76 landed in an A-4C *Skyhawk* (A4D-2N). The *Big E* has been averaging over 1000 landings a month.

Franklin D. Roosevelt (CVA-42)

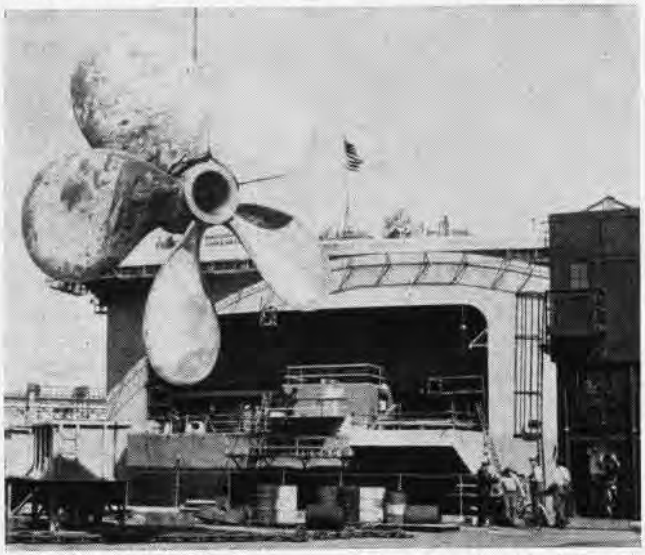
In a postscript to the April NAVNEWS on Overseasmanship (pp. 12-13), the *FDR* returned to Kalyvia, Greece, and completed work on the village schoolhouse interrupted last visit by operational commitments. More desks, blackboards and bookcases were installed in the first graders' room, and the interior was painted a pastel green. A giant swing-seesaw, built by volunteers of Attack Squadron 12 aboard *FDR*, was erected in the school's playground.

Earlier, a carrier-based helo answered a distress call relayed by the Naval Attache in Athens. A Greek sponge diver had been stricken with the bends near the island of Nisos Tinos. Ltjg. H. E. Williams, accompanied by flight surgeon Lt. Nick Papadakas, helolifted the patient 87 miles to the Royal Hellenic Arsenal at Salamis where the victim was immediately treated in a decompression chamber.

During Air Defense exercises, the radar on one of *FDR's* directors broke down. John D. Kniep, FT3, diagnosed the trouble instantly and made needed repairs. Within five minutes, the director was "locked on" the air target at a range of 67,000 yards. This enabled the carrier to reach its highest score in two years in the competitive exercise. Kniep was commended as Sailor-of-

(Continued on page 24)

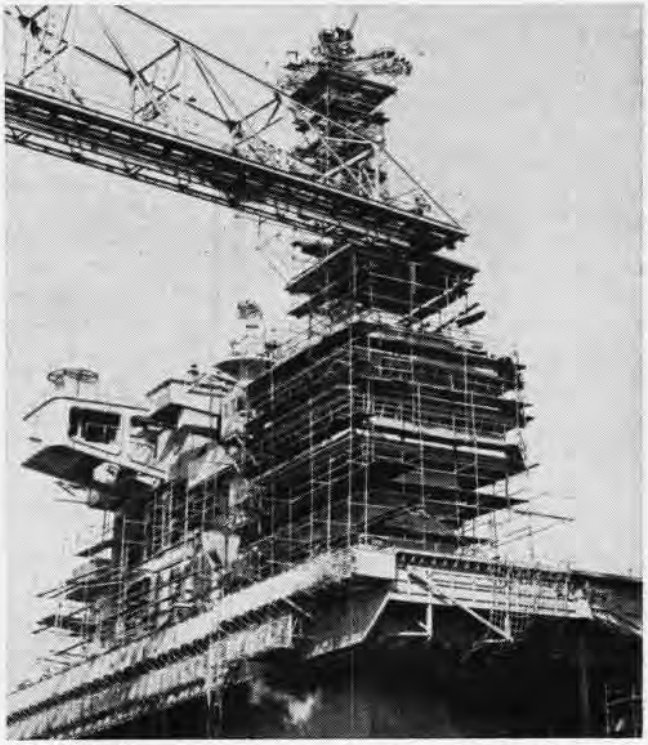
VIEW FROM *the bottom of USS Independence shows men installing new aircraft elevator safety nets during overhaul at Norfolk Navy Yard.*



TWO STORIES *high, this screw is one of four propelling the Independence at a speed better than 35 mph. Each one is 22 feet in diameter.*

PROPPED UP, *this fatigued sailor catches a midday nap on a stray blade scheduled to be cleaned and reworked during the overhaul period.*

ANCHOR CHAINS *line the exposed hull in Norfolk Navy Ship Yard. Each link in the chain weighs 360 pounds, helps hold 30-ton anchors.*



SCAFFOLDING *on ship's island permits yard workers to put up radar antennae and install new windows on the navigation bridge areas.*

the-Month by Capt. Walter E. Clarke, commanding, during a special program over the carrier's closed circuit TV.

The 120,000th arrested landing was made aboard the *FDR* by LCdr. Richard S. Davidson of VAH-11 in an A-3B *Skywarrior* (A3D) after he and his three-man crew had just completed 15 scored runs over the radar bombing site in Naples, Italy. His bombardier/-navigator was Ltjg. Alec Blunden. The crewmen were Charles L. Abbey, AE1, and Richard May, AQB3.

Lake Champlain (CVS-39)

Within two minutes after he ditched an EA-1E *Skyraider* (AD-5W) in the Caribbean, the pilot was safely aboard the flight deck of USS *Lake Champlain*. The speedy recovery was made by Lt. Gordon Dey and Ltjg. Jack Gander, HS-5, in an SH-34J *Seahorse* (HSS-1N). Howard Gantz, ADR3, manned the rescue hoist.

The 30,000th helicopter landing aboard the *Champ* was logged by Lt. Henry Jay Fox, IV, of HS-5. Capt. A. L. Burgess, commanding, assisted in the cake cutting celebrations.

Shangri La (CVA-38)

Observing a six-week training cruise in the Caribbean, RAdm. R. J. Stroh shifted his flag from *Saratoga* to *Shangri La*.

Before heading for the exercise, the carrier stopped at Norfolk to take on explosives. Working around the clock, the ammo handlers finished the job a full day ahead of schedule, taking on 940 tons of bombs, shells, small arms rounds, hand grenades, rockets and missiles.

Lexington (CVS-16)

LCdr. M. H "Mutt" Henry had more *savoir-vivre* and intrepidity than the average pilot carqualling in an S-2A *Tracker* (S2F) after an absence of 13½ years from carrier aviation. LSO-ing him from the *Lex's* flight deck was Lt. D. R. "Dave" Henry of VT-22, NAAS KINGSVILLE. They are brothers.

The 50,000th arrested landing aboard the *Lex* since recommissioning was made by Ens. William P. Kantor of VT-5. This brings the carrier's total arrested landings to 80,000. Ens. Kantor made the landing in a T-28.

Wasp (CVS-18)

A 21-gun salute cracked across the Caribbean as Costa Rica's President Francisco J. Orlich boarded the *Wasp* on the eve of President Kennedy's meeting in that country with officials of six Central American nations. "We know this Task Group [Bravo] is part of the U.S. effort to defend the free world," President Orlich said during his three-hour visit. "Although I come from a small country with no Army, no Navy, and no Air Force and although we cannot give you military support, I pledge to you the moral support of my government and my people . . . . God go with you."

PACIFIC FLEET

Ranger (CVA-61)

A long way yet from holding the Gray Eagle Trophy, Capt. J. Lloyd Abbott, Jr., chief of staff for Commander Carrier Division Five, relinquishes this month his claimed seniority among carrier-qualified Naval Aviators in Service Group One, making routine flights from a ship. It's the service group status that will make the difference to Capt. Abbot, who this month celebrates his 45th birthday. Service groups are medical classifications established for Naval Aviators. They take into consideration such criteria as age and physical health. On his birthday, Capt. Abbot will automatically be transferred to Service Group Three.

SPARROW III *kill is held by VF-96's Ltjg. T. Hommel, Lt. G. Elie, bit from their F-4B.*

His most recent carrier qualification was made last October aboard the *Ranger*, when he made ten arrested landings in a C-1 *Trader* (TF).

The 54,000th arrested landing aboard the *Ranger* was made by LCdr. Norris O. Anderson of Heavy Attack Squadron Six. He piloted an A-3B *Skywarrior* with Ltjg. Robert L. Eychaner as bombardier/navigator and Vernon L. Conk, AD1, as third crewman.

Oriskany (CVA-10)

A "Screaming Demon," F-3 (F3H), piloted by LCdr. D. E. Swank registered the 67,000th landing on the *Oriskany* flight deck. LCdr. Swank is attached to VF-161, NAS MIRAMAR.

Bennington (CVS-20)

A center spread in *The Hukster*, ship's paper for the USS *Bennington*, started off: "The *Benny* crew spent six months in a shipyard complaining about the lack of Naval type action. Oh ho. Hang on to your white-hats, boys, we're up to our peacoat collars in it now. Four weeks of 'round-the-clock' operating which is designed to turn us into a solid team of coordinated sailors."

The article then went on to brief the crew ("60% of which is fresh and unsalted") on what to expect during the Underway Training that was to follow.

"An example of what we might expect: Prior to a man-overboard drill, an observer will clamp on to a young sailor chap and request he hide in a void for a few short minutes. The catch is to see how quickly and accurately all departments report with correct musters. Will the hidden kid be discovered on muster report as missing Mr. X?"

In this vein, the article made sense out of some pretty bewildering situations that were bound to arise during refresher training, especially for the "60% fresh and unsalted."

Bon Homme Richard (CVA-31)

When the people of Bremerton like you, they let you know about it. That's what officers and men of the *Bonnie Dick* found out when they reached

that city for a four-month overhaul. Mayor "Whitey" Domstad presented Capt. R. P. Kline, commanding, a key to the city. Also aboard to welcome the men were Miss Puget Sound Naval Shipyard (Donna Conway) and Miss Kitsap County (Carolyn Driver). The West High School all-girl drill team and the 100-member band, converged on hangar bay No. 1, to make the greeting a melodic, memorable one.

Hornet (CVS-12)

The 74,000th landing on the *Hornet* was made by Ltjg. E. R. Choiniere of VAW-13 in an EA-1E *Skyraider*. Nearly a month later, Ltjg. Gary L. Ostrander of VS-37, logged in the 75,000th, in an S-2D *Tracker*. Ltjg. Ostrander also qualified as Landing Signal Officer during this deployment.

Coral Sea (CVA-43)

On her third deployment to the Western Pacific, *Coral Sea* stopped at Sydney, Australia, to represent the U.S. during that country's annual observance of "Coral Sea Week" (see Page 2), commemorating the 1942 Allied victory. The carrier continued north to join the Seventh Fleet.

In a letter to Capt. Charles E. Roemer, commanding, RAdm. J. F. Davidson, Commander Training Command, U.S. Pacific Fleet, wrote as the carrier headed for WestPac: "My congratulations on an excellent show in the final battle problem of *Coral Sea*. I was impressed by the calm and professional manner of that part of the crew which I was able to observe closely. The Flight Deck Crew and the Air Group were impressive during air operations. All hands reflected great credit on a fine ship, and I know that your future cruises will be happy and successful ones."

Donald S. Wagner, SN, of the 01 Division pointed up the efficiency of the crew while *Coral Sea* was still at San Diego. Standing the 2000-2400 lookout watch forward on the 08 level, he spotted the oncoming lights of a ship only seconds before a collision would have occurred. He quickly shouted what he had seen and the forward progress of *Coral Sea* was immediately halted and the course changed. Wagner's job was difficult in that he had to distinguish other ship's running lights from the city lights of San Diego blinking in the background.

LCdr. William K. Doggett of the CAG-15 staff aboard executed *Coral Sea's* 110,000th landing in an A-4B.

EN ROUTE *to her third WestPac deployment, USS Coral Sea makes a stop at Sydney, Australia to be only U.S. Navy carrier in the annual observance of the Battle of the Coral Sea.*

Ticonderoga (CVA-14)

At Yokosuka, Capt. J. G. Daniels, III, commanding, the officers and men aboard hosted a large number of visitors. Among them were Navy men from the Republic of Viet Nam, headed by Ens. Bui-Trung-Tinh. Next came 28 enlisted men in training at Camp Takkyama, of the Japanese Ground Self Defense Force. On the following day, 37 Cub Scouts from Camp Zama Army Base came aboard, and, on the same day, 42 more Cub Scouts, these from Pack 46 at Tachikowa AF Base, made a tour of the carrier. A few days later Prof. Kazuo Nagai, Vice Dean of Hihon University, School of Dentistry, and Dr. Kiroyoshi Habu of the Department of Dental Materials at the same school boarded the *Tico* for a detailed tour of the medical spaces aboard. But perhaps the most delightful group to tour the carrier during the Yokosuka stop were about 500 Japanese ladies of the Ashahi Women's Welfare and Culture Society of Tokyo. Few of the 3000 U.S. Navymen aboard elected to go on liberty.

Hancock (CVA-19)

When Lt. G. A. Fox of Attack Squadron 216 touched down on the USS *Hancock*, his A-4B *Skyhawk* was logged as the 55,000th landing aboard.

SELECTED AIR RESERVE

NAS NEW YORK *recruiters make debut with Betty Furness on WABC TV's "Answering Service." Cdr. Kimberling is third from left, first row.*

LT. W. E. PRICE, III, *of VP-673, NAS Atlanta, asked to have designation on his auto license tag. His skipper, Cdr. K. S. Kirkwood (L) approves.*

New York Recruiters in TV Debut

For one hour a few weeks ago, ten recruiters from NAS NEW YORK handled over 1000 telephone inquiries on the Betty Furness television show, "Answering Service," an audience-participating program which appears daily on WABC-TV Channel 7.

Experts in different fields comprise a panel to answer telephone inquiries. The questions are written down by the "Answering Service" and given to Miss Furness who then addresses the question to the expert in the particular field involved. The show has an audience of 1,500,000 throughout New York, northern New Jersey, northern Pennsylvania, Rhode Island and Connecticut.

Cdr. F. E. Kimberling, Information Recruiting Department Head at NAS NEW YORK, appeared as a Navy expert. Specialists in other fields also were on the panel.

Typical questions included such queries as these:

"What type of training do you receive to become a Navy pilot?"

"My husband is in the Naval Reserve. Is it as good as being in the regular Navy?"

"If some plants give off oxygen, why can't they have plants in a submarine?"

"In what wars was a naval battle the decisive turning point?"

"Do you believe at the present time, as far as defense is concerned, that the U.S. is the leader of the seas?"

"I got out of the Navy in 1960 upon completion of enlistment. Am I eligible for the Naval Reserve?"

The Navy enlisted personnel who coordinated the "Answering Service" were: G. J. Huerstel, ADRCA; R. C. Andrews, YN1; Charles Kain, PN1; W. E. Purvee, YN2; H. A. McLaughlin, PN1; H. J. Malone, AO2; J. Hunter, ABF2; M. J. Mannarino, AMS2; E. A. Schlobohm, AA; and M. Rule, AA.

As a direct result of the publicity given to the Naval Air Reserve Program, the NAS NEW YORK recruiting phones were busy during the program and for two hours afterwards.

MARGARITA SIERRA, *TV star, gets recognition in Kansas City for recruiting help she gave.*

Home Again in Maryland

Twenty-five years ago, a young Naval Aviation cadet completed primary elimination flight training at the old Anacostia, D.C., Naval Reserve Aviation Base. Today he is Commanding Officer of NARTU ANDREWS AFB, jet age counterpart of Anacostia.

He is Capt. Edelen "Ace" Parker, and he resides in his boyhood home in Clinton, Md.

He was the Naval Air Reserve Training Unit's training officer during the organization and build-up following WW II. He served the Unit from September 1946 to July 1950.

During WW II, Capt. Parker was C.O. of Composite Squadron 71. He was awarded the Air Medal for meritorious achievement during operations against Japanese forces on Skashima Gunto. He also wears numerous campaign awards as well as the Navy Unit Commendation.

The last assignment he held before going to Andrews was in the Office of the Chief of Naval Operations where he had been coordinator of the nation's Naval Air Reserve since 1958.

Legion of Merit

The Legion of Merit, the nation's second highest award bestowed upon members of the Armed Forces during

peacetime, was presented to LCol. Archie J. Clapp, X.O. of the Minneapolis Marine Air Reserve Training Detachment aboard NAS TWIN CITIES.

The medal was presented by BGen. Louis B. Robertshaw, Commanding General of Marine Air Reserve Training to Col. Clapp for outstanding service between April 15 and July 31, 1962. At the time, Col. Clapp commanded Marine Helicopter Squadron 362 operating in the Republic of Vietnam.

LCol. Clapp's squadron, "Archie's Angels," were stationed aboard USS *Princeton*. The squadron was supporting the struggle against the Communist Viet Cong insurgents.

Though often operating in the face of Viet Cong fire and at times executing difficult and hazardous night missions, not a single member of "Archie's Angels" became a casualty during the Colonel's time as Commanding Officer.

Finding his squadron faced with not only adverse weather and a hazardous environment, but also a situation entirely new to Marine helicopter units, Col. Clapp had to rely on a broad knowledge of helicopter operations. He exercised a high degree of leadership ability and resourcefulness in implementing the special tactics and techniques that are now "part of the book" in conducting successful counter-insurgency operations.

Col. Clapp returned to the United States to become executive officer of Marine Air Reserve Training Detachment, Twin Cities, in October 1962.

A Good 'Image'

For the second time in a year, Naval Public Relations Company 9-7 (Minneapolis-St. Paul) has received the Chief of Information Naval Reserve Project of the Month Award. The Unit was selected for the way it conducted the people-to-people public relations when Company 9-7 accompanied VR-811 and VR-812 to Port Lyautey, Morocco, on training duty.

The company was selected for a similar award in March in conjunction with the Twin City visit of Adm. Rongel, Chief of the General Staff of the Brazilian Navy.

En route to Morocco, Naval Public Relations Company 9-7 wrote and transmitted releases. The cruise was covered completely and regularly throughout the tour. All media were used, including a telecast.

BGEN. L. B. ROBERTSHAW, *USMC, gives LCol. Clapp Legion of Merit for Vietnam service.*

Double Service

A recruiting "first" has been claimed by NAS GROSSE ILE when an NROTC midshipman was enlisted in the Naval Air Reserve. Robert A. Burroughs, a freshman engineering student at Ohio State University, who is a contract member of the NROTC, was sworn into the Weekend Warrior program at Grosse Ile. He will serve in both programs for the next four years.

His campus NROTC program introduced him to the flying end of the Navy during a midshipman's cruise to NAS PENSACOLA. He saw the NavCads in training, and "That's when I decided to join the Weekend Warrior Program."

Man of the Year

A Navy Petty Officer attached to NAS ATLANTA was named Man of the Year for 1962 by the Navy League Council of Metropolitan Atlanta. The award was presented to Carl Finch, AD1, by Cdr. Hugh Howell, Jr., USNR, President of the Fulton-DeKalb Council. For the past two years, Finch has been in charge of his station's summer "Teen Navy Training" program.

PAY DAY IS SALK DAY *at NAS South Weymouth as the Medical and Disbursing Departments team up to make sure all hands get oral Salk vaccine. J. A. Buckley, PN3, vaccine cup in hand, gets paycheck from Arthur Rod, DK3.*

RAdm. Canaday at MATS Hdqtrs.

At Military Air Transport Service Headquarters, Scott AFB, Ill., one of the Navy's high ranking reservists, Adm. Harry R. Canaday, served his AcDuTra this spring. Adm. Canaday, who has the mobilization assignment as commander of the MATS Naval Air Transport Wing, Atlantic, at McGuire AFB, N.J., conferred with LGen. Joe W. Kelly, Commander of MATS and was brought up-to-date on the MATS mission and role in the U.S. wartime structure.

In civilian life, Adm. Canaday is the superintendent of training for the Overseas Division of Pan American World Airways. He has been with Pan Am since 1934.

Always There

NAS NEW ORLEANS finds the drill attendance record of Leslie L. North, Jr., ADRC, outstanding. Chief North has been a member of the Naval Air Reserve there since November 1947. He has served with FASRon-63, VS-821 and VF-821.

Since his affiliation with the New Orleans Weekend Warriors, he has attended every scheduled weekend drill and 14-day annual training duty period. One weekend when most people would have "stood in bed"—he had pneumonia—he attended the drill.

New Yorkers Hosted by VP-56

Cdr. R. W. Roehrig, VP-836 skipper, stationed at NAS NEW YORK, checked his squadron aboard NAS NORFOLK for a two-week active duty training cruise. VP-56, led by Cdr. D. W. Herlong, was host to the visiting "firemen."

For this cruise, Cdr. Roehrig swapped hats, leaving on the mantel at home the well known "tin bonnet" of a New York City Fire Department lieutenant. Many other civilian occupations were represented by the New York group: test pilot, electronics expert, lawyer, teacher, typewriter salesman, automobile executive and airline pilot, to name a few.

This year's cruise marked the third year VP-836 has been assigned to a Fleet Air Wing for operational control. VP-56 provided on-the-job flight and ground training in the latest ASW equipment and tactics.

MUTT AND JEFF

PROBLEMS IN AIRCRAFT COCKPIT DESIGN

AS LIVING MODELS *of Mutt and Jeff, E. R. Wallace, HMC, and F. Rutherford, HM1, pose.*

By Ltjg. W. L. Smith, MSC, USNR

WHAT ARE THE MEASUREMENTS of the average or 50-percentile man? Is it possible to design an aircraft's controls, switches, emergency handles, etc., to meet the requirements of the arm reach of both Naval Aviators "Mutt" and "Jeff?" Do the average man's dimensions change, and if so, how often? These kinds of questions keep Human Engineering Teams on their toes when they attempt to define basic requirements for a cockpit in an aircraft today.

The five- to 95-percentile man (Mutt and Jeff concept) covers a wide range of anatomical shapes and sizes. Let the aviator who doubts this just look around at the members of his squadron in the ready room.

We can gain insight into the problem of designing for Mutt and Jeff by considering just a few selected body measurements involved in one study. For example, a measurement of man's functional arm reach is involved when the designer plans the position of the actuating controls in the cockpit. This is the reach he may have to use in operating emergency handles for escape from his disabled aircraft. The importance of the reach is driven home every time the face curtain or secondary firing handle is used by a "Hot-pipe Harry" or when an aircrewman actuates an emergency hatch release handle.

To measure functional arm reach, the subject stands erect in a corner, his shoulders pressed against the bulkhead, his right arm and hand extended horizontally along the side bulkhead except that the tips of his thumb and fingers are pressed together. Then using a scale on the side bulkhead, the examiner measures the distance from the rear bulkhead to the tip of the thumb.

A study of U.S. Naval Aviators performed by the Human Engineering Branch of the Air Crew Equipment Laboratory, U.S. Naval Air Material Center, Philadelphia, Pa., showed that the functional arm reach for the five percentile man was 25.1 inches and for the 95-percentile man, 35.0 inches, a range of 9.9 inches.

Let's go a little further and see what the difference is between the one-percentile and the 99-percentile man. The former has a 24.1 inch functional arm reach as against a 36.4 inch reach of the 99 percentile man. The difference has now been extended to a range of 12.3 inches. Furthermore, if you were to plot all the measurements of functional arm reach on a chart, it would appear as a two-hump camel's back. Clearly, this distribution compounds the problems of the design team.

SEATED SIDEWAYS, *O'Day and Rutherford demonstrate the differences in shoulder height.*

R. A. O'DAY, *HM1, shows how the measure of functional arm reach is accurately determined.*

One body measure cannot be isolated from another. Consider another measurement closely associated with the functional arm reach. When a pilot leans forward to actuate a lever, the measurement of shoulder height (sitting) can aid or hinder him in completing a task. Combinations of long torso-short arms and short torso-long arms which are found in the Naval-Marine Aviators represent nothing but headaches in designing machines and flight gear.

The shoulder height is measured with the subject sitting erect, looking directly forward, his feet resting on a surface so that his knees are bent at about 90 degrees. Measuring the vertical distance from the sitting surface to the highest point on the outboard edge of the right shoulder joint provides the shoulder height (sitting). The measurement for the five percentile man is 22.5 inches; for the 95-percentile man, 27.1 inches. Although this range of 4.6 inches is not great, it takes on significance when it is related to the camel back distribution of the functional arm reach measurement.

Is there a significant body measurement variation between U.S. Navy pilots and other groups? The answer to

this question can be found in a study entitled, "Compilation of Anthropometric Measures of U.S. Navy Pilots," Part I, 28 July 1960. Some of the conclusions reached from the results of this study by ACEL are as follows:

1. In overall height, the Navy pilot is approximately one to two inches taller than other groups throughout the whole percentile range.

2. In the upper percentiles, between 50- to 99-percentile range, Navy pilots were found to be one to four inches greater in shoulder height (sitting).

3. In the functional arm reach variable, Navy pilots were found to be one to four inches shorter in the lower (one- to 50-) percentile range.

4. In the crotch height, Navy pilots exceeded the results of other studies by one to two inches at both extremes of the percentile range.

5. In buttock circumference (sitting), Navy pilots were found to be two to three inches smaller in this measurement.

These conclusions highlight the reason for the use of specific body measurement data in designing for a particular group of population. The advantages can readily be seen.

How can the frustrated Human Engineering Team be helped? One proposal, which looks promising, is the concept of a minimum functional human envelope. This thinking involves a three-dimensional concept of man and his space requirements necessary for him to function properly in both normal and emergency operational conditions. Many an A-4 driver will go along with this concept whole-heartedly! This proposed system would determine the minimum space requirements for a seated operator of a flight vehicle.

Many questions need to be answered in general considerations of body measurement studies. With the general population changing in the many dimensions, what would be the time interval necessary before remeasurement of the population would be necessary to keep all data current? Differences must be taken into consideration in body measurements of sub-populations within specific groups. For example, the body measurement data obtained from recruits or cadets will not necessarily apply to the operational groups, such as pilots or aircrewmen. How many can recognize a buddy or friend after a few years out of Boot Camp or Pre-Flight?

Anthropometry, body measurement, by its very nature of growth, will always be a dynamic field of study. The most definite thing about anthropometry is its change. The next time the reader hears complaints about small cockpits or hard to reach handles, he should remember the designers *are* trying to satisfy both types, Mutt and Jeff.

Training Field Expanded

NAMTraGru Includes Target Drones

The Naval Air Maintenance Training Group, NAS MEMPHIS, now includes training in the field of target drones. Factory training for two Aviation Ordnance and two Aviation Fire Control Technician Instructors began June 3 at the Beechcraft Aviation Company in Wichita, Kans. Upon completion of this training, the instructors will return to NAMTraGru Det. 1081 (F-3B), NAS MIRAMAR, Calif., to prepare the course.

Training will revolve about the KD2B-1 target vehicle. This is not a drone in the true sense of the word, but a pre-programmed, non-recoverable missile target. It is designed to simulate the speed, altitude and radar appearance of enemy aircraft and will be the first Mach 2+ flying target to be placed in general use for training.

NAMTraDet 1081 will provide training initially, since the F-3B *Demon* is slated to be the Navy's primary launch vehicle for the new missile target. Later, other aircraft, such as the F-4B *Phantom II* and the A-4B *Skyhawk*, will be phased into the launching program.

Men Build Own Equipment

Fuel Pump Test Bench at Whiting

At NAAS WHITING FIELD, four enlisted men attached to the Aircraft Maintenance Department here recently constructed a fuel pump test bench for use in the Aircraft Maintenance Component Repair Program.

The men, L. A. Johnson, AMHCS; William E. Murner, AMH1; Gary A. Etten, AMH1; and Charles Carey, AMS2, designed and produced the test bench. They received letters of commendation from the Whiting C.O., Capt. Robert E. Taylor.

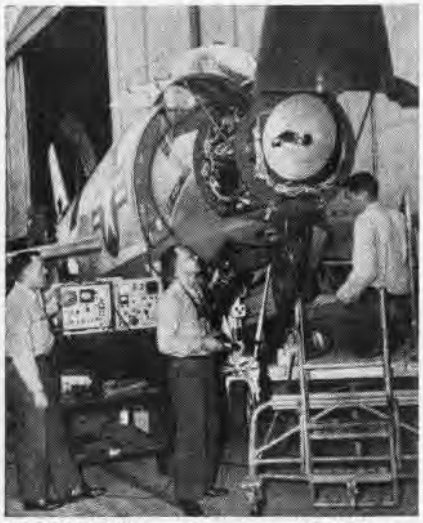
By processing all aircraft fuel pumps locally, the funds and man-hours previously expended for paper work, packaging and transportation will be materially reduced. This equipment will decrease numerous AOCP's.

The tachometer and drive of the Hydraulic Test Bench are in conjunction with the Fuel Pump Test Bench and consist of salvage parts.

A COLLECTION *of detailed scale model aircraft, originally built in tribute to Naval Aviation on the occasion of its 50th anniversary in 1961, is making the rounds of naval air stations in California. The display of 70 faithfully reproduced models was assembled by members of the American Aviation Historical Society. It is hoped eventually to have a total of 100 models which will reflect the changes in U.S. Navy and Marine aircraft.*

Enlisted Men Gain Know-How

FIVE YEARS OF MAINTENANCE TRAINING



DEMON RADAR *is checked by W. K. Foran, AQ1, K. E. Huff, AQ2, R. L. Smithson, AN.*

POWER PLANT *crew members, under the guidance of an instructor, make final preparations on a new J-71 engine before installing it in one of the F-3 Demons flown by VF-121.*

By Lt. M. W. Schreck, USN

THE BEST POSSIBLE enlisted maintenance training in the shortest time —this is a major mission of Combat Readiness Air Group Twelve (CRAG-12), based at NAS MIRAMAR. April 10 marked the fifth anniversary of Fleet Readiness Enlisted Maintenance Training (FREM). More than 14,000 "FREMS" have been graduated by CRAG squadrons VF-121, VF-124, VA-122, VA-125 and VAH-123. The total also includes nucleus Air Force and Marine personnel trained to maintain the F-4 *Phantom II* (F4H).

The curriculum stresses individualized training which is geared to each man's schooling, experience, aptitude and service needs. In the six to 14 weeks spent by FREM's in CRAG maintenance courses, polished maintenance obviously will not be produced. But the trainee will be given the basic tools he needs to proceed toward proficiency in a Fleet squadron. Reliable indicators show that a minimum of about one year of intensive Fleet experience is required after "A" school and Naval Air Maintenance Training Group (NAMTraGru) instruction before the average third class petty officer can be considered a capable maintenance man. Slow learners or men without certain aptitudes may require up to two years in the Fleet to become capable.

YOUNG GROUP *of prospective Plane Captains for Skyhawk squadrons VA-23 and VA-94 inspect components of a new A-4E which will be prime responsibilities in near future.*

The need for individual training is even more necessary for the first class or chief petty officer who must transition to jet "tail hook" duty after years in patrol squadron maintenance or shore billets, such as administration or recruiting.

Upon reporting to a CRAG squadron, each prospective FREM is interviewed to determine his schooling and experience. Gaps and weak spots in his background are noted with reference to the type of aircraft he will maintain. From the basic program established by the written syllabus, many "custom made" variations are possible. For example, the inexperienced student receives a course in fundamentals; the petty officer with years in systems similar to that of his new billet will

study a shortened course. Perhaps all that an experienced CPO needs is a two-week refresher course at NAMTraGru before reporting to his new squadron for duty. In other cases, special qualifications are needed in the Fleet unit and a man with appropriate talent is ordered to a logs-and-records course or a specialized O&R maintenance class.

Let's follow a typical prospective maintenance man through readiness maintenance training. After an interview to determine his specialized needs, he begins the first of a three-part program.

Pre-school training includes a short aircraft familiarization on the line, station and local area orientation lectures, leadership training, and one or more fundamental courses in the local NAMTraGru detachment. Driver education and licensing also are included for inexperienced men.

Technical training, the second phase, returns the FREM to the NAMTraGru classroom where he receives systems familiarization and/or maintenance lectures. Courses include liberal use of working models of the systems.

Well supervised *on-the-job* training (OJT) in the CRAG squadron completes FREM training. Learning line procedures acquaints the trainee with correct preflight procedures, assuring effective work when his duty section is called upon to launch aircraft. Most important, the student learns on the line the requisites of an *up* aircraft. Another major phase of OJT is participation in at least one major aircraft inspection. Finally, the FREM is taught common trouble-shooting problems associated with his rating.

This is the beginning, the best possible launching of a Fleet maintenance man in the limited training time allotted. From this point, it is up to the Fleet squadron to make him a polished professional.

How is individual training made compatible with Fleet needs? Continuous liaison is maintained between Fleet squadron training petty officers and the Enlisted Training Department of each CRAG squadron. Fleet requests and recommendations are encouraged.

The replacement maintenance training idea, promulgated by CNO in the late 1950's, has resulted in a practical, effective program. Policies and procedures set by CRAG-12 are used throughout the command. Frequent liaison visits of the Staff Maintenance Training Coordinator to the combat readiness squadrons insure standardization of the program.

In the words of the U.S. Naval Aviation Safety Center at Norfolk, "Maintenance training in model as provided by the CRAG is considered a basic requirement for professional maintenance. . . . The fact that maintenance/servicing-caused accident rates have not gone up in the face of increasing complexity of modern aircraft can be attributed at least in part to CRAG maintenance training."

PRELIMINARY ADJUSTMENTS *for effecting radar installation of service change in stripped nose section of an A-4 Skyhawk are made by G. T. Burleson, AM1, and A. Cacace, AM3.*

THREE TRAINEES *of VF-161 undergo 'on the line' practical instruction by hanging conventional ordnance on wing racks of a squadron Demon as C. M. Richards, AO1, supervises.*

MIGHTY ORION *leads its predecessor in the sub-hunting role, the venerable Neptune. Even though twice as fast in the air and more than twice as potent as a sub-killer, the prop-jet Orion can be inspected in half the time required for the less sophisticated two-engine Neptune.*

P-3A Inspection Verification Program

NEW AIRCRAFT—NEW METHODS

By Herbert A. Franck,
Lockheed-California Company

IMPOSSIBLE! This is the average Maintenance Chief's initial reaction when told a P-3A *Orion* calendar inspection can be done in less than two days.

To cut the *Orion* check down to size, Lockheed and the Navy teamed up for a maintenance requirements validation program that is paying real dividends. The Inspection Verification Program was conceived by the Bureau of Naval Weapons. It is one element of the approach to maintenance now known as the Integrated Maintenance Management Program—formerly called WRAP for Weapons Readiness Achievement Program—described in "WRAP Unwrapped," by LCol. Richard A. Bauer in NANEWS, April 1962, pp. 32-35.

Part of the program involves a very detailed analysis of all routine maintenance actions to ensure that they are *valid*—worth the effort. The Integrated Maintenance Management Program was ordered applied to the P-3A *Orion* in mid-1961.

The plan was unfolded in a new two-part specification — XFMPP-148. The first part introduced the concept of *maintenance engineering analysis*, and the second part set forth a new plan for *inspection requirements* data. A related specification, XFMTD-156, addressed itself to a new concept of maintenance instruction manuals. The P-3A was the first weapon system to have these specifications applied together.

It was obvious that the heart of this program was the maintenance engineering analysis—a detailed analysis of the airplane, its systems and components, and support equipment.

The key to a successful analysis was *identification of only those maintenance requirements that could be justified.* No longer could squadrons be saddled with a requirement to inspect a part merely because "we have always checked it." On the contrary, those items historically appearing on check sheets became the most suspect. Maintenance had to be geared to the needs of the airplane, with consideration given to its mission and operating environment. "Has this part ever failed? If it did, would it affect flight safety or mission accomplishment? Is it more economical to rework the part before it fails than to let it run to failure?"

The maintenance engineers turned to the reliability engineers for the facts needed to answer these questions. Where the facts existed (and for the P-3A, many of them did), the maintenance engineer had a fairly solid starting point. He knew about how often the part might fail, how it would fail, and the results of the failure. But even when the facts didn't exist, he was

able to make an "educated guess." He had the time to assemble related data and analyze it thoroughly to develop conclusions that were in the ball park.

The next step, of course, was to establish maintenance requirements that could be fully justified in terms of these data matched against safety, mission and economics. These requirements set the pattern for what maintenance had to be done, why and when it had to be done, how long it would take and—most important—what tools, parts and instructions were necessary.

All of this information was recorded in a Maintenance Engineering Analysis Record (MEAR) for each system and component on the airplane. Items of ground support equipment were similarly analyzed. The MEAR's then were blueprints for logistic support in much the same manner as engineering drawings were blueprints for producing the airplane. The MEAR's provided a justified, well-documented foundation for a maintenance plan that would meet operational use. They provided not only the plan requiring the least expenditure of manpower and support dollars, but also a tool for integrated maintenance management of the weapon system.

This is all fine, you are probably saying right now, but how about the Lockheed-Navy team effort. How has this resulted in a two-day check for the P-3A? We're coming to that.

Throughout the development of the MEAR's, close liaison was maintained with the BuWeps Weapon Support Branch. Also, frequent visits were made by a BuWeps team to review, monitor and guide Lockheed's effort. This team consisted of representatives from BuWeps, ASO, Fleet Readiness Reps, O&R, and others having a vital stake in the program. In addition, Cdr. W. L. Hinkle, LCdr. J. A. McCaig and D. E. Lewis, ATCM, were assigned TAD to Lockheed in training for their maintenance jobs in the first P-3A squadrons. They kept a constant weather-eye on the progress of the program and provided invaluable assistance during development of the maintenance manuals and inspection cards.

PORTABLE CONTROL *stand is command post for keeping inspection rolling along smoothly.*

The other half of Spec-148 reflected a new Navy concept of inspections. This concept had been developed by the Bureau of Naval Weapons, in conjunction with North American Aviation and the McDonnell Aircraft Corporation (see "Card Sharp Maintenance Yields Bonus," NANEWS, July 1962, pp. 33-35, for special details.)

In line with this concept, squadrons are provided with a *periodic maintenance requirements manual* (PMRM).

This manual includes under one cover all the scheduled maintenance requirements for all maintenance levels. Squadron daily, preflight and calendar inspection requirements, progressive aircraft rework (PAR) requirements, component replacement schedules, accessory record card items and references to all other applicable technical directives are included. No more searching through a maze of instructions to find those that apply to *your* airplane.

The squadron inspection requirements are contained in maintenance requirements cards (MRC). These 5 x 8 cards replace the long familiar check sheets and are sorted by rating and work area on the airplane. A sequence control chart shows what is considered to be the most efficient order for performing the work on the cards under normal conditions. (See *VF-114* and Scheduled Maintenance," NANEWS, February 1963, pp. 16-18 for a discussion of the use of the sequence control chart.)

As the MEAR's were developed for the P-3A and the justified inspection requirements extracted and sequenced, some startling facts began taking shape. Early in the P-3A program, an inspection plan had been developed based on check sheets in use by the airlines and Navy P-2 squadrons. Now it was possible to match the manpower required for that plan against that required under the new concept.

J. E. BURGAY, *VP-44 AX-1, does scheduled maintenance inspection of Orion electronics.*

AMS3, R. C. SHOEMAKER, *is absorbed in work of checking hydraulic lines on landing gear.*

A. ALBERICO, *AN, performs a scheduled maintenance check of mighty turboprop T-56.*

In comparing crew size and elapsed time, for example, the results were quite startling—

Inspection	*Old Concept*	*New Concept*
Preflight	6 men—2 hrs.	4 men—30 min.
Daily	9 men—2½ hrs.	6 men—1 hr.
Calendar	32 men—21 hrs.	18 men—13½ hrs.

Naturally the claim to have cut inspection requirements by approximately two-thirds required some proof before it could be accepted by the customer. Proof was arranged.

A P-3A was set aside at Lockheed's Burbank plant. A Navy team from the Inspection Requirements Branch (IRB) under the direction of Lt. Samson Mikitarian arrived to witness the demonstration. The contractor was represented by the MEAR program maintenance engineers who had developed the maintenance requirements cards (MRC) and sequence control charts (SCC), service engineers and flight test mechanics.

The contractor personnel were organized into crews with the maintenance engineers assuming the role of division and maintenance officers to duplicate actual squadron conditions as closely as possible. Each inspection, preflight-daily-calendar, was conducted separately in that order and specific procedures were established to ensure a thorough, orderly verification program.

A portable workstand (MRC) holder was set up next to the airplane and designated as the control station. Individual MRC's were issued to the various mechanics who proceeded to the airplane to accomplish the items listed on the card. The assigned Navy observer from the Inspection Requirements Branch watched closely to verify the time required and the sequencing of inspection items. He also reviewed the MRC's to make sure the instructions were crystal-clear and left no room for misunderstanding. Support equipment and parts required were double-checked. The observer marked any corrections on the mechanic's MRC which was returned to the control station. MRC's requiring changes were then passed to the MRC change board—consisting of the senior Navy and Lockheed representatives—and discussed by them with the IRB observer who had recommended the change. Approved changes were then incorporated into the master MRC file.

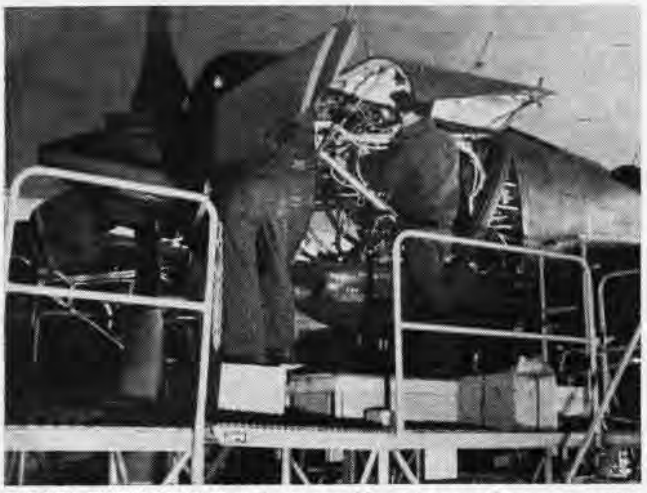
Verification of the sequence control charts (SCC) was given special attention since calendar inspections usually "down" an airplane for the longest time. IRB representatives adjusted task times for calendar inspection items where necessary to reflect actual squadron conditions as closely as possible. Tasks requiring assistants were double-checked to make sure that the SCC reflected the coordination needed for the right mechanic to do the right task at the right time. Manpower leveling was reviewed to be sure that no unnecessary "gaps" existed; when a man finished one job, he started right in on another. Completion of all work in an area with one opening of the accesses, coordination of power requirements, and work separation to prevent mechanics from getting in each other's way were also verified on the sequence control chart.

On completion of the verification program, it was apparent that the inspection requirements established by the P-3A WRAP program were valid and the elapsed times could be met by the specified check crews. The IMPOSSIBLE had become POSSIBLE through Integrated Maintenance Management!

The Integrated Maintenance Management Program has amply demonstrated its ability to reduce significantly the manpower required for scheduled maintenance of P-3A. Inspection requirements established by maintenance engineering analysis have been validated by the MRC verification program. Squadrons receiving the P-3A *Orion* can rest assured that inspection items contained in the maintenance requirements cards are valid—more important, they have been tried under the watchful eye of the Navy. A revision program will ensure that MRC's continue to reflect the latest inspection requirements. And, as additional P-3A maintenance experience is gained, calendar inspection sequence control charts will certainly be refined to a still finer point of performance.

Obviously, unscheduled maintenance done during the calendar inspection may add to the elapsed time normally required. But the scheduled maintenance requirements for a calendar inspection can be completed in less than two days.

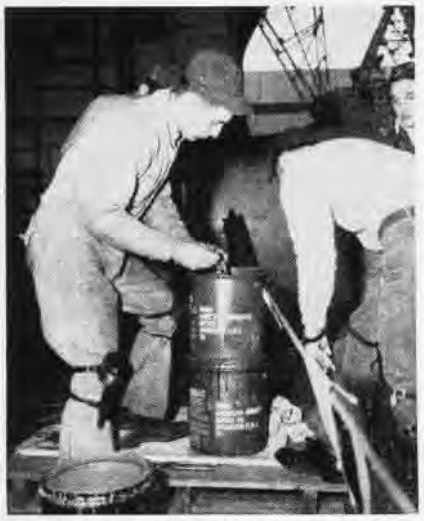
Call it impossible? Not on your life.



SPECIAL CHECK STANDS *make it possible to inspect the power section as well as the prop section of all four engines at the same time.*

AUTHOR, MR. HERBERT A. FRANCK, *discusses inspection scheduling with Lt. S. Mikitarian of Inspections Requirements Branch, NATS Patuxent.*

BIG 'I' RE-COATS DECKS WITH NON-SKID



INDEPENDENCE SAILORS READY NON-SKID

FERROX ABRASIVE MIXED WITH NON-SKID

THE DAILY, routine movements of over 4000 men and more than 80 airplanes on the Navy aircraft carrier USS *Independence* (CVA-62) account for a significant amount of deck wear to both hangar bay and flight deck areas. Frequent application of a non-skid abrasive on these areas is therefore a necessary process in the interest of safety. Traction caused by the non-skid surfaces assists in the re-spotting of airplanes, especially when the ship is turning, and also in helping maintenance and deck force personnel maintain their balance in high winds or heavy sea conditions.

The job of applying non-skid requires the coordinated efforts of teams of sailors well-versed in procedures. Non-skid used by the *Independence* will lose its effectiveness when mixed with an abrasive ingredient called Ferrox 420M if not applied quickly, so the teams, usually comprised of eight men, must work systematically and with minimum delay.

Initially, a segment of deck area is cleared of all loose gear. Wire-brushes and deck-stripping machines are then used to scrape away old non-skid down to the armor steel base of the flight or hangar deck. A primer coat is applied to the area followed by the pouring of non-skid solution in proportionate amounts. Men with trowels immediately commence spreading the substance evenly, by-passing the numerous aircraft tie-down rings which must be kept clear. Next, the non-skid is smoothed down by rollers and left to dry. A 24-hour period is desired to let the substance "set" thoroughly.

Elements of time and availability of space during various phases of operations usually preclude a complete application of non-skid to the hangar and flight decks. But, during shipyard periods when areas are somewhat more accessible, non-skid can be applied both topside and in the hangars over a period of about one month. Weather conditions sometimes delay work.

Evidence of the size and magnitude of coating the decks with non-skid lies in the fact that 5500 gallons of the abrasive are used and an area of some 225,000 square feet is covered.

NON-SKID IS POURED ONTO HANGAR DECK

TROWEL AIDS IN SPREADING THE MIXTURE

SAILOR SMOOTHS SURFACE WITH ROLLER

Construction at Pt. Mugu

New Simulation Lab Being Built

Construction has begun on a new simulation and vectoring facility for the Naval Missile Center at Point Mugu. It is scheduled to be completed in May 1964.

The $1½ million structure will rise on a 300-foot front and contain 48,000 square feet of floor space.

The facility will be used for simulation of all parts of weapons systems by means of electronic analog computers and for vectoring missile-carrying aircraft into correct positions for launching missiles against airborne targets. Such computers have been used at Point Mugu since 1950 and have filled three temporary frame buildings and parts of others. The new building will permit consolidation which will increase the efficiency of operations.

The building will also provide shops to maintain and modify computers and to design and build other simulation equipment for the Missile Center.

Marine Instructor Honored

1200 Safe Flight Hours in Year

At NAAS WHITING FIELD, Capt. Howard L. Snider, USMC, has achieved the distinction of being the first flight instructor in the Naval Air Basic Training Command to receive official recognition for flying over 1200 accident-free flight syllabus training hours in a period of one calendar year.

Landing at Whiting Field after a five-day extended syllabus cross-country flight, Capt. Snider was welcomed by Cdr. H. C. Cyr, his C.O., who congratulated him on his record.

Since reporting aboard Advanced Training Squadron Six a year ago, Capt. Snider has served as a Flight Instructor in all phases of the squadron's training syllabus. During the period beginning April 2, 1962, he flew over 800 student training flights, coaching would-be Naval Aviators through untold numbers of landings in the Navy's venerable TC-45J "Twin Beech" aircraft. Capt. Snider has also instructed VT-6 students in precision instrument and all-weather flight, including use of radio and radar aids to navigation.

Capt. Snider was personally congratulated by RAdm. Magruder H. Tuttle, CNABaTra. According to the Admiral's staff, over 100 certificates

CDR. CYR WELCOMES, HONORS SNIDER

have been awarded since 1960 to Flight Instructors achieving over 1200 accident-free instructional hours during their tour of duty. But no individual has ever been officially recognized as achieving a record rivalling Capt. Snider's 1200.7 accident-free instructional hours in a like period of time.

Quick Action Saved Life

Medal for Heroism Awarded to JG

The highest award for heroism, restricted to a non-combat basis, is the Navy and Marine Corps Medal which has been given to Ltjg. Harold L. Singleton. The medal was presented to Ltjg. Singleton in ceremonies on Midway Island by Capt. Elmer W. Dailey, Jr., O-in-C of the AEW Barrier Squadron (Pacific) detachment.

The act of heroism took place when a fellow officer inadvertently contacted an open fuse. He was inspecting a 2400-volt electrical fuse panel and went into shock.

Ltjg. Singleton, the only person in the victim's company, at once tried to actuate the master circuit breaker switch, but was unable to do so because of shocks received from his companion's body.

After summoning help, Ltjg. Singleton removed his belt and placed it around the victim's legs and managed to pull him free from the power source. He then administered external cardiac massage until his companion was removed to the hospital.

Ltjg. Singleton was cited for his prompt and effective actions in the face of grave personal danger" which were "responsible for saving the life of a fellow officer."

Training Unit for J-60's

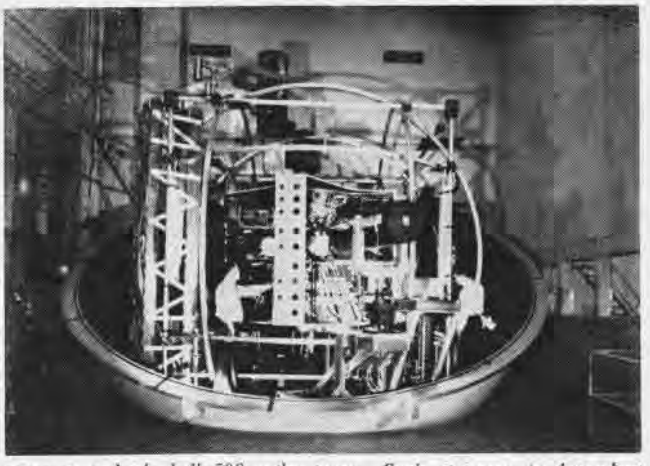
Glynco Welcomes Instructor Group

In July, a new Naval Air Maintenance Training Group Detachment will begin teaching Class C aircraft engine maintenance on the P&W J-60 turbojet engine at NAS GLYNCO, Ga. Addition of Glynco to the NAMTraGru complex swells the number of air stations served by the command to 27.

Two J-60's will power the Navy's new T-39 aircraft which will be used for pilot and radar operator training.

NAMTraGru instructors attended a highly concentrated seven-day school on the aircraft in April at North American Aviation Company plant, Inglewood, Calif. These instructors will provide the only formal training in the services for this engine. Students will learn inspection and maintenance procedures, minor disassembly of the engine, and complete hot section maintenance and repair procedures.

A MIRROR LANDING SYSTEM *from an aircraft carrier is being used by North American's Columbus Division at Clinton AF Base in southern Ohio in a phase of the Navy preliminary evalnation program of the A-5C Vigilante. The mirror is mounted on a truck so it can be placed in different positions as required. The A-5C is the tactical reconnaissance version of the Vigilante. Earlier attack A-5A's are operational aboard the nuclear carrier, USS Enterprise.*



TESTING OF THE STABILIZATION *and control system of the Orbiting Astronautical Laboratory began with its "first flight" at the Grumman Company's new $1.1 million space simulation facility. The NASA satellite will be able to track a star with an accuracy of one-tenth of a second of arc, a capability comparable to the ability to point a telescope at a basketball 500 miles away. Such accuracy is dependent upon a stabilization and control system so sensitive that the force imparted by the beating of a heart would cancel these forces. At left, workers adjust solar simulator on space facility. Above is the air bearing table which simulates the freedom of motion found in space.*

Ferries Planes Safely

VR(F)-32 Has Accident Free Record

Commanded by Cdr. W. T. Marshall, Jr., VR(F)-32 of the Naval Air Ferry Command, has achieved an outstanding record.

The squadron pilots and crews have flown 10,000 accident-free hours; made over 2600 aircraft deliveries and flown 20,048 hours in Fiscal 1962; and made over 1800 aircraft deliveries in the current fiscal year.

VR(F)-32 based at NAS NORTH ISLAND was declared "Outstanding" in the annual Admin/Mat inspection.

Target System Evaluated

Flight Tests Yield New Records

Technicians in the Engineering Development Laboratory, NADC JOHNSVILLE have produced a new aerial tow target system. It can provide firing practice for many types of modern anti-aircraft weapons including missiles.

The new system, which has completed evaluation flight testing at the NATC PATUXENT RIVER, currently holds the following records: (1) highest tow target speed, 1000 mph., (2) longest cable and target in tow, 51,000 feet (more than nine miles), (3) highest deployment speed, 5400 feet per minute, and (4) highest recovery speed, 5300 feet per minute.

Main components of the system, which will be employed by both the Navy and Air Force, are the Aero RMU-8/A tow reel and the Aero 47 target. The system has been successfully used on the F-4B *Phantom II* (F4H), the world's fastest jet fighter.

The tow reel, fitted to the underside of the aircraft, can store up to 100,000 feet of towline and can deploy and recover its attached target at approximately a mile a minute.

The target can be equipped with passive or active radar augmentation, infra-red augmentation, and a scoring system. This means the target can be used with the most advanced air-to-air and surface-to-air missile weapon systems.

This system will provide in-squadron operating capability and may replace the far more expensive and complex powered targets—drones—for missile firing exercises.

It also replaces sleeve targets usually towed at speeds of about 200 mph at an altitude of 5000 feet.

Safe Flight, Rough Routes

VW-11 Chalks up over 50,000 Hrs.

As of April 1, 1963, Airborne Early Warning Squadron 11 had flown a total of 50,560 consecutive, accident-free hours. Flying EC-121K *Super Constellations*, VW-11 has not had an accident for more than three years.

The last accident occurred on March 9, 1960 when the starboard landing gear of EC-121K Buno 141305 was damaged during a practice landing by a student pilot. Although the drag strut was broken, the aircraft became airborne again and was skillfully landed by the instructor pilot, with minimum additional damage to the aircraft. There were no injuries to any of the 13 crew members aboard.

Since then—for more than 1100 days—VW-11 has not had an accident. This record is significant because the squadron's airplanes fly in some of the worst flying weather in the world. The radar-equipped *Constellations* provide seaward extension of the land-based DEW Line. Flying out of Keflavik, Iceland, they keep a continuous radar watch between Greenland and the United Kingdom.

Since its commissioning, VW-11 has flown almost 7000 early warning barrier flights, and squadron aircraft have patrolled a distance equivalent to more than 30 trips to the moon and back.

Argentinian Logs Milestone

Marks VT-30's 10,000th 'Safe' Hour

Lt. Horacio Estrada of the Argentine Navy logged VT-30's 10,000th accident-free hour when he returned to Corpus Christi one day in early April. The accident-free hours were accumulated between September 29, 1962 and April 4, 1963. Over half these hours were flown by students flying solo in the A-1H *Skyraider* (AD-6).

Lt. Estrada is assigned to Training Squadron Thirty for LSO training. He is undergoing instruction similar to that which a flight instructor receives when he reports for duty.

BILL POWERS WORKS ON F-8 NOSE GEAR; LT. HUDSON CHECKS WITH WRITER, MIKE LEWIS

F-8 MAINTENANCE PROCEDURES TESTED

RADM. F. L. ASHWORTH, until recently Assistant Chief of BUWEPS for RDT&E, has stated that the job of designing the logistic subsystem for operational support of a modern aircraft is "an endeavor no less time-consuming or technically intricate than designing the weapon itself." (See "Naval Weapons of the Seventies," NANEWS, May pp. 36-38).

Chance Vought division of Ling-Temco-Vought recently completed the "engineering" of an important element of the logistic support system for the F-8D and F-8E *Crusaders*. The latest element of the integrated maintenance program for the *Crusader* is the 17-volume Maintenance Instruction Manual (MIM) which replaces the HMI (Handbook of Maintenance Instructions) formerly used. The MIM provides the detailed technical information backup for the maintenance requirements cards and sequence control chart which had been developed previously.

Modern maintenance procedures, just as sophisticated new hardware, require test and evaluation before they are ready for issue to the Fleet. Fourteen maintenance officers and men from Navy and Marine *Crusader* squadrons on both coasts spent several weeks in the Dallas plant of Ling-Temco-Vought on a program for verification of the prescribed procedures for E (hangar) and F (line) maintenance.

The program of test for the technical instructions had two objectives:

- Making sure that the instructions were understandable to the mechanics and squadron maintenance people who would have to use them, and
- Verifying the fact that the prescribed procedures with Navy equipment and methods were the best possible way to do the job.

The tests were performed by teams consisting of a company technical writer, a company mechanic, and a "customer"—the military representative. In verifying the instructions, the technical writer read the prescribed procedure aloud as the mechanic performed the work, step by step, under the watchful eye of the military representative. When an inaccuracy was spotted or an inefficient procedure found, instructions were revised on the spot. Stress was laid on determining the best work sequence.

The verification was judged by all to be a resounding success. Not only was the sequence control chart improved, but in some cases the level of maintenance was changed and many procedures were greatly simplified.

One team discovered that a job calling for removal of the engine could be performed with the engine in place. The change in procedure cut the time required for the job by 24 man-hours.

Sangley Wins Fire Award

Prevention Winner for Fifth Year

For the fifth time since 1956, NS SANGLEY POINT, Philippines, has garnered the top winner certificate in the annual fire prevention contest sponsored by the National Fire Protection Association. The station won in the category covering activities with personnel strength below 1500. Contestants were communities, government offices and industrial firms all over North America, and Armed Forces installations in the U.S. and Canada. A Certificate of Merit was awarded the station.

There was a total of 1900 entries in the 1962 contest. Grand award winner among U.S. Navy shore activities was the NS NORFOLK. Sangley was singled out for receiving Certificates of Merit, Honorable Mention, in 1956, 1957, 1959 and 1960.

Since its foundation in 1896, the NFPA, a non-profit voluntary membership organization, has been the international clearinghouse for information on fire prevention, fire-fiighting procedures, fire protection methods and the analysis of fire experience.

SATS Mat Tests are Made

Aluminum Strips Take Punishment

A narrow, dark green strip of aluminum is being subjected to heavy punishment at MCAS EL TORO, testing a newly designed matting that may be used in connection with the Short Airfield Tactical System (SATS).

Plans by the SATS project office at El Toro call for 800 to 1000 "bounces" to be made on the matting. Three types of aircraft are being used in the tests, F-4B *Phantom II's* (F4H), A-4 *Skyhawks* (A4D), and F-6A *Skyrays* (F4D). They are making touch-and-go's with the tail hook in both up and down positions.

The *Phantom* is being used because it is the heaviest of the aircraft which would utilize SATS.

The matting was designed and built by the Harvey Aluminum Company of Torrance, Calif. This company has been concerned with SATS before, in the catapult anchoring system.

ASTRONAUTS *James Lovell (L) and Elliot See "fly" a simulator to test effectiveness of proposed control systems for lunar landings at Grumman Aircraft Engineering Corporation. Both men are part of the Apollo program.*

Brunswick to Use X Ray

Valuable Tool in Maintenance

A "seeing eye" is being added to the maintenance facility at NAS BRUNSWICK, Maine. It is a portable X-ray unit, capable of transmitting X rays which penetrate metal.

The unit is contained inside a black case, which, when opened, reveals an array of electronic devices, such as amperage and voltage meters, potentiometers and other indicators and control devices. From the case, a detachable "tube," which is used to transmit the X rays and take an X-ray photograph, can be lifted.

In 1959, a project was launched by NAS JACKSONVILLE and sponsored by the Bureau of Aeronautics (BuWeps) to determine the possible advantages of using a portable X-ray unit. The study revealed that such a use in maintenance would be efficient and economical. No time consuming extensive disassembly of suspected faulty mechanisms is required, a tremendous saving of maintenance time.

Since technicians are needed to handle the equipment, a training course was inaugurated at the Technical Training Unit, NAS JACKSONVILLE. Thus far, about 80 personnel have been trained as aircraft radiographers.

The X-ray unit will go into operation as soon as the necessary equipment arrives, according to K. M. Cochran, AMS1, shop supervisor of airframes and station radiographer at Brunswick, Me.

Editor's Corner

CARRIAGE TRADE. One hundred infants—all born since the *FDR* started a Sixth Fleet deployment—were waiting for the Atlantic Fleet carrier's return to NS Mayport in mid-April. Awaiting first looks at their sea-going fathers were one set of twins, one John Paul Jones, and one boy almost old enough to walk—he was born the day after the *FDR* sailed last September. An enterprising *FDR* reporter told the *Mayport Mirror* that parents apparently were not smitten with any particular name—75 names were chosen. Most popular were Richard and Julie, each given to four babies. More than half of the *FDR's* "crop" were "first borns."

April Fool, Twice Over. April 1, 1963, was one of those unbelievable days for Seaman Gordon Cameron and 129 other Navy men at NAS ATSUGI, Japan. That was the day that Cameron received word of his promotion to Personnelman Third Class. Because of the date, he (and others on the promotion list) at first tossed off the announcement as an April Fool's joke. He believed it, however, when shown the official letter announcing his promotion. Even greater disbelief was his again later the same day, when he was told he had been selected for officer candidate school and a promotion to Ensign, USNR. Again he had to be shown the official papers before accepting it as fact. A graduate of Michigan State University, Cameron will attend OCS as a PN3 before putting on his officer's cap.

SLICKEST EDITOR OF THE MONTH. The following announcement appeared in the Cherry Point *Windsock* under the guise of a classified ad: "Help Wanted—Must be able to identify aircraft. Last week's *Windsock* erroneously labeled a VMF(AW)-531 *Phantom II* as a VMA-225 *Skyhawk*. We regret this error and the gloom that this gross misstatement may have caused."

RAF Plans a Change. An exchange officer, Royal Air Force Flight Lieutenant John David Price Matthews, became acting commanding officer of a U.S. Marine Squadron (MASS-3) at El Toro recently. He was elevated to the post temporarily when the squadron C.O., LCol. J. P. Kelley, was hospitalized while the squadron executive officer, Maj. R. J. Munro, was on leave. Lt. Matthews announced that he would make no changes in the Marine squadron while in his post. "But," he said, "since Col. Kelley is Irish, I plan to convert the squadron to English before he returns."

WHAT'S IN A NAME? A new lightweight drone under development for the Marines by Republic Aviation under an Office of Naval Research contract, is to be called "Bikini." Why that name? According to a recent press release, "It is so named because of its simplicity, economy and ability to cover strategic areas."

Law Foils a Hiker. Trying to comply with the President's physical fitness program isn't always a mere matter of setting out on a hike. Cpl. Glenn Jenkins, a Marine reservist attached to VMA-142 at Jacksonville, set out to hike to his weekend drill. Starting out at 0500 on a Friday (to make muster Saturday in Jacksonville) he had covered 35 miles when police forced him to quit his walk. It seems there is a law which "prohibits walking on country roads after dark." (The police drove him the rest of the way.)

FAMILY STYLE DUTY. In virtually the same mail, came the following examples of "togetherness" in the Navy: Gary Lee Moore, SN, has reported to VS-37, at NAS North Island, the third Moore brother in the squadron. Brother Marvin, an AD2, reported in 1961 and brother Kenneth, an AD striker, reported in 1962.

On the *Saratoga* (CVA-60) a rare father-and-son combination has been re-united. Machinist's Mate First Class Richard Kline was serving in *Sara* in 1960 when his son Edrich enlisted aboard ship. After boot camp, the son served with his father in *Saratoga* until 1961, when Dad went to shore duty and son went to another ship. In February 1963, they were both back aboard *Saratoga* and ready for another cruise.

LETTERS

SIRS:

By some oversight, because we are normally avid readers of your fine journal, we have only now read the article headed, "The First to Log 1000 Landings," in the August 1962 edition of *Naval Aviation News*. We heartily congratulate Cdr. Watkins, but would at the same time like to put the record straight. Cdr. Watkins' feat is not a record outside the U.S. Navy. The Royal Navy has two pilots with over 2000 landings and both achieved this number in 1950 within days of each other and before the days of the angled deck, so all are "trap" landings.

One of the pilots is Capt. E. M. Brown, present Deputy Director of the Naval Air Division at Admiralty and still an active aviator. He had completed 1000 deck landings by 1943. It is of interest to note that his total of 2000 plus includes the first-ever deck landings of a twin-engine, a jet and an undercarriageless aircraft. Incidentally he had already crossed the 2000 mark when he shared the same office with (then) Lt. Watkins in Flight Test, Patuxent River, in 1951-52.

The second "two-thousander" is LCdr. J. S. Bailey, now retired from the Royal Navy. *Naval Aviation News* published a short note on this pilot's feat in the summer of 1950.

You will, I hope, accept this letter as in no way belittling Cdr. Watkins' achievement, but rather as a very mild bit of "line-shooting" by the Royal Navy.

M. N. R. HILL
EDITOR, FLIGHT DECK

Admiralty, Whitehall

SIRS:

I see by the April issue of *Naval Aviation News* (p. 24) that VT-6 has a pretty old Twin Beech. This raises the question as to who has the oldest SNB/C-45 in active service. Incidentally, this would be the oldest aircraft on the active register. I am enclosing a photograph of Buno 4715 serving NARTU ALAMEDA, taken in July 1962.

Applicable Buno blocks are 2543-2547 and 4709-4729, which were assigned to JRB-1 and JRB-2 aircraft. Gentlemen, who can claim this honor?

BUDE DONATO

16800 Saticoy
West Van Nuys, Calif.

PHOTO CREDITS

President Kennedy, Adm. George W. Anderson, Jr., and Ens. David G. Mitchell on p. 2—R. L. Knudsen, PHC; Adm. William E. Gentner, p. 1—MSgt. T. W. Kilmer, USAF; back cover view of drone parachute—Jim Mitchell, PHC, NS Roosevelt Roads; and illustrations on pp. 32-34, courtesy of Patrol Squadron 44, NATC Patuxent River.

SIRS

The Golden Wings Model Display (see page 29 of this issue) is under the direction of Mr. Bude Donato, 16800 Saticoy, West Van Nuys, Calif. He is now preparing a comprehensive study of U.S. Navy and Marine Aviation squadron histories and would appreciate receiving copies of Fleet squadron histories, along with a reproduction of their squadron insignia in color which would be added to the display.

GOLDEN WINGS MODEL DISPLAY GROUP

SIRS:

Page 40 of the April issue of *Naval Aviation News* carries the challenge from VMGR-352 regarding their safety record. They are to be congratulated on this outstanding accomplishment.

We respectfully submit the record of Training Squadron 31, NAS CORPUS CHRISTI, Tex. As of 1 January 1963, VT-31 has flown 53,197 accident-free hours since June 1959. This record is particularly noteworthy owing to the squadron mission of training student naval aviators. During this period, familiarization and instrument training was conducted in five aircraft types: C-45 (SNB), T-34B, P-2E (P2V-6T), and P-5A/B (P5M-1/2).

The squadron at present has accumulated 55,368 accident-free hours during the period of June 1959 to 1 April 1963.

CDR. W. H. PATTERSON
C.O., VT-31

SIRS:

Some time ago there was a presentation of the new designation system for U.S. Naval Aircraft. As I remember, the inside covers and the center pages of the December 1962 issue were used. Later these were reprinted in quantity. At the time, I intended to make a request to have copies of these pages sent to me, but I neglected to do so.

By any chance, do you have copies of these presentations left? If so, I would like ten copies.

RICHARD CLARK

Oklahoma City, Okla.

¶ Right! The December 1962 issue did carry the presentation of the new designation system. Those interested in obtaining copies will receive them simply by sending in their requests to NANews, Op. 05A5, Department of the Navy, Washington 25, D.C. We still have them on hand, so they may be ordered singly or in quantity.

ABOUT THE AUTHORS

Lt. Jerry M. Pierce *(Hovering for Inspection,* pp. 6-8) is Line Officer for Helicopter Squadron Three and serves as PIO on a collateral duty basis. He was designated a Naval Aviator in 1954 and a helicopter pilot in 1962.

Lt. Pierce was command liaison officer at NAS OLATHE (1957) and NARTU LAKEHURST (1959). He received CRAG training with HS-1 just prior to coming to HS-3.

HS-3 was the first operational ASW squadron in the U.S. Navy to receive the twin-jet SH-3A. This was also the squadron that picked up Astronaut Scott Carpenter on May 24, 1962. HS-3 is currently attached to CVG-56 aboard the USS *Intrepid*.

LCdr. Thomas A. Loomis *(Air Power at Sea, Atlantic,* pp. 9-12) entered the U.S. Navy V-12 College Training Program in 1943. Following WW II, he returned to the University of Michigan, graduating in 1947 with a Bachelor of Science degree. He re-entered the Navy in 1948 as an ensign and received his designation as a Naval Aviator in 1949.

LCdr. Loomis has served as a CIC watch officer aboard the USS *Sicily* (CVE-118), in various patrol and air anti-submarine squadrons in the Atlantic and Pacific, as a flight training instructor and as Aide and Flag Lieutenant to the Chief of Naval Air Basic Training at Pensacola, Fla.

His citations include the Air Medal, Navy Unit Citation (USS *Sicily*), Korean Service Medal, United Nations Medal, China Service Medal, and the Victory Medal.

LCdr. Loomis is currently Public Information Officer on the staff of Commander Naval Air Force, U.S. Atlantic Fleet, with additional duty as PIO to Commander Fleet Air Norfolk.

Mr. Herbert A. Franck *(The P-3A Inspection Verification Program,* pp. 25-26) is a Senior Design Specialist in charge of the Maintenance Engineering Analysis Record (MEAR) program and Inspection Requirements program for the P-3A *Orion* at Lockheed-California Company.

Mr. Franck's qualifications in aircraft maintenance in general, and naval aircraft maintenance in particular, are substantial. Before joining Lockheed in 1961, he rose through the maintenance career pattern from apprentice seaman to LDO Commander.

Franck enlisted in the Navy in 1937 and flew with PBY *Catalina* squadrons in the Pacific Theater during the early days of WW II. In 1942 he was commended for salvaging the engines and equipment from a wrecked PBY sunk in seven fathoms off Western Australia.

Commissioned Ensign in 1943, he served in various maintenance billets including BUAER Field Service Representative in the Pacific (1944), Maintenance Officer CVG-19 (1947), and Maintenance Project Officer in BUAER for patrol aircraft and missiles (1953).

During the Korean conflict, he received a commendation for leadership and ingenuity in repairing damaged aircraft during sustained combat air operations while serving as Maintenance Officer of CVG-14 deployed in *Kearsarge*.

From 1956 to 1959, Mr. Franck was Project Officer at the U.S. Naval Personnel Field Research Activity, San Diego, and was commended for his direction of an applied research project which revised aviation personnel rating structure in response to technological change.

SQUADRON INSIGNIA

In the past three years, the Rampagers from Attack Squadron 83 have made three deployments with the Mediterranean's Sixth Fleet on the USS Forrestal, won the coveted CNO Safety Award, and been awarded the ComNavAirLant Battle Efficiency Pennant two times. Adding to this impressive record, squadron aviators have logged more than 6700 carrier landings in the Douglas A-4 Skyhawk since 1960. Shore-based at NAS Oceana, Va., VA-83 has Cdr. A. H. Cummings for C.O.

RAMPAGER SKYHAWK IS CATAPULTED OFF THE BOW OF THE USS FORRESTAL

STRAP A PARACHUTE ON THE NEWS?

NAVAL AVIATION NEWS

A Firebee jet drone has almost finished its day's work. As it floats gently toward the sea, a helicopter is waiting nearby to retrieve it. Tomorrow the drone will fly again as a high speed target for Navy missile men.

This copy of Naval Aviation News also is meant to 'fly again.' It is intended for the eyes of 10 readers. Are you Reader #1 or Reader #10?

P.S. If you'd like a personal copy for home or office, send $2.50 check or money order for one year's subscription (add $1 for foreign mailing) to Superintendent of Documents, Government Printing Office, Washington 25, D. C.

NAVAL AVIATION NEWS