NAVAL AVIATION NEWS

44th Year of Publication

OCTOBER 1963

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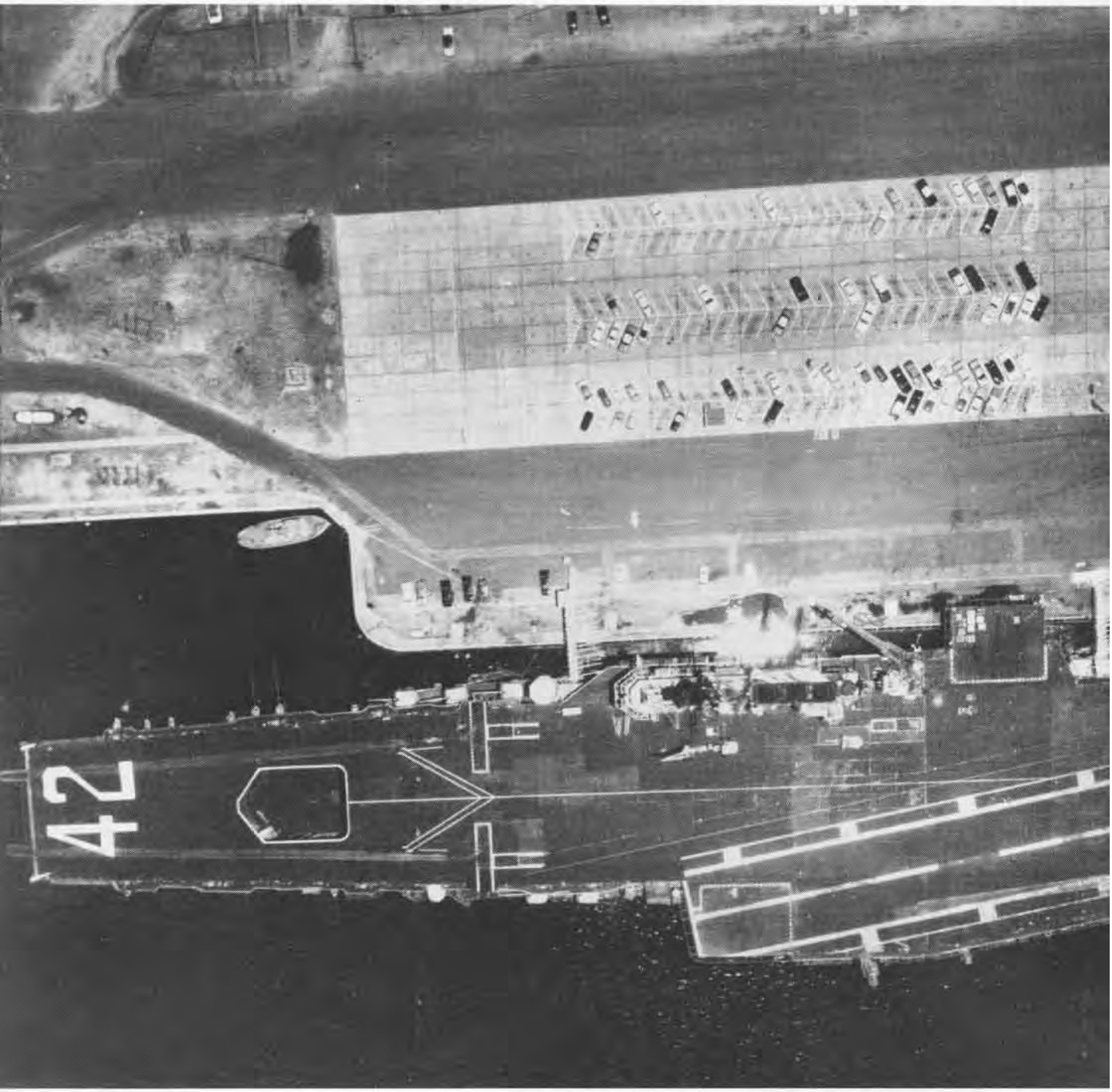

TRY THIS ON YOUR BROWNIE

A beginner in camera art might guess that this is a daylight aerial photo of the USS Roosevelt; an advanced student might notice that there are two photos. It is, in truth, an example of the NIGHT Forward Firing Technique developed by Navy's VFP-62 photo squadron which received a Navy unit citation for its work during the 1962 Cuban crisis. Unusual clarity of detail and brilliance of lighting result from this innovation. A Crusader drops flares of 260 million candlepower intensity at one-second intervals; each flare triggers the shutter of an aerial camera.

■ COVER

Airplanes from Carrier Air Group 15, attached to the attack carrier, USS Coral Sea, fly in formation during a special weapons demonstration. CVA-43 is commanded by Capt. C. E. Roemer. The formation includes A-3B's, F-8D's, A-4C's and F-3B's. The photograph was taken by N. T. Calicchio, Airman.

NAVAL AVIATION NEWS

FORTY-FOURTH YEAR OF PUBLICATION OCTOBER 1963

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■ THE STAFF

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NAVAL AVIATION NEWS

First P-3 Flies Pacific

Makes Non-Stop Flight to Atsugi

VP-31 scored a first on August 9th when Cdr. Grant L. Donnelly, squadron C.O., and his crew flew a P-3A *Orion* non-stop across the Pacific from NAS MOFFETT FIELD, Calif., to NAS ATSUGI, Japan. The plane was assigned to VP-31, Det. A, the West Coast's "Combat Readiness Air Group" squadron responsible for training pilots and crews in ASW operations with *Orion*.

The flight took 14 hours, 26 minutes, and covered a distance of 5135 miles. Purpose of the mission was to provide overseas patrol squadrons an opportunity to see the new *Orion* and discuss training problems in the field of ASW tactics. During seven days of orientation flying, the *Orion* logged 57 hours and covered approximately 16,750 miles. Over 435 anti-submarine warfare personnel had a first hand opportunity to view the aircraft.

The Lockheed patrol plane added another record to its list when it made the non-stop return to North Island in 14 hours, 5 minutes, covering 5153 miles.

Marines Win Air Medals

Decorated for Service in Vietnam

Air Medals were presented to more than 20 MAG-36 Marines and one from VMA-211 for their actions while serving in Vietnam as members of HMM-362. Col. N. G. Bright, MAG-36 C.O., and Maj. L. W. Bays, skipper of VMA-211, made the presentations at EL TORO, July 31st.

President Kennedy cited the men "for meritorious achievement in aerial flight as helicopter aircraft commander, and as helicopter crew in Marine Medium Helicopter Squadron 362 during combat troop lift missions in support of the Republic of Vietnam against the insurgent Communist forces. While often exposed to hostile fire at close range, they contributed materially to the success of their squadron. Their courage and devotion to duty in the face of hazardous flying conditions were in keeping with the highest tradition of the U.S. Naval Service."

Decorated were 1st Lt. William A. Rose, VMA-211; Capts. P. L. Moreau, C. S. Tubbs and R. S. Charles; 1st Lts. Jack Bartlett and T. D. Owens; GySgt. W. J. Camp, SSgt. G. D. Weitzel, SSgt. H. M. Rico, SSgt. K. R. Parker, Sgt. G. L. Armstrong, Cpl. D. E. Kurth, Cpl. G. L. Murphy, Cpl. R. J. Dumas and Cpl. N. F. Christopherson, all of HMM-362; Maj. J. R. Plummer, Capts. D. J. Leighton, Darcy L. Clasen; 1st Lt. J. R. Webb and Cpl. M. R. Shrouf, of H&MS-36; Capt. J. L. Shelton and Sgt. K. A. Schultz of HMH-462 and 1st Lt. H. L. Mattia of HMM-363.

First Lieutenants J. R. Sales, J. M. Shields, D. V. Vacca and C. L. Garoutte of VMO-6, Camp Pendleton, will receive Air Medals later this year.

A WELCOME REPAST *awaited the 16 astronauts at the Caribbean Air Command's USAF Tropic Survival School upon their return from the Panamanian jungle. MSgt. Donald Horton (left) had ready for them an array of continental dishes, compliments of the Albrook NCO Club, at the conclusion of a four-day survival course. Four of the participating astronauts are shown here, left to right, Edward H. White II, Lt. Col. USAF, "Gus" Grissom, Donald K. Slayton, and John H. Glenn, Jr.*

VAH-5 Wins in Bombing

Outscores Others in Wing Derby

NAS SANFORD's VAH-5 won the Heavy Attack Wing One July bombing competition, marking a final achievement in A-3B *Skywarriors*. The squadron is in the process of transitioning to the RA-5C *Vigilante* attack-reconnaissance plane. The winning record was made with only three of the normal complement of twelve aircraft the squadron usually operates.

Maj. William S. Dursteler, an Air Force exchange pilot with VAH-5, won the "Pilot of the Month" award during competition. Lt. Dale Purdy of VAH-11 qualified as "Bombardier of Month."

Chutist Insignia Approved

Similar to Naval Aviator's Emblem

A distinctive parachutists insignia for the Navy and Marine Corps has been approved, according to BuPers Notice 1020.

The new insignia may be worn by the individual who has qualified. It may be obtained through service retail exchanges.

The old parachutist insignia is to be called the Basic Parachutist Insignia; the new is to be referred to as the "Navy and Marine Corps Parachutist Insignia."

GOLD WINGS FOR NAVY/MARINE 'CHUTISTS

It is a gold embroidered (Navy only) or gold-colored metal pin, the same as that provided for the Naval Aviator's insignia, except that a gold-colored open parachute shall be centered on the wings vice the shield and fouled anchor.

Personnel are entitled to wear the Navy and Marine Corps parachutist insignia if they have met these requirements: (1) Have previously qualified for the Basic Parachutist Insignia by having completed formal parachutist training at an Armed Services installation. (2) Have completed a minimum of five additional parachute jumps, under competent orders, with a Navy or Marine Corps organization whose mission includes parachute jumping. (3) When the right to wear such insignia has not been specifically revoked. (4) After an appropriate entry has been made in the service record, verifying (1) and (2).

AZ Rating Is Now Open

Selection Board Meets in November

SecNav has approved the establishment of the AZ rating, Aviation Maintenance Administrationman.

LT. ROGER BELLNAP, *USN, prepares to start engines on this F-3B at the U.S. Naval Missile Test Center, Point Mugu, Calif., prior to Operation "Nite Owl." A Sparoair two-stage, solid-propellant probe, mounted beneath the wing at right, carries instruments to measure the ultraviolet radiation of the stars. The atmosphere's ozone layer at about 100,000 feet absorbs the ultraviolet rays emitted by the stars, so that studies of this kind cannot be conducted from the earth's surface. Lt. Bellnap launched the Sparoair in a nearly vertical attitude at about 30,000 feet over the Pacific Missile Range sea test area. The probe reached some 350,000 feet.*

BuPers has announced that a board will meet in November to select sufficient numbers of active and inactive duty personnel to build the AZ rating to a sustaining level. Applications are solicited from qualified petty officers. Those selected will be authorized to change in equal pay grade to the AZ rating with no change-of-rating examination required.

Aviation Maintenance Administrationmen will perform administrative, management and clerical duties required to support the naval aircraft maintenance program; plan, schedule and coordinate maintenance workload; prepare and route work orders and inspection forms; schedule special and periodic aircraft inspections and incorporation of changes and modifications to aircraft equipment; set up and maintain status boards; collect and record data pertaining to the history, operation, maintenance, configuration, receipt and transfer of naval aircraft and related aeronautical equipment. They will also prepare reports and correspondence; determine requirements for, order and control aircraft service change kits; maintain charts and analyze trends of aircraft system and component failures. Other duties include requisitioning publications, forms, and microfilm; and organizing and maintaining technical libraries.

An applicant must (1) be eligible for a security clearance; (2) be capable of typing for five minutes at 20 words per minute (certified by his commanding officer); and (3) be in pay grade E-4 or above in a Group IX rating other than AT, AQ, or AX. (Personnel in other than a Group IX rating who hold as a primary or secondary code NEC AD-6433 and who meet the above qualifications may apply).

Inactive duty personnel who meet the above qualifications may submit applications, on which should be the word "Inactive" in large red letters.

Applications for change to the AZ rating are to be submitted before November 1, 1963, to the Chief of Naval Personnel (Attn: Pers B223) on Form NavPers 1339 (Enlisted Evaluation Report). A definite recommendation of the commanding officer is required. On the reverse side of the form are to be listed all periods during which the applicant was engaged in various aviation maintenance administration.

GRAMPAW PETTIBONE

Submerged

After a thorough briefing by the chase pilot, the flight of A-4B's departed an East Coast air station on a fam flight for the second pilot. The flight proceeded normally according to the fam syllabus during the high altitude work and the practice touch-and-go landing at a neighboring field. After four practice touch-and-go landings, the chase pilot led his student back to the home field for a final landing, giving him the lead after setting him up for entry into the break. A normal overhead break was accomplished with a good approach.

During final, the pilot dropped his nose slightly but corrected his attitude and passed the RDO's position with an amber approach light. After touchdown, with approximately 6100 feet of runway remaining, flaps were raised and normal braking commenced. With only 3000 feet of runway left, heavy brakes were applied and the right tire blew. Shortly thereafter the pilot noted (for the first time) his air speed to be 90 knots, but failed to lower his hook for an arrested landing.

The aircraft ran off the end of the runway, hit a concrete drainage gutter and perimeter road, then became airborne for approximately 63 feet before passing through the boundary fence. At this point the aircraft again became airborne for 200 feet, struck the ground and bounced into a pond. The water was only three feet deep, but the mud on the bottom was extremely soft and the aircraft sank. It is strongly suspected that the pilot inadvertently advanced the throttle, thereby adding considerable power upon impact with the drainage ditch.

The pilot had failed to release the canopy prior to the cockpit's becoming completely submerged beneath the mud. The oxygen equipment performed satisfactorily.

He first attempted to jettison the canopy with the emergency release, then manually unlocked it and attempted to force it open. In order to exert more force on the canopy, he stood in the seat and in so doing pulled his oxygen mask loose. After exerting himself to the point of hyperventilation, he found it difficult to exhale through the mask as the valves were fouled by mud.

In desperation he attempted to jettison the canopy by pulling the face curtain down to the first notch, taking care not to pull it the full length. After this maneuver, an explosion was heard but there was no effect on the canopy. Being fatigued and realizing that there was little he could do, the pilot quietly awaited rescue. After a series of events in rescue attempts, the aircraft was winched from the mud and a somewhat exhausted but thankful pilot was rescued. The time from impact to rescue was 23 minutes.

Grampaw Pettibone says:

Great jumpin' Jehosophat! Failure to retard throttle to idle on initial touchdown; inattention to speed at distance markers; misjudgment of speed prior to reaching arresting gear; failure to lower hook for arrested landing, and several other errors could be written on this one. This lad's thorough briefing by the chase pilot before the flight just didn't get through. The Navy puts out many dollars annually to procure, install, and maintain distance markers and arresting/abort gear. To have a pilot absolutely refuse to use it is just plain discouragin'.

Rescue for Real

Just off shore from a West Coast air station, the crew of a UH-25B was engaged in student aircrew training

ILLUSTRATED BY Osborn

exercises that included simulated no electrical/no ICS and an unconscious man pickup. After performing several successful and realistic simulated pick-ups, the chief who was assigned as safety crewman for the flight noticed the handle for the rescue hatch loose on the deck. He unbuckled his lap belt, moved aft and, in an attempt to properly stow the handle, tripped over the copilot's collective stick—also adrift on deck—lost his balance and fell unnoticed through the open hatch. As he fell, he grabbed the landing gear, but the wheel turned and he continued approximately 30 feet into the water.

The next thing the chief remembers is that his life vest was inflated; he had a cold wet feeling above the waist but no feeling at all in his legs.

Shortly thereafter, the aircrew trainee observed that the chief was missing and informed the pilot of the fact that he had fallen from the aircraft. The pilot immediately returned to the scene and made the rescue.

Grampaw Pettibone says:

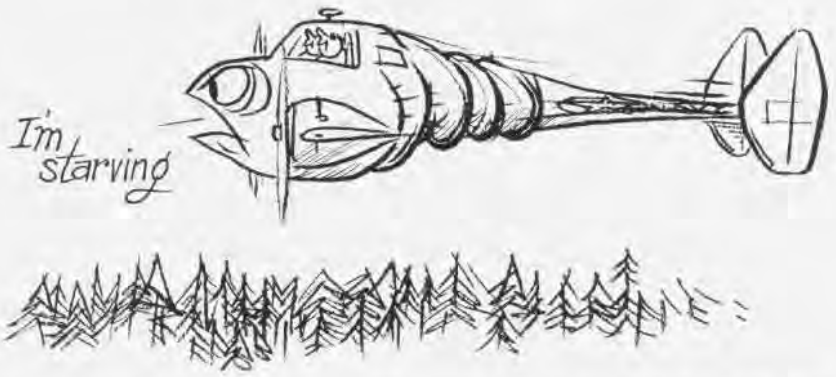
Oh, my achin' back! This chief probably received the shock of his life when he took that spectacular step. That is really the hard way to leave a helicopter. This well dunked lad is pretty lucky to be able to tell the boys about it at Happy Hour. He can also give out with some sound logic about not wandering around near an open hatch without a gunner's belt and the proper stowage of loose gear.

Can Do

The crew of a CH-19E (HRS-3) helo was alerted for a rescue job at their Southwest Pacific island base. They were told that a Navy nurse, while out sight-seeing, had slipped on moss-covered rocks and fallen over a waterfall in a remote and relatively inaccessible area and was unable to move her legs. There were no roads which were passable, even for a jeep. Owing to the extremely heavy jungle growth, a helo was the only logical answer to the rescue problem. The crew manned their aircraft, lifted off and flew directly to the scene.

The nearest clearing suitable for landing was one and one-half miles downstream of the accident site, and the dense jungle and sheer cliffs in the vicinity precluded hoisting the victim.

The resourceful helo pilot set it down in the clearing downstream and hiked back through the jungle to the waterfall, together with the doctor and corpsman who formed the rescue crew. They carried with them a Stokes litter and a one-man life raft.



The helpless accident victim was strapped in the litter, which was in turn strapped to the raft, and floated downstream guided by the helo crew, now doubling as swimmers, until the clearing utilized for landing the helo was reached.

The patient was then carried to the helo and flown to the Naval Hospital.

Grampaw Pettibone says:

Bust my buttons! It's good for the old blood pressure to read about a resourceful bunch like this helo *TEAM!* Even a helicopter has limitations and it's a sure sign of a pilot's professional proficiency when he backs off after due consideration of the situation and says *'NO'*. This is sometimes the toughest of all decisions to make.

Planned Prang

Two proficiency pilots departed an East Coast air station in a trusty Beechcraft after carefully calculating fuel required to complete the cross-country with two en route stops. Unexpected delays consumed precious fuel, including ground delay at point of departure, winds stronger than forecast, holding because of instrument weather, and identification turns owing to radio difficulties.

Fuel could have been obtained at the first stop, but the pilots did not take the time required to refuel; they wanted to make the second point of intended landing on time. They were also confronted with the fact that their home base closed at a certain hour, and they wanted to make it back before then.

Throughout the last leg of the flight to the second point of intended landing, the pilot was concerned about the fuel, but, because he needed to get back to his home station before closing time and had a passenger to pick up, he neglected to realize how much time he had already flown that day.

Approximately seven miles out, the pilot notified the control tower of his dangerously low fuel state and was cleared for a straight in approach. The gauges at this time indicated .2 to .4. Three miles from the runway, the fuel pressure fell to zero and use of the wobble pump regained pressure only momentarily. Fuel tanks were switched and wobble pump exercised to no avail. The plane was crash-landed—gear and flaps up—in a rather thick forest.

The aircraft came to rest in an almost vertical position with the entire front half of the cockpit torn away. You could walk into the cockpit through the gaping hole on the left side. Neither pilot lost complete consciousness.

Grampaw Pettibone says:

Great balls of fire! However, this one didn't have an opportunity to end that way, for the only fuel available for a fire was in the pilot's cigarette lighter.

It's pretty difficult to imagine a couple of otherwise savvy guys working so hard to violate minimum fuel requirements as specified by the Navy, FAA, and sound operating procedures based on good judgment and common sense. So accustomed are these little power plants to an octane diet, they positively refuse to perform without it.

To say these young gents were lucky to walk away from this one is putting it mildly. Although the Navy has one proficiency type bird less, we should have two smarter aviators in the fold.

TRADITIONAL RITES OBSERVED IN STYLE

SIX RETIRING OFFICERS ARE GIVEN FULL HONORS IN SPECIAL CEREMONY AT WHIDBEY

WITH THE MARCH of time through the years 1961-1965, which mark the two-decade anniversary of the WW II years, more and more retirements are the order of the day. NAS WHIDBEY recently went all out to add sparkle to the retirement ceremony of six naval officers with a combined service of 138 years.

The ceremony opened with an inspection by the retiring officers of a 400-man Guard of Honor. The officers were Capt. Thomas Robinson, Chief of Staff for Commander Fleet Air; Capt. Wallace M. Brown, Public Works Officer; Cdr. Arthur S. Linder, Comptroller; Cdr. Francis C. Rutherford, Assistant Supply Officer; Cdr. Reid E. Coble, Security Officer; and LCdr. Edward J. Nugent, Administrative Officer, all of NAS WHIDBEY ISLAND.

A drill by the crack Whidbey Island Drill Team followed the inspection.

The retiring officers were then piped aboard the USS *Salisbury Sound* (AV-13) where their careers were reviewed by Capt. Renfro Turner, Commanding Officer of the air station, and Capt. Hugh M. Durham, skipper of the seaplane tender.

As the principal speaker, RAdm. William S. Guest, Commandant, 13th Naval District, stressed the role played by Navy wives in the successful careers of their husbands. Flags of the home states of the retiring officers and their wives, which were displayed on the deck of *Salisbury Sound*, were symbolic of the roots of national power which extend from the Armed Forces back to homes across the land.

Each retiring officer spoke briefly of his active service career. They were then "piped over the side" between rows of high-ranking "side boys" to "Auld Lang Syne" played by the Thirteenth Naval District Band.

As the retirees went "over the side," a flight of SP-2H *Neptunes* of Patrol Squadron Two dropped a series of photo-flash cartridges at intervals across several miles of open water. The crescendo of the exploding charges was a moving and dramatic salute.

UP OARS! BOAT PULLS AWAY FROM AV-13

Escape System for TFX

Rocket Capsule Being Developed

Rocket Power Incorporated of Mesa, Ariz., has received a one million dollar contract to design and develop a special pilot escape rocket motor for the TFX (F-111) multi-service jet fighter. The new system will be unlike those used in current jet aircraft where pilots eject from the cockpit in an emergency.

The TFX design calls for both of the plane's crewmen to remain in an encapsulated nose section which is boosted away from the aircraft by a rocket motor. The capsule then floats to earth by parachute.

A solid propellant motor of 50,000 pounds thrust will separate the capsule from the plane. Enough boost will be provided for a safe escape capability at virtually any speed or altitude.

Bombardier Trainee Scores

In a Week 3 Consecutive Bullseyes

Chalk up the magic number three for Ens. R. L. Davis, VAH-123 bombardier trainee at NAS WHIDBEY ISLAND. He scored three consecutive bullseyes over the radar bombsight at Spokane, Washington, in one week.

Lt. P. J. S. McNenny was the pilot and their A-3A was at 31,000 feet when Ens. Davis zeroed in on the target for his feat. Ens. Davis had two bullseyes to his credit, both on his first bombing flight at Spokane earlier in the week.

Ens. Davis reports to VAH-6 after his six-month "pro" training is finished.

CDR. C. G. BERKSTRESSER, *C.O. of VP-56, at NAS Norfolk chats with three of the 26 Midshipmen who spent three days with the squadron. Universities and colleges represented included Ohio, Minnesota, Cornell, Harvard.*

ITS MAD GEAR BOOM EXTENDED, S2F TRACKER FLIES ACROSS BOW OF ITS HOME SHIP, USS YORKTOWN, DURING ANTI-SUBMARINE OPERATIONS

AIR POWER—PACIFIC STYLE

By Kyle McGonigle, JO1

PRESIDENT KENNEDY stands on the deck of the world's largest conventionally powered ship—the San Diego-based supercarrier *Kitty Hawk*. The Navy is showing its power to the Commander in Chief as *Phantom II's* and *Crusaders* demonstrate their missile proficiency and ASW units conduct anti-submarine warfare exercises.

Simultaneously, two Pacific Fleet attack carriers launch exercise strikes. One is off the northern tip of Japan, the other is operating off the coast of the Philippines. The sphere of influence these aircraft command extends from the Bay of Bengal to Yamsk, Russia, and covers the entire seaboard of Asia. Minutes later another exercise strike is launched from a third carrier somewhere in mid-Pacific and the air cover of the Seventh Fleet continues to spread like a steel umbrella.

The hardest hitting element of the Seventh Fleet is the Attack Carrier Striking Force. In almost every phase of Fleet operations, the key ship is the attack carrier with her 60 to 90 aircraft. Each carrier maintains a potential striking range of 3000 miles from any one point in the Seventh Fleet operating area. By steaming at 30 knots for 24 hours, the carrier will travel about 900 miles; her sphere of influence will increase accordingly.

The job of today's attack carrier includes not only long range bomber strike capabilities and close air support of amphibious operations, but also continued air cover for the units of the Fleet with which they operate.

Organizing the Fleet into task groups with Carrier Task Forces as nuclei gives Seventh Fleet the advantage of wide spread dispersal over the 30 million square miles of its responsibility. Effective replenishment at sea largely eliminates dependency on foreign ports. This replenishment, coupled with refueling capabilities, gives both ships and aircraft the ability to maintain an effective posture of readiness and be where they are needed, when they are needed.

Posture of readiness does not apply only to the Seventh Fleet, for the waters from Hawaii to the West Coast of the Americas is the operating area of the First Fleet. These two Fleets combined control an area of 85 million square miles, bordered on the north by the Arctic, the south by Antarctica, the east by the Americas and the west by the coast of Asia.

Operating in this vast area are nine attack aircraft carriers, four anti-submarine warfare carriers, four seaplane tenders and over 2800 aircraft. The attack carriers are: *Bon Homme Richard, Constellation, Kitty Hawk, Oriskany, Ticonderoga, Coral Sea, Hancock, Midway,* and *Ranger.*

Anti-submarine warfare capabilities are rendered by *Bennington, Hornet, Kearsarge,* and *Yorktown.*

The seaplane tenders in PacFlt are *Currituck, Salisbury Sound,* and *Norton Sound.*

Each is a part of the Naval Air Force in the Pacific Fleet and falls under the administrative control of VAdm. Paul D. Stroop, Commander Naval Air Force, U. S. Pacific Fleet.

As one of nine type (or specialized) commanders, VAdm. Stroop is responsible to the Commander in Chief, U. S. Pacific Fleet, in Pearl Harbor, Hawaii. The major job of VAdm. Stroop, his organization and staff, and every action taken by them is related to the policy of always rendering full, complete, and timely support to the requirements of the operating forces.

Support of an organization as large as the Naval Air Force, Pacific, is a complex job as the structure of ComNavAirPac readily shows. There are 12 Naval Air Stations, two Naval Auxiliary Air Stations, and three Air Facilities under the cognizance of ComNavAirPac through the Commander Fleet Air/Commander Naval Air Bases organizations. Eight of these air stations are located throughout the Pacific for the support of deployed operating units. Normally, three attack aircraft carriers, one anti-submarine carrier, two seaplane tenders and numerous auxiliary ships, plus their aircraft and personnel, are under the

NORTH ISLAND, COMNAVAIRPAC HEADQUARTERS, IS BACKDROP FOR F-8'S HEADING FOR SEA

operational control of Seventh Fleet.

The remainder of VAdm. Stroop's units are continuously operating and training with the First Fleet off the West Coast of the United States with the exception of those undergoing repair and overhaul. Like the Seventh Fleet, First Fleet is capable of conducting sea-air offensives or deploying for naval defense of the United States. It is also a proving, testing, and training ground for ships and aircraft as they work toward achieving the highest peak of operational readiness.

VAdm. Stroop is responsible, first of all, for the administration, direction and control of training of the vessels, aircraft and aviation units which are assigned to his command. Each unit undergoes type training.

Let's watch a Pacific Fleet carrier as it might go through a training cycle. A 65,000-ton flattop has just finished a deployment in the Far East with the Seventh Fleet. Upon returning to her home port, she starts her 12-month overhaul and training cycle with a month of post-deployment activity. This is a leave and upkeep period.

She goes next into overhaul and, upon its completion, joins the Fleet Training Group for refresher training. For the next four weeks, all phases of ship operation, from keel to mainmast and stem to stern, are practiced.

Refresher training finished, she joins the First Fleet for training with her aircraft. These aircraft have been going through similar upkeep and training. With sights still fixed on achieving operational readiness, ship and aircraft work together day after day until they are one coordinated weapons system.

The time for the "final examination" arrives. The ship with her air group steams for Pearl Harbor to undergo Operational Readiness Inspection and a graded battle problem. Ship, men, and aircraft each meet their moment of truth as months of training pay off.

Operational Readiness Inspection successfully finished, the carrier steams once again for her home port. First Fleet operations continue until it is time for deployment in the Far East. After a short in-port period to take on supplies and make last minute preparations, she departs for Seventh Fleet.

In carrying out the function of command, ComNavAirPac, like a tree, maintains a root structure. Thirty-five subordinate commands form the roots, which channel administrative orders throughout the Naval Air Force in the Pacific. First of the subordinate commands are the Fleet Air Commanders or ComFAirs. They serve as type commanders for assigned units, coordinators of Pacific Fleet aviation, and controllers of aviation logistic support in their respective areas. The ComFAirs are: San Diego, Alameda, Whidbey Island, Alaska and West Pacific. ComFAirWestPac is also the administrative commander of ComFAirJapan and ComFAirSoWestPac.

The root structure of ComNavAirPac grows with the addition of Commanders of Carrier Divisions 1, 3, 5, 7, 15, 17, and 19. These ComCarDivs are employed primarily as operational commanders of designated task elements and administrative commanders of ships assigned to their divisions.

Five Fleet Air Wing Commanders are in charge of the mobile, combatant patrol squadrons of the Pacific Fleet. Commander Utility Wing, U. S. Paci-

IN SOUTH CHINA SEA EXERCISE, HANCOCK MAKES FAST RUN BEFORE LAUNCHING SKYHAWKS

fic Fleet, is responsible for Fleet Air Photographic Units, distribution of drones and other types of specialized targets as well as general utility jobs.

Commanders of Carrier Air Groups (CAG's) coordinate the tactical and training operations of squadrons assigned to their specific groups. The functions of Commanders of Carrier Anti-submarine Air Groups (CVSG's) are much the same as those for CAG's, except the operations are specialized and tailored for anti-submarine warfare with the CVSG's operating from anti-submarine aircraft carriers.

Aircraft make extreme versatility the key word in Naval Aviation in the Pacific. Attack bomber capabilities come from the A-3B *Skywarriors*, A-4C *Skyhawks* and propeller-driven A-1H *Skyraiders*. These attack bombers range in size from the largest carrier-based aircraft, *Skywarriors*, to the nation's smallest and lightest jet-powered combatant aircraft, the *Skyhawks*.

All-weather fighters in the Pacific include the F-3B *Demon*, F-4B *Phantom II*, holder of the world's fighter speed record, and previous holder of this same record, the F-8D *Crusader*. All three of these all-weather fighters use a wide variety of missiles.

Patrol missions are handled by the P-3A *Orion* and S-2D *Tracker*. The four-engine, land-based *Orion* is the replacement for the veteran P-2V *Neptune*. Anti-submarine warfare capabilities are furthered by SH-3A *Sea Kings*. These jet-powered helicopters can detect, identify, track and destroy enemy subs on a round-the-clock basis.

A host of utility and miscellaneous aircraft, including both fixed and rotary wings, completes the list.

The nerve center of ComNavAirPac is located at VAdm. Stroop's headquarters aboard NAS NORTH ISLAND, San Diego. His staff is located there for the express function of assisting ComNavAirPac.

Fifteen major staff offices and divisions, with their various branches, perform their missions by obtaining and evaluating information on the administration and operation of NavAirPac subordinate commands and units.

The staff serves as the link between VAdm. Stroop and his widely dispersed commands. This command unity is coordinated by the daily morning message conferences. During these conferences, all staff department heads join to review message traffic, to make recommendations for courses of action, and to exchange ideas on related subjects. On Tuesday of each week, local area commanders meet with ComNavAirPac and members of his staff to exchange views on occurrences within their commands.

The Naval Air Force in the Pacific is composed of a mixture of men, machines, logistics, administration and a host of allied functions, all with one express purpose: Maintenance of a posture of readiness over some 85 million square miles, the Pacific Ocean.

SKYHAWKS ARE SMALLEST, SKYWARRIOR IS LARGEST, OF PACIFIC CARRIER-BASED PLANES

VICE ADMIRAL PAUL D. STROOP, USN

Commander Naval Air Force, United States Pacific Fleet

VAdm. Paul D. Stroop became the 11th man to hold the position of Command Naval Air Force U.S. Pacific Fleet on November 30, 1962.

Throughout VAdm. Stroop's career, naval weapons and aviation have figured prominently. His first sea duty as Plotting Room Officer on the battleship USS *Arkansas* initiated him into Fleet gunnery. Shortly after completing this assignment in 1928, he started flight training at NAS Pensacola and became a designated Naval Aviator in September 1929. Following this, he served with torpedo and patrol squadrons for three years on the seaplane tender USS *Wright*. During this period, Adm. Stroop was ordered to the Naval Proving Ground, Dahlgren, Va., to study technical and operational details of the Norden bombsight.

He participated in the 1931 tests against the USS *Pittsburgh* in Chesapeake Bay. These tests proved the accuracy of the now famous sight and led to procurement of Norden bombsights for the Army Air Corps as well as the Navy.

Adm. Stroop has commanded four ships, three of these in wartime. In April 1943, he assumed command of USS *Mackinac* (AVP-13), a seaplane tender operating in the South and Central Pacific. He commanded the *Princeton* (CV-37) and *Essex* (CV-9), both operating against Communist forces in the Korean conflict. He also was C.O. of USS *Croatan* (CVE-25) in the Atlantic.

VAdm. Stroop has served in the following posts: commander of NOTS China Lake; senior Naval Member of the Weapons System Evaluation Group; Office of the Assistant Secretary of Defense (R&E). He also served in the Bureau of Aeronautics. Adm. Stroop was Deputy and Assistant Chief of BuOrd from December 1954 to April 1957 and returned as Chief of that bureau in March 1958. While serving in that capacity, he was selected in 1959 to become the first Chief of the Bureau of Naval Weapons.

THE FIRST FLIGHT *of P-2 "Arctic Basin II" launched three miles from this Eskimo village at Barrow, Alaska, viewed from a local plane.*

THE ISLAND OF GREENLAND *marked the easternmost limit of flights flown in the most recent series of scientific aerial surveys of the Basin.*

THE FLIGHTS OF 'ARCTIC BASIN II'

The ice was here, the ice was there,
The ice was all around:
It cracked and growled, and roared and howled,
Like noises in a swound!

THE RIMY remembrance of this stanza of Coleridge's *Ancient Mariner* chilled the readers of the early Nineteenth Century. The haunting description still rings true and, after over a hundred years, men still struggle —but now largely by air—to unlock its mysteries and chart its icebound vastness.

Even before the mid-Nineteenth Century, Great Britain took an intense interest in polar navigation—especially in the Arctic—and many serious attempts were made to find a Northwest Passage over the top of North America. The major motivation was commercial, but after the disappearance of Sir John Franklin and his party in the 1840's, ten years of mercy missions followed; some 40 expeditions joined the search, but none was in time. The entire Franklin party was wiped out by hunger, accident, and arctic cold.

During this period and in the years following, much of the land mass north of the Arctic Circle was mapped. With the introduction of aviation to polar exploration, most of the remaining snow- and ice-covered islands there were discovered, photographed and charted. Some isolated rocks and small islands still pop up in unexpected places and find their way to the charts of the

By Lt. Tom Kelly
NATC Patuxent River, Md.

area. But for the most part, cartographers are generally satisfied with available land mass information.

The waterways, however, are less known. The gulfs, straits, seas, channels and rivers are inaccessible by ship much of the year. In the summer months, the cracking, growling, roaring, howling ice on these waters makes navigation through them either dangerous or impossible, depending on the thickness of the ship's hull attempting the passage, and the density of ice.

The Arctic Basin itself, sprawling under the Arctic Ocean and its thick crust of ice, remained much of a mystery through the eons of time. Until as recently as 1948, scientists had no valid reason to suspect the Basin was not just one huge oceanic depression.

However, recent studies have shown that the Basin consists of two geologically distinct units, divided by a major subsurface mountain system. In a 1962 report of the University of Wisconsin, *Geophysical Investigations of the Arctic Ocean Basin*, Dr. Ned A. Ostenso summed up man's current knowledge of the area.

"The Arctic Ocean Basin," he wrote, "is the Earth's least understood first order physiographic feature. Indeed, whether it may, in the geologic sense, be properly considered an ocean is an open question. Its isolation, inclement weather, and perpetual ice cover have contributed to the Arctic Ocean's being largely ignored by man in his quest for geographic and scientific discovery; yet it occupies a position of unique importance to better understanding the Earth's structural framework.

"Because the ocean's position between the continents of North America and Eurasia, it might be considered the keystone in the structure of northern hemisphere geology, making its study fundamental to better understanding of intercontinental lithologic [rock characteristics] and tectonic [structural] relationships.

"To be sure, it has been the inaccessibility and inhospitality of the region, not lack of interest, that has left the Arctic environs so long unstudied."

The Office of Naval Research now has a continuing program in effect to gain more scientific information on this area. The total geophysical program includes investigative studies of magnetic, seismic, gravity, bathymetric and geological conditions. The first of a current series of U.S. aerial surveys, Arctic Basin I, was completed in June 1961 by the Naval Air Development Unit, now disestablished, but then based at South Weymouth, Mass. (See "Neptunes Probe Arctic Basin," NANEWS, November 1961.)

In March and April of this year, the second series of polar flights, Arctic Basin II, was launched, again sponsored by ONR through contract with the University of Wisconsin. The Weapons

System Test Division of the Naval Air Test Center at Patuxent River, Md., was assigned to provide operational planning and support. A P-2E *Neptune* and crew provided support of the aerial survey, in which magnetic phenomena were studied over 23,000 miles of preplanned tracks.

Primary purpose of the second survey was to correlate data gathered on the first survey of the series, to fill in existing gaps, to provide more complete coverage, and to concentrate coverage in geographic areas of special scientific interest. Measuring and mapping magnetic intensities in the Arctic aids scientists to determine, among other things, the underlying geology and structure of the earth's crust. Flight operations were conducted from Thule AFB, Greenland, the Danish radio and weather station at Nord, Greenland, and from the Arctic Research Laboratory—three miles to the northeast of the Eskimo village of Barrow, Alaska.

Most of the Arctic survival training for the crew was received at NAS PATUXENT RIVER before deploying. All project investigators and observers aboard had prior experience in arctic operations and did not require special training. Many of the crew had also served in polar areas on earlier tours.

Lt. Gordon L. "Pete" Petri piloted the aircraft, with Lt. Paul L. Siverly in the right seat. The crew consisted of plane captain George N. Dematties, ADRCA, mechanic Norman P. Phillips, ADJ1, radar operator George D. Crosby, AT1, radio operator Jesse B. Shurtz, AT1, electrician Arvil E. Hall, AE2, and navigator GySgt. Tom Southwick, USMC.

Dr. Ostenso accompanied the crew on all flights, representing the Geophysical and Polar Research Center of the University of Wisconsin. Other project personnel aboard were Lt. Jaap W. Boosman, USNR, representing ONR, and veteran ice observer M. J. Bardon, AG1, from the U.S. Naval Oceanographic Office. Bardon's assignment was not directly connected with the primary purpose of the flights. He was to make observations, notations, and photographs of the arctic ice, valuable information in forecasting ice break-up and drift, making possible more effective planning of ship movements in waters to the south.

In preparing for the trip, all unnecessary ASW search and detection equipment was removed from the airplane, with the exception of radar, to reduce weight and to give the crew more elbow room. For special project equipment, a Varian proton precession magnetometer was installed in the plastic tail cone, replacing the MAD equipment that is usually housed there.

The first project flight was flown on March 21 from Point Barrow, lifting from the icy Marston matting runway marked off by fluorescent red painted 55-gallon drums. During this flight, the crew encountered a high noise level in the magnetometer aboard. The problem was solved by attaching two static electrical discharge wicks on the tail cone and by removing pieces of magnetic material in the cone that appeared to be affecting the equipment.

Tom Southwick, the navigator, did an outstanding job in meeting the accuracy requirements of plus or minus ten nautical miles, under some of the most difficult navigation conditions known. He is a veteran of Operation *Deep Freeze* and a former member of VX-6. He was assigned to Arctic Basin II on TAD orders from MCAS CHERRY POINT.

On three occasions, the compass system went out. The first time, the plane was only 30 minutes away from Thule, and the crew had little trouble reaching their destination. The second time, the compass went out six hours after takeoff and the crew robbed the radar of common parts to get the compass back in operation. On the third time, Lt. Petri and GySgt. Southwick determined that over a 15-minute period, the compass was precessing at the rate of one degree a minute. The pilot started a slow correction in the opposite direction at the same rate, thereby maintaining a straight course.

The *Neptune* was not especially configured for Arctic operations. The change from relatively warm Patuxent to the severe cold of the Arctic presented a few maintenance problems.

Engine and propeller oil congealed and the plane suffered hydraulic leaks. On one occasion, the port engine had

DR. NED A. OSTENSO, *in charge of scientific aspects of the flights, views P-2 decal.*

CREW OF THE PATUXENT *River-based Neptune, scientist and observers, pose by their aircraft at Pt. Barrow in April this year, during second month of the Arctic Basin aerial survey flights.*

to be shut down for high oil temperature, and, to make matters worse, the prop would not fully feather. Prior to the next flight, the crew licked this problem by manufacturing wheel well covers from water repellent canvas. This facilitated preheating of both oil supplies, which brought their oil problems to an end.

The longest flight of the trip was from Point Barrow to Nord and then to Thule. The Thule leg was unscheduled and had to be made because of low visibility at Nord. Total time for the flight was 15.7 hours, covering 2850 nautical miles.

Communications in the Arctic presented a familiar problem. Contact with ground stations was never maintained continuously. During the period of operations, six small sun spots erupted, producing periods of magnetic storm activity. This, at one time, reduced high frequency transmission to a range of 68 nautical miles at 1500 feet altitude. The magnetic storm also affected the project equipment; one flight was delayed a day owing to the high level of activity.

One of the memorable points of the trip was passing over the floating ice island T-3, an ONR-operated scientific observation station which is manned on a year-round basis by about 15 non-military personnel. The ice island, incidentally, can be used as an alternate emergency landing field—and was considered as such in preflight planning.

The *Neptune* flew past Mt. McKinley at 10,000 feet. The mountain, rising to 20,320 feet, is the highest point of land in North America. A similar "dwarfing" experience was enjoyed by the crew when the *Neptune*, at 1500 feet, surveyed Robeson Channel between northern Greenland and Ellsmere Island. Cliffs rose 2000 feet on both sides.

Constant sunlight, unbroken by night darkness, and massive fields of ice impressed the crew. Flying conditions were, for the most part, excellent, and the pilots were able to remain VFR at 1500 feet most of the time. Occasionally, however, the pilots had to climb to 5000 feet to take a celestial line of position on the sun.

While at Nord, Lt. Petri volunteered to drop supplies to a search and rescue party out on a glacier.

The party was looking for a man who had fallen into a crevasse while travelling with a partner about 12 miles from Nord. The lead man, on skis, had suddenly disappeared into a crevasse. His partner worked his way up to the narrow opening and attempted to locate him. The second man could see nothing and received no answer to repeated calls. Weather deteriorated rapidly and he pitched camp near the crevasse for the next 48 hours. During the storm, another crevasse opened, inches from where he was sleeping, leaving only half the floor space that was under the tent.

After the storm abated, he walked the 12 miles to Nord, leaving a dog sled behind. The search party proceeded immediately to the lethal crevasse but found no trace of the missing man and returned to Nord earlier than expected. Services of the *Neptune* were not required.

During the last few days of the operation, a noticeable deterioration in the weather occurred. It was associated with the opening of many leads in the pack ice. Predicted wind information was very scanty and often incorrect, owing to rapidly changing conditions and the relatively few observation stations.

The *Neptune* returned to Patuxent River on April 27, 43 days after departure for the north. In this period, the crew flew a total of 232.2 hours, covering approximately 40,600 nautical miles. Of this, 135.6 hours and 23,300 miles were in direct support of the project on tracks over the ice. The remainder was spent in reaching and returning from the basin and in regular logistic flights.

Dr. Ostenso drew a few tentative conclusions from visually monitoring the data while in flight, but reserves the right to draw separate conclusions based on evaluation of the data.

"Probably the most significant find," he wrote Dr. Max O. Britten of the Geography Branch of ONR, "is that I think we have pretty well established and defined the continuation of the Mid-Atlantic Ridge into the Arctic Basin through the Lena Trough [in the northern Greenland Sea].

"The flights into the previously blank area northwest of the Canadian Arctic Archipelago support my earlier suggestion that this area is a deep sedimentary basin, probably being a seaward continuation of the Franklin geosyncline [a great downward turn of the earth's crust].

"We also got more data over the magnetic 'ridge' northwest of Barrow and over the large anomaly in the Robeson Channel. These data should prove very interesting. Other than these specific items, we filled in a lot of holes and greatly extended the area of coverage and thus have better defined and delineated the structural elements of the Arctic Basin."

Dr. Ostenso also had fine words to say of the pilots and crew of the *Neptune*. "The fact remains," he said, "that the program was essentially 100% completed, which is testimony to the pluck and competence of the plane commander, Lt. Petri, and co-pilot, Lt. Siverly. These officers took a keen interest in the scientific mission and without exception conducted themselves in a spirit of cheerful and aggressive cooperation."

The modern mariners, through Naval Aviation, have pierced the cracking, growling, roaring, howling ice with modern electronics and uncovered some of the secrets under its mantle.

PARKED BETWEEN FLIGHTS, *this Neptune logged 232.2 hours in the course of Arctic flights. Cold weather presented maintenance problems, solved by crew. The plane was deployed 43 days.*

CHINA LAKE PILOTS SET THE PACE IN WEAPONRY

By Jack Broward

AGAINST THE DESERT *backdrop and the Sierra Mountain range from the floor, Project Pilots LCdr. J. M. Morgan, Lts. J. W. Burns and J. L. Kistler, return from flights over Mojave Desert.*

THE "BLACK BOX OF SCIENCE," rated by many as the miracle of the Twentieth Century, takes a back seat to the human element at NOTS China Lake, California.

What's more, it is doubtful that man —his priceless control of individual thought and flexibility of actions— will ever be replaced, according to Cdr. John A. Sickel.

The Navy three-striper's faith in his fellow man is reflected daily in the work he and his six-man staff of project pilots carry out at the sprawling weapons research and development station.

"We represent the airborne eyes, ears and senses of reaction to the scientists and engineers on the ground," explained the 1946 Annapolis graduate, before ending his third tour of R&D duty. In August, he transferred to the USS *Constellation*.

Project pilots, like test pilots, must not only put new weapons and delivery systems through aerial paces, but also evaluate potential results should it become an operational device in the hands of Fleet pilots.

"This sometimes demands a bit of gazing at our crystal ball," Cdr. Sickel says. "Our pilots must hold as their foremost consideration: the useful application of all projects being tested once they reach operational availability. This is perhaps the most important area of consideration attached to our work."

Once a project has been "checked out" by Cdr. Sickel's unit, its members must make clear to engineers and scientists what is needed to make the project more effective or versatile. Cdr. Sickels points out that "one out of every ten aviators has the makings of a successful project pilot."

Those associated closely with project pilot work, he feels, should be men "who possess to an unusual degree, intellectual curiosity, a better-than-average background of Fleet operational duties and a keen dedication to scientific endeavor."

Such are the men who now serve as project pilots at the China Lake Naval Air Facility, Cdr. Sickel reports. "Each of our pilots has special qualifications in the general field of aviation. They were selected to serve in these billets only after exhaustive studies had been conducted in areas related to previous performance, flying ability and displayed motivation for the work."

Averaging 30 years of age, the pilots are LCdr. J. Mark Morgan, LCdr. Carl W. Rochester, Lt. Earl P. McBride, Lt. James L. Kistler, Lt. James W. Burns and Lieutenant A. L. (Tony) Tambini.

All are married, possess better-than-average Fleet operational experience and chorus the merits of project pilot duty.

"It's a world apart from the general aviation duties," claims Lt. Tambini, now on his third year as a scientific pilot. "It presents a greater challenge, an increased demand for individual initiative, and yields more fulfillment than other jobs."

As Attack Systems project officer, Tambini puts in highly irregular hours, constantly sacrificing his time at home. "I feel I'm contributing something significant, a tangible quantity of something personal," he says.

Lt. McBride, presently assigned to Projects Department as Fighter Weapons officer, arrived at China Lake from Monterey's Postgraduate School last June.

Grunting his comments while zipping up his pressure suit before a recent flight, the former VF-74 and FAW-TULant pilot smiled between grimaces,

PROGRAM PLANNERS *include (from left) scientist Wm. B. Porter, LCdr. Morgan, Cdr. J. A. Sickel, C. P. Smith and D. N. Livingston.*

PRIMARY PILOT *for Shrike program, Lt. Tony Tambini, briefs NOTS China Lake Project Officer, Cdr. R. A. Hoppe, on cockpit presentation.*

FIGHTER WEAPONS *Officer, Lt. E. P. McBride (c), is from Monterey Postgraduate School.*

IN SHRIKE *project, Lt. Tony Tambini consults NOTS civilian scientist H. W. Simpson.*

PROJECT PILOT, *Lt. James L. Kistler, confers with technician Wayne Anderson before flight.*

WATCHING AERIAL *demonstration, Tambini is in contact with pilot as Capt. Jack W. Hough, NAF C.O., and Lt. James W. Burns observe.*

SHRIKE TEAM *(from left) William B. Porter, Jack Russell and George F. Cleary, get report from Tambini as Cdr. Hoppe sits in conference.*

commenting, "I'm one of the pilots lucky enough to get this duty!"

Talking with the pilots assigned to Cdr. Sickel's group, collectively and individually, one gets an impression of unanimous recognition of the worth of their role in science. Where's the reward for extra effort, greater demand, and broader risks?

"Self-satisfaction. Knowing you've contributed to something worthwhile," says quiet-spoken LCdr. Mark Morgan.

Project pilots are now conducting flight tests on more than 50 projects related to air-to-air, air-to-ground, anti-submarine weapons and a cluster of delivery systems.

Several of the current programs, some scheduled for Fleet development in the near future, include HIPEG, the 20mm triple-gun system that fires 12,000 rounds per minute, *Shrike*, the newest air-to-surface missile, and a series of "Eye" weapons intended for limited warfare use.

With more than 350 captive flight hours of work invested in the *Shrike* missile program, Lt. Tambini is a leading authority on the operation of this newest of the Navy's air-to-ground missiles.

Scheduled for introduction to the Fleet—and Air Force use as well—the anti-radiation weapon is being subjected to final development tests at China Lake.

Shrike's success is largely due to the human endeavor the program represents. At the hands of Lt. Tambini, the "marriage" between weapon and delivery system was achieved only after exhaustive developmental testing.

Project manager George F. Cleary, one of the project's top civilian scientists, recalls the two-year period in which Lt. Tambini has served as *Shrike's* principal project pilot. "It was the recommendations made by Tambini, once the project left drawing board stages, that steered us on course. I cannot praise his contributions highly enough. And there's no question in my mind that sticking with this project the way he has demands an unusual amount of dedication to his work."

He works in close harmony with two civilian engineers, William B. Porter and Jack Russell, who represent missile and delivery systems elements in the project. According to them, Lt. Tambini was the one who "worked out the air-borne bugs."

NAVAL AVIATOR *of the future, 11-year-old John A. Sickel, Jr., at NOTS China Lake, discusses model of A-4 Skyhawk. Cdr. Sickel is pleased his son says he will follow him into the Navy.*

His test procedures included aerodynamic heating checkouts, air load, vibration signatures, receiver performance and those areas in which "only the human sensitivities could pass judgment," notes Mr. Porter.

With nearly 2000 jet hours in his log, much of which was gained as a Fleet pilot, Lt. Tambini has been responsible for a series of system improvements, particularly in the area of cockpit presentation.

"The effectiveness of *Shrike*," he comments, "is largely due to the success of its delivery system. If we're to assure that success, we have to put the best possible system into the hands of the pilots who will be expected to use it."

Though the *Shrike* is equipped with the best in data-recording equipment, engineers agree that the ultimate success of its performance depends upon the experienced judgment of the project pilot.

"There's work enough to keep us occupied day and night," adds another project pilot, Lt. Burns, ASW officer. He explains that his project pilot team works side-by-side with civilian scientists and engineers at NOTS in a spirit of total cooperation.

"The guys on the ground share all our emotions and then some," Lt. Burns says.

Fighter Systems Project officer, Lt. Jim Kistler, describes the scientist-pilot relationship this way: "There's a kinship that welds us together. Their problems are ours too. Our job, as project pilots, is to recognize and evaluate problems in terms of actual combat conditions.

"A weapon or system might prove quite adequate and successful out here in the Mojave Desert. But what about the guy handling it from a carrier, thousands of miles from land, under combat and sometimes confused circumstances? These are the areas a project pilot must consider as he tests a program."

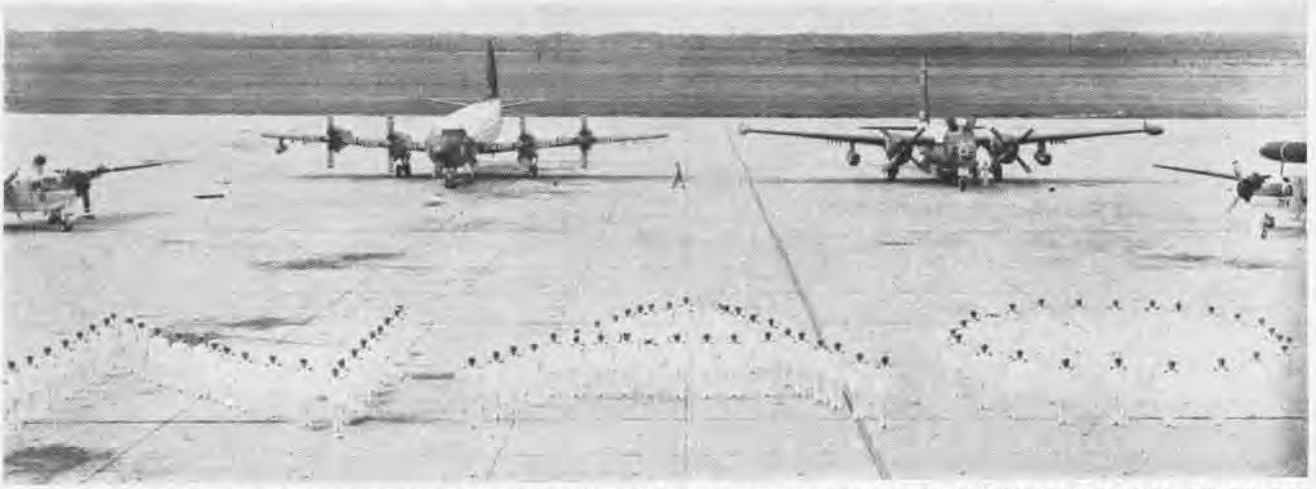
Some 20 other pilots attached to the Naval Air Facility can earn temporary assignments periodically as project pilots working with Cdr. Sickel's unit.

"From these assignments and the resulting performances, we are able to base our selections for replacements when our men are transferred," Lt. Kistler says.

Cdr. Sickel explains that the long-range value of the Navy project pilot is the rotation they perform—from project to Fleet duties—then back again. "We're given the chance to familiarize ourselves with Fleet conditions—weapons, systems, absorbing demands that Fleet duties make on a pilot—and we store this information up for eventual application during our next tour of project duty," he adds enthusiastically.

On this level of conversation, Cdr. Sickel is at his best. You believe him when he says, "Man will never be replaced by a black box. But he may be carrying one in his cockpit!"

NAO SCHOOL BECOMES COMMISSIONED UNIT

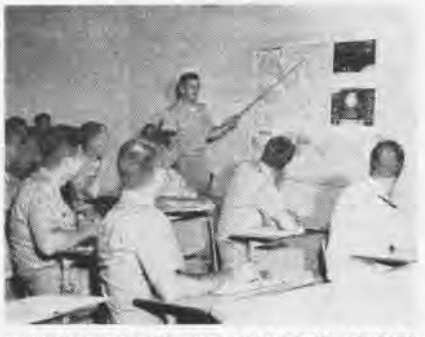


PROUD OF NEW STATUS AS A COMMISSIONED UNIT, STUDENTS SPELL OUT 'NAO' AFTER CEREMONY. PLANES ARE (L-R) ES-2A, P-3, P-2, E-1B

THE BASIC NAVAL AVIATION OFFICER SCHOOL, NAS PENSACOLA, became a commissioned unit in a ceremony at Forrest Sherman Field August 2. Cdr. C. C. McBratnie became the first Commanding Officer. The guest speaker for the occasion was VAdm. Fitzhugh Lee, Chief of Naval Air Training.

The school has been a unit of NAS PENSACOLA's training department for three years. Established March 2, 1960 by order of CNO, the unit has turned out more than 1700 officers trained in highly specialized areas of aviation support.

The school produces highly trained "back seat" support officers, capable of handling sophisticated electronic devices for navigation, early warning, search, attack, ASW, etc. (NANEWS, April 1961, "Advanced Training of the NAO's," pp. 16-17, and August 1962, "The Case of the Ubiquitous Mr. C.," on pages 12 and 13.



WEATHER CHARTS ARE CAREFULLY STUDIED

By Mike Albertson, JO2

Training for these areas continues to be the basis for the program. Some of the officers become skilled in aircraft maintenance and electronics; others enter the field of air intelligence.

The increasing complexity of Naval Aviation's technical hardware caused the General Aviation Training Conference of 1959 to recommend and lay the ground work for such a school.

The men selected come from civil occupations, Officer Candidate School, NROTC, and the U.S. Naval Academy, Annapolis, Md.

They attend a 16-week course at the Naval School of Pre-Flight at NAS PENSACOLA which is based on the same tough curriculum given fledgling Naval Aviators.

The NAO students, mingling with flight students, study aerodynamics, engineering, physiology and leadership. Next, they report to the eight-week NAO school at Hangar 1854 to begin intensive study of navigation, meteorology, communications, air intelligence, special weapons and aviation electronics. In addition, NAO candidates undergo athletic conditioning and thorough survival training.

In the basic NAO school, candidates fly indoctrination hops in the T-34 and T-28 single-engine propeller trainers and the S-2A and C-47 dual engine aircraft. They also get hops in the T1-A single-engine jet trainer which provides them with a basis on which to choose between propeller or jet training in the advanced training stage.

Detailed training records are kept on each student. Toward the end of the school, five senior officers review the records to determine on the basis of the student's desires, his academic and flight record, physical qualifications and quota distribution, which advance training he should take.

After completing the basic course at Pensacola, students go to specialized courses at NAS CORPUS CHRISTI, NAS MEMPHIS, and NAS GLYNCO.

Upon graduation, the NAO receives the wings of a Naval Aviation Observer and goes to the Fleet for more training in a replacement squadron before he assumes the job for which he is intended.

Under the "teammate" arrangement, the pilot devotes himself to flying the

NAO'S GO OVER INSTRUMENT MOCK-UP

aircraft, while the NAO handles navigation, radar, sonar and other technical jobs. These tasks, which once called for a specially trained pilot, now are left to the Naval Aviation Observer.

An NAO may be at the console of a long-range radar aboard a Navy *Super Constellation* flying early-warning picket over the North Atlantic.

Or, he could be operating a sensitive sonar device in a P-3A *Orion* over the ocean.

Other NAO's are trained as ground officers to direct maintenance and electronic repairs.

Still others attend Air Intelligence School upon completion of their basic training at Pensacola. Air Intelligence specialists brief pilots and flight crews on targets and gather intelligence on enemy forces and armaments.

One of the main attractions of the NAO program to the prospective candidate is that, unlike some specialized and limited fields, officers who enter the program are eligible for sea command and promotion to flag rank.

There are two broad categories of NAO's: flight crew members and ground officers. For the student who qualifies for flight crew duty, there are six categories in which he may train and earn the designation of Naval Aviation Observer. These are Airborne Intercept; Navigator; Bombardier Navigator; Controller (airborne); Electronics Counter-Measures Evaluator; and Air Anti-Submarine Warfare Tactical Evaluator.

Students who do not qualify for duty in a flight status become aviation maintenance electronics officers. Another highly specialized, non-flying NAO, the air intelligence officer, is usually designated for his job by BuPers before he enters training. After 16 weeks of pre-flight at NAS Pensacola, the air intelligence officer attends either an eight-week course in Alameda, Calif., or a 32-week school in Washington, D. C.

LCdr. Bruce Smithee, present NAO Administrative Officer, was the first assistant OinC of the unit when it was established in 1960. He summed up the feeling of Naval Aviators toward their new teammates by saying, "These men are very welcome. They excel in their specialty and relieve the Naval Aviator to concentrate on his primary job. Each is an expert in his own field. The team they form does a fine job."

Take, for example, the specialities employed in the EC-121K *Warning Star* which is used by the Navy as a hurricane hunter. The big, four engine plane can carry a crew of 30 men and stay in the air for periods up to 20 hours. In addition to the pilots and enlisted men, the crew includes a navigator, two AEW specialists and one electronics countermeasure operator. Each of these jobs can be handled expertly by an NAO.

Thus by using these experts, the Navy has formed tightly-knit airborne units that are a crack team in action.

New Courses are Started

Safety Center Graduates 29

The first class of 29 Naval and Marine Corps officers graduated from the U.S. Naval Aviation Safety Center's new five-day course in late August. The staff, under the direction of RAdm. Edward C. Outlaw, organized the course to meet needs of Fleet and shore station aviation safety officers.

The course does not replace the 10-week school at the University of Southern California. Rather, it is a "broad brush" treatment of aviation safety for units and activities who are unable to take advantage of the longer course. Subjects covered include: safety officer duties, accident prevention, accident investigation, flight physiology and aircraft systems.

In his closing address to the first graduates, Adm. Outlaw said: "As Naval Aviation Safety Officers, it is your responsibility to indoctrinate the officers and men in the Fleet. In this day of the jet age, the Naval Aviation Safety program has to be carried out in the Fleet from skipper to striker."

Thailand Pilots Trained

Flight Course Completed at Agana

Two Thailand Navy pilots completed four weeks of intensive training at NAS Agana, Guam, in the HU-16D.

Both graduates of the Royal Thai Air Force Flight Training Program, Ltjg. Nikan Rohatas and Ens. Charuwan Watna spent seven and one-half months at NAS Corpus Christi and NAS Pensacola before arriving in Agana.

At Corpus Christi, the pilots received advanced training in the S-2F *Tracker* and SP-5A *Marlin*. They took navigation training in the R4D-8. They went to Pensacola for instrument training.

At NAS Agana, the pilots received day and night familiarization training in the HU-16D *Albatross*. Their instructor was Lt. William D. Dobbs, attached to the Operations Department, Agana.

THE HONORABLE FRED KORTH, *Secretary of the Navy, recently came aboard USS Coral Sea accompanied by his administrative assistant, Mr. John Dillon, to observe part of a Fleet Exercise. SecNav was welcomed by RAdm. Daniel F. Smith, ComCarDiv Three. Shown above, from left to right are Mr. Dillon, Capt. C. E. Roemer, CVA-43 skipper, and Mr. Korth.*

SCUBA CHUTISTS ENHANCE VERSATILITY

IN THE AIR, under water, on land—no potential enemy is safe from attack by U.S. Marines. Here, two members of the First Force Reconnaissance Company, First Marine Division, test their skill as jumper-divers in a Pacific Ocean drop near Camp Pendleton, Calif. Jump gear and scuba equipment are checked carefully before jumping. Drop is made from a Marine CH-37C helicopter as a boat circles below to recover the 'chuting Marines.

VP-19 Gets P-3A Orions

Moves from Alameda to Moffett

Patrol Squadron 19 received its first P-3A *Orion* at NAS MOFFETT FIELD. Cdr. R. E. Burrell, commanding the unit, accepted the plane in August.

A test flight on the aircraft was made by a key crew for examination of the P-3A's inflight capabilities and its advanced navigation systems. Plane Commanders for the flight, LCdr. R. D. Miller and LCdr. B. B. Blackwell, noted that "the P-3A performs on a par with its reputation as the Navy's best anti-submarine patrol aircraft."

VP-19 is rapidly transitioning into the P-3A with extensive training of flight and ground personnel. At the same time, the squadron's home port was changed from NAS ALAMEDA to NAS MOFFETT FIELD.

The squadron now comes under the operational and administrative control of Commander, Fleet Air Wing Ten, recently commissioned at Moffett Field.

VF-14 Gets Phantoms

Trained with VF-101 at Key West

Fighter Squadron 14, commanded by Cdr. C. C. Buck, recently completed transitioning to the new F-4B *Phantom II* under the instruction of the VF-101 *Grim Reapers* at NAS KEY WEST. The *Topbatters* commenced training in June and finished on August 8th, more than three weeks ahead of schedule.

Fourth squadron to graduate from VF-101's CRAG, VF-14 follows VF-74, VF-41, and VF-102 in the Atlantic Fleet. Jacksonville is its home base.

Airman Wins Tracer Award

Trophy, Gift of Three RN Officers

At NAS NORFOLK, George W. Sloane of VAW-12 became the first aircrewman of his squadron to win the Tracer Trophy. It was presented to him by the squadron's commanding officer, Cdr. Arthur W. Motley, Jr.

The Tracer Trophy is a semi-annual award given to the outstanding enlisted aircrewman in the squadron. It was recently given to VAW-12 by three Royal Navy Officers who served on exchange duty from Great Britain's Early Warning Squadron 849: LCdr. John M. Barbour, Lt. Ronald E. Coventry and Lt. Michael J. Howitt.

VAW-12 flies the E-1B *Tracer* from which the new trophy derives its name.

MARINES AND NAVY COMBINE IN 'WINDUP'

COL. ELLIS *(r), points out the objective area to LCol. Madson (r), and Maj. Reese.*

HELICOPTER *loaded with landing force troops lifts from carrier Ticonderoga's flight deck.*

THE MARINE landing force waited aboard USS *Ticonderoga* (CVA-14) three miles west of San Clemente Island. On the flight deck, UH-34 transport helicopters were ready. "Our mission," explained LCol. Joe Tamulus of the 9th Staff Group, "is to neutralize the island . . . and destroy simulated missile, radar and communication capabilities. . . . We will employ regular ground tactics once ashore."

At 1300 on August 21st, Operation *Windup*, first of its kind for the *Tico*, hurled into action. Reserve units of the 56th Rifle Company, Bellingham, Wash., and the First Truck Company, Tulsa, Okla., began vertical envelopment of the objective area. In two hours the force of 33 officers and 241 enlisted men was airlifted by MAW-3 helos from MAG 36, Santa Ana.

The 9th Staff Group, USMC Reserve, Chicago, headed by LCol. E. Madson, planned *Windup*. The Landing Force Training Unit, Amphibious Base, Coronado, led by Col. G. W. Ellis, conducted the exercise designed as a special training problem for the reserves.

"The over-all coordination, between all the different units involved has been remarkable," said Capt. H. S. Roehl, C.O. of the 56th Rifle Company. GySgt. R. R. Winters of the 1st Truck Company added: "It's this type of training that gives us actual experience in vertical envelopment landings and helps recruiting and drill attendance because of interest it creates in men."

ASSAULT MARINES *rest on Ticonderoga hangar deck before start of Operation Windup.*

COMBAT READY *Marine jumps from helicopter after landing on San Clemente Island.*

LANDING FORCE *troops, heavily laden with gear, proceed in file to copter of MAG-36, 3rd Marine Air Wing. Unit contained 274 men.*

TICONDEROGA FLIGHT *deck crewman leads a battery of Marine Reserves to a waiting helicopter. The force was airlifted within two hours.*

. . . his tour started here

NEARING the end of the mission, they stopped at Hickam AF Base, Hawaii, stayed three days at Waikiki. On September 15, Furlong left Patuxent for another series of oceanographic surveys, to Fairbanks, Alaska, then to Norway and Greenland. On one flight leg, he will fly over the North Pole.

YOUNG NAVY MAN ON THE

It doesn't happen to every Navy man graduating from boot camp but Airman Charles Furlong is delighted it happened to him. Th first 17 years of his life were spent in St. Paul, Minn. After recru training at Great Lakes, he reported to NAS Patuxent River for hi first tour, with Project Magnet, his first flight in any type aircrat and—wonder of wonders—a three-month trip around the world

ACCORDING to Furlong, Papeete, Tahiti, was the most impressive port visited. "That's the place I'd like most to go back to," he said. In the six-day stay, he took a scooter tour of the island, enjoyed the "carefree people."

TIME TO

VERDANT is the word for Nandi in the Fiji Islands. Some natives watch as Furlong grabs still another shave. Fiji was a one-day crew rest layover. He stayed at the colorful Hotel Mocambo, and was serenaded by native combos.

FIRST STOP was Panama City. In his fist is a battery-operated electric shaver he found convenient throughout the months-long global aerial mission.

LIMA, PERU, fascinated Furlong during the six-day stay. Aboard the EC-121K, he is in charge of food, among other things, and is striking for AT. "I was pretty green when I started," he said. "If the pilot had told me that he couldn't take off until the coffee red light was on, I'd have believed him."

MOVE

FLY NAVY

YANKEE MUSIC is very popular in Rio de Janeiro, Brazil, Furlong found out. The plane arrived just after record waves piled sand 18 inches deep on the road adjacent to famed Copacabana Beach. Civilian clothes are uniform of the day for all Magnet personnel when they are visiting foreign countries.

!!! THIS WAS Furlong's reaction when he reached Capetown, South Africa, where the crew remained two weeks. They flew airborne geomagnetic survey flights on tracks that took them to 60°S., just north of the Antarctic Circle. They next flew to seldom-visited Great Britain's Mauritius Island.

YET ANOTHER thrill awaited him when the plane moved to Perth, Australia, for three days, then to Sydney for 25 more (and a 100-hour check).

ESSEX *joined the Oriskany class after Project 27A. She is shown after Ship Improvement No. 1. CV-9 got her angled deck in Project 125.*

CORAL SEA *was the last WW II-built carriers to be reworked extensively in the modernization programs; shown here after Project 110A.*

Evolution of Aircraft Carriers

THE TURBULENT POST-WAR YEARS

'There has been a spectacular advance in aircraft design technology. The transition from propellor-driven aircraft to jet power has been fast. We are now undergoing another evolution from subsonic to supersonic speeds at higher altitudes. . . . By modernization we have utilized our assets of World War II Essex class carriers to the maximum. This has been a military necessity in order to maintain an acceptable degree of combat readiness economically in about half the time required for new construction. Carrier modernization has been pushed vigorously.'—Adm. Arleigh Burke, U.S. Navy, CNO, 1957.

By Scot MacDonald

THE POST-WAR ERA was one of dynamic change. The aircraft carriers reflected that change with many modifications designed to equip them to operate the most modern aircraft capable of delivering nuclear weapons and launching guided missiles.

Technological developments were making the *Essex* class obsolescent. On June 4, 1947, the Chief of Naval Operations approved new aircraft carrier characteristics to be incorporated in an improvement program titled Project 27A. This was the first of a series of modernization efforts to modify the *Essex* carriers to meet changing operating requirements.

USS *Oriskany* (CV-34) was the first of the *Essex* class carriers modernized under Project 27A. She entered New York Naval Shipyard in October 1947. At spaced intervals, she was followed by *Essex* (CV-9), *Wasp* (CV-18), *Kearsarge* (CV-33), *Lake Champlain* (CV-39), *Bennington* (CV-20), *Yorktown* (CV-10), *Randolph* (CV-15), and *Hornet* (CV-12). These programs were conducted at Puget Sound and Newport News, in addition to the New York Navy Yard. The *Hornet*, last to be modernized under 27A, left the New York yard in October 1953.

The principal changes involved in the 27A project were directed toward a capability of operating aircraft of up to 40,000 pounds gross weight. The H4-1 catapults were removed and H-8's installed, permitting the launching of considerably heavier aircraft than the carrier had been capable of during the war years. The flight decks were strengthened and the five-inch guns on the flight deck were removed to decrease topside weight, to provide more deck space for parking planes, and to increase safety aspects of the landing area. A special weapon capability was given the last six of the nine carriers modernized under this project. Elevator capacities and dimensions were increased to accommodate heavier planes. And special provisions for jet aircraft were installed—such as jet blast deflectors, increased fuel capacity, as well as some modern jet fuel mixers.

Three of the ready rooms for pilots in these carriers were moved down below the hangar deck, relocating them from spaces directly under the flight deck. This increased pilot comfort and provided better protection. To get the equipment-laden pilots up to the flight deck, an escalator was installed abreast of the island. This provided a single route for pilots manning their planes; it prevented confusion from ship's company rushing up the normal access routes to man battle stations.

In April 1947, *Franklin D. Roosevelt* entered the yards on Ship Improvement Program No. 1, which provided her with a special weapon capability. Her sister ships, the battle carriers *Midway* and *Coral Sea*, followed. This program was also extended to the *Oriskany*, *Essex* and *Wasp*, which had not received the capability under 27A.

Almost a year before the *FDR* entered the yards, the first U.S. testing of the adaptability of jets to shipboard operations were conducted aboard, on July 21, 1946. Successful landings and

takeoffs in an FD-1 *Phantom* were made by LCdr. James J. Davidson. (For background on the Navy's first jet pilots, see NANEWS, March 1963, pp. 6-13.)

The Navy continued to experiment with heavier aircraft launchings from carrier decks. In March 1948, carrier suitability of the FJ-1 *Fury* jet fighters was tested on board the *Boxer* (CV-21) off San Diego. A number of takeoffs and landings were made by Cdr. Evan Aurand and LCdr. R. M. Elder of Fighter Squadron 5A. The following month, Cdr. T. D. Davis and LCdr. J. P. Wheatley made JATO takeoffs in P2V *Neptunes* from the deck of the *Coral Sea* off Norfolk. This was the first carrier launching of planes of this size and weight.

It was inevitable, then, that the Navy would introduce all-jet squadrons to carrier operations. On May 5, 1948, Fighter Squadron 17-A, equipped with 16 FH-1 *Phantoms*, became the first carrier-qualified jet squadron in the U.S. Navy. It took three days of operations to do it, but all squadron pilots, in addition to Commander Air Group 17, qualified on the USS *Saipan* (CVL-48), with a minimum of eight landings and takeoffs each.

Project 27A was originally intended for more than nine carriers, but development of the steam catapult and the prospective employment of more advanced types of aircraft made it apparent that this project had to be modified to meet future needs. Accordingly, Project 27C was initiated.

Hancock, Intrepid and *Ticonderoga* were slated for this program—later identified as Project 27C (axial deck). Most important of the changes was the introduction of the steam catapult developed by the British. In 1952, tests of the catapult installed in the Royal Navy carrier HMS *Perseus* were conducted at the Naval Shipyard, Philadelphia, at NOB NORFOLK, and at sea during the first quarter of the year. Reported NANEWS:

"The new catapult fared so well during the tests that the Navy has already begun an investigation into the adaptability of it to their new flush deck carrier USS Forrestal, which is now under construction.

"The new catapult, invented by a Royal Navy volunteer reserve officer, Cdr. C. C. Mitchell, O.B.E., of Messrs. Brown Brothers & Co., Ltd., Edinburgh, uses the principle of the slotted cylinder, and has no rams or purchase cables. A hook on the aircraft to be launched is connected directly to a piston which is driven along the cylinder by high pressure steam from the ship's boilers. A novel sealing device is used to keep the slotted cylinder steam tight.

"While the amount of steam required for sustained operation is large, tests have shown that the boilers can meet the demand without interfering with the ship operations."

HANCOCK WAS *the first carrier to receive the C-11 steam catapult. Note the TACAN "bucket" atop mast for homing, enlarged elevator, and the distinctive bridle catchers at end of catapults.*

The *Hancock* was the first U.S. carrier to receive the new "steam slingshot," designated C-11 by the U.S. Navy. On June 1, 1954, Cdr. H. J. Jackson, in an S2F-1, was catapulted from the *Hancock* in the initial U.S. operational tests. Throughout the month, testing continued. A total of 254 launchings were made with the S2F, AD-5, F2H-3, F2H-4, FJ-2, F7U-3, and F3D-2 aircraft.

In addition to the C-11 steamcat, Project 27C (axial deck) also provided for a strengthening of the flight deck. The number three centerline elevator was replaced with a deck edge type of greater capacity. Other improvements were made, in addition to those proved efficient in 27A.

Even as these changes were being built in the *Hancock, Intrepid* and *Ticonderoga*, the Bureau of Aeronautics proposed, in mid-June 1952, that a new design flight deck be installed in the *Antietam*. The previous May, both jet and propeller type aircraft were tested on a simulated angled deck aboard the USS *Midway*. The idea was originated by the British and proved very effective for them. *Antietam's* deck was to extend outboard on the port side from the normal flight deck,

ANTIETAM TESTS *British-designed angled deck in the Virginia Capes area in April 1953. Fifteen types of aircraft were used during evaluation period. Pilots were enthusiastic, for it eliminated barriers, barricades, and danger of parked planes at runway's end.*

thus allowing aircraft landings to be angled 10° off the ship's centerline.

Pushed through the guidance design stage by the Hull Design Branch of BuShips in early July, *Antietam's* new deck was completed in mid-December at the New York Naval Shipyard. At first called a canted deck, this term officially gave way to the more familiar angled deck by OpNav Notice 9020 on February 24, 1955. It also outlawed the use of "slanted" and "slewed" in describing the deck design.

In December 1953, BuShips *Journal* reported:

"The final detailed report on the evaluation of the canted flight deck installed in USS Antietam (CVS-36) reveals that the operational trials have met with a high degree of success. The canted deck aircraft carrier appears to provide the safest, most desirable, and most suitable platform for all types of aircraft—those currently in use as well as those still on the design board—and is superior to the axial flight deck carrier in these respects. . . .

"The canted flight deck on Antietam was finally installed at an angle of 10.5° to the centerline of the axial flight deck. The landing area of the canted deck is 525 feet long with a width at the landing ramp of 70 feet and narrowing to 32 feet, 8 inches, at the extreme forward end of the takeoff area. This gives the effect of 'flying into a funnel,' causing the pilot to head toward the canted centerline. This effect aids him in maintaining the flight and deck path which fully utilizes the complete length of the canted flight deck.

"Fifteen types of aircraft, both propeller and jet-propelled, participated in the tests which were conducted in four phases, extending from December 29, 1952 to July 1, 1953. A total of 4107 landings were made, including touch-and-go and arrested landings, during day and night operations. During the entire evaluation period there was no major accident and only a total of eight minor accidents, none of which could be attributed to the canted deck principle."

The advantages were immediately manifest. By eliminating the centerline elevators and using one or more deck edge elevators (not installed in the *Antietam*), more elevators would be available for bringing up spares from the hangar and striking "dud" aircraft below. Once landed, the plane could easily taxi onto a starboard deck edge elevator without impeding flight operations.

It was also possible to catapult aircraft and land them simultaneously, and to launch CAP and interceptors on short notice. This gave the carrier improved combat readiness.

The pilots were impressed. An extra margin of safety was given them by removing the danger of crashing into gassed and armed planes parked forward of the landing area. The BuShips *Journal* commented:

"The clear deck ahead on every carrier pass relieved the pressure on the pilot. Primarily for this reason, pilots who have flown from the canted deck are unanimous in their favorable enthusiasm. This was found to be especially true when Antietam's canted deck was rigged to simulate a CVE type carrier. Pilots flying AF type aircraft confirmed that part of the mental strain of carrier landings is relieved with removal of the barriers and that landings were much easier. . . .

"Fewer cross deck arresting pendants and arresting gear engines are required for the canted deck. It is considered desirable to keep the landing area as far aft as is practical and safe, yet far enough forward to decrease rates of descent. This can be accomplished only by limiting the pendants to a minimum commensurate with safety and picking optimum pendant locations. Fewer pendants also result in a decrease in topside weight."

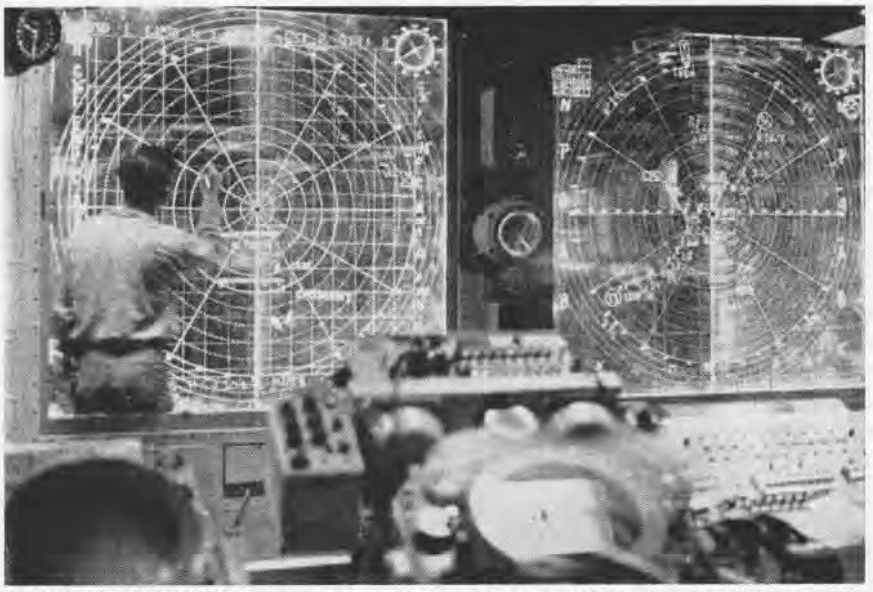
Project 27C (angled deck), which resulted from the *Antietam* tests and modified the original 27A, significantly changed the silhouette of the aircraft carriers. The canted or angled deck was installed and the hurricane bow of the original *Saratoga* and *Lexington* carriers reintroduced. The project also allowed for the improvement of the Mark 7 arresting gear by reducing the number of deck pendants by one-half and thereby cutting the ratio of arresting gear sheaves to two to one. The forward centerline elevator was enlarged. Air conditioning and sound proofing made the island spaces more comfortable and efficient. The latest advancements in deck lighting were also installed in these attack carriers.

Lexington, Shangri La, and *Bon Homme Richard* all received the improvements of this project and they were so successful that *Hancock, Intrepid* and *Ticonderoga* returned to the yards for this new conversion.

The trend extended, inevitably, to the *Midway* class. In September 1953, the Navy announced new modernization plans for these carriers under a new program called Project 110. In May 1954, the *Franklin D. Roosevelt* entered Puget Sound Naval Shipyard for the conversion. *Midway* followed in September 1955. These carriers received the best features of the 27C (angled deck) conversion which were incorporated in Project 110. Additionally, they had a modified steam catapult installed in the angled deck area; full blisters were added for maximum protection, liquid stowage, and stability, and the after starboard elevator was relocated to the starboard deck edge.

With the changes in carrier configuration ran a parallel change in missions and these changes were reflected in the redesignation of certain carriers as they appeared in the Navy Vessels Register.

On October 1, 1952, the very familiar CV and CVB designations went by the board. The ships were assigned the designation CVA, reflecting their reclassification as attack carriers. Prior to this, only the CV's were known as attack carriers, in the Fleet, to distinguish them from the CVB's. Antisubmarine Support Aircraft Carriers became a new classification in July 1953 and was applied to those attack carriers assigned to ASW; the following August 8, five CVA's were redesignated CVS's, ASW support carriers.



DECISION AND DISPLAY *room in first installation of Modular CIC is viewed in Oriskany. The concept proved so successful that it was later installed in Coral Sea and other aircraft carriers.*

There were no further changes in designations over the next two years, but in July 1955, *Thetis Bay* (CVE-90) became CVHA-1. This proved the first move in the eventual disappearance of escort carriers from the operational Fleet. The attempt to modify CVE's for a new role in helicopter vertical assault operations was abandoned when the experiment proved too costly. On May 7, 1959, the classification of 36 escort carriers, designated CVE, CVU, and CVHE, was changed to AKV, for Cargo Ship and Aircraft Ferry. New hull numbers were assigned. This ended the role of escort carriers as combat ships of the Fleet.

On December 30, 1957, USS *Saipan* (CVL-48), last of the light carriers, was decommissioned. On May 15, 1959, that designation was stricken from the register when the classification of four support carriers, CVS's, and seven light carriers, CVL's, was changed to Auxiliary Aircraft Transport, AVT.

The modernization of individual carriers reflected Navy thinking, Navy accomplishment, and Navy planning. The programs were successive steps in what somebody once called "a schedule of orderly retirement." As the carriers aged (some aged "faster" because of battle damage in WW II), they were transferred from the CVA designation

ORISKANY *was the first of the carriers to be reworked in the postwar modernization program. Angled deck was installed in Project 125A.*

MIRROR LANDING SYSTEM, *developed by British, was tested in Bennington by Cdr. R. G. Dose, C.O., VX-3. Bennington's C.O. congratulates.*

to the CVS, then to LPH and retirement, and it all was tied to new construction programs which made it possible to keep the number of operating CVA's up to the prescribed limits. As each new ship was acquired, it took the top position among the CVA's while the one in the bottom position moved to the top of the next lower class.

USS *Coral Sea* (CVA-43) was the last aircraft carrier of World War II design to be extensively reworked during the post-war modernization program. She entered the Puget Sound shipyard on April 15, 1957, and was recommissioned January 25, 1960. In the interim, changes made in her configuration were contained in Project 110A, a modification of the 110 of her sister ships, *FDR* and *Midway*.

The basic changes were the same as those in Project 110, but 110A added new features. Of the three deck edge elevators installed, for instance, one was placed on the port side near the LSO platform. This eliminated the hazardous arrangement of having an elevator contiguous to the landing area. It also simplified maintenance problems and provided the capability of operating all three elevators during flight operations.

Existing arresting gear was replaced with five Mk 7-2 pendant and barricade engines with the new sheave and anchor dampers. *Coral Sea* was the first to have installed, in the fantail area, a complete jet engine test facility; they are now installed in all new carriers. She had twice as much stowage for JP-5 fuel as her sister ships, over a million gallons, in addition to a 62,000-gallon capacity for avgas. And although *Ranger* was the first to have fuel centrifugal purifiers installed, she did not rely on them exclusively. When *Coral Sea* deployed to WestPac, she had four of them installed and did use them exclusively. During the first 8½ months of operation, she burned approximately seven million gallons of JP-5, according to Air Officer Cdr. D. W. Houck, and did not experience one case of contaminated jet fuel.

Modular CIC, a clock-like layout of communications, radar, and other CIC elements, had been tested in the *Oriskany* and proved successful. It was installed in *Coral Sea*, which became the second aircraft carrier to have such an arrangement.

The modernization program extended the lifetime usefulness of the *Essex*-class carriers built during WW II and permitted them and other class carriers to operate jet-powered aircraft of increasing designed power without compromising combat readiness of the Fleet. The important limiting characteristics of the planes operating from carriers are landing speed, landing weight and required end speed, and—in wooden deck ships—the wheel loading.

Many new developments have had a profound effect on carrier aviation. In August 1955, for instance, the constant run-out method of controlling arrestment was used in the Mk. 5 arresting gear installed in USS *Bennington*. Its primary advantage was the ability to arrest a plane with a minimum amount of hook loads. With the earlier pressure types of controls it was necessary to stop the aircraft in shorter run-out in order to take care of inadvertent overspeed of the aircraft. This put a considerable strain on the planes. The new system is set for the weight of the landing aircraft, so that a 60,000-pound plane would pull out no more wire than a 10,000-pounder.

Other pilot aids include TACAN (Tactical Air Navigation System) which gives pilots bearing and distance from a carrier, the British-developed mirror landing system (improved by the use of Fresnel lenses), and PLAT (Pilot/LSO Landing Aid Television).

THETIS BAY *(CVE-90) was redesignated CVHA-1 and started the phasing out of CVE's from the Navy's list of combatant ships. Here the ship is being converted for the operation of helicopters.*

MIRROR LANDING *system was first tested in the U.S. carrier Bennington in 1955.*

"We are limited by how far we can go in modernization programs by the age of the ship," said Adm. Arleigh Burke in 1957. "They are getting old. Their machinery is wearing out and they are becoming progressively more expensive to maintain. Like an old car, they must be replaced.

"The modernization programs have been the proving ground for the advances which have been made in carrier operating techniques. But the full combat effectiveness of these developments can be realized only in new construction."

Two years earlier, in 1955, USS *Forrestal* (CVA-59) was commissioned, the first of a new class aircraft carrier. It was a logical step in the evolution of one of the Navy's proven and powerful aircraft weapons systems—the modern ship-of-the-line in the Fleet.

'Big E' Wins Noted Award

Battle Readiness, Training Cited

USS *Enterprise* has been named winner of the Marjorie Sterrett Battleship Fund Award for fiscal year 1963. The carrier was among seven Atlantic Fleet ships given the award, which was established in 1917 by the Tribune Association, now the New York Herald Tribune, Inc.

A monetary award from the fund is presented annually to one ship of each type in the Atlantic and Pacific Fleets for excellence in battle readiness and training. The prize money is deposited in the recreation fund of the winning ships.

Adm. David L. McDonald, Chief of Naval Operations, made the following statement concerning the award: "To the officers and men of award winning ships, my heartiest congratulations for this achievement requiring your dedicated efforts toward improvement of the battle readiness of our Navy."

The USS *Enterprise* completed a tour with the Sixth Fleet in the Mediterranean and returned to its home port, Norfolk, last month.

Buffalos Join Dragoons

Canadian Unit Trains with VP-56

Some 60 members of the Royal Canadian Air Force engaged in joint airborne surveillance and anti-submarine warfare training exercises in late July with NAS NORFOLK's VP-56. The *Buffalos* of Maritime Patrol Squadron 404, led by squadron leader Arnold Lehn, were greeted on arrival by VP-56 C.O., Cdr. Charles G. Berkstresser, who heads the *Dragoons*.

Based at Greenwood, Nova Scotia, the visitors flew to Norfolk in two *Argus* aircraft which joined the host squadron's P-2 *Neptunes* in operations. The squadron is equipped with eight *Argus* planes and 500 personnel.

Formed in 1942, the Canadian unit was disbanded shortly after WW II, and re-established in 1951. The *Buffalos* flew *Lancaster* planes until 1958 when they were assigned the *Argus*.

PERHAPS THE CLOSEST *to a multi-service squadron is the Navy's Air Development Squadron Six based at NAS Quonset Point, R.I. At least, a look at the squadron's roster of personnel and aircraft assigned tends to bear this out. In addition to Navy inventoried planes, the squadron operates a Marine C-47 Skytrain and an Army helicopter. The roster includes Navymen, Marines, Army personnel, and civilian technical representatives. The unit flies in Deep Freeze.*

Marine Wins Purple Heart

Wounded While Flying in Vietnam

At MCAS KANEOHE BAY, Marine Capt. Virgil R. Hughes, a pilot with the Hawaii-based First Marine Brigade's Helicopter Squadron 161, received the Purple Heart for injuries sustained while flying a troop support mission in South Vietnam.

Capt. Hughes is the first Brigade Marine to be awarded the Purple Heart for injuries while serving in the Republic of Vietnam. He was wounded while serving on temporary duty with MAW-1 HS-162.

He received the award from BGen. C. A. Youngdale, Commanding General, First Marine Brigade.

Capt. Hughes was injured April 27, 1963, during a routine flying mission 43 miles south of Da Nang. Communist automatic fire penetrated the cockpit of his helicopter, hitting him in the leg and causing him to lose control of the aircraft and crash.

Another Marine helicopter in the area picked up the captain, his crew and passengers and carried them to safety.

Over Two Years in Orbit

Navy Satellite Provides Useful Data

A Navy experimental navigational satellite is still operating and providing useful information continuously, after more than two years in orbit. The 175-pound satellite, launched June 29, 1961, has responded to more than 500 commands from the injection station at the Applied Physics Laboratory of The Johns Hopkins University, Howard County, Maryland. The satellite has withstood the effects of the high altitude nuclear tests of July 9, 1962 which shortened the operating life of other satellites.

It was the first satellite to be powered by a nuclear power supply, the small lightweight radioisotope-fueled thermoelectric generator. It was also the first satellite to carry pick-a-back two other satellites in tandem: the Naval Research Laboratory's satellite to measure solar radiation and the satellite developed by the University of Iowa to measure the radiation of the Van Allen belt.

It was with data from the Navy navigational satellite that Robert Newton and associates of the space division of the Applied Physics Laboratory confirmed the ellipticity of the earth.

Developed by APL, the satellite is a part of BUWEPS' R&D program.

SURFACE SHIPS *of the Pacific Fleet began seeing a new tow aircraft in their gunnery sights for the first time in over 17 years in July when VU-7, based at North Island, became the first Pacific squadron to go operational with the US-2C. A converted Tracker, the US-2C has begun replacing the old UB-26J Invader as the primary tow aircraft for surface-to-air firing practice. The conversion was done by Progressive Aircraft Rework Branch of O&R, North Island.*

SELECTED AIR RESERVE

CDR. HARRY D. WARRENS *(2nd from left) of VP-722, NAS Glenview, checks operation of his crew as they work on P-2 at NAS Norfolk.*

MAJ. M. P. WIECZOREK, *HMM-263, New River, N.C., salutes Maj. J. E. Appelfeller of visiting VMO-4, its pilots and ground officers.*

Trophies Announced

On August 8, RAdm. George P. Koch, CNAResTra, announced that the winner of the 1963 Edwin Francis Conway Memorial Trophy is NAS OLATHE.

Winning the Conway Trophy means that Olathe was judged the most efficient unit in the Naval Air Reserve.

NAS NEW ORLEANS was named "the most improved" and thereby won the Chief of Naval Air Training Trophy for the year.

Noel Davis winners in all classifications in the competitions were named as follows:

Air Wing Staff	AWS-93, Willow Grove
NARMU	NARMU-891, Seattle
Attack Squadron	VA-831, New York
Fighter Squadron	VF-822, New Orleans
Patrol Squadron	VP-776, Los Alamitos
Transport Squadron	VR-833, New York
ASW Squadron	VS-892, Seattle
Helicopter Squadron	HS-772, Los Alamitos
WEPTU	WEPTU-661, Andrews
Intelligence Unit	NAIRU, Dallas
Naval Air Reserve Div.	NAS Grosse Ile

Awards are based on efficiency in training, operations, administration and recruiting/procurement efforts at each of the 18 stations. Standings of individual squadrons in the Noel Davis competition are taken into account in measuring the standings of the station.

Each man in a winning squadron or station is entitled to wear the E on his shoulder during the fiscal year.

Glenview to Norfolk

VP-722 of NAS GLENVIEW, commanded by Cdr. Harry D. Warren, spent two weeks on active duty in Norfolk with VP-56, commanded by Cdr. Charles G. Berkstresser.

The mission of VP-722 was training for ASW flights and familiarization with the operational commitments of an active duty squadron. The visiting squadron was also given an ORI by VP-56.

Since the squadron's organization in 1958, VP-722 has deployed to Jacksonville, Fla., Alameda and Los Alamitos, Calif., and twice to Brunswick, Me., for active duty training cruises.

LTJG. B. J. BORREABACH, *member of VP-833, and young friend at Argentia, look at drawing.*

Midsummer Iceberg Patrol

While their fellow easterners were getting ice cubes from their refrigerators, the men in VP-833, NAS NEW YORK, were looking for ice on the grand scale—icebergs!

Nineteen officers and 68 enlisted men left for Newfoundland on two weeks' active duty July 29. They operated out of Argentia where the July temperature is, on the average, 55 degrees. During the spring and summer thaw, pieces of ice break loose from huge glaciers and slip into the sea lanes creating a need for patrols.

While in Newfoundland, the squadron gave gifts they had brought from New York to the Sunshine Camp Children's Rehabilitation Center in St. John's.

VP-833, which operates EP-2E *Neptunes*, is commanded by Cdr. G. G. Gaugler, Jr.

MARTC Topples Safety Records

The Marine Air Reserve Training Command has achieved a rate of 1.21 accidents for each 10,000 flying hours for fiscal year 1963, a 45 per cent reduction from 1962's figure of 2.03.

This record represents the lowest rate in the history of Marine reserve aviation statistics.

Compared to 1962, major accidents were reduced from 18 to 10, resulting in savings of nearly two million dollars in lost aircraft costs. Only one fatality occurred during fiscal 1963 as compared to six the previous year.

The record of 79 consecutive accident-free days established in 1958, was broken twice this year. The new record is 130 days or four consecutive months of flying without an accident. In addition, the command had seven accident-free months in its jet operations and six without a mishap in over-all activities. In 1963, 12 detachments within MARTC established accident-free records as compared to five in 1962. These 12 units include 33 squadrons which operated for an entire year without mishap while flying 75,000 hours.

According to LCol. William T. Witt, MARTC aviation safety officer, "Based on presently available information and supporting figures, it appears that this record may contain the lowest accident rate of any Navy or Marine command."

Two Trophies for Lakehurst

NARTU LAKEHURST is the 1963 winner of two coveted trophies in the Naval Air Reserve Command, the Lockheed Recruiting Retention Trophy and the "Bear Trap" Trophy. The presentation was made during the annual Military Inspection, September 20-21.

CAPT. RONALD HOEL, *C.O. of VR-22 at Norfolk, swears his son Ronald into the Reserve.*

The first trophy is presented to the outstanding command by the Lockheed Aircraft Corporation. The scoring areas are in the categories of retention, veteran recruiting, command standing, etc., and the competition includes the 18 Naval Air Reserve stations and units.

RAdm. George P. Koch, CNAResTra, congratulated the squadron on receiving the Lockheed Trophy and commended them also for winning the "Bear Trap" Trophy. This trophy is given to the squadron achieving the greatest improvement over the previous fiscal year in Naval Aviation Officer procurement.

RADM. GEORGE P. KOCH *reads orders making him 11th Chief of Naval Air Reserve Training.*

New CNAResTra

Before the massed ranks of Naval Air Station and Headquarters Personnel, at Glenview, Ill., RAdm. George Price Koch became the Chief of Naval Air Reserve Training.

The Command includes 18 Naval Air Stations and Naval Air Reserve Training Units. It is responsible for the training of its 30,000 Reservists for mobilization in the event of a national emergency.

His most recent assignment has been Commander, Fleet Air Wings, Atlantic Fleet, a post he held from July 1, 1962 until his transfer to GLENVIEW.

Retirements at Atlanta

Four station officers have been retired at NAS ATLANTA, Marietta, Ga.: Commanders T. N. Blanks, E. C. Garner, R. O. Rechsteiner and T. D. Alexander.

Retiring on the same occasion was Capt. Bart Slattery, Jr., Director of Public Information at NASA's Marshall Space Flight Center, Huntsville, Ala. Before his tour at Huntsville in 1960, he was in the Office of the Chief of Information, Navy Department. From 1954 to 1958 he was head of *Naval Aviation News*. He will continue as head of information in a civilian capacity at the flight center.

LED BY CDR. DICK MORRISON *in his first command (3rd from left, 2nd row), pilots from VA-873 at NARTU Alameda, captured 14 E's in weapons deliveries on training duty in Yuma.*

IN A KNEELING *position, Cpl. William Wood fires his M-60 as 'copter moves in to land.*

AT THE SAME TIME, *port side area is covered by the copilot, armed with .45 grease gun.*

HMM-361 LEARNS VIETNAM LESSONS

ENEMY SMALL ARMS FIRE was the biggest single factor against taking a flight of helicopters into Viet Cong territory. One hit, lucky or well placed, could down a chopper. Fast approaches, short stays on the ground and maximum power pull-ups helped to stay aircraft losses," a Marine helicopter pilot recently reported from Vietnam.

Lessons on how to avoid enemy ground fire and counter with fire from helicopters are being taught to Marine air crews of HMM-361.

Commanded by LCol. T. J. Ross, the squadron, based at MCAF SANTA ANA, El Toro, Calif., has been engaged in ground and air firing of the M-60 machine gun and .45 grease gun.

The enlisted crewmen's weapon is the M-60 which is mounted in the doorway of the UH-34D Sikorsky helicopter. The mount is supplemented during training flights by a standard tie-down strap.

M-60 IS *so rigged with straps that crewman is able to fire horizontally or vertically.*

The crew chief wears the standard gunner's belt which is strapped around his waist and attached to a hook in the ceiling of the chopper.

With the M-60 mounted in the doorway, the cargo strap is hooked into the door frame overhead. This allows the gun to be freely swivelled.

The copilot used his lightweight .45 calibre grease gun to cover landing areas from the left side.

This unique stateside training has been underway at MCAS YUMA, and at field ranges at Marine Corps Base, 29 Palms. According to squadron spokesman, crewmen scored an impressive total of hits during strafing runs on electronic targets.

In addition to the aerial gunnery practice, the pilots and crewmen have checked out with the M-60 and grease gun on local rifle ranges to get the feel of the gun.

Pilots of the squadron have also received extensive training in low level navigation over unfamiliar territory and in the securing of landing sites, cooperating with Marine Pathfinders.

Helos Become Fishermen

Help Institute of Marine Science

Helicopters from NAS CORPUS CHRISTI marked a year of cooperation with the Institute of Marine Science in late August. The institute, a unit of the University of Texas, has been using the helos to drop sampling fish nets in a project designed to discover seasonal variation in the numbers and types of fish in Corpus Christi Bay. Data accumulated over the past 12 months will be tabulated for the Texas Game and Fish Commission.

After a net has been spread out on the ground at the air station, a helicopter picks it up, transports it to the test locale several thousand yards offshore, and drops it into the ocean. Boats from the institute then move in and draw up the net, forming a purse containing the fish.

Ichthyologist Bob Jones of the institute staff, reported that the biggest surprise in the tests was the constancy of the number of fish caught. He also said there has been a variation from month to month in the species of fish with mullet or menhaden ordinarily predominating.

Of the 24 helo flights made in the project, the Navy flew 19. Army aircraft performed the remaining five.

VT-2 Scores Record Rate

Had No Accidents in Fiscal 1963

Effort, teamwork and cooperation on behalf of all hands have accounted for the first accident-free flying year at NAAS WHITING FIELD's VT-2. This record, achieved in fiscal year 1963, marked a ⅓ reduction in the accident rate from the previous year.

Since February 13th of this year, instructors and student pilots have flown 26,724 sorties, accumulated 40,304 hours and made 105,000 landings.

Marine Top Guns Picked

AF Exchange Pilot One of Winners

Two F-8 fighter pilots from MCAS BEAUFORT were selected as the "top guns" of all 2nd Marine Air Wing units on the East Coast after competition held in August. Capt. Gerald P. Carr, VMF(AW)-122 and Capt. Andrew L. Patten, an Air Force exchange pilot serving with VMF-333, were awarded trophies by MGen. Richard C. Mangrum, Commanding General, 2nd Marine Air Wing.

Capt. Carr placed first in the low-level *Sidewinder* missile-firing event. Capt. Patten earned his trophy by winning the Ground Control Intercept exercise. They were selected following scoring of a "tie-breaker shoot-off."

The MAW-2 competition was in three segments; live *Sidewinder missile* firing; broadcast control intercepts; and ground control intercepts.

Squadron Re-enlists 13

VP-8's Rate Is Best in 20 Years

Patrol Squadron Eight, based at NAS PATUXENT RIVER, has recorded a 68.4 per cent re-enlistment rate in the third quarter of calendar year 1963. Career counselor H. E. Wethington, AT1, said this figure is the highest obtained in the squadron's 20-year history. Since July 1, 13 of 19 men have reenlisted.

The promise of schools and financial bonuses were deciding factors in achieving the record. STAR and SCORE program opportunities helped seven out of nine first tour sailors ship over.

VP-8 has done well in the past, too. Last year the squadron scored the second highest re-enlistment rate, 44.1 per cent, for East Coast patrol squadrons.

CDR. H. W. COOK, *VS-24 C.O., presents a Letter of Commendation from RAdm. E. E. Christensen, ComCarDiv 18, to W. J. Hilbert, AMS2, for outstanding performance of duty in connection with the Cuban Quarantine.*

VR-7 to Switch to C-130

Last Passenger Flight in July

This month VR-7 switches from the *Super Connies* to the C-130 *Hercules*.

The squadron, based at NAS MOFFETT FIELD, marked the end of a decade of C-121 passenger service for the Military Air Transport Service when the final passenger boarded flight 873-31 on July 31.

Commissioned in April 1953 at Hickam AFB, near Honolulu, Hawaii, VR-7 has since carried more than 1,500,000 passengers more than nine billion miles to all parts of the Far East.

VR-7, commanded by Capt. Edward W. Bergstrom, USN, has more than 500 officers and men on duty. In addition, a detachment is maintained at Tachikawa AFB, Japan. Since the end of passenger flights July 31, the squadron has carried cargo in the C-121's.

CHIEF COCHRAN INDICATES HOW DEVICE HE INVENTED GRIPS TIRE OF A VU-7 CRUSADER

VU-7 DEVICES FACILITATE MAINTENANCE

TWO ENLISTED men from VU-7, based at NAS NORTH ISLAND, have invented devices which account for smoother handling of the squadron's maintenance load. McDavid Cochran, AMSC, designed an entirely portable device which reduces tire wear on aircraft which undergo maintenance compass swings. George W. Owens, AE1, built an electric signal board which transmits the status of planes to three vital areas within squadron spaces.

Before Cochran's invention, compass-swinging procedures involved securing one of the aircraft's tires to a disc on the compass rose and locking a rail directly across the diameter of the disc. Pilots then turned the aircraft around the rose with the other main wheel rolling around the outside of the disc as men checked compass alignment. Too often, a tire would be damaged from being pushed against the rail.

The new device consists of a triangular metal piece which is secured to the rotating disc by three pins. In the center of the triangle, a series of concentric metal pieces forms a receptacle for the tire and acts as grip, locking it in place while the plane is turned and the compasses are checked. The squadron now uses this method regularly on its F-8A, T-33B and RC-45J type aircraft.

Owens' status board has become a great asset to pilots, duty officers and maintenance personnel in their efforts to keep an accurate and up-to-date account of VU-7's 38 aircraft.

It consists of a control console and three repeater boards located in the line shack, operations watch office and the maintenance control space.

By operating switches on the control console, located in the line shack, a man indicates on all three repeaters whether a plane is "up," "down," or "ready." Next to each plane number are three lights. When an aircraft is ready for flight, both the "up" and "ready" lights are illuminated, indicating the plane has been pre-flighted. If only the "up" light appears, the plane's work orders have been complete, but, even then, it still requires fuel, oil or pre-flighting.

Owens and helpers from the line crew spent 250 man hours to complete the project. The device utilizes a series-parallel circuit, 1,152 electrical connections, 576 wires, 45,000 ft. of wire.

AT SEA WITH THE CARRIERS

WHILE OPERATING *in the Mediterranean as a unit of the Sixth Fleet, these A-4 Skyhawks of Attack Squadron 83 passed in formation above the USS Forrestal (CVA-59) aboard which they were based. The Forrestal has since completed her Med cruise and returned to the U.S.*

ATLANTIC FLEET

Forrestal (CVA-59)

Helicopters were launched recently to air-evac an ill submariner from SS *Sirago* operating independently off the Virginia coast. Chief electrician Jack E. Bonner became stricken with acute appendicitis. When the two ships were within 40 miles of each other, one helo lifted Bonner from a small opening on the sub's main deck, and the second helo provided back-up. The patient rode into the helicopter in a specially designed litter. An appendectomy was successfully performed. According to Lt. Mel H. Sher, ship's surgeon, Bonner's appendix "surely would have ruptured within the next 24 hours—maybe sooner," had he not been given medical attention.

Saratoga (CVA-60)

It is hardly surprising to discover the name Cdr. Walt Zebrowski in this corner of NANEWS. He commands VA-34, based in *Saratoga*. Our August issue reported two X000th landings he made. Last month, we noted his 600th arrested landing in an A-4C. Latest word from the *Saratoga* is that he has reached another mark. He has qualified as a triple Centurion.

Impressive, also, is the number of night landings made by VA-32's X.O., Cdr. Al Barber. He made his 200th night landing in an F-8D *Crusader*.

Newest addition to the "Ten Thousand Trap Club" is Capt. Frederick T. Moore, Jr., commanding *Saratoga*. He qualified when an F-3H *Demon* of VF-31 logged the 72,716th landing made on the carrier.

While at Cannes, France, Cdr. F. T. Stephens relieved Cdr. F. C. Turner as Commander Air Group Three. Cdr. Stephens had duty aboard CVA-60 in 1960 when he was Air Boss.

Boxer (LPH-4)

This amphibious assault ship worked up some impressive statistics during the last fiscal year. Of the 365 days, *Boxer* spent 233 of them deployed, 156 of which were under way. She visited many Caribbean ports in that period, including St. Thomas of the American Virgin Islands; Kingston, Jamaica; Santo Domingo, Dominican Republic; St. John's, Antiqua; Bridgetown, Barbados; Fort de France, Martinique; Port of Spain, Trinidad; Ponce, Puerto Rico; and Port au Prince, Haiti.

She recorded over 13,000 helicopter and 169 fixed wing landings.

From her commissioning date, May 14, 1945, to the end of fiscal '63, she was underway 58,590 hours, or a total of nearly seven years of her 17 in operation. In logging this sea time, *Boxer* steamed 855,000 engine hours.

Randolph (CVS-15)

Approximately 250 Midshipmen boarded *Randolph* at Norfolk for this year's Midshipmen cruise.

Lake Champlain (CVS-39)

Taking advantage of *Champ's* yard period, Marines aboard proceeded to Quantico, Va., for a month's refresher course in basic combat skills. As the ship's yard period drew to a close, they returned to CVS-39, to resume regular duties.

While at Boston, *Champ's* personnel toured the Navy's oldest commissioned ship, USS *Constitution*. Talking to the 47 enlisted men serving aboard, they discovered that differences between the old Navy of *Old Ironsides* and the modern Navy of *Lake Champlain* were mainly ones of degree. Ten of the IX-20 (unclassified vessel) lifeboats would fit into one of the diesel-powered launches used as survival boats by the ASW support carrier.

For additional news of *Lake Champlain*, see page 36.

Independence (CVA-62)

After her six-month yard period at Norfolk Naval Shipyard, *Independence* completed the usual six-week shakedown cruise in the Guantanamo Bay area in just four weeks. Notably absent from the carrier's deck were A-1 *Skyraiders*. They have been replaced by A-4C *Skyhawks*. The only prop aircraft aboard are an E-1B *Tracer* and the ship's utility aircraft. The carrier is commanded by Capt. L. V. Swanson.

Essex (CVS-9)

Hanson Baldwin, military editor and renowned journalist of the New York Times, flew aboard *Essex* for a first-hand look at ASW capabilities. A graduate of the Naval Academy, he was greeted by RAdm. Donald Gay, Jr., ComCarDiv 18, and Capt. Joseph M. West, commanding the carrier.

The 113,000th arrested landing was made aboard *Essex* by Ltjg. Philip Unser and Ltjg. Frank Lewandowski, in an S-2D *Tracker*. Both Naval Aviators are attached to VS-39. The 11,000th helicopter landing was made by Ens. Meredith Merrick, co-pilot of an SH-3A *Sea King*, with Lt. Steve Burgess as the pilot. They are members of HS-9.

Another appendicitis case was reported when *Essex* surgeons operated on a 20-year old Federal German Navy seaman apprentice, Helmut Kindermann, from the German destroyer Z-3. An *Essex* helo, piloted by LCdr. William G. Forster and Lt. Victor Gordon, air-evacuated the patient from the destroyer some 85 miles away.

Franklin D. Roosevelt (CVA-42)

On her way to New York for a complete overhaul and drydock period, *FDR* had to stop at Bayonne, N.J., to have her mast removed. The entrance to Bayonne's harbor was shrouded in a dense fog which forced the ship to postpone her arrival for a day. When the fog refused to lift, it was decided the ship would attempt to go in anyway. Her huge bulk was moved skillfully and carefully into the harbor and toward the proper pier.

When the job was finished, *Roosevelt* slipped up the East River and under the Brooklyn Bridge. At low tide and with the mast gone, the ship passed under the bridge with at least 13 inches to spare.

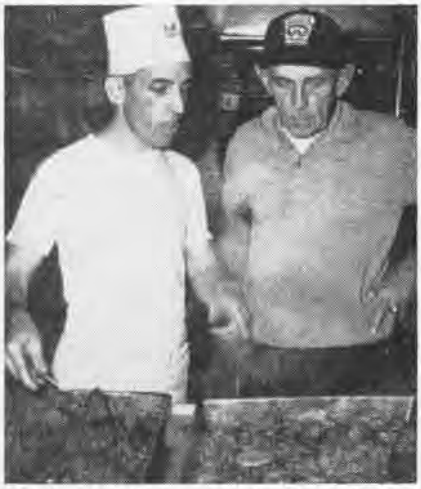
SQUADRON SAFETY *officer, LCdr. J. O. Yanaros, is commended by VAH-11's skipper*

The *Checkertails* of VAH-11 claim the title, "Safest Squadron in Heavy Attack Wing One." In a 12-month safety competition, the squadron had a perfect safety record. In that time, about nine months of carrier operations with *FDR* were conducted, seven of these in the Mediterranean. LCdr. John O. Yanaros, squadron Safety Officer, was officially commended by Capt. J. M. Tully, commanding HATWing-1, for "effectively conducting a dynamic accident prevention program."

Capt. Gerald E. Miller relieved Capt. Walter E. Clarke as commanding officer of *FDR* in ceremonies aboard.

Wasp (CVS-18)

It has been many years since *Wasp* operated as a CVA, but she recently had that opportunity while operating off the Virginia Capes in company with *Shangri La*. Nine jet aircraft were diverted from CVA-38 for an unscheduled recovery aboard *Wasp*.



RADM. GALLERY *is assured by Wasp's Wilfred Chouinard, CS3, the men aboard are well fed.*

In a professional manner, she took aboard six A-4C *Skyhawks*, two F-3 *Demons*, and one F-8 *Crusader*. Messages of congratulations were received from ComCarDivs 6 and 14, but the most treasured thanks came from *Shangri La*. It read: "You were an outstanding CVA. We are now your most ardent admirers."

When the new Argentine sail training ship, ARA *Libertad*, arrived at Boston for a six-day official visit, honors were exchanged between her and *Wasp*. A 21-gun national salute was exchanged in addition to a 13-gun salute honoring RAdm. Robert E. Riera, ComCarDiv 14, in the *Wasp*. RAdm. Riera was Senior Officer Afloat.

Wasp also had her share of officer trainees during the recent Midshipmen cruises. Aboard were 100 sophomores, juniors, and seniors from Yale, Rensselaer, Brown, Villanova, Pennsylvania, Holy Cross, Harvard, Rochester, and Columbia universities.

Enterprise (CVAN-65)

Ltjg. H. Parker Henderson piloted an A-4 *Skyhawk* to the 22,000th landing aboard the Enterprise. He is serving with VA-64. Cdr. J. S. Christiansen, Commander Carrier Air Group Six, greeted Cdr. Leroy A. Heath, commanding VAH-7, on his completion of the 1000th carrier arrested landing by the squadron during its current deployment.

Capt. Frederick Hayes Michaelis relieved Capt. Vincent P. de Poix as commanding officer of CVAN-65 while the carrier was anchored at Cannes, France.

PACIFIC FLEET

Kearsarge (CVS-33)

Plane handlers aboard the *Kearsarge* knew that they had done a day's work recently, and they did not have to be told that they did it well. During a normal day's air operations, an average of 100 aircraft are moved from

the flight deck to the hangar bays. On this occasion, they moved 1000 aircraft consecutively, without even a minor mishap.

Capt. Eugene P. Rankin, commanding *Kearsarge*, commended plane captains and aircraft handlers on their success. Hangar deck director, John H. Collins, ABAN, who directed the safe movement of the 1000th plane, was the first to slice into a commemorative cake.

Lt. Henry A. French of VS-29 made his 300th carrier arrested landing, in an S-2 *Tracker*. He logged this record during a single tour, 290 of the landings made on the *Kearsarge*. He is the son of Capt. Louis E. French, USN (Ret.), who commanded the carrier from its recommissioning in February 1952 until February the following year.

Kitty Hawk (CVA-63)

USS *Kitty Hawk* went in for a yard period at NAS NORTH ISLAND, but for a very short one, five weeks. Her boilers and propulsion machinery were overhauled and the engine room auxiliary equipment replaced, as needed. All four steam cats were pulled for inspection and piston change. Hangar deck crews picked up paint chippers and "had at" the three-acre deck. The side cleaner division worked from sunrise to sunset each day the ship was in port, paint rollers in hand.

Since June 6, 1960, Ltjg. Robert C. Shultz enjoyed the title Number One Plankowner. On that date he was the first man to report to the carrier. This was two weeks before the next man reported, and ten months before the ship was commissioned. He left *Kitty Hawk* last July to report to Fleet Antiaircraft Warfare Training Center at Norfolk for duty.

IN THIS FORMATION *are A-3B's, F-8D's, A-4C's and F-3B's from Carrier Air Group 15.*

Constellation (CVA-64)

Constellation did a turnabout recently when she reversed replenishment roles. It happened when USS *Ashtabula* (AO-51) and the carrier were involved in operational training exercises off the southern coast of Korea.

The provisions *Constellation* delivered to the fleet oiler—six tons of them—were received from the supply ship USS *Graffias* (AF-29). Owing to a tight time schedule and previous commitments, it was necessary for the supply ship to make her delivery via the carrier.

President Chiang Kai-shek of the Republic of China visited the *Constellation* when she was operating off the coast of Taiwan. He was accompanied by Madame Chiang and U.S. Ambassador Jerauld Wright. They came aboard by helicopter. He received full honors accorded a head of state, and was greeted by VAdm. Thomas H. Moorer, Commander Seventh Fleet, who extended the invitation, and other ranking military officers aboard.

Ltjg. Don G. Deluca of VA-144 made the 14,000th arrested landing on the *Constellation*, only one month after he made the same ship's 12,000th such landing. He piloted an A-4C *Skyhawk*.

Midway (CVA-41)

The 110,000th landing aboard *Midway* was made by Lt. F. M. Wicke of VF-24 in an F-8A *Crusader*. The landing was made during a rigorous Weapons Training Exercise. On the day before, Cdr. Edward Riley, commanding VA-23, made his 500th landing in an A-4E *Skyhawk*. Of these, 315 were made on the *Midway*.

Yorktown (CVS-10)

HS-4, the Navy's *Black Knights* squadron, reports 1000 night hours flown while attached to *Yorktown*,

WHAT ARE THEY LOOKING AT? *Men aboard USS Coral Sea (CVA-43) crowd the carrier's flight deck to watch the 18-plane pattern overpass printed above. The CVG-15 aircraft are based aboard the carrier. This unusual photo was taken by N. T. Calicchio, AN, serving aboard.*

recorded in late May, but only recently released. The record hour was logged when an SH-34J *Seabat* landed on May 27. The helo was piloted by Ltjg. Maurice R. Butts and LCdr. Don J. Hayes, with crewman R. E. Jones, AX2.

During the same cruise, the 3000th night helo landing on the *Yorktown* was made a short time later by LCdr. Don H. Picht and LCdr. Roger N. Kersch, with crewman P. L. McGeorge, SOC.

The 90,000th fixed wing landing was made by 1st Lt. Ogle D. Hopkins. USMC, of VMA-121. He piloted an A-4C *Skyhawk* during carrier qualifications off the coast of California.

Hornet (CVS-12)

The 78,000th arrested landing on the *Hornet* was made by Lt. Michael C. Hupp of VS-37 in an S-2D *Tracker* during ASW exercises off the coast of Hawaii.

Hancock (CVA-19)

Four Royal Navy Midshipmen from the British carrier HMS *Hermes* served aboard *Hancock* for an eight-week training cruise as part of an exchange program between the British and American navies. They assumed duties as junior division officers.

While *Hancock* was moored at Hong Kong, His Royal Highness, the Duke of Kent, visited the carrier and was given a tour of the ship by Cdr. Arthur C. O'Leary, *Hancock's* X.O. Before departing, Prince Edward visited Capt. T. D. Harris, Commanding Officer of the carrier.

Bennington (CVS-20)

When a seaman went overboard the *Bennington* recently, while standing starboard lifebuoy watch on the fantail, Capt. Charles E. Healy, commanding, expressed his concern over the tragedy, in a column published in the *Huk-Ster*, the ship's newspaper.

"The safety of the ship and her crew is the responsibility of the Commanding Officer at all times," he wrote. "It is *my* concern and it is a 24-hour concern. Any second of any day something can happen, someone can get hurt, something can go wrong. The only way I am able to meet my responsibility is to have every man on this ship realize it along with me.

"Working with aircraft, climbing ladders, cleaning the side of the ship, welding, painting, or smoking a cigarette, handling lines or standing watch, always be careful. Always be wide awake and know what you are doing. Think before you act, not afterward.

"The unfortunate loss of one of our crew proves again the importance of our daily drills and exercises. *Never* think that our continual drills and practices are routine. They are designed and held in order that all of us are prepared for any contingency, at anytime of the day or night.

"Constant vigilance is the watchword—constant practice is the key."

The 10,000th helicopter landing aboard USS *Bennington* was made last August by Ltjg. Alan W. Frelich with Lt. Michael O'Connor in the copilot seat. They are serving with Helicopter Anti-submarine Squadron Eight (HS-8) and were undergoing operational ASW training off Alaska. Commanding officer of HS-8 is Cdr. J. R. Evans.

Ranger (CVA-61)

The *Black Knights* of Marine Aviation, VMFA-314, completed qualifying all pilots in daytime carrier landings aboard *Ranger*, and more than half in nighttime landings. During this period, 1st Lt. Charles Bell logged the carrier's 57,000th landing. His RIO was Warrant Officer Larry Helber.

The *Black Knights* then flew to MCAS YUMA where they were tested in missilry, security, maintenance and administrative proficiency, along with all-weather air-to-air intercept capabilities. They then flew to NAS FALLON to qualify in napalm bomb and rocket weapons.

Last month, *Ranger* eased into San Francisco Naval Shipyard at Hunter's Point for major overhaul, her first since completion in February 1961. The forward portion of the angle deck will be expanded to accommodate the new A-5 *Vigilante*. A nose-launching system will be installed on two of the carrier's four catapults. She'll receive a new bridle arrester system, a new hydraulic barrier system, and new jet blast deflectors.

Ranger's signal bridge will be raised to make room for additional radar and communications equipment.

Below-decks work to be accomplished includes installation of a new liquid oxygen converter bench on the hangar deck; modifications to the ship's evaporator system, increasing capacity; construction of a new integrated air intelligence center; building a new space at the after end of the hangar deck to house an aviation engine and welding shop; construction of six new avionics shops; new berthing spaces; and the addition of an inertial guidance system for aircraft gyroscopes.

THIS IMPRESSIVE VIEW *of USS Hancock was taken as she left ConUS for her current deployment to the Far East. During her stay at Hong Kong, she hosted Prince Edward, Duke of Kent.*

COPIOUS COPY FROM A CARRIER'S CORRESPONDENTS

In one afternoon's mail the editors of NANews received what amounted to an impressive flow of copy, all originating from one aircraft carrier, USS *Lake Champlain* (CVS-39), all readable, all about routine events, all interestingly prepared. The day's mail from this ship was almost routine in itself, for, thanks to an aggressive public information program approved by Capt. Andrew L. Burgess, C.O., and implemented by Ens. Donald C. Rutherford, ship's PIO, enlisted journalists were encouraged to be original, to be prolific, to tell their ship's story in the best manner possible. This was not always easy, for the carrier entered Boston Naval Shipyard in April for a four-month overhaul. Neither chipping hammers, leave periods, nor lack of an operating schedule cooled the typewriters of the Navy reporters. The one-day's mail, edited below, proves this.

Comfort Is Carrier Deep

By D. H. Boxmeyer, JO3

The modern Navy is reflected in a few "creature comforts" being built into USS *Lake Champlain* during an overhaul period at Boston Naval Shipyard.

For instance, spanking new barbers' chairs are being installed in the crew's barber shop, along with an air conditioning unit, modern sterilization cabinets and larger mirrors. New washers and dryers are being installed in the ship's laundry, as well as a new mangle for flat work.

The crew will sit in newly upholstered chairs in the mess hall, select salads from a custom-built salad bar, draw milk from sparkling dispensers, and chomp on doughnuts made in a modernized bakery.

But when it comes time to bunk down at night, here is where the modern Navy draws the line on change; reveille is still held at 0600.

'Habent Sua Fata Libelli'

By Dennis O'Neil, JO3

"Books have their own destiny." Each Sunday morning Catholic personnel aboard aircraft carrier *Lake Champlain* receive a leaflet containing, on the outer two pages, a general explanation of some facet of their faith, and on the inner pages, religious information pertaining especially to *Lake Champlain* crewmen.

Chaplain Guy I. McPartland, a Catholic priest of the Carmelite order, initiated the bulletin program six months ago when he realized the few minutes allotted to the sermon during Sunday morning services were not enough for spiritual instruction.

Champ Band, a Boom Boon

By Richard F. Hill, JO3

"Everybody loves a band," says Cdr. John M. Danielsen, chaplain aboard USS *Lake Champlain* (CVS-39), "and sailors are no exception." Chaplain Danielsen supervises the ship's 20-piece band.

The *Champ's* band is composed of enlisted men from various rates and backgrounds; none is a rated musician. Personnel reporting, interested in music, are encouraged to join.

The band plays colors and provides music for smokers, parties, and the like. Nearby commands not boasting a band frequently request the services of *Champ* on special occasions.

The morale benefit to the crew can be seen under actual working conditions. Line-pulling seamen at refueling-at-sea evolutions are accompanied by the band, and pulled better by it.

Sea Probe by MIT Strobe

By D. H. Boxmeyer, JO3

"In about 100 years, the bottom of all the oceans will probably be photographed," says Dr. Harold Edgerton, Professor of Electrical Measurement at Massachusetts Institute of Technology. "It will be done through the use of stroboscopic light."

He described the light and its value to undersea exploration during a lecture to officers in USS *Lake Champlain* while the carrier was undergoing overhaul at Boston Naval Shipyard.

The uniqueness of photographing by stroboscopic light, Dr. Edgerton asserted, is the ability to make 500 exposures at very rapid intervals.

Photomapping the ocean floor will be a difficult and frustrating experience, he intimated, because of constantly shifting currents, crushing underwater pressure and total darkness of very deep ocean areas.

Experts Update Officers

By Dennis O'Neil, JO3

What's new in the world?

Determined that officers aboard USS *Lake Champlain* (CVS-39) would be kept *au courant*, Executive Officer Cdr. Robert L. Wolfe invited various experts to lunch aboard, and requested they give a short talk on their specialties.

Dr. Dwight W. Batteau was first to respond with a lecture on practical uses of sonar. In succeeding weeks, Professor George W. Blackwood spoke on presidential politics from a political scientist's point of view. Dr. Gerald S. Hawkins outlined recent, little-known developments in space research, and Dr. H. E. Edgerton spoke on stroboscopic photography.

Cdr. Wolfe hopes to continue the series when *Champ* returns to sea.

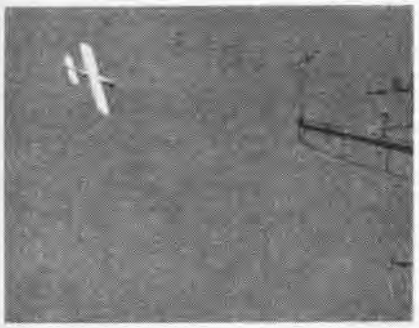
And Then There Was One

By D. H. Boxmeyer, JO3

The Warrant Officers' pine-panelled mess aboard USS *Lake Champlain* (CVS-39) is no longer the gathering place for some of the Navy's oldest and wisest former enlisted men. It is now used for meetings, courtsmartial, and group seminars.

Lake Champlain's sole remaining man with a broken gold stripe on his sleeve is Chief Ship's Clerk George Massey. He now eats in the officers' ward room, but still has a nostalgic word or two for the fraternity of the Warrant Officers.

There is a kinship, a familiarity between Warrants, he explained, and he regretted the need for closing the mess aboard the *Champ*. "But," he added philosophically, "the Navy is changing all the time to best suit its own needs."



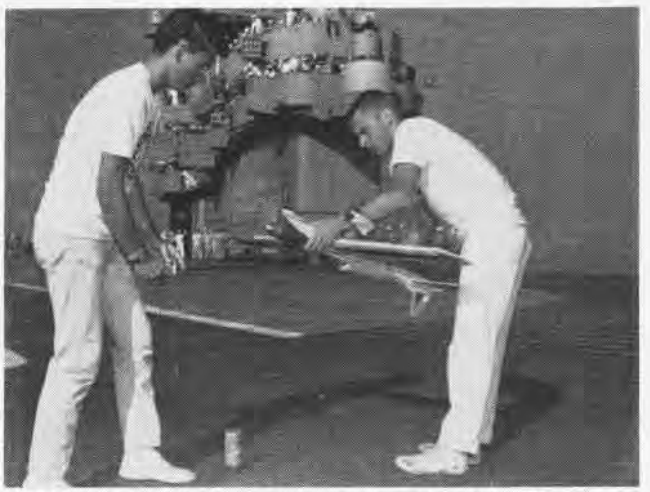
NATIONAL MODEL AIRPLANE CHAMPIONS MEET AT LOS ALAMITOS FOR A WEEK OF CONTESTS TO ESTABLISH NEW RECORDS

RICHARD CHILDS *launches a Nordic A-1 glider during model competition at Los Alamitos.*

AIR FORCE *Capt. Jack Bomar sets his pontoon tipped model in Los Al's man-made pond.*

STEVE MUELLER, *13, shows Cdr. Paul Boyer, Jr., his plane which set a new national record.*

WITH G. D. GIDDENS, *Union Carbide Consumer Products Co., which sponsored the Junior Combat event, are the winners with their planes.*



PREPARING TO LAUNCH *a model stunt plane aboard USS Lexington at NAS Pensacola are John Davis (L) and Jim Ketterer, both '63 winners.*

TWO WILDLY screaming airplanes, "piloted" by teenagers, darted at each other in combat. Marty Klimaitis, 15, and Daniel Jones, 19, were the aces. Both were entrants in the 32nd National Model Airplane Championships held at Los Alamitos in August.

The model competition, which lasted a week, attracted over 1000 pilots, young and old, in national championship events. The combat event, where the model craft dive at each other in an attempt to cut a paper streamer from the tail of one another, was only one of the varied categories in which some 7000 planes were entered. The meet is sponsored by the Academy of Model Aeronautics, Washington, D. C. and hosted by the Navy.

Presentation of the championship awards was made by VAdm. Fitzhugh Lee, Chief of Naval Air Training. A few days later the 17 winners were guests for a cruise aboard USS *Lexington* at Pensacola.

Special features on the two closing days of the meet were the shows put on by the *Blue Angels* and *Chuting Stars.*

JOHN DAVIS *gives a stunt flight demonstration aboard the training carrier Lexington.*

No Mishap Mars Its Year

VA-43 Has a Proud Safety Record

Attack Squadron 43 recorded an accident-free year for fiscal year 1963. Squadron instructors and pilots under training totalled 14,000 hours for a 365-day period without mishap. The mission of the squadron makes such an accomplishment impressive.

Responsible for training fledgling Naval Aviators in operational flying, VA-43 must qualify these pilots in all phases of Fleet operations before they join one of the Atlantic Fleet attack squadrons. Endless hours of ground training, pilot pre- and post-flight briefing with constant emphasis on the safety aspects are required to achieve this. Constant and unremitting stress on safety is absolutely essential.

During the past year, the squadron has carrier-qualified pilots on the USS *Enterprise, Intrepid, Randolph, Independence, Lexington, Saratoga, Forrestal* and *Franklin D. Roosevelt*, amassing 1062 carrier landings during both day and night operations. Extensive training is also provided in bombing, rocketry and low altitude navigation when, each month, a group of instructors and students deploy to Yuma, Ariz.

Yet this is only part of the story. Although accident-free records are computed on a fiscal year basis, the squadron logged 26,000 hours, or close to 6000 days since its last accident.

FLY NAVY *was given wide TV coverage August 11 when it appeared on the barge used for news media and officials during Seattle Seafair Hydroplane Trophy races. Cdr. O. R. Noetzelman, NAS Seattle, and Public Works Department were responsible for the big sign.*

VR-24 Pulls Up Stakes

Support Unit Goes to Rota, Spain

Ever since July, Fleet Tactical Support Squadron 24 (VR-24) has been phasing down its operations from its Kenitra, Morocco, base. The VR-24 detachment in Naples, Italy, has not been affected; it will continue to operate from Capodachino Airport as before.

The move to Rota, Spain is to be completed this month. The "phased" movement plan minimized interference with the carrying out of the primary mission of the squadron. It also held down the problems involved in moving squadron personnel and their dependents.

Calling itself the "World's Biggest Little Airline," VR-24 has compiled an enviable record over the years of operation at Kenitra. For example, it has in one month logged 284,000 flight miles, the equivalent of 11 trips around the world. Its planes have landed safely in 85-knot winds, and its crews have unloaded 19,000 pounds of cargo in 47 minutes.

Never in 17 years of operation has VR-24 incurred a fatality. The squadron earned two Safety Awards in fiscal year 1962, the ComNavAirLant Safety Award and the CNO Safety Award.

Editor's Corner

HOW TO AVOID THE FREEWAYS. Sgt. John Finneran, attached to AirFMFPac, El Toro, has solved the major problem that faces all military men assigned to southern California for duty—how to avoid the fumes and frustrations of driving on the freeways. Sgt. Finneran runs to and from work from his Santa Ana home. The route is either 11 or 13 miles, depending on which roads he uses. (Pedestrians are not allowed on the freeways.) The Marine says he has trimmed 30 pounds from his weight, may try his feet in the Boston marathon next year. Autoists are a problem sometimes, he admits. "Sometimes people are determined to run me down."

One Man in a Community. When it was time to pick its outstanding enlisted man for a community honor, VA-126 proudly selected Parachute Rigger First Class George Schissler. Here's why: Schissler is San Diego's District Commissioner for Boy Scouts with more than 1400 scouts under his jurisdiction; he is active in the PTA, the Veterans of Foreign Wars, Chamber of Commerce; he has qualified as a "gallon a year" blood donor in Red Cross drives since 1953; served as a swimming and water safety instructor; served as organizer and manager of Little League teams; headed a ship's drive that raised $40,000 for a crippled children's fund. As a parachute packer, Schissler has batted 1.000. Pilots have made 23 emergency jumps using his chutes, all successful. The squadron named him Sailor of the Year, sent him to the San Diego Chamber of Commerce's First Annual Outstanding Enlisted Man's Recognition Luncheon.

COINCIDENCE OF THE MONTH. Ejected from his disabled *Skyhawk* off the northeast coast of Canada in July, Lt. David Osburn was plucked from the ocean by a helicopter attached to the USS *Newport News*. The rescue pilot's name? Lt. Charles Osborne.

Wet Feet, Yet! Publishing a notice about O Club pool restrictions, the Corpus Christi *Beam* reports, "Children under 16 are not permitted in the deep end of the pool from 1130 to 1300 on weekdays; this is so that 'Dad' who has only a short lunch hour may have an opportunity to swim without the patter of little feet on his head."

BRAVES AND SCREAMING EAGLES. After performing at an Idaho centennial celebration in Pocatello recently, the *Blue Angels* flight demonstration team and the *Chuting Stars* parachute team were inducted into the Pocatello Indian Tribe.

The *Blue Angels* were dubbed, "Warriors Who Ride Screaming Eagles in Crooked Circles, scare-um many tribes." The *Stars*, appropriately, were named "Braves Who Hang in Sky from Big White Clouds."

Of Time and the Jetstream. In 1947 Ens. C. V. Merrell was pilot of an SB2C *Helldiver* and W. E. Matthews was his aircrewman. In July 1963, Cdr. C. V. Merrell, C.O. of VF-143, had the same W. E. Matthews (now Chief) as a back seat passenger. Their latest ride was in the F-4B *Phantom II*. While airborne, the commander re-enlisted Matthews for his fifth tour of duty. He is Maintenance Chief for VF-143 aboard USS *Constellation*.

NO TUB NEEDED. In the HU-1 Newsletter, a detachment report noted that the Japanese rainy season had started. "We don't take showers before going on liberty now," the reporter said. "We just take along soap and shower in the liberty launch."

Oceana Visitor. Douglas Corrigan, who startled the world in 1938 with his "wrong way" flight across the Atlantic, visited NAS OCEANA recently after a rare public appearance in New York City. Corrigan, now operator of a California orange grove, had not visited the Norfolk area since his return to America following his transocean flight. He visited with Tom Pearson, a Technical Representative with Curtiss-Wright attached to CVG-8, and his former mechanic, Lon Halbleib, now a resident of Virginia Beach.

BOILER NUMBER NINE? *Shangri La's* PIO office received an anonymous letter which contained some rather startling information, at first glance.

"Contrary to popular belief," the note stated, "*Shangri La* has nine (9) boilers and not just eight (8) as do all the other *Essex*-type carriers."

After explaining that the ship has eight conventional boilers that power the ship, the writer divulged the location of the ninth one. "Boiler number nine is a very special type that empowers the men of Main Control to do their jobs in an alert and efficient manner. Boiler number nine is Main Control's coffee pot and it makes the best coffee on board ship."

(Turns out that the writer is technically correct; the water used by Main Control is drawn from the de-aerating feed tank, which reputedly contains "the hottest and purest" on the ship. The tank has its own stencilled label, "No. 9 boiler.")

Fish Story. For two years while attached to ComFAir WHIDBEY, Yeoman First Class Bob King tried his hand at salmon fishing in Puget Sound, using the standard salt water fishing rigs. Result: no fish. This year, he hied up the Skykomish River to shallow water, where no salmon had ever been caught. Result: two salmon. He used a fresh water rod and four-pound test line which held up through a 45-minute fight with a 20-pound king salmon. Skykomish natives told him the fish must have been stranded up river during a high-water period.

WHAT KIND OF BIRD ARE YOU? In the El Toro *Flight Jacket*, SSgt. Sam Stimson published the following definitions of drivers in connection with a safe driving campaign:

Half-blind loon—drives with a dirty windshield.

Gawking booby—gazes at girls while driving.

Cross-walk creeper—one who cheats on corner takeoffs.

Ruffle-fendered tailgater—one who drives too closely to the bumper ahead.

Nocturnal dimwit—one who drives at night with only his parking lights lit.

One-eyed nighthawk—motorist who has only one headlight.

Migratory weaverbird—one who constantly changes lanes.

Torpid hi-way creeper—drives at subnormal speeds on expressways.

One-winged roof clutcher—one who "needs just one hand to drive with while the other holds the roof in place."

LETTERS

SIRS:

Oops! We led you wrong! NANEWS was kind enough to print the item on page 3 of the August 1963 issue concerning the Maintenance Training being conducted on the E-2A and P-3A weapons systems.

There was, however, a slight mix-up in the last paragraph of the article. Instead of the 90 and 82 detachments listed in the article, we have only one E-2A Detachment located at NAS North Island, San Diego, Calif., and two P-3A *Orion* Detachments at Moffett Field, Calif., and Patuxent River, Md.

The confusion apparently occurred because of our statement that these new detachments raised the total number of Naval Air Maintenance Training Detachments in our entire command to the new figure of 90 detachments. Sorry that we misled you. We'll be more explicit in the future.

G. J. SCHNABL, ADJC

NAMTRAGRU
NAS Memphis

SIRS:

On page 14 of the July 1963 issue of your magazine, it is stated that "To the best of our knowledge, AEWRon 13 is the first in Naval Aviation to have an individual unit flag." We, the officers and men of Airborne Early Warning Squadron Four, challenge that statement.

As of 31 October 1962, the *Hurricane Hunters* have had their own squadron flag. It is proudly displayed with the National Ensign on the squadron flagpole and used in all appropriate ceremonies.

The white nylon flag appliqued with the squadron insignia was first designed by Ltjg. M. H. Henry of Weather Squadron Two.

Lt. Henry's design embodied the basic features of the mission of hurricane reconnaissance. The background is composed of a gray cloud on a field of white; a green shield; and a sea of blue. The large gray cloud represents a cumulo-nimbus cloud formation that is typical of tropical storm formations. The green of the shield is symbolic of rain as denoted on weather maps and charts. The turbulent blue sea across the bottom is another quality of a hurricane. The double red flags with square black centers, located in the lower left hand corner of the shield, are internationally recognized flag signals for hurricanes.

Also, in the upper right hand corner of the shield is an eye. It represents the "eye" of a hurricane, the goal of the search plane. Across the shield is a bolt of lightning, indicative of the severity of the type weather through which the pilot must fly his aircraft.

At the top of the shield are the gold wings of an Aerographer's Mate. These wings denote the importance of the "flying weathermen" to the mission of the squadron. Below the green shield, imposed on the blue sea, is found a white ribbon pennant that bears the name by which the squadron has become known around the world, *Hurricane Hunters*.

This emblem was considered so indicative and applicable to the mission of hurricane reconnaissance that when Weather Squadron Two was redesignated as Airborne Early Warning Squadron Four, the insignia was retained as the official emblem.

RONALD R. MORTALI, LT.

VW-4

CLAIMS TO BE 1ST SQUADRON WITH FLAG

EVOLUTION OF AIRCRAFT CARRIERS

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

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

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

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

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

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

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

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

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

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

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

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

The Wartime European Carriers—May 1963, pp. 30-33

SIRS:

The Naval War College, in furtherance of its mission to prepare officers for higher command, offers extension (correspondence) courses designed to extend the educational facilities of the Naval War College to officers of the military services who are unable to attend resident courses. The officer who applies himself to these graduate level, subjective type courses can gain a commendable knowledge of those fundamentals, military and non-military, which are so essential to a proper understanding of the art and science of modern warfare.

All Naval War College Extension Courses have been recently revised to provide a more effective extension program by accomplishing the following major goals: The courses have been updated to more nearly parallel the resident course program and to reflect the latest changes in organization, weapons systems and international affairs within the limit of security requirements; individual installments require less time for completion; and the courses have been designed to better fit the needs of the busy active duty officer.

The courses given are: National and International Security Organization; Military Planning; Command Logistics; Naval Operations; International Law; International Relations; Selected Reading, International Law: International Relations; Strategic Planning; and Counterinsurgency.

The courses in Military Planning and Naval Operations are of particular interest to officers destined for operational or planning staff duty. The other courses are of a broader nature and all constitute good preparation for staff and command billets. Bupers Instructions 1500.49 and 1570.4 furnish further information in regard to courses offered.

Officers of all services, active lieutenant and above, or inactive lieutenant commander or above, may make applications as follows: If active, a letter via Commanding Officer, or if inactive, letter via Commandant or other command maintaining record to Naval War College, Newport, Rhode Island.

Your publication, NAVAL AVIATION NEWS, a progressive, timely and widely disseminated periodical, is a most effective means of "getting the word" to Naval Aviators, both afloat and ashore.

J. C. SMITH, CDR.
Acting Head, Extension
Education Department

Naval War College
Newport, Rhode Island

SIRS:

The annual conference of the Naval Enlisted Reserve Association will be held at the International Inn, Washington, D. C., on November 1 and 2, 1963. It is hoped that there will be a good turn-out. Anyone wanting further information should write NERA National Headquarters, Box 7111, Apex Station, Washington 4, D. C.

DUNCAN FORSYTH, JR.
National Vice President

SQUADRON INSIGNIA

The 'Fighting Redcocks' of VA-22 celebrated their 15th birthday in July. Through the years, they have fulfilled assigned missions with Corsair, Panther, Cougar, Fury and its current Skyhawk aircraft. Once an East Coast unit, the squadron fought in Korea as VF-63 and became VA-22 in 1959. Now based at Naval Air Station Lemoore, California, the 'Redcocks' have Cdr. E. W. Abbott for their commanding officer.

IT'S THE NEWS, 6 TO 1

Who's the slowest man here? Obviously, he's the one NOT reading Naval Aviation News. When the first Deep Freeze support flight from Christchurch reached the wintering-over party at Antarctic headquarters, the others beat him to the mail sack and accumulated copies of the News. Does your unit receive enough copies of the News? (One copy for each 10 readers.) For more, write to the Chief of Naval Operations, DCNO(Air), Op. 05A5, Washington 25, D.C.

For a personal copy to your home or to a friend, send $2.50 check or postal money order ($3.50 for foreign mailing) for a year's subscription to the Superintendent of Documents, Government Printing Office, Washington 25, D.C.

NAVAL AVIATION NEWS