# naval aviation news

AUGUST 1981

Photo by Chuck Bohner
McDonnell Douglas

A Navy F-14 gets a drink from an Air Force KC-10 in recent compatibility tests.

# naval aviation news

**Sixty-Third Year of Publication**

**Vice Admiral W. L. McDonald** Deputy Chief of Naval Operations (Air Warfare)

**Vice Admiral E. R. Seymour** Commander, Naval Air Systems Command

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**COVERS — Front, SH-60B prepares for hookup to the RAST system aboard USS McInerney. Back, final landing phase as viewed from McInerney's helicopter control tower.**

**Features**



**Departments**



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From the

# EDITOR'S NOTEBOOK

This month *Naval Aviation News* honors Rear Admiral William A. Moffett, first Chief of the Bureau of Aeronautics and a forceful advocate of Naval Aviation. He appeared on the scene at a time when the future of Naval Aviation was in question, and provided a strong unwavering leadership while under fire from opponents within and without the Navy. Although not a Naval Aviator himself, he was the first Naval Aviation Observer and spent many hours in the air accumulating as much firsthand knowledge as he could. Naval Aviation could not have asked for a more dedicated champion.

Moffett was a great supporter of the airship and believed it could play an important part in naval warfare. It is ironic that a flight in one of these behemoths cost him his life and that the tragedy marked the beginning of the end of a concept he had fought so hard to nurture.

On the evening of April 23, 1933, the airship *Akron*, largest in the world, left NAS Lakehurst, N.J., and flew westward toward Philadelphia. Then, making a large lefthand arc which took her over Wilmington, Del., and southern New Jersey, she swung to the northeast in the general direction of Lakehurst. There were violent storms in the area and the commanding officer, Commander Frank C. McCord, attempted vainly to find an area where he could operate safely until the bad weather abated. There seemed no respite over land or water.

At 2900 *Akron* was observed from the Coast Guard Station, Barnegat Inlet, crossing the coastline and heading out to sea. Thirty minutes later, buffeted by winds and violent downdrafts, she crashed into the ocean.

Four survivors were picked up by the German motorship *Phoebus* but one of these died of injuries a short time afterward. Seventy-three men, including RAdm. Moffett, perished with the airship. It was the worst aviation disaster that history had yet recorded.

Despite much media coverage and considerable public concern, a Congressional investigation recommended continued development of the airship concept including the commissioning of *Macon*. That airship, a virtual replica of *Akron*, was already in existence and had been christened by Mrs. Moffett less than a month before the Admiral's untimely death. The committee also called for a replacement for *Akron* and the construction of a new training airship. These latter two recommendations never came to fruition. The United States was then in the midst of the great depression and money was tight. Perhaps more important, public confidence in the airship had been badly shaken by the tragedy.

*Macon* crashed on February 13, 1935, off Point Sur, Calif., with two fatalities. For all practical purposes this marked the end of the rigid airship in the U.S. Navy. There was no Moffett to take up the cause and as WW II approached, the expense of such machines led U.S. planners to concentrate on other vehicles which had, in their view, proven themselves more reliable. Lighter-than-air advocates did enjoy a revival of activity in the form of the blimp which lasted some 20 years. Eventually, it too fell from the inventory of modern naval weapons.

The controversy over the practical usefulness of lighter-than-air craft is still with us and will, perhaps, never be resolved satisfactorily. Could a man like Moffett have prevailed where others could not? Is there a forceful advocate today who can make a compelling case for the application of LTA to military or even commercial pursuits? Or is it all just another colorful and exciting chapter of Naval Aviation history?

# DID YOU KNOW?

**McClusky Award** VA-65 is the recipient of the Admiral Clarence Wade McClusky Award for excellence among attack squadrons in combat readiness, tactical and weapons system development, aviation safety and personnel retention. The *Tigers*, home-ported at NAS Oceana, Va., were the first to receive the TRAM-equipped A-6E with laser designator and infrared sensor. Led by Commander J. W. Prueher, the squadron is preparing for an upcoming deployment aboard *Eisenhower*.

The Vought Corporation-sponsored award is in memory of the air group commander who distinguished himself in leading a bombing attack which put four Japanese carriers out of action in the Battle of Midway, and in leading other repeated aggressive attacks upon the enemy, which helped to turn the tide of the war in the Pacific.

**Isbell Trophy** The 1981 Captain Arnold Jay Isbell Trophy for excellence in air antisubmarine warfare has been won by VS-22, VP-16, HS-7 and HSL-34 in the Atlantic Fleet, and VS-38, VP-46, HS-2 and HSL-37 in the Pacific Fleet.

The award is sponsored by the Lockheed-California Company and is named for the distinguished antisubmarine commander under whose leadership planes and escort carriers operating in the Atlantic during WW II developed into a powerful combat force. Capt. Isbell was killed in action in 1945 in the Pacific theater while serving aboard USS *Franklin*.

The trophy was established in 1958 to motivate superior performance of ASW capabilities and to present tangible awards to those squadrons judged to be the best during each 12-month competitive cycle.

**Bronze Hammer Awards** The 1980 CNO Self-Help Bronze Hammer Awards were presented to winners and runners-up in the following four categories: 1. enlisted allowance greater than 1,000 with a construction battalion unit (CBU) in the immediate area; 2. enlisted allowance less than 1,000 with CBU; 3. enlisted allowance greater than 1,000 with no CBU; and 4. enlisted allowance less than 1,000 with no CBU.

1. Winner: NAS Memphis, Tenn.
   Runner-up: NAS Alameda, Calif.
2. Winner: Naval Security Group Activity, Northwest, Chesapeake, Va.
   Runner-up: Naval Weapons Station, Concord, Calif.
3. Winner: Naval Training Center, Orlando, Fla.
   Runner-up: Naval Education and Training Center, Newport, R.I.
4. Winner: Naval Support Activity, Souda Bay, Crete
   Runner-up: Fleet Activities, Sasebo, Japan

A special award was announced for Naval Security Group Activity, Augsburg, Germany, a tenant command on a U.S. Army installation, for renovating berthing and lounge spaces.

The annual award recognizes those activities which have made the most progress in self-help improvements using available resources. Achievement, in general, is judged on the priority of attention given to personnel support facilities, the quality of completed improvements, the ingenuity exercised in execution of the program, and the command's support of the program through funding, manpower, material, etc.

## First Space Shuttle Payload

NASA scientists and engineers are making preparations at Kennedy Space Center, Fla., for installation of the first payload to be carried into space aboard the Space Shuttle during STS-2, its second test flight, now scheduled for this fall. The payload is designed to demonstrate the Space Shuttle's capability as an operational space platform for scientific and applications research. The experiments are concerned primarily with remote sensing of land resources, atmospheric phenomena and ocean conditions.

Some experiments will include an imaging radar to help test advanced techniques for mapping geological structures important in oil and gas exploration; a multispectral infrared radiometer to measure the solar reflectance of mineral-bearing rock formations; night and day optical surveys of lightning storms; and an air pollution measurement experiment for measuring the distribution of carbon monoxide in the middle and upper troposphere (lowest layer of earth's atmosphere characterized by varying humidity and turbulence, and in which temperatures decrease with altitude).

STS-2 will be launched from the Kennedy Space Center into a 174-mile circular orbit with an inclination of 40.3 degrees. The four-day mission will conclude with the orbiter *Columbia's* landing at Dryden Flight Research Center, Edwards, Calif.

## Space Shuttle Astronauts Honored

Astronauts Captain John W. Young, USN(Ret.), and Navy Captain Robert L. Crippen were presented medals at various ceremonies in Washington, D.C., last May, honoring their successful mission on the first orbital flight of the Space Shuttle in April 1981.

Young, commander of the Shuttle and a veteran of two *Gemini* and two *Apollo* flights, and Crippen, pilot of *Columbia* making his first trip into space, received Distinguished Service Medals, NASA's highest award. The medals were presented to them by President Ronald Reagan at the White House.

In ceremonies at the Pentagon Young was awarded the Department of Defense Medal for Distinguished Public Service and Crippen the Defense Medal for Distinguished Service. Young also received the Congressional Space Medal of Honor which is awarded to "any astronaut who in the performance of his duties has distinguished himself by exceptionally meritorious efforts and contributions to the welfare of the nation and of mankind."

## New AV-8B Engine

The first Rolls-Royce Pegasus engine for the AV-8B V/STOL light attack aircraft has arrived at McDonnell Douglas Corporation, St. Louis, Mo. The F402-RR-404 Pegasus 11 is the first of eight engines in the AV-8B full-scale development program for the U.S. Marine Corps. The 3,444-pound vectored-thrust turbofan engine was shipped from its manufacturer's plant in Bristol, England.

The improved engine evolved from earlier Pegasus engines used in the Royal Air Force's *Harrier* GR Mk3 and the U.S. Marine Corps' AV-8A. The engine has four nozzles, two on each side, that can be rotated from the full-aft position for forward flight, to a full-down position for vertical takeoffs, landings or in-flight maneuvering. Tests demonstrated that directing the engine's fan air through the new nozzles with an improved airflow path increases thrust by over 200 pounds to 21,180 pounds without increasing fuel flow. The additional thrust plus the AV-8B's new supercritical all-graphite/composite wing and lift-improvement devices doubles the AV-8B's payload or radius over that of the AV-8A.

The Marine Corps will replace its A-4M and AV-8A aircraft with an estimated 336 AV-8Bs beginning in 1985. The Royal Air Force may purchase about 100 of the advanced V/STOL aircraft. Principal subcontractor is British Aerospace, Kingston-Brough Division.

# Grampaw Pettibone

## From the Mailbag:

Dear Gramps,

Enclosed are some words recently issued by our command on the subject of bird strikes, which might provoke a thought or save others some grief. The following excerpt is provided:

"This is the second bird strike within three days, which causes us to re-evaluate our hazard assessment. This strike not only damaged the radome, but also fodded the engine. To CinCBird: I GIVE UP! I now fully realize that the airspace in "birdland" is a "flaktrap." Accordingly, this squadron will honor the DMZ erected at longitude 7730W, oriented N/S, east of that line from Norfolk, Va., to Wilmington, N.C. We must train for the possibility of combat in the sophisticated threat, but we cannot damage aircraft at the rate that we are with bird strikes, while flying at minimum altitudes of 500 to 100 feet. We will no longer penetrate that airspace below 1,000 feet, except while on target."

The message went on to request the following questions be answered in the interest of reducing bird strikes:

1. Does aircraft paint scheme make a difference?

2. Is the bird population increasing with more stringent environmental protection laws?

3. Are low-level routes out of the question (strictly for the birds?) – particularly in the swampy flatlands of the entire eastern shore coast?

4. Is there sufficient knowledge of migrating habits and population to make sound judgments in reference to

low-level routes?

5. Have any measures been taken to readjust/relocate low-level routes away from high-density bird areas?

The Naval Safety Center receives approximately 200 reports of Navy aircraft bird strikes annually. In 1979, 100 plus incidents occurred, resulting in no injury/no damage, plus 60 Charlie incidents, six Bravo, and one Alpha damage incidents. During 1980, 125 no injury/no damage incidents were reported, with 67 Charlie, seven Bravo, and two Alpha damage incidents reported, some of which resulted in fatalities. Eighty-five percent of the incidents occurred at altitudes less than 1,000 feet above ground. Interestingly, one strike occurred at 15,000 feet.

Naval Aviation is not alone in this dilemma as our USAF counterparts also recognize bird strikes as a serious problem. During the period from April 1978 to April 1980, the USAF experienced 3,258 bird-strike incidents. They have established a Bird Aircraft Strike Hazard (BASH) unit at Tyndall AFB to study and counter bird strike hazards. This team, consisting of three USAF aviators with degrees in biology – Captains J. J. Short, Gerald Long and Jim Kent – published some very beneficial bird strike avoidance information in their BASH guidance package contained in the September 1980 issue of the USAF *Safety Journal*. At the request of the 2nd MAW, this team surveyed the MCAS Cherry Point airfield, the 2nd MAW low-level routes and target areas to define specific bird problems. Various active and passive techniques for bird traffic control were recommended. For example, seagulls will not loiter in grassy areas adjacent to runways if


the grass length is kept at 6 to 12 inches vice cut short.

Effective bird control techniques for airfield facilities are fairly well defined. However, much remains to be accomplished in developing bird



ILLUSTRATED BY Osborn

dispersal techniques for low-level training routes. This problem obviously requires more attention, and close cooperation of all services seems prudent.

For additional information on bird strike prevention programs, please contact the USAF BASH team at autovon 970-6239/40, Tyndall AFB, Fla.

## Flock Foils Flight

One late February morning, the crew of a West Coast UH-1 *Huey* helo encountered instrument flight conditions at 200 feet after liftoff on a SAR training mission. Passing through 550 feet above ground level, the aircraft collided with a flock of northbound snow geese. One goose impacted and shattered the righthand forward windscreen.

The pilot squawked an emergency, as did the geese. He was given an immediate precision radar approach back to home plate. Rapidly deteriorating weather conditions prevented visual contact during descent to minimum altitude, and a missed approach was executed. The HAC elected to climb to VFR-condition-on-top and then proceeded to a safe landing in a known clear area 25 miles to the west.

After the weather improved, a maintenance crew was flown in to inspect and repair the aircraft. Damage was limited to the shattered right windscreen and scraped rotor blades. The starboard elevator and engine intake areas were covered with feathered debris but received no damage. The engines were not fodded.

The geese, however, did not fare so well. Approach radar was unable to detect their ruffled feathers on their snow-cluttered radar, forcing the geese to execute immediate terminal approaches. Six of the flock were recovered from the runway by the field support/salvage personnel.

Four of the geese incurred Alpha damage (dead ducks) and were properly disposed of by the crash-salvage crew. Two suffered only Bravo injury (broken wing spans) and were treated by a veterinarian — no quack cracks allowed. They were then assigned, TDY-DIFDEN status, to the care of a local biologist for eventual release, well free from the clutches of Colonel Sanders, Frank Perdue and other "finger-licking-good" enterprises.

Grampaw Pettibone says:

Holy hidden hazards! This honker-vs-helo happening is a good example of why only birds of the same feather should flock together.

This crew was lucky that fate plucked their bird from the role of cooked goose. They could easily have been included on this menu of pea soup, goose under glass and marinated birdmen. Further, they were wise old owls in that they had their helmet visors down, as prescribed in the blue-bound-book (NATOPS) and thus prevented possible eye injury from flying glass and debris. In fact, they suffered no injuries, save a near fatal case of goose bumps.

An age-old Grampsism is that "a gaggle of geese in the goo is guaranteed to give any good birdman a down-in-the-mouth feeling should guts, fur and feathers engage the rotors."

# RAST
## A Pilot Report

**By Lieutenant Commander Dick Childers**

*LCdr. Childers served as NATC LAMPS MK III RAST Project Officer from July 1979 to June 1981 and has more than 200 hours in the SH-60B. A graduate of Test Pilot School Class '74, he was test pilot on the first three Navy preliminary evaluations of this aircraft. Childers is currently serving with HSL-30 based at NAS Norfolk.*

The first year of the test and evaluation of the Light Airborne Multi-Purpose System (LAMPS MK III) weapon system by the Naval Air Test Center (NATC), Patuxent River, Md., is nearing an end. Navy testing has included technical evaluation of the full system in the laboratory, test center and shipboard environment. With two of three major technical test phases completed, two of the five SH-60B helicopters were transferred to VX-1 for initial weapon system operational evaluation. A portion of the NATC LAMPS MK III test program was the evaluation of the recovery assist, secure and traverse (RAST) system, which was completed with the sea trials of the SH-60B *Seahawk* aboard USS *McInerney* (FFG-8).

The LAMPS MK III weapon system integrates the tactical capabilities of a surface combatant and a helicopter for the ASW and anti-ship surveillance and targeting (ASST) missions. The major elements of the system include the Sikorsky SH-60B *Seahawk*, IBM mission avionics and electronics, and the DAF INDAL, Inc. shipboard RAST system. LAMPS MK III upgrades LAMPS MK I with expanded sensor capability and flexibility, computer-based data handling and analysis, increased ship/air tactical integration via a directional data link, and extended helicopter range and endurance. The system, scheduled for fleet introduction in 1984, will be deployed aboard FFG-7, DD-963 and CG-47 class ships. It will be employed as a reactive system, extending the range of influence of the ship beyond the horizon in the prosecution of contacts generated by the deploying ship or another sensor platform operating with the task force.

The RAST concept was included as an element of the LAMPS MK III weapon system to provide capability for helicopter launch, recovery and deck handling in sea state five conditions. These conditions were anticipated to produce ship rolls to 28 degrees. RAST was designed to provide helicopter guidance to landing, helicopter security while on the deck, and movement of the helicopter between the hangar and the flight deck.

The RAST operational concept requires that the pilot make a normal approach to the ship and establish a hover over the flight deck. A messenger cable is connnected from the helicopter to the flight deck and is connected to the

RAST provides that extra capability for operating in rough seas.

shipboard recovery assist cable. The recovery assist cable is hauled up to the helicopter and is automatically locked into the main RAST probe. When the proper cockpit status is indicated, the pilot requests hover tension. The Landing Signal Officer (LSO), the shipboard RAST system operator, selects a prebriefed hover tension. The system can apply cable tension between 850 and 4,000 pounds, although 2,000 pounds has normally been used for hover. When conditions for landing are met, the LSO upon signal from the pilot applies 4,000 pounds of cable tension and the pilot lands the aircraft. The recovery assist cable tension has a strong centering effect on the helicopter which stabilizes the prelanding hover and draws the aircraft to the proper landing position. The pilot has the capability to immediately release the cable from the aircraft at any time during tethering operations.

The recovery assist landing places the aircraft's main RAST probe inside the rapid securing device (RSD) capture area. Upon landing, the LSO closes the RSD arresting beams about the main probe which, with the recovery assist cable tension, secures the aircraft to the flight deck. Additional restraint is provided when the pilot lowers a tail probe into a yaw restraint grid mounted on the flight deck. Using the rapid securing device and a tail guide winch system, the helicopter is maneuvered to a position directly over and aligned with the RAST deck track, and the helicopter is ready to be traversed into the hangar. The entire process is conducted without opening the securing device arresting beams so that the aircraft is secured to the deck throughout.

The evaluation of RAST consisted of engineering evaluations by the Naval Air Engineering Center, Lakehurst, N.J., and technical evaluations by NATC. The initial evaluations were conducted using a complete RAST system installed in a universal landing platform at Lakehurst. That facility accurately simulated all aspects of the flight deck environment with the exception of deck motion and enabled evaluators to check out RAST subsystems performance as well as tethered flying qualities and landing characteristics of the helicopter before going aboard ship. A series of dockside shipboard landings and deck handling evolutions were also conducted aboard *McInerney* to ensure that the system was ready for testing at sea. Embarked testing included the final technical evaluation of the RAST system and the development of shipboard envelopes for SH-60B operations aboard FFG-7 class ships configured with the LAMPS MK III RAST system.

The need for the RAST system for SH-60B operations aboard an FFG-7 was repeatedly demonstrated during the embarked testing. Without it, manual movement of the 20,000-pound-class helicopter between the flight deck and the hangar would have required more personnel than could have safely found a place to push on the airframe. Additionally, the limited clearance (as little as eight inches) between the airframe and the hangar door frames and internal hangar structures would have required a more precise aircraft alignment than could have been achieved during any but the most stable deck conditions. When ship roll motion exceeded 12 to 15 degrees the helicopter, due to the landing gear characteristics and its freedom of roll within the rapid securing device, rolled up to 15 degrees beyond the flight deck roll angle and beyond its static roll-

over angle. Without the security provided by the securing device, helicopter operations in these roll conditions would have been extremely hazardous. Non-tethered landings were made into the RSD to define the relative wind and deck motion limitations for helicopter recovery in the event the recovery assist system should be inoperable. Non-tethered landings into the securing device's 42-inch-by-36-inch capture area required a high pilot workload, and the probability of a successful landing diminished as deck motion and relative winds increased. The RAST system permitted test operations during extremely severe deck motion conditions.

The flying qualities of the *Seahawk* were evaluated to be well suited for the shipboard environment. Basic hover stability, automatic hover augmentation and superior gust response produce stable hover characteristics which are complemented by a degree of control responsiveness and agility normally expected in a much smaller helicopter. Wind turbulence and rotor wash impingement off the flight deck and hangar face cause deviations in hover position and attitude. Nevertheless, only small, although frequent, pilot control movements were required to stabilize the hover. Application of cable tension stabilized the helicopter and, in the tethered mode, the pilot workload was significantly reduced. The stabilizing effect provided by the cable tension was particularly helpful with simulated degraded flight control systems recoveries. The helicopter exhibited agreeable tethered flying qualities, and its response to cable tension variations, the cable centering effect and sudden cable releases was mild and easily controlled by the pilot. RAST recoveries required, on average, two and one-half to three minutes of hover over the flight deck. That length of time in a high-risk, high-workload environment was viewed acceptable in light of the assurance that the recovery assist system would guide the helicopter to a proper landing into the RSD and that the helicopter would be immediately secured to the flight deck.

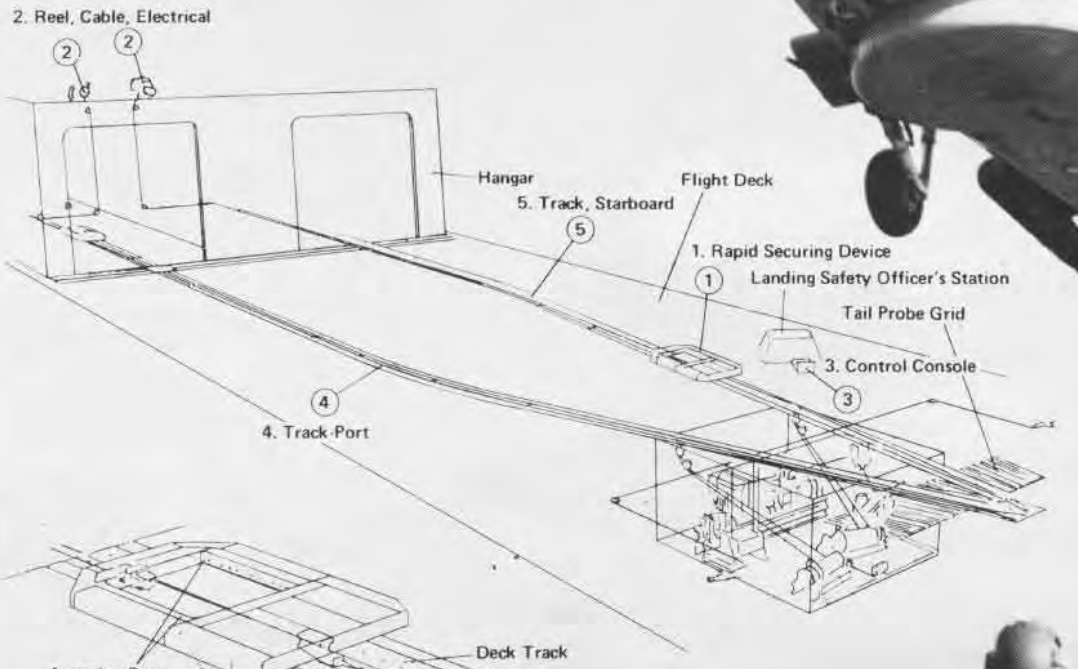
Recovery assist recoveries required a coordinated effort between the pilot and the LSO, with the pilot controlling the pace of the process and the landing sink rate and retaining final authority over the process with his option to instantaneously release the recovery assist cable. Using the method refined by the Canadian Forces, the pilot anticipated a lull in the deck motion cycle, descended from the cable hook-up height (15 feet) to a low hover height (8 feet) over the rapid securing device and advised the LSO, "Ready to land." The LSO, a *Seahawk* pilot, provided final advisories for precise hover positioning, broadcast "Land now," and set 4,000 pounds of cable tension. That tension produced a strong centering effect and drew the helicopter into the securing device capture area. The pilot controlled landing sink rate by increasing collecting pitch, but normally held the other controls fixed. Landing rates of six to eight feet per second were encountered during high deck motion conditions, but the *Seahawk* landing gear design characteristics made the landing comfortable for the flight crew and prevented any tendencies for post landing oscillations.

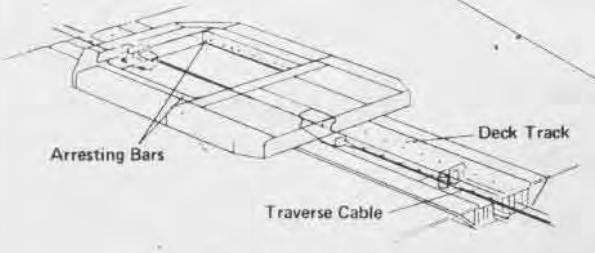
The visual landing aids package installed aboard *McInerney* was specifically adapted for RAST recovery operations. Modifications to earlier packages included an up-the-stern approach orientation, hangar top illumination, hover position cue marks on the hangar top, hangar face and flight deck, and a horizon reference system. The up-the-stern approach orientation was adopted to eliminate the influence of ship pitch motion on approach line-up cues during high deck motion conditions. The hangar top illumination and hover position cue marks were included to provide the pilot with hover position cues during the RAST hookup (usually conducted at 15 feet above the deck). The horizon reference system consisted of an illuminated gyro stabilized bar mounted atop the hangar, which maintained a level attitude during ship roll motion. The system provided an excellent pilot cue for maintenance of a wings-level attitude, lateral position keeping, and assessment of the ship roll cycle and the identification of the period of minimum ship roll. The horizon bar was the primary pilot reference during night hover operations.

Helicopter operations under high deck motion conditions (pitch and roll in excess of four and ten degrees, respectively), required the consideration of several factors not normally required during less severe conditions. The safety of the deck crewmen who were required to make the cable hookup under the helicopter was a primary concern. Their security during high deck motion was with a tether line fixed to the flight deck and helicopter gunner belts. The crewmen attached their belts to the tethered line and were able to perform cable grounding and hookup with relative freedom but with the assurance of positive security to the deck. At every condition evaluated, there existed within the ship motion cycle a period during which the motion was minimal. That quiescent period of the cycle varied in frequency and duration, dependent upon the sea conditions, the ship's heading relative to the seas, and ship's speed. In each condition, the ship motion cycle was assessed by the pilots, and takeoffs and landings were made during the quiescent period. Identification of the approach of a quiescent period and its consideration during launch and recovery operations will enhance the safety of the operations.

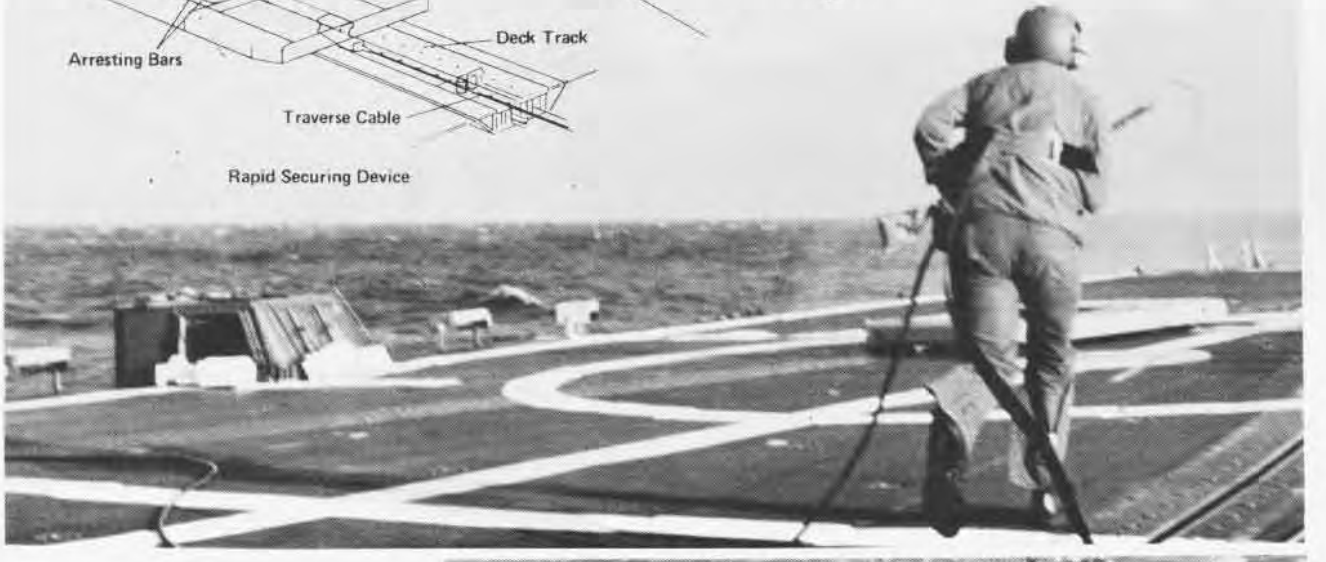
The relative wind and deck motion envelopes developed for SH-60B launch and recovery operations aboard RAST-configured FFG-7 class ships are broader than any envelopes previously developed and illustrate the added operational capability provided by the RAST system and the SH-60B. The success of the sea trials of the SH-60B and the RAST system reflect the sound technology upon which the LAMPS MK III weapon system is being developed and the added mission capability which the system will provide to the fleet.

# RECOVERY ASSIST SECURE TRAVERSE SYSTEM'S EQUIPMENT (RAST)




Rapid Securing Device



RAST sea trials were conducted aboard McInerney (FFG-8).

# LAMPS MK III
## Operational Test and Evaluation

By Lieutenants A. L. Eaton, Jr. and C. T. Walters

Early in May 1981, Air Test and Evaluation Squadron One (VX-1) received two prototype SH-60B *Seahawk* aircraft to be used in operational test and evaluation of the LAMPS MK III ship/air ASW weapons systems. At-sea testing is taking place aboard USS *McInerney* (FFG-8), the LAMPS MK III-configured test ship. During the test period, VX-1 will evaluate the effectiveness and suitability of five major elements of the LAMPS MK III weapons system: the helicopter, airborne avionics, system software, shipboard electronics and shipboard support facilities, including the RAST (recovery, assist, secure and traverse) system. Evaluation of the RAST system took place in May and June 1981, and provided RAST suitability and effectiveness data plus

SH-60B releases a Mk 46 homing torpedo.

a quick-look report on the entire LAMPS system. This thumbnail evaluation will allow Commander Operational Test and Evaluation Force (ComOpTEvFor) to provide decision makers with a recommendation regarding initial LAMPS MK III procurement. The second phase, OR OT-IIB, will take place from October 1981 through January 1982. OT-IIB is designated as the LAMPS MK III weapons system OpEval. Successful accomplishment of this phase will allow ComOpTEvFor to make a recommendation regarding approval for service use and full-scale production of the LAMPS MK III.

Pilot training was one of the first steps in getting the program under way. VX-1's extensive *Seahawk* pilot training syllabus was especially structured to satisfy the requirements for flight in prototype aircraft. All VX-1 pilots who will be *Seahawk* aircraft commanders have completed at least 15 hours of flight training in the Army's *Blackhawk* helicopter and a one-month ground school at Fort Rucker, Ala. Additionally, each pilot has participated in Sikorsky *Seahawk* ground school and flight training with Sikorsky test pilots. Pilots also participate with Naval Air Test Center aircrews in extensive system checkouts, and ship/helo dynamic interface testing. All aircrew personnel also attend an IBM tactical systems familiarization course which provides an avionics/mission systems overview.

Tactical training was conducted at IBM's Federal Sys-

tems Division in Owego, N.Y. The Airborne Tactical Officer (ATO) syllabus included two weeks of intensive lecture and laboratory periods, followed by a one-week team training course. A LAMPS simulator team trainer allowed aircrews and USS *McInerney* combat information center personnel to conduct basic through advanced detection, localization, tracking and attack of computer-simulated submarine targets. ATO training also included Sikorsky ground school and flight training. As a contingency plan, four officers received both pilot and ATO training and can function at either position.

IBM's sensor operator training paralleled that of the tactical officers. However, it was tailored to the intricacies of acoustic and non-acoustic sensor display and interpretation. Training of sensor personnel also included instruction on initialization and loading procedures for both on-board computers. Following one week of team training, sensor operators attended Sikorsky *Seahawk* airframe and systems ground school for overall aircraft familiarization. Since November 1980, VX-1 sensor operators have been actively involved in all facets of NATC shore-based testing.

Prior to any LAMPS at-sea testing, pilot, tactical officer and sensor personnel are formed into individual aircrews. These aircrews will fly together during all ground training, field carrier landing practice and tactical flights ashore. For at-sea testing purposes, these same crews will continue to fly together, thus optimizing crew coordination, data collection and safety of flight.

VX-1 shipboard operator training is currently being conducted at the Mobile Ship Ground Station at NAS Patuxent River, Md. This is a fully functional reproduction of the test configured LAMPS MK III shipboard electronics suite. To enhance shipboard and aircrew training, the IBM LAMPS interactive tactical tester has been incorporated into the ground station. The tactical tester simulates a tactical ocean environment where synthetic sonobuoy and target information is generated. This provides a means of conducting full ASW tactical problems, thereby employing all LAMPS ASW mission systems.

RAST training has been ongoing at NAEC Lakehurst, N.J., and aboard *McInerney*. The VX-1 RAST operational test director participated in the first recovery assist landing aboard *McInerney* in January 1981. Since then he has spent over a month at sea with a Naval Air Test Center detachment conducting dynamic interface testing. Aircrew personnel will train, on NAEC Lakehurst's elevated fixed platform, an operational mock-up of the FFG-7 flight deck, complete with RAST and lighting package. They will then receive their deck landing qualifications aboard *McInerney*.

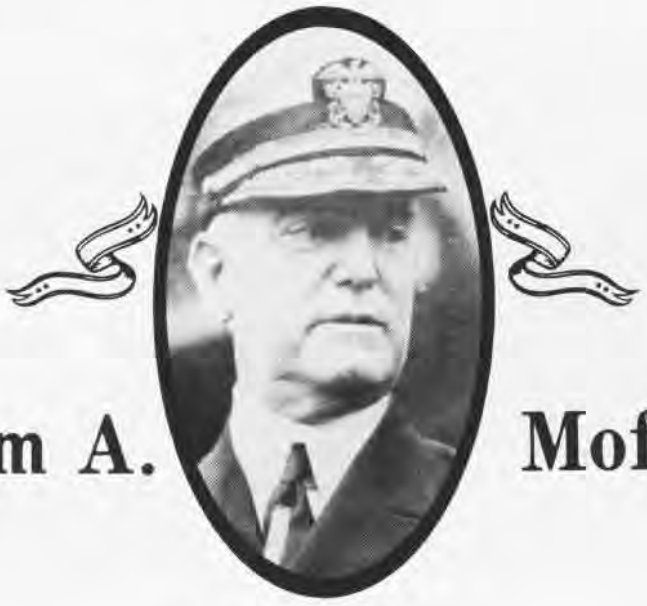
Meanwhile squadron maintenance personnel have undergone extensive contractor training in all phases of aircraft systems and theory. VX-1 personnel have been actively involved in *Seahawk* maintenance and training at the Test Center since June 1980. In March of this year, they were heavily involved in a program to validate contractor maintenance concepts and familiarize Navy personnel with maintenance procedures.

On May 13, a 24-man VX-1 detachment took both aircraft to sea aboard *McInerney*. The operational testing by VX-1 personnel, however, is in sharp contrast to NATC's technical testing. First, VX-1 tests LAMPS MK III in its intended variable operational environment as opposed to technical testing which requires defined test conditions. Secondly, VX-1 uses fleet representative pilots, aircrew and maintenance personnel to fly and maintain the MK III, whereas NATC's data collection and analysis requirements dictate that Navy and Sikorsky test pilots and specialized operating personnel and engineers be used. Finally, VX-1's charter requires that system testing be conducted against a simulated enemy who will fight back.

VX-1 will continue to test LAMPS MK III through production, ensuring that program objectives for system operational effectiveness and suitability are met.

**Operational mock-up of McInerney's flight deck at NAEC Lakehurst, N.J.**

NAVAL AVIATION HALL OF HONOR
*This is the eighth in a series of articles on each of the first twelve men to be enshrined in the Naval Aviation Hall of Honor.*



# William A. Moffett

**By Sandy Russell**

Rear Admiral William Adger Moffett was one of the great advocates of Naval Aviation. Although he joined forces with the airplane and the airship late in his career, no man has been a more energetic and resourceful champion of what was in those days a revolutionary concept.

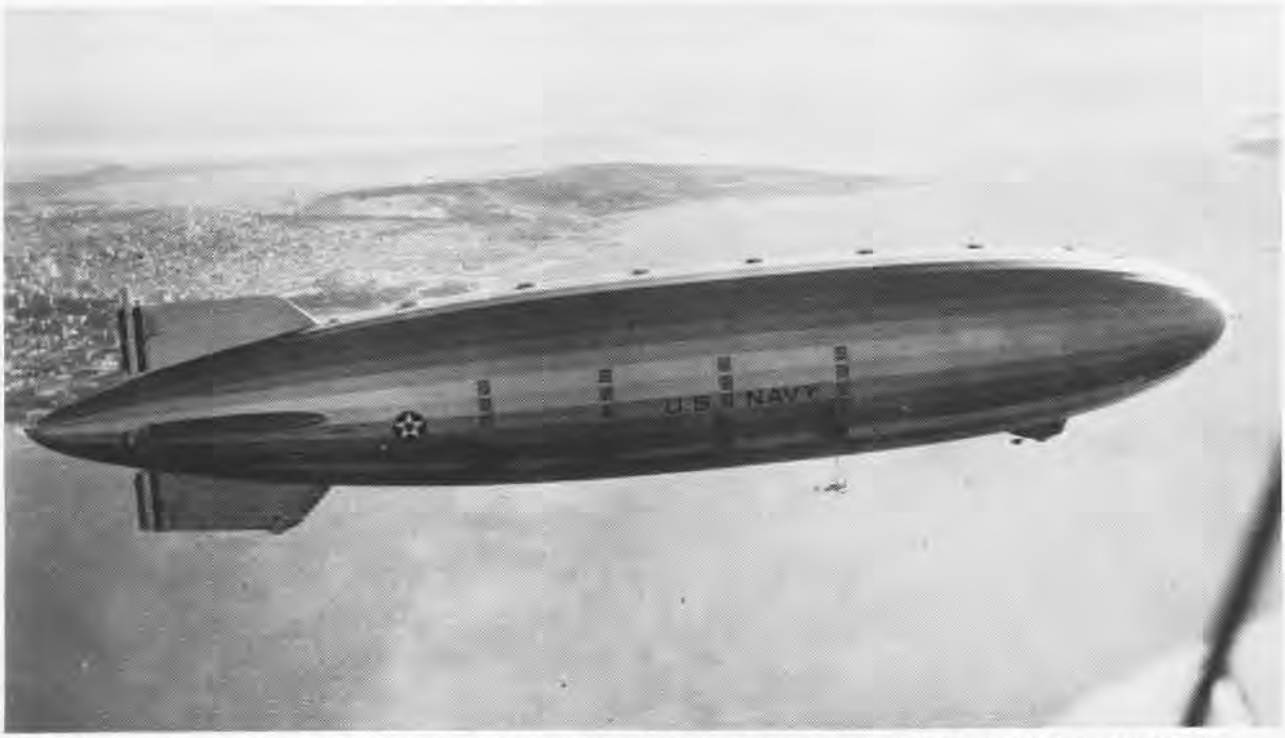
Throughout his naval career and during three terms as Chief of the Bureau of Aeronautics, RAdm. Moffett fought against opposition from the elder and more conservative officers of the Navy who wanted to isolate Naval Aviation and downplay its importance. Rear Admiral Richard E. Byrd, Jr., said of Moffett, "The Admiral was a pioneer in the strictest sense of the word. . . . His outstanding trait was his courage . . . . But he was also a skilled diplomat . . . a fine combination for an officer who had the job of selling to the service a new arm of defense."

Born in Charleston, S.C., on October 31, 1869, Moffett was the fourth son in a family of nine children. Both sides of his family were among the earliest settlers of Charleston. RAdm. Moffett's father, Captain George H. Moffett, was remembered in the city because of his excellent military record in the Civil War. The qualities Moffett found in his father — congeniality, chivalry, loyalty and determination in the face of the greatest obstacles — he also found exemplified in the life of General Robert E. Lee, the idol of every southern boy, whose influence was apparent throughout Moffett's life.

It was during Moffett's third year in high school that he decided to take the competitive exam which won him an appointment to the U.S. Naval Academy. He was appointed on September 6, 1886, by Congressman Samuel Dibble, who represented the district in which Charleston was located.

Soon after his return from a cruise aboard *Constellation* in the summer of 1887, Midshipman Moffett went through a difficult period. One of his closest friends, Chester B. White, was forced to resign from the Academy due to ill health. Moffett was depressed and found his studies taxing. A year later, he came down with typhoid fever, and was afflicted during six of the nine months of his third year at the Academy. Claude Bailey, Moffett's roommate, related an incident during that time illustrating Moffett's passionate loyalty which was one of his strongest characteristics.

"The incident occurred one evening when a northern lecturer attempted to discuss the causes leading up to the Civil War. After some preliminary remarks in regard to slavery, secession and the political situation of the period, with some indication of an unfavorable attitude toward secessionists and the South in general, he said, 'Thus those dastardly South Carolina traitors started the War.' He scarcely got the words out of his mouth when Moffett, flushed and inwardly boiling, stood up and shouted at the top of his voice, 'Rats!' " About half of the class of 1890 was from the South




**Above, Akron prepares to draw a utility plane up on the trapeze and into the T-shaped opening in her belly which could hold other hook-on planes. This scene over San Francisco Bay shows the Golden Gate, sans bridge, in the early 1930s. Below right, Moffett Field's Hangar One, built in 1933 to house the airship Macon, is a focal point today of patrol aviation.**

and such handclapping and stamping of feet resounded throughout the room that the speaker found it hard to continue his lecture.

As might have been expected, Moffett's act was regarded as a breach of discipline and decorum, and he was summoned to the superintendent for reprimand. Nevertheless, he felt that he had been in the right and that his conduct had been justified under the circumstances. Courage of conviction was a hallmark of his character and he became known for meeting opposition head-on no matter what the consequences. Bailey said, "He had the satisfaction of being told by board members years afterwards that they all greatly admired his courage, spirit and loyalty to his native home. They doubtless saw in him the fighting spirit that is a requisite in any officer and the loyalty that was to grow into a great love of his country. His patriotism and devoted service in the latter years of his career fulfilled all expectations they may have anticipated."

The class of 1890 was to prove itself outstanding. Former Midshipmen John V. Chase and Frank H. Schofield were Commanders-in-Chief U.S. Fleet; Schofield was also Commander-in-Chief of the Battle Fleet; Charles B. McVay, Jr., Commander-in-Chief Asiatic Fleet and Chief of the Bureau of Ordnance; Julius L. Latimer, Judge Advocate General; and Moffett, Chief of the Bureau of Aeronautics. The class of 1890 occupied all the high positions in the service except that of Chief of Naval Operations.

After graduation from the Naval Academy and two years' sea duty (then required by law before commissioning), Moffett was comissioned Ensign on July 1, 1892. He served aboard a number of ships before attending the Naval War College in 1896. Later he served aboard *Charleston* during the Battle of Manila Bay.

In 1902 while in New York, during a port call of the training vessel *St. Mary's*, Moffett visited his sister's art studio and met Jeanette Beverly Whitten of Kingston, Canada. Shortly thereafter, Miss Whitten left for London. By coincidence, *St. Mary's* destination was Southampton. The couple saw a great deal of each other and were married on July 26, 1902.

In 1908, Moffett was assigned to the armored cruiser *Maryland*, first as navigator and later as executive officer. This was followed by a tour as executive officer aboard the battleship *Arkansas* and command assignments aboard *Maine, Chester, North Carolina* and *Brooklyn*.

Commander Moffett became Commandant of Naval Training Station, Great Lakes in September 1914 where he served for the next four years with additional duty as Supervisor of the Ninth, Tenth and Eleventh Naval Districts. By the end of WW I, Captain Moffett had taken

what had been a receiving and distributing center, and turned it into one of the largest and best-equipped naval training centers in the world.

It was during his command of Great Lakes that Capt. Moffett became enthusiastic about aviation as a powerful arm for the Navy. The first plane at Great Lakes was a Curtiss flying boat, and the Aviation Mechanics' School was authorized on August 1, 1918.

In December 1918, Moffett assumed command of the battleship *Mississippi*, serving aboard for two years, until he returned to shore duty as Director of Naval Aviation in the Office of the Chief of Naval Operations, Washington, D.C.

The prestige of Naval Aviation had increased greatly during WW I. Lieutenant Commander Richard E. Byrd, Jr., had campaigned in Congress in favor of establishing a Bureau of Aeronautics. President Warren G. Harding recommended the enactment of a bill establishing the Bureau and the bill became law on July 12, 1921. Moffett was appointed the Bureau's first Chief on July 25. He was commissioned Rear Admiral at the same time, becoming the first air admiral in the U.S. Navy.

RAdm. Moffett took the regular Naval Observer's course at Naval Station, Pensacola, which qualified him for all service in a plane except to solo. He qualified as a Naval Aviation Observer on June 17, 1922. From then on, he flew in practically every type of plane and airship to acquaint himself firsthand with the problems of aviation. He was responsible for the law which required that aircraft carrier commanders be Naval Aviation Observers until such time as upcoming Naval Aviators achieved proper seniority. Moffett was reappointed Chief of BuAer by President Calvin Coolidge on March 13, 1925, and again by President Herbert Hoover on March 13, 1929.

When Army General Billy Mitchell returned from Europe after WW I, he began a vehement campaign in favor of a united Air Force. He was convinced that the airplane would be the deciding factor in the next war, and that future improvement in national defense must center in aviation.

He wanted the Navy to concentrate all its efforts on submarines since, in his opinion, the rest of the naval program was no longer necessary.

In September 1919, General Mitchell made some unguarded statements which started his seven years' war with the Navy. He opined that if American aviation were developed properly a navy would be useless and the U.S. Army would be obsolete. Both the Army and the Navy took exception to the General's thesis. The Secretary of War wrote several directives to keep Mitchell from appearing before committees in Congress. On April 12, 1921, President Harding said before Congress that "aviation is inseparable from either the Army or the Navy" and called for cooperation between the two services.

It was at this time that RAdm. Moffett, as Chief of BuAer, felt obliged to wage his own war against Mitchell. Ironically, the two men were alike in three important respects. Both were sincerely zealous where the welfare of their country was concerned, both were enthusiastic about aviation, and both felt that the country, Congress and the services were not giving aviation the all-out support it deserved. Here, however, the similarities ended. Mitchell was impatient and many felt, imprudent. Moffett, on the other hand, was the soul of patience. Mitchell tried to stir up a revolution of sorts while Moffett sought orderly development. Mitchell attacked personally all who disagreed with him while Moffett was a diplomat. Mitchell defied his superiors whereas Moffett worked within the system. Mitchell claimed for aviation what had not yet been proven. Moffett concentrated on what had already been achieved.

In early 1925, President Coolidge selected a Board of General Aircraft Inquiry, known as the Morrow Board, which among other things made a number of recommendations concerning the future of aviation in the United States. An act of Congress on June 24, 1926, implemented the recommendations of the board. Under

a five-year aircraft building program, 1,248 planes were built; the terms Naval Aviator and Naval Observer were clarified and defined by law; the airships *Akron* and *Macon* were constructed; a myriad of inventions and improvements were made possible; and the office of an Assistant Secretary of the Navy was created to foster naval aeronautics. During this period, Moffett spearheaded many efforts to realize the potential of Naval Aviation. By 1927, two 33,000-ton battle cruisers, *Saratoga* and *Lexington*, were converted into carriers. It was Moffett who salvaged these vessels from the scrap heap and supervised their conversion with the aid of Captain Henry C. Mustin.

Moffett was a strong proponent of lighter-than-air craft. He believed that in scouting operations a dirigible would do the work of 10 cruisers. Unfortunately, the first U.S. Navy-built dirigible, *Shenandoah*, crashed during a training flight in 1925, but President Coolidge and Congress authorized construction of two more — *Akron* and *Macon*.

*Akron* was commissioned on October 27, 1931, and for the next year and a half the airship made 73 flights, totaling 1,700 air hours. During a training cruise on April 4, 1933, *Akron* crashed at sea, killing 73 persons aboard, including RAdm. Moffett. (*Macon* had been christened by Mrs. Moffett in March, and was commissioned on June 23, 1933.)

After RAdm. Moffett's death, NAS Sunnyvale, Calif., was officially renamed NAS Moffett Field on June 1, 1933. In April 1936, the Rear Admiral William A. Moffett Memorial Trophy was established with funds received from Naval Aviators, to be awarded annually in memory of the admiral to the battleship or cruiser-based aviation unit conducting the safest operations throughout the year. A destroyer, USS *Moffett*, was named in his honor and commissioned on August 27, 1936.

Rear Admiral William A. Moffett combined the qualities of a fine sense of humor, tremendous energy, high ideals and a deep knowledge of the sea/air environment as a medium of warfare. In a time when the value of Naval Aviation had not yet been fully established, he fought for its expansion, placing greater importance on the advocacy of this new form of warfare than on any desires for personal advancement. He never left a command without remarking, "If I can do anything for you, let me know." And he was as good as his word.

Admiral J. H. Towers summed up the man and his career: "Upon his assignment to Naval Aviation duty, Adm. Moffett's entire waking moments were focused on ways and means of saving Naval Aviation from destruction by its enemies within and without the Navy, and to build it up as the Navy's strong right arm. I cannot recall any man who more loved a fight and who could think of more ways to win one. . . . Adm. Moffett the officer did great things for his country; Bill Moffett the man, who died with his boots on, was beloved by all who had the privilege of really knowing him."

**RAdm. Moffett, Chief of BuAer, climbs aboard for a flight to inspect progress of Naval Aviation.**

Left, the old Connie is much loved by her crew. Below, 141292 escorted by an F-4B Phantom and an EA-4F Skyhawk over the Virginia coastline.

# And Then There was One

By Lieutenant Commander Peter Mersky, USNR

Lockheed C-121 *Constellations* have served the Navy for over 25 years, performing a variety of functions. They have worked as radar picket aircraft, early warning outposts, hurricane hunters, electronic warfare test platforms, airborne satellite tracking stations and scientific research vehicles. They have proven themselves to be reliable workhorses throughout their military service and have given the American taxpayer a good return on his investment.

Most of these aircraft were retired by August 1979 (see *Naval Aviation News*, November 1979, "Parting with Connie"). But one last survivor, BuNo 141292, is still in service with VAQ-33 at Norfolk, Va. She is something of an oddity in modern Naval Aviation. Once the latest word in large multi-engined transport-type aircraft, this faithful old bird seems to have been overtaken by time and technology. Nevertheless, she is still carrying her share of the load, putting in a full day's work with the best of them. And she is much loved by her crew, who wear distinctive patches on their flight suits which bear the legend "until there was but one."

Accepted by the Navy on September 26, 1956, and designated a WV-2 (*Willie Victor*), 141292 was originally assigned to VW-11 as an airborne early warning platform. She was employed on the distant early warning line flying from Argentia, Newfoundland, to the Azores or Scotland, and return. From 1964 to 1969 she took up residence at the Naval Air Technical Training Center, NAS Glynco, Ga., where she served as a flying classroom for student Naval Flight Officers.

With only 7,000 hours on her airframe, she was next acquired by the VAQ-33 *Firebirds* who added another 7,000 hours to her logbooks. For a 20-year-old aircraft she is now 14,000 hours young. But, this may be the last year of active service for 141292, and her retirement is scheduled for March 1982. Part of the problem of keeping the old girl active is the limited availability of high octane aviation gasoline. She uses only 115/145 avgas which is no longer manufactured, and only dwindling reserves keep the plane flying. Maintenance costs and parts availability are also considerations in putting her out to pasture.

But until that day arrives, she continues to be used for research, equipment experiments, and other chores. *Naval Aviation News* salutes a grand old lady.

Which way is up?

# ANDREWS '81

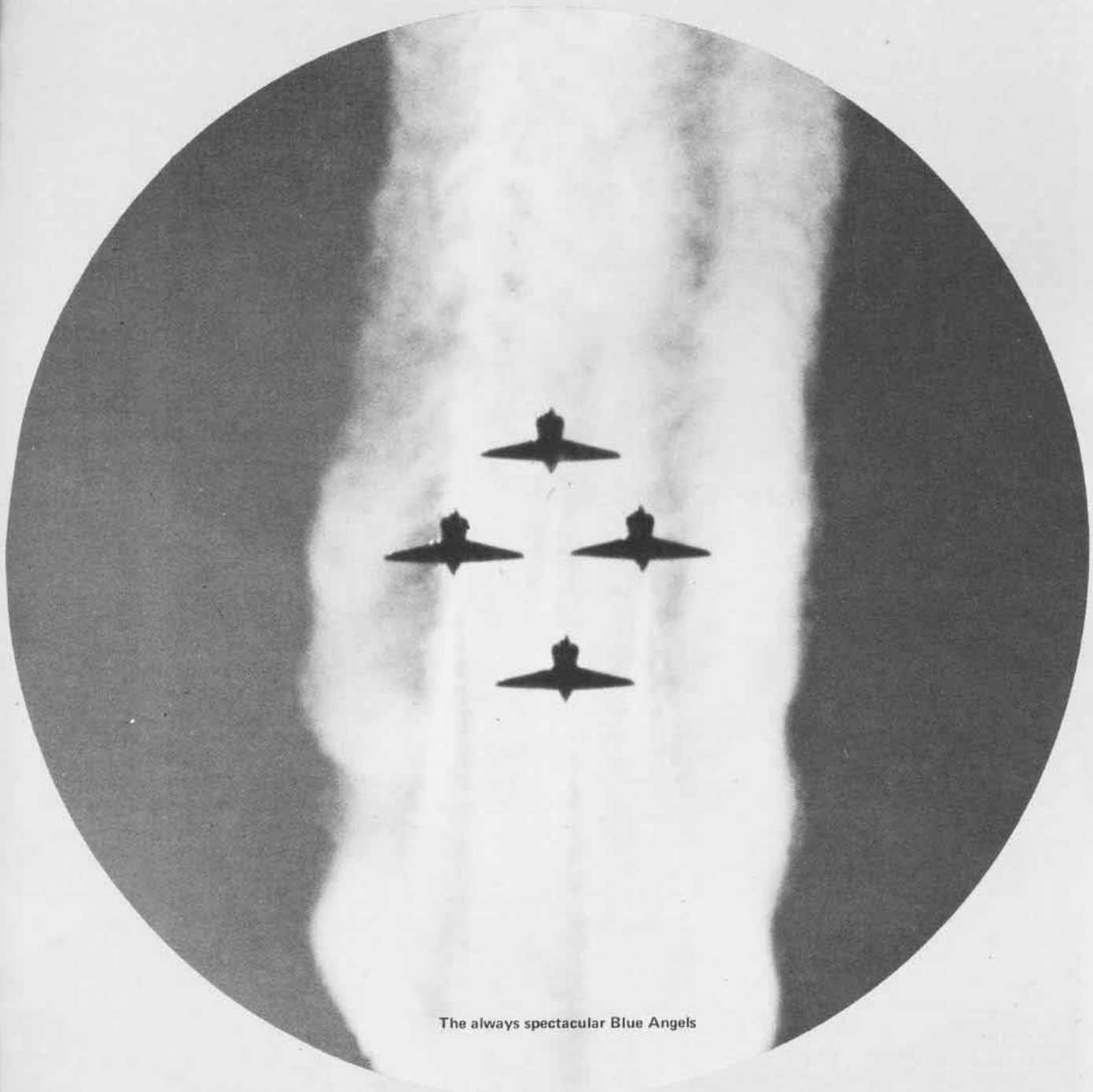
Armed Forces Day at Andrews Air Force Base drew an estimated 550,000 spectators on May 9 to see a fine air show and to get a close-up look at more than 60 aircraft on static display.

The show featured the always spectacular *Blue Angels* as well as a flyby of VMFA-321 F-4s, and demonstrations by F-18s and F-14s from the Naval Air Test Center, Patuxent River and VF-101, respectively. In all 16 Navy, Marine Corps and Coast Guard units participated.


A good seat for the show.

**Sea Service Participants**

| | |
|---|---|
| VF-32 | F-14A |
| VF-101 | F-14A |
| VF-171 | F-4S |
| NATC | F-18A #5 |
| VA-42 | A-6E |
| VA-46 | A-7E |
| VS-39 | S-3A |
| VT-22 | TA-4J |
| VT-26 | T-2C |
| TAW-4 | T-44A |
| TAW-5 | T-34C |
| VMA-223 | A-4M |
| VMFA-321 | F-4N |
| VMO-1 | OV-10A |
| HMT-204 | CH-53D |
| Coast Guard Cape May | HH-52A |



The always spectacular Blue Angels

Photos by Jim Burridge

# smile you're on recon camera

By Lieutenant Commander Peter Mersky, USNR

When the dust had settled and all the photo evidence was evaluated, the Navy and Air Force flew off with top awards in the 1981 World Famous Open Class Photo Derby for aerial reconnaissance squadrons.

The derby, held at Naval Air Facility, Washington, D.C., April 12-18, attracted 15 squadrons from the U.S. and Canada.

The Air Force's 67th Tactical Reconnaissance Wing from Austin, Texas, took top honors in the team competition. RAF Squadron Leader W. E. "Jock" Stirrup, a British exchange pilot, accepted the Chicago Aerial Trophy for the wing. "This has been a tremendous competition and I hope to return next year to represent my country with our own *Jaguar* aircraft," Stirrup told the audience at the awards ceremony.

The derby is the brainchild of Commander Doug Simpson, program manager for Naval Air Reserve Light Photographic Squadron 6366, at the Naval Air Facility. "We're here to share ideas and tactics," he pointed out. And he added that the derby is definitely not a training exercise.

The individual first place trophy was awarded to U.S. Navy Lieutenant Mike Cramer and his Radar Intercept Officer Lieutenant Gil Michael of VF-124. The pair flew an F-14 *Tomcat* with the tactical air reconnaissance pod system known as TARPS. According to Cramer, it was an auspicious debut for the TARPS-configured *Tomcat*.

Each of the participating squadrons brought two aircraft and two crews, and there were some interesting advancements in reconnaissance equipment carried by participants. In addition to the TARPS-equipped *Tomcats*, VA-35 from NAS Oceana, Va., came with its A-6E *Intruders* carrying the new forward looking infrared radar (FLIR) to test the system's reconnaissance capability. Designed for weapons guidance, FLIR may also have added value in aerial reconnaissance.

Tanker refueling for the participants was provided by Naval Air Reserve squadrons VAK-208 and VAK-308 flying KA-3 *Skywarriors* out of Alameda, Calif. Radar direction and traffic control came from VAW-78 and VAW-88 reservists flying E-2B *Hawkeyes* and stationed at NAS Norfolk and NAS Miramar, respectively. Aggressor aircraft came from NAS Oceana-based VC-12 flying TA-4J *Skyhawks*.

The competition routes were flown at 420 knots, a speed which derby officials felt would most realistically simulate combat conditions and still maintain safety considerations for other air traffic. The routes, some of which contained 30 individual targets – railroad bridges, tank farms, road intersections, etc. – were laid out on designated visual training routes, and had actually been flown by the derby organizers prior to the competition.

A highlight closing out the competition was a symposium given largely to briefings on specific reconnaissance methods and capabilities.

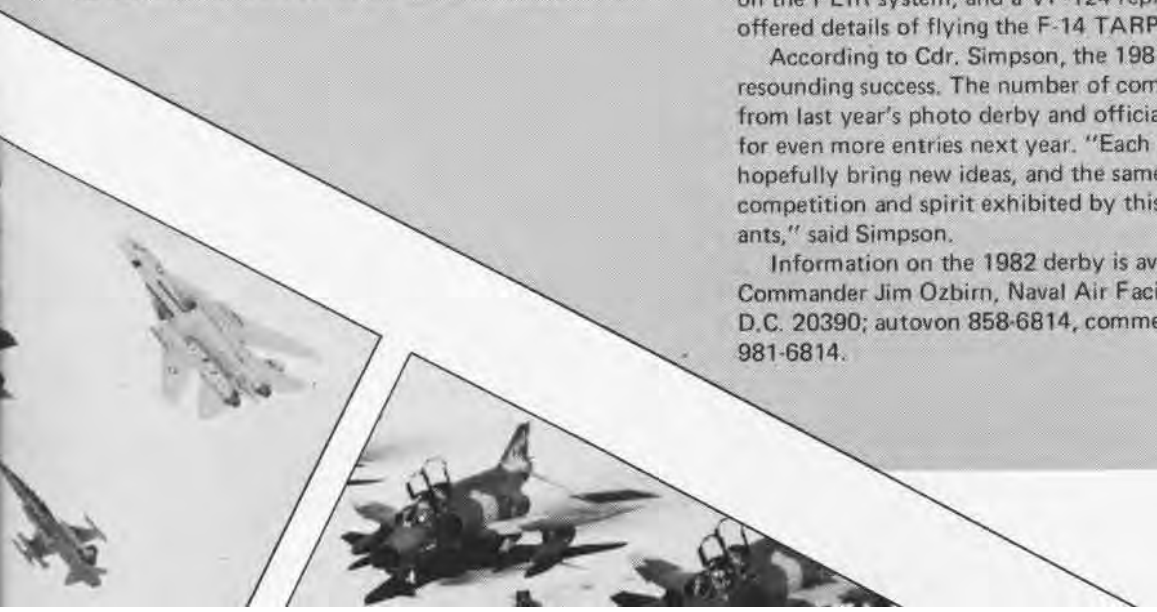
Of special interest was discussion by British and Australian observers who gave their views of the competition, commented on their exchange tours and made comparisons of different operating philosophies.

Squadron Leader Stirrup noted that his own *Jaguar* squadron syllabus allows for a 60/40 mix of ordnance delivery/reconnaissance training. And he emphasized the visual reconnaissance approach used by many European communities, pointing out that the totally dedicated reconnaissance platform was a thing of the past.

Briefings were also given by Kodak and Chicago Aerial Industries, manufacturers of the aerial cameras used by many American reconnaissance squadrons. A McDonnell Douglas team discussed the reconnaissance version of the F/A-18, VA-35 personnel gave a briefing on the FLIR system, and a VF-124 representative offered details of flying the F-14 TARPS.

According to Cdr. Simpson, the 1981 derby was a resounding success. The number of competitors tripled from last year's photo derby and officials are hoping for even more entries next year. "Each new edition will hopefully bring new ideas, and the same feeling of competition and spirit exhibited by this year's contestants," said Simpson.

Information on the 1982 derby is available from Commander Jim Ozbirn, Naval Air Facility, Washington, D.C. 20390; autovon 858-6814, commercial (301) 981-6814.




The Marine Corps' AV-8A Harrier, Art Scholl's Super Chipmunk and Joe Hughes' Super Stearman team up for a Super Photo by Jim Larsen.


22

Dr. Robert Delvecchio checks arm reach of Stephanie Meyer in the reconfigurable crew station evaluator.

# Cockpits Go Coeducational

The proposed Navy undergraduate jet flight training system (VTXTS) for the 1990s is part of a changing philosophy. Grumman Aerospace and Beech Aircraft teamed up in February 1980 for an initial concept design study. The design they will submit and the designs of other competitors for the Navy contract must accommodate female as well as male pilots and maintenance personnel.

"This is the first time the Navy has required us to design for both men and women," says Dr. Robert Delvecchio of Grumman's Life Sciences group, who headed a VTXTS study of female body dimensions. One hundred and fifty Grumman women participated in the project, and they proved what the Life Sciences group had predicted: When it comes to airplanes, one size won't fit all.

Most aircraft are designed to suit males ranging in height from 5'6" to 6'1", with a mean height of 5'10". Comparable height for females ranges from just under 5'1" to 5'8½" — with a mean height of 5'4¾". Women who are 5'6" and over should have little or no problem, but the ones who are smaller than that would have some real difficulties.

The study measured all the factors that would influence the configuration of the cockpit: height, weight, sitting height, leg length, arm reach and muscle strength. "Most of the difference is in leg length," explains Delvecchio. "If you look at the people around you, you'll notice that, sitting down, most of them are very close in height. A 6'2" man doesn't sit that much taller than a 5'2" woman; their torsos are very nearly the same length."

In the first part of the test, completed in January 1981, only physical dimensions were measured. Women who were within a specifiied range were called back for the second phase which used the reconfigurable crew station evaluator, a piece of equipment that can simulate the cockpit setup of various aircraft. For this portion of the test, which was finished in early February, volunteers were asked to put on a flight suit and helmet, and sit in the cockpit. "The flight suit is fairly heavy, so the person wearing it sits about a half inch higher because of the thickness of the material," Delvecchio says, "and the helmet reduces the amount of available headroom." The volunteers were then asked to push and pull on the control stick and press down on the rudder pedals. A scale built into the evaluator indicated leg and arm strength.

The women who participated in the study had answered a request for volunteers. Delvecchio notes that his group was pleased with the large response. "The more volunteers, the more valid our results," he explains. "We had been hoping to get at least 70 participants and we got more than twice that number."

"It's a fascinating project," says Jill Breunig, a buyer in procurement. "I like being part of something completely new. . .especially when you consider that it could help women years from now."

Stephanie Meyer, a receptionist at Grumman headquarters, says she signed up ". . .because I always raise my hand when someone is looking for volunteers. And this project is important for the company and important for women."

Carole Ann Bosco, a Grumman financial analyst, agrees. "It's really encouraging to see that women are being taken into consideration more now. So many things are simply designed for bigger people." At 5'2¾", Bosco knows just how frustrating that can be. "Chairs, for instance," she says. "My feet don't hit the floor. I finally traded in the chair I've been sitting on at work for three years. It was supposed to be adjustable, but it had arms which wouldn't allow it to fit under the desk. I had to sit forward on it, my spine never touching the back of the chair. The new one I have now is a plain, non-adjustable, straight-back chair. Not great, but at least my feet are on the floor. Driving can be a problem, too. I drive a small car, but in a rental car I have to put a cushion in back of me in order to reach the pedals."

Nancy Guernsey, a 5'3" volunteer with a private pilot's license, feels a special satisfaction from participating in the project. "If I want to fly, I have no choice but to contend with airplanes designed for tall people," she says. "That's why I'm especially pleased to be part of this study. In a way, it's my chance to get even!"

**Condensed from an article in Grumman *Plane News*, January 30, 1981.**

# VP-40
# Cooperation for Survival

By Lieutenants Junior Grade
Tommy Klepper and Larry Luck


Most emergencies can be be managed and training is the key to success. Patrol Squadron 40 under Commander D. S. Axtman, based at NAS Moffett Field, teamed up with a neighboring squadron from another service recently to provide both units with rescue and survival training that may someday save lives.

The exercise simulated conditions which might actually be encountered in an aircraft ditching situation in the open ocean. Although the planning for this event had been taking place for several weeks prior, neither the crew of the P-3C or of the HH-3 rescue helicopter involved was aware that a staged ditching was about to occur.

It was not until combat aircrew nine arrived at the briefing room for a routine patrol flight that they learned some of them would be placed in a survival situation in the Pacific Ocean that day rather than conducting surveillance. Early in the preflight, individual crew members were selected to be survivors of the staged aircraft ditching. The crewmen were then driven to Santa Cruz harbor to meet the safety boat team from the Air Guard rescue and recovery squadron. They were allowed to use only survival equipment that would be available in any ditching from a P-3C.

After notifying the Coast Guard and local rescue authorities, the aircrewmen were placed in the ocean about three miles southwest of Santa Cruz Beach. They were outfitted in new bright orange survival suits, recently authorized for use by flight personnel. While awaiting rescue, the survivors practiced attracting potential rescuers

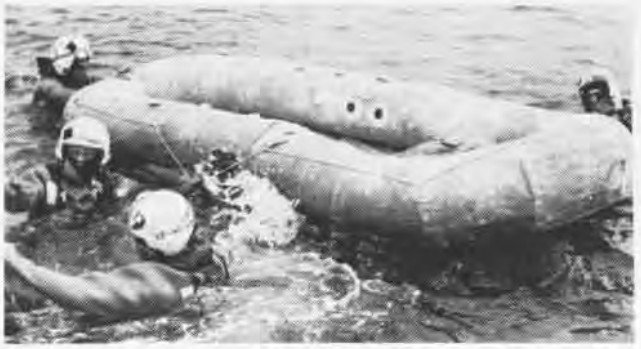

P-3C of VP-40 off the coast of California.

with flares, smoke markers, sea dye and other survival equipment provided in the life raft. The five survivors remained afloat for over four hours in a water temperature of 59 degrees. The survival suit successfully kept the aircrewmen warm and dry while in the life raft. In the event of a real emergency, familiarity with the use of these survival devices would be essential and "hands on" training of this type would prove invaluable. To add to the realism and to get the most benefit from the training, the squadron carried out all established procedures as if the event were a real accident. The aircraft pre-mishap plan for search and rescue efforts was carried out in simulation by key Patrol Squadron 40 personnel. In addition, key members of the 129th Rescue Squadron, commanded by Colonel E. R. Aguilar, were notified and an HH-3 rescue helicopter was dispatched to search for the surviving airmen.

Forty minutes after the request for assistance was received by the Air Guard, the helicopter successfully located the survivors' life raft and was preparing to retrieve them from the ocean. As the helicopter hovered some 50 feet above the first man to be rescued, an on-board crewman lowered a rescue cable and seat with a winch which the survivors quickly mounted for hoisting into the helicopter.

The exercise was a complete success. The VP-40 aircrew received survival training that is impossible to realize from books or lectures; Air National Guard members acquired invaluable experience in search and rescue operations; and the two neighboring units from NAS Moffett Field gained new insight into the advantages of cooperation.

Rescue was made 40 minutes after request for assistance.



VP-40 crewmen had no advance warning of the survival exercise.

# TOUCH AND GO

*Coming and Going With the Carriers*

The carrier *Forrestal* is midway through her sixteenth Mediterranean deployment, beginning her second quarter century of naval service. She relieved USS *John F. Kennedy* at Malaga, Spain, in March and is scheduled to visit Mediterranean ports in France, Italy, Greece and Spain while deployed.

During operations prior to crossing the Atlantic, *Forrestal's* crew coordinated a search and rescue effort for 35 crewmen missing from a merchant ship which sank off Bermuda.

*Kennedy* returned from Spain to her home port of Norfolk, Va., and is presently undergoing a yard period there.

*Lady Lex* is going to be around a little longer. The 40-year-old *Lexington*, now used to train Navy pilots, will continue service through FY 89. The decision was based on assessment of the ship's age and material condition. Keeping her active will enable the Navy to continue a realistic, operational training environment for Navy pilots. She is scheduled for approximately 12 months of refit and overhaul in FY 84.

At the headquarters building of Commander Naval Air Force, Pacific, visitors are now greeted at the quarterdeck by a model of USS *Constellation*. The 12-foot-long replica is on loan from the David Taylor Naval Ship Research and Development Center in Washington, D.C. The model, valued at more than $250,000, was constructed in 1961 by the Pattern Shop at New York Naval Shipyard as part of the construction contract for the "real" *Constellation*. *Connie* is home-ported in San Diego, a short distance from ComNavAirPac's NAS North Island headquarters.

**Lexington underway.**

*Flight Deck Family Goes to Sea*

Sailors on an aircraft carrier can develop strong friendships, but such a friendship comes naturally when it is between a father and son who are stationed together. Chief Aviation Boatswain's Mate William Purcell works on USS *Midway's* flight deck, and his son works one deck below in the ship's photo lab.

Chief Purcell supervises all movement of aircraft and support vehicles on the flight deck and is responsible for the safety of those who work there. He has more than 20 years of aircraft handling experience, 12 of those on aircraft carriers.

His enthusiasm for the activity of the flight deck is shared by son Bill Jr., a photographer's mate. "My dad has been a guiding force in my life," says the 18-year-old.

He has been interested in his father's work ever since he can remember. His first visit to a U.S. Navy ship was as a guest on a dependents' cruise aboard the carrier *Lexington*, then home-ported in Pensacola, Fla. He recalls visiting *Lexington* and his father nearly every day during in-port periods.

Bill Jr.'s aptitude for photography surfaced in high school, where he began taking sports photos after being dissatisfied with what was appearing in the school paper for which he worked. Photography has been part of his life since, and it is a love shared by his father.

Photographers and aviation boatswain's mates don't generally work together, or share many of the same interests. Bill and Bill Jr. are exceptions to the rule.

**JO3 Rick Zigler and JO1 Ray Fredette**

Photo by JO1 Ray Fredette, Jr.

**Father Purcell (right) and son share a Naval Aviation career aboard Midway.**

*VAW 88 Comes In From the Cold*

Reserve Carrier Airborne Early Warning Squadron 88 is back home in sunny San Diego, following a chilly deployment to Keflavik, Iceland, this past winter.

With minimal advance notice, three of the squadron's E-2B *Hawkeyes* were readied and on January 13 the aircraft and detachment of 85 persons took off, with winter gear, to replace VAW-124 in Iceland. VAW-124 had been called to take part in NATO Exercise *Creek Sentry* in northern Europe.

The deployment was a shock of sorts for the VAW-88 officers and enlisted, more than half of whom were Naval Air Reservists on active duty for training.

In addition to the usual early warning missions to fill needed radar coverage, the squadron also flew several search and rescue missions for overdue and downed civilian aircraft. Flight operations in Iceland's winter, it was discovered, require resourcefulness beyond the daily routine. In addition to the usual snow and rain that caused a constant sheathing of ice, there were 100-knot winds during one storm which destroyed the very instruments made to measure the wind velocity.

The crews gave up using standard chocks when securing the aircraft. The combination of ice and wind caused the aircraft to slide about, so sand bags replaced the wooden blocks.

On February 21, the squadron returned to San Diego and NAS Miramar to be met by warm Santa Ana winds.

The deployment was described as successful and drew high praise from both NATO and Icelandic military officials for a thoroughly professional performance. **Cdr. Jack L. Henry**

*Assuming You Survive*

Crew 12 from Patrol Squadron 9 got a chance to brush up on their survival skills this spring. A "scheduled" hijacking took them from the runway of NAS Whidbey Island, Wash., to the slopes of Mt. Shuksan 100 miles away for a 24-hour short course in survival.

Survival training for aircrews, after the initial five-day survival, evasion, resistance and escape (SERE) school, is generally limited to about two hours of instruction a month. The wilderness experience by the nine-man crew from VP-9 was the idea of Lieutenant Junior Grade Jon Reed, squadron aircrew survival officer.

The crew had been told the flight from their home base at NAS Moffett Field, Calif., to Whidbey Island was a routine torpedo exercise. On landing at Whidbey, however, they were placed aboard a bus under the care of Chief Dave Cuthbert, a SERE instructor from the Fleet Aviation Specialized Operational Training Group, Pacific.

Shortly after arriving at the "crash site," the crew was able to signal a search and rescue helicopter using signal mirrors. But the "rescue" had to wait while the helicopter suffered a simulated parts malfunction, returned to base, and left the survivors to fend for themselves.

**AW3 Dave Ferguson signals the search and rescue helicopter.**

Parachutes were cut up to build lean-tos, screens put up to reflect heat from the fires, and pine boughs cut to insulate the sleeping crew from the cold ground.

The threat of temperatures in the low 20s was less than intimidating. The crew had just returned from a five-month deployment to Keflavik. As AT2 Richard Nelson put it "Iceland was a really good prep for this."

The next morning the crew built signal fires, and by that afternoon were back in the air en route to Moffett Field and home. Asked if the crew had scored well, Chief Cuthbert responded, "Absolutely. They made a few minor mistakes in survival techniques. Maybe they would have been colder without a shelter than they were last night, but they would have survived. They had the right attitude. They were cooperating and working as a team, and in a survival situation that makes all the difference."

**Story and Photo by Ens. R. Jane Burch**

PH3 E. G. Nocciolo, Jr.

Crewmen of HSL-34 perform in-flight refueling with a Brazilian helicopter.

*Cross Decking Gets Workout*

The seven-nation Exercise *Unitas XXII*, involving U.S. and South American navies, began in June and is again bringing an international flavor to flight deck operations aboard the "small boys" of the fleet. Flight quarters on destroyers, fast frigates and other small ships during the maneuvers may mean the arrival of a number of different helicopter types – from a Brazilian *Lynx* to a U.S. *Seasprite*.

During *Unitas XXI* in 1980, this type of cross-decking provided a unique opportunity for pilots, aircraft crews and flight deck personnel to put into practice helicopter operations involving a variety of aircraft and ships other than carriers.

According to AXC John Young, with HSL-34's Det Two during 1980 maneuvers, the manual can provide basic information but "nothing can replace the hands-on experience we received with the different helos. This exposure to new helos and procedures has made us more aware of our own procedures."

The dissimilarity of equipment and the language barrier create minor problems, says Lieutenant Mark Nofkee of HSL-34. But he adds that it is "nothing that the flexibility of the crews . . . can't make up for."

*Unitas XXII*, scheduled to conclude in early December this year, involves both landings and refuelings and limited antisubmarine training. **Lt. Mark Nofkee**

*Going South For the Spring*

Spring and the birds were headed north again with the sun. Well, not all the birds. The P-3 *Orions* of Patrol Squadrons 26 and 66 were going south – and not for a vacation.

The detachment from VP-26 was at NAS Roosevelt Roads, Puerto Rico, participating in *READIEX 1-81*. The location was tropical and the accommodations spartan by comparison with hometown hangar facilities at NAS Brunswick, Maine. Maintenance was housed in a tent, ordnance had a trailer from which to work, and recent terrorist activity necessitated posting of guards on the aircraft.

But the living conditions apparently had little effect on the mission. *Trident* aircrews completed torpedo exercises, coordinated operations with surface ships, and became the first P-3 squadron to score two direct hits with their first two *Harpoon* missile shots.

VP-66 was even further south, providing support with three aircraft to the joint U.S./Venezuela Exercise *Halcon Vista XV*. The exercise, planned and controlled by Venezuelan armed forces, involved infiltration of aggressor personnel from the sea by surface craft to attack selected, high value targets. Friendly forces, including task groups from the Venezuelan Navy, Air Force, Army and National Guard, and VP-66, attempted to detect and intercept the intruders.

With support facilities nonexistent on site, VP-66 operated as a self-contained detachment, providing all maintenance personnel and equipment. Despite the logistic isolation, the detachment remained 100 percent mission capable throughout the exercise.

*HAL-4 Reservists Flying Low*

Members of Helicopter Attack Squadron 4 spent their annual active duty for training in March hopping hills and skimming the desert.

Using six HH-1K *Hueys* from sister squadron HAL-5, the unit flew out of MCAS Yuma, Ariz. The training schedule, according to executive officer Commander Ken Lyons, included working closely with HAL-5 personnel "to standardize procedures and to experience terrain evaluation and route finding (TERF), fire team and weapons tactics in a desert environment." There was also a weapons tactics instructor course with on-site training, easy access to night vision goggle operations areas, and coordi-


A HAL-5 Huey, similar to those used in recent HAL-4 active duty for training exercises, prepares for a firing run.

nated training with SEAL personnel.

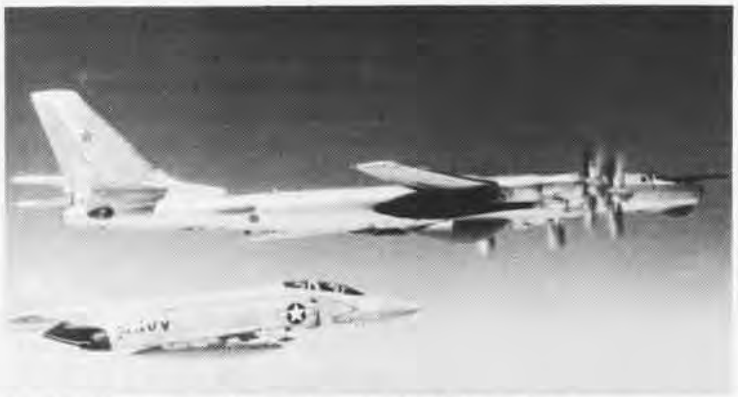
The *Red Wolves* were introduced during the first week to desert TERF flying, using low-level helicopter navigation designed for defensive movement in a missile threat environment. They also practiced navigating through rugged mountains at below 50-foot altitudes, avoiding enemy antiaircraft fire and missiles, and arriving at designated checkpoints at the proper time.

The second week of training combined Navy SEAL and ordnance operations with firing runs, using aerial rockets and door guns. Working with the helicopters, the SEALs practiced insertions and extractions, rappelling and parachute jumps.

With helicopters and crews in nearly constant motion, maintenance crews worked 12-hour shifts to ensure the availability of aircraft at over 90 percent throughout the training period.

"This active duty for training was truly a success," said squadron commanding officer Commander Don Yost. "We traveled nearly 6,000 miles, met all of our training goals and completed all of our missions safely."

*Tigertail and the Bear*



A VF-74 Phantom provides escort service for a Russian Bear.

It was the usual welcoming party. *Forrestal* was en route to the Mediterranean when Tigertail 010, an E-2C *Hawkeye* from VAW-125, detected the "welcome wagon" made up of three Russian TU-95 *Bear* reconnaissance aircraft.

The *Hawkeye* followed the Russian aircraft, which had been picked up at long range from the carrier, and vectored Marine interceptors from VF-74 to escort the three *Bears*.

Long-range detection and interception of unidentified aircraft is one of a number of missions assigned to VAW-125. The early warning squadron provides carrier air traffic control, area surveillance, search and rescue guidance, and communications relay to the fleet. The squadron has four *Hawkeyes* aboard *Forrestal* and is operating as part of Carrier Air Wing 17 during the Mediterranean deployment.


NAVY

# Home on the Range

Story and Photos By JO2 Dallas Bellamy

More than an hour before sunrise, the quiet stillness of the Point Mugu Naval Air Station's flight line is brought to life by a few shadows moving easily in and around some of the parked aircraft. They belong to members of the Range Support Aircraft Division's Air Crew Branch. They are there because an early test operation demands that one of the division's six P-3 *Orions* must be ready to take off by the time the sun comes over Laguna Peak.

It will be a range clearance mission to ensure that no boats are in the "hot zone" of the 1,200 square miles of ocean area which is the Navy's Sea Test Range.

Each time a P-3 goes out, it means at least two hours of preflight preparation by the Air Crew Branch and almost as much time after landing in securing the aircraft. A clearance flight may take from 4 to 12 hours and when you add all the ground hours it makes for a long day.

Often, schedules are altered while the aircraft is airborne. That usually means the crew won't be landing when expected. The old saying holds, "What goes up must come down." It's just that they can't always be sure "when." The 24 enlisted member branch supplies all the crew (except pilots) for the P-3s, including radio and radar operators, flight engineers and in-flight technicians.

**Above, Chief Jay Dee Osier, flight engineer, inspects No. 4 engine as part of the early morning preflight check. At far left, Bloodhound 39 heads for the range and another long day in the air.**

The aircraft's primary mission is support of special projects like the *Harpoon* missile, Cast Glance over-the-horizon detection system and sonic buoy missile impact locator systems. It is also used as a test and evaluation platform. Occasionally the P-3s and crews are deployed to Rota, Spain; Sigonella, Sicily; Puerto Rico; and the Philippines.

The bulk of the time at the Pacific Missile Test Center range is spent cruising at low altitudes, looking for boats that may have wandered into the hot zone. They often find pleasure craft or fishing boats too small to be seen by radar. If the boat has its radio off or is on a different channel, the pilot will make a low, close pass while the copilot broadcasts instructions over loudspeakers for the boat to "come up" on a specific radio frequency.

The boat's occupants are then given a set of course headings to steer it out of the danger area. Most of the time, there is no difficulty and the boat's occupants follow instructions. Sometimes, however, they get stubborn, and that creates problems.

"You've got some fisherman out there trying to make his living," explains Senior Chief William Harding, branch chief. "He has all his nets out, and then you come flying along out of nowhere and tell him he's got to move 30 miles. That'll take him all day and he knows it. He may just ignore us . . . ."

Most of the time, people cooperate. On the rare exceptions, the test location may be altered for safety's sake. For the P-3 crew it means that another section of the range may have to be swept and that involves more time.

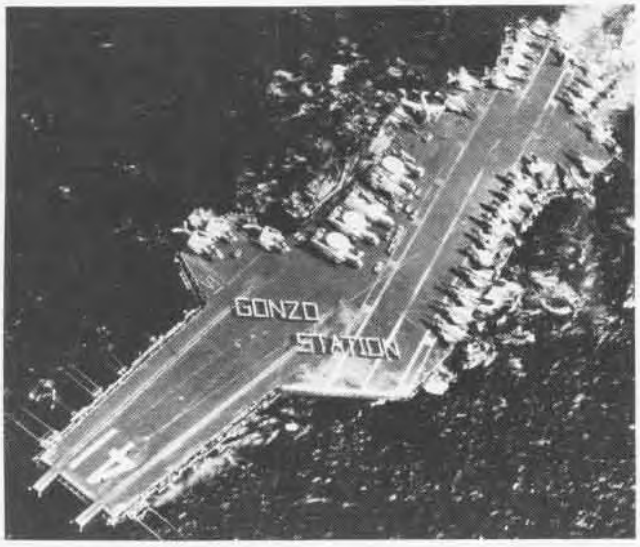
One of the P-3's four turboprop engines is shut down to conserve fuel while searching the test area. The aircraft can safely stay aloft for about 14 hours without refueling, and last year the branch logged about 3,600 hours of flight time. That equates to almost 10 hours for every day of the year.

"Yeah, we do a lot of flying," says Chief Jay Dee Osier, flight engineer. "You know what you ought to call this story," he adds with a grin. "Home on the range!"

Below, flight engineer Jay Dee Osier makes final systems checks as the aircraft commander Lt. Brad Inman (center) watches for the ground crew. At bottom, AT1 Norman Johnson watches the sea for vessels that may have strayed onto the range testing site.


Above, Tom Medlen signals the pilot during warm-up of Bloodhound 38 for a range flight. Right, a super-wide-angle camera view gives a unique look at the P-3.

# Midway
## Ace in the hole




Above, Midway crewmen mark another Gonzo Station deployment in the Indian Ocean. At right, Midway shows her lower hull during a repair period in drydock.

Her crew calls it *Midway Magic*. It keeps the Navy's oldest operational carrier performing on a level with the newest aircraft carriers, year after year, cruise after cruise.

"It must be magic," they say. "How else do we do it?"

The Navy's only forward deployed carrier, home-ported in Japan, *Midway* was the first on the scene in the Indian Ocean when U.S. relations with Iran began to deteriorate in late 1979. *Midway* and five other ships of the battle group had been nearing the end of a fall deployment and the crews were looking forward to Christmas in Yokosuka with families and friends. Suddenly, "hostage crisis" was a household phrase in the U.S., and there would be no Christmas at home for the hostages or the men aboard *Midway*. And by the time the hostages were free, *Midway* would have made a second deployment.

*Midway* sailors and their families and friends are becoming used to the unexpected. *Midway* wives joke about the published operating schedules, saying that "flexible is too rigid a word to describe them."

During that rapid-response deployment to the Indian Ocean, *Midway* accumulated 220 days steaming and 26,880 miles. The following year was no exception. Departing for what was supposed to be a short period of operations in April, the carrier was rushed to the coast of Korea, during a period of heightened tensions. Adding it all together, *Midway* and her crew spent more than half their time at sea. In the political game of Indian Ocean politics, she was America's ace in the hole.

How does a 35-year-old carrier continue to respond? One answer is the constant state of overhaul to which she is subjected during any home-port period. Hours after her return to Yokosuka, whether from a week-long sea trial or five-month deployment, hundreds of Japanese shipyard workers from the Navy ship repair facility swarm aboard. They are fast and thorough, and their workmanship is superb. Some *Midway* crewmen point out tongue-in-cheek that the ship can never go back to the States, because "all the blueprints are in Japanese."

*Midway's* air wing is indicative of her age. The wing composite includes F-4 *Phantoms* and E-2B *Hawkeyes*. The newer F-14 *Tomcats* and S-3 *Vikings* are too large to operate off her flight deck. Despite this apparent handicap, the wing has a deserved reputation for excellence. Carrier Air Wing Five has won numerous competitive honors for light attack, medium attack, fighter and airborne early warning aircraft.

Wing personnel feel theirs is the most smoothly run and professional group in the Navy, pointing out that aboard other carriers squadrons form air wings for one deployment and disband at cruise-end. Air Wing Five remains aboard *Midway* on a permanent basis.

Equipment is one side of the performance coin. The other is the people who maintain and operate that equipment. *Midway* has little problem with sagging reenlistment rates. Career counselors point to that as perhaps even more than magic. Aboard a carrier at sea there are no weekends. The workday may be 12 hours long, and home is a bunk and a locker. It is difficult enough to explain away these inconveniences under normal circumstances. Add to that *Midway's* eight months a year away from home and four cruises to the Indian Ocean in less than two years. Nevertheless, *Midway* sailors reenlist, and many of those who do not still agree to extend their present enlistment on board.

After all, "We're the first team," they explain.

They make light of their "magic" slogan, at the same time believing in it. And while like sailors everywhere they may occasionally grumble about the old girl's faults, others had best keep their comments to themselves.

*Midway* will probably not see a stateside vacation for many years to come, and that trip is likely to be her last. But then, she couldn't go back if she wanted. You see, there is this problem with the blueprints.

# Aviation Art

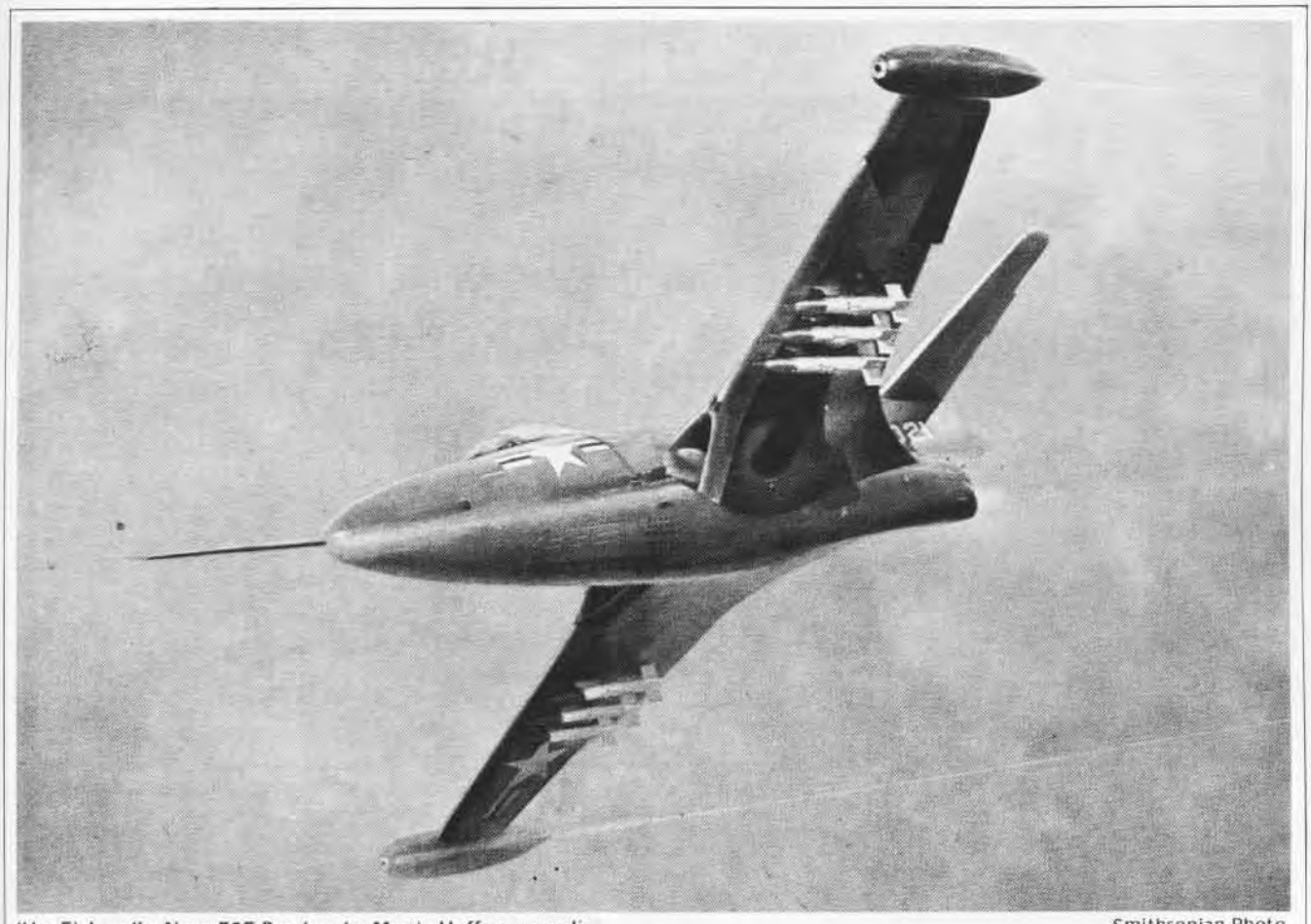
## The Real Thing

"Assignment: Aviation," an exhibit featuring 21 paintings by leading photo-realists, went on view at the Smithsonian's National Air and Space Museum on May 19. The collection which will be exhibited until the spring of 1982 was commissioned by aviation attorney Stuart M. Speiser, a longtime collector of aviation art. It was presented to the museum in 1978, making it the most valuable gift of art from a private donor ever received by the museum.

The Speiser Collection is unique in that it combines the efforts of artists working in the same style, in the same year, on a single theme. The selection of paintings provides an interesting range of artists' perspectives on the subject of flight.

Photo-Realism, based on photographic imagery, came into prominence in the late 1960s and early 1970s. By combining photography and painting, the artists generate dynamic images, often creating the impression that the aircraft are flying off the canvas.

**Included in the museum's permanent Speiser exhibit is the portrait of Charles A. Lindbergh by Ted Wilbur.** Photo by JOC Kirby Harrison



"Jet Fighter," a Navy F9F Panther, by Martin Hoffman, acrylic

Smithsonian Photo.

"White Lightning," by Tom Blackwell, oil

Smithsonian Photo.


"Seaplane," by Charles Bell, oil

Smithsonian Photo.

"Mustang Salley Forth," by Ron Kleeman, acrylic

Smithsonian Photo.

Artist Ted Wilbur and Stuart Speiser examine Wilbur's "Pitts Special," oil.

Photo by JOC Kirby Harrison

# PEOPLE·PLANES·PLACES

## Records

Several units marked accident-free flight-hour milestones: VP-40, 100,000 hours; VS-32, 70,000; VP-68, HML-167 and HC-3, 50,000; VMO-2, MAG-39 and VR-55, 20,000; and VT-9, 10,000.

Some units recorded safe flying hours in years: *Iwo Jima*, 20 years; HML-267, 10;

VS-32, 16; HSL-33 and VF-124, 1.

Maj. Simon F. Stover, flight instructor from HT-18, recently completed 5,000 accident-free career flight hours.

The *Valions* of VA-15 on board *Independence* are claiming the record for the longest successful divert of an A-7. Ltjg. Scott Rupert was airborne as part of normal flight operations until his hook would not extend for recovery. Four hours and 45 minutes later, he landed safely at RAAF Base, Pearce in Western Australia.

*Kitty Hawk* logged her 200,000th arrested landing while operating off the coast of San Diego.

Correction: VF-33's commanding officer, Cdr. Fred H. Vogt, logged his 980th carrier arrested landing and his 300th aboard *Independence* in the Indian Ocean, all in the F-4J *Phantom.*

VA-72 flourished with individual achievements during its Mediterranean deployment. LCdr. Car Davie, Lts. Jim Lectracker, Mike Eide, Andy Ingram, Jim Weatherbee and Dick Costigan passed the 1,000-hour mark in the A-7E. Cdr. Jerry Knott joined the elite group of *Corsair* drivers, surpassing 2,000 hours in the A-7.

Cdr. R. F. Brough, C.O. of the VS-31 *Topcats*, logged his 5,000th flight hour as a Naval Aviator.

## Reactivated

Patrol Wing 10 returned in June to NAS Moffett Field after being disestablished in June 1973.

The action to reestablish Patrol Wing 10 was ordered because of the need to have a middle echelon between Moffett patrol squadrons and Commander Patrol Wings, Pacific.

The reactivated patrol wing has a rich tradition and background. It was originally established in December 1940, when the unit served with distinction during WW II in the Southwestern Pacific theater of operations. It was responsible for coordinating and directing some of the famous *Black Cat* patrol bombing operations against the Japanese in the Philippines. The wing was disestablished for the first time after the war in June 1947. It was reformed as Fleet Air Wing 10 in 1963 and rotated between Moffett and the Philippines during the Vietnam War.

Capt. Bobby C. Farrar has assumed command of the wing.

## Established

HMH-464 was activated recently as the Marine Corps' newest helicopter squadron at New River, N.C. It will be the first to fly the CH-53E *Super Stallion*, with first deliveries scheduled to begin in mid-1981.

The squadron is slated to receive 15

CH-53Es plus pilots and maintenance crews to bring it to an authorized strength of 180.

The unit is part of Marine Aircraft Group 26 and is under the command of Col. Tom Hewes. MAG-26 Marines fly CH-53Ds, CH-46s, UH-1Ns, AH-1Ts and OV-10s.

## Et Cetera

*John F. Kennedy* and VF-32 played an important role in strengthening NATO relations with Spain recently. Col. Eduardo Gallarza, commanding officer of Spanish Air Force Squadrons 111 and 112, and 20 senior *Mirage*-3 fighter pilots were guests aboard CV-67 for a tour and seminar. Hosted by the *Swordsmen* of VF-32, the *Mirage* pilots were introduced to the capabilities of the F-14 *Tomcat*. Cockpit familiarization was followed by a flight deck tour and general overview of carrier operations.

The conference continued with a lecture by Lt. Al Groves of the Test Pilot School on F-14 weapon system utilization and combat effectiveness. After viewing movies and a slide presentation, Spanish pilots and *Swordsmen* settled into informal discussion groups. Regardless of nationality, fighter aircrews speak a common language. By sharing common experiences, Spaniards and Americans alike enjoyed an interchange that spanned cultural boundaries.

Navy chaplains are commonly referred to as "sky pilots" and Lt. Gary V. Lyons is certainly living up to the name. MAG-31's Lt. Lyons plans to take to the controls of his own miniature F-4 *Phantom* that he designed and is building. Unlike the real thing, however, it will be powered by a reciprocating engine with the propeller in the rear. It will weigh 1,250 pounds, have a 16-foot wing span and a length of 21 feet, 4 inches. The aircraft is designed to fly at 200 miles per hour at 75-percent power with an expected ceiling of 20,000 feet. Chaplain Lyons has already built a 1/5 scale model which he has tested in wind tunnel experiments to study basic aerodynamic soundness.

President Ronald Reagan was all smiles as he addressed a crowd of welcomers at NAS Point Mugu. He and Mrs. Reagan, on his right, paused at the Pacific Missile Test

J02 Dallas Bellamy

Center en route to their ranch at nearby Santa Barbara, Calif. Point Mugu has been officially designated as the regular landing spot for Air Force One whenever the commander in chief returns to the ranch. The first family was greeted by RAdm. Fred H. Baughman, commander of PMTC; vice commander, Capt. Ray F. Crater; and commanding officer of the air station, Capt. James E. Webb (R-L).

In this International Year of Disabled Persons, Casey Cook, 8, who is blind and deaf, doesn't let his handicap dim his enthusiasm for the *Blue Angels* and their planes. When Lt. Kevin Miller recently visited the Pacific Missile Test Center at Point Mugu, Calif., he held Casey aloft to get a feel for a *Blue Angel* TA-4 *Skyhawk*. Casey, who lives in Oxnard, Calif., is looking forward to


PH3 Chris Holmes

this year's air show at nearby Point Mugu. The annual show draws about 100,000 people. The 1981 event is scheduled for October 31-November 1.

A high point of a recent open house at Naval Station Pearl Harbor, Hawaii, was this demonstration of special patrol insertion-extraction (SPIE) by members of the Honolulu-based Marine Corps 4th Force Reconnaissance Company. SPIE enables the Marines to quickly place men into, and get them out of, locations at which helicopters are unable to land. The CH-46 *Sea Knight* belongs to HMM-262, MCAS Kaneohe Bay, Hawaii.

JOCS John D. Burlage

## Awards

An awards luncheon was held in honor of three Naval Air Test Center personnel at the 33rd annual reunion and symposium of the U.S. Naval Test Pilot School.

NATC Commander RAdm. John G. Wissler presented awards to: LCdr. Kenneth K. Grubbs, Test Pilot of the Year, in honor of his work as project officer and engineering test pilot on the F/A-18 developmental program; LCdr. Robert W. Dubeau as Naval Flight Officer of the Year in recognition of his work as LAMPS Mark III mission systems project officer; and Leonard E. Parrish as Test Project Engineer of the Year. LCdr. Grubbs was also presented a watch by former NATC Commander RAdm. H. L. Miller, USN(Ret.) — an award initiated by the Golden Eagles (Early and Pioneer Naval Aviators Association) for presentation to the outstanding test pilot of the year.

## Change of Command

ASWOC-1294: Cdr. Gilbert R. Grigsby relieved Cdr. Gerald A. Smith.

MABS-32: Maj. Stephen A. Beaulieu III relieved Maj. Charles E. Stewart.

MAG-13: Col. Donald J. McCarthy relieved Col. George C. Psaros.

NAS Fallon: Capt. Denis J. Taft relieved Capt. Leonard E. Giuliani.

RVAW-120: Capt. John R. Condon relieved Capt. R. A. Allen.

TraWing-4: Capt. Donald E. Riggs relieved Capt. Conrad J. Ward.

VA-22: Cdr. J. E. Vomastic relieved Cdr. J. D. Palmer.

VA-52: Cdr. D. T. Waggoner relieved Cdr. P. A. Rice.

VA-147: Cdr. Frank C. Bledsoe relieved Cdr. David J. L'Herault.

VA-305: Cdr. Douglas L. Bailey relieved Cdr. Paul G. Giberson.

VAW-114: Cdr. H. G. Perkins relieved Cdr. J. R. Morford.

VAW-124: Cdr. Henry C. Fortenberry relieved Cdr. Leonard N. Oden.

VC-1: Cdr. R. G. Ludlow relieved Cdr. R. E. Curtis.

VF-1: Cdr. Lloyd Edward Allen, Jr., relieved Cdr. Doyle J. Borchers II.

VF-51: Cdr. R. F. Johnson relieved Cdr. J. D. Davis.

VFP-63: Cdr. David M. Beam relieved Cdr. Joseph T. Phaneuf, Jr.

VMA-311: LtCol. H. Gary Roser relieved LtCol. Monroe F. Williamson.

VP-22: Cdr. Lou Milioti relieved Cdr. Ray White.

VP-50: Cdr. Robert L. Bushong relieved Cdr. Jerry F. Huss.

VR-58: Cdr. J. W. Seeley relieved Capt. R. W. Kortum.

VS-31: Cdr. Richard L. Harlan relieved Cdr. Robert F. Brough.

VX-4: Capt. R. C. Schroeder, Jr., relieved Capt. G. W. White, Jr.

# Professional Reading

**By Lieutenant Commander Peter Mersky, USNR**

Polmar, Norman. *The Ships and Aircraft of the U.S. Fleet*, 12th edition. Annapolis: Naval Institute Press, 1981. 432 pp. 749 photos and line drawings. Appendices. $24.95.

All active U.S. ships are covered in this volume with pertinent facts and figures and generally sharp, well-chosen photographs, many of which have not been published before. The aviation side of the Navy is well represented with aircraft and squadrons, active and reserve, described and their missions explained. With the impending addition of new surface combatants, submarines and aircraft to the fleet, this book is an excellent reference and a good update on today's Navy.

Hanson, Norman. *Carrier Pilot*. Patrick Stephens Ltd., Bar Hill, Cambridge, England. 1979. 255 pp, glossary, personnel roster. Illustrated. $19.25.

This autobiographical account of a Fleet Air Arm pilot's experience flying *Corsairs* from British carriers provides a different perspective on a familiar subject. Trained at Pensacola, the author flew from HMS *Illustrious*. It is a little known fact that the British used the F4U in regular carrier operations before the Americans did. The wartime carrier operations of our British allies are often given only cursory coverage in discussions of the subject, because they tend to be upstaged by some of the more conspicuous exploits of large U.S. carrier task forces. Yet the contributions of these ships and their aircraft were significant and the experiences of their pilots colorful and exciting. This book helps to bring this part of the picture into focus.

Dickinson, Clarence E. *The Flying Guns*. Washington, D.C.: Zenger Publishing Company. 196 pp. Illustrated. $10.95.

First published in 1942, and subtitled "Cockpit Record of a Naval Pilot from Pearl Harbor through Midway," this book is one of several reprints issued by this publisher. The author, who retired as a rear admiral, literally flew *into* WW II when he was shot down in an SBD *Dauntless* by Japanese fighters during the surprise attack on Pearl Harbor, December 7, 1941. The account of his experiences makes fascinating and colorful reading as he covers the previously mentioned incident and subsequent combat with Scouting 6 in *Enterprise*, in the first attacks against the Marshall Islands, Wake, and the pivotal Battle of Midway in June, 1942. Maps and photos which were not part of the original edition are included. Markings and color schemes of SBDs during the early 1942 period are clearly shown.

# Letters

## 70th Anniversary Issue

Nice job JOC Harrison did on "Carrier," 70th Anniversary of Naval Aviation, *Naval Aviation News*, May 1981. It seems a shame to nitpick, but I imagine I'm not the only old bird you'll hear from since WW II history isn't quite that old yet.

In reference to the jeep carriers in the Atlantic, I would be the last to detract from the outstanding record of *Card* and *Guadalcanal*, but you missed one. USS *Bogue* (CVE-9) pioneered the sub-killer concept and was the first U.S. escort carrier into the North Atlantic on that mission. *Bogue*, her air group and escorts also received the Presidential Unit Citation and were credited with 13 kills, 11 German and 2 Japanese. Even more interesting might be a story on VC-9, the original squadron embarked in *Bogue*, which later joined with VC-1 on *Card* and continued to make history in the Atlantic.

Please don't take my criticism in the wrong way. I just thought I'd speak up for my shipmates who served in *Bogue* with much pride. I was a plank owner and left her as a TBF(TBM) plane captain (AMM2/c) in April 1944.

Ralph L. Hiestand, TDCS, USN(Ret.)
6037 Tujunga Avenue
North Hollywood, CA 91606

**Ed's note: Bogue was indeed a pioneer of the hunter-killer concept. Many thanks for your comments.**

## Photo Collector

I am an 18-year-old Dutch student and my hobby is studying the U.S. Navy, Marine Corps and Air Force. I take pictures of U.S. military aircraft, collect black and white negatives and color slides, and exchange duplicates with friends and correspondents. I am still looking for a correspondent in the United States. Anyone interested?

Peter Scholtes
Sloetsweg 132A
7556 HT Hengelo (ov)
The Netherlands

## Grumman Fighters

I am in the process of researching a book on the Grumman series of fighters. This particular text will cover all the fighters from the FF-1 to the F-14.

If any of your readers can provide interesting stories or photos of some of the different aircraft, it will be greatly appreciated. All photos will be returned as soon as copies are made.

Joe Turpen
P.O. Box 27, ABAC Station
Tifton, GA 31793

## NAS Ottumwa

I am the recruiter in charge of Navy Recruiting Station, Ottumwa, Iowa. It has come to my attention that there was a Naval Air Station, Ottumwa at one time for the training of Naval Aviators. Any information that you or your readers might have concerning any aspect of that facility would be greatly appreciated. We are currently planning an exhibit for our local Labor Day celebration featuring the old NAS and, hopefully, a reunion later in the year for former personnel. We are especially interested in hearing from anyone who was assigned to staff positions or who took their flight training there.

STG1 Frank Lewis deMonbrun
c/o Navy Recruiting Station
P.O. Box 537
Ottumwa, IA 52501

**Ed's note: NRAB Ottumwa was established July 1, 1942. It was redesignated NAS January 3, 1943, and the naval air station was officially established March 13, 1943. NAS Ottumwa was inactivated August 1, 1947.**

## WW II Night-fighters

I'm putting together a history of the Navy night-fighters of WW II. I was C.O. of a VF(N) detachment aboard *Ticonderoga*, but this is not a first person story.

We trained at Vero Beach, Fla., and then formed squadrons at Charleston, R.I., an auxiliary base of Quonset Point. The following photos are urgently needed: NAS Charleston; *Independence* (all night attack carrier); *Ticonderoga* (straight deck before slant); Edward "Butch" O'Hare and others; any squadron or group; shots (color, if possible) of Grumman F6F night-fighter with radar bulb on starboard wing; equipment (such as APS-6 air-to-air radar) and cockpit arrangements; and any action shots.

Anything will be most welcome. Please call at (314) 443-3706 or send to:

Tom Ladwig
1411 Pratt
Columbia, MO 65201

## Reunions, Conferences, etc.

**VA-75 Sunday Punchers, 1954-58,** reunion proposed. Contact LCdr. H. J. Koehler III, USNR-R or PNC P. A. Justin, USN(Ret.), P.O. Box 514, Elizabeth, NJ 07207, (201) 558-0308.

**WW II and pre-Pearl Harbor Navy personnel** reunion, October 25-30, 1981, Las Vegas, Nev. Write Navy Reunion, 5023 Royal Avenue, Las Vegas, NV 89103 or call (702) 873-9841.

**VX-3/HU-4 and all descendent squadrons** reunion, October 2-4, 1981. Contact: S. J. Temple, 121 W. Randall Avenue, Norfolk, VA 23503, (804) 583-1636.

# A composite squadron with a difference

By Lieutenant Junior Grade Robert J. Richards

The *Challengers* of Fleet Composite Squadron 10 are based at Guantanamo Bay, Cuba, a sprawling naval complex at the southeastern tip of Cuba which encompasses both sides of the entrance to the bay and covers approximately 45 square miles. Originally Utility Squadron 16 home-based at San Juan, Puerto Rico, the squadron spent a brief period at the U.S. Coast Guard Station in Miami, Fla. From there it was ordered to Guantanamo Bay in April 1945 where it has remained ever since, giving it the distinction of operating at an overseas home-port location longer than any squadron currently in existence. After its arrival in Cuba, the squadron was designated Utility Squadron 10, a title which it held until July of 1965 when it became Fleet Composite Squadron 10 (VC-10).

The attack simulation and other support missions of fleet composite squadrons are not always as glamorous as those of carrier-based units. Historically, VC-10's mission has been to sharpen the combat skills of the units and ships of the U.S. Atlantic Fleet, the Coast Guard, and allied nations operating in the Caribbean by flying mock aircraft raids, antiship simulations, and target tows. However, the *Challengers* more than make up for this lack of glamor by being a small group of highly motivated individuals who make their organization "The Composite Squadron With a Difference."

The difference is that VC-10, with its complement of eight TA-4J *Skyhawks*, is the only fleet composite squadron in the Navy with a primary base defense combat mission; and the only land-based, operationally ready strike unit in the Caribbean theater, available to support and defend U.S. interests on a round-the-clock basis.