

NAVAL AVIATION NEWS

January-February 1995



NAVAL AVIATION NEWS

Flagship Publication of Naval Aviation

Oldest U.S. Navy Periodical, Volume 77, No. 2, January–February 1995

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COVERS—Front: Joe Cupido of Riverside, Calif., captured these *Tomcats* of VF-41 on the prowl at sunset. Back: Aircraft fill the flight deck of *Abraham Lincoln* (CVN 72) while underway on her circumnavigation of South America in October 1990 (PH2 Dennis D. Taylor).

RAdm. Brent M. Bennett

Director, Air Warfare

Published by the Naval Historical Center
 under the auspices of the Chief of Naval Operations

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Naval Aviation News (USPS 323-310; ISSN 0028-1417) is published bimonthly for the Chief of Naval Operations by the Naval Historical Center. Editorial offices are located in Bldg. 157-1 Washington Navy Yard, 901 M Street, SE, Washington, DC 20374-5059. Second-class postage is paid at Washington, DC, and additional mailing offices. The Secretary of the Navy has determined that this publication is necessary in the transaction of business required by law. Funds for printing have been approved by the Navy Publications and Printing Policy Committee. The use of a name of any specific manufacturer, commercial product, commodity or service in this publication does not imply endorsement by the Navy. Photographs are U.S. Navy unless otherwise credited.

Publication Policy: *Naval Aviation News* considers for publication unsolicited manuscripts, photo essays, artwork and general news about aircraft, organizations, history and/or human endeavors which are the core of Naval Aviation. All military contributors should forward articles about their commands only after internal security review and with the permission of the commanding officer. Manuscripts will be returned upon request. Articles accepted for publication may be submitted on a diskette in Word Perfect 5.1. For further guidelines on submissions, contact the Managing Editor at DSN 288-4407/8/9 or (202) 433-4407/8/9; FAX (202) 433-2343.

Subscriptions: Superintendent of Documents, Government Printing Office, P.O. Box 371954, Pittsburgh, PA 15250-7954. Phone: (202) 783-3238. Annual price: \$10 U.S.; \$12.50 foreign.

POSTMASTER: Send address changes to *Naval Aviation News*, Bldg. 157-1 Washington Navy Yard, 901 M Street, SE, Washington, DC 20374-5059.

By RAdm. Brent M. Bennett, Director, Air Warfare

Dial 911—Carrier

Events in 1994 proved once again that the nation's best instrument for crisis response is the aircraft carrier. Carriers were called upon over and over in 1994 to provide credible combat capability throughout the world in response to an expanding menu of crisis.

During the past year, we routinely had 6 of our 12 aircraft carriers at sea. In early October, we had seven under way. This further illustrates what we already know: while force cuts are being enacted, there is no slowdown in our operational tempo.

America (CV 66) and *Dwight D. Eisenhower* (CVN 69) played a key role in the successful operations in Haiti and restoration of that country's democratically elected leader. Although in Haiti the manner in which these carriers were employed was a unique solution to a unique problem (Army troops embarked as the primary war-fighting complement), this case illustrated the flexibility and adaptability of our aircraft carriers.

Meanwhile, Saddam Hussein decided to test our resolve by again massing his troops near the Kuwait border. Again, a forward-deployed carrier, *George Washington* (CVN 73), responded by arriving on scene swiftly and fully ready—providing the preponderance of tactical air power in the region and, again, causing Saddam to blink. This was the second time during her deployment that *George Washington* sortied from the Adriatic (Deny Flight) to the Persian Gulf. Meanwhile, *Kitty Hawk* (CV 63) was on watch in the Yellow Sea monitoring events in North Korea.

After her duties in Haiti were complete, "Ike" went back to Norfolk briefly, picked up her air wing (CVW-3) and deployed to the Med/Persian Gulf, allowing *George Washington* to return home on time from a very successful first deployment.

The enduring value of aircraft carriers and Naval Aviation cannot be overstated. Our unrestricted access "from the sea" has been called upon over 200 times since WW II to respond to crises, and those calls have increased in fre-



J02 Bobby Jones

RAdm. Brent M. Bennett

quency since the end of the cold war. The changed world increases reliance on Naval Aviation with its ability to go where and when needed, and be ready for offensive operations the moment it gets there, as a fully integrated package. In fact, **since the Gulf War ended, every deployed carrier has been called upon to respond to at least one crisis.**

Twelve aircraft carriers is the minimum force level required to sustain this level of response and to support the administration's strategy of engagement, which seeks to enlarge the community of free-market democracies. Naval Aviation continues to receive strong support from our nation's leaders. This support is based on experience, for when a crisis erupts, the first question asked continues to be, "Where is the nearest aircraft carrier?"

The most important good news from 1994 was our mishap statistics—the lowest on record (28 Class "A" mishaps, nine fatalities). **Great job** by all hands to reduce our mishap rate. However, the reality was grim for those serving in units that experienced a mishap. I am concerned about the six midairs/nine aircraft lost in FY 1994. With your help, I see an opportunity to make an immediate improvement. We are also experiencing a higher number of TFOAs (things falling off aircraft). Check each other.

FLY 'EM SAFE!

Lt. Michaels, VF-11



Carrier Air Wing 14 aircraft fly over Carl Vinson (CVN 70) while on deployment in the Arabian Gulf.

Sea Stallion Slider

A CH-53D was scheduled for a functional check flight (FCF) with a crew of three on board: pilot, copilot and crew chief. After start-up, the tip path plane was checked by the crew chief at the request of the pilot because the plane was not level when the cyclic was centered. When the tip path plane was level, the cyclic was displaced left of center about one inch.

The *Sea Stallion* launched and began the tests. After controllability hover checks, the pilot told the copilot the aircraft was having difficulty achieving 35 knots airspeed in left sideward flight. Yet, he discounted the difficulty, believing it was caused by the 12-knot winds from the northeast. The pilot felt it was not unusual for the CH-53D to experience more difficulty sliding left than sliding right.

After a time, the pilot radioed squadron maintenance that the flight portion of the check was complete and the aircraft was up but the cyclic was displaced left of center. He requested quality assurance personnel meet the CH-53D on the line. The pilot's concern was "not so much for safety but more for what other pilots might think of the cyclic position."

A little later, utilizing all available left cyclic, the pilot found that maximum available angle of bank (AOB) was 35 degrees at 120 knots. He transferred control to the copilot but did not tell him of the 35-degree limitation. The copilot began an approach to the runway, noting a right drift during descent and deceleration. (Minimum lateral control margin occurs when the helo loses translational lift and transitions to a hover.)



FRED PETTIBONE

He tried to correct right drift with left cyclic and momentarily trapped the pilot's leg between the collective and the cyclic. A moment later, still correcting for right drift, he thought he struck the pilot's leg again.

"I need it," said the copilot, meaning left cyclic. The pilot then called for wave-off and took the controls. He increased speed and made a left-hand decelerating and descending turn to a short final. At 100 feet, 50 knots and perpendicular to the wind line, the pilot realized he had run out of left cyclic and sensed the aircraft was rolling quickly to the right. He called, "... servos off" and while complying with this

command, the copilot inadvertently rolled the #2 center of gravity trim wheel forward. The aircraft executed two 360-degree turns before stabilizing in a hover facing the nearby beach.

The pilot reported, "We're having problems with ... no left cyclic; we're trying to get her down here and we may have to declare a mayday."

The *Sea Stallion* drifted right and descended toward the beach, gaining forward speed and causing people on the beach to scurry for safety. Seeing this, the pilot stopped the rate of descent and forward motion with cyclic flare and collective pull. This put the CH-53D into an extremely nose-high attitude. The aircraft momentarily settled into some pine trees in a rolling, right-yawing moment. The pilot tried corrective action but to no avail.

"Put it in the water," said the copilot. "Put it in the water." Shortly thereafter, the aircraft made a final right-hand spiraling turn, impacting the five-foot-deep water in a slight right-wing-down, nose-low attitude.

The *Sea Stallion* was destroyed but the crew managed to egress safely, albeit with difficulties, including entanglement of HEED (Helicopter Emergency Escape Device) lanyards and swallowing a combination of saltwater and JP-5 fuel.

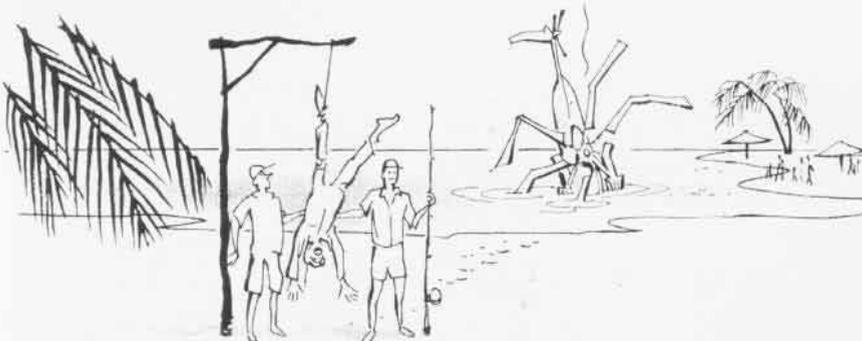


Grampaw Pettibone says:

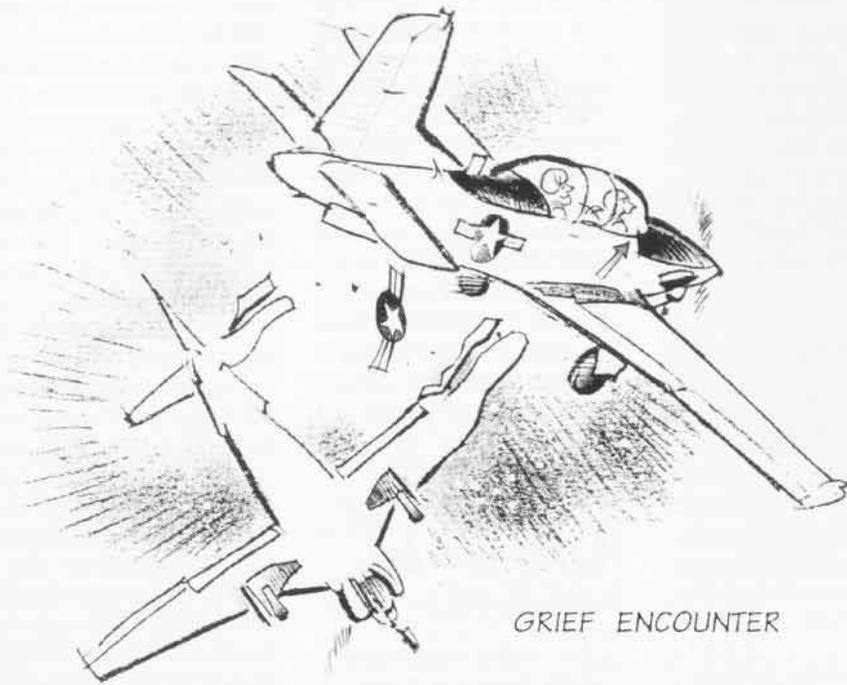
What a ride! What a shame!

Maintenance erred in using incorrectly sized rigging pins before the flight, but that shouldn't have cost an aircraft. Personalities played a part in this one. The pilot was an experienced, can-do aviator respected by his peers and known for flying thorough FCFs. But these attributes might have led to his inability to determine the *Sea Stallion's* rigging problem. As the investigators put it, "His extensive familiarity with functional check flight profiles and the idiosyncrasies of various squadron airframes dampened his sensitivity to the aircraft's rig." The tip path plane was one clue, the difficulty sliding to the left was another.

Also, the copilot was never briefed on the purpose of the FCF, nor did he review the yellow sheets. He was



SLIDE SHOW



GRIEF ENCOUNTER

new to the squadron and felt intimidated by the pilot's experience level and reputation for being very stern to copilots. This impeded communication to a fault. The pilot used poor judgment when he performed a nonstandard AOB check and did not inform the copilot of the AOB limitation.

Plenty of other things went wrong on this one, but overconfidence and failure to work as a team—crew coordination is the buzz word—led to the *Sea Stallion's* scary plunge into the shallow sea.

Turbo-Mentor Trouble

At a tower-less, "uncontrolled" outlying field, a training command T-34C *Turbo-Mentor*, aircraft No. 1, approached the 2,500-foot-high key for a practice precautionary emergency landing (PPEL). The instructor in the rear cockpit was aware of other aircraft in the lower touch-and-go pattern. (There were five operating at the field at the time.) PPELs from high altitude use a left-hand pattern; touch and goes employ a right-hand pattern.

The student began his turning descent,

gear down, flaps up. He reached low key 200 feet below the prescribed 1,200-foot altitude, three seconds before another T-34C (No. 2) in the touch-and-go pattern reported at the abeam position. No. 1 did not hear this report because the instructor was talking to his student on the intercommunication system just before and just after the low key call. The instructor in No. 1 looked for conflicting traffic at the 180 but did not see No. 2.

Both aircraft were thus making simultaneous, converging approaches to final, which for the touch-and-go aircraft is a point 100 to 150 feet above ground level (AGL) with about 1,500 feet of straightaway remaining and airspeed at 80–90 knots with full flaps. The 90-degree position altitude is 400 feet AGL.

For No. 1's precautionary approach, final calls for 1,500 feet of straightaway, 90 knots (full flaps, 95 knots, flaps up) with no specific altitude—although instructors consider 300–400 feet AGL appropriate. No. 1's flaps remained up until landing was assured.

The crash crew had authority to advise pilots of unsafe conditions but was not allowed to issue clearances. Noticing the proximity of the aircraft, a crash crew

member transmitted, "Heads up on final!" But the *Turbo-Mentors* crossed paths and then collided, No. 1's left wing striking the bottom of No. 2's right horizontal stabilizer.

Neither aircraft had seen the other until this time. No. 1 added power and began a right turn, at which point No. 1's left wing impacted the trailing edge of No. 2's right aileron, jamming it to the full-down position. The aircraft were now at 200 feet, 800 feet from the approach end of the runway. No. 1 managed to climb away and land safely after a flight controllability check. No. 2 was forced into an unrecoverable, left-hand roll and hit the ground nearly inverted, killing the instructor and student on board.



Grampaw Pettibone says:

Gol dang it all! The bottom-line cause for this tragedy was lack of situational awareness on the part of the aircrews. It's as simple and as brutal as that.

Installing air traffic control facilities at outlying fields that don't have them is a great idea—but expensive in these days of downsizing. Plus, we've been handling dual patterns well over the years.

Flight instructors, especially new ones, need time to adapt to "rear-seat flying." They've got a hard row to hoe for several reasons: the vantage point from back aft is different from what they're used to, their teaching responsibilities are awesome, and the skies of the training command tend to be crowded.

Right from the git-go, students are working their hearts, minds and bodies to the max in the tough-as-tough-can-be world of Navy flight training. Their lookout doctrine is a necessary but draining load on a plate of responsibility that's already full.

Even so, those who take to the air in flying machines—whether on a training or operational mission—must keep their heads on a swivel and wary eyes ever alert for potentially deadly traffic.

Aviator Flag Moves

RAdm. Walter J. Davis, Jr., was promoted to vice admiral and assumed the position of Director, Space and Electronic Warfare, Office of the CNO.

242 Naval Reserve Units to Close

Over 12,500 positions in the Naval Reserve are scheduled to close in 1995 due to disestablishment of 242 Naval Reserve units and attrition. At least one Marine Corps aviation unit is also scheduled to close. Some of the aviation units are: VAs 205 and 304, VFs 202, 301 and 302, VFAs 303 and 305, VAW-88 and HMs 18 and 19; NAS Glenview, Ill.; Naval Air Reserve Centers Lemoore and Miramar, Calif., and Millington, Tenn.; and Marine Air Traffic Control Squadron 48.

Aviation Department Head Board Changes

New procedures set for the FY 1995 Aviation Department

Head Screen Board will include a second look for operational and special mission. An officer will be considered for an operational department head screen on the first look and for operational and special mission during the second year's look. NAVADMIN 178/94 has more information.

Philadelphia Drydock Completes Last CV

When *John F. Kennedy* (CV 67) left the Philadelphia Naval Shipyard drydock 15 November 1994, she ended an era—as the last aircraft carrier to be overhauled at the site before the yard is closed. Work will continue at Pier 6 at the shipyard but the drydock phase of the overhaul is finished. *Kennedy* is scheduled to complete her \$491-million overhaul in September 1995 and leave for a home port change to Mayport, Fla., until decommissioning in FY 2010.

F-14 Crash Victim Found

The body of Lt. Kara Hultgreen, one of the first two

female pilots in an operational F-14 squadron, was found in about 3,700 feet of water still strapped into her ejection seat. The F-14 she was flying crashed 25 October 1994 about 50 miles off the coast of San Diego, Calif., during an attempted landing on *Abraham Lincoln* (CVN 72). The radar intercept officer flying with Hultgreen, Lt. Matthew P. Klemish, safely ejected from the aircraft only seconds before it crashed. The Navy plans to recover the aircraft as part of the crash investigation.

Hornets Nest 1-95 Ends

The MAG-31-sponsored Hornets Nest 1-95 anti-air warfare exercise at MCAS Beaufort, S.C., ended 4 November 1994 after 12 smooth days of training. The exercise participants comprised a variety of U.S. Armed Forces, including Marine Corps, Navy, Air Force and Air National Guard units. B-52, F-14/15/16, KC-10/135, MC-130, A-6E, F/A-18, AV-8, UH-1N, EA-6B and E-2C aircraft and HAWK (Homing-All-the-Way Killer), Stinger and Avenger missile systems were all players in the semiannual exercise conducted throughout the South Carolina coastal area.

International News

Finland and Switzerland decided to buy the ITT/Westinghouse ALQ-165 Airborne Self-Protection Jammer for installation on their F/A-18 *Hornets*.

The **Japanese** Defense Agency's Technical Research and Development Institute predicts that its new SH-60J rotor blade will provide 5-per-

cent better hovering efficiency and 30-percent less vibration compared to current blades. Plans are to assemble a prototype system next year for full-scale testing in 1996-1997 on the Navy's Sikorsky/Mitsubishi SH-60J antisubmarine warfare helicopter. The new system will have all-composite blades with redesigned cross sections, planforms and tips. The Defense Agency also has contracted with Indal Technologies, Inc., Mississauga, Ont., **Canada**, to supply modification kits to upgrade the RAST (recovery, assist, secure and traverse) helicopter handling systems on DDH and *Giri*-class ships. The \$1.1-million contract provides for two kits with potential follow-on contracts totaling \$5 million.

NATO Helicopter Industries made an unsolicited offer of its new utility helicopter, NH-90, to **Britain**. The aircraft is scheduled to make its maiden flight in late 1995. The NH-90 program is being developed by companies from four European countries: the **Netherlands** (Fokker), **Italy** (Agusta), **Germany** and **France** (both Eurocopter). These countries have requirements for both transport and naval variants of 726 aircraft.

The Royal **Netherlands** navy requested Westland Helicopters for proposals to extend the life of its 22 *Lynx* helicopters until the NH-90 arrives for operational use beginning in 2003 and extending through 2005. The *Lynx* has been upgraded and standardized with new Rolls-Royce Gem 42 engines, new gearboxes, dipping sonar capability, radar altimeter, combined UHF/VHF radio set and other improvements. Radar-warning receivers, the Global Positioning System and Forward-Looking InfraRed sensor are

Vance Vasquez



The Evaluators of VX-9 Det Point Mugu, Calif., welcomed back "Vandy 1" (call sign) on 17 September 1994. The Super Tomcat painted in a glossy black paint scheme returned to Naval Air Weapons Station Point Mugu after a two year absence.

additions planned for 1995-1996.

An Israeli company, Opgal Optronics Industries, Inc., was awarded a \$13-million contract to supply thermal imagers for the USMC AH-1W Night Targeting System. The imagers will be integrated into the system by Israel Aircraft Industries' Tamam Division and by Kollsman, Inc., Merrimack, N.H.

EMERCOM, Russia's civil defense and disaster-emergency agency, ordered two Eurocopter BO-105 EC Super Fives to support its Ilyushin IL-76 aircraft while flying emergency missions in inaccessible areas. The mission was previously handled by MIL Mi-8s, but their use was found to be limited.

Kuwait has signed an \$80-million agreement with Britain to buy laser-guided Starburst air-defense missiles. The close-air missile is used against high-speed aircraft and helicopters.

Sweden's JAS Grippen 39 multirole fighter will be armed with the Advanced Medium Range Air-to-Air Missile. Approximately 100 missiles were acquired in the initial batch. The Grippen is designed to perform fighter, reconnaissance, ground attack and sea support missions.

Medals Will Change Names

On 1 October 1995, the Navy Achievement Medal and Navy Commendation Medal will change to the Navy and Marine Corps Achievement Medal and Navy and Marine Corps Commendation Medal. This change and others will be included in a revision of the Navy and Marine Corps Awards Manual, SECNAV-INST 1650.1F.

New School at Naval Aviation Schools Command

The Aircrew Coordination Training (ACT) Instructional Model Manager Program was established at NAS Pensacola, Fla., and is now teaching fleet readiness squadron ACT instructors for the fleet. The new course provides the necessary instructional personnel to meet the initial and annual recurrency training now required by OPNAVINST 3710.

JPATS Update

Northrop Grumman was dealt a blow 22 November 1994 when notified by the Air Force that the Pampa 2000, a Vought Aircraft Joint Primary Aircraft Training System entry, was removed from further consideration due to technical deficiencies displayed during the competition's flight evaluation phase. Vought is a subsidiary of Northrop Grumman, which still has two other aircraft entries in the competition with the Super Tucano 2 and the S.211A.

NADEP News

The General Electric F404-F1D2 engine, which powers the F-117 Stealth Fighter, will be repaired by Naval Aviation Depot, Jacksonville, Fla. About 60 engine overhauls per year are planned. The decision to have Jacksonville conduct the overhauls was made after an independent accounting firm determined that the depot could perform the work more cost effectively than a private company.

Selected Navy Pilots to Receive ACP

The Navy is offering Aviation Continuation Pay to selected pilots in the following communities: VFA (F/A-18), VAQ (EA-6B), VS (S-3), VQ (E-6A and ES-3A) and VAW (E-2). Naval Flight Officers are not eligible for the pay. Pilots must be qualified for operational flying duty, in a paygrade below commander, and entitled to Aviation Career Incentive Pay. They must be serving with a regular commission or selected for augmentation and must remain on active duty to complete 14 years of commissioned service. Qualified and accepted pilots can receive up to \$12,000 per year.

Corporate News

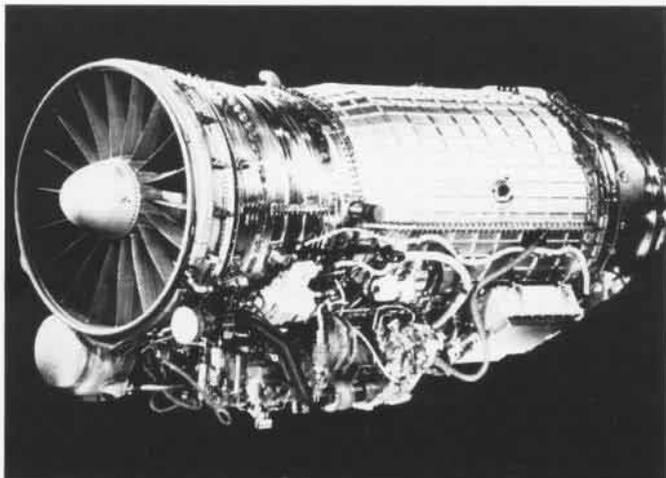
Reflectone, Inc., won a subcontract worth \$11.5 million to provide a U-125A aircraft flight simulator and related integration and test services to the Japanese government. The U-125A is being modified for search and rescue missions.

Tests of a new Lockheed Sanders high frequency (HF)

communications system have produced extremely reliable transmissions at 9,600 bits per second, four times the rate of current HF radios on the market. The CHES (Correlated Hopping Enhances Spread Spectrum) transmitted data over a 205-mile communication link between Litchfield, N.H., and the U.S. Air Force Rome Laboratories in Rome, N.Y. The system includes commercial off-the-shelf equipment housed in a single 5 1/2-inch-high by 19-inch-wide rack-mounted unit and is controlled by a laptop personal computer and operated by DOS commands.

An \$18-million production contract option for the AN/ARC-210 Multimode Integrated Communications System was awarded to Rockwell Defense Electronics by the Naval Air Systems Command. The AN/ARC-210 enables an aircraft to communicate with all branches of the U.S. and NATO forces, the civil air traffic control system and maritime users.

Jeppesen added stand-alone Global Positioning System (GPS) instrument approaches to its Airway Manual and NavData Services. Stand-alone GPS approaches are newly designed and developed specifically for GPS navigation.



This type of approach allows pilots with certified GPS receivers to fly nonprecision approaches at airports where these GPS instrument approaches are approved. The FAA expected to have as many as 200 GPS approaches approved by the end of 1994, with an additional 500 to be added annually in subsequent years.

Boeing Commercial Airplane Group, with McDonnell Douglas Aerospace as the subcontractor, will lead an industry team in exploring aerodynamic, flight system, material and structure technologies for the U.S. High-Speed Civil Transport (HSCT). The \$440-million contract calls for development of the HSCT as a commercial aircraft that can fly transoceanic distances carrying 300 passengers at Mach 2.4 (1,800 mph).

The Navy selected **Pioneer UAV, Inc.**, for a \$20.2-million contract for 20 Pioneer Unmanned Air Vehicles.

Newport News Shipbuilding and Drydock Co. won a \$7-million contract for the post-shakedown availability of *John C. Stennis* (CVN 74).

Bell Boeing won a \$5-million contract to begin configuration studies for a special operations version of the V-22, designated the CV-22. The U.S. Special Operations Command will fund the effort to identify changes to the baseline MV-22 being developed for the Marine Corps.

Alenia Aeronautica of Italy granted **Reflectone, Inc.**, a contract and exercised an option on an earlier contract for a total of \$5.6 million. The new contract was for modification of a U.S. Marine Corps AV-8B *Harrier II* maintenance trainer.

Marine Helo Update

On 30 September 1994, a new CH-53D heavy-lift helicopter squadron, **HMH-366**, stood up at Kaneohe, Hawaii, joining the existing CH-53D squadron there, HMH-463. Over the next two years, all active Marine CH-53D assets will be relocated to Kaneohe. HMH-362 will move in Summer 1995 from MCAS New River, N.C., and HMH-363 in Summer 1996 from MCAS Tustin, Calif. A new fleet replacement squadron, HMT-301, will stand up in Summer 1995. HMT-302, currently based at Tustin, will relocate to MCAS New River in the second quarter 1996. All CH-46 squadrons will move from Kaneohe over the next two years. In January 1995, HMM-265 will deploy for six months and thereafter be assigned to MCAS Futenma, Japan; the other two medium-lift squadrons, HMMs 364 and 165, will relocate to CONUS in the summers of 1995 and 1996, respectively.

SERE Schools to Consolidate

The Navy, Marine Corps and Air Force plan to consolidate their Survival, Evasion, Resistance and Escape training for aircrew personnel at Fairchild AFB, Wash. The Navy and Marine Corps now train at NAS North Island, Calif.; NAS Brunswick, Maine; and NAS Pensacola, Fla. Beginning in FY 1996, a total of 5,200 aircrew will be trained; 2,500 will be Navy and Marines. The training is given to aircrew who may find themselves in a situation of high risk of capture or greater-than-average risk of exploitation by a captor.

Aircraft Mishaps

An A-6E *Intruder* from VA-115 crashed 14 October 1994 while flying a low-level training route over the Yoshinogawa River on the island of Shikoku, Japan. Both crewmen, Lts. Eric A. Hamm and John J. Dunne, Jr., were killed.

On 16 November 1994, a **UH-1N** of HMLA-267 crashed at Camp Schwab, Okinawa, Japan, while conducting a training flight—killing Sgt. Ernest A. Miller III and injuring four others.

An **SH-3H** *Sea King* from HS-5 crashed in the Central Arabian Gulf 9 September 1994 while operating from *George Washington* (CVN 73). All crew members were rescued quickly and there were no reported serious injuries.

HC-85 Goes Hollywood

HC-85 participated in the filming of the new movie *Apollo 13* by flying two of its SH-3s to the Apollo capsule, hoisting the astronauts into the aircraft and delivering them to a ship. During filming, several of the aircrew posed as astronauts being hoisted. The movie is due to be released in late 1995.

Established...

COMPATWINGSLANT

A 3 October 1994 ceremony at Norfolk, Va., marked the establishment (officially 1 October) of Commander Patrol Wings, U.S. Atlantic Fleet (COMPATWINGSLANT), with RAdm. Michael D. Haskins as its first commander.

Similar in purpose to a staff of the same name that was disestablished at NAS Brun-

wick, Maine, in 1992, the new COMPATWINGSLANT is a functional wing that exercises administrative command over the two East Coast patrol type wings (Commander Patrol Wing 5 at NAS Brunswick, and Commander Patrol Wing 11 at NAS Jacksonville, Fla.) and the Navy's patrol fleet readiness squadron, Patrol Squadron 30, also at Jacksonville.

In addition, the new COMPATWINGSLANT staff absorbs the Atlantic operational patrol, surveillance and antisubmarine warfare responsibilities of Commander Task Force 84 that long resided with a section of the staff of Commander in Chief, U.S. Atlantic Fleet (CINCLANTFLT), also at Norfolk. COMPATWINGSLANT reports to CINCLANTFLT in operational matters and Commander Naval Air Force, U.S. Atlantic Fleet, for administrative, training and logistics matters.

NAS Fort Worth



Naval Air Station, Fort Worth, Texas, was established 1 October 1994 as a joint reserve force base. The station occupies the site of the former Carswell AFB, which was shut down as part of the Base Closure and Realignment process.

NAS Fort Worth is now the home for the Navy and Marine squadrons formerly based at NAS Dallas, Texas, which is closing, and NAS Memphis, Tenn., which will no longer be an air station. Units involved include Fighter Squadron 201, Marine Attack Squadron 124,

Marine Fighter Attack Squadron 112 and Fleet Logistics Support Squadron 59. Marine Aerial Refueler Transport Squadron 234 is transferring to Fort Worth from NAS Glenview, Ill., which is also closing. Sixty helicopters from the Army Reserve and Army National Guard, as well as the Air Force Reserve's 301st Fighter Wing and several Army and Marine Corps ground units, will also operate under the new management.

Disestablished...

NAF Detroit

Naval Air Facility, Detroit, Mich., was disestablished 1 April 1994 as part of the Base Closure and Realignment process.

The facility, sited at Selfridge Air National Guard Base about 20 miles north of Detroit, served as a base for reserve force squadrons and other reserve units since its establishment 9 November 1969. The facility replaced NAS Grosse Ile, about 30 miles to the south, as the home of Naval Air Reserve units in the Detroit area. In fact, the first Naval Air Reserve unit in the area originated in 1925 at Selfridge Field, then run by the Army, before moving to Grosse Ile in 1928.

Of the two reserve force squadrons based at NAF Detroit, one (Patrol Squadron 93) remained as it prepared for a September 1994 disestablishment. The other, Fleet Logistics Support Squadron 62, moved to NAS South Weymouth, Mass., and transitioned from the C-9B to the C-130T. Reservists remaining at Detroit drill with the Naval Air Reserve Activity at Selfridge.

HSL-33 Seasnakes

A 23 March 1994 ceremony at NAS North Island, Calif., marked the disestablishment (officially 29 April) of Helicopter Antisubmarine Squadron Light



(HSL) 33 after over 20 years of service. Cdr. Michael L. Hoyt was the last CO of the *Seasnakes*, the Navy's last SH-2F squadron.

HSL-33 was established 31 July 1973 at NAS Imperial Beach, Calif., with 1 SH-2D and 10 SH-2F *Seasprite* Light Airborne Multi-Purpose System helicopters, as part of the restructuring of HSL-31 into a fleet readiness squadron. HSL-33's first detachments were already at sea as they transferred from HSL-31. Since that time, the *Seasnakes* deployed worldwide, but primarily to the western Pacific, Indian Ocean, Red Sea and Persian Gulf on board cruisers, destroyers, frigates, supply ships, Coast Guard cutters and the battleship *New Jersey* (BB 62).

The squadron's self-sufficient detachments—normally composed of 4 pilots, 2 aircrewmen and 12 maintenance personnel—were tasked with such missions as antisubmarine warfare, antiship missile defense, surveillance and targeting of surface ships, search



The Kaman SH-2F Light Airborne Multi-Purpose System MK I helicopter was retired from active fleet operation on 23 March 1994.

and rescue, naval gunfire spotting, medical evacuation and logistics.

The *Seasnakes* deployed to many crisis areas during the squadron's existence, most notably operating in the Persian Gulf escorting tankers and hunting for mines during the Iran-Iraq War and supporting combat operations and enforcing the UN embargo against Iraq as part of Operations Desert Shield and Desert Storm.

The Navy's last SH-2F detachment, HSL-33 Detachment 1, returned home from deployment in mid-April 1994. With the disestablishment of HSL-33 and the retirement of the last SH-2Fs, the active Navy HSL force is comprised entirely of SH-60B *Seahawk* squadrons. Two Naval Air Reserve squadrons, HSL-84 at North Island, and HSL-94 at NAS Willow Grove, Pa., continue to operate the SH-2G version of the *Seasprite*.

VP-22 Blue Geese

A 22 January 1994 ceremony at NAS Barbers Point, Hawaii, marked the disestablishment (officially 31 March) of Patrol Squadron (VP) 22 after over 51 years of service. Cdr. R. T. Holloway was the last CO of the *Blue Geese*.

VP-22 was originally established 15 February 1943 as Bombing Squadron (VB) 102,

thrown rapidly into action in the Pacific theater of WW II, arriving in Guadalcanal in April with the first PB4Y-1 *Liberators* modified with the Erco nose turrets. VB-102 was commanded by LCdr. Bruce Van Voorhis, who aggressively led his squadron to legendary effectiveness. LCdr. Van Voorhis became the only patrol plane pilot to be awarded the Medal of Honor, losing his life when his plane was shot down after repeated attacks on a Japanese seaplane base



near the Solomon Islands. In October 1944, VB-102 was redesignated Patrol Bombing Squadron (VPB) 102 and continued in combat action until the end of the war.

Redesignated VP-102 on 15 May 1946, the squadron survived the postwar draw-down. Based at NAS Kaneohe Bay, Hawaii, the squadron was redesignated VP-HL-2 (HL stood for Heavy, Land-based) 15 November 1946 and obtained its final designation as VP-22 on 1 September 1948. By this time equipped with PB4Y-2 *Privateers*, VP-22 moved to NAS Barbers Point, its home for the next 46 years. In 1950, VP-22 retired its PB4Ys and acquired P2V-3 *Neptunes*.

VP-22 made three six-month deployments to its second war, the Korean conflict, from 1950 to 1953, flying patrol and mine-hunting missions from bases in Okinawa. These deployments were made successively with P2V-3, P2V-4 and P2V-5 versions of the *Neptune*. The squadron also flew patrols in the Formosa

Strait in support of the Chinese Nationalists on Formosa. The hazards of these missions were made manifest on 18 January 1953 when a VP-22 P2V-5 was shot down off Swatow, China, by anti-aircraft fire. Hampered by shore battery gunfire, a Coast Guard PBM picked up the crew but crashed because of high seas, with 11 men killed, including seven VP-22 crewmen.

For the next decade, VP-22 conducted numerous deployments to the northern and western Pacific with its P2V-5 and later P2V-5S (SP-2E) *Neptunes*. In July 1964, VP-22 made the transition to the P-3A *Orion*, making five deployments with this version, including four deployments to the Vietnam war zone in support of Operation Market Time, the sea interdiction effort against North Vietnam. Transition to the P-3B was completed in December 1971, followed by two more deployments to the Vietnam war zone before war's end.

During late 1978, the *Blue Geese* transitioned to the TACNAVMOD version of the P-3B (also called the "Super Bee"), giving the squadron a greatly increased capability to track Soviet submarines patrolling the Pacific. During a 1979 deployment to NAS Cubi Point, R.P., VP-22 became heavily involved in successful rescues in the South China Sea of refugees fleeing Vietnam by boat. It was also during that deployment that a mishap ended the squadron's unparalleled safety record of 25 years, seven months, one week and one day of mishap-free flying, totaling 205,199 flight hours.

VP-22 made numerous de-

ployments to the northern and western Pacific and Indian oceans until 1993, supporting fleet operations and tracking foreign submarines and shipping. The *Blue Geese* became the last fleet squadron to operate the "Super Bee," relinquishing the last one 11 September 1990 and transitioning to the P-3C Update II.5 version. In January 1992, VP-22 switched to the Update III retrofit version of the P-3C prior to the squadron's last deployment (to Diego Garcia), flying missions off Somalia in support of Operation Restore Hope and in the Persian Gulf in support of UN sanctions against Iraq. The *Blue Geese* flew their last flight 17 December 1993.

VAQ-137 Rooks



A 26 May 1994 ceremony at NAS Whidbey Island, Wash., marked the disestablishment (officially 30 September) of Tactical Electronic Warfare Squadron (VAQ) 137 after over 21 years of service. Cdr. Steve Ewell was the last CO of the *Rooks*.

Established 14 December 1973 at Whidbey Island, VAQ-137 was equipped with the Expanded Capability version of the highly sophisticated EA-6B *Prowler* electronic warfare aircraft. Joining Carrier Air Wing (CVW) 14, the *Rooks* first deployed to the western



A VAQ-137 EA-6B.

Pacific on board *Enterprise* (CVN 65), on hand to provide support for Operation Frequent Wind, the evacuation of Vietnam in April 1975.

The *Rooks* deployed to the Mediterranean with CVW-6 on board *America* (CV 66) in 1976, again supporting an evacuation, this time of Americans from civil war-torn Beirut, Lebanon. VAQ-137 returned to the Mediterranean once more aboard *America* before transferring in 1978 to CVW-2 on board *Ranger* (CV 61) for three cruises to the western Pacific and Indian Ocean.

VAQ-137 was back in action off Lebanon in late 1983, flying from *John F. Kennedy* (CV 67) with CVW-3. In November, the *Rooks* supported the coordinated U.S.-French strike against an Iranian training camp at Baalbek, Lebanon; in December, the squadron provided jamming support for the strike against anti-aircraft sites east of Beirut. In February 1984, the *Rooks* flew support missions for multinational peacekeeping forces pulling out of Lebanon.

Upon transition to the Improved Capability II version of the EA-6B, VAQ-137 joined CVW-17 on board *Saratoga* (CV 60) for two Mediterranean deployments, the first of which

included a stint in the Indian Ocean. During this cruise, on 24 March 1986, the *Rooks* provided jamming support for the retaliatory strike against a surface-to-air missile site at Sirte, Libya, and the destruction of Libyan naval vessels.

VAQ-137 joined CVW-1 on *America* in 1989 for a Mediterranean and Indian Ocean deployment. When *America* was recalled to the North Arabian Sea in response to the execution in Lebanon of Marine Corps Col. Higgins, the *Rooks* provided support for contingency operations, and, upon return to the Mediterranean, supported the evacuation of the American Embassy in Beirut.

With Operation Desert Storm about to break, VAQ-137 departed for the Red Sea aboard *America* in December 1990, flying its first combat missions over Iraq 18 January 1991. The *Rooks* flew 212 combat sorties, providing jamming support for coalition strike aircraft, and suppressing enemy air defenses with 30 AGM-88 HARM missiles. The squadron operated from the Persian Gulf during the last phase of the Gulf War.

VAQ-137 returned to the Mediterranean for two more deployments on board *America*,

also operating in the Red Sea during the first and in the Indian Ocean during the second. During this last cruise, the *Rooks* provided support for Operations Restore Hope in Somalia, Southern Watch over Iraq and Deny Flight over Bosnia, returning home for the last time in February 1994.

VF-74 BeDevilers



A 28 April 1994 ceremony at NAS Oceana, Va., marked the disestablishment (officially 30 April) of Fighter Squadron (VF) 74 after over 49 years of service. Cdr. John J. Morrow was the last CO of the *BeDevilers*.

Established 16 April 1945 at NAS Wildwood, N.J., as Fighter Bomber Squadron (VBF) 20, the squadron missed combat action in WW II. Initially equipped with the F4U-1 *Corsair*, VBF-20 switched briefly to the F6F *Hellcat* before operating the F8F *Bearcat* for four years. On 15 November 1946, the squadron was redesignated VF-10A. Moving to NAS Charleston, R.I., VF-10A deployed to the Mediterranean in February 1948 with Carrier Air Group (CVG) 9 on board *Philippine Sea* (CVA 47).

On 12 August 1948, VF-10A was redesignated VF-92.

When CVG-9 was disestablished in December 1949, VF-92 moved to NAS Quonset Point, R.I., to join CVG-7 and on 15 January 1950 was redesignated VF-74. The squadron transitioned to the F4U-4 *Corsair* and deployed to the Mediterranean in 1951 with CVG-7 on board *Franklin D. Roosevelt* (CVA 42). In May 1952, the *BeDevilers* made their first combat cruise, this time on board *Bon Homme Richard* (CVA 31), flying over 1,500 combat missions against enemy targets in Korea.

VF-74 entered the jet age in 1954 when it briefly acquired the F2H-2 *Banshee*, switching to F9F-8 *Cougars* later in the year, making one Mediterranean deployment on board *Lake Champlain* (CVA 39). The *BeDevilers* switched again in 1956 to the F4D-1 *Skyray*, followed by three Mediterranean deployments on *Franklin D. Roosevelt* and *Intrepid* (CVA 11).

Taking delivery of its first F4H-1 (F-4B) 8 July 1961, VF-74 became the world's first operational *Phantom II* squadron. In August 1962, the *BeDevilers* took the *Phantom II* on its first Mediterranean deployment, on board *Forrestal* (CVA 59). For the next 20 years, VF-74 made 13 Mediterranean deployments with the *Phantom II* aboard *Forrestal* and *Nimitz* (CVN 68).

Interspersed with the Mediterranean cruises were two combat deployments to the Vietnam war zone for VF-74. The first, on board *Forrestal* with Carrier Air Wing (CVW) 17, ended tragically when a disastrous fire broke out during the launch of a strike on the flight deck 29 July 1967; among the losses were 42 of VF-74's enlisted personnel and three F-4Bs. The second combat cruise took the squad-



A pair of VF-74 F-14Bs.

ron on board *America* (CVA 66) flying new F-4J versions during seven line periods from July 1972 to February 1973, including strike and combat air patrol missions in support of Operation Linebacker II. VF-74 did not lose a single aircraft to enemy action.

VF-74 made its last *Phantom II* deployment in 1982 with the F-4S version and ended over 21 years of *Phantom II* operations when it switched to the F-14A *Tomcat* in early 1983. The *BeDevilers* would make five *Tomcat* deployments on board *Saratoga* (CV 60) with CVW-17 to such waters as the Mediterranean, Red Sea and Indian Ocean. In October 1985, VF-74 and VF-103 crews intercepted a Boeing 737 carrying the hijackers of the *Achille Lauro* and forced it to land in Sicily, where the hijackers were taken into custody. Later in the same cruise, in March 1986, VF-74 *Tomcats* covered Navy attack aircraft as they struck targets in Libya in retaliation for a terrorist bombing in Germany.

In August 1988, VF-74 became the fleet's first operational F-14A+ (later F-14B) squadron. The *BeDevilers* took the new *Tomcat* version on its first combat cruise in support of Operations Desert Shield and Desert Storm. VF-74 aircraft were part of the first strike into Iraq 16 January 1991 and flew strike and air defense missions for the remainder of the Gulf War, losing no aircraft to any cause.

VF-74 would make one more deployment to the Mediterranean in 1992, operating in the Adriatic Sea in support of UN relief efforts in the former Yugoslavia. After returning in November 1992, VF-74 worked up with *Constellation* (CV 64) and *Saratoga*, but was assigned to Commander Fighter Wing, Atlantic, when the decision was made to reduce the number of F-14 squadrons on carriers from two to one. VF-74 closed out the last year of its illustrious history in an adversary role working with other Navy and Air Force units.



NAS Norfolk

By Gayle Lemieux

Ever since the Wright Brothers made the first flight at Kitty Hawk, N.C., in 1903, people have been fascinated by the miracle of aviation. Aeronautical technology has changed a lot since those first days of wood, wire and fabric airplanes, but the need for highly skilled aviation professionals is more evident now than ever before. On board Naval Air Station (NAS), Norfolk, Va., those professionals hone their skills daily as they perform numerous operational missions in support of the Atlantic Fleet and deployed units.

In August 1994, NAS Norfolk surpassed 76 years of aviation support to the U.S. and allied forces worldwide. During that time, NAS Norfolk has evolved into one of the busiest air stations in the world. Today, it is home for the Atlantic Fleet Airborne Early Warning, Airborne Mine Countermeasures, Helicopter Combat Support and Fleet Logistics communities. With 90 tenant commands and a combined population of over 16,000 military and civilian personnel, NAS Norfolk is a multiservice organization.

In the early 1900s, a naval officer by the name of Washington Irving Chambers was practically alone in his belief that the Navy needed aviation. He approached the Wright Company with the proposal that they fly one of their planes from the deck of a battleship. Wright declined, but the Curtiss Company agreed to attempt it. In 1910, civilian airplane builder Glenn Curtiss and pilot Eugene Ely proved to the Navy and the world that aviation could go to sea. On 14 November, Ely flew a 50-horsepower Curtiss biplane from a temporary platform on the cruiser *Birmingham* to a field approximately five miles away at Norfolk.

During this time, Captain Chambers was investigating every phase of aviation and was detailed to the Bureau of Navigation to devote his entire time toward the establishment of a Naval Aviation service. Aviation was considered a dangerous novelty by many officers, and since the cooperation of the various bureaus was essential, Chambers' assignment was very difficult. Ely's flight and Chambers' belief that the Navy needed aviation were instrumental in the decision to develop large

ships with platforms to serve as operational bases for aircraft and in identifying the need to establish a hub of aerial operations on the East Coast.

In early 1917, Naval Air Detachment, Norfolk, was established and seven student aviators, led by Lieutenant H. B. Cecil, were assigned to the Curtiss Aeroplane Company Field at Newport News, Va. Two ensigns and 15 seamen of the Naval Reserve Flying Corps soon followed to enroll in aviation courses. Student aviators learned the fundamentals of seaplane assembly, aerodynamics, military drill and naval regulations. Following about six hours of instruction time, students soloed on F-boats and were then transferred to N-9 seaplanes.

Later that same year, a more suitable location was identified to continue operation of the detachment. The site selected was a plot of 150 acres on the former Jamestown Exposition, located in the northeastern corner of Naval Operating Base (NOB), Norfolk. With seven seaplanes, five officers and 20 mechan-

A Pacesetter in



Naval Air Detachment, Norfolk, began operations with seven seaplanes in 1917.



NAS Norfolk covers over 1,200 acres with over 300 buildings. Including tenant commands, the air station hosts over 16,000 military and civilian employees daily and thousands of visitors yearly.



NAS Norfolk conducts 24-hour operations in a single-runway environment with a wide variety of aircraft. In FY 1994, there were over 100,000 takeoffs and landings, of which 33,000 were instrument operations. Over 35,000 flight operations were supported at the heliport.

Customer-oriented Fleet Support



In 1973, the air station welcomed the first E-2C, a new version of the Grumman E-2 Hawkeye, which was known as the "eyes of the fleet" for its ability to track enemy air and surface targets.

ics on board, several canvas hangars were constructed to house aircraft; buildings were framed for repair, smith and fabric shops; and three two-story barracks and mess halls were erected.

By the end of 1917, two H-12s, one H-16 seaplane and one Sopwith were added to the inventory of planes assigned to the unit. Other aircraft assigned included R-6 and R-9 seaplanes and HS-2 flying boats. As flight operations increased, four hangars, an administrative building, a lighter-than-air hydrogen plant and a dispensary were also constructed.

NAS Norfolk was commissioned on 27 August 1918 with Lieutenant Com-

mander Patrick N. L. Bellinger as the first commanding officer. Its mission was to train student officers; provide for the instruction of enlisted personnel in duties relating to the construction, repair and maintenance of seaplanes; furnish an operational base for patrol flights along the Atlantic seaboard; and conduct experimental work in seaplane operations. The Aviation Mechanic's School was also established in 1918 with an enrollment of 200. Soon, enrollment increased to 1,200 as the station continued to grow and expand.

Despite drastic reductions in defense

funding during the 1920s, expansion of aviation facilities increased and additional mechanics were trained to accommodate increasing test work and assembly of aircraft. In 1921, the supply department was transferred to NAS Norfolk from NOB and industrial work expanded. Experimental work in the areas of launching and arresting techniques and equipment laid the groundwork for the development of the state-of-the-art technology used by today's aviators.

The assembly and repair department consisted of a main assembly hangar,

overhaul building, engine test stand and various shops located in lean-to hangars. It was in this department in 1930 that the first group of civilian employees was assigned. These 50 or so employees united with approximately 300 military personnel to provide assembly/maintenance services to the growing number of customers served by NAS Norfolk. By this time, 12 to 16 aircraft engines were overhauled monthly.

Expanding its capabilities in the 1930s, NAS Norfolk functioned as a supporting unit for both the Fleet Air



An HH-46D of HC-6 Det 6 carries cargo to Wasp (LHD 1). The 30-year-old Sea Knight—called the workhorse of the fleet—is critical to the Navy's logistics operations.



MH-53E Sea Dragons, such as this one from Helicopter Mine Countermeasures Squadron 14, will soon have integrated aircrews of USN and USNR personnel.



Since April 1954, NAS Norfolk has hosted an annual air show and open house in conjunction with the city of Norfolk's International Azalea Festival and salute to NATO.



A flight deck crewman watches a C-2A Greyhound of Fleet Logistics Support Squadron 40 land aboard John F. Kennedy (CV 67) in March 1993.

PHCS D. W. Holmes II

Detachment and its carrier aircraft and the patrol planes of Commander Patrol Wing 5. Offering two landing fields—the east field, later named Chambers Field, used for operation and parking, and the west field that accommodated two fighter squadrons—NAS Norfolk provided the only landing fields in the area and accommodated all land and seaplanes at Norfolk. Several large carrier groups, cruiser and battleship aviation units, and three or four patrol squadrons were either permanently or temporarily located at the air station.

With the next decade came additional land from the city of Norfolk to accommodate the growing influx of personnel, aircraft and equipment. Silt was dredged from Willoughby Bay to provide a seaplane operating area. This silt was used as fill-in material for marshlands and additional land for aircraft operating areas. By this time, an average of 1,000 officers, 9,500 enlisted personnel and 4,000 civilians were assigned.

By the time of the Pearl Harbor attack, station personnel were involved in intensive training programs, bombing, precision landing practice, seaplane and coastline protection flights and numerous routine and practice flights. NAS Norfolk served as a training base for numerous air groups, including those from the famous WW II carriers *Wasp*, *Ranger*, *Yorktown* and *Hornet*.

During the war, over 8,100 officers and 139,000 enlisted personnel were trained at NAS Norfolk. Additionally, the station was heavily involved in supervising convoy operations. Patrol planes operating from the station provided valuable assistance in shipping operations.

Due to the shortage of men and the need for more working personnel, women began to fill vacancies at NAS Norfolk. Women served as riveters, welders, machinists and sewing operators and played a vital role in winning the war on the home front.

Just as the end of the cold war brought reductions in modern-day defense forces, the end of WW II meant a decrease in activity and personnel at NAS Norfolk. Continuing its important role in fleet readiness, the air station added a training function, Naval Air Reserve Training Unit, for ready and standby reserves. Actions of war had demonstrated the need to have ready reserves of qualified officers and enlisted personnel who could step into action quickly

in times of emergency.

Community involvement and increased awareness of naval capabilities began to take on a more prominent role in operations in March 1953 when the gates of NAS Norfolk opened to welcome visitors to the first air show held at Old Chambers Field. Nearly 20,000 spectators thrilled to the barrel rolls, loops and other daring maneuvers of the Navy's premier flight demonstration team, the *Blue Angels*.

Now recognized by the International Council of Air Shows as one of the finest shows in the country, NAS Norfolk's initial air show marked the beginning of an annual event which has grown to display over 100 aircraft in flight demonstrations or on static display and has welcomed as many as 300,000 guests. The annual event is the grand finale to one of the largest festivals on the East Coast. The International Azalea Festival began in 1954, one year after the establishment of the North Atlantic Treaty Organization's (NATO) Supreme Allied Command, Atlantic, in Norfolk. Each year, the city of Norfolk pays tribute to NATO by hosting a spectacular six-day festival attended by a quarter of a million participants and spectators.

The 1960s were a time of change and growth at NAS Norfolk. In the summer of 1960, Congress appropriated over \$2 million for expansion and new construction. The sixties also marked a decade of bidding farewell to the old and hailing the new.

In December 1963, an SP-5B *Marilyn* seaplane marked the end of an era as it splashed down for a landing in the icy waters of Willoughby Bay. The *Marilyn* was the last seaplane to make the flight from Bermuda to NAS Norfolk. Seaplanes in the Atlantic were being replaced by the land-based P-3A *Orion*, a transition that marked the conclusion of a legacy started in Norfolk in 1917 when seven seaplanes gave birth to the air station.

In 1968, the air station assumed a major role in the nation's effort to put a man on the moon by commissioning the Recovery Control Center, Atlantic, which shifted spacecraft recovery control operations from Cape Kennedy, Fla., to Norfolk. The center consisted of 19 officers and 41 enlisted personnel and afforded continuous contact with all ships and aircraft involved in spacecraft recovery operations. Again, as the nation progressed into an increasingly

technological age, NAS Norfolk performed a significant supporting role.

In June 1973, the air station welcomed the first of a new breed of aircraft, the Grumman-built E-2C *Hawkeye*. The E-2C was soon known as the "eyes of the fleet" because of its ability to track enemy air and surface targets. The first *Hawkeye*, valued at more than \$15 million, was delivered to Carrier Airborne Early Warning Training Squadron 120 at NAS Norfolk.

That year, the Atlantic Fleet's first LAMPS (Light Airborne Multi-Purpose System) helicopter squadron moved to NAS Norfolk from Lakehurst, N.J. An innovative helicopter, the SH-2F *Seasprite* featured a new, more responsive rotor system designed to provide greater power and stability on a rolling, pitching destroyer's fantail. Because of NAS Norfolk's outstanding maintenance and training capabilities, the air station was a prime location for state-of-the-art aircraft.

As its growth and importance to the fleet continued to increase, NAS Norfolk was designated an ordnance transshipment point in 1976. This function made the air station a key repository of Navy weapons and a touchstone for the movement of weapons. The air station continues to be the busiest East Coast weapons transshipment point. Over 1,700 gross tons of ordnance were handled in FY 1994.

Throughout the 1980s, NAS Norfolk was host to more than 70 commands, while handling over 135,000 aircraft operations, 29,000 tons of air cargo and 132,000 passengers per year. Each month, the command supported about 1,500 transient aircraft consisting of 78 different types and also rendered support required in photography, meteorology and electronics to fleet commands.

Today, NAS Norfolk's mission includes providing the basic elements of personnel and logistics readiness for the operating forces of the Navy and supported activities. NAS Norfolk is a fourth-echelon command and receives primary support from Commander Naval Base, Norfolk, and technical-aviation support from Commander Naval Air Force, U.S. Atlantic Fleet. Currently, the station encompasses over 1,200 acres and 329 buildings with an overall value of over \$1.5 billion.

NAS Norfolk proper includes 11 departments and 15 special assistants and provides support to 90 tenant commands,



The HH-60H, an aircraft unique to the Naval Air Reserve Force, is operated on board NAS Norfolk by Helicopter Combat Support Special Squadron 4, which provides the primary strike rescue and special warfare support response in contingency and war-time operations.

32 nonresident commands and all Atlantic Fleet aviation-capable surface ships. Areas of support include weapons, supply, aircraft operations and aircraft maintenance. Total base population, including tenants, is approximately 8,900 military and 7,100 civilian personnel.

A "customer service"-oriented organization, NAS Norfolk is dedicated to the principles of effective teamwork and total quality. Air station personnel, from senior officers and civilians to the most junior sailor, understand the importance of communication between service providers and patrons. Working

groups are formed which include air station customers as well as station personnel. Groups are composed of personnel from all levels of the chain of command and continue to reinforce the philosophy that everyone has something of value to contribute to the organization.

NAS Norfolk provides myriad services which support the overall success of the world's largest naval complex, including aviation and general supply support on 24,000 line items with an inventory value of \$249 million. Approximately 160 tenant aircraft receive aviation fuel

services equating to over 700 thousand gallons per month, and about 140 Air Mobility Command flights are provided 638,000 gallons of fuel each month. Over 61 pack-up kits are managed to support vertical replenishment-capable ships, airborne mine countermeasure systems and MH-53, SH-3G, C-2, HH-60 and E-2C special missions, including counternarcotics operations.

NAS Norfolk's Aircraft Intermediate Maintenance Department is classified as a major aircraft intermediate-level maintenance department with over 650 people assigned. The facility inducts in excess of 2,800 components monthly with a ready-for-issue rate of 98 percent. Support equipment availability averages 93 percent and average turnaround for repair is just over 11 days.

The air station conducts 24-hour flight operations in a single-runway environment with a wide variety of rotary and fixed-wing aircraft. Diverse-pattern entry and exit routes and airspace restrictions result in challenging operations. In FY 1994, there were over 100,000 takeoffs and landings, of which 33,000 were instrument operations. Over 35,000 flight operations were conducted at the heliport.

Training is just as important in the

NAS Norfolk Tenant and Supported Activities

Tenant Activities (DoD)

Air Mine Countermeasures Weapons System Training School

Atlantic Mobile Environmental Team

U.S. Atlantic Fleet Band

Aviation Material Office, Atlantic

Carrier Airborne Early Warning Wing, Atlantic

Carrier Airborne Early Warning Squadrons 78, 120, 121, 122, 123, 124, 125 and 126

Commander, Naval Air Force, U.S. Atlantic Fleet

Commander, Naval Base, Norfolk

Commander Reserve Patrol Wing, Atlantic

Defense Mapping Agency Combat Support Center, Atlantic Office

Explosive Ordnance Disposal Mobile Unit Two, Detachment Norfolk

Fleet Aviation Specialized Operational Training Group, Atlantic Fleet

Fleet Imaging Command, Atlantic

Fleet Composite Squadron 6

Fleet Logistics Support Squadrons 40 and 56

Helicopter Tactical Wing, Atlantic

Helicopter Combat Support Squadrons 2, 6 and 8

Helicopter Combat Support Special Squadron 4

Helicopter Mine Countermeasures Squadrons 14 and 18

Commander Carrier Group Two

Marine Corps Security Force Battalion, Atlantic

Marine Corps Exchange Branch

Measure Operational Control Center, Norfolk

Military Air Traffic Coordinating Office, Norfolk

Naval Air Maintenance Training Group Detachment

Naval Air Reserve, Norfolk

Marine Aircraft Group 42, Detachment BRAVO

Commander Carrier Groups 4 and 8

Naval Audit Service Southeast Region

Naval Aviation Depot

Naval Aviation Engineering Service Unit, Detachment Norfolk

Naval Construction Battalion Unit 411

Naval Atlantic Meteorology and Oceanography Command

Naval Criminal Investigative Service Resident Agency, Norfolk

Naval Medical Command, Portsmouth

Naval Safety Center

Naval Sea Cadets Corps

Naval Station, Norfolk (Special Services & Fire Department)

Fleet Industrial Supply Center, Norfolk

Naval Computer & Telecommunications Area Master Station, Atlantic

Naval Training Systems Center/Training Systems Support Activity

Navy Campus Education Center

Defense Courier Station, Norfolk

Navy Drug Screening Laboratory

Navy Resale & Services Support Office

436 Military Airlift Wing, Detachment 2

Navy Material Transportation Office

Navy Public Works Center

Defense Printing Service Detachment Office

Special Operations Command, Atlantic

Norfolk Navy Flying Club

Resident Officer in Charge of Construction, Sewells Point Area

Shore Intermediate Maintenance Activity, Portsmouth

Personnel Support Activity Detachment, NAS Norfolk

Naval Aviation Maintenance Office Detachment, Atlantic

Naval Air Systems Command Detachment, Weapons System

Human Resources Office, Norfolk

1990s as it was in the station's early development. Supporting overall fleet readiness, NAS Norfolk operates a training facility in the utilization of UC-12B/M aircraft for all naval air stations within the Atlantic Fleet and European and Middle East theaters. In FY 1994, 87 pilots and 54 aircrew personnel were trained.

In addition to serving its internal customers, NAS Norfolk's personnel play a vital role in the community, consistently strengthening Navy ties with local citizens. Sailors and civilians at the air station donate their time to many local efforts. They help keep the community clean through Clean the Bay and Adopt-a-Spot programs, they volunteer for the local Day of Caring, coach Little League teams and they build houses for the needy. Additionally, the NAS Norfolk on-base and community recycling program saved taxpayers over \$100,000 in FY 1994.

In 1994, the NAS Norfolk Personal Excellence initiative, Adopt-a-School, earned two prestigious awards for outstanding achievements in its eight-year partnership in education with Willoughby

Elementary School in Norfolk. Each year, Commander Naval Base, Norfolk, recognizes the most exemplary of the many outstanding command initiatives that help educate youth and improve the quality of life in the community. In addition, the State of Virginia Governor's Partnerships in Education award is presented to celebrate excellent education partnerships throughout the Commonwealth. For 1994, NAS Norfolk took home both awards.

With current right-sizing efforts, NAS Norfolk will face new, and possibly never-experienced, challenges. One challenge involves the closure of Naval Aviation Depot, Norfolk. Strategic planning is required to develop a closure plan that complies with the Base Realignment and Closure 93 law and allows transition of workload in the most expeditious manner. The closure plan is ongoing and involves 85 buildings and over 2.5-million square feet of space that will be redesignated to other commands between now and 1996.

Visualized as a blueprint for the best use of facilities and resources, the Naval Base Norfolk 2010 concept is a flexible

road map for the base's future. It involves relocating industrial facilities from the waterfront so that more personally enriching activities are accessible to shipboard sailors. It also entails aesthetic improvements to base green areas and adjoining waterfronts. As concerned inhabitants of the Hampton Roads area, the Navy is committed to protecting and enhancing the environment.

Presently commanded by Captain Dan Franken, NAS Norfolk has a history of noteworthy accomplishments in fleet support through enhanced operational readiness, constant improvements in quality of life and work for its personnel, and thriving community relations.

Over the decades, NAS Norfolk has been a pivotal point in the history of Naval Aviation and as new challenges and opportunities are presented, the world's busiest air station will be equally pivotal in Naval Aviation of the future. ■

Gayle Lemieux is Public Affairs Officer, NAS Norfolk, Va.

This article commences a new series on Naval Air Stations/Facilities and Marine Corps Air Stations/Facility for upcoming issues. Public Affairs Officers are encouraged to contact the Editor for scheduling. NAS Whidbey Island will appear next.

Naval Occupational Safety, Health & Environmental Training Center
Fleet Technical Support Center, Atlantic

Tenant Activities (Non-DoD)

ARINC Research Corporation
Embry Riddle Aeronautical University
Grumman Corporation
McDonald's Fast Food Restaurant
NAS Employees Recreation and Welfare League
NAS Little League
Naval Air Federal Credit Union Branch
SERV-AIR, Inc.

Sikorsky Aircraft Corp.
U.S. Customs Service
U.S. Postal Services Branch
Business Opportunities for the Blind #42
Harborage, Inc., Dallas, Texas
Tidewater Community College, Portsmouth
St. Leo College, Norfolk
Old Dominion University
Department of Agriculture
Norfolk State University

NAS Norfolk, Va.

CO: Capt. Daniel J. Franken

Departments

Commanding Officer
Executive Officer
Administration Department
Aircraft Intermediate Maintenance Department
Air Operations Department
Comptroller Department
Facilities Management Department
Fleet Replacement School Department
Hospitality Department
Security Department
Supply Department
Training Department/TQL Coordinator
Weapons Department

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445-0101
444-1364

Special Assistants

Aviation Safety Officer 444-3724
Chaplain 444-2110
Command Career Counselor 444-1442
Command Master Chief 444-8331
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Coming Soon: NALCOMIS

By AZCS(AW) Keith Stern, AKC Andrew Galligan and AZC(AW) James Hughes

No, you won't find it at your personal computer store. NALCOMIS (Naval Aviation Logistics Command Management Information System) is the automated information system that brings aviation maintenance business processes up to speed with our ever-expanding technology. NALCOMIS is designed to improve aircraft material readiness, improve aircraft maintenance and supply support, reduce administrative burden and improve up-line data reporting. It provides real-time management information at Navy and Marine Corps aircraft Organizational Maintenance Activities (OMAs), Aircraft Intermediate Maintenance Department (AIMD) and Marine Aviation Logistics Squadron (MALS) Intermediate Maintenance Activities (IMAs), and Supply Support Centers.

In early August 1994, the 100th NALCOMIS site was successfully implemented. This marks a new era in Naval Aviation as we have transitioned from pen and paper (Visual Information and Display System/Maintenance Action Forms) into a more automated information system that supports Navy and Marine Corps organizational and intermediate maintenance management. The poor reliability of paper documentation and the burdensome requirement for hand carrying and manually managing aircraft maintenance and availability information is now a part of the past. Today, there is a system that is capable

of meeting the future requirements of the fleet for accuracy, improved aircraft reliability and support. NALCOMIS is that system.

Currently, 48 squadrons are operating with NALCOMIS OMAs. An additional 90 squadron stand-ups are planned in FY 1995, with all squadrons complete in 1997. A total of 57 AIMD/MALSs are now operating with NALCOMIS IMAs. Complete implementation at all IMA/MALSs is planned for FY 1995. NALCOMIS OMA is being evaluated at the Dryden Flight Research Facility, Edwards AFB, Calif., and the Naval Aviation Depot Flight Line Branch, Norfolk, Va.

NALCOMIS functionality continues to expand and improve by means of strong user involvement and the Fleet Design Team recommendations. Fleet concerns are the first and foremost priority in NALCOMIS design efforts. IMA improvements for 1995 include Pre-Expended Bin management and history retrieval. Planned OMA improvements include detachment processing, revised ad hoc configuration management and accelerometer readings.

The next OPNAVINST 4790.2 series update to the bible for naval aviation maintenance policy and procedures, due out to the fleet in July 1995, will reflect the value added by NALCOMIS IMA and OMA. This revision significantly improves the fleet work environment and assists NALCOMIS users in providing professional aircraft maintenance. It also paves the way for Navy-wide

examinations and rate training manuals to reflect NALCOMIS in the future.

NALCOMIS OMA/IMA training courses are online and offered at numerous Fleet Aviation Specialized Operations training commands, with more to be online soon. Two new Navy Enlisted Classifications (NECs) were established to ensure fleet sailors receive the training necessary to make NALCOMIS work in each activity. AZ "C" school is teaching the NALCOMIS System Administrator/Analyst (NEC 6315) and Database Administrator/Analyst (NEC 6314) courses. These new NECs replace the AZ NEC 6313 billets. The AZs holding these NECs are the key to ensuring NALCOMIS operates smoothly at the activity. They provide the expertise necessary to resolve system- and function-related problems. The Aviation Maintenance Officer school in Pensacola, Fla., came online teaching NALCOMIS OMA indoctrination to new maintenance officers in October 1994.

If you are currently operating NALCOMIS, fleet inputs for improvements are encouraged via your wing/type commander. If not, keep your eyes open, NALCOMIS is coming your way soon. ■

AZCS(AW) Stern, AKC Galligan and AZC(AW) Hughes are assigned to the NALCOMIS Program Office at Naval Air Systems Command headquarters.

Battle "E" Winner to the End

Guadalcanal Decommissioned

After 31 years of dedicated service, *Guadalcanal* (LPH 7) was decommissioned 31 August 1994 at Naval Station, Norfolk, Va. The crew, family members, friends and more than 100 WW II veterans honored the career of an amphibious assault ship that was always "there when needed." The last skipper of the Norfolk-based LPH was Captain Phillip L. Sowa.

Guadalcanal was the second ship to bear the name of the island on which a major WW II battle took place. In August 1942, Admiral Richard Kelly Turner's amphibious force and the First Marine Division stormed ashore and, after six months of bitter fighting, reclaimed the island from the Japanese.

LPH 7 was commissioned 20 July 1963 at the Philadelphia Naval Shipyard and was the third ship of the *Iwo Jima* class. She was designed from the keel up to transport and land Marines by means of assault helicopters. Secondary missions ranged from supporting AV-8B *Harriers* to providing temporary hospital/evacuation facilities during both combat and humanitarian missions. Her crew consisted of 60 officers and 700 enlisted personnel and she could carry 1,800 embarked troops and 30 helicopters.

After the initial shakedown cruise in December 1963, *Guadalcanal* found herself off the coast of Panama for two months when unrest there threatened American lives. In July 1966, *Guadalcanal* served as primary recovery ship for the Gemini 10 space flight and in March 1969 engaged in the recovery of Apollo 9.

In January 1976, LPH 7 departed for the Mediterranean, where more than three months were spent off the coast of Lebanon ready to assist in the evacuation of United States citizens from Beirut. In July 1980, following an eight-month overhaul at the Philadelphia Naval Shipyard, *Guadalcanal* transited the Suez Canal into the Red Sea and Indian Ocean. During this period, she crossed the equator and conducted

operations as far south as Mombassa, Kenya.

Between September 1981 and September 1982, *Guadalcanal* participated in five different joint multinational exercises: Display Determination '81 off the coast of Turkey; as the flagship of Amphibious Squadron 6 for Alloy Express '82 conducted in the fjords of northern Norway; as the flagship for Amphibious Squadron 2 for Ocean Venture '82 in the Caribbean Sea; and United Effort and Northern Wedding, both in the North Atlantic.

In January 1983, with further unrest in Beirut, *Guadalcanal* served as the mainstay of the multinational peace-keeping force off the coast of Lebanon and remained on station for over 120 consecutive days without relief.

After another overhaul period at Philadelphia Naval Shipyard in 1984, *Guadalcanal* returned to Norfolk and continued her training cycles, earning a third Battle "E" and logging her 100,000th aircraft landing in 1985.

In June 1987, LPH 7 departed for what was thought to be another routine Mediterranean cruise. But the ship was soon diverted to the Arabian Gulf with Helicopter Minesweeping Squadron 14 to support convoy escort and airborne minesweeping duties. While in the Arabian Gulf, *Guadalcanal* assisted in the boarding and capture of Iranian mine-laying vessel *Iran Ajr* on 22 September 1987.

In December 1988, *Guadalcanal* deployed on another six-month Mediterranean cruise, during which she participated in three joint operations: Phinia '89, Dragon Hammer '89 and Sardinia '89. Also during this time, LPH 7 received a surprise visit from President George Bush and First Lady Barbara while off the coast of Nettuno, Italy, supporting Memorial Day services at the Sicily-Rome American Cemetery.

In March 1990, *Guadalcanal* went into the Metro Machine Shipyard,

Portsmouth, Va., for a six-month overhaul, emerging two weeks early and quickly preparing for action in Operation Desert Storm.

Arriving in the Mediterranean towards the end of the war in February 1991, *Guadalcanal* was called to provide assistance to Kurds who were fleeing Iraq, and the 24th Marine Expeditionary Unit deployed to provide a protective perimeter of safety between the Kurds and the advancing Iraqi army during Operation Provide Comfort. *Guadalcanal* returned to home port in Norfolk 7 August 1991.

After participating in NATO exercise Teamwork '92 off northern Europe in February 1992, *Guadalcanal* entered a four-month repair period in Metro Machine Shipyard.

In April 1993, *Guadalcanal* participated in Ocean Venture '93, a major exercise that expanded the traditional naval role by allowing a U.S. Navy admiral to command an entire multinational/joint task force "from the sea," using the latest in advanced command and control technologies.

On 11 August 1993, *Guadalcanal* departed on her final Mediterranean cruise, during which she participated in United Nations' operations Provide Promise and Deny Flight in the Adriatic Sea, and Restore Hope off Somalia, before returning to Norfolk 5 February 1994.

In *Guadalcanal's* final months, she offloaded all her ammunition at Yorktown Naval Weapons Station, Va., participated in Fleet Week '94 in New York City and was awarded her fourth, and last, Battle "E" award. LPH 7 left the fleet with over three decades of unflinching service under her keel, a casualty of the dramatic changes taking place in America's maritime strategy. ■

Information courtesy of Naval Surface Force, U.S. Atlantic Fleet, Public Affairs.



Guadalcanal (LPH 7) underway in the Persian Gulf.

PH3 Cleveland

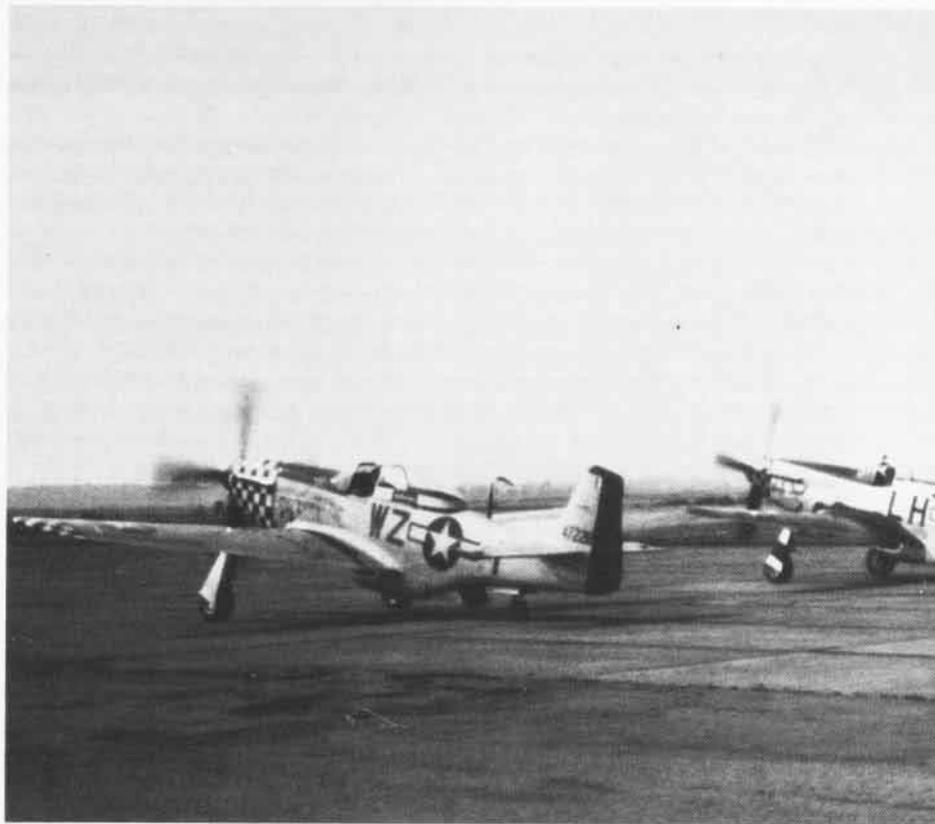
Young Aviator Learns Old in a P-51 Mustang

By Ltjg. Tom Baker

Rarely do modern aviators get the opportunity to fly an aircraft steeped in the lore of the fighter pilot. Two Fighter Squadron (VF) 101 *Tomcat* crews were able to take the flight of a lifetime in a P-51 *Mustang*, compliments of the National Warplane Museum and the owners of the magnificent aircraft. The fortunate four—Lieutenants Scott Alwine, Carl Deni, Dell Bull and I—were to begin a flight on a humid Friday morning from our home base at NAS Oceana, Va. Our destination was a small civilian airfield in Batavia, N.Y., where museum organizers were to hold the annual “Warbirds” air show. This unique event was to include a very special “Grumman Cat” fly-by: an echelon formation of an F4F *Wildcat*, F6F *Hellcat*, F7F *Tiger*cat, F8F *Bear*cat and our F-14 *Tomcat*. Batavia is located near my hometown of Ithaca, and I was anxious to have my parents see me fly for the first time in my naval career. My pilot was well aware of this fact and thoroughly briefed the effects of “get-home-itis” to avoid what was beginning to sound like the opening lines of a mishap report.

The flight went as briefed and as our preflight planning had determined, our *Tomcats* were unable to land at the air show landing strip due to its short length. We planned our landing at a field 30 miles to the west which met our runway length and security requirements. This inconvenience seemed insignificant, when on arrival we learned we would be ferried to and from the air show by volunteer aircrew participating in the weekend activities. At the time, no one imagined the type of flights that awaited on that hazy New York horizon.

Following our separate crew debriefs, we made our way out to the pickup point and searched the skies for our ferry pilots to arrive. After 20 minutes of standing next to an asphalt taxiway, our ears perked up and our eyes strained through the afternoon haze to see four P-51 *Mustangs* in a tight diamond formation. They flew directly overhead, circled



the field and lined up for their final approach. What followed is a flight I will never forget.

The four *Mustangs* taxied toward us and came to a stop as their propellers chopped through the heavy afternoon air. The pilots shut down their aircraft in unison and descended from the polished cockpits to greet us. Hasty introductions were made, typical aviation banter exchanged and cursory emergency briefs given. As I squeezed into the modified jumpseat of the *Mustang*—sans survival gear, helmet and ejection seat—the first two things I noticed were the lack of head room and a single air sickness bag strategically placed on the bulkhead. My host pilot, retired Brigadier General Reg Urschler, strapped in, donned his headset and began to enlighten me on the lore of the *Mustang*. Our ensuing flight lasted only 30 minutes. But as I looked

over to see my squadronmates strapped tightly to their jumpseats in those beautiful warbirds, my thoughts drifted back 50 years to a time when hundreds of young aviators, not unlike myself, took off over Europe to fight Hitler's Luftwaffe.

As the designated flight lead, Brig. Gen. Urschler called for taxi in formation as his history lesson progressed. We rolled out of the line with the others dutifully in trail and began a path that to me seemed much like my first clumsy attempt at taxiing a T-34C in the training command. Not wanting to cause a protocol faux pas with a comment like “Hey pal, what's with your steering?” I sat silently and listened to the stories my pilot told. As we neared the hold short, I had to inquire—with as much tact and savvy as I could muster—about the “slight deviations in headings during taxi.” The answer was: “Simple,” he

Tricks . . .

Below, the Mustangs (Gen. Urschler's not shown) shut down in unison. Right, Ltjg. Baker and Gen. Urschler pose after their first hop. Below, "back to the future" in our Tomcat.



explained. "The *Mustang's* nose is so large and at such an angle that it makes vision straight down the center line impossible." A sigh of great relief marked the beginning of our takeoff roll.

The roar of the tremendous Merlin engine made intercockpit communication nearly impossible, so I sat back and enjoyed the sights and sounds of this once-in-a-lifetime experience. As the *Mustang* eased gracefully into the air, and we were safely airborne, I turned to see our wingmen lift off and join with pinpoint precision. The majestic Niagara Falls passed beneath us as our flight of four came together in a diamond formation. Sitting in the back of our respective aircraft, each of my squadronmates turned and nodded to the other knowing we were privileged to an experience that very few would ever witness again. As the flight progressed,

we put our *Mustangs* through their paces. Some were able to sit in on a practice run for the next day's demonstration, while I experienced the performance demo of a lifetime with an aviator claiming 25,000 hours. That's not a misprint; my host pilot has a combined military and civilian flight-hour total of over 25,000 hours.

After finding our way through the haze for a perfect three-point landing, we continued our discussion about the aircraft's history, tactics and characteristics. The *Mustang*, although designated a pursuit plane, might have been better termed an interceptor, as I learned it was not an outstanding turning aircraft. Its slow-speed fighting characteristics were also limited, having a higher slow-fighting speed than our 60,000-pound *Tomcat*. The controls were unaided by the modern conveniences of hydraulics and made

for a very tired right arm after any flight of duration. On the "goods" side, the roll rate and quick response to pilot stick inputs were surprising, as was the onset of G force at the slower cruise speeds of the *Mustang*. As in the F-14, the canopy structure made 360-degree lookout quite easy and was one of the contributing factors to its WW II success.

To be great aviators of today, we all must learn about aviators of the past. Their machines, their maneuvers and their memories should all be studied. During the winter months, open a book by Galland or Boyington, and when spring rolls around, take a look at the message traffic and sign yourself up for what could be the air show of a lifetime. Who knows, you just might get lucky. ■

When radar intercept officer Ltjg. Baker wrote this article, he was a student in F-14 fleet readiness squadron VF-101, NAS Oceana, Va.



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Aviation Electrician's

Aviation used to be such a simple thing. Crank the engine and head for the sky. Orville and Wilbur never could have imagined the complexity of aircraft in use today as we approach the 21st century. And even if they had, they never would have dreamed that these sophisticated aircraft were maintained by men and women in their teens and early twenties. We're not talking bubble gum and bailing wire, here. We're talking about the most advanced electronics in use in the world today, all loaded into F-14s, F/A-18s, E-2Cs, S-3Bs and SH-60s, as well as every other aircraft that the Navy flies.

The men and women who troubleshoot and repair this conglomeration of electronic wizardry belong to the Aviation Electrician's Mate (AE) rating. These sailors maintain and repair navigational equipment, power generators, lighting systems and flight instrument systems. They also have the opportunity to volunteer to become aircrewmembers, flying aboard some of the Navy's fixed-wing and rotary-wing aircraft.

In order to become an AE, a recruit must achieve a qualifying score on the Armed Services Vocational Aptitude Battery test, have good color vision and depth perception and must be a United States citizen eligible for a security clearance.

After boot camp, aspiring AEs will settle in to a required five-month "A" school located at NAS Memphis, Tenn. There, as a group, they learn basic electronics and aircraft instrument systems and receive a generous helping of instruction on the documentation and paperwork that is required for their job.

Upon graduation, AEC(AW) Scott C. Carlson, the AE detailer for E-4s and below, sends the school orders for the graduating class. The students pick their orders based on their academic ranking with the top-ranked student getting to pick first.

Carlson said, "Depending on the

needs of the Navy, some students will proceed directly to a Fleet Readiness Aviation Maintenance Personnel (FRAMP) squadron for about six weeks of training in the specific aircraft they will be working on when they get to their ultimate duty station. Others will report straight to their squadron, ship or Aircraft Intermediate Maintenance Department (AIMD). Typically, sailors reporting directly to their unit will get the opportunity later to attend a FRAMP to continue their training.

"Of course, all sailors usually take their turn working with the first lieutenant's division, providing facility maintenance at their base, or working in the ship's galley; but once they return to their squadron, a new AE begins learning the skills that he or she will use everyday," Carlson continued.

Novice AEs spend 6 to 12 months following a qualified petty officer around the work spaces learning from the senior AE the ins and outs of the

trade. In addition to this on-the-job training, they might be working on the line division servicing aircraft and preparing them for flight.

"There are documented skills that AEs must acquire before they are ready to move up the career path," Carlson said. "The Maintenance Training Improvement Program, a series of 12 tests, in addition to a specific on-the-job training program for a specific aircraft, ensures these sailors are getting the necessary training to take on added responsibility."

By the time AEs become second class petty officers, they should be the senior technician in the shop, according to Carlson. "They might even be shift supervisors if they have the skills. At this point in their career, they should be working towards becoming collateral duty inspectors—putting their signature on the line stating that a particular job has been completed correctly."



AE2 John D. Roberts, of the AIMD at NAF Washington, D.C., replaces a cracked cover of an actuator for a P-3 auxiliary power unit.

Mate

Story and Photos by JO1(SW) Eric S. Sesit

At the AIMD on board Naval Air Facility, Washington, D.C., AE2 Mark A. Olinger does just that. Not only does he supervise other AEs in his shop, he helps train drilling reservists on the weekends. His career path is typical of AEs around the fleet with a good dose of sea time mixed in with various shore tours.

"As an airman apprentice with Carrier Airborne Early Warning Squadron 126, I learned the basics of electrical maintenance and power generation systems," Olinger said. "As an E-3, I was the one taking the new AEs around the shop and teaching them all that I knew. At the 'O' [Organizational] level, we did troubleshooting, found the bad part, took it out, went to supply, got out a replacement and installed it in the aircraft. We sent the bad part to AIMD for repair. Now I'm at 'I' [Intermediate] level, and I'm having to learn new skills myself. We have to troubleshoot circuit boards and really get into the

parts to find out what's wrong."

Olinger continued, "At I level, you really don't get a chance to see the results of your efforts. It's a good feeling to track down a problem and repair it, but it's a bigger thrill for me when I see a plane fly after repairing it."

Olinger looks forward to earning his first class crow. At that point in an AE's career, they should be performing as the leading petty officers in their shop, working on more administrative functions as they gain the experience and management skills needed to become a chief petty officer.

With such a large number of electrical systems, specialization is extremely important in the AE community. "We have 55 different Navy Enlisted Classification (NEC) codes," Carlson said. "NECs are earned by attending various 'C' schools located around the country at major air facilities."

When sailors earn an NEC, chances are they will be working in that specialty

for the remainder of their career—a process called closed-loop detailing. "As the Navy continues its right-sizing, we're seeing more closed-looped detailing. In reality, it makes sense. There are fewer squadrons, fewer aircraft and fewer personnel to move around. We must use the people we have in the best possible way, and if a sailor is a specialist in a certain area, we need to utilize that person's skills," he added.

The AE rating has gone from more than 8,000 men and women in 1990 to 6,200 AEs serving today. Plans call for the rating to decrease its population to 5,700 by the end of 1995.

"Despite the reduction in personnel, we are starting to see the light at the end of the tunnel as far as advancement," Carlson said. "We advanced 70 people to chief this last advancement cycle and the mid-grade petty officer ratings are beginning to open up."

AEs can expect to spend approximately 60 percent of their career at sea. Third and second class petty officers serve 48 months at sea before reporting to shore duty for 36 months. First class petty officers and chiefs spend 42 months at sea and 36 months on shore.

"We work in a really broad field," Carlson concluded. "Our work interacts with virtually every other aviation rating. If there is an electrical wire running through any system that is being worked on by another shop, we have to be there to make sure those systems stay intact as well as making sure the electrical system isn't the problem. As a result, we learn an awful lot about the aircraft, and that is why AEs are known as 'Aviation Everything.'" ■



At AIMD, NAF Washington, D.C., Lance Corporal Christian S. Wolf troubleshoots an EA-6B supervisory panel, which maintains voltage coming off the aircraft's generators, while AE2 Mark Olinger observes.



CT

By Hal Andrews

One of Naval Aviation's toughest challenges these days is having the right airplane for its "big punch" strike missions. A look back over the years shows that it's nothing new.

Coming out of the First World War, the torpedo plane was seen as the next step in aerial attack on an opposing fleet. Land-based torpedo planes or shore-based seaplanes were the only airplanes large enough to carry a torpedo weighing some 1,500 pounds and enough fuel for a useful attack range.

In July 1919, Congress appropriated funds for the Navy's first carrier. The collier *Jupiter* (AC 3) entered the Norfolk Navy Yard in March 1920 to begin her conversion into *Langley* (CV 1). The officers and engineers of the Bureau of Construction and Repair's aviation section faced coming up with the right airplanes to meet potential fleet mission needs operating from a carrier without any operating experience, aircraft or ship, for background.

From exposure to British experience, the initial view was that carrier airplanes would be seaplanes taking off from the flight deck using a launching cart and landing on the water for recovery. Prior torpedo seaplanes using the largest engine in service, the 400-hp Liberty, had indicated that useful mission performance could not be achieved in a single-engine design. In-house design studies and an interest in making best use of the latest technology advances resulted in specifications for a competitively awarded contract for a "torpedo-carrying, twin-pontoon seaplane."

Requirements included twin-tractor engines, twin floats, two-man crew, overall span not greater than 65 feet, and disassembly into principal parts for storage and reassembly in a confined

space aboard ship. Wing panels had to be less than 25 feet long and reassembly could not involve re-rigging. Deck take-off would be under its own power or by catapult using a light launch cart into relative wind not greater than 20 mph. Preference for a monoplane and internally braced surfaces were noted, along with typical general performance requirements. Award could be on the basis of merit alone of the design submitted.

Typically, with the government's fiscal year then from 1 July to 30 June, a contract was awarded to Curtiss on 30 June 1920 for nine Curtiss torpedo seaplanes, subsequently designated CTs, to be built in batches of three, with only the first batch authorized for construction. An option was included to change to metal construction for the second and third batches. A provision was included for building only the first, with the other two to be delivered rapidly after its acceptance. The other winner was a newcomer, the Stout Engineering Laboratory, with an all-metal monoplane design. Stout would subsequently build the first all-metal monoplane transports in this country, which led to the Ford/Stout trimotors, widely known for their use by the early U.S. airlines.

Using one of the thick "high-lift" airfoil sections then in vogue, Curtiss came up with a novel design. With enough height in the large chord center section to house the engines and the crew behind the leading edge, the two Wright-Hispano 300-hp engines and a minimum crew nacelle extended just forward of the wing. The biplane tail was carried on two "V"-strut booms extending aft from the engine nacelles and the aft end of the floats. The prop shafts extended through the nearly square, flat radiator in front of the engines.

Over the next months, the detail design progressed. Curtiss and the Navy agreed to raise the aft cockpit slightly. This allowed the second crewman to see the pilot's instruments over his

shoulders and eliminated the need for a second set and enabled him to fire his gun on a circular mount over the pilot's head, not requiring a forward-firing gun for the pilot. Provisions for radio installation were added, along with building a handling truck suitable for both ship and shore operations. With the CT on the truck, the total height had to fit in *Langley's* "hangar deck." A dummy crew nacelle was built to resolve final crew-related arrangements.

In November, sand load testing of an outer wing panel was held up by repeated test jig failures, delaying completion and first flight. January 1921 brought the realization that the weight was going to be greatly above original estimates. Concern was also raised over the other propulsion installation details, especially the well-known vibration characteristics of the Wright H engine mounts. Assembly at NAS Rockaway Beach, N.Y., was completed in April with the first flight on 2 May. Initial brief flights with light loads resulted in increased fin area added to the tail boom "V" under the stabilizer and increased rudder area. Further flights showed the increased fin area was detrimental and it was removed before initial flights with a dummy torpedo. Inadequate engine cooling, excessive spray and other problems resulted in aborted flights at high weights. In early June, after installation of spray strips on the floats, satisfactory flights brought Navy Trial Board personnel to witness preliminary trials. Short flights on two days in mid-June were plagued by engine power loss due to overheating, the final flight resulting in a downwind landing with water damage to the horizontal tail. The most favorable comments by the board were on the CT's excellent seaworthiness.

In addition to the cooling, cracked engine mounts and inadequate tail bracing required revisions. These and repair of the horizontal tail were initiated in July. The radiator at the front of each nacelle was replaced by one above the nacelle behind the engine where it would be in more favorable propeller slipstream. A more streamlined engine cowling replaced the original radiators and cowling behind the propeller. Welded tubular engine mountings replaced the cracked sheet metal ones, and vertical struts were fitted at the middle of the

29 August 1921





2 May 1921

"V" tail booms.

Resumption of flights in late August followed by further changes and late September flights brought the project to a halt. Cooling was still inadequate and the tubular engine mounts still cracked.

In October, a review of the whole project resulted in these actions: Curtiss would investigate ways to significantly reduce the weight of the other eight airplanes; the engines of the first would be replaced by Curtiss CD-12 400-hp engines—mounted on wooden engine bearers; and plans for the rest of the contract would involve Curtiss supplying CD-12 engines with a reduction in the number of CTs to be built. On this basis, the project went forward—with Curtiss noting that it was studying an alternate biplane design.

With the CD-12s installed on their new mountings, and two Lamblin "lobster pot" radiators under each, flying resumed at Rockaway in December. Improvement was measured, but the problems of ice on Jamaica Bay and the closed status of NAS Rockaway Beach led to transfer of testing to NAS Anacostia, D.C. Flying time from Rockaway to Anacostia on 13 January 1922 was 3 hours, 55 minutes, with a stop at Atlantic City, N.J., to top off the gas tanks. On the 19th, with a Navy observer on board, one CD-12 crankshaft failed, resulting in extensive engine damage and loss of the propeller—which fortunately only slightly damaged the floats—followed by a "no-problem" landing.

Another Navy CD-12 in storage at Curtiss for the Navy's CR racers was installed, and after ice melted on the Potomac and Anacostia rivers, flying was resumed. Trials, as an experimen-

tal type, were undertaken by a Bureau of Aeronautics (BuAer) Trials Board in March to determine contract acceptance and assess the CT's special features. By this time, BuAer was evaluating Curtiss proposals for a single-engine biplane design using the new Navy-sponsored Wright T-2 525-hp engine. Convertible between wheel and float landing gear, this promised a more effective carrier-based torpedo plane design. With the commissioning of *Langley*, at that time, planning was oriented to use its arresting system to recover wheeled landing gear airplanes back aboard, while seaplane torpedo planes would fit other naval operations.

The trials indicated that with the more powerful CD-12 engines, the CT met most of its original contract guarantees at its operating weight; empty weight was not guaranteed. While the overall configuration was recognized as too large for operation on the first two carriers then being planned through conversions from battle cruiser hulls, there were features of interest for possible future aircraft. The board's recommendation for acceptance for further experimental use was approved and the CT was ferried to NAS Hampton Roads, Va., in early May.

The CD-12 engines and Lamblin radiators were removed for return to Curtiss and further use in the CR racers. Pending their return, the CT was put in storage. Curtiss and the Navy agreed on a close-out deal—full payment for the first airplane and cancellation of the rest of the contract. In return, a new contract was signed in June for six of the new biplanes—by then designed for multimission use as scouts, bombers or torpedo planes.

The CT, still engineless, was moved out of its hangar to make room for more useful airplanes in the spring of 1923. Stored with another "obsolete" airplane between two hangars in early July, a heavy wind squall blew the other airplane over on top of the CT. After some internal deliberations in BuAer, it was

finally stricken in November. A decade would pass before BuAer would again look to monoplanes using the latest technology to meet the Navy's carrier tactical aircraft needs.

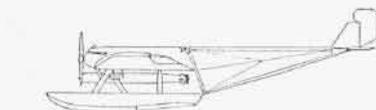
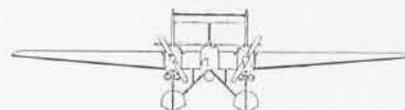
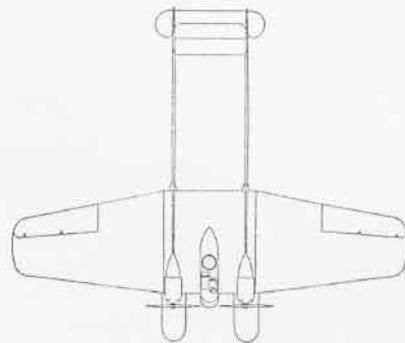
In the late 1920s, the configuration was resurrected for a handful of landplane prototypes which were called "flying wings." One of these was Jack Northrop's first all-metal airplane that preceded his tailless true flying wings of the 1940s.

Appreciation is extended to National Air and Space Museum and National Archives personnel for their assistance in making this article possible.

CT-1



Span	65'
Length	52'
Height	15'11"
Engines:	2 Curtiss CD-12, 400 hp
Maximum Speed	107 mph
Service Ceiling	5,200'
Maximum Range	350 mi
Crew	2
Armament:	One .30 machine gun One 1,650-lb. torpedo or equivalent load bombs



1922





As the first wave of Mindoro assault forces nears the shore 18 December 1944, a rocket-firing LCI (landing craft, infantry) lets go a powerful barrage of deadly projectiles to smother beach defense.

80-G-47465

Back to the Philippines

Part 1

By John M. Elliott

Early in 1944, the U.S. Joint Chiefs of Staff (JCS) directed Allied forces in the Pacific to begin an offensive towards the Philippine Islands. The recapture of these islands would be a major step in the defeat of Japan. Operating from bases in the Philippines, the Allies could cut Japanese lines of communication to the rich, conquered territories of Netherlands East Indies, French Indochina, Thailand, Burma and Malaya. These losses would also support further advances against Formosa, the China coast and Japan itself.

Almost as soon as General Douglas MacArthur assumed command of the Southwest Pacific Area, after being ordered by President Roosevelt to leave the Philippines, he began planning his move back to the Philippines. He visualized this as a succession of amphibious landings along the north coast of New Guinea and into the southern Philippines. This approach, he felt, could quickly achieve the strategic objective of cutting the Japanese supply lines to the Netherlands East Indies. However, this concept did not coincide with that of the JCS, who had decided that an advance through the Central Pacific would be strategically more effective.

In direct conflict with Gen. MacArthur's concept, the JCS felt that the longer Southwest Pacific route would be more costly in terms of men, aircraft, money, time and ships. A seldom-considered point was that the Central Pacific route was better because there would be less jungle and swamp warfare with attendant tropical diseases than would

an approach through New Guinea. Finally, there was a practical limit to the Japanese air and ground forces which could be deployed on the small Central Pacific islands, while these assets could be placed on New Guinea and the islands between it and Mindanao in quantities limited only by the availability of shipping. Another factor that weighed heavily in JCS thinking was the potential of the Army Air Forces' (AAF) new offensive weapon, the B-29 bomber. Joint Chiefs of Staff plans called for extensive bombing of the Japanese home islands, but there was some doubt concerning the continuing operations from bases in China. However, air bases in the Mariana Islands, less than 1,500 miles from Tokyo, would provide B-29 bases that the Japanese would be unable to retake.

While all of these factors made the Central Pacific approach strategically, tactically and logistically best to the JCS, they also felt it would be undesirable to move all Allied forces from the Southwest and South Pacific areas out of Japanese contact, which had been established during the campaign to reduce Rabaul. They felt that the utilization of both routes would prevent the Japanese from knowing where the next blow would fall.

The JCS made the decision that the approach to the Philippines would be made through both routes but with priority to the Central Pacific, which appeared strategically more decisive. Central Pacific forces would move towards the Philippines by way of the

Marshalls, Carolines and Palaus, while South Pacific forces would move up the northern coast of New Guinea and into the islands between the northern peninsula and Mindanao.

Upon reaching the northern peninsula of New Guinea, it would become necessary to protect both flanks prior to moving north into the Philippines. Halamahara, on the left flank, was a principal distribution point for the eastern part of the Netherlands East Indies and became a focal point for the Japanese defense of the southern approaches to the Philippines. On the right flank, the Palaus in the western Carolines were heavily defended and as the operations in the Marianas were taking longer than expected, the decision was made to occupy only the three largest islands in the southern portion. Airfields could be developed on Angaur, Peleliu and possibly Ngesebus to extend Allied control over the Western Pacific and support the Philippine invasion.

The Japanese had prepared an elaborate defense system in the southern Palau to stop invaders at the beaches. In the event these failed, the defenders were to fall back to previously prepared defenses inland utilizing the caves and natural terrain features of the ridge line down the center of the island.

Task Force 38, under Vice Admiral Marc A. Mitscher, was to conduct strategic air support missions hitting the enemy naval forces threatening landing operations in the western Carolines. He was also to provide air support for the simultaneous landings

Naval Aviation in WW II

at Morotai north of Halamahara and in the Palaus. The III Amphibious Corps was under the command of Major General Roy S. Geiger, USMC, a Naval Aviator, who was to be the ground force commander for the assault on the Palaus. This force basically was composed of the 1st Marine Division and the 81st Infantry Division, U.S. Army. The assault of Morotai was to be conducted by the 31st Division, U.S. Army.

Little resistance was expected against the Morotai invasion, and since it was extremely important to rapidly develop airfields on the island, there was no preliminary air or naval bombardment prior to D day that would prevent a tactical surprise. However, land-based Allied aircraft did conduct heavy raids on Japanese bases within range of Morotai. Air support on D day was provided by Task Force 38 and escort carrier (CVE)-based aircraft which continued to provide support until airfields were constructed. Landing on 15 September 1944, the 31st Division met little opposition and quickly moved inland to take its objectives. Japanese troops on Morotai showed little offensive spirit, choosing to escape rather than to attack or defend prepared positions. Nor did the Japanese command at Halamahara reinforce the island. Airfield construction proceeded slowly due to lack of adequate good surfacing material, as well as bad weather conditions.

The far-ranging Third Fleet carriers providing air support for the Palau and Morotai operations reported Japanese strength in the southern Philippines to be weaker than expected. Based on the decision to bypass some of the islands in the western Carolines that had previously been marked for attack, release of troops assigned to these assaults made it possible for Gen. MacArthur to plan an attack directly to Leyte, bypassing Mindanao. While there were no actual sorties flown against Leyte by Morotai-based aircraft, they did fly support over southern Mindanao and later against targets in the Netherlands East Indies and the Japanese oil center at Balikpapan, Borneo. The Morotai fields, secured at an extremely low cost, were well worth the taking.

Fast carrier strikes in the Palaus began on 6 September, D minus 9. They also provided close air support on D Day

at Peleliu. Gunfire support commenced on D minus 3 by 4 battleships, 3 heavy cruisers, 1 light cruiser and 9 destroyers. On 18 September, simultaneous with the Morotai landings, the 1st Marine Division began landing on Peleliu. Initially, it was anticipated that Peleliu would be a tough, but short operation which could be secured in four days. As the amphibian vehicles crossed the reef they, and the beach, were subjected to mortar, artillery and automatic weapons fire from the high ground of Peleliu's central ridge system. As succeeding waves pushed ashore, Japanese fire steadily increased, providing ample evidence that the preliminary air and naval bombardment had not been as effective as hoped. In two days of heavy fighting, the most important objective, the Peleliu airfield, had been secured—but at a cost of almost 1,500 Marine casualties. The Japanese commander withdrew his forces to the ridge lines and high ground north of the airfield. Against stubborn resistance and with reinforcements being sent south from the more northerly islands, it was evident that additional troops would be needed to destroy the enemy. After a week of extremely strenuous combat, the 1st Marine Division had been temporarily halted. The division had lost just under 4,000 men. The 1st Marines had been virtually eliminated as a combat unit, with the 7th and 5th Marines also suffering heavily. Maj. Gen. Geiger directed that the 1st Marines be evacuated from Peleliu and that the 321st Regimental Combat Team be attached to the 1st Marine Division.

By the end of September, Peleliu had been secured—at the cost of 5,300 American casualties. The airfield, which was the primary purpose for seizing the island, was operational for fighter aircraft. This certainly did not mean that the fighting was over. When the III Amphibious Corps headquarters moved ashore on 12 October, Maj. Gen. Geiger declared that the assault and occupation phase of operations on Peleliu had ended. Yet, strenuous fighting remained to be done to blast the remnants of Japanese defenders from their final ridge-line positions. The 1st Marine Division left the island on 30 October having suffered 6,526 casualties. Army units continued the fighting until 27

November when hostilities finally ceased. The operation which had been expected to last only four days had continued for almost two and a half months.

After "Bloody Peleliu" was all over, it never served the purposes originally envisioned. The airstrips were not operational in time to directly support the Philippine landings as planned. It was not until 17 November that the first bomber mission was flown against a Philippine target from a field in the Palaus—almost a month after the landing on Leyte. The islands, as it turned out, were not as valuable as anticipated nor used as extensively as planned. This cost us over 9,800 American lives.

The primary purpose of the Leyte campaign was to establish an air and logistics base in the Leyte area in order to support future operations in the Luzon-Formosa-China coast area and, particularly, to nullify Japanese strength on Luzon. The return to the Philippines was to be accomplished in two phases. The first would be a preliminary operation into the Sarangani Bay area of southern Mindanao to establish land-based air forces to augment the carrier-based air support for the principal effort. The major thrust was to be an amphibious landing with forces mounted from New Guinea to seize airfields and bases on Leyte. Because of its central location, the occupation of Leyte would split the Japanese forces in the Philippines. It would also provide an excellent anchorage in Leyte Gulf and sites for bases and airfields from which land-based aircraft could attack all parts of the Philippines, the coast of China and Formosa. Rapidly changing events in the conduct of the war made it possible to eliminate the first step into the Philippines and jump directly to the assault at Leyte.

The Seventh Fleet, under Vice Admiral T. C. Kinkaid, was assigned the mission of supporting the landing. Pre-invasion bombardment was to commence on 17 October with landings to be made on the 20th. As expected, the Japanese responded to this assault with a massive naval operation destined to destroy the U.S. Navy units and crush the landing force. Once again, their plans were thwarted. (For a detailed description of the Battle of Leyte Gulf, see *Naval Aviation News*, September–October

1994.) Carrier-based aircraft continued to support the Leyte campaign till adequate facilities were constructed ashore. Marine aviation, in the form of a night-fighter squadron and four *Corsair*-equipped fighter squadrons, were deployed to the Tacloban airfield from Peleliu. These squadrons operated for a little under four weeks at Leyte but in that time flew 264 missions and destroyed 22 Japanese ships and 40 aircraft. ■

"Back to the Philippines, Part 2," will appear in *Naval Aviation News*, March–April 1995.

Ticonderoga (CV 14), foreground, and other ships form the fighting fleet at Ulithi Atoll in December 1944.

2 Jan: Eighteen Fighter Bomber Squadrons (VBFs) were established within existing Carrier Air Groups to adjust their composition to the needs of changed combat requirements in the Pacific.

11 Jan: The Bureau of Ordnance assigned the first task on Project Bumblebee to the Applied Physics Laboratory, thus formally establishing the program for development of a ramjet-powered, guided, antiaircraft weapon from which the Talos, Terrier and

Tartar missiles eventually emerged.

6 Feb: The Chief of Naval Operations directed that, following a period of training at NAS Kaneohe Bay, Hawaii, Patrol Bomber Squadrons 109, 123 and 124 of Fleet Air Wing 2 be equipped to employ the SWOD Mark 9, Bat, guided missile in combat.

USN 294129



Formation Bombing

PBYs played an important part in the Pacific war, but few people know that these venerable planes once launched a massed-formation flying raid against a Japanese invasion fleet.

With the destruction of the majority of MacArthur's air force on 8 December 1941, some of the burden of repelling an amphibious assault against Luzon fell to the naval air arm, in particular, to Patrol Wing 10's PBY-4 *Catalinas*. These early model twin-engine flying boats (no waist blisters) had been active in reconnaissance work prior to and after 8 December.

The Japanese understood that command of the air was critical to the entire

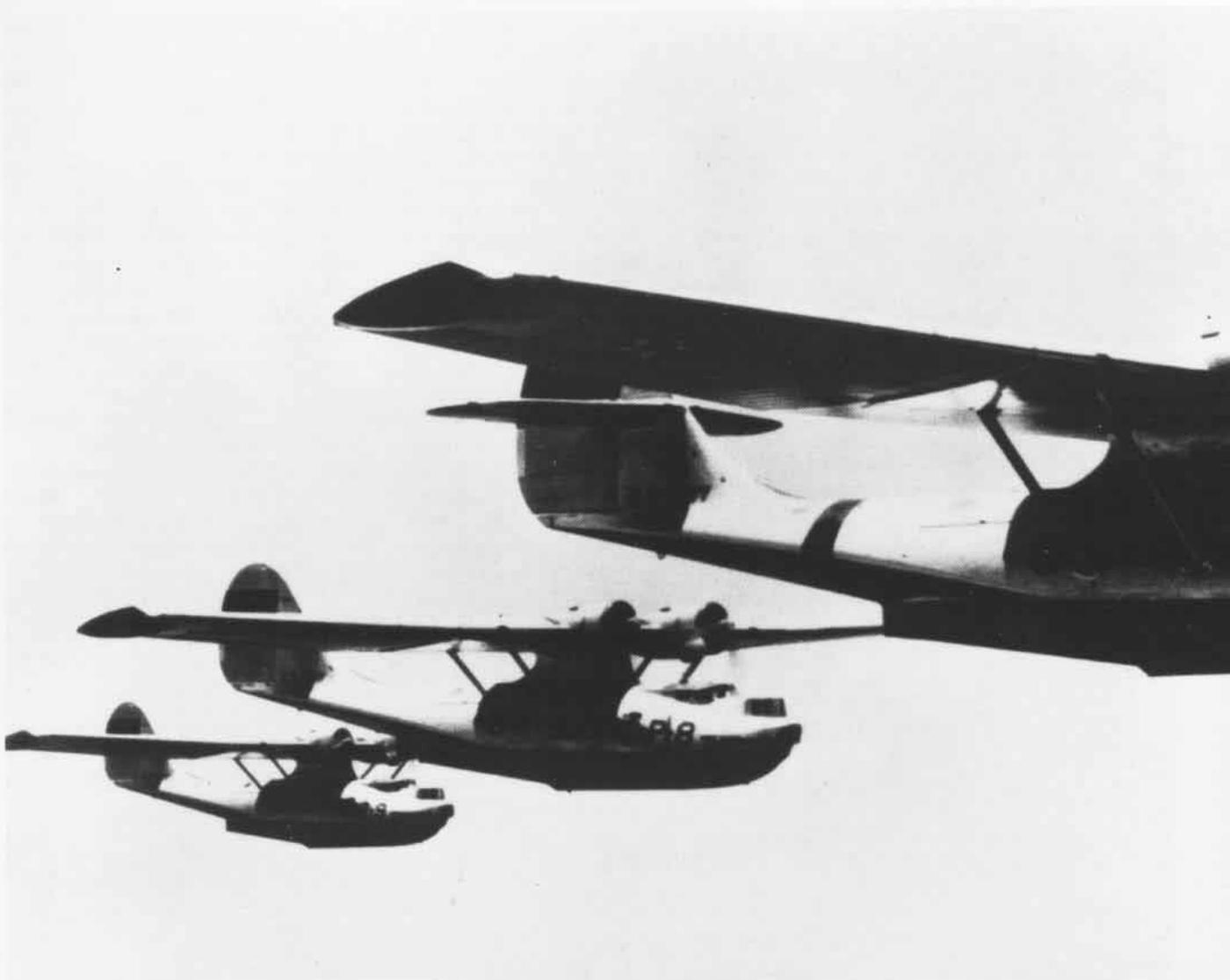
Philippine operation. Although fighters could, and did, operate out of Formosa, travel time, wear on pilots and loiter time over targets made poor use of air assets. The *Zero* had more than twice the flying radius of the American P-40, but the time it took to fly from Formosa to Luzon and return was still time it could not fight. Air bases on Luzon would increase the effectiveness of every aircraft based there many times, for multiple missions could be flown daily.

In a bold and rather risky move, with limited forces, the Japanese planned several small landings to secure airfields from which their short-range aircraft could continue the attrition of American

air power. Ultimately, these planes would cover the main invasion fleet.

The two targets in North Luzon were Aparri and Vigan. To escort the Army and its two troop convoys, Vice Admiral Ibo Takahashi commanded the Northern Covering Force with heavy cruisers *Ashigara* and *Maya*, one light cruiser, two destroyers and two converted seaplane tenders. They left the port of Mako in the Pescadores on 8 December. The transports carrying the soldiers had left Mako the evening before in fast 12- to 14-knot ships.

The Japanese considered these two invasions very important to the success of the Luzon campaign. The small size



These PBYs of Patrol Squadron 3 are similar to the Patrol Wing 10 *Catalinas* flown in the assault against Luzon.

with PBYS

By Lt. Col. John W. Whitman, USA (Ret.)

of the forces also left the Japanese very concerned over the outcome. Air cover was to be provided by the elements of the 24th and 50th fighter regiments, and planes covered the ships all day during their voyage on 8 and 9 December. The Japanese considered it a miracle that not one American aircraft had spotted them during the two-day trip.

At 0210 on 10 December, a P-40 from MacArthur's much-reduced Far East Air Force took off on a reconnaissance mission. Reports had reached the Americans about a naval force operating near Vigan, and confirmation was necessary. Lieutenant Grant Mahoney spotted 6 transports off Vigan

Bay and 11 warships off the town of Vigan. When Mahoney slowed to land at Nichols Field, Filipino soldiers at an anti-aircraft position shot him out of the sky. Mahoney bailed out and landed uninjured.

Despite the delay in reporting what he had seen, Mahoney's information reached American commanders at 0513. In response to Mahoney's report, the Army ordered the Far East Air Force to attack the shipping with all its forces. Unknown to the Army, the Navy would become involved, too.

At 0645 on 10 December, one of three Navy PBYS operating out of Manila Bay spotted VAdm. Takahashi and his Northern Covering Force. After an hour of confusion over whether or not the ships were the British *Prince of Wales* and *Repulse*, Lieutenant Clarence Keller banked his plane and passed astern of the Japanese ships. Heavy anti-aircraft fire convinced Keller that the ships were hostile. So much fire reached for the PBY that the ships themselves seemed on fire.

At 0800, Keller reported the enemy force as two battleships, one light cruiser and four destroyers—a pretty good report with the exception of promoting the two heavy cruisers to battleships.

Back on Luzon, an attack group of five PBYS that had been loaded with bombs had spent the morning derigging these bombs, rigging with torpedoes, then changing back to bombs again. Now, armed with four 500-pound bombs each, they took off at 0910 from Laguna de Bay, a large lake southeast of Manila. Following signals sent by the contact PBY, the attack group closed in on the Japanese. The Americans practiced formation flying before the war, and now they tightened up for mutual security. With luck, maybe the two .30-caliber and two .50-caliber machine guns on each plane might actually deter a Japanese fighter.

When the PBYS reached the target area, the pilots spotted the ships 10 miles off. They also saw Japanese aircraft flying at about 7,000 feet. Using scattered clouds as concealment and with the sun at their backs, the PBYS began their bomb run from 15,000 feet. Not satisfied with the alignment as they

approached, Lieutenant Commander J. V. Peterson held his fire and led the formation through a full 360-degree turn to try again.

At 1205, these formation-flying PBYS dropped their 20 bombs in the midst of 4.7-inch and 47mm anti-aircraft fire, as well as machine gun fire from Japanese floatplanes. The ships were boiling up wakes as they dashed about at 23 knots. Aimed at the largest "battleship," the bombs near missed and possibly damaged one ship's rudder. The Americans watched a ship swing to port through a complete circle, slow, then straighten.

Released from the disciplined formation required during the bomb run, the five PBYS did a close imitation of a *Blue Angel* clover leaf as each pilot dove for a likely looking cloud. Amazingly, not a single PBY was lost over the target.

Back on Luzon, another four PBYS armed with torpedoes and bombs started racing across Manila Bay as a second strike. But they ran into a blizzard of Japanese *Zeros*. Eighty-one horizontal bombers and 71 fighters had arrived over Manila at 1145. Those planes had been engaged in bombing Cavite Navy base and found the PBYS a welcome diversion.

Firing their cannon and machine guns, the *Zeros* sieved one PBY and sent it flopping back into the water. *Zeros* shot up a second PBY and sent it into Manila Bay in a semi-controlled crash. The third PBY sat quietly on the water and was ignored by the Japanese. A fourth *Catalina* avoided the *Zeros*, searched for the Japanese ships, but could not find them.

Although the PBYS that attacked the Northern Covering Force survived the experience, additional use of PBYS as bombers quickly convinced naval officers that such missions were nearly suicidal. The planes fell back to the reconnaissance work for which they were so well suited.

But for one brief moment, the PBY flew into the ranks of famous horizontal bombers. ■

Lt. Col. Whitman has published articles in various military publications and is the author of *Bataan: Our Last Ditch*, Hippocrene, 1990.



Stamped in Honor USS Wasp

By Michael W. Lake

Michael Lake is an honor student at Bourne High School, Bourne, Mass. He is an avid stamp collector and a member of the American Philatelic Society, and American First Day Cover Society where he is a staff columnist. His father, Alan, served aboard Wasp as an airman in the V-3 Division from 1970 to 1972. The following article relates how Michael persevered to commemorate Wasp's anniversary in his own unique way.

It was 27 October 1993 in Newton, Mass., a suburb of Boston. The Boston Marriott Hotel was teeming with close to three generations of people. All of them had one thing in common: they all served aboard the carrier *Wasp*, fondly known as "The Mighty Stinger." About 1,000 former crew members attended the special 50th anniversary reunion. In fact, 27-31 October was officially proclaimed "USS *Wasp* Reunion Weekend" by the city of Newton and the Commonwealth of Massachusetts. This article is a stamp collector's tribute to a ship and crew who deserve much recognition.

Wasp (CV 18) was launched 17 August 1943 and was commissioned 24 November 1943 at Bethlehem Steel Company's shipbuilding yards in Quincy, Mass. CV 18 was actually the eighth naval ship to bear the name *Wasp*.

The carrier played a major role in a number of sea battles in the Pacific during WW II, participating in Guam, Iwo Jima, Leyte Gulf and Okinawa, to name a few. On 19 March 1945, *Wasp* was hit by a 500-pound, armor-piercing bomb. The bomb penetrated the flight and hangar decks and exploded in the ship's galley. Over 100 crewmen were lost, but operations continued. During WW II, *Wasp* was also involved in the demobilization of troops from Europe back to the United States.

Wasp was placed out of commission and into the Atlantic Reserve Fleet on 17 February 1947. The ship was refitted beginning in 1948 and was recommissioned

10 September 1951.

After service in North Atlantic Treaty Organization (NATO) operations and protection of Chinese Nationalists in the Tachen Islands, she returned to the U.S. for major overhaul. *Wasp* went back to duty sporting a new hurricane bow and angled flight deck on 1 December 1955.

Following another tour of the Far East, *Wasp* returned home and was designated an antisubmarine warfare support carrier (CVS 18) in November 1956.

Throughout the late 1950s and early 1960s, *Wasp* served in additional NATO operations, tours and maneuvers around the world before being called upon in November 1962 to aid in the Cuban Missile Blockade.

Beginning in 1962, *Wasp* was a member of the Navy's Atlantic Recovery Force, which picked up astronauts after splashdown. The carrier was the primary recovery ship for five space missions: Gemini 4, 6, 7, 9 and 12.

Following a number of other tours taking her all over the Atlantic, *Wasp* was ordered to proceed to drydock at Newport News, Va., in early November 1971. During this time, suspected corrosion of the carrier's propeller shafts was inspected to determine the extent of damage. It was found that three of the four propeller shafts needed to be replaced, and official notification of eminent decommissioning was released by the Department of Defense in early March 1972. *Wasp's* Fleet Post Office was closed 22 June 1972, and the carrier was officially decommissioned 1 July, just a year and a half before her 30th birthday.

The ship was sold 21 May 1973 to Union Minerals & Alloys of New York City. The armor plates from the hull of the carrier have been used to filter atomic particles at an Illinois physics laboratory conducting nuclear experiments.

In April 1993, I decided to help honor

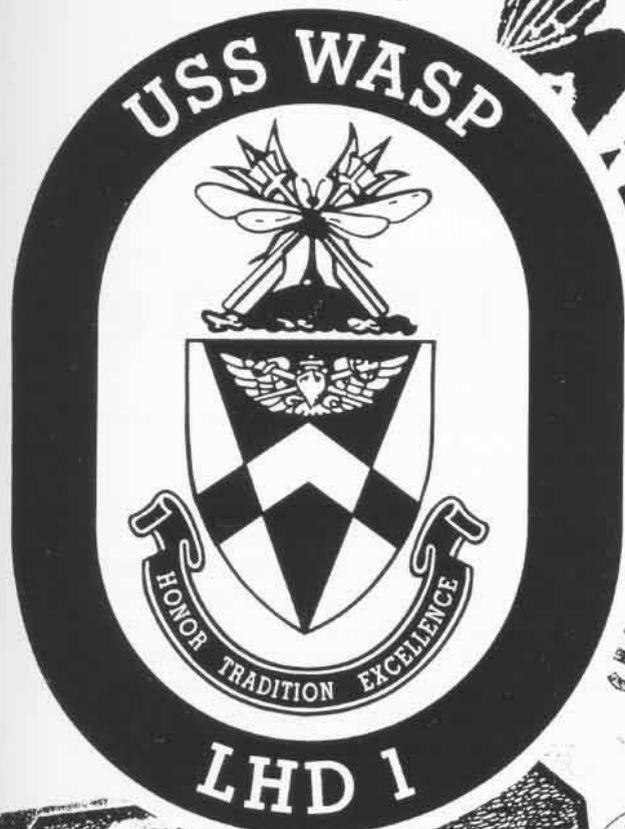
the upcoming 50th anniversary of *Wasp's* commissioning. In June, I submitted proposals to the United States Postal Service (USPS) to commission two special pictorial cancelations for use on letters: one in conjunction with the 27 October reunion of *Wasp* organization members in Newton and the other on the actual anniversary date, 24 November, in Quincy.

Throughout the summer of 1993, I worked with the USPS in the design/development stage, as well as the lengthy approval process. After final approval was granted in August by USPS Headquarters in Washington, D.C., I created two styles of special cacheted commemorative envelopes to complement my pictorial cancelations. I decided to make a limited edition of 100 envelopes for each cancel. I first photocopied the envelope templates with "The Mighty Stinger" insignia and ship outline already printed on the template. With my father's help, I finally finished the tedious job of coloring each one, cutting them out, folding them into an envelope and finally stamping each one. The final products were well worth the effort.

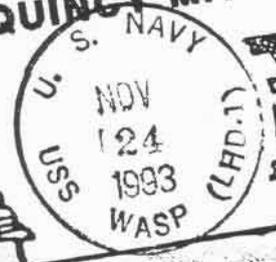
It should be noted that *Wasp's* history has not yet come to an end. The legacy of "The Mighty Stinger" is being carried on by her namesake, the newest ship in a new class of amphibious assault carriers. *Wasp* (LHD 1) was commissioned in 1989 and served in Somalia during U.S./United Nations relief efforts there. ■

USS *Wasp* CV/CVA/CVS 18, Inc., is a non-profit organization whose membership includes anyone who served aboard the carrier from 1943 to 1972. Membership information can be obtained by writing: Mr. Richard VanOver, 6584 Bunting Rd., Orchard Park, NY 14127.

Page 33 shows a montage of Michael's pictorial cancelations which symbolize *Wasp's* proud history.

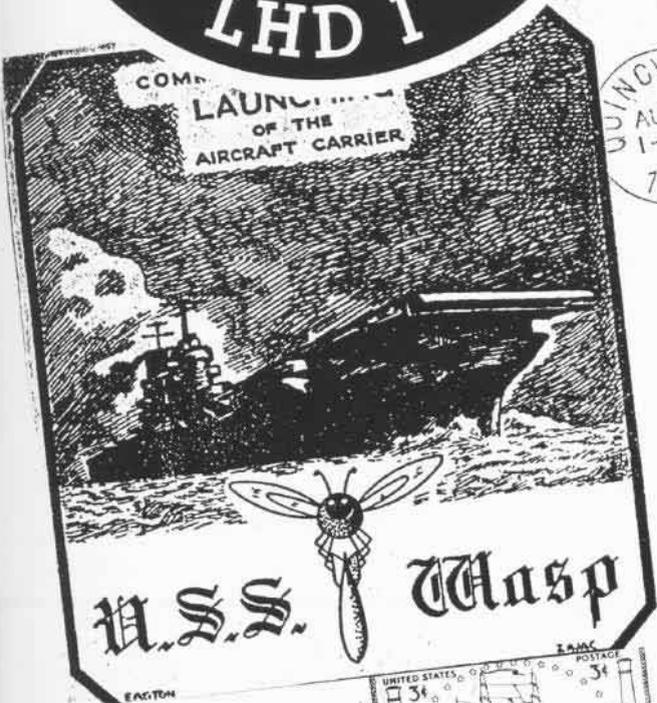


CV-18
NOVEMBER 24, 1962
STINGER STATION
QUINCY MA 0216



SP
18
972

U.S. WASP

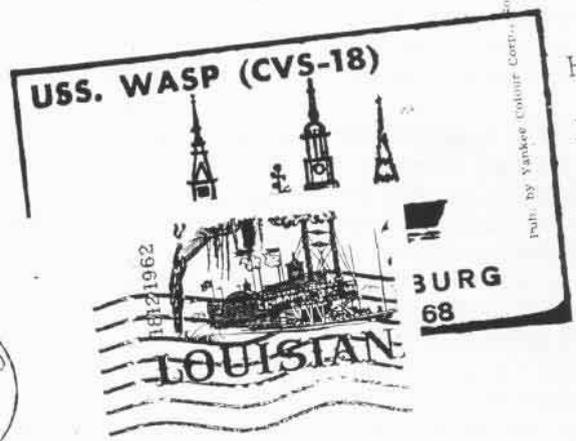


U. S. S. WASP (CVS-18)

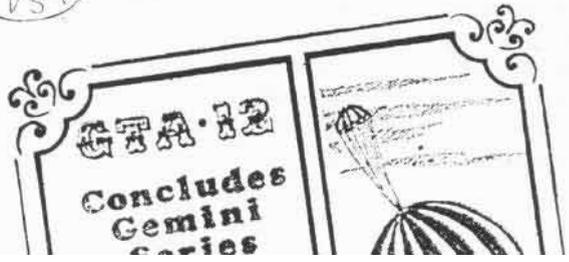


Post Card

Herrn Hubert Pl
Franciscanerstr
KERKRAD
Holland



Independence Day
July 4th, 1962



Standard Engine

By Sidney Sneade

The expected service life of existing Navy Intermediate (I)-level maintenance gas turbine Engine Test Systems (ETSs) now in the fleet will expire by the year 2000. Current maintenance procedures are cumbersome, inefficient and prone to operator and instrumentation errors. Testing is slow, involving manual calculations, reporting and recording. New engines from F-14D, F-18E/F and V-22 aircraft require a digital interface between the ETS and the engine control unit(s); however, all existing fleet ETSs were designed to process only analog signals. The Standard Engine Test System (SETS) is a state-of-the-art system with digital capability chosen as the solution to satisfy the Navy's engine testing requirements into the 21st century. The SETS concept comprises a new generation of intermediate maintenance-level engine test equipment capable of testing all gas turbine engines, including turbofan/jet, turboshaft/prop and small gas turbine engines. SETS will be deployed worldwide—including aircraft carrier installations—providing one single configuration, which simplifies training, operation and maintenance throughout the Navy.

Mission requirements for fleet aircraft engine test equipment are defined in the various I-level engine maintenance manuals and the operational scenarios that they support. Within the context of those requirements, engine test equipment for approximately the next 20 years can be provided through two different avenues. The first approach is to modify the currently deployed ETS equipment so that it will be technically adequate to support the testing of current and near-term engines, including those engines with on board engine control systems. The second approach is to develop a "next generation" test system that is specifically tailored to the

testing requirements of the engine technology and timeframe in question.

The cost-effective advantage of a new ETS, such as SETS, is driven by two factors: the high maintenance costs that are and will continue to be necessary to keep the aging group of current ETSs functioning and technically capable, and the inherently lower operating costs of a state-of-the-art, computerized test system. Simply stated, computerized testing is faster and less operator intensive, thus saving fuel and man-hours.

Automation of gas turbine engine testing through the use of real-time computer data acquisition and processing provides an opportunity for dramatic increases in efficiency with appreciable cost savings. Positive benefits associated with computerized testing include:

- improved safety for the engine, test equipment and personnel
- significantly lower fuel costs
- increased data accuracy and repeatability
- increased Unit Under Test items processed
- reduced personnel (operator) requirements

Additionally, the technical sophistication of a computerized test system provides a robust set of options in terms of test protocol and data output that results in faster and more rigorous engine testing. Enhanced functionality of automated test systems when compared to current analog test systems include:

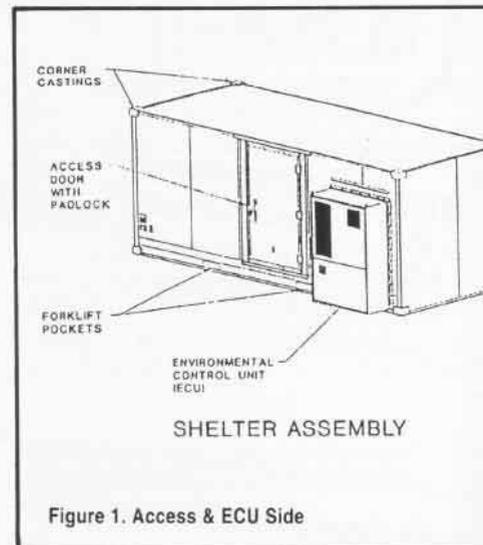
- "real-time" monitoring of critical system variables, such as fuel flow, rotating assemblies, speeds, temperatures, positions, vibration and pressures
- rapid scanning and automatic collection of sensor data
- immediate data normalization, such as standard day correction
- instantaneous display (and printout on demand) of data in a range of format options

- generation and archiving of an accurate and thorough test log record
- dynamic calculation of fixed and sliding limits with display of engine function alarm messages
- growth capacity to accommodate new engines or revised test protocol via routine software modifications

In reality, SETS is truly an Instrumentation and Control (I & C) package that will exist in several configurations depending on the operational environment.

The prototype units depict the "transportable" version of SETS. This unit is analogous to the open-air test systems currently in use, such as the A/E37T-23 turbofan/jet test stand, A/E37T-26 APU test stand, A/E37T-17 turboprop test unit and the A/E37T-24 turboshaft test system.

Fixed facility test systems will also house SETS. At the time of this writing, efforts were under way to erect a reclaimed (NAS Cubi Point, R.P.) A/F37T-10 turbofan/jet test facility at NAS Patuxent River, Md. Upon comple-



Test System

tion of the facility reconstruction, the I & C package to be installed will be SETS in lieu of the reclaimed hardware.

The Naval Air Systems Command team is in the process of developing a fixed facility test system for indoor testing of turboshaft engines. The next major milestone is the 35-percent design review, which occurs at the conceptual stage to make allowances for SETS incorporation. The allowances manifest themselves in such ways as computer flooring for the control room, larger spaces in wall areas to house SETS junction boxes, etc. The actual SETS interface design effort is yet to be started.

Still another planned version for SETS is for sea-going applications, which will replace the I & C package currently employed in the A/W37T-1 shipboard turbofan/jet/APU test system.

The transportable version of SETS incorporates an 8 x 8 x 20-foot shelter assembly (Figure 1). The interior of the shelter is painted with a corrosion-resistant enamel and covered with

acoustic tiles, while the exterior treatment is of conventional epoxy-based coatings. Climate control within the shelter is achieved by a self-contained environmental control unit that is externally mounted.

Figure 2 shows the engine side of the shelter. A viewing window allows observation of the test area. Two connector panels, the engine and facilities control, provide the input/output interface for the routing of system power and signal interconnect wiring.

The interior walls are lined with materials that act as sound barriers and dampeners. The I & C assembly (Figure 3) is the heart of SETS and consists of all hardware found within the shelter assembly. Components include various computer hardware, signal processors, displays, storage media, terminal interfaces and the cabinets used to house them.

The control console assembly (CCA) in the I & C is the workstation from which the operator will implement the engine test procedures and monitor and

record test progress and results. The CCA consists of a five-bay, low-silhouette console cabinet, which accommodates the various controls and monitoring equipment that the operator uses during engine testing.

Keeping its large and diverse fleet of aircraft flying is a top priority for the Navy, and the periodic testing of aircraft engines is essential to meeting this goal. The Standard Engine Test System has been chosen as the best candidate for providing the fleet with the level of support required. SETS is a single state-of-the-art test system capable of testing the entire complement of Navy and Marine Corps gas turbine engines in a fast, economical, efficient manner. ■

Mr. Sneade is a systems engineer in the Systems Engineering Department, Naval Air Warfare Center Aircraft Division, Lakehurst, N.J.



Figure 2. Engine Side View

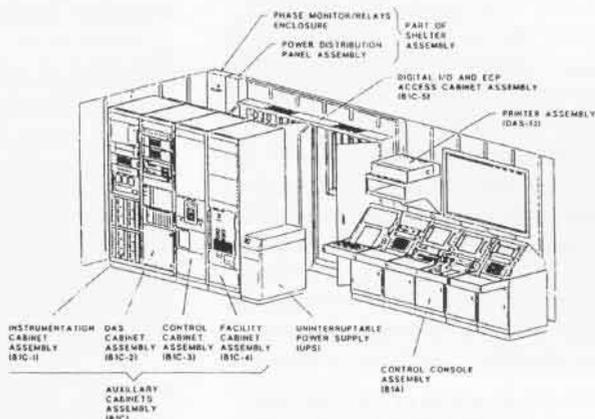


Figure 3. Shelter Interior

Awards

The Secretary of the Navy personally presented the **Navy and Marine Corps Medal** 15 October 1994 to *Kitty Hawk* (CV 63) crewmen who participated in the rescue of aircrew from a burning F-14 on the carrier's flight deck (see *NA News*, Nov-Dec 94, p. 3). The awardees were: ABHC Leroy Danielly, ABH1(AW)s Larry Spradlin and Timothy Goode, ABH2 Jose Dickson and AT2(NAC) Brandon Liesemeyer.

The following COMATKWINGPAC/Intruder annual awards were presented during the week of 17 October and at the 1994 Intruder Ball held 22 October: **Senator Henry M. Jackson Leadership Award**, Cdr. James Engler; **Pilot and Bombardier Navigator of the Year**, Lts. Brian Kasperbauer and John Elstad; **Overall Bombing Derby Winner**, VA-196; **Grumman Maintenance Squadron of the Year**, VA-128; **Maintenance Officer of the Year**, Lt. Barry Grinstead; **Hughes Tactical Squadron of the Year**, VA-95; **Pratt and Whitney Foreign Object Damage Excellence Award**, VA-165; **Fleet Replacement Pilot and Bombardier Navigator of the Year**, Lts. Robert George and Ken Canete; **Texas Instruments LGB Excellence Award**, VA-165; **Fleet Junior Officer of the Year**, Lt. Greg McCreary; and **Gulfstream TC-4C Pilot of the Year**, Lt. Gregory Jordahl.

Enlisted Intruder of the Year Awards: **Administration**, YN1(SW) Earnest L. Hall; **Career Counselor**, AMCS(AW) Michael A. Harris; **Intelligence**, IS3 Michael P. Rusinko; **Maintenance Instructor**, ADC(AW) William D. Williford; **Line/Trouble Shooter**, AMS1(AW) Raymond C. Hartmann; **Aircraft Division**, AMS1 Tom D. Alexander; **Avionics/Armament**, AT1 Jeffrey O. Amidon; **Corrosion Control**, AMS1(AW) Ronald E. Kutz; **Maintenance Admin**, AZ2(AW) Timothy D. Lutz; **Quality Assurance**, AMH1(AW) Jeffery A. Ploof; **Maintenance Dept. CPO**, AFCM(NAC) Robert A. Cooter; and **Maintenance Control CPO**, ATCS David A. Stanley.

1994 **Instructors of the Year** were announced by the following commands: VT-7, Lt. John Boon; VT-19, Capt. Keith Buchanan, USMC; and VT-23, Lt. Raymond Schenk.

The Pensacola, Fla., Lions Club honored nine Training Air Wing 5 & 6 flight instructors 25 October 1994. The **Outstanding Flight Instructors** were selected by their respective commands based upon flight safety, leadership, performance of duty as a flight instructor, community involvement and personality. Honorees were: Lt. Kurt Johnson, VT-2; Capt. Kirk J. Kumagai, USMC, VT-10; Lt. Michael E. Wojcik, VT-3; Capt. Gregory D. Anderson, USMC, NASC; Lt. William G. Cook, VT-6; Lt. Darrel M. Blaschak, HT-8; Lt. D. Craig Klein, HT-18; Lt. Paul Hechenberger, VT-86; and Lt. Curtis G. Phillips, VT-4.

SSgt. Gordon McGowan, VMA-211, was the recipient of the Marine Corps Aviation Association's **Kerry Dale Award** presented annually for outstanding achievement or contribution by a Marine to promote aviation safety in V/STOL flight training.

VFA-146 was awarded the 1994 **Ltjg. Bruce Carrier Memorial Award** given to the Pacific Fleet F/A-18 squadron that demonstrates an unparalleled level of performance and expertise in the operation of all facets of maintenance/quality assurance programs.

Lt. Susan D. Fink, HC-3, was honored by the **California Women in Government** for her military expertise and knowledge in Naval Aviation and her community involvement. The recognition occurred at the group's annual Tribute awards program and dinner held 20 October 1994.

Station Operations and Engineering Squadron, MCAS Cherry Point, N.C., was awarded the **Commandant's Aviation Efficiency Trophy** for outflying more than 75 Marine aircraft squadrons during 1994.

VA-196 was selected 1994 **West Coast Intruder Bombing Squadron of the Year** in competition with four other squadrons.

On 17 October 1994, VAdm. Robert J. Spane, COMNAVAIRPAC, presented HS-6 with the 1993 awards: **Captain Arnold Jay Isbell**, **Admiral John S. "Jimmy" Thach**, **Battle "E"** and the **CNO Safety Award**.

Mary Beth Fennell of NADEP Cherry Point, N.C., received the **Environmental Protection Agency Stratospheric Ozone Protection Award** at the 1994 International Chlorofluorocarbon and Halon Alternatives Conference held in Washington, D.C., 25



October 1994. The award was given for exceptional leadership, personal dedication and technical achievement in protecting the stratospheric ozone layer.

Cdr. Lee M. Morin, MC, Director, Warfare Specialty Programs, Naval Aerospace and Operational Medical Institute, received the **Chairman of the Joint Chiefs of Staff Award for Excellence in Military Medicine**. The award recognizes leaders in the military medical community and was established last year through the efforts of Zachary and Elizabeth Fisher of New York City.

VFA-125 won the **McClaran Strike Fighter Derby** in competition with other Navy F/A-18 *Hornet* squadrons based at NAS Lemoore, Calif.

Eleven Marines were honored 20 October with 1994 **Navy League Awards** by the Honolulu Council of the Navy League of the United States. The council annually honors outstanding officers and enlisted personnel of the three sea services—Navy, Marine Corps and Coast Guard—in the mid-Pacific area. Honorees were: Capt. Richard N. Shizuru, HMH-463; 1st Lt. David T. Aycocock, HMM-265; 2nd Lt. Devin C. Young, MWSS-174; Sgt. Doyle W. Braddy, MCB Hawaii, Kaneohe Bay; SSgt. Julia A. Deloach, MFP Camp H. M. Smith; SSgt. Patrick G. Williams, CSSG-3; Sgt. Junior L. Logan, HMM-265; Sgt. Eric G. Walters, MCB Hawaii, Kaneohe Bay; Sgt. Boise A. Harris II, MCSF Co., Pearl Harbor; Sgt. Kenneth Mouton, Jr., MWSS-174; and Cpl. Duane P. Vila, HMH-463.

Enterprise (CVN 65) received, for the

second year in a row, the **Virginia Governor's Award for Volunteering Excellence**. Also, volunteers from *Enterprise* won the Hampton Roads, Va.-area **J. C. Penney's "Golden Rule Award"** for educational excellence.

NAS Patuxent River, Md., received the **Tree City USA Award** (fifth consecutive) and the **Tree City Growth Award** on behalf of the National Arbor Day Foundation, the USDA Forest Service and the National Association of State Foresters.

George Washington (CVN 73) won the **Edward F. Ney Memorial Award** for excellence in food service.

AD1(AW) Roosevelt Rumble, VAQ-135, and LCpl. David S. Westhoff, USMC, AIMD, NAS Whidbey Island, were honored by the Oak Harbor Area Council of Navy League and the Rotary Club of Oak Harbor, Wash., as the **Top Sailor and Marine of the Year**.

The **Vice President Al Gore Hero of Reinvention "Hammer" Award** was presented to Naval Air Technical Training Center, Millington, Tenn., for accomplishments in effective training and saving money. The Coast Guard also received the award for its reserve and active duty integration in San Diego, Calif., and its herring fishery traffic management in San Francisco, Calif.

MCAS Cherry Point, N.C., became the first military installation to receive the North Carolina **Gold Key Award** for contributions to the "Adopt-A-School" program.

VAQ-129 was awarded the **Meritorious Unit Commendation** for the period 15 November 1992 to 15 January 1994.

VF-102 was recognized as the TARPS Squadron of the year by receiving the **Atlantic Fleet Tactical Air Reconnaissance Trophy**, which honors superior photoreconnaissance support.

Records

Several units marked **safe flying time**:

Unit	Hours	Years
VA-52	31,457	7
VFA-195	50,000	13
VMFA(AW)-225	10,000	
VMFT-401 (F-5E)	20,000	
VMGR-352	160,000	20
VS-33	150,000	34

Special Records

HSL-48's **AW1 Larry Hitchew** completed his 2,000th SH-60 flight hour, while **Lt. Ted Cossette** and **AW2 Steve Slogoski** both surpassed 2,000 total flight hours during their deployment to Unitas 35-95 aboard *McInerney* (FFG 8).

AT2 K. W. Eichenauer, VR-54, surpassed 1,000 C-130T flight hours.

HS-10's **AWC Dave Weiner** completed 5,000 helicopter flight hours.

Lts. Tim Dermody and **Mark Innes**, VAQ-139, achieved 1,000 EA-6B flight hours.

AFCM David Penn, HC-3, completed 6,000 flight hours.

Anniversaries

Marine Corps	219 years
HMM-262	43 years
HSL-43	10 years
HSL-47	7 years
NAS Pensacola	80 years
<i>Wasp</i> (LHD 1)	5 years

Rescues

HSL-44 Detachment 6 completed a dramatic five-person night rescue 22 September 1994 in the Caribbean Sea from a distressed 83-foot U.S.-flagged fishing vessel, *Mesca Lero*. The vessel was over 100 miles away and sinking after being hit by a waterspout during a thunderstorm. The crew had no survival raft or personal flotation equipment. The SH-60's



crew, **Lts. Dana Gordon** and **Elizabeth Franklin**, **AW1(AW/SW) Robert Alexander** and **AW2(AW) Scott Palmer**, from *Vella Gulf* (CG 72), launched and flew 114 miles through heavy rain, thunderstorms,

low visibility and gusty winds to find the ship in the heart of still another line of thunderstorms. Due to the deteriorating condition of the vessel, a rescue directly from the ship was determined unsafe. The aircrew rescue swimmer, **Palmer**, was deployed from a 15-foot hover into the pre-dawn waters. Fighting up to two knots of current, 6- to 8-foot waves and 25 knot winds, **Palmer** swam to the vessel and boarded from the stern. He calmed the survivors and prepared them for rescue from the water abeam the vessel. After assisting one of the survivors, who was a marginal swimmer and in shock, **Palmer** and the remaining four survivors were hoisted aboard the hovering helicopter and flown 85 miles back to *Vella Gulf*. The survivors were treated for shock and exposure.

Coast Guard HH-60 crews from **Coast Guard Air Station, Elizabeth City, N.C.**, made two rescues within hours of each other on 17 November. In the first, the aircraft battled 15-20 foot seas to rescue a family of four from a sinking sailboat about 410 miles east of Norfolk, Va. The crew consisted of **LCdr. Dave Gunderson**, **Ltjg. Dan Molthen**, **AM2 Bobby Blackwell** and **ASM3 Mario Vittone**. Petty Officer **Vittone** was lowered into the water to assist the survivors into the hoist basket and the family was then flown back to CGAS Elizabeth City for treatment.

Only a few hours later, another crew—consisting of **Lt. Jack Newby**, **Ltjg. Mike Brady**, **AT2 Matt Moyer** and **ASM2 Mike Thomas**—battled 30-40 foot seas and 50-mph winds in rescuing a crew of three from a 49-foot sailboat 100 miles east of Norfolk. The rescue swimmer was again deployed to assist the survivors into the rescue basket. The three were in good condition after returning to the air station.

AT3 Georgia Mercer, **VP-16**, heard screams from in front of her home in Hammond, Ind., and came out to find two men performing CPR incorrectly on a man who had suffered a heart attack. Taking over the effort, Petty Officer **Mercer** worked on the man for nearly 30 minutes until paramedics arrived. After being alerted of the event by the paramedics, **VP-16** awarded her the Navy Achievement Medal for helping to save the man's life.

NAS Lemoore Search and Rescue rescued a man who fell 25-30 feet while hiking in the Sequoia National Park and

broke his ankle 29 October 1994. The crew of Lts. Rick Grint and Bob Hauser, AE3 Tim Yarbrough and HM2 Mike Cave conducted a litter hoist recovery from a streambed.

MCAS El Toro SAR rescued a trauma victim who fell in rough terrain, hit his head and became trapped in the San Jacinto Mountains. The man was six feet, four inches tall and weighed 250 pounds. The crew of Maj. Rich H. McKenzie, Capt. John V. Ingwell, SSgt. Joseph L. James and HM2 Joe A. Rodriguez was requested because the victim could not be carried out without risk of injury to rescuers.

The Japan Maritime Self-Defense Force conducted a medevac from *California* (CGN 36) by landing a seaplane beside the ship, launching a small rubber boat to transfer FC3 David Henderson, suffering from acute appendicitis, and HM3 Scott Youngerman, an escort, and flying them to NAS Atsugi, Japan. The



two men were then flown by Japanese helicopter to Yokosuka Naval Hospital where Henderson underwent surgery.

Scan Pattern

Thirty-seven chief petty officers from **NAS Jacksonville, Fla.**, commands spent 9 November 1994 repairing the home of a local needy senior citizen. A tree had fallen through the roof of the home several months before and the home had deteriorated due to weather. The chiefs jacked and leveled the foundation, replaced flooring, repaired and replaced rafters, added and painted new siding and prepared the roof for new shingles. The project was sponsored by the USO's Shipmates with Hearts program.

Retired Adm. Jerome L. Johnson, a former Vice Chief of Naval Operations, was selected 1 October 1994 by the

Board of Managers to become the 13th President of the **Navy/Marine Corps Relief Society**. Adm. Johnson retired after 38 years of naval service in July 1992. He replaced retired VAdm. Jimmy Pappas, who had held the position for three years.

Ground was broken 28 October 1994 for **VP-30's** new hangar at NAS Jacksonville, Fla. VP-30 is the fleet replacement squadron for P-3 *Orion* aircrew and maintenance personnel.

Nearly 300 officers, trustees and guests of the Naval Aviation Museum Foundation gathered 14 October 1994 at the **National Museum of Naval Aviation**, Pensacola, Fla., for the foundation's annual Board of Trustees Banquet. Guest speaker Under Secretary of the Navy Richard J. Danzig honored retired Adms. Thomas H. Moorer and Maurice F. Weisner for their tireless service and strong leadership, which has helped preserve the rich history and proud heritage of Naval Aviation through the growth and expansion of the museum.

The last two TBD *Devastator* torpedo plane pilots to survive the **Battle of Midway** passed away in 1994 within days of each other. George Gay died 28 October and Wilhelm G. "Bill" Esders died 1 November. Both were participants in the famous WW II Pacific air battle where 35 out of 41 carrier torpedo planes with 68 pilots and aircrew were lost. Survivors like these two and radioman/gunner Lloyd Childers were considered living symbols of bravery and sacrifice from a group of men who took on the enemy with odds of survival stacked almost totally against them. Childers went on to become a Marine pilot and retired as a lieutenant colonel.

H. M. King High School, Kingsville, Texas, is the only high school to have its own **TA-4J Skyhawk**. The jet is on loan from the National Museum of Naval Aviation and is used as a static display and training for the school's new aircraft maintenance class. An official unveiling and dedication ceremony was held 28 October 1994.

EW1 Jim Butterworth, Command and Control Warfare Group, Pacific, assigned to *Kitty Hawk* (CV 63), was selected out of 30,000 applicants to be one of 10 members of the second annual **Marlboro Adventure Team**. The team made an



11-day trek on a 600-mile journey through deserts and rugged western trails, white water rafting, rock wall climbing, four-wheel driving, dirt biking and horseback riding.

EAA Oshkosh, Wisc., has set plans for the **43rd annual Experimental Aircraft Association Fly-in** convention in 1995, which will be held 27 July–2 August. In 1994, more than 850,000 people and 12,000 airplanes participated in the event.

The **Navy Prototype Optical Interferometer**, a state-of-the-art telescope, was dedicated 19 October 1994 at Lowell Observatory near Flagstaff, Ariz. The telescope is unusual because it consists of mirrors that allow it to measure peaks and valleys of light waves and will be capable of pinpointing extremely precise positions and providing information on the sizes, shapes and surface features of stars. It was developed by the U.S. Naval Observatory, the Naval Research Laboratory and Lowell Observatory, with funding from the Office of Naval Research and the Oceanographer of the Navy.

VMFA-235 moved from MCAS Kaneohe Bay, Hawaii, to MCAS El Toro, Calif., 1 September 1994. The squadron was the last F/A-18 unit to make the move.

The **Yorktown CV-10 Association and Foundation, Inc.**, held its annual reunion 6–8 October 1994 at Patriots Point aboard the carrier in Charleston, S.C., harbor. The day was marked by flight deck ceremonies and a WW II F6F *Hellcat* fighter plane fly-by, and two Vietnam War combat aircraft were dedicated to two heroes and their comrades killed in action during the war. The Patriots Point A-7 *Corsair II* display aircraft was dedicated in honor of retired Adm. "Gus" Kinnear and the 21 carrier-based A-7 pilots killed in action in the war. The museum's SH-3 *Sea King* was dedicated in honor of retired Capt. Robert Vermilya and in memory of nine carrier-based SH-3 pilots and aircrewmembers who lost their lives in the Vietnam War.

The Navy's first African-American pilot, **Ens. Jesse L. Brown**, was immortalized in his hometown of Hattiesburg, Miss., with the unveiling of a monument, placed on the corner of Jesse Brown St. and Country Club Rd. A ceremony held 1 November 1994 and witnessed by nearly 200 people, including Brown's widow, daughter and granddaughter, honored his memory and accomplishments. Ens. Brown died during the Korean War after his aircraft was shot down while attempting to provide cover for trapped U.S. troops at the Chosin Reservoir in North Korea. On 17 February 1973, the destroyer *Jesse L. Brown* (DE 1089) was commissioned as the first U.S. Navy ship named in honor of an African-American naval officer.



AD1(AW) Stephanie J. Bruno is the Navy's first enlisted female combat flight engineer assigned to an operational squadron, VP-24. She earned her qualification 3 November 1994 while the squadron was on a six-month deployment to NAS Keflavik, Iceland.

The "**Spirit of Naval Aviation**," a statue of five Naval Aviators, was unveiled 7 December 1994 in a ceremony at the National Air and Space Museum, Washington, D.C. An aviator represents each of the following periods throughout Naval Aviation history: WW I/The Early Years, WW II, Korea, Vietnam, and Desert Storm/The Modern Era. The statue, sculpted by Ms. Sandra Van Zandt, will be dedicated

and placed at the entrance of the National Museum of Naval Aviation, Pensacola, Fla., in May 1996.

Change of Command

Blue Angels: Cdr. Donnie Cochran relieved Cdr. Robert Stumpf, Nov 94.

CVW-9: Capt. John R. Worthington relieved Capt. Timothy J. Keating, 26 Oct 94.

Duluth (LPD 6): Capt. Paul H. Stevens relieved Capt. Richard B. Ormsbee, 2 Sep 94.

FITWINGLANT: Capt. Dale O. Snodgrass relieved Capt. Robert S. Schmidt, 30 Sep 94.

HMM-164: Lt. Col. Timothy P. Minihan relieved Lt. Col. Bruce A. Albrecht, 17 Nov 94.

HS-10: Cdr. Carl D. Robertson relieved Cdr. Michael T. Fuqua, 30 Oct 94.

HSL-45: Cdr. William B. Watkins relieved Cdr. Gary D. Klink, 6 Oct 94.

Inchon: Capt. David Crocker relieved Capt. W. D. Young.

MALS-46: Lt. Col. Michael N. Daily relieved Lt. Col. Donald L. Weiss, 2 Oct 94.

NAF Adak: Capt. Larry W. Crane relieved Capt. Walter J. Cummings, 25 Aug 94.

NAVAIRRES San Diego: Capt. David A. Grupe relieved Capt. Michael P. Rishel, 25 Sep 94.

NB San Diego: RAdm. Joseph S. Walker relieved RAdm. Fran K. Holian, 10 Nov 94.

NR NADEP Norfolk: Capt. Marvin F. Hough relieved Capt. James L. Conn.

NRTSC 0191: Cdr. Trin J. Astrella, Jr., relieved Cdr. Darryl S. Zeleniak, 1 Oct 94.

SACLANT: MGen. John J. Sheehan relieved Adm. Paul David Miller, 31 Oct 94.

SFWSPAC: Lt. Cdr. Lawrence C. Burt relieved Cdr. Scott H. Swift, 14 Oct 94.

SOMS MCAS El Toro: Lt. Col. Michael J. Hughes relieved Lt. Col. Eric A. Jones, Sep 94.

VA-34: Cdr. Charles Hautau relieved Cdr. Robert Gilman, 12 Sep 94.

VA-95: Cdr. Pieter N. A. Vandenberg relieved Cdr. Gerald L. Nicholson, 2 Dec 94.

VA-165: Cdr. Ronald Stites relieved Cdr. James Symonds, 29 Sep 94.

VAQ-132: Cdr. Gary B. Hicks relieved



A VQ-5 ES-3 Shadow prepares to land aboard *Independence* (CV 62). VQ-5 moved from Guam to NAS North Island, Calif., on 1 October 1994

Cdr. Roy L. Holbrook, 16 Nov 94.

VAQWINGPAC: Capt. Roger A. Pierce relieved Capt. Baker R. Hamilton, 28 Oct 94.

VAW-122: Cdr. Carl W. Dossel relieved Cdr. Gregory J. Pitman, 18 Oct 94.

VAW-124: Cdr. Ralph Costanzo relieved Cdr. William Wolters, Oct 94.

VAW-125: Cdr. Jacob Wilkins relieved Cdr. Gary Carter, 28 Oct 94.

VF-111: Cdr. Tom Joyce relieved Cdr. Donnie Cochran, 1 Sep 94.

VF-154: Cdr. Philip W. Grandfield relieved Cdr. Kevin P. McNamara, 15 Aug 94.

VFA-86: Cdr. John Noell relieved Cdr. John McClain, 29 Sep 94.

VFA-97: Cdr. R. Thompson relieved Cdr. C.E. Wattam, 15 Nov 94.

VMFA(AW)-121: Lt. Col. Patrick R. Moriarity relieved Lt. Col. Donald J. Borje, 16 Nov 94.

VP-10: Cdr. Thomas J. Arminio relieved Cdr. Keith F. Koon, 30 Sep 94.

VP-24: Cdr. Steve A. Seal relieved Cdr. Perth F. Pearson, Jr., 20 May 94.

VQ-2: Cdr. Jay S. Snowdon relieved Cdr. Lawrence G. Holmes, 10 Nov 94.

VR-54: Cdr. Gary D. Bumgarner relieved Cdr. Allen B. Adams, Jr., 15 Oct 94.

VR-56: Cdr. George Platz relieved Cdr. Mark Estes.

VR-61: Cdr. Charles T. Ryan relieved Cdr. Jerome A. Dabrowski, 22 Oct 94.

VRC-40: Cdr. John V. FitzSimons relieved Cdr. Randall W. Hamilton, Nov. 94.

VT-21: Cdr. Richard A. Palmer relieved Cdr. David C. Cox, 7 Oct 94.

VTC-12: Cdr. Jeffrey D. Rusinko relieved Cdr. Jerry J. Brown.

Cdr. Peter Mersky, USNR (Ret.)

Carl, Major General Marion E., USMC (Ret.), with Barrett Tillman. *Pushing the Envelope: The Career of Fighter Ace and Test Pilot Marion Carl*. U.S. Naval Institute Press, Annapolis, MD 21402. 1994. 152 pp.

When I first saw this slim volume, I was prepared not to like this long-overdue autobiography of one of America's most experienced, yet least-known military aviators. Marion Carl's career includes some incredible wartime successes—not the least of which is ranking seventh among USMC aces with 18.5 kills and receiving two Navy Crosses. But there was so much more, including being in on the ground floor of jet and helicopter development and finally tallying more than 13,000 flight hours.

Carl led some of the first Marines into Vietnam and flew more than 100 combat missions in Southeast Asia in helos and jets.

It took long-time friend and successful author Barrett Tillman to midwife the general's memoirs. As I read this engrossing, at times enlightening biography, I found myself constantly delighted at the succinctly written anecdotes and revelations, too many to detail in a short review. (The only gaff is a misspelling of a central Massachusetts city on page 75; it's Worcester, not Wooster.)

This book turns on a bare bulb in a darkened warehouse of memories, and Carl lets us peek inside for a few treasured accounts of experiences in war and peace. Names of famous Navy and Marine aviators rise and fall in the text, as they would roll off the general's tongue if he were speaking to us. And we are left wanting more.

I do wish there had been a better selection of photos, not only of the general during his career but of his family. There's only one photo of his wife, Edna, who appears on many of the pages as his soul mate, as well as of other people he

worked and flew with for more than 40 years.

But, even though I harp on photos as an integral part of military books, I relent in this case because the text and narrative are that good. This is a nice, little biography which, by its brevity and simple style says a lot about the quality of hero and man telling it.

Martin, Patrick. *Hook Code: United States Navy and Marine Corps Aviation Tail Code Markings, 1963-1994*. Patrick Martin, 812 East 55th St., Tacoma, WA 98404. 1994. 247 pp. \$24.95.

This book is expensive, badly constructed and poorly printed. For the price, I expected at least a small color folio of some of the more interesting markings. But the photos are little more than high-quality xeroxes, the type small and some of the pages loosely secured within the binding. However, the author, who apparently published the book, did allow for a good quality, full-color cover.

Understandably, the scope of the subject results in a few errors. Two examples I caught were on pages 11 and 16, respectively. VFP-306, assigned to CVWR-30, used ND, not AF, as a tail code; the date given for the photo of an A-6E as January 1990 predates the Iraqi invasion of Kuwait in August 1990. A few squadrons—such as VA-65 aboard *Theodore Roosevelt*—in Desert Storm painted some of their aircraft in two-tone, water-based brown camouflage immediately before the Gulf War started in January 1991. (Actually, VA-72, aboard *John F. Kennedy*, didn't camouflage an A-7 until after the war, immediately before returning to the U.S.)

Maybe the European market, where aircraft spotters abound, will be more receptive. However, as a reader of such material for more than 40 years, I think there will be limited American interest.

ANA Bimonthly Photo Competition

The Association of Naval Aviation and its magazine, *Wings of Gold*, is continuing its annual photo contest which began in 1989. Everyone is eligible except the staffs of *Wings of Gold* and *Naval Aviation News*. The ONLY requirement is that the subject matter pertain to Naval Aviation. Submissions can be in black and white or color, slides or prints of any dimension. Please include the photographer's complete name and address, and **PHOTO CAPTION**.

Cash Awards: Bimonthly - \$100; Annual - First, \$500; Second, \$350; Third, \$250.

For deadline and submission details, call (703) 998-7733. Mail photographs to: Association of Naval Aviation Photo Contest, 5205 Leesburg Pike, Suite 200, Falls Church, VA 22041-3863.



LCdr. Pete Alexander, Albuquerque, N.M., won the bimonthly ANA photo competition with this shot taken in 1981 while assigned to America (CV 66) in the Indian Ocean. LCdr. Alexander was in the right seat of a VS-33 S-3 when he snapped his wingman as they set up to "attack the spar at dawn with no mercy."

FLIGHT BAG

USS Saratoga

I have just completed reading Steven D. Hill's excellent "Super Sara—A History of USS Saratoga (CV/CVA 60)" (*NANews*, Nov-Dec 1994). I served aboard *Saratoga* from June 1970 until July 1972 while attached to the *Sluggers* of VF-103 and have many fond memories of operations aboard the "Sara Muru." I do have one small nit to pick regarding the described MiG engagement of 11 July 1972.

On that morning, while en route to our combat air patrol station, my section did, indeed, engage a section of MiG-17s. After several passes along a generally north-south line, the MiGs turned toward the west and Lt. "Bat" Masterson and I followed in Clubleaf 212. Shortly thereafter, Lt. Masterson called to "Break" and cannon tracers passed from behind. These were being fired from the lead aircraft of another MiG-17 flight, this one of three aircraft. We took one round, caught fire and as the airplane rolled uncontrollably right and tucked, the second flight of MiGs overshot. Our day was over, however. We ejected and were almost immediately captured. The North Vietnamese did not confirm our capture until the peace accords were signed, so we remained listed as missing in action until that time. I never saw Clubleaf 211 after our initial turn with the MiG two-plane flight.

R. I. Randall
Rt. 1, Box 131-F
Lexington Park, MD 20653

Mr. Steven D. Hill's deployment history of *Saratoga* was a superb documentation and will certainly have a place in my permanent collection.

However, the fixed-wing antisubmarine warfare community may feel a bit forlorn. VS-24, with its S-2G *Trackers* led by Cdr. George M. Zaludek with Cdr. T.J. Spencer as XO, was missing from your 27 Sep 74 to 19 Mar 75 Med deployment. This was VS-24's only overseas deployment aboard "Sara" and the last one for the ship involving the S-2 *Tracker*.

AMHC Roy L. Leverich, USN (Ret.)
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Portland, IN 47371

Have a Story to Tell?

Naval Aviation News plans to periodically

publish a column relating a personal experience/anecdote involving Naval Aviation. If you have a story to tell, write a brief (no more than 4 double-spaced, typewritten pages) first-person account of your interesting/unusual/funny experience and send it (and photos, if available) to:

Editor, Naval Aviation News,
Bldg. 157-1 Washington Navy Yard
901 M Street, SE Washington,
DC 20374-5059
Fax DSN 288-2343 or 202-433-2343

Do not submit safety-related stories, please; those belong in *Approach* magazine.

WW II Patrol Aviation

It was with great interest that I read the article, "Patrol Aviation in the Atlantic in World War II," in your Nov-Dec 94 issue. While Capt. Raithel's research briefly mentions VP-73's service in the Battle of the Atlantic, I feel that a more complete account could be given concerning VP-73's work in combating the U-boats.

According to the war diary of VP-73, on 20 August 1942, Ltjg. Robert B. Hopgood, A-V(N), USNR, and his crew #9 attacked and sank the German submarine U-464. For this kill, Hopgood received the Navy Cross and his crew received commendations. On 2 September 1942, U-756 was sunk by a squadron PBV. The patrol plane commander was Ltjg. John E. Odell. On 5 October 1942, aircraft 73-P-12 attacked and sank U-582.

The effectiveness of VP-73 was pointed out by RAdm. Daniel V. Gallery when he stated on page 15 of his book, *Clear The Decks*, "We set the pace for the U.S. Navy's antisubmarine campaign. With a twelve-plane squadron (VP-73), we amassed the highest record of any squadron in the Navy, with eight confirmed U-boat kills. I believe three additional sinkings, formerly credited to the [Royal Air Force], were recently credited to VP-73."

RAdm. Gallery, now deceased, was C.O. of NAS Reykjavik, Iceland, at the time of VP-73's victories. He was later the commanding officer of the escort carrier that captured the U-505.

Patrol Squadron 73 had further events in Iceland that were not mentioned in

the *Naval Aviation News* article. In November 1942, while based in French Morocco, VP-73 *Catalinas* battled Fiat CR-32s over the Canary Islands and Focke-Wulf 200Cs of Gibraltar.

I have recently researched VP-73 (later VPB-73) for a book I have just sent to my publisher. Entitled *Cats over the Atlantic*, it tells the story of the squadron from the days before WW II when it flew Consolidated P2Y-2s, through the Neutrality Patrol, the Battle of the Atlantic and its final disestablishment after the war. It is my purpose to set the record straight about the war record of my squadron, in which I served as a pilot from 1943-1945.

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NAS Quonset Point History

Author of *From Quahogs to Carriers, The History of NAS Quonset Point and COMFAIR Quonset* seeks information for inclusion in his book on the history of NAS Quonset Point. Contact: Sean Milligan, 137 Olympia Ave., Pawtucket, RI 02861, 401-722-5821.

Correction

Sep-Oct 94, back cover: Mrs. Jean Jackson, vice her husband, snapped the shot of their horse, Topper, watching a VMA-231 *Harrier* take off from their property. She said that this was probably the most exciting incident to ever happen in Aguila, Ariz.

Reunions, Conferences, etc.

Iwo Jima Survivors Association of Texas 50th Anniversary Reunion, 19-23 FEB, Wichita Falls, TX. POC: Cy Young, POB 1657, Bowie, TX 76230, 817-845-3261.

American Airpower Heritage Museum International Symposium, 2-4 MAR, Midland, TX. POC: Dr. William G. Morris, Midland College, 3600 N. Garfield, Midland, TX 79705, 915-685-4641.

VS-33 reunion, 1 APR, San Diego, CA. POC: Reunion Committee, VS-33, NAS North Island, CA 92135, 619-545-7086.

Tarawa (CV/CVA/CVS 40) reunion, 6-9 APR, Mystic, CT. POC: Rudy Marzano, 488 Summit Ave., Maplewood, NJ 07040.

NAS New York (Floyd Bennett Field) reunion, 27-30 APR, Virginia Beach, VA. POC: Chet Atkinson, POB 62066, Virginia Beach, VA 23466, 804-495-1338.

