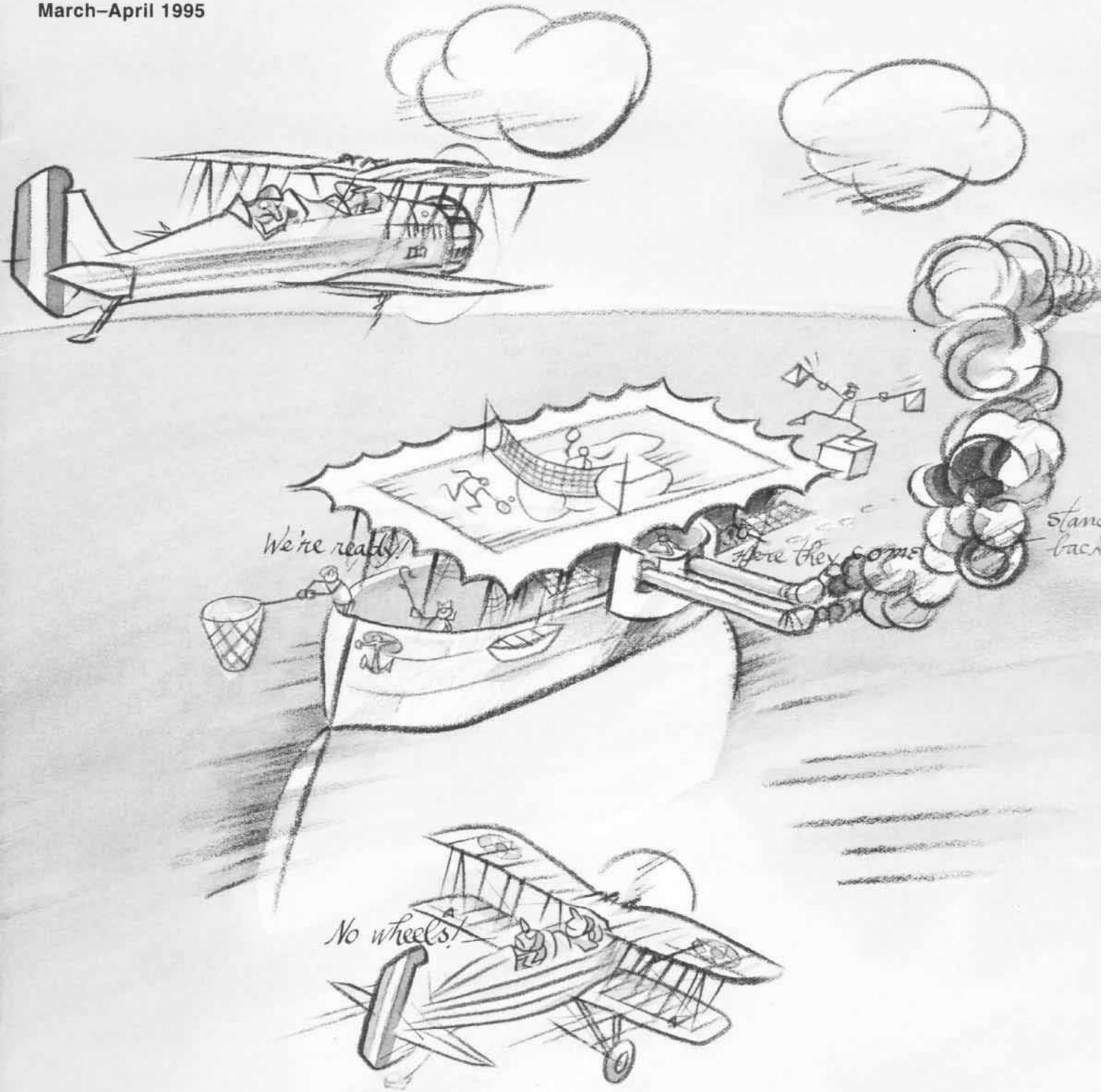


NAVAL AVIATION NEWS

March-April 1995



Robert C. Osborn
Grampaw Pettibone
Artist Dies
Page 18

Osborn

NAVAL AVIATION NEWS

Flagship Publication of Naval Aviation

Oldest U.S. Navy Periodical, Volume 77, No. 3, March-April 1995

Features



New Horizons for Unmanned Reconnaissance Aircraft 15

**NAS Whidbey Island—
A Tradition of Excellence 10**

Grampaw Pettibone Artist Dies 18

The Technical Directive Nightmare 19

**Enlisted Aviation Series—Aviation
Structural Mechanic Hydraulics 22**

An Antarctic Tale 24

**Naval Aviation in WW II—
Back to the Philippines, Part 2 28**

Joint Navigator Training Update 39

Departments

Flight Line 1

Grampaw Pettibone 2

Airscoop 4

Naval Aircraft: SN2J 20

People—Planes—Places 34

ANA Photo Competition 38

Vapor Trails 38

Professional Reading 40

Flight Bag inside back cover



COVERS—Front: Robert Osborn conceptualized early carrier aviation in one of his classic drawings. Back: These two symbols of American pride were captured on film by Sharon C. Solorzano, the ANA Bimonthly Photo Competition winner, p. 38.

RAdm. Brent M. Bennett
Director, Air Warfare

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

Capt. William T. Vance
Acting Director, Naval Historical Center

Cdr. Mike Lipari
Director, Naval Aviation History and Publication Division

Staff

Cdr. Russ Jowers	Editor
Sandy Russell	Managing Editor
Charles C. Cooney	Art Director
Wendy Karppi	Associate Editor
JO2 Jerry Knaak	Assistant Editor
JO2 E. Blake Towler	Assistant Editor

Associates

Harold Andrews
Technical Advisor

Cdr. Peter Mersky, USNR (Ret.)
Book Review Editor

LCdr. Richard R. Burgess, USN (Ret.)
Capt. R. Rausa, USNR (Ret.)
Contributing Editors

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, 710 North Capitol Street NW, Washington DC 20402-9375. Phone: (202) 512-1800. 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. Bennitt, Director, Air Warfare

Joint Tactical Airborne Electronic Warfare

During this decade the Department of Defense has dramatically changed the way it does business. The days of totally unique missions, equipment, doctrine and programs for each of the three service branches have passed, probably forever. Today, leadership in Congress, DoD and JCS, coupled with severe fiscal constraints, have driven the services closer together, consolidating mission areas and programs to meet the Commander in Chief's requirements. New policies that will facilitate this process include the creation of the Defense Airborne Reconnaissance Office (DARO), the Joint Tactical Air to Air Missile Office (JTAAMO) and the Joint Combat Identification Office (JCIDO). The bottom line is that very few major programs will be funded in the future without definitive joint application and need, and Naval Aviation is a full participant in this process.

Recently, the EA-6B has been involved in a number of high level joint reviews related to tactical airborne electronics warfare. Most significantly, the entire spectrum for the future of airborne tactical electronic warfare is being examined by the Joint Tactical Air Electronic Warfare Study (JTAEWS). The results of this study will influence tactical airborne electronic warfare well into the next century. Several joint tactical airborne EW programs are already underway, including the Missile Approach Warning System (MAWS) and the Integrated Defensive Electronic Countermeasure (IDECM) system.

In a very significant development, the Office of the Secretary of Defense has directed that the Department of the Navy, using the EA-6B *Prowler*, assume the joint mission of airborne offensive electronic warfare for all of DoD. In



JO2 Bobby Jones

RAdm. Brent M. Bennitt

parallel, the EF-111A and the F-4G Wild Weasel will be retired within two years. This merger of Air Force and Navy requirements into a joint role to be fulfilled by the capabilities of a single platform is a watershed event in multi-service commonality.

In the past, common systems were limited to ordnance and avionics, and very few of either. Past attempts to create common platforms have met with little success, as demonstrated by the inability of the F-111A (TFX) and the F-16 to meet the Navy's common lightweight fighter requirement due to shipboard incompatibilities.

However, in the case of offensive airborne EW, a decision has been made to adopt the most capable existing platform as the DoD standard and accept certain limitations (lack of supersonic capability and reduced unrefueled range in the case of the EA-6B) in the interest of the best "bang for the DoD buck." In the future, other mission roles may be relegated to a single platform assigned to support all services either through

mutual support by the parent service or acquisition of a common platform by multiple services.

The employment of the *Prowler* as the sole offensive airborne EW platform will entail several challenges. The most significant issue is the near-term implementation of this bold new concept. Air Force mission needs will have to be implemented within Naval Aviation EW doctrine. Additional Air Force personnel on exchange tours may have to be integrated into EA-6B squadrons. A command structure that will prioritize allocation of limited *Prowler* assets to competing mission requirements will need to be identified and exercised. The most effective implementation of joint support methodology must be determined (i.e. joint mission training of Navy or Marine Corps assets or both, specialization by only a few designated squadrons or joint training for all). Once doctrine is developed and training provided, *Prowler* support of Air Force strikes must be exercised.

The future of Naval Aviation may be significantly impacted by the success or failure of joint offensive EW provided by the EA-6B. If other mission roles are assigned to a single platform, that platform (or a variant) must be carrier compatible or Naval Aviation warfighting capability will be diminished. The success of the *Prowler* community in implementing this historic opportunity will influence the selection of a follow-on aircraft to the EA-6B and potentially affect the outcome of the Joint Advanced Strike Technology (JAST) study and future advanced tactical aircraft. Budget pressures have dictated an entirely new concept of "joint." Now it is up to the *Prowler* community to make it work.

FLY 'EM SAFE!

Tragic Tangle

An AH-1W and a UH-1N launched on an authorized photographic mission. A professional photographer, who was also a Naval Aviator, rode in the rear of the UH-1N to film the AH-1W. The AH-1W pilot was the flight leader. There was a pilot, copilot and crew chief in the UH-1N; a pilot and copilot in the AH-1W.

After taking some overland pictures, the helicopters went feet wet and proceeded toward an auxiliary field on an island off the coast. Over water at 200 feet, 100 knots, the UH-1N was in the lead while the AH-1W maneuvered for photos, generally maintaining a one to three "rotor" separation distance, flying an abnormal position: abeam to a slightly forward bearing with zero to 10 feet step-down on the port side. Standard parade position is on the 45-degree bearing, one rotor separation and 10 feet of step-up.

En route to the island field, the copilots in each aircraft were directed to review the approach plates for landing. At this point, positioned one rotor away, the pilot of the AH-1W looked into the cockpit to scan the gauges. Thus, both the pilot and copilot had their eyes in the cockpit. When he looked back out, the pilot saw the UH-1N, seemingly twice as big as before. He tried to slide away.

At the same time, as they were stowing their approach plates, both copilots heard a loud whack. They observed main rotor blades of the two aircraft intermeshing and hitting each other. The aircraft began to descend, separately.

The UH-1N pilot was able to initiate a flare at 75 feet altitude. The aircraft impacted the water, aft skids first, and pitched nose down into the sea.

The AH-1W pilot banked left for separation after impact and autorotated. The AH-1W's engine was losing main rotor rpm and the engines were overspeeding when it struck the water. The AH-1W pilots egressed safely. The pilot of the UH-1N and the photographer were lost but the copilot, who nearly drowned, and the crew chief survived.



in the briefing that he did not seek close shots nor did he want the aircraft making steep angle-of-bank maneuvers. Furthermore, at the time of impact, he was changing the film in his camera.

This was a case whereby the leader—who was known as an outstanding pilot and who was very confident in his formation flying skills—and his copilot were both preoccupied long enough for their helo to drift into the UH-1N.

It was true when I started out in bi-planes, and it's just as true now: when you're a wingman, keep your eye on the leader. Always.



Grampaw Pettibone says:

When Gramps first learned about this midair during a photo mission, the impulse was to figure the helos got too close posin' for pictures. Not so. Indeed, the photographer stressed

PHOTO
FINISH



Tomcat Tussle

A Tomcat squadron was undergoing its last Fleet Fighter Air combat maneuvering Readiness Program (FFARP) training mission, a flight over an at-sea TACTS (Tactical Aircrew Combat Training System) range. A "bogey" section consisting of two A-4s and an F-16 was disposed in a three-plane "wheel" formation. A section of F-14As was "in pursuit" of them.

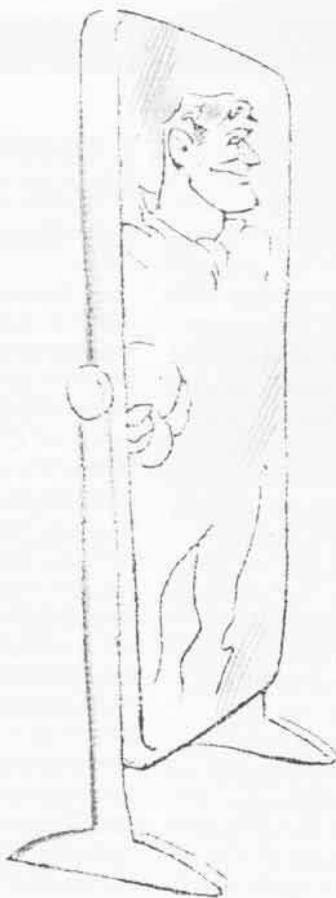
En route to the range, the wingman advised the F-14A leader that fuel was streaming from the vent mast/tailhook attach point area. The pilot cycled his fuel dump switch and the fuel loss was significantly reduced but still streaming a bit. The pilot decided to execute the ensuing engagement in military power in case some fuel was still streaming. He customarily flew an intercept portion in military power for wingman consideration.

From a point four miles in trail, the Tomcats gained a radar picture of the three bogeys orbiting at 22,000 feet. The bogeys "felt threatened" and turned to the north. The lead F-14 tracked the bogeys and "shot" a missile at one of the A-4s, scoring a kill. Maneuvering continued and the F-14 pilot achieved position and scored another kill on the F-16.

In this last firing sequence, the F-14 was in an 80-degree left angle of bank, 12 degrees nose high. He reduced angle of attack while executing an aggressive roll to the right without rudder input. Throttles were at military power. He was trying to acquire the remaining threat, now to the southeast.

Passing through 20 degrees right angle of bank, while looking over his right shoulder, the pilot heard a loud bang on the right side of the aircraft. His radar intercept officer (RIO), eyeing the F-16 over the pilot's left shoulder, did not hear the bang. The aircraft continued to roll steeply to the right (82 degrees) with a sideslip, an increase of right yaw, rising angle of attack and the G load growing to 5.2 Gs. Altitude was 20,000 feet.

The Tomcat commenced an uncommanded right roll off from 82 degrees angle of bank with rapidly accelerating right yaw rate. The engine stall warning tone came on. Seconds later, the pilot pulled both throttles to idle. Sensing a violent departure and right nose slice, the pilot slammed the stick full forward. There was no control response. Also, there was no rpm indication on the instrument panel. The RIO transmitted, "Lock your harness," then, "Neutralize, let go . . . terminat-



Ah, yes...
Ace of the
Base!



LT JACK S. PYLOT

ing." The engine stall warning tone stopped.

The F-16 pilot transmitted, "We've got a guy spinning here."

The F-14 had departed and entered an unrecoverable flat spin. Descending through 13,000 feet, the RIO jettisoned the canopy and initiated command ejection. Both flyers landed in the water and were rescued uninjured.



Grampaw Pettibone says:

Heckuva hassle that was! The pilot bagged two birds, then his own flyin' machine, so to speak. This pilot was a fierce fighter, no doubt about it. Too fierce. A review of the records showed the pilot was no stranger to engine stalls. Further, he tended to ignore those stalls in the heat of the fight in air combat maneuvering engagements. During the FFARP period, for instance, he had as many engine stalls as the rest of the squadron flyers combined. In the three flights prior to the accident, he maneuvered the F-14 with one or both engines stalled.

"I fight to win and I don't lose," he

told the investigators after the crash. Gramps applauds that attitude—up to the point it leads to abusin' the airplane. The pilot had a community-wide reputation for frequently flying up to and beyond the operating envelope of both the aircraft and the engines.

Why weren't the seniors in this outfit aware of the problem? Beats me. They shoulda been. And they shoulda done somethin' about it before the flat spin got their full attention. Naval Air Training and Operating Procedures Standardization says that after an engine stall (that bang he heard), the aircrew should: immediately unload to .5 to 1.0 G and retard the throttles to idle. Unloading the aircraft reduces the likelihood of departure while providing more normal engine inlet airflow. Makes sense to me.

The crew was not helped by a partly malfunctioning maneuvering flaps/slats problem, which increased the violence of the departure.

Nevertheless, fighting to win is OK, but fighting to win SAFELY is better—especially in a training environment.

Aviator Flag News

VAdm. Joseph W. Prueher was nominated for his fourth star to become the next Vice Chief of Naval Operations, replacing **Adm. Stanley R. Arthur** who is retiring. **RAdm. Norbert R. Ryan, Jr.**, has orders to become Commander Task Force 12/Patrol Wings, Pacific Fleet. **RAdm. William V. Cross II** will take over CARGRU-6. **RAdm. Philip S. Anselmo** took over the Naval Space Command relieving **RAdm. Lyle G. Bien** who transferred to assume CARGRU-7. **RAdm. Anselmo**, who is the deputy director for Space and Electronic Warfare (N6B) on the CNO staff, will head NAVSPACECOM in an additional duty capacity.

Six active aviators and one reserve out of a total of 24 were selected for Rear Admiral (upper half). The officers and their current assignments are: (Active) **Charles S. Abbot**—CARGRU-8; **Michael L. Bowman**—CARGRU-6; **Frank M. Dirren, Jr.**—CO Naval Base Jacksonville, Fla.; **Michael D. Haskins**—COMPATWINGLANT; **Robert M. Nutwell**—Dep. Dir. for Plans and Policy, J-5, U.S. European Command; **Jay B. Yakeley III**—CARGRU-3; and (Reserve) **Kenneth L. Fisher**—Dep. AIRLANT.

Five active Marine Corps aviator colonels were nominated by the President for promotion to Brigadier General: **Charles F. Bolden, Jr.**, **Randall L. West**, **Dennis T. Krupp**, **Michael A. Hough** and **Edward R. Langston, Jr.**

Expeditionary Medal Approved for Haiti Ops

The Chairman of the Joint Chiefs of Staff approved awarding of the Armed Forces Expeditionary Medal for personnel who served in or supported Operation Uphold Democracy in Haiti. The established opening date for receiving the award is 16 September 1994 and no closing date has been set. The award may be authorized for three categories of operations: military operations, operations in direct support of the United Nations, and operations of assistance for friendly foreign nations. Eligibility is limited to those forces who participated in, or directly supported, the activity within land, sea or airspace of the area of operations. Participants must have either encountered foreign armed opposition or otherwise been placed in such a position that hostile action could have been imminent.

F/A-18E/F Update

McDonnell Douglas completed structural assembly of the forward fuselage for the F/A-18E/F and will now paint and install the wiring and hydraulic tubing before joining it in May to the aircraft's center/rear fuselage. Northrop Grumman has just joined the major rear fuselage sections of the first aircraft at its El Segundo, Calif., plant. When completed, the aircraft's center/rear fuselage will be shipped to McDonnell Douglas for mating. Northrop Grumman is the principal subcontractor for production of the aircraft. The program is on schedule and within budget and plans call for purchase of 1,000 aircraft through 2015.

Corporate News

Rockwell International Corp. was awarded a nearly \$3-million contract for an Airborne Integrated Communications System (AICS) demonstrator for the United Kingdom Defense Research Agency, a part of the UK Ministry of Defense. AICS is a modular avionics package specifically designed for retrofit into rotary or fixed wing aircraft and provides a complete communications system covering high frequency through L-band with reductions in size, power and weight.

Northrop Grumman was awarded a \$122.5-million contract for long-lead procurement and production start-up for seven new E-2C *Hawkeye* Group II aircraft. Total value of the contract could be \$400 million. The aircraft will be built at the new plant in St. Augustine, Fla., and will be delivered in 1997 (four) and 1998 (three). Additionally, the company won a contract to develop a new mission computer for in-service and new production *Hawkeyes* to provide significantly improved memory and processing capabilities in a smaller and lighter unit that is easier to maintain.

McDonnell Douglas was awarded contracts totaling over \$514 million for F/A-18 *Hornet* support systems. Nearly \$171.8 million went to a U.S. contract for weapon systems support services and \$13.9 million was added to a previously awarded U.S. contract for the production of 36 F/A-18C aircraft weapon systems, associated data and associated integrated logistics support. \$328.8 million were added to a previously awarded Swiss

contract for the production procurement of two F/A-18C/D aircraft weapon systems, kits, associated supplies and data for the Swiss government under the Foreign Military Sales program.

Hewlett-Packard Co.

(HP) won the Navy Tactical Advanced Computer (TAC-4) program contract, which has an estimated value of up to \$672.6 million. HP's UNIX system-based computers will be used by the Navy to build shipboard and land-based systems comprised of commercial off-the-shelf components. These systems will be used on a range of naval vessels, including ships, submarines and aircraft, as well as in land-based laboratories for mission-critical applications, such as electronic intelligence, data collection and logistics planning. HP is teamed with subcontractors Science Applications International Corp. (SAIC), and Harris Corp. SAIC will provide systems-integration services, equipment ruggedization, portable computing technology and system-engineering services. Harris will provide imaging, security and networking.

Lucas Western, Inc., pled guilty to multiple counts of false tests and statements regarding work performed on the Navy and Marine Corps F/A-18 *Hornet* and the Army's Multiple Launch Rocket System and paid a fine of \$18.5 million. Navy studies show that the F/A-18 airframe-mounted accessory drive, manufactured by Lucas, lasted only half as long as the contractual requirement, resulting in a loss of over \$30 million.

Texas Instruments will provide 17 forward-looking infrared sensor sets for the HH-60H under a \$14.8-million contract for an improved night antisurface warfare capability. The equipment will be common with the AAS-44, which the company is building for integration into the LAMPS MK III SH-60B program.

Hughes Aircraft Co. will supply an advanced infrared night vision system to Bell Boeing for the Marine Corps V-22 *Osprey* under a \$4.8-million engineering and manufacturing development contract. The new infrared imaging system will combine production components from the company's AAQ-16B turreted forward-looking infrared sensor—employed on a variety of U.S. military helicopters—with a new 3- to 5-micron, mid-wavelength infrared staring focal plane array detector. The total system weighs about 93 pounds, including a 50-pound turret. The contract calls for five models to be delivered, starting in January 1996, with options for an additional 12.

Sikorsky Aircraft purchased a two-percent share of Russia's Mil Helicopters at a shareholder auction in December 1994. United Technologies Corp., parent company of Sikorsky, has several links with Russian companies.

Lockheed Sanders Defense Systems Division was awarded a \$12.5-million contract for equipment to support both organizational (flight line) and intermediate (in-shop) maintenance of electronic countermeasures systems for the F/A-18. Issued under the

Foreign Military Sales program, the order includes 13 AN/USM-406D countermeasure test sets for use by the U.S. Navy, Malaysia, Switzerland and Spain. Additionally, the Malaysia procurement includes one AN/USM-458C intermediate-level test set and one AN/USM-392B circuit card assembly test set as well as engineering and support services.

General Electric Co. won a \$481.7-million contract to manufacture 58 F/A-18 engines for the U.S. Navy, 75 for Switzerland, 57 for Finland and 18 for Malaysia.

Newport News Shipbuilding and Drydock Co., Newport News, Va., signed a contract worth about \$3 billion over its life to build the aircraft carrier *Ronald Reagan* (CVN 76).

A federal judge's decision involving the canceled A-12 *Avenger* favored the companies, **McDonnell Douglas Corp.** and **General Dynamics Corp.** The U.S. Court of Claims concluded that DoD should not have canceled the aircraft program "for default," meaning the manufacturer was to blame. \$1.6 billion are at stake in the lawsuit which stemmed from the cancellation in January 1991 because DoD said that the project was seriously overcost and behind schedule. The companies filed a lawsuit asking for payments to cover their losses. DoD has also filed a lawsuit against the companies seeking nearly \$1.4 billion that the government had already advanced at the time of the cancellation.

Kaman Corp. made an unsolicited proposal worth \$25 million to develop and install four Magic Lantern LIDAR-based, antiship-mine detection systems on MH-53E *Sea Dragons*. The company is already under contract to provide two of the systems for contingency deployment and they are scheduled for completion this summer. The first operational deployment of a Magic Lantern system was in 1991 during Operation Desert Storm where the system found mines in areas even after being "cleared" by other means. Magic Lantern uses a neodymium: yttrium-aluminum-garnet, double diode, blue-green laser to detect, classify and localize moored and floating antiship mines.

The Naval Air Systems Command awarded a \$24.9-million contract to **Raytheon Co.** for the initial development phase of the new Sidewinder missile, the AIM-9X. The contract is for an 18-month demonstration and validation program of new missile system technology. The company is in competition for a potential \$200-million contract for engineering, manufacturing and development of the new missile.

Blue Angels Taking Applications

The Navy Flight Demonstration Squadron is accepting applications for 3 demonstration pilots (2 Navy, 1 Marine), 1 Marine C-130 pilot, 1 maintenance officer, 1 administrative officer and 1 supply officer for the 1996 airshow season. Interested officers should submit applications no later than

30 April 1995. For more information, contact Maj. Ben Hancock at DSN 922-2583 or 904-452-2583 or write to NAVFLIGHTDEMCON, 390 San Carlos Rd., Suite A, Pensacola, FL 32508-5508.

Navy Ends Air Force F/A-18 Hornet Repair Experiment

The Navy ended an experimental contract with the Air Force to repair F/A-18 *Hornets* at the Ogden Air Logistics Center, Hill AFB, Utah, and transferred the work to NAS North Island, Calif. The repairs had been conducted in Utah for one year when, on 21 December 1994, the decision was made to terminate the contract.

VA Will Pay for Flight Training

Veterans can use the Veterans Educational Assistance Program, the Montgomery GI Bill and Reserve Montgomery GI Bill to pay for flight training. To be eligible, one must already have a private pilot's license and must meet medical requirements for a commercial pilot's license. The courses must be approved by the Federal Aviation Administration and the state approving agency.

Specific information may be obtained from the Dept. of Veterans Affairs at 1-800-827-1000, and educational benefit information can be found in OPNAVINST 1780.3 or by calling DSN 224-5934 or 703-614-5934.

Aircraft Mishaps

Two **F-14D Super Tomcats** from VF-31, NAS Miramar, Calif., collided over the Pacific 60 miles southwest of San Diego 13 January forcing all four crew members to eject from their aircraft. Navy, Marine and Coast Guard helicopters picked up the crewmen and delivered them to Balboa Naval Hospital.

A **T-34C Turbo-Mentor** from VT-10, NAS Pensacola, Fla., crashed 5 December 1994 into a coastal Alabama field killing the only crewman aboard, Lt. John Francis Brown of Provo, Utah.

An F/A-18C from *Abraham Lincoln* (CVN 72) crashed off the California coast during a training flight 29 January. The pilot was reported missing, but a search was under way.

International News

The first of eight Lockheed P-3C Update III *Orions* for the **Republic of Korea** navy entered the flight test phase following its first flight 12 December 1994. The aircraft is the first to be built on the new Marietta, Ga., production line after moving from Palmdale, Calif., where the last plane was completed in 1990. Delivery of the first aircraft to Korea is scheduled for March and the eighth and last is planned for November 1995. The new *Orion* features a new Texas Instruments surface search radar developed from the AN/

APS-137(V)1 fitted in the S-3B and advanced avionics based on the Unisys AN/ASQ-212 central processing computer.

Japan's Defense Agency request for funding for 74 aircraft in FY 1995 was cut to 68 by the Ministry of Finance. Only 9 of the 10 Kawasaki T-4 trainers requested will be funded; 8 SH-60Js will be reduced to 6; and only 2 of 4 AH-1Ss will be purchased. The first aircraft of six prototypes of Japan's new FS-X fighter was rolled out 12 December 1994 at Mitsubishi Heavy Industries' Komaki Minami Plant. The aircraft is based on the U.S. F-16C but has 25 percent more wing area for better turning performance, advanced materials to cut the weight, an improved electronics warfare suite and an improved General Electric F110-GE-129 engine. Ground tests have begun and the first flight is planned for this summer.

On 5 January, the UK Minister of Defence issued an invitation to tender for a contract, potentially worth \$1 billion, to refurbish or replace the fleet of 25 *Nimrod* MR.2 maritime patrol aircraft beginning in 2001. Top contenders are an updated version of the Lockheed P-3C, a BAe/Boeing upgrade of the existing *Nimrods*, Dassault's *Atlantique 2 Plus*, and Loral with refurbished ex-USN *Orions*. The contract is due to be awarded in summer 1996.

Brunei confirmed its intention to place an order for three IPTN-built CN-235 maritime patrol aircraft. The Air Wing of the Royal Brunei Armed Forces will operate the aircraft for offshore patrol.

The Irish Air Corps' two CASA-built CN-235-100MPA *Persuader* aircraft were formally handed over to the Irish Ministry of Defence in a ceremony at the Seville, Spain, factory. The mission for the aircraft will be maritime patrol and fishery protection.

France will buy four Northrop Grumman E-2C *Hawkeyes* to equip the nuclear-powered *Charles de Gaulle* aircraft carrier. Two aircraft are in the 1995 French defense budget and an order for an additional two will be concluded at an unspecified date. The new carrier will be operational in 1999.

To fill the gap until Euro-fighter 2000 arrives, the Spanish Defense Ministry is negotiating with the U.S. for 21 early production ex-Navy F/A-18 *Hornets*. A Spanish company will provide structural upgrading after delivery, if the deal is approved.

New Carrier Names Approved

The President approved the names *Harry S. Truman* (CVN 75) and *Ronald Reagan* (CVN 76), which the Secretary of the Navy requested. Both will be *Nimitz*-class nuclear-powered aircraft carriers with an operating life span of nearly 50 years. CVN-75 will be christened in September 1996 and commissioned in July 1998, while CVN-76 is scheduled for christening in March 2000 and commissioning in December 2002. Both ships will be constructed at the Newport News Shipbuilding and Drydock Co., Newport News, Va.



Lt. Susan Still of VF-101 was one of the recent selectees for the Space Shuttle Program.

Navy Astronauts Selected

NASA selected eight Navy and Marine Corps active duty officers and one reserve officer as space shuttle pilots and mission specialists for the 1995 astronaut class. A total of 13 military officers and six civilians were chosen. The group will report to NASA's Johnson Space Center, Houston, Texas, in March 1995 for a one-year training period as astronaut candidates. The active duty personnel, with their astronaut positions and current assignments, are: LCdr. Scott Altman, pilot, VF-31; Cdr. Jeffrey Ashby, pilot, VFA-94; Cdr. Robert Curbeam, mission specialist, Naval Academy; LCdr. Joe Edwards, pilot, JCS; Cdr. Dominic Gorle, pilot, VFA-106; Maj. Carlos Noriega, mission specialist, 1st MAW; Lt. Susan Still, pilot, VF-101; and Capt. Fredrick Struckow, pilot, Naval Air Warfare Center Aircraft Division. The one reserve officer is LCdr. Kathryn Hire, mission specialist, VP-62, an engineering supervisor for Lockheed Space Operations Co.

AWSTS Established

The Airborne Mine Countermeasures Weapon Systems Training School (AWSTS) was established 1 October 1994 at NAS Norfolk, Va., to provide airborne mine countermeasures (AMCM) training to students after they have received their MH-53E training. With the disestablishment of HM-12, the AMCM fleet readiness squadron, Navy student pilots and aircrewmembers will receive initial MH-53E systems and flight training at HMT-302, Tustin, Calif., and then receive follow-on mission training at AWSTS. Pilots will receive 266 hours of ground and simulated tactical instruction training and aircrewmembers will receive 376 hours. AWSTS reports to Commander, Helicopter Tactical Wing, U.S. Atlantic Fleet.

JSOW Test Successful

The first free flight of an AGM-154A Joint Stand-Off Weapon (JSOW) was conducted at the China Lake, Calif., test range. The Texas Instruments-built weapon flew over 13 miles after being launched from an F/A-18C at an altitude of 5,000 feet MSL. The test verified safe separation under active autopilot, dynamic wing deployment and also the flight termination system.

AMCM Squadrons Merge

In November 1994, HM-19 officially disestablished and transferred all officers and crew to HM-15 to become the reserve

element of that command. This was part of the restructuring of the airborne mine countermeasures (AMCM) community directed by CNO. Previously, the community consisted of a fleet readiness squadron (HM-12), two active duty squadrons (HMs 14 and 15) and two reserve squadrons (HMs 18 and 19). The CNO plan called for the disestablishment of HMs 12, 18 and 19, with the reserves integrating into the existing active duty squadrons, a new and untested concept. Alameda, Calif.-based HM-15 is unique. It is a regular Navy squadron that will be commanded by active duty and reserve commanders in rotation. The executive officer shares his responsibilities with a reserve element commander and reserve element officer in charge. HM-15 is organized into detachments. Blue Det is made up of 380 regular Navy officers and sailors. Their job is to maintain and operate six MH-53E *Sea Dragons* in the AMCM mission and to be able to deploy anywhere in the world on 72 hours notice. The Gold Det is made up of 321 reserve officers and sailors, who also operate and maintain six MH-53Es; two of these aircraft and approximately 85 TARs (training and administration of reserves) must be prepared to deploy on short notice with Blue Det. The remaining personnel and four aircraft will be utilized for shore-based training of reservists and fleet replacement crews. The new HM-15 is the largest deployable aviation squadron in the Navy.

JPATS Update

Selection of the winning contractor for the Joint Primary Aircraft Training System was

delayed six months, and the length of the buy was stretched eight years to cut short-term costs. The new purchase program will last 20 years instead of 12, and the number of purchases in each of the early years will be decreased from 10 to 3. The first delivery of Air Force planes will be 1998, and the Navy will buy its first in about 2000. The new contract announcement is planned for August 1995.

V-22 Wins Approval

The Secretary of Defense announced in December 1994 a commitment to the production of the V-22 *Osprey* for the Marine Corps and special operations forces' medium-lift requirement. The decision allows the V-22 program to continue toward fielding the aircraft by 1999. Four special operations aircraft (CV-22s) will be procured from the FYs 2000 and 2001 out-year budgets and 33 Marine aircraft (MV-22s) are planned from the FY-1996 to FY-2001 budgets. A total of 33 special operations versions are planned.

Additionally, the Naval Air Systems Command awarded the Bell Boeing tilt-rotor team a contract, not to exceed \$4.9 million, to study definitions of a configuration and supporting logistics system for the CV-22 variant of the baseline MV-22. The eight-month study will develop CV-22 configurations, including cost, schedules, risk, design and engineering data, and a recommendation of required changes to the MV-22 for production of the CV-22.

The *Osprey* cockpit passed its Critical Design Review in November 1994 at Boeing Helicopters' facility in Ridley Park, Pa.

T45TS Approved for Full-Rate Production

The T-45A *Goshawk* received approval to enter full-rate production following a comprehensive review of the naval undergraduate jet pilot training system. The T-45A and its associated training system elements completed a successful DoD Milestone III review 17 January. The approval means that prime contractor McDonnell Douglas will continue to produce 12 T-45As per year for a total buy of 174 aircraft completed through 2003.

EA-6Bs to Fill Air Force Role

The Air Force EF-111 aircraft will be canceled and the electronic jamming mission filled partially by Navy EA-6B *Prowlers*, according to a decision made by DoD in December

1994. Specifics of the plan are still in the works.

Some ACIP Requirements Are Waiverable

The Secretary of the Navy granted BUPERS authority to approve waivers for disassociated sea tours to count toward required flight gates for Aviation Career Incentive Pay (ACIP). Waivers must be submitted to the Bureau of Naval Personnel (PERS-43C).

Sailors May Wear Marine Aircrew Insignia

An upcoming change to Navy uniform regulations will allow sailors who are crew members of Marine aircraft involved in combat flights to wear the Marine Corps combat aircrew insignia on their Navy uniforms. The qualifying flight must have been clearly defined

as a combat mission whether or not combat conditions were actually encountered. The device is worn in the same place as other breast insignia.

Last Corsair IIs Retire

Twenty-eight years of Navy A-7 *Corsair II* flight operations ended in November 1994 when the last two operational aircraft departed Naval Air Warfare Center Weapons Division, Point Mugu, Calif., for their last trip. The aircraft made a stop at NAS Lemoore, Calif., then headed for the Aerospace Maintenance and Regeneration Center at Davis-Monthan AFB, Ariz., for long-term storage and possible future sale to another country. There were over 1,000 Navy *Corsair IIs* built from 1964 to 1982, and the aircraft saw combat action in attack and electronic countermeasures missions in Vietnam, Grenada, Lebanon and Operation Desert Storm.

Cdr. Robert Noziglia, OIC, Weapons Test Squadron, Point Mugu, with Lt. Mike Norman, waves goodbye in an EA-7L *Corsair II* during the last *Corsair* high-speed fly-by.

Vance Vasquez



NAS Whidbey Island

A Tradition

of Excellence

By Lt. Hunter Newton

Background

Since its beginnings in 1942, Naval Air Station (NAS), Whidbey Island, Wash., has represented the finest qualities of Naval Aviation with top-notch fleet support. Construction began on a seaplane rearming base to be used in defense of Puget Sound, as ordered by the Bureau of Aeronautics and the Chief of Naval Operations. Fifty-three years later, NAS Whidbey Island stands as the winner of the 1994 Commander-in-Chief Installation Excellence Award and the center of Naval Aviation in the Pacific Northwest.

NAS Whidbey Island is actually composed of two bases five miles apart: the Seaplane Base on the eastern shore of Whidbey Island and Ault Field on the island's western shore. In addition, the naval air station operates Outlying Field, Coupeville, also on Whidbey Island;

Boardman Bombing Range in Boardman, Oreg., and Radar Bomb Scoring Unit, Spokane, Wash. Whidbey personnel are dedicated to providing the finest facilities, services and materials to its aviation community. To this end, 8,900 military personnel and over 2,000 civilians act as shareholders in our country's interests, keeping Naval Aviation strong at sea.

Whidbey Island is the home of all Navy electronic warfare squadrons flying the EA-6B *Prowler*, a carrier-based tactical jamming aircraft. It is the West Coast training and operations center for the A-6E *Intruder* all-weather, medium-attack bomber squadrons. In late 1993, P-3C *Orion* maritime patrol aircraft came aboard and were joined in 1994 by EP-3E fleet air reconnaissance aircraft. The naval air station also maintains a Search and Rescue Unit,

PH2 Von Seggern



The main gate of Ault Field in the 1950s



NAS Whidbey Island as it looks today.

The EA-6B Prowler electronic warfare aircraft is right at home dominating the skies of the Pacific Northwest.



which flies UH-3H *Sea King* helicopters, as well as UC-12B *Huron* aircraft for fleet logistics support. In all, there are 19 active duty squadrons currently based on Whidbey Island.

Reservists from around the Northwest and beyond travel to NAS Whidbey for training. The base is the center of activity for Naval Air Reserves in the region. One reserve patrol squadron flying P-3Cs and a fleet logistics support squadron with C-9Bs are also located at Whidbey,

There are more than 20 tenant commands aboard NAS Whidbey, which provide training, medical, dental and other support services, including a Marine Aviation Training Support Group for the Marines based there.

The Early Years

The Commandant of the 13th Naval District had orders to locate a site suitable for seaplane takeoffs and landings under instrument conditions and which



was capable of expansion into a large landplane/seaplane operating station. Facilities were needed for landing equipment, fuel, ammunition and bomb storage and personnel accommodations.

An area on northern Whidbey Island along Saratoga Passage was selected as a suitable site for the seaplane

Naval Air Station/Facility Series

rearming base, and the acquisition of Crescent Harbor was recommended. An area five miles north of the Seaplane Base was found to be ideal for the landing field. Level, well drained and accessible from any approach, Clover Valley was believed to be the best natural site for a landing field in the Puget Sound area.

On 21 September 1942, Commanding Officer Captain Cyril Thomas Simard read the orders and the watch was set. U.S. Naval Air Station, Whidbey Island, was duly established. A year later, on 25 September 1943, the landplane field was named Ault Field, in memory of Commander William B. Ault, missing in action in the Battle of the Coral Sea.

First Aircraft Arrive

The first aircraft to arrive at the Seaplane Base was a PBY *Catalina* piloted by Lieutenant J. A. Morrison in December 1942. Morrison landed about five miles out because there were too many logs in the harbor. A log boat pulled large logs out of the PBY's way as it became the first seaplane to taxi to the ramp.

The first plane to land on the runway, which was to become Ault Field, was piloted by Lieutenant Newton Wakefield with a London fire chief as his passenger. In spite of crosswinds and ditches on both sides of the still incomplete runway, the landing was perfect. The date was 28 August 1942, and the nation was at war.



A P5M Marlin of VP-47 at the Seaplane Base.

Making Do

Patriotic fervor ran high in the early 1940s. The need to train America's fighting force in a hurry was nowhere more evident than on Whidbey Island. The sudden influx of 5,000 people on the tiny community of Oak Harbor created a housing crunch. Many residents offered room and board for personnel far from home as planning for trailers, dormitories and family housing swiftly moved ahead.

No mess hall was included in the plans for the air station as some considered the base to be "on the other side of Lake Washington." Meals were to be taken at NAS Seattle, Wash. After it was pointed out that this was a 130-



October 1943. F6F Hellcats dominate the ramp at NAS Whidbey Island. Also pictured are PBY Catalinas, a PV-1, an R5O and an SNJ.



The P-3C Orion maritime patrol plane joined NAS Whidbey Island's aircraft inventory in 1993.

mile trip, the Seaplane Base got its mess hall.

The War Years

The earliest squadrons of aircraft at Ault Field flew F4F *Wildcats*, which came aboard in 1942. Later that year, PV-1 *Venturas* arrived for training. By the end of 1943, the F4Fs were gone, replaced by the F6F *Hellcat*. In 1944, SBD *Dauntless* dive-bombers became the predominant aircraft at Ault Field. Some B-26s arrived early that year to be used in towing targets. At the Seaplane Base, several PBM *Mariners* were aboard in the summer of 1944.



Wartime training on Whidbey Island went on at a furious tempo. Patrol planes flew long-range navigation training missions over the North Pacific. Fighters and bombers made bomb, rocket and machine gun attacks on targets in the Strait of San de Fuca. Recruits, petty officers and officers went to training schools. A torpedo overhaul facility, set up in 1942, refurbished six torpedos per day, increasing its production to 25 per day by 1945.

Postwar

During the years following WW II, the Navy was choosing its permanent postwar bases. Many closed because they couldn't meet the requirements of the new Air Navy; 6,000-foot runways were now the minimum standard. Approach paths had to be suitable for radar-con-

trolled approaches in any weather. In 1949, the Navy decided that NAS Seattle, the prewar major naval installation in the Northwest, was suitable to train reserve forces and support a moderate number of aircraft but could not be expanded as a major fleet support station.

As a result, NAS Whidbey Island was chosen as the only station north of San Francisco, Calif., and west of Chicago, Ill., for this fleet support role. Circumstances had combined to give Whidbey a future as secure as that of Naval Aviation itself. By 1952, Whidbey was buzzing with growth. The P2V *Neptune*, which arrived in the late 1940s, would eventually make up six patrol squadrons (VP) here. VP-50 moved up from Alameda, Calif., in June 1956, returning seaplanes to NAS Whidbey. Flying the P5M-2 *Marlin*, patrol squadrons dominated the base until the 1960s. VP-1, the last patrol squadron of that era, left Whidbey in March 1970 for Barbers Point, Hawaii.

The sixties saw the beginning of attack aircraft dominating the tarmac at Ault Field. By May 1961, there were six squadrons of A3D *Skywarrior* heavy-attack aircraft on board Whidbey, where the "Whales" comprised the core of attack aviation.

Present-Day Aircraft

The A-6 *Intruder*, arriving at NAS Whidbey in 1967, has been the mainstay of the Navy's attack role for over 25 years. The A-6 can still be seen at Whidbey Island, but the venerable aircraft is scheduled for retirement by mid-1997.

Since 1971, the EA-6B *Prowler* electronic countermeasures aircraft has been vital to our nation's defense—and to NAS Whidbey Island, which is home to all of the Navy's *Prowler* squadrons.

The return of patrol squadrons, flying the P-3C, to Whidbey Island in 1993 marked another shift of aircraft roles at the air station. The *Orion* is the Navy's workhorse for maritime patrol and long-



NAS Whidbey Island's Search and Rescue (SAR) Unit participated in 71 SAR and medevac missions in 1994.



A-6 Intruders, like these of VA-128, are familiar sights over NAS Whidbey Island.

Naval Air Station/Facility Series

range antisubmarine warfare. Fleet Air Reconnaissance Squadron 1's arrival in December 1994 added the EP-3E to Whidbey's aircraft inventory.

Mission Compatible with the Environment

NAS Whidbey Island has long been a leader in environmental, recycling and natural resource programs. In addition to the Installation Excellence Award flag, Whidbey flies two Department of Defense Natural Resource Award flags. Whidbey also won a Keep America Beautiful Award for military installations in 1994.

NAS Whidbey has two areas on the National Priorities List (NPL) for environmental cleanup funding. One of those areas has been cleaned up and this year NAS Whidbey will be among the first military installations requesting delisting of a site from the NPL.

Bald eagles, peregrine falcons, harrier hawks and blue herons all nest on board the air station, and NAS Whidbey is one of five places in the state of Washington where the endangered Golden Indian Paintbrush grows.

Close attention to procurement, storage, use and disposal of hazardous materials has resulted in more than an 80-percent reduction in hazardous waste aboard the air station in the past three years.

Whidbey personnel are proud of their record, which stands as proof that the mission of Naval Aviation is compatible with the environment.

A Tradition of Excellence

NAS Whidbey Island stands as a model for the Navy with its award-winning recycling programs, quality of life for families and single sailors, environmental

restoration and protection, training and fleet support. It is no wonder that orders to the air station are highly coveted; Team Whidbey's spirit of excellence touches everyone—on the job, in the fleet and in the community.

An important chapter in naval history began when the flag was raised at NAS Whidbey Island's establishment ceremony in 1942. The men and women assigned aboard are dedicated to keeping the tradition of excellence alive at the most vital naval air station in the Pacific Northwest and, we at Whidbey think, the finest in the world. ■

Lt. Newton is assigned to NAS Whidbey Island Public Affairs.

This article continues our Naval Air Station/Facility Series. Public Affairs Officers are encouraged to contact the Editor for scheduling. NAS Sigonella, Italy, will appear next.

NAS Whidbey Island Tenant and Support Activities

Tenant Activities (DoD)

Attack Squadrons 52, 95, 165 and 196
Attack Fleet Readiness Squadron 128
Commander Attack Wing, U.S. Pacific Fleet
Commander Electronic Combat Wing, U.S. Pacific Fleet
Commander Patrol Wing 10
Construction Battalion Unit 417
Counseling and Assistance Center
Explosive Ordnance Disposal Mobile Unit 11
Explosive Ordnance Disposal Mobile Unit 17
Fleet Air Reconnaissance Squadron 1
Fleet Aviation Specialized Operational Training Group Pacific, Detachment Whidbey Island
Fleet Imaging Center Pacific, Seattle
Fleet Logistics Support Squadron 61 (reserve)
Marine Aviation Training Support Group
Medium Attack Weapons School, Pacific
Naval Air Maintenance Training Group Detachment, Whidbey Island
Naval Air Reserve, Whidbey Island
Naval Aviation Engineering Support Unit
Naval Communication Detachment, Whidbey Island
Naval Facility, Whidbey Island
Naval Hospital, Oak Harbor
Naval Legal Service Office Detachment
Naval Pacific Meteorology and Oceanographic Detachment, Whidbey Island

Naval Training Systems Center, A-6E/EA-6B Training Systems Support Activity
Naval Weapons Strike Facility, Boardman, OR
Navy Calibration Laboratory
Navy Publishing and Printing Service Detachment Office
Outlying Field, Coupeville, WA
Patrol Squadrons 40 and 46
Patrol Squadron 69 (reserve)
Personnel Support Activity Detachment, Whidbey Island
Radar Bomb Scoring Unit, Spokane, WA
Tactical Electronic Warfare Squadrons 130, 131, 132, 134, 135, 138, 139, 140 and 141
Tactical Electronic Warfare Fleet Readiness Squadron 129
Whidbey Island Navy Flying Club

Grumman Aircraft Corporation
Maytag Aircraft Service Corp.
McDonald's Restaurant

Serv-Air, Inc.
Skagit Valley College
U.S. Post Office

NAS Whidbey Island

CO: Capt. John F. Schork
Departments

Commanding Officer
Executive Officer
Administration Department
Aircraft Intermediate Maintenance Department
Air Operations
Chaplain
Comptroller Department
Command Career Counselor
Command Master Chief
Drug and Alcohol Program Advisor
Educational Services Officer
Environmental Affairs
Equal Employment Opportunity
Human Resources Office
Legal Officer
Naval Strike Warfare Facility, Boardman, OR
Navy Campus Education Center
Occupational Safety and Health
Public Affairs Officer
Public Works Department
Quarterdeck/Officer of the Day
Radar Bomb Scoring Unit, Spokane, WA
Security Department
Supply Department
Weapons Department

Phone Numbers

CMC: AWCM(AW) William Nance
DSN 820-xxxx

(360) 257-2345
257-2122
257-2634
257-1571
257-2120
257-2414
257-2744
257-8800
257-2012
257-3326
257-2336
257-1009
257-3366
257-8756
257-2126
(503) 481-2565
257-1270
257-2426
257-2286
257-3348
257-2631
(509) 327-2669
257-3122
257-2441
257-2402

Tenant Activities (Non-DoD)

American Federation of Government Employees
American Red Cross
Beech Aerospace Industries
Brown & Root Service Corp.
Chapman University
Embry-Riddle Aeronautical University

New Horizons for Unmanned Reconnaissance Aircraft

By Ray Coleman

The scene could be anywhere. Naval Aviators gather at day's end. Frequently, the talk turns to, "What did you do during Desert Storm?"

For a select few Navy and Marine Corps veterans, the response could be, "I flew unarmed reconnaissance aircraft in Iraq and Kuwait."

"Yeah? See much action?"

"Some. I was shot down twice and crashed three aircraft."

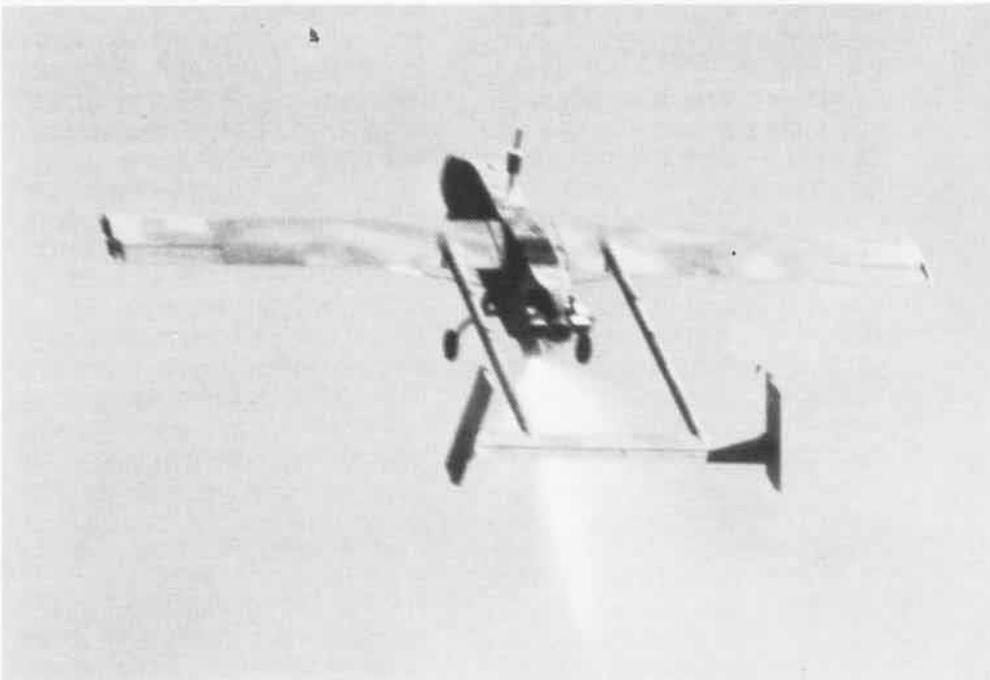
That little story, and variations of it, has led to many an evening's lively entertainment for those who wear the Wings of Gold.

And, if it never comes to light that the brave aviator was flying his "unarmed reconnaissance aircraft"—in reality, an unmanned aerial vehicle (UAV)—while sitting warm and safe in a ground control station far from the scene of action, why spoil a good war story?

Judging by present plans and recent history, more and more aviators will be able to recount such stories after future wars. If Desert Storm proved anything, it is that there is room in the sky for airplanes with no crew on board. In fact, one day soon all of the Navy's aircraft carriers and large-deck amphibious warfare ships might have the capability to operate unmanned aircraft.

The origin of the UAV dates back to the Vietnam era, during which a type of unmanned vehicle, called RPV for remotely piloted vehicle, was in use. However, the radio-controlled RPV was limited in the distance from base it could fly because of its dependence on line-of-sight communication, and that RPV program was abandoned soon after the end of the Vietnam War.

The Navy began actively exploring the use of unmanned aircraft again during the early 1980s. Operations in Grenada, Lebanon and Libya identified a need for an on-call, inexpensive, unmanned, over-the-horizon targeting, reconnaissance and bomb damage-



PH2 J. Carnes

assessment capability for local commanders. In July 1985, then-Secretary of the Navy John Lehman directed the expeditious acquisitions of remotely piloted systems for fleet operations using current technology.

Two *Pioneer* systems were procured by the Navy from an Israeli defense contractor to be used in an accelerated testing program in 1986. This effort culminated in installation and deployment of the *Pioneer* aboard *Iowa* (BB 61) in December. In September 1987, routine deployments of the *Pioneer* system on board battleships commenced.

During 1987, three systems were delivered to the Marine Corps, and within the next seven months they deployed to Morocco in support of an allied amphibious assault training operation—as well as to the Marine Corps base at Camp Pendleton, Calif., for training exercises. In 1990, a system was delivered to the U.S. Army.

The *Pioneer's* operational history

Desert Storm saw extensive use of *Pioneers* for observation and reconnaissance. VC-6 had detachments aboard *Missouri* (BB 63) and *Wisconsin* (BB 64).

includes its unprecedented success during Operations Desert Shield and Desert Storm. U.S. Army, Navy and Marine Corps commanders lauded its operational effectiveness as six operational units from three services flew over 300 missions. Only one air vehicle was shot down; three others were hit by ground fire during combat missions but were safely recovered.

Some of those combat missions included operating from the battleships *Wisconsin* (BB 64) and *Missouri* (BB 63) during Desert Storm, providing naval gunfire spotting, targeting, and pre- and post-strike battle damage assessment.

It was the *Pioneer* that recorded the memorable Desert Storm scene in which Iraqi soldiers abandoned their fighting positions and surrendered to the UAV. Apparently, the Iraqis soon learned that

bad things surely follow the distinctive noise made by the *Pioneer's* 25-hp, motorcycle-engine power plant. The *Pioneer* was praised as "the single most valuable intelligence collector" by Lieutenant General Walt Boomer, Marine Corps Central Command Element Headquarters, and "unequivocally outstanding" by the 1st Marine Expeditionary Force.

The mission of the UAV is similar to that of manned reconnaissance aircraft: to provide information about potential enemy forces, where they are, what their disposition is and what sort of threat they represent. The information, or imagery, comes from the UAV's payload, which—instead of bombs, guns or rockets—is a day-or-night electro-optical sensor, including infrared synthetic aperture radar and a couple dozen other "packages," are in various stages of development. Responsibility for developing UAVs for all armed services resides with the Program Executive Office, Cruise Missiles and Joint Unmanned Aerial Vehicles, which reports to the Assistant Secretary of the Navy for Research, De-

velopment and Acquisition.

The emphasis on unmanned systems, both lethal and nonlethal, in the case of the UAV is that it lowers the risk to aircrews. Unmanned systems may also be cheaper to build and operate than some manned aircraft. But, mainly, the UAV can be sent into heavily defended target areas that are too risky for manned aircraft. This capability almost certainly will cut down on death, injury or capture of aircrews. Unmanned aircraft may also be better suited for long-range missions, such as those lasting 24 to 48 hours. Additionally, UAVs are envisioned as being used to sample the air for chemical, biological or nuclear agents in a potentially contaminated area.

The only operational UAV in service today is the *Pioneer*, which has seen action not only in Desert Storm but in several post-Desert Storm contingencies in Africa and the Adriatic area. The *Pioneer* was scheduled to go out of service by 1995. However, follow-on UAVs designed to replace and improve on the *Pioneer* have not yet come on-line, and the *Pioneer* has been extended

on active duty until around the year 2000. It is primarily a land-based vehicle which the Navy adapted for shipboard use.

The *Pioneer* is 14 feet long, has a 17-foot wingspan, weighs 450 pounds fully fueled and can carry a 75-pound payload. It can fly out to a distance of about 100 miles, remains aloft for almost five hours and can reach a speed of about 110 miles per hour at altitudes up to 15,000 feet. It can be launched a number of ways, including rocket-assisted takeoff; from a truck-mounted, pneumatic-powered rail launcher; or just by rolling down a runway. This flexibility makes its combat mobility virtually limitless.

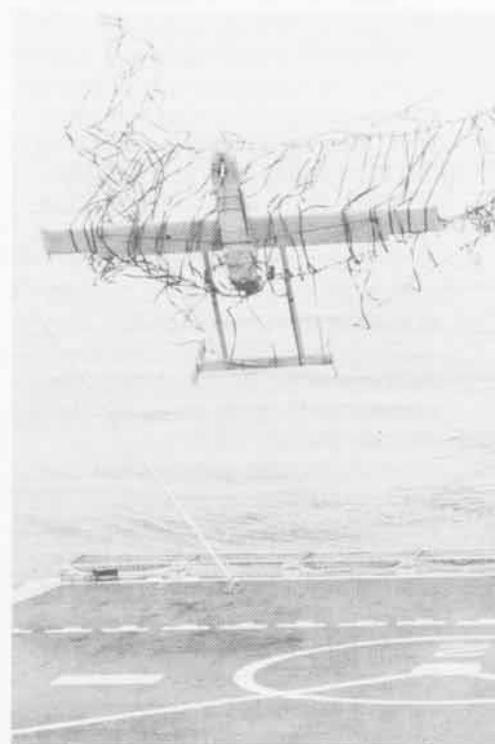
With battleships out of naval service, the *Pioneer* showed its versatility by adapting to life aboard amphibious ships beginning with *New Orleans* (LPH 11). The Navy plans to outfit six amphibious assault ships to handle the *Pioneer*, two of which, *Denver* (LPD 9) and *Shreveport* (LPD 12), already have completed deployments to Africa and the Adriatic area in support of U.S. and United Nations operations. The *Pioneer* is currently fielded with two ship-deployable U.S. Navy detachments, three U.S. Marine Corps UAV companies and the U.S. Army's C Company, 304th Military In-



The *Pioneer* is currently the only UAV in operation. Its small size and low cost make it invaluable for a wide range of reconnaissance missions.



This kind of pneumatic-powered, rail-launching truck was used exclusively by Marine UAV companies during Operation Desert Storm.



An ungainly "net trap" aboard *Shreveport* (LPD 12) signals the return of the *Pioneer* from another mission.

telligence Brigade, Fort Huachuca, Ariz.

Since Desert Storm, the *Pioneer* also has been deployed to Korea and supported various training exercises at White Sands Missile Range, N.M., the National Training Center at Fort Irwin, Calif., and provided pre- and post-strike imagery for exercises in California, Arizona and Fort Polk, La.

One of the *Pioneer's* most spectacular efforts was in support of precision strike operations involving the Tomahawk cruise missile. A *Pioneer* that orbited over a target on San Clemente Island, Calif., and relayed near-real-time imagery before, during and after the arrival of an armed Tomahawk, clearly showed the value of real-time intelligence to locate and identify targets and report the results of the strike within seconds.

While the *Pioneer* is fulfilling the role of an unmanned reconnaissance aircraft with considerable success, modern technology is pressing on to develop newer and better UAVs. Waiting in the wings to replace the *Pioneer* is the Joint Tactical UAV (JT-UAV). The Joint Tactical System is a larger, more capable UAV system to be deployed by three services, including a ship-based version for the Navy. The JT-UAV is built around the *Hunter* air vehicle, an aircraft roughly the size of a small Cessna. The *Hunter* has a 29-foot wing span, weighs 1,643 pounds at launch and flies 8-12 hours. The ship-based *Hunter* was tested aboard the amphibious assault ship *Essex* (LHD 2) in December 1993, recording more than 30 takeoffs and landings. During the test, the *Hunter* also transmitted live television imagery back to *Essex* for retransmission to other intelligence nodes.

There also is a land-based variant of the JT-UAV, which is in low rate initial production by the contractor team of TRW, Inc., and Israel Aircraft Industries International, Inc. Seven systems are on order, one of which is in acceptance testing at Fort Huachuca.

Another type of UAV, currently in the experimental phase, is the *Pointer*, a low-cost, low-weight UAV which can be transported in a soldier's backpack, assembled in minutes and launched by hand. The *Pointer* has a limited range of only about five miles, but since it starts transmitting live television signals as soon as it is airborne, it's ideal for peeking around hills or obstructions and

effectively "reconning" the area ahead of an advancing force.

Other types of UAV systems that have been tested include a medium-range reconnaissance scout that can achieve .80 Mach, and a vertical/short takeoff and landing-capable UAV which uses tilt-rotor wing technology similar to the V-22 *Osprey*.

Another UAV with potential Navy application is the *Predator*, a medium-altitude UAV now in Advanced Concept Technical Demonstration. The *Predator* probably won't take off from or land on Navy ships, but because of its longer range of 500-plus miles and its flying time which could reach 50 to 60 hours, it could be "handed off" to naval forces for mission control and imagery exploitation. The *Predator* is undergoing trials at Fort Huachuca.

It should be noted that the term "UAV system" describes some number of aircraft, usually eight, and all the other nonflying components, such as mission planning and ground control stations, launch and recovery gear, data links, payloads, data relay terminals, generators and the associated ground transport equipment, such as trucks and trailers.

When a UAV goes to sea, only the vehicles, payloads, airborne data relay and maintenance equipment will have to be on-loaded. Other parts of the system, such as the ground control station, mission planning station, ground data terminal and launch and recovery equipment, will already be

permanently fixed to the ship.

Among the amphibious assault ships, LHAs will be the first equipped with permanent JT-UAV equipment. One reason for this is that LHAs carry motor gasoline (MOGAS), and the *Hunter* will operate on MOGAS until a heavy fuel engine comes on-line. The Naval Sea Systems Command's (NAVSEA) assessment was that the LHA is easier to integrate than the LHD, the LHA ship configuration is well defined, and the scheduled yard or tender availability periods for the LHA are more accommodating.

Altogether, there will be 18 "equivalent" systems of the JT-UAV procured for the Navy. If the JT-UAV comes with eight aircraft, for example, it might not be desirable or feasible to embark all eight aircraft for a deployment. Extra aircraft could be left behind for other ship sets, providing flexibility and better use of available assets.

Plans are pending for aircraft carrier installation but probably won't proceed until after the LHA and LHD efforts are completed or under way. With the dedicated collaboration between NAVSEA and the contractor, the JT-UAV retrofit is expected to have minimal impact on aircraft carriers and their crews.

The unmanned aerial vehicle adds a unique and exciting element to the future of Naval Aviation. ■

Mr. Coleman is the Public Affairs Officer for UAVs in the Program Executive Office, Cruise Missiles and Joint Unmanned Aerial Vehicles under the Assistant Secretary of the Navy for Research, Development and Acquisition.

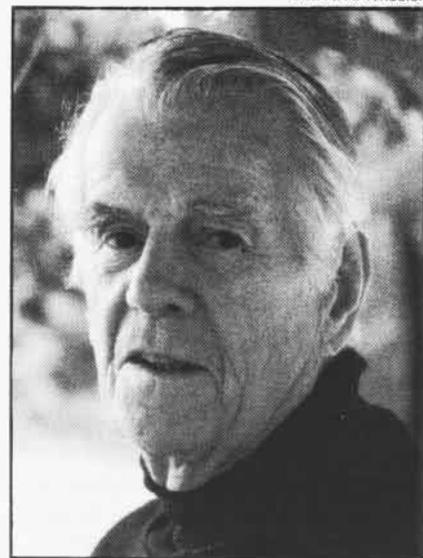


Rocket assisted launchers such as this one aboard Denver (LPD 9) allow *Pioneers* to launch from virtually anywhere.



Grampaw Pettibone Artist Dies

Cdr. H. A. Wheeler



Bob Osborn in 1985.

January 1943 issue of the *BUAER News Letter* (our predecessor)—Grampaw Pettibone and *Naval Aviation News* have become synonymous.

Bob shared the character's creation with Commander Seth Warner, with whom he worked in the Bureau of Aeronautics' Training Division during WW II. Through his artwork, Bob brought to life a character they envisioned as a cantankerous old Naval Aviator railing against present-day flyers whose unsafe actions cause aircraft accidents. Osborn also created more than 2,000 of the famed "Dilbert the Pilot" and "Spoiler the Mechanic" safety posters, which were liberally displayed in hangars and aboard ships. In addition, his "Sense" pamphlets taught common sense safety rules on topics such as "Carrier Sense."

Osborn thought of himself primarily as a "drawer" and an artist with moral convictions. For more than 50 years, his sardonic and sometimes savage drawings in books and magazines engaged readers with their images of bloated power, violence and death. At the same time, he could be wittily ironic about society's pretensions—spoofing subjects like psychiatry, suburbanites and social climbing. He drew for *Harper's*, *Fortune*, *Life* and *Look*, to name a few, and became a regular contributor to *The New Republic*. He wrote and illustrated many books—including his 1982 autobiography, *Osborn on Osborn*—and, in a lighter vein, wrote a trilogy of books about catching trout, and shooting quail and ducks. His work is in the collections of the Beinecke Library at Yale, Library of Congress and Smithsonian Institution.

Robert C. Osborn, well-known caricaturist, cartoonist and satiric commentator, died of bone cancer at his home in Salisbury, Conn., on 20 December 1994. He was 90.

Known in Navy circles as the original illustrator of "Grampaw Pettibone," Osborn retired from drawing the Gramps column in the May–June 1994 issue of *Naval Aviation News*. Our tribute to Osborn appeared in July–August 1994—along with his "Swan Song" farewell drawing (above). Captain Ted Wilbur, USNR (Ret.), took over as illustrator of the Gramps column in the September–October issue. The magazine had celebrated Osborn's "50 Years of Gramps," in its January–February 1993 edition. Since the "sage of safety" cartoon first appeared—in the 15

Through the years, Osborn continued to publish his cartoons in *Naval Aviation News*. The Navy occupied a special place in his heart—and the feeling was mutual. In 1958, he received the Navy Distinguished Public Service Award, and in 1977 he was designated Honorary Naval Aviator No. 14, an honor he cherished. A 1989 exhibition of his artwork in the Navy Museum, part of the Naval Historical Center in Washington, D.C., heralded his lifelong contributions to Naval Aviation.

Since 1947, Osborn lived in Salisbury with his wife, Elodie, who died in January 1994. He is survived by sons Nic and Eliot of Taconic, Conn., and two granddaughters.

Bob Osborn's legacy to Naval Aviation rests with naval flyers. His drawings and Gramps' pithy remarks remain in the hearts and minds of aviators, who extol countless times when the old-timer's safety messages saved them from flight accidents.

Bob was an extraordinary person and a treasured friend of *Naval Aviation News*. We share the great loss with his family and friends. ■

The Technical Directive Nightmare

By AZCS(AW) Keith Stern and AKC Andrew Galligan

Is your aircraft, support equipment or test bench configured correctly? Have you ever been hit on an advisory inspection for your Technical Directive (TD) program? If a visit by a maintenance officer, maintenance material control officer or maintenance/production control chief makes you squirm, you're not alone. Numerous commands have trouble tracking TDs, which state required inspection or modification to an aircraft or piece of equipment.

What's the problem? Let's take avionics changes, for instance. Your Quality Assurance/Technical Library receives the TD and checks to see if it applies. If it does, the TD is sent to Maintenance Control, which issues Maintenance Action Forms (MAFs) to incorporate the TD or to verify if serial numbers apply. Let's say four out of nine apply. You order the parts, have the avionics change performed by organizational or intermediate-level maintenance, sign off the MAF and then have Logs and Records annotate it in the logbook. Two weeks later, that component fails and you receive an unmodified component from supply. What do you do now? Send it back to supply? Accept it to fill the hole and order parts to incorporate the change—again?

That's the problem. Management is going crazy; work center personnel have enough work without constantly doing TDs. Quality Assurance and Logs and Records have binders full of TDs to track.

As we travel and talk with the fleet, this subject always comes up. Here are some tips on managing your TD program:

- Once a TD is received, see if it applies to your equipment. If it does, initiate a MAF, then order kits or parts, if applicable (remembering that kits are serial number controlled and only one can be ordered per serial number), and include the TD in the next Monthly Maintenance Plan.
- If Aircraft Intermediate Maintenance Department/Marine Aviation Logistics Squadron (AIMD/MALS) is to incorporate the TD, squadrons must order the parts. Once parts are received, coordinate with AIMD/MALS.
- Aggressively track supply status. Sometimes, it takes a while to receive kits or parts. Consistently check your requisition status.
- Communicate with Supply. If Supply has spares that require a TD, they must send the component to AIMD for TD incorporation. If Supply fails to do this, you

Releasing the aircraft as safe for flight with an unmodified piece of equipment puts you and your aircrew at risk.

may receive an unmodified component the next time you order it. Releasing the aircraft as safe for flight with an unmodified piece of equipment puts you and your aircrew at risk.

- If you transfer an aircraft and you have a kit on hand for a TD yet to be incorporated, ensure that the kit goes with the aircraft. This will help your shipmates out.
- Logs and Records personnel must screen Scheduled Removal Component, Assembly Service Record and Modular Service Record cards, support equipment records and all associated aircraft/engine logbooks to ensure applicable TDs are incorporated on a continual basis.
- One way to keep your TD program on track is to prepare an index with the TD number and subject. This will help you when you are screening MAFs and wondering if there is a TD against that component. You'll be able to check your index and the TD.

Hopefully, this will assist you with your TD program. The Naval Aviation Logistics Command Management Information System (NALCOMIS) makes this process more manageable. However, we have a long way to go. Configuration management is the NALCOMIS Fleet Design Team's top priority. It's a tough job, but we all have to do it. So, let's communicate with all the players involved. ■

AZCS(AW) Stern and AKC Galligan are assigned to the NALCOMIS Program Office, Naval Air Systems Command Headquarters, Arlington, Va.

SN2J

By Hal Andrews

As easily as SNJ comes to the tongue of those who lived with the pre-McNamara Navy aircraft designations, it's almost as easy to see that the designation of its proposed successor, SN2J-1, would have yielded to typical Naval Aviation verbal shorthand. As it turned out, the two XSN2J-1 prototypes weren't followed by production so no shorthand was needed.

In retrospect, one might conclude that the XSN2J-1 never should have existed. Its flight tests demonstrated a successful design, and there was no equivalent competitor. Even so, there were no production orders. However, there is another criteria for its worth. The North American (NAA) team that produced it went on to design a prototype basic trainer for the then-new Air Force, initiating the widely used T-28 series. Half a dozen years later, NAA's T-28 team, by then relocated from Los Angeles, Calif., to NAA's Columbus, Ohio, plant, designed a jet version of the T-28 for the Navy. In the general scheme of things, this was transformed into what became today's T-2C—only now, some 40 years later, facing the end of its Navy service life.

Back to the beginnings. By late summer 1944, the character of this country's WW II aircraft production had changed. A long, tough war was still to be faced, but it was no longer necessary to maintain production rates for numbers only. Older combat models, then mainly produced for operational training roles, could be replaced by refurbished "war wearies." Even production of the Army's obsolete Curtiss P-40 was finally brought to an end. At the same time, the obvious



deficiencies of older trainers—continued in production to achieve essential pilot training levels—could be assessed and appropriate action taken.

One of the major deficiencies identified by the Navy was the inadequacy of its primary trainers: fabric-covered, open-cockpit, fixed-landing gear, biplane N2S and N3N "Yellow Perils." These were fine for initial pilot training and led nicely to basic training in only slightly less antiquated SNV "Vibrators." Both were a far cry from the latest all-metal, retractable-gear monoplanes that trainees would fly as Naval Aviators, and the open cockpits and equipment of the primary trainers were from another age, as well as totally inadequate in winter weather.

In September, the Chief of Naval Operations (CNO) directed the Bureau of Aeronautics (BUAER) to study a modern primary trainer design. The design would replace both primary and basic trainers, eliminating the need for transition training through two types in the early phases of pilot training and acquainting pilots from the start with the intricacies of the latest all-metal, retractable-gear operational aircraft. As the studies progressed, the need was recognized for an intermediate trainer which was capable of introducing students to all the functions of carrier combat aircraft, including carrier operations. With performance, instruments and other equipment closer to operational aircraft, it would provide an effective bridge between flying the new primary trainer and operational training in combat aircraft. A November directive to BUAER added design studies for this type to

those previously requested.

In December, the primary trainer results were submitted, and over the next few months a competitive process led to a contract for prototype Fairchild XNQ-1 primary trainers. Meanwhile, the intermediate trainer studies were completed in January 1945. These were released to industry with a request for informal proposals following in April. Proposals for designs to be powered with an 1,100-hp Wright R-1820 Cyclone engine were received from Boeing, Douglas and NAA. NAA's design was selected based on a smaller airplane that provided the desired performance with superior maintainability features and a lower price. A letter of intent to NAA 1 September 1945 initiated the design and construction of two prototypes and a static test article, with delivery of the first XSN2J-1 scheduled for July 1946. Among its features were dive brakes ahead of the flaps and provisions for carrying external fuel tanks, bombs or rockets under the wings.

Following the XFJ-1 jet fighter contract previously awarded, this was the second contract North American had won for a Navy carrier aircraft, with a third to come for the piston-plus-jet XAJ-1 bomber. Prior Navy and Marine North American aircraft had been designed for the Army. Probably significant in this turnaround had been the modification of SNJ trainers for carrier operation during the war and successful carrier prototypes of both NAA's P-51D *Mustang* and B-25H *Mitchell*.

The paired trainer projects were continued in the postwar Navy program, though the pace was dropped during



the war-to-peace time late 1945–early 1946 transition. Various late wartime initiatives, such as standardized, organized cockpit layouts, were incorporated and received particular attention in the XSN2J-1's mockup inspection. Special features were also added; for example, the instructor in the rear cockpit could introduce errors or disable the front cockpit student's instruments for training purposes.

Design proceeded in early 1946, with construction following. By then, it was evident that the contract's July delivery date would not be met. Subsequent material availability problems and engine delivery delays resulted in continuing delays, with the first flight finally occurring in February 1947.

With only minor changes necessary, basic airplane flight tests continued through the spring, followed by tests carrying external tanks, bombs or rockets. The second XSN2J-1 joined the flight test program in May, with the first subsequently undertaking preliminary demonstrations. In August, the two airplanes went to Patuxent River, Md., where final demonstrations were completed in early September and Board of Inspection and Survey (BIS) Service Acceptance Trials initiated.

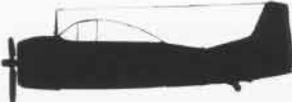
While an early assessment of suitability as an intermediate trainer was requested, and BIS was to include accelerated service tests in the trials,

other events under way would change the XSN2J-1's future. At CNO direction, the training command was evaluating use of SNJs as primary trainers. SNJs had long been equipped for arrested landings, and with plentiful F6F *Hellcats* available for advanced training, a straight through SNJ training program followed by advanced training for carrier combat pilots in F6Fs was an economical way to go in the post-WW II peacetime drawdowns. Furthermore, funds for new aircraft were being drastically reduced.

With emphasis on the evaluation of the new jet fighters and other combat types, progress on the XSN2J-1 trials had been slow. In August 1948, the trials were reduced to remaining tests necessary to confirm contract performance compliance, since no production was planned, and these were completed in the fall.

One of the XSN2J-1s remained at Flight Test while the other went to Armament Test; however, their "one-off" nature and nonrepresentative performance among the new combat types resulted in little interest as test beds. One was stricken in May 1949, the other in July.

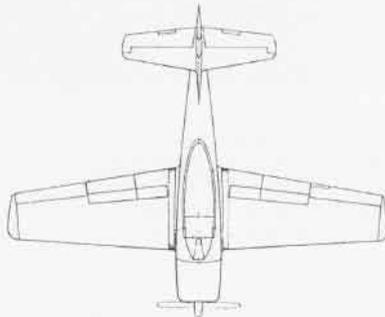
By that time, the NAA proposal for a smaller, lower-powered, tricycle-gear basic trainer follow-on design had won the Air Force contract for two XT-28s, and the path was set for North American's future in the trainer business. ■

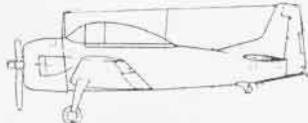


XSN2J-1

Span	42'3"
Length	33'10"
Height	12'2"
Propulsion: Wright R1820-78	1,100 hp
Maximum Speed	252 kn
Service Ceiling	30,500'
Maximum Range:	
Internal Fuel	1,375 nm
Two 58-gal. external tanks	1,785 nm
Crew	2

Armament:
Two .50 guns; two 500-pound bombs; and eight 5-inch high-velocity aircraft rockets








JO1(SW) Eric S. Sesit

Changes in technology mean changes for the AMH rating. AMH3 Cruze holds part of an F/A-18 brake assembly in his right hand and, in his left, a portion of an EA-6B disk.



This article concludes JO1(SW) Eric S. Sesit's series on enlisted aviation ratings.

Aviation Structural Mechanic Hydraulics

I like turning wrenches. I never did enjoy working behind a desk shuffling papers," Aviation Structural Mechanic Hydraulics (AMH3) Shawn E. Cruze of the Aircraft Intermediate Maintenance Department (AIMD), Naval Air Facility, Washington, D.C., said. Cruze chose his rate wisely. AMHs, like the other Aviation Structural Mechanics—Safety Equipment (AME) and Structures (AMS)—get more than their share of turning wrenches, repairing aircraft and replacing parts. Specifically, AMHs maintain, among other things, hydraulic systems, landing gear systems, brakes and related pneumatic systems and inspect, remove and replace components of hydraulic systems.

AMHs should be mechanically inclined with an aptitude for working with tools, equipment and machines. They should possess manual dexterity and enjoy working with other people as part of a team. Additionally, they need to be sharp enough to troubleshoot and repair complex systems in very complex aircraft.

An eight-week "A" school at Naval Air Station, Memphis, Tenn., teaches the basics of the AMH rate. Students are taught the fundamentals of hydraulics, tool control, brakes, corrosion and how to determine if fluids are contaminated. They receive two weeks of training in the art of troubleshooting and a one-week indoctrination to the Navy publications required in their field.

"We like to assign all graduates to a Fleet Readiness Aviation Maintenance Personnel (FRAMP) squadron to continue their training in a specific aircraft,"

AMHC(AW) Jimmie S. DePace said. DePace details E-5 through E-7 AMHs, assigning them orders when they are ready for transfer. "Unfortunately, we can't always do this. Many times fleet requirements force us to send people straight to a squadron or ship, but more often than not, their new unit eventually sends these sailors to a FRAMP to continue their training."

On the job, new AMHs spend much of their time "shadowing" qualified technicians, learning from more experienced sailors and receiving on-the-job instruction. They learn troubleshooting techniques, maintain and inventory tools and handle daily gripes—performing routine maintenance on aircraft discrepancies. They must also progress through a Maintenance Training Improvement Program, which comprises specific tasks that measure the progress and knowledge of AMHs.

When sailors advance to third class petty officer, they take on added responsibility. Then, not only are they the more experienced sailor teaching "boots," but they also are working towards becoming collateral duty inspectors.

AMH3 Cruze is typical of third class AMHs assigned to AIMDs around the fleet. "My job is to support the squadrons," he said. "The thing I enjoy most about working here [Intermediate- versus Organizational-level maintenance] is when we get a really complicated component that needs to be repaired or rebuilt. There are a lot of gripes that I haven't seen yet since I'm only a third class. It's a challenge to be able to re-

pair a part I'm not familiar with—to break a component down, find out what's wrong, repair it and put it back together again. Of course, all our work is done strictly according to Navy publications, so I always have set guidelines to follow.”

When the time comes for Cruze to put on his second class crew, he'll be looking for new and bigger challenges that carry more responsibility. "I've always felt that second class petty officers make the Navy happen," DePace said. "The second class is the active supervisor on the line. They are the link between the leading petty officer and the junior rates, and the job carries a lot of responsibility. They are the ones out there everyday making sure the work is done on time and correctly."

As AMHs progress to chief petty officer, not only are they experts in their own field, but they have gained enough experience by working in close proximity with AMEs and AMSs who are at the E-8 level that they drop the "H" from their title and the three ratings merge to become AMs. At the master chief level, AMs combine with Aviation Machinist's Mates and become AFs.

Although specialized skills don't play as big a role for AMHs as they do in other rates, there are certain areas that require additional training. Class "C" schools, located at naval air stations around the country, provide training in 15 specialties. Each awards a Navy Enlisted Classification code that designates the sailor an expert in a certain field.

DePace said, "Since we're not as specialized as some other ratings, we don't have a need for closed-loop detailing. Closed-loop detailing means that if a sailor has a specialty, he or she might work in that area of expertise their entire career. We just don't have a need to do that. We really try to keep our people cross trained. It makes for a better AMH and a better sailor."

The AMH rating is a sea-intensive rating with more sea time than shore at each paygrade. First-termers serve their entire first enlistment at sea. Third and second class petty officers spend four years at sea and three years at a shore facility. First class and chief petty officers will go to sea for 45 months

before hitting the beach for three years. A senior chief and master chief will spend 39 months at sea and 36 months on shore.

Advancement has been slow for AMHs during the Navy-wide drawdown but DePace expects the numbers to begin a slow and steady increase. Presently, there are 3,500 AMHs working in the fleet and their ranks are expected to shrink in the next few years, although not at the record numbers of the past two years. "It's been tough for a lot of sailors, but our manning requirements are beginning to stabilize," DePace

said. "People are advancing and it's no secret how they do it. They work hard and study hard."

"The AMH rating is still an excellent field to get into. We do a lot more than chase bubbles in hydraulic fluid. By working closely with all the other aviation ratings, we get to know these aircraft inside and out," DePace concluded. ■

In a meticulously clean environment, AMH3 Cruze prepares to perform a patch test, which searches for contaminants in hydraulic fluid.

JO1(SW) Eric S. Sesit



An Antarctic Tale

By LCdr. Mark A. Hinebaugh, USNR



The radio call from McMurdo Center got my attention like a cold bucket of water in the face. Our alternate navigator for the day, Carol, was receiving an update on the weather forecast back at McMurdo for our second flight of the day when she emerged from the flight deck with furrowed brow. She suggested that I come and listen.

The McMurdo weather forecasters decided 45 minutes after we departed that the weather wasn't going to improve as they originally briefed; in fact, it was getting worse. As we spoke, they said the current conditions at McMurdo were partially obscured (a ceiling or cloud that started on the deck, Antarctic fog), one and one-half miles visibility, nil and nil (no surface or horizon definition). With conditions deteriorating there rapidly, I scanned the horizon and was filled with dread as the same storm was approach-

ing our position here in the open on the Ross Ice Shelf. A major Antarctic storm (also known as a Herbie) was brewing, so I had several major decisions to make, all of which centered around our cargo.

Our mission today was simple: deliver a snow plane (a grader towed by a tractor to create a smooth, prepared surface on which to land the LC-130 aircraft—as well as an awkward piece of equipment to unload) to a remote site on the ice shelf an hour out of McMurdo. We would then return to McMurdo to shuttle out the personnel to man the camp.

I shook my head ruefully as I recalled how recent events complicated my decision process now. Several days ago, an explosives expert and his tractor driver crashed through a snow bridge and fell into a crevasse while carrying a load of high explosives overland to

this site. The good news was that the two individuals and explosives were rescued; the bad news was that we would have to fly the explosives out (thus, the snow plane to prepare a smooth landing site).

Unfortunately, there was another nagging problem: they had fallen into the crevasse while transiting our emergency landing area—the whiteout area. It was there that we landed when weather got so bad we couldn't see the ground by setting a rate of descent and flying until we hit the ground in a controlled, visionless crash. The whiteout area was chosen for emergency landings because it was supposed to be free of crevasses. And, now, there were doubts. That alone made an argument for staying on the ice shelf and waiting out the storm. On the other hand, we only carried enough food, fuel and supplies to



The author poses with two 18-inch-high Adele penguins, more of which are pictured at left.

Crew Four (L to R): Lt. Tim Lefebvre, LCdr. Dave Hegland, Lt. Neil Nostrant, LCdr. Ed Angel, AE2 Chris Derby (leaning), AD1 Roy Williams and LCdr. Hinebaugh.



Ski-equipped LC-130 Hercules at the McMurdo Station skiway await their next Antarctic mission; Mt. Discovery provides a dramatic backdrop as it dominates the skyline.

last our crew a week in modest weather conditions, and the last Herbie endured for eight days.

I also vividly remembered the travails of explorer Robert Falcon Scott and the remaining two members of his party when they waited 10 days for weather like this to clear in 1912 in a position close to where we were now:

Thursday, March 29, 1912. Since the 21st we have had a continuous gale from WSW and SW. We had fuel to make two cups of tea apiece and bare food for two days on the 20th. Every day we have been ready to start for our depot 11 miles away, but outside the door of the tent it remains a scene of whirling drift . . . Scott.

If the weather was deteriorating as quickly at McMurdo as it was here on the ice shelf, I figured we had just enough time to make it back before it got really

ugly. I watched as the weather began closing in around us for hundreds of miles, so our best option seemed to try and beat the storm home.

I had our engineer, Roy, figure our fuel situation; it wasn't good. Unless we could get this snow plane out of the LC-130 quickly, we would only have enough gas to get back to McMurdo and to shoot one or two approaches—not nearly enough to fly to the South Pole (weather there wasn't much better, anyway). Since we had been briefed that weather for our return would be good, I hadn't asked for any extra fuel on our original departure.

I went aft and explained to the rest of the crew and our loadmaster, Chris, that we needed to get out of there fast; each minute of fuel wasted unloading was a minute less for approaches at home. The snow plane wasn't even half-

way out, and now Chris had to somehow dump it quick. I asked him what the rest of the crew could do to help. We were in this together and we helped as he directed. The work took a feverous pitch—hauling for all we were worth. By continuously adjusting the cargo ramp, we completed the remainder of the offload—which should have taken another hour—in less than 20 minutes. We wasted no motion; there was no idle chatter, nothing but the business at hand. We all knew the score: screw up now and we might not make it home before the weather closed in entirely.

With the snow plane offloaded, we turned our attention to flying out of there on our first try, still hoping to make it home before the weather hit. We left the snow plane sitting alone at the end of our ski tracks and taxied back to our landing tracks.

The snow turned on us, an ugly and patient adversary. On the first run, the copilot doing the takeoff couldn't get the nose ski to stay straight and got the plane going sideways a number of times. His second run was better, but we simply couldn't accelerate in the soft, slushy snow. Roy did some quick figuring and told me we didn't have any more gas to waste; we had to get off this time.

The wing flaps on the LC-130 are like barn doors and act as big brakes when we are trying to get airborne in slushy snow, so by starting our takeoff slide with the flaps up, we were able to accelerate quickly to 50 knots because of the increased drag. At 55 knots, I lowered them to 50 percent, normal for takeoff. When we stagnated at 65 knots, I pushed the flap handle all the way down to position the flaps to full down. This allowed the weight of the plane to be shifted from the skis to the wings and the plane shook as it rose a little higher and lighter on its skis; we sped up to 75, then 80 knots.

The copilot and I pulled with all our might, burying the yokes in our laps, as if sheer force of will would pull this hulking beast out of the snow and skyward. I remember hearing someone on the headset say, "C'mon baby," just before we popped free of the snow and into the air. A collective sigh of relief ran through the plane.

We wasted no time in cleaning the plane up and figuring out a maximum range flight profile, one which would give us the best gas mileage home. We would need every drop we had once we got there. Roy figured that we would be on top of the field with about 9,000

pounds of gas, enough for three good approaches, maybe four, if we were lucky.

At altitude, I could see Mounts Erebus and Terror on Ross Island almost 180 miles away and I thought to myself, "How bad could it be?" Fifty miles from the runway over Minna Bluff, I knew. The whole area was covered with a pall of low dense clouds that looked like a death shroud. It stretched for hundreds of miles. There was no getting around it; we had to punch through.

I had Tim, the second pilot, call the tower, then maintenance control to update the conditions at the field. We often called our maintenance control for weather. The maintenance chief's office was fitted with a huge plastic window, and we could get a realistic and unjaded call on the visibility on the deck depending on how far he could see. Conversely, the forecasters were holed up in a corrugated tin building several miles away on a hill and their window on Antarctica often sat above the fog line.

Today, both verdicts were bad. There was no ceiling, no visibility, no surface or horizon definition. The maintenance chief did say he could see maybe 40 yards, sometimes.

I put all the first-string players in the seats for this approach. We would have to fly the plane with all our wits about us and stay cool as we dove into that pea soup fog at 150 knots to search for the ground.

As I descended the plane to 1,600 feet, Roy gave me the numbers. He figured we had at least two, but no more than three, shots at the runway before the gas gave out. We set up for landing. The plane was working well, everything functioning properly—no malfunctioning landing gear, no motors to shut down, no popped circuit breakers—so that was encouraging. When we had descended below 1,100 feet, we went into a fog so thick that we could barely see the international orange paint on the wing tips 60 feet away. We were now in the hands

of the Ground-Controlled Approach (GCA) controller. She began giving me headings to fly and a rate of descent by telling me whether I was on, above or below glide path.

I think the first GCA was good but no one saw a thing: no panels (demarking the skiway), no ground, no tower, no planes, nothing but white. Like flying in a milk bottle.

In retrospect, I can authoritatively state there is nothing worse in the world for me than being at 100 feet above the ground, supposedly centered over the runway, and seeing absolutely nothing with no suitable alternate airfield. At 100 feet, Tim called, "Wave off." I added maximum power, pulled back on the yoke and nosed the plane back up into the sunshine. The controller gave me instructions and headings to fly to realign the plane with the runway for a second try. I reduced power, slowed to approach speed and settled into the clouds again. It started to get busy in the cockpit.

The tower supervisor tried to talk us in for our second approach but as we got lower to the ground, his calls became erratic. Normally, on final for a GCA, we only make slight heading changes, but now he called heading changes of 8 to 10 degrees, which was much too gross a correction when trying to fly a precision approach.

I concentrated on flying the headings and the glide slope, so Tim called my airspeed and rate of descent. Roy called out absolute altitudes as we passed through 200, 150 and 100 feet on our descent. Carol gave me drift information stating which way the wind was pushing us. This relay of information from crew to pilot is called the polar back-up. It was designed to be used in just this type of situation. With the crew calling out pertinent information, the pilot is free to concentrate on flying the plane without taking eyes off the flight director (a coupled attitude gyro and compass). All I had to do was filter the information and make corrections.



LCdr. Hinebaugh explained that snow planes like this one are dragged by tractors to prepare skiways at established camps which have regularly scheduled flights.

The South Pole's 80-foot-high dome looms behind an LC-130.



The polar back-up sometimes sounds like a talk show, with an obnoxious host trying to talk over his guests, but with a practiced crew it takes on cool efficiency—each member stating their information then shutting up. From that, I know when I'm on airspeed at 135 knots, descending at 300 feet per minute, 200 feet above the deck, the wind is pushing me slightly to the left, and that I am on course and glide slope.

Today, it didn't sound quite the same. The controller was giving me confusing heading calls. He was zig-zagging me across the extended runway centerline, but the crew hung in there.

At 100 feet, we peered out into the opaque whiteness to find nothing. Tim yelled, "Wave off," and I added power to go around. But this time as I banked I inadvertently dropped my guard to look out the window and allowed the plane's nose to drop slightly. At 100 feet, in a 20-degree angle-of-bank turn with the wing tip probably only 65 to 70 feet above the ground, Tim yelled my name and together he and I pulled hard on the yoke, bringing the nose up and the wing away from the ground. We had been seconds away from disaster.

Seeing nothing after two passes only increased the tension. Seat cushions went wet with our sweat as our stomach muscles tightened involuntarily. When we broke free of the clouds, I turned to Roy, who assured me we had one more approach before returning to the uncertainties of the whiteout area.

On down wind I was up for suggestions when Carol spoke. She had followed the last two approaches on her weather radar (which was infinitely inferior to the approach radar the controller on the ground had) and said that he had lined us up well to the right of the runway, and would I give her a shot at it. Absolutely! I had tried two GCAs without any luck and we were *in extremis*, so I decided to have a go at Carol's heading calls. All Antarctic navigators are trained to provide internal approaches using the plane's radar to align the plane, so I figured, "Why not?"

The tension on the flight deck, if bottled, would have wound a rubber band so tight it could have launched one of those balsa wood gliders to the moon. I turned on final; the runway was out there directly in front of us at eight miles. All we had to do now was find it.

As we settled in for the third approach, we all knew this was our final shot. We would all have to back each other up if we were going to do it. We decided that Carol would call the course as I flew listening to the glide slope calls of the controller, Tim's airspeed and rate of descent calls and Roy's altitude calls. Now, all I had to do was ignore the controller's heading calls, find the runway and land the plane—piece of cake, like finding a dropped contact lens in deep grass.

As we dipped into the clouds, hopefully for the last time, I tried to lighten the mood by telling the crew that I was in a bar one time when a grasshopper walked in and the bartender asked, "Do you know we have a drink named after you?" And the grasshopper said, "You have a drink named 'Melvin'?" I received only nervous laughter; I forced a weak smile and winked at Tim and Roy. They nodded back and Roy gripped my shoulder.

A crew, no matter what the circumstances, always looks to the aircraft commander for salvation in times of crisis. I was their last hope. The jokes weren't intended to loosen them up as much as myself. I had to depend on my ability as a pilot, on my mental strength to get us all through, and right now I needed to relax. I was my only hope, too.

We descended into the whiteness and when the controller made his first call to turn left some 5 degrees, I heard from Carol, "No, Mark, stay right here. You're looking fine." From Tim, "128 down 4"; Roy, "1,000 feet"; and the controller, "On glide slope."

"Okay, I think we need to come about 4 degrees right. Good, steady up. Looking good." "126, down 5"; "500 feet"; "Going slightly above glide slope."

"... kick it over 2 degrees, no more." "125, down 3." "200 feet." "Going slightly below glide slope."

"Mark, ease it over one degree left now. Okay, hold that. We should be right over the threshold!" "124, down 3." "100 feet." "On course over landing threshold."

Tim had nothing, so I held my course and maintained 100 feet. "Now?" I asked. Still nothing. I added power to go around. As I did, out of the corner of my eye I saw a beautiful black runway marker race by. I concentrated on it and eased the power back until we settled to 50 feet. I caught another panel and

drifted over to it. At 25 feet, I had enough lateral visibility to see panels on either side of the runway. They hung as if suspended in the white air, so I centered the plane between the panels as best I could.

At 10 feet on the radar altimeter I eased back on the yoke, started to flair and pulled power to flight idle. I still couldn't distinguish the ground from the sky. We hit the deck and the crew's tension melted away at the sound of the tires touching the ground. Home. It was a fantastic feeling.

I immediately brought all power levers into maximum reverse. I wanted to stop as quickly as possible because I had no idea where we were on the runway and, with less than 100 feet of forward visibility, I didn't want to run off the end. We stopped adjacent to the four board (which indicated we had 4,000 feet of runway remaining). We landed a little less than halfway down the runway. As I brought the throttles out of reverse, Roy, Tim and I all high-fived and started to laugh. I turned around and there was Carol, her face ringed with a red welt she acquired from pressing her face so hard into her rubber radar hood. She broke into a giddy chuckle that led us all into hysterical fits of laughter until we had tears rolling down our cheeks. We were okay. We had beaten the white night, but Carol would have the red mark for at least a few hours.

Our mirth was cut short by a call from the tower asking where we were and if we were all right. Tim laughed into the mike for about five seconds, just enough time to get the controller thinking that we were all certifiably crazy. We probably were, or soon would be.

Once we had completed all our checklists and shut down the plane, we unstrapped quickly and congratulated each other. We had made it through as a team, each of us playing an integral part under fire. There are no words to describe the elation of the moment, the emotional high of cheating death through raw determination and intestinal fortitude.

We assembled in my room to clean out my supply of liquor. We drank, laughed and celebrated life. We had survived by getting into the only place there was to go. ■

LCdr. Hinebaugh is a Naval Aviator and writer. This was excerpted from his first book, which recalls his experiences flying in Antarctica.

Back to the



349596

General Douglas MacArthur and a group of U.S. Army and Philippine officers wade ashore at Leyte Island.

Philippines Part 2

By John M. Elliott

Once the decision was made to invade Leyte, it became necessary to determine the next step in the advance towards Japan. Two courses of action were considered. The first was to bypass Luzon and jump to an invasion of southern Formosa with a simultaneous landing on the coast of China. This would provide an easier route to supply the eastern China airfields, which were to support B-29 raids against Japan. The second course of action was to invade Luzon and then work back to consolidate the entire Philippine archipelago. While it appeared that Formosa would be the best from a strategic point, Luzon was more favorable logistically.

Japanese offensives in eastern and southeastern China overran the last air bases from which the China-based Fourteenth Air Force could effectively support an invasion of either Formosa or Luzon. This reduced the urgency for the development of a port on the coast of China. By the same token, one of the main reasons for seizing Formosa—to secure a steppingstone to China—became much less desirable. In the end, the Joint Chiefs of Staff decided to invade Luzon, bypass Formosa and continue the advance north through Okinawa and the Ryukyu Islands.

The best landing site on Luzon was Lingayen Gulf, the same approach used by the Japanese in 1941–1942 that led to Manila through the Central Plains. Airfield construction at Leyte continued to fall behind schedule and aircraft based there would be unable to support the Lingayen Gulf invasion. The decision was made to route the invasion convoy through the confined waters of the Visayans, which required more air coverage than the previously considered route around the northern end of Luzon.

To provide this cover, a base would be needed on Mindoro. The landings at Mindoro and Luzon stretched the amphibious shipping available to the utmost. This required numerous changes in plans and the dates that these landings—as well as the follow-on assaults against Iwo Jima and Okinawa—could take place.

A few days prior to the Mindoro invasion, General George C. Kenney stated that the Army Air Forces (AAF) would not be ready to take responsibility for air cover of the Mindoro convoy. In addition to the delays in building new airfields and weather problems, the inexperience of his pilots would preclude their taking off before daylight or landing after dark. Due to this, it was necessary to borrow escort carriers (CVEs) from the Central Pacific and arrange for Third Fleet cover and support and the help of land-based Central Pacific aircraft. The CVEs were to operate in the Sulu Sea to protect the convoy during hours when the AAF could not be present. The aircraft complement on these ships was changed to 24 fighter and 9 torpedo bombers from the normal 16 and 12. Third Fleet's Task Force (TF) 38 was to prevent the Japanese from launching air attacks from Philippine fields during the approach, landing and unloading.

The move to Mindoro was one of the boldest during the war in the Pacific. Driving this wedge into the central Philippines required bypassing several important enemy-held islands. This new air base would be 262 miles away from our nearest base in Leyte and beyond the normal range of land-based fighter planes.

On 13 December 1944, the main convoy was being protected by 12 aircraft from the CVEs and 35 land-based

Marine *Corsairs*. At about 1500, a kamikaze "Val" sneaked in low from astern and crashed into the light cruiser *Nashville* killing 133 personnel. Later, a destroyer was hit resulting in a loss of 14. Several other kamikaze attacks were launched but were destroyed prior to reaching their target. The landing on the 15th was an amphibious group commander's dream as everything worked according to plan. That, however, was not to last. Twelve minutes after the AAF arrived to relieve the carrier-based aircraft, a kamikaze group arrived. Hits were made on a CVE and two landing ships, tank (LSTs) were destroyed. Air attacks against the later supply convoys were also conducted by kamikazes. By 30 January 1945, no enemy forces capable of organized action remained in northwest Mindoro and further mopping up was left to the Filipino guerrillas. It had been a tough nut to crack, but the four airstrips constructed there were well worth the effort in the protection they gave convoys going to Luzon.

By this time, the Kamikaze Corps, which had first been encountered during the battle for Leyte, had become a real problem to the Navy. It was estimated that 1 in 4 found a target and did some damage, and 1 in 33 sank a ship as it completed its one-way trip. All personnel returning to the U.S. and Australia were warned not to mention the kamikazes, and mail was carefully censored for any hint of them to prevent the enemy from knowing how effective the attacks were. It was not until April 1945, during the Okinawa campaign when it was impossible to suppress the news, that the world became aware of this new form of attack. One means of combating this threat was to change the aircraft complement aboard the big

Naval Aviation in WW II

carriers. *Essex*-class carriers were now to have 73 fighters, 15 bombers and 15 torpedo bombers in lieu of the 38, 36 and 18 previously carried.

Task Force 38 left Ulithi on 11 December 1944 to make preliminary strikes on Luzon airfields, which threatened the Mindoro operation. Massive strikes over three days resulted in 270 aircraft destroyed and 3 or 4 freighters and 1 Japanese-type LST heavily damaged.

Upon completion of these strikes on the 16th, Admiral William F. Halsey had hoped to be able to make his long-desired raid into the South China Sea where the survivors of the Japanese fleet had been reported after the Battle of Leyte Gulf. However, it was felt that the land-based air at Leyte was not yet

sufficiently strong or reliable to risk moving the carriers from positions to cover Luzon. TF 38 was about to run into a typhoon, which was to cause more damage than the Japanese had been able to inflict. Three destroyers capsized and 6 or 7 other ships were seriously damaged, with a loss of almost 800 personnel.

While attempting to refuel, they had run into a small unreported typhoon. Several course changes were made to

Task Group 50.3 in line as they enter Ulithi Anchorage for supplies and recreation after strikes against the Japanese in the Philippines.

USN-301231

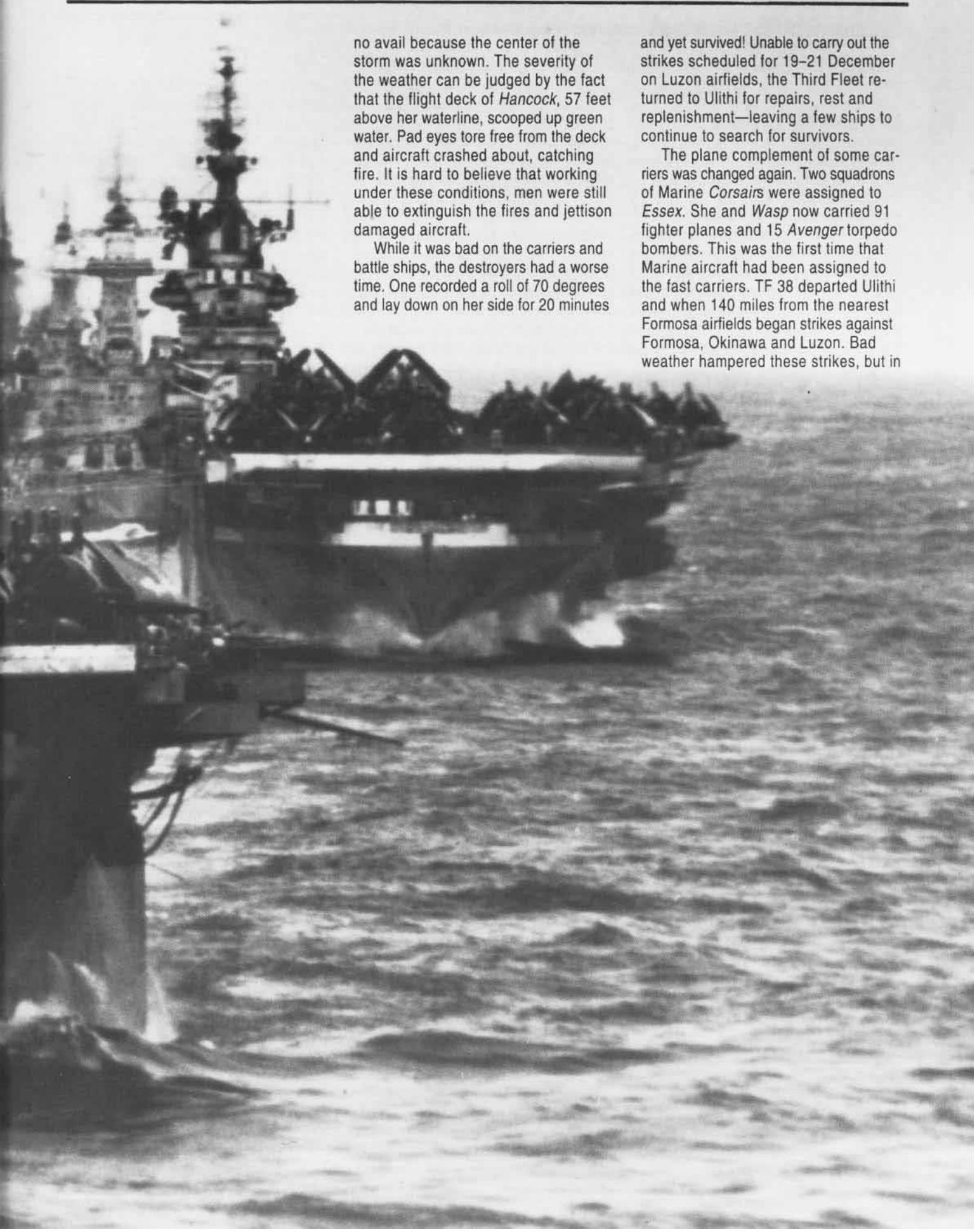


no avail because the center of the storm was unknown. The severity of the weather can be judged by the fact that the flight deck of *Hancock*, 57 feet above her waterline, scooped up green water. Pad eyes tore free from the deck and aircraft crashed about, catching fire. It is hard to believe that working under these conditions, men were still able to extinguish the fires and jettison damaged aircraft.

While it was bad on the carriers and battle ships, the destroyers had a worse time. One recorded a roll of 70 degrees and lay down on her side for 20 minutes

and yet survived! Unable to carry out the strikes scheduled for 19–21 December on Luzon airfields, the Third Fleet returned to Ulithi for repairs, rest and replenishment—leaving a few ships to continue to search for survivors.

The plane complement of some carriers was changed again. Two squadrons of Marine *Corsairs* were assigned to *Essex*. She and *Wasp* now carried 91 fighter planes and 15 *Avenger* torpedo bombers. This was the first time that Marine aircraft had been assigned to the fast carriers. TF 38 departed Ulithi and when 140 miles from the nearest Formosa airfields began strikes against Formosa, Okinawa and Luzon. Bad weather hampered these strikes, but in



Naval Aviation in WW II

one week TF 38 had flown more than 3,000 sorties and dropped approximately 700 tons of bombs. In accomplishing this they lost 86 planes, 40 of which were operational losses.

The assault convoy departed Leyte for Lingayen Gulf and learned that there were still plenty of Japanese aircraft in the Philippines. Kamikaze attacks began soon after the fleet entered the Sulu Sea. From there until they arrived off Lingayen Gulf, the convoy was subjected to numerous kamikaze attacks, which did considerable damage but sank only one CVE. Once the convoy arrived in the gulf, things were no better.

Between 3 and 6 January 1945, kamikaze attacks sank or damaged 25 ships, 3 of which suffered two or more attacks. The effectiveness of this new tactic is vividly revealed considering that there were only 28 kamikazes and 15 fighter escorts involved. The Japanese determined not to defend the beaches and concentrated their defenses in the mountains, making the preliminary shore bombardments unnecessary. The ships lost in this portion of the operation, however, had sacrificially served the invasion by acting as bait for the kamikazes, who expended themselves before the day of the land-

ing. The amphibious force was also attacked by kamikazes but not to the extent that the Bombardment and Fire Support Group or the Minesweeping and Hydrographic Group had been previously. The actual landing proceeded like a textbook exercise. There were few kamikaze attacks against shipping, but by the end of the day, about 30,000 tons of supplies had been landed and assault troops had advanced as much as 8,000 yards. The Japanese still had one more new weapon in their bag of tricks. On the night of the landing, a group of 18-foot suicide boats attacked the fleet. One ship was sunk and eight

USMC-98028



A Corsair fighter plane of the 2nd MAW doubles as a bomber to blast the Japanese from a gorge behind Five Sisters peaks on Peleliu.

others damaged. These boats made no further attacks at Lingayen Gulf.

With the troops ashore and proceeding towards their objectives as planned, the next step was to secure the long supply line between Mindoro and Lingayen Gulf from all means of counterattack between Tokyo and Singapore. A strike was made on Camranh Bay on 12 January 1945. There were no combatant ships as anticipated but numerous merchant ships were sunk or damaged; many were oilers. Saigon was also struck and docks, airfield facilities and oil storage ashore were hit.

Sailing north on 15 January, TF 38 launched strikes against airfields on the China coast and Formosa. Several ships were sunk but only 16 aircraft were shot down and an additional 18 destroyed on the ground. More strikes were made against the China coast and on down to Hong Kong. Once again, the weather was bad and Navy losses were greater than the enemy; most were due to anti-aircraft fire and the low altitude the aircraft were required to fly. After refueling and avoiding some additional bad weather, the fleet retired to the north around the northern end of Luzon. Again, on 21 January, fighter sweeps were launched to neutralize airfields in Formosa, the Pescadores and the Sakishima Gunto. Flying all day, with emphasis on shipping in the morning and airfields in the afternoon, a total of 1,164 sorties were flown with 104 aircraft claimed destroyed on the ground.

It was a different matter at sea as the kamikazes came to life again. *Langley*, *Ticonderoga* and *Maddox* were struck; *Ticonderoga* was hit by two different strikes. Upon landing aboard *Hancock*, one of our torpedo bombers was taxiing up the deck and dropped a 500-pound bomb out of the bomb bay; the bomb exploded. Casualties were heavy: 52 killed and 105 wounded. During the 22nd, a total of 682 sorties were flown against Okinawa to obtain photographic coverage for the forthcoming capture of the island. That night, TF 38 started south and returned to Ulithi for a well-earned rest.

The Marine Corps dive-bomber squadrons, which were requested from the northern Solomons, went ashore and established an airfield near Dagupan

7 Mar: Commanding Officer, CGAS Floyd Bennett Field, N.Y., reported that a dunking sonar suspended from an XHOS-1 helicopter had been tested successfully.

8 Mar: A rocket-powered Gorgon air-to-air missile was launched from a PB4Y-5A and achieved an estimated speed of 550 mph in its first powered test flight, conducted off Cape May, N.J., under the direction of LCdr. M. B. Taylor.

18 Mar–21 Jun: Carrier air support during the Okinawa campaign was on a larger and more extensive scale than any previous amphibious campaign. Fast and escort carrier planes flew over 40,000 action sorties, destroyed 2,516 enemy aircraft and blasted enemy positions with

8,500 tons of bombs and 50,000 rockets. Marine Corps squadrons ashore destroyed another 506 Japanese aircraft and expended 1,800 tons of bombs and 15,865 rockets on close air support missions. Task Force 58's time on the line (18 Mar–10 Jun) was surpassed by the escort carriers (24 Mar–21 Jun), but of several records for continuous operations in an active combat area that were marked up by the carriers during the campaign, the most outstanding was logged by *Essex* with 79 consecutive days.

23 Apr: PB4Ys of Patrol Bombing Squadron 109 launched two Bat missiles against enemy shipping in Balikpapan Harbor, Borneo, in the first combat employment of the only automatic homing missile to be used in WW II.

to support the 1st Cavalry Division in its dash to Manila. Close air support procedures had been worked out with the Army while still in the Solomons, placing a forward air controller with a radio-equipped jeep with each battalion. This for all practical purposes placed a forward observer, who was a Naval Aviator, at the command posts who understood an aviator's requirements and could properly direct him to the target. The SBDs of Marine Air Groups 24 and 32 guarded the flanks of the 1st Cavalry Division and destroyed hard points in front of the advance as they spearheaded the dash to Manila.

There were numerous small landings after Luzon that followed the same general pattern of the enemy retiring to inland positions and a final mop-up by guerrilla forces. As there were no Japanese aircraft operating in the southern Philippines, the fleet did not suffer any kamikaze damage. The Eighth Army determined that it had conducted 14 major and 24 minor landings in 44 days, and the VII Amphibious Forces hung up a record for amphibious operations that is not likely to be challenged.

Naval Aviation had one more operation in the Philippines when Marine Air Groups 12, 14 and 32 were assigned the mission of close air support for the

41st Division in the assault on Zamboanga, Mindanao. After the initial shore bombardment, the assault forces quickly moved inland. The Marine SBDs flew in from Luzon in support of the advance to supplement the F4U *Corsairs* of Marine Air Group 12. Heavy fighting took place in the hills as the Army slowly advanced, supported by Marine Corps planes and gunfire from the cruisers and destroyers offshore. These ships left on 12 March as they were needed for another landing, and their task was taken over by destroyers which continued to deliver call fire until the 18th.

Missions continued to be flown in support of operations at Davo, Malabang and Sarangani Bay on the island of Mindanao, as well as on the island of Jolo. The last hurrah for the SBD was on 31 July 1945 when the aircraft struck enemy positions along the Davo River. This was the last SBD strike of the war. The airplane that had destroyed the might of the Japanese fleet was no more.

The obligation was honored to all of those military and civilian personnel who had been abandoned three long years. The debt was paid. We had returned. ■

Mr. Elliott is a former historian in the Naval Aviation History Branch of the Naval Historical Center.

Awards

People of the Year:

HSLWINGLANT and HSL-42: LCdr. Craig C. Felker—**Officer** and LCdr. Ed Callao—**Maintenance Officer**.

HSL-40: Lt. D. C. Boyle—**Pilot**, Lt. V. K. Phillips—**Maintenance Officer**, MCPO James H. Reed—**Senior Maintenance CPO**, PO1 David W. Edinger—**Junior Maintenance PO**, PO1 Jorge L. Ramos—**Sailor**, PO2 Jerry D. Grabenstein—**Aircrewman**, PO2 Frank M. Burrows—**Junior Sailor**, PO3 Paul A. Antkowiak—**Airwolf** and Chief James J. Simonetti received the **Enlisted Leadership Award**.

HSL-44: LCdr. Neil Hogg—**Officer**, Lt. Dave Jungers—**Pilot**, Chief William Lukander—**Maintenance CPO**, PO1 Duwayne Love—**Maintenance PO**, Lts. Dana Gordon and Elizabeth Franklin, PO1 Bruce Alexander and PO2 Scott Palmer—**Embarked Aircrew**, PO1 Y. B. Westheimer—**Aircrewman**, PO1 Michael Vanderhoof—**Shore Sailor**, PO1 Jeffrey Mouras—**Sea Sailor**, AN John Lyttle—**Shore Swamp Fox**, PO3 William Goforth—**Sea Swamp Fox** and Mary Vanderhoof and Ginger Brewer—**Ombudsmen**.

HSL-46: LCdr. Richard P. Snyder—**Officer**.

MAWSPAC: AO1(AW/SW) Melvin J. Fenner—**Sailor**.

NAS Kingsville: Ltjg. Kurt Bratzler—**Kingsville Chamber of Commerce Person**, AC1(AW) Mary Hixson—**Navy League Military Person** and Sue Miller—**Citizen**.

NAS Lemoore: GMG1 Joseph Lauletta—**Sailor**.

NAS Patuxent River: Lt. Theodore Develan Wilson II—**Admiral Merlin O'Neill Award**.

VA-95: LCdr. Marion E. Watson and ADC(AW) Gareth L. J. McMullen II—**Capt. Jerry Rogers Leadership Award**.

VA-196: AMS1(AW) James Patteson—**Main Battery Sailor**.

VAQ-132: CTT1(AW/NAC) Neil M. Wasserman—**Sailor**.

VAQ-138: AD1(AW) Russell S. Celia—**Sailor**.

VP-10: AMH1 Richard D. Latour—**Sailor**.

VP-11: AME1(AW) Jeffery Tonn—**Sailor**.

VS-21: AME1 Gene Russell Carrey—**Sailor**.

VS-33: AE1(AW) Carl D. Carson—**Sailor**.

VT-10: YN2(AW/SW) Monte A. Jones—**Sailor**.

Marine aviator and Persian Gulf War veteran Maj. Rod von Lipsey was selected as one of *Time* magazine's **America's 50 most promising leaders for the future**. Now assigned as a Council on Foreign Relations International Affairs Fellow, he elected to serve his fellowship at the Joint Center for Political and Economic Studies. Maj. von Lipsey was one of three African-Americans under 40 who were recognized. The other two are Pennsylvania Congressman Chaka Tattah and Georgia Congresswoman Cynthia McKinney.

AKCS(SW) John A. Washington, NAS Jacksonville, Fla., was honored as a **1994 Black Achiever** by the YMCA of Florida First Coast Black Achievers Program. He was selected because of his community involvement, leadership qualities and enthusiasm.

Reserve squadron VP-62 won the **AVCM Donald M. Neal Award** for excellence in aircraft maintenance. The award was established in 1965 to recognize outstanding maintenance performance by fleet patrol squadrons and is sponsored by Lockheed-California Co. Additionally, VP-62 Crew 7 was named winner of the **1994 Liberty Bell Trophy**, which is given to the reserve P-3 antisubmarine warfare (ASW) crew which attains the highest grade on a special ASW exercise. Winning crew members were: Cdr. J. A. Hayes, LCdrs. D. K. Burton, R. W. Filler and J. S. Kasper, Lt. J. C. Hutches, ADC W. Green, AWC C. J. Miller, AE1 R. D. Sanderford, AO2 M. F. Abraham, AT2 A. S. Griffith, AW2 C. J. Miller and AW3 R. J. Rollo.

Naval Air Reserve (NAR) Norfolk, Va., won the **FY 1994 Ens. C. H. Hammann Award**, presented to the Naval Air Reserve command judged to be most efficient in the performance of its primary mission. The award is named in honor of Ens. Hammann who, as a Naval Air Reservist flying in Europe during WW I, was awarded the Medal of Honor for extraordinary heroism. While evading enemy pursuers, he landed his damaged Macchi M-5 flying boat alongside a downed fellow aviator in open water, took him on board and flew back to base.

The Naval Reserve's **Conway Trophy**

winner is NAS Joint Reserve Base New Orleans, La., as top air station in the Naval Reserve. It is named after Navy Lt. Edwin Francis Conway, who at the time of his death in a 1933 plane crash was CO, Naval Aviation Reserve Base, Floyd Bennett Field, Brooklyn, N.Y.

NAS Kingsville, Texas, was awarded a **Certificate of Commendation** for an accident-free 1994 by RAdm. W. B. Hayden, Chief of Naval Air Training, and also was placed on the **National Safety Belt Honor Roll** by the National Highway Traffic Safety Administration. The safety belt honor was for achieving over 90-percent seat belt usage.

For the first time in 40 years, a Naval Aviator, retired Capt. Matt Portz, was elected **Flight Captain of the 7th Flight of the Order of Daedalians**. The Order of Daedalians is the National Fraternity of Military Pilots.

MCAS El Toro, Calif., received the **Dick Schram Memorial Community Relations** award from the International Council of Air Shows for its 1994 air show. The award was named in honor of a former *Blue Angel* and DoD Aviation Support Liaison Officer and recognizes military public relations activities which go far beyond the traditional base/community relations. The show was attended by 1.3 million spectators, involved more than 1,000 civilian volunteers representing 45 different organizations and was sponsored by 34 national, regional and local businesses. Additionally, it provided a special free show and over 5,000 free lunches to mentally and physically challenged children, senior citizens, school groups and their families.

The **VAdm. Robert B. Pirie Air Traffic Controller of the Year** and the **VAdm. William P. Lawrence Air Traffic Control Technician of the Year** awards were respectively presented to AC1(AW) Victor O. Roman of NATTC Millington, Tenn., and Sgt. Richard Gunn of MATCS-38, Det C,

Left to right: AC1(AW) Roman, Sam Evans of Telephonics Corp. and Sgt. Gunn.



MCAS Camp Pendleton, Calif. The awards are sponsored by Telephonics Corp.

All aircrew of VAQ-136 on their last deployment to the Arabian Gulf received the **Strike Flight Air Medal** for missions in support of Operation Southern Watch over Iraq.

The 1994 recipients of the **National Air and Space Museum Trophy** are Michael H. Carr for Lifetime Achievement and Patty Wagstaff for Current Achievement. Sponsored by the Martin Marietta Corporation, the award was established in 1985 to recognize extraordinary service in air and space science and technology. The recipients are chosen by a nine-member selection committee.

NAS Oceana, Va., was selected as a **Virginia Green Community** award winner by the Virginia Urban Forest Council.

LCdr. Markham K. Rich was awarded the Naval Postgraduate School **Space Systems Operations Award for Academic Excellence**. He graduated with a master's degree in systems technology with a grade point average of 3.97.

RAdm. William B. Hayden, Chief of Naval Air Training, was selected as a **Laurel Award** winner by *Aviation Week and Space Technology* for his leadership in establishing joint Navy/Air Force pilot and navigator training.

Tripoli (LPH 10) won the **Navy Energy Conservation award**.

Helicopter Association International awarded the **1994 Igor I. Sikorsky Award for Humanitarian Service** to a crew from CGAS Elizabeth City, N.C., for a dramatic night rescue of a disabled sailboat crew in 60- to 70-knot winds and 25-foot seas. The crew consisted of LCdr. Bruce Jones, Ltjg. Mark Collier, AE3 Thomas Parker, ASM2 Scott Adlon and AT2 Matthew Moyer.

Records

Several units marked **safe flying time**:

Unit	Hours	Years
HMH-772	20,000	13
HS-7	15,000	4
HSL-47	47,000	7
NAF Mildenhall, UK	85,000	35*
VAW-114	46,685	24
VMFAT-101	70,000	
VP-16	200,000	
VS-31	100,000	25

* longest of any Naval Aviation unit

Anniversary

NADEP Cherry Point, NC, 51 yrs.

Special Records

Cdr. Rivers Cleveland, VA-52 CO, made his 700th *Kitty Hawk* (CV 63) landing.

LCdr. Edmund K. Rybold, Jr., HSL-44, surpassed 2,500 SH-60B flight hours.

PHAN Charles L. Withrow



America (CV 66) logged her 300,000th trap 19 November 1994. Ltjg. Dan Martin, flying an A-4 *Skyhawk* from VT-7, trapped the number 4 wire 29 years and 7 months after the first trap, also accomplished in an A-4.

Cdr. R. N. Schwenk, VQ-6 CO, accomplished his 4,000th flight hour flying EA-3B and ES-3A aircraft 6 December 1994.

Lts. Dan Brown and Scott McClure, VA-115, surpassed 1,000 A-6E flight hours.

Cdr. Pieter Vandenberg, VA-95 CO, marked his 3,000th A-6E flight hour 5 December 1994.

VS-21 CO **Cdr. Dwight L. Cousins** logged his 3,000th and **Lt. Rich Moormann** his 1,000th S-3 flight hour during the same flight.

Lt. Jim Hogan, VAQ-139, completed his 1,000th EA-6B flight hour.

Lt. Steve Starboard, HC-11, surpassed 1,000 H-46 flight hours.

Rescues

NAS Fallon, Nev., Search and Rescue (SAR) helped rescue a lost eight-year-old boy on Christmas Day. He had been missing for over 24 hours in snowy woods southeast of Lake Tahoe, Calif. The child's footprints were spotted by the SAR team—consisting of Lts. Preston Spahr and Mark Winter, AMS2 Sam Cox, AMS3 Tom Lacey and HM3 John Warfield—while flying a search pattern. A six-hour search of the area was eventually successful and the boy was

flown to a nearby medical facility for treatment. The Fallon team was called out again on 6 January and made another rescue after searching for and locating a skier who had become lost in the Alpine Meadows ski area of Lake Tahoe. He was found after being lost for 40 hours in 5- to 6-foot-deep snow. The team landed their UH-1N "Huey" on its belly in the snow and HM3 Bill Schieding donned snowshoes and trudged 150 yards through the snow to the victim, who was unable to walk. The aircraft hovered 100 feet above and hoisted the victim and Schieding up to it. In addition to Schieding, the aircraft crew consisted of Lt. Dan Keohane, LCdr. Dan Rothenberger, AMS3 Joseph Coorough and AMH3 Jason Cassidy. A few hours after the rescue, a major winter storm blanketed the area with two additional feet of snow and 50-mph winds.

A crew from **HS-3** deployed on *Theodore Roosevelt* (CVN 71) rescued a sailor who washed overboard from *Battfish* (SSN 689) while their SH-60F was conducting underway personnel transfers with the submarine. The injured sailor tried to swim clear but was unable due to his injury and the suction from the sub's engine's draw. He was drifting toward the sub's turning prop when AW3 Rafael E. Garcia, the aircraft rescue swimmer, was lowered into the



An HS-3 SH-60F Seahawk flies past *Theodore Roosevelt* (CVN 71).

water to help pull the man clear. Both men were successfully hoisted into the aircraft at the last moment and the rescued sailor was delivered back to the submarine. Other aircrew members included CO Cdr. Jim Thompson, Lt. Kevin Bailey and AW1(AW) Paul White.

CGAS Miami and NAS Key West, Fla., Search and Rescue (SAR) conducted a joint rescue of 9 Belizeans and a dog on 14 November 1994 50 miles southeast of Key Largo, Fla. The two units fought 55-knot winds and 20-foot seas after the motor vessel *Jeano Express* ran aground. Tropical Storm Gordon had forced the tanker into shallow water, where a reef ripped a hole in the hull. Coast Guard Miami-based

Group 7 initially rescued six crewmen and the dog, leaving one of their crewmen behind on the tanker. The Group 7 crew could not return due to an aircraft malfunction; therefore, the Key West SAR UH-3 *Sea King* lowered its rescue swimmer into the water beside the pitching and rolling ship and, after some tense and heroic events, hoisted the remaining tanker crew members, Coast Guard crewman and the Navy rescue swimmer into the aircraft. The tanker's crewmen, who spoke no English and could not swim, had to be coaxed into the water for pickup.

A search and rescue (SAR) crew from **NAS Whidbey Island, Wash.**, made a mountain rescue of an injured hiker 29 December. One of two hikers attempting to climb Mt. Jupiter slipped, slid about 300 feet through rocks and snow, landed on a rock crevasse and suffered compound complex fractures of his right leg and a separated shoulder. The other hiker used his cellular phone to call the local county sheriff's office, which then called the Air Force Rescue Coordination Center in Langley, Va. They called NAS Whidbey Island SAR, who responded with their UH-3H within minutes. The crew of Lts. Pete Shumway and Randall Ingles, AD3 Patrick Gibbs, AMH3 Shawn Mosqueda and HM3 William Ballas searched visually for the hikers unsuccessfully. They then called the hiker back on their cellular phone and he guided the aircraft to their exact position at the 4,700-foot level. POs Ballas and Mosqueda were lowered to the injured hiker and they prepared him for hoisting. All four were then lifted up to the aircraft and delivered to the Harborview Medical Center in Oak Harbor.

An HC-5 aircraft out of Anderson AFB, Guam, evacuated over 40 people from Anatahan, Mariana Islands, 4 November because of a typhoon threat. The crew consisted of Lts. Larry McElvain and Jenny Walker, AD2 Casey Lulow and AMH3 Paul Howell.

An HH-46 from **HC-11 Det 4** rescued a man overboard while deployed aboard *Tripoli* (LPH 10). Launching on night vision goggles, pilot Lt. Kevin Hensley, copilot Lt. Shannon O'Neal, crew chief AMS2 Richard R. McClendon and rescue swimmer AMS3 Jeffery Hobbs proceeded to affect a flawless rescue on a dark and moonless night. While in a doppler hover, they deployed

the rescue swimmer and saved the Marine, returning to the flight deck within minutes.

Scan Pattern

The **NAS Patuxent River, Md.**, Combined Bachelor Quarters was officially opened and dedicated 13 December 1994 to Capt. Michael J. Smith, the pilot aboard space shuttle *Challenger* which exploded in flight 28 January 1986. Capt. Smith was a graduate of U.S. Naval Test Pilot School Class 66 and was assigned to the Strike Aircraft Test Directorate at NAS Patuxent River from 1976–1977. The \$5-million building project began in July 1992.

Naval Air Warfare Center Aircraft Division, NAS Patuxent River, Md., began a Personal Excellence Partnership with the Maryland Tomorrow Program, a dropout-prevention initiative. Students are selected from Leonardtown and Great Mills high schools' grades 9 through 12 for mentoring, tutoring and career-awareness counseling as part of the program. Tutors meet weekly with selected students, and summer job opportunities are provided.

Ground-breaking ceremonies were held 10 January for facilities at **NAS Fallon, Nev.**, for the Navy's Fighter Weapons School (Top Gun), which will move from NAS Miramar, Calif., next year. A \$13.5-million hangar and ramp, \$7.5-million academic instruction building and \$17.7-million bachelor officers quarters (already under construction) will be built to house the new tenant.

VAW-113 home-based at NAS Miramar, Calif., joined with Jerabek Elementary School as part of the Partners in Education program.

The first of two C-20G aircraft arrived at its new permanent home, **MCB Hawaii**, 20 December 1994. The aircraft will be used to support various commands in the area. **MCAS Futenma**, Okinawa, Japan, also received its new C-20G *Gulfstream* jet to replace a CT-39 *Sabreliner*.

The **Association of Naval Aviation** set its 1995 convention/symposium "Proud Past—Challenging Future" for 17–21 May at the Radisson Mark IV Hotel, Alexandria, Va.

Members of **HC-2 Det 4** aboard *Mount Whitney* (LCC 20) took a break from Operation Uphold Democracy to brighten the walls of a classroom in Maragoane, Haiti. The 72-year-old Catholic school

was in dire need of repairs and the detachment assisted. Fifteen members of the det flew into the small town, boarded a U.S. Army Humvee for the ride to the school and spent the day painting the inside of the classroom before returning to the ship that evening.

Beginning in early 1996, **VFC-13** will transition to F-5 *Tigers* and relocate to NAS Fallon, Nev., from NAS Miramar, Calif. The F-5s will come from two disestablishing squadrons: VFAs 127 and 45, both based at Fallon. The change will allow the reserve squadron to pick up the adversary mission lost when the active duty squadrons are disestablished.

MCAS Beaufort, S.C., reactivated its **Marine Corps Aviation Association Squadron** and nicknamed it the "Santini Squadron." The squadron was deactivated in the mid-1970s. The new skipper is Col. Gary Van Gysel, USMC (Ret.).

An accident (see *NANews*, Jan–Feb 1995, p.6) involving a UH-1N from **HMLA-267**, which crashed 16 November 1994, claimed another victim when Capt. Thomas E. Torpy, USMC, died 23 November of injuries sustained in the accident. The training mishap occurred at Camp Schwab, Okinawa, Japan.

LCpl. Karri Holmes, USMC, became the first female navigator in the Marine Corps when she graduated from Marine Aerial Navigation School at Randolph AFB, San Antonio, Texas.

Mitscher (DDG 57), the seventh destroyer in the DDG 51 class, reported for duty and will be home-ported in Norfolk, Va. DDG 57 is the second Navy warship named to honor Adm. Marc Andrew Mitscher, a famed Naval Aviator and WW II aircraft carrier task force commander.

Capt. Miguel Ivorra became the first Spanish air force pilot to carrier qualify on a U.S. Navy aircraft carrier. Assigned to VFA-125 as an exchange pilot, Ivorra completed his carrier quals on *Abraham Lincoln* (CVN 72) in an F/A-18 *Hornet*.

Col. Robert Cabana, USMC, was named **Chief of the Astronaut Office** at Johnson Space Center, Houston, Texas. He replaced Capt. Robert Gibson, USN, who began training full-time to command the first shuttle mission to dock with the Russian Space Station Mir in late May 1995. Col. Cabana is a veteran of three shuttle missions since 1990.



AO3 Burleigh (left) and AO1 Huppman of VP-40.

On 22 November 1994, AO1 Donald Huppman and AO3 John Burleigh, VP-40, became the **last Aviation Ordnancemen (AO)** to fly aboard a P-3 as aircrewmembers. Recipients of a waiver to allow them to complete a deployment, the two ended 31 years of aircrew service provided by AOs.

NAS Whidbey Island, Wash., welcomed its newest squadron, **VQ-1**, 12 December 1994. VQ-1 moved from NAS Agana, Guam, where it had been home based since 1971.

Inchon (LPH 12) left Norfolk, Va., and will be in Pascagoula, Miss., for 13 months undergoing a \$29-million conversion into a mine countermeasures support ship (MCS 12). Ingalls Shipyard was awarded the contract to convert the ship into the first of its kind: the flagship and central command for mine countermeasures. That mission will involve repair and providing food, fuel and other supplies for minesweepers and associated aircraft. The ship will be extensively overhauled and fitted out with new equipment and modified to accommodate 138 female sailors scheduled to arrive over the next year.

Senator John S. McCain (R-Ariz.), a former Naval Aviator and Vietnam prisoner of war, was appointed **Chairman of the Aviation Subcommittee** of the Senate Armed Services Committee.

The infamous "**Hanoi Hilton**" Vietnam prison, real name Hoa Lo prison, has been destroyed to make way for a real hotel. A 22-story luxury hotel to accommodate the growing influx of tourists will occupy the spot where some American prisoners of war were kept shackled and subjected to torture, for years in many cases.

Enterprise (CVN 65) installed the first of many commemorative plaques to be placed over the stateroom of each pilot who lost his life or became a prisoner of war (POW) during the ship's six combat deployments to Southeast Asia. The first plaque marked the stateroom of Lt. Robert J. Naughton who returned, to help install the plaque, for the first time since he catapulted off the carrier 18 May 1967. He was shot down on that mission and

spent more than six years as a POW. His younger brother, Capt. Richard J. Naughton, is now the CO of *Enterprise*.

The **last F-16N Fighting Falcon** was farewelled from the Navy Fighter Weapons School (Top Gun), where it had served since 1987 as the school's adversary aircraft. Its speed, radar performance and agility ideally suited the *Fighting Falcon* for the adversary role, which has been taken over by F/A-18 *Hornets*.

Addendum

A Jan-Feb 1995 "People-Planes-Places" article stated the name of the first enlisted female combat flight engineer to qualify in an operational squadron: AD1(AW) Stephanie J. Bruno, of **active duty** squadron VP-24, designated 7 November 1994. However, AMS1 Mary Della Ebersole, of **reserve** squadron VP-62, received her designation 23 October 1994, becoming the **first enlisted female combat flight engineer in the U.S. Navy**.

Carolyn Russo, Smithsonian



VAdm. Donald D. Engen, USN (Ret.), is the current DeWitt C. Ramsey Fellow at the National Air and Space Museum. The fellowship was established under the will of Adm. Ramsey's widow "to improve the representation of U.S. Naval Aeronautics in the Museum." VAdm. Engen's career extended from a WW II dive-bomber pilot to retirement as Deputy Commander in Chief of the U.S. Atlantic Command and U.S. Atlantic Fleet. He was a member of the National Transportation Safety Board, Administrator of the Federal Aviation Administration and is a Fellow of the Society of Engineering Test Pilots.

Change of Command

CARGRU-4: RAdm. Robert Ellis, Jr., relieved RAdm. L. E. Allen, Jr., Dec 94.

Constellation (CV 64): Capt. Marc A. Ostertag II relieved Capt. Gilman E. Rud, 9 Jan.

CVWR-20: Capt. Robert McLane relieved Capt. Robert Hathaway, 10 Dec 94.

HC-6: Cdr. John M. Caram relieved Cdr. Kevin P. Dowling, 13 Jan.

HC-11: Cdr. Kenneth J. Bitar relieved Cdr. Richard Weyrick, 27 Jan.



F-16N Fighting Falcon.

HS-1: Capt. David R. O'Brien relieved Capt. John J. Waickwicz, 8 Dec 94.

HSL-49: Cdr. Paul M. Pietsch relieved Cdr. Zachary A. Henry, Jr., 16 Feb.

HSL-51: Cdr. John H. Bowling III relieved Cdr. David R. Landon, 12 Jan.

Kearsarge (LHD 3): Capt. Christopher S. Cole relieved Capt. David J. Montgomery, Jan.

NAVFITWPNSCOL: Cdr. Thomas W. Trotter relieved Cdr. Richard K. Gallagher, 16 Dec 94.

NAS Patuxent River: Capt. Elmer Standridge relieved Capt. Roger Hill, 18 Jan.

NR NAS North Island 0194: Capt. Russ Erickson relieved Capt. Jeff E. Wallin, 21 Jan.

NR NAVSPACECOM 0266: Cdr. Richard S. Ryan relieved Cdr. Stephen A. O'Brien, 30 Sep 94.

Tarawa (LHA 1): Capt. James A. Hayes relieved Capt. Raymond M. Wikstrom, 9 Jan.

TACGRUONE-0194: Capt. Alexander P. Huish relieved Capt. Tom Morton, 16 Jan.

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

VF-32: Cdr. Cary Silvers relieved Cdr. Allen Myers, 10 Dec 94.

VF-103: Cdr. Steven C. Schlientz relieved Cdr. Stanley S. Saunders, 20 Jan.

VFA-83: Cdr. Russell M. Ziegler relieved Cdr. Dale E. Lyle, 26 Jan.

VFA-94: Cdr. Matthew Pasztalaniec relieved Cdr. Jeff Ashby, 12 Jan.

VFA-151: Cdr. Tom Heigl relieved Cdr. Thomas W. Trotter, 5 Dec 94.

VFA-192: Cdr. John L. Green relieved Cdr. Craig T. Cuninghame, 15 Dec 94.

VMFA-314: Lt. Col. Timothy P. Hughes relieved Lt. Col. Gregory G. Rath, 18 Nov 94.

VR-40: Cdr. John Fitzsimons relieved Cdr. Randall Hamilton, Dec 94.

VT-19: Cdr. George A. Montgomery relieved Cdr. Brett B. Bernier, 20 Jan.

VTC-1294: Cdr. Kevin R. Skjei relieved Cdr. Bruce E. Dehner, 16 Jan.

Wasp (LHD 1): Capt. Raymond Duffy relieved Capt. Robert Chaplin, Dec 94.

Vapor Trails

The following begins a new column, to be run periodically, which relates an interesting/humorous personal experience/anecdote involving Naval Aviation.

In the summer of 1991, an A-6 from Attack Squadron 95 experienced a partial ejection and landed aboard *Abraham Lincoln* (CVN 72) with the bombardier navigator (BN) protruding about four feet outside the aircraft in his ejection seat. The PLAT [pilot landing aid television] tape is nothing short of awesome. I was the senior air wing landing signal officer on *Lincoln*. I waved the pass [controlled and graded the approach and landing].

After the aircraft landed, the BN was taken down to medical (all of us flight deck observers thought he was dead) prior to medevac to the beach. When I found out from the squadron CO that he was still alive, I hurried down to medical to see him.

He was lying on one of those steel tables getting stitches in his upper arm to close a significant gash he'd gotten from the plexiglass shards of the broken canopy. He was a little beaten up, bruised and battered, but awake.

I leaned over into his line of vision and

he grinned at me. Somehow, he knew I had waved the pass and he thanked me for "getting him aboard." He asked what I gave his pilot for a grade.

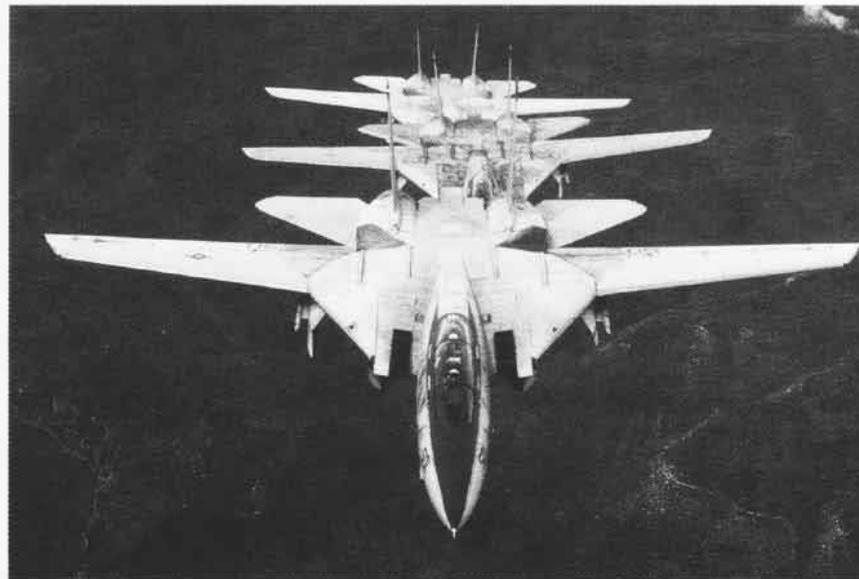
I replied, "I gave him an 'Okay, underlined,' of course!"

He smiled wanly and said, "From where I was, it *looked high all the way.*"

The wry humor of carrier aviators never dies, no matter how bad it is!

Submitted by Cdr. Mike Manazir, Aviation Liaison Officer, Office of the Assistant Secretary of Defense—Public Affairs.

ANA Bimonthly Photo Competition



1994 Annual Winner

Ted Carlson "caged" these VF-41 F-14 Tomcats over Colorado, while en route to NAS Fallon, Nev.

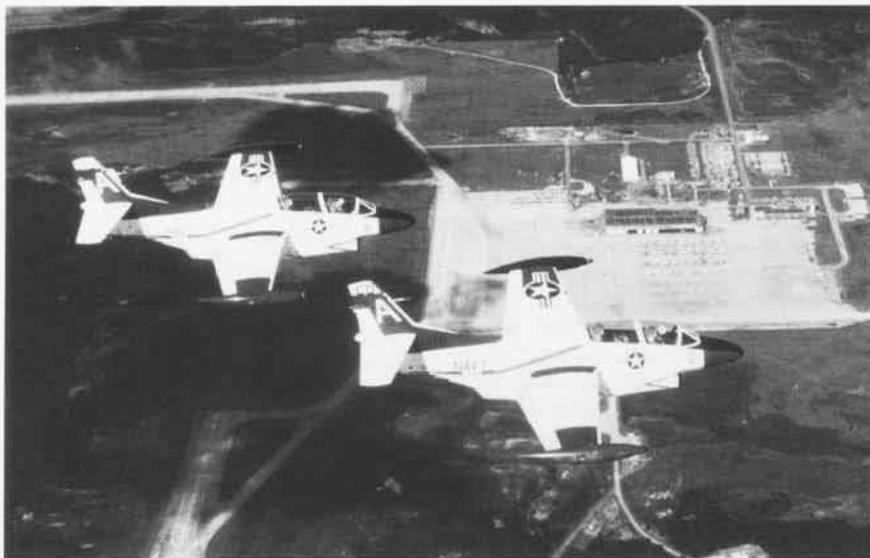
Sharon C. Solorzano waited patiently aboard USS *Coronado* long enough to capture the Blue Angels and Old Glory together over San Francisco, Calif.

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.

Joint Navigator Training Update



T-2C Buckeye jet trainers provide students with their first look at the world of carrier aviation.

Robert L. Lawson

By LCdr. T. B. Floyd

The following article updates information that appeared in the Sep-Oct 94 issue as part of "The New Naval Air Training Command" feature.

Jointness has come to Naval Flight Officer (NFO) and USAF Navigator (NAV) undergraduate training. The first of 32 USAF students planned for FY 1995 arrived at Training Squadron (VT) 10, NAS Pensacola, Fla., in October 1994. In 18 months, this syllabus will expand to include the entire primary NFO/NAV training requirement of the USAF, USN, USMC and foreign military sales.

The joint NFO/NAV training pipeline will be streamlined. All NFO/NAV students begin with six weeks at Aviation Preflight Indoctrination (API) at the Naval Aviation Schools Command in Pensacola. At the completion of API, NFO/NAV students commence primary training at VT-10. The students learn visual flight rules and basic airmanship during 14 weeks and 22 flight hours in the T-34C.

After completing primary, initial track selection takes place to choose tactical navigation, or maritime/panel navigation for students destined to fly C-141, C-135, B-52, E-3A, P-3C, E-6A, EP-3 and C-130 aircraft. Those selected for the maritime/panel pipeline transfer to Randolph AFB, Texas, and continue with 22 weeks of Specialized Undergraduate Navigator Training in the T-43, a militarized Boeing 737. The training emphasis is on the unique navigational requirements for overwater/overland flight. All students

are awarded their wings upon graduation.

Tactical navigation students continue training at VT-10 with the 14-week intermediate syllabus flying the T-34 and introducing the USAF T-1A *Jayhawk*, a militarized Beech 400A business jet currently used in USAF tanker/transport training. At VT-10, the T-1A will be used to introduce tactical NFO/NAV students to multiseat jet aircraft, crew coordination and low-level and airways navigation training. Following graduation, track selection for the tactical jet and Aviation Tactical Data System (ATDS)/Electronic Warfare Officer (EWO) pipeline is con-

ducted. Navy students selected for the ATDS pipeline transfer to Carrier Airborne Early Warning Squadron 110, the E-2C fleet readiness squadron, and the USAF EWO (B-52, RC/EC-135, EC/MC-130) students begin electronic warfare training at Corry Station, Pensacola. Upon graduation, these students attend their respective Combat Crew Training School.

Tactical jet navigation students begin advanced jet training at VT-86 in Pensacola. The VT-86 syllabus includes strike and strike fighter training flying the T-39N *Sabreliner* and T-2C *Buckeye*. The T-39N is a multiposition jet aircraft, and the two-seat T-2C has been used for intermediate tactical jet training for 20 years. Together, these aircraft are used to teach advanced tactical crew coordination and low-level and air-to-air intercept procedures.

Joint NFO/NAV training is an exciting development in the future of military aviation. Through joint operations, we will continue to improve and strengthen our war-fighting capabilities. ■

LCdr. Floyd is the VP/VS Training Sponsor/Undergraduate NFO Programs Sponsor for the Director, Air Warfare, in the Office of the Chief of Naval Operations.



Training Air Wing 5 T-34C Turbo-Mentor aircraft lands aboard NAS Whiting Field, Fla., following completion of a student naval aviator training flight.

Changing Times for "Professional Reading"

By Cdr. Peter B. Mersky, USNR (Ret.)

When we first started this column in 1985, we kept each review short and sweet. At first, this seemed satisfactory. However, occasional reader feedback said, "Everything you write about a book is good. Don't you ever find something wrong?" I decided to interject a point of "constructive criticism" from time to time.

I felt good, actually more credible, about upgrading my reviewing style, while honestly trying to limit my criticisms. But, in the last few years, I have become aware of growing trends in the aviation publishing industry that include poor layout and photo printing quality and, most disturbing, a breakdown in editorial concerns.

Not only are such concerns my job as Book Review Editor of this magazine, but after looking at aviation literature for more than 40 years, I know what I like to see in such publications. I hope that my strengthened write-ups are guides for the reader—and for the publishers.

The opinions are strictly mine, of course, and not associated with any other authority or organization. Aviation has been my life, and I would not have it any other way. I value the associations and contacts that I have made through the years. I have written many articles and several books and like to think that I put the same amount of effort into the research and fine tuning of each as I demand from the authors and publishers of the books I discuss.

I believe the aviation publishing industry today needs an enhanced sense of value. With rising book costs, the reader must spend an average of \$30 for a 200-page book. For this expenditure, one should expect well-reproduced

photos, good layouts that take advantage of the fine photography and adequate printing on quality paper.

Authors and their publishers should also be concerned about producing books in new areas of interest and steering clear of the sensational journalism that has characterized a portion of military writing in the early 1990s.

I am truly sympathetic to the hard-working authors who strive to get their many years of dedicated research into print. Like any form of public display, or product manufactured for public consumption, writing books is risky. The kudos are satisfying, but the criticisms can be harsh. I try to give each author a fair shake; although, like any other consumer, my expectations can be high.

The huge number of photo-books—beginning long before Heatley's *The Cutting Edge*—stifles honest research and writing. As I stress in my reviews, good photography is always desirable and certainly contributes directly to the success and value of the overall effort. However, publishers should be satiated with photo essays.

Solid biography, in-depth historical research that raises new corners of the carpet, and succinct, knowledgeable commentary on current matters are the backbone of military literature. I've noted many examples of all three types since we started this column. I believe there's a vast number of subjects out there to which a good author can devote time and skill, and a publisher should know about that topic and understand how to present it to the reader who buys the finished book.

Bruce, LCdr. R. W., USNR (Ret.), and LCdr. C. R. Leonard, USN (Ret.). *Crommelin's Thunderbirds: Air Group 12 Strikes the Heart of Japan*. U.S. Naval Institute, Annapolis, MD 21402. 1994. 228 pp. Ill. \$26.95.

Written by two former Naval Aviators, veterans of the action they describe, this short memoir is full of personal recollections of the last year of the Pacific war. Officer pilots and enlisted aircrewmembers tell their experiences flying fighters and dive-bombers against the remainder of the Japanese fleet and shore installations, including the first carrier raids against Tokyo in February 1945. The text discusses the introduction of early G-suits, now a staple of flight gear. The war moves closer to the Home Islands, and the book highlights action at Okinawa and against the growing kamikaze threat.

It's a nice little book but somewhat overpriced. The title is a little misleading, too. Although Air Group Commander

Crommelin occasionally appears, there is little personal detail about this member of one of the Navy's most illustrious families of the period.

An odd point is the declaration that Nakajima's Ki.84 fighter was derived from Germany's Focke-Wulf 190. Never heard that one! Both were great planes and, indeed, if the Ki.84 (code-named "Frank") had appeared earlier and in larger numbers, Allied airmen might have had a tougher time of it. But there's little to link the two types other than their big radial engines.

Maps and photos illustrate the narrative. There are several interesting views of aircraft on USS *Randolph* whose *Hellcats* had to be among the most ornately marked of any Pacific F6Fs. This book fits well within this period of WW II 50th anniversary memoirs.

In Sympathy

The staffs of the Naval Aviation News and Naval Aviation History branches of the Naval Historical Center extend their condolences to Capt. Ted Wilbur, USNR (Ret.), on the loss of his wife, Maureen, whose battle with lung cancer ended 4 January 1995. She is also survived by a daughter, Lorna, and son, Morgan.

Kitty Hawk

I'm writing to express my feelings about the extraordinary artwork that went along with the "Fearless Firefighters" story on the *Kitty Hawk* F-14 incident ("Grampaw Pettibone," *NANews*, Nov-Dec 94, p. 3). My first thoughts were, "How did they ever get that photograph?!" I don't know what the original rendering looks like, but . . . please pass on my sincere compliments to Ted Wilbur.

David Skepner
One Music Circle South
Nashville, TN 37203

Ed's note: I've passed on your comments to the artist, retired Capt. Wilbur, who illustrates the "Grampaw Pettibone" column. We agree. His ink drawing is "extraordinary"!

Quonset Air Museum

The Quonset Air Museum (QAM), located at the former NAS Quonset Point, R.I., is seeking the following memorabilia: NAS insignia, squadron photos/patches/plaques, pilot logbooks and cruise books. Also, the QAM History Center is seeking pilots who flew: TBM-3E BuNo 53914; F6F-5 BuNo 70185; A-4C BuNo 147790; A-4F BuNo 155027; A-4M BuNo 158148; A-6E BuNo 159179; SH-3H BuNo 149687; and F3D-2 BuNo 124620.

Any donations to the QAM are tax deductible. All donors will receive a complimentary QAM membership, which includes unlimited free visits to the museum and our quarterly newsletter, *The Quonset Scout*. Call 401-294-9540 or write:

Quonset Air Museum
ATTN: Howard Weekley, Jr.
PO Box 1571
North Kingstown, RI 02852

Call for Papers

The Naval Academy's History Department will sponsor the Twelfth Naval History Symposium on 25-27 October 1995. Individuals who wish to propose a paper or an entire panel should submit

an abstract of approximately 250 words to: Dr. William B. Cogar, Department of History, U.S. Naval Academy, Annapolis, MD 21402-5044. Those who presented papers at the 1993 symposium are not eligible to do so this year, but they may serve as moderators/commentators. **Deadline for proposals: 1 May 1995.**

Military Historical Tours

In cooperation with the Department of Defense's 50th Anniversary WW II Commemorative Committee, Military Historical Tours has formulated a series of historic travel programs through which WW II Pacific veterans can make pilgrimages back to the islands, campsites, cities, towns and battlefields where they served. For information/upcoming events, contact: Military Historical Tours, 1500 King St., Alexandria, VA 22314, 703-739-8900 (Fax 703-684-0193).

Wanted

Seeking assembled/unassembled model kits of escort carrier hull numbers CVE 55 through CVE 104. Contact Robert E. Holmbeck, 2596 Moundview Dr., Mounds View, MN 55112.

Researcher wants to contact Navy flyers in the Solomons in WW II, particularly from squadrons: VD-1, VBs 101, 102, 104 and 106, VS-64, VF(N)-75 and other VP and VBP units. Contact Peter Woodbury, G.P.O. Box 2601, Sydney 2001, Australia.

Future NANews Staffer?

A new prototype was recently added to the *NANews* family. On 29 December 1994, the XNU-B8B *Hayden Blake Towler* was launched at Bethesda Naval Hospital, weighing in at 7 pounds, 11 ounces. His designers, Assistant Editor JO2 Blake Towler and his wife, Cécile (who was in charge of production), were pleased with the initial testing phase and expect rapid development.

Reunions, Conferences, etc.

VAW-125 reunion planned, Spring 1996. Squadron plank owners and former COs please contact: Ltjg. Dermody, 804-444-2456/4704.

National Helicopter Association symposium, 21-24 MAR, NAS Jacksonville, FL. POC: Lt. Chris Schaier, HSL-40, 904-270-6640 or Lt. John Freeburg, HS-1, 904-772-2581.

HMX-1 reunion, 7-9 APR, Quantico, VA. POC: Reunion Committee, HMX-1, 2102 Rowell Rd., Quantico, VA 22134-55061, 703-640-2422.

Dakota Bull Session VI & Maritime Museum Association reunion of men and women who have served in the Armed Forces, 21-23 APR, Devils Lake, ND. POC: Carl V. Bloomquist, POB 626, Devils Lake, ND 58301, 701-395-4359.

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.

Global Air and Space '95 International Business Forum and Exhibit, 2-4 MAY, Arlington, VA, 800-707-2345

Navy Vets of WW II-Europe/VE Day reunion, 3-9 MAY, London, England. POC: Col. Paul R. Flebotte, POB 3397, Laurel, MD 20709-3397, 703-739-8900.

Air Group 33 (WW II) 50th anniversary of kamikaze attack reunion, 4-7 MAY, Norfolk, Va. POC: Scott Young, 115 Kitty Hawk Bay Ct., Kill Devil Hills, NC 27948, 919-441-6289.

Ticonderoga (CV/CVA/CVS 14, CG 47) reunion, 4-7 MAY, San Diego, CA. POC: Charles Large, 31 Lowe Ave., Stoughton, MA 02072, 617-344-3461.

Rendova (CVE 144) reunion, 11-13 MAY, Denver, CO. POC: Billy J. Evans, 6310 Kaybro St., Laurel, MD 20707-2621, 301-953-7589.

Vigilante Community (A-5/RA-5C) reunion, 11-14 MAY, Pensacola, FL. POC: Frank Hamrick, POB 34228, Pensacola, FL 32507, 800-359-1844.

Lexington (CV 2) Club reunion, 17-20 MAY, Jacksonville, FL. POC: Walt Kastner, USS Lexington (CV 2) Club, 466 Ivy Glen Dr., Mira Loma, CA 91752, 909-681-1101.

Roosevelt (CVB/CVA/CV 42) reunion, 17-21 MAY, Virginia Beach, VA. POC: Robert McCauley, 1987 Bucknell, Chula Vista, CA 91913, 800-437-0869.

CASUs 16/17 Tarawa Island/CASU "F" 44 Tinian Island reunions, 18-20 MAY, Folsom, CA. POC: Robert A. Bado, 3515 Fort Jim Rd., Placerville, CA 95667, 916-621-3953.

Ranger (CV/CVA 61) reunion, 18-21 MAY, Pensacola, FL. POC: George Meoli, 1740 Durham Rd., Guilford, CT 06437.

Breton (CVE 23) reunion, 25-28 MAY, Seattle, WA. POC: Rick Coffey, 3466 Lister St., Conover, NC 28613.

Hornet (CV 8)/Mustin (DD 413) survivors reunion, 28-31 MAY, La Crosse, WI. POC: Elmo Wojahn, RR 3 Box 37, Houston, MN 55943, 507-896-3418.

Aerospace Atlantic and National Aerospace & Electronics Conference, 22-26 MAY, Dayton, OH. POC: Karen Mong, 412-772-7120, or Gayle Reagan, 513-255-8056.

EA-6B Prowler Tactical Electronic Warfare symposium, 23-25 MAY, NAS Whidbey Island, WA. POC: Lt. Tim Biller, Symposium Coordinator, DSN 820-2793, Comm 206-257-2793.

NAVAL AVIATION NEWS

March-April 1995

