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MORGAN IAN WILBUR 019

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FRONT COVER – Artist Morgan Wilbur's painting depicts the following flight from Henderson Field, Guadalcanal, on August 28, 1942: Flying a Douglas SBD *Dauntless* dive-bomber, Ensign Harold "Hal" Buell, with gunner ARM 3/C John Villarreal, attacked the Japanese destroyer *Shirakumo*. At dusk, they scored a direct hit on the warship, seriously damaging it and causing a great loss of life to the enemy. The SBD's aircrew then returned safely to their base.

RAdm. Riley D. Mixson
 Director, Air Warfare

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By RAdm. Riley D. Mixson

Director, Air Warfare

The Next 20 Years

A familiar warning to leaders in any endeavor is that if you do not take control of events, they will take control of you. That could never be truer than today, as Naval Aviation considers its future in the downsizing defense structure, with its attendant budget dilemmas and reconsideration over roles and missions.

To lead Naval Aviation into the future, the Naval Aviation Advisory Board, comprising 25 of our top aviation combat experienced leaders, recently reached a consensus on recommendations to the Chief of Naval Operations (CNO) to guide Naval Aviation for the next 20 years. The consensus of the advisory board is that Naval Aviation's top procurement priorities remain the FA-18E/F, AFX, and CVN 76. The most difficult and agonizing decision for the Air Board was how to recapitalize Naval Air to enable the things we need to do to arrive in the year 2010 with a robust 12-carrier fighting force.

In that context, the recent budget cuts, proposed downsizing plans for Department of the Navy, and the redefinition of the Navy's air power role – as described in our "...From the Sea" strategic plan – forced us to review the structure of our carrier-based strike force. The elimination of an aircraft type to achieve budget goals while maintaining the best possible fighting force on our forward-deployed carriers was determined to be the most cost-effective solution.

The A-6E was chosen as the major TMS (type/model/series) to reduce because of its age, and limited survivability and growth for the future, even with the upgraded Block 1A modification scheduled to commence later this year. This upgrade was intended to introduce operational, reliability, and maintainability upgrades to aging aircraft systems in order to sustain operations until the A-6E could be relieved by the AFX, now scheduled late in the next decade. The operating costs of the A-6E are increasing due to the high maintenance manpower costs associated with aging system components. Removing this aircraft from the inventory, at a rate of two squadrons per year for the next six years, allows us to suspend costly planned modifications, curtail manufacture of wings, and save sig-

nificantly in operational and support costs.

The F-14 was chosen over the A-6E because it is a supersonic aircraft with superior air-to-air and an effective VFR (Visual Flight Rules) air-to-ground capability. Modest improvements to a significantly reduced force of 210 aircraft (one 14-plane squadron for each wing) will enable an effective, day/night smart bomb strike capability, fulfilling its potential as a highly survivable and self-escorting multirole aircraft, with the same bombing capability as the F-117. Modifications will be limited to incorporating a precision laser-guided bomb capability and off-the-shelf improvements to countermeasures against surface air defenses. These changes will result in an all-dual-mission carrier strike force of F-14s and USN/USMC FA-18s, which will expand the flexibility of the naval expeditionary force and greatly enhance its capabilities.

A net development and modification cost saving will be achieved by eliminating the A-6E Block 1A modification and substituting the modest F-14 strike modification. A net operating cost avoidance for the carrier force will be achieved by eliminating a complete aircraft type, with all of its unique support structure. The plan is cost effective and affords considerable long-term savings to sustain the APN (Aircraft Procurement, Navy) plan to include the FA-18E/F, AFX, V-22, and the remanufactured AV-8B. It reflects the tenets in "...From the Sea."

Rest assured this was not an easy decision for us. The A-6 community has been impressive from the get go, seeing extensive combat in Vietnam and Desert Storm. We take some risk in giving up the all-weather, terrain-hugging, low-level mission; however, that risk is acceptable given the projected threat for the next 15 years and especially so when considering the lack of survivability of any aircraft flying that mission profile against many of the third world threats we could be faced with. Rest assured, the A-6 community will be well taken care of, and for you F-14, FA-18, EA-6B, and S-3 bubbas, expect to see some mighty fine A-6 crews coming into your squadrons in the near future.

We are also working hard to reduce the age and expense of our other aircraft in-

ventories by recommending accelerated phaseout of other type/model/series, including the SH-2, SH-3, and P-3B. The Naval Air Systems Command's Health of Naval Aviation program and service life extensions are prolonging the life of our other aircraft, and we will continue to modernize many of them.

Force-level reductions, in conjunction with USMC integration and more effective use of the Reserves on a day-to-day contributing basis, will enable a very capable power projection air wing, while necking down our overall operational and support costs.

Incorporating the Naval Air Reserve into adversary and FTRG (Fleet Tactical Readiness Group) missions has enabled us to cut back on active squadrons. The Reserve will also assume more of the drug interdiction mission, and supplement the mine countermeasure, carrier-onboard-delivery, and helicopter combat support missions.

Economies will also accrue in joint procurement, the wave of the future. The AFX and JPATS are joint with the Air Force. All future weapons programs will be joint. The advanced Bomb Family is now part of the Joint Direct Attack Munition program, and the Joint Standoff Weapons Program now includes the Advanced Interdiction Weapons System. The AMRAAM missile program will incorporate seeker and propulsion technology gained from the Navy's canceled AAAM program, and we have drafted a joint requirement with the Air Force for the next-generation Sidewinder, the AIM-9X.

As we neck down the force with vigor, we will still maintain our concern for people – the Navy's most precious asset. Career opportunity in Naval Aviation will remain but become even more competitive than in the past. By proceeding with the hard decisions today, Naval Aviation will still be a great profession tomorrow.

The CNO's vision of future naval operations, as laid out in "...From the Sea", involves sustainable naval expeditionary forces shaped for joint operations, optimized for littoral warfare, and able to project power through the complex sea-land interface. We are on the road to achieving just that. Keep the faith and keep 'em flying safely.

Waiting Game

An instructor and two student Naval Aviators were on a four-leg cross-country from NAS South to NAS North in a TH-57 *Sea Ranger*. All had family in the destination area. Wrote one of the student participants about the flight, "We got together at O dark thirty for planning the journey and after some creative math, we came in just under max gross weight."

Not long after launch, the crew noticed that vehicular traffic seemed to be moving as fast as the helo. Turned out that ground speed was barely 75 knots, the winds were stronger than anticipated, and they would be cutting it close to reach planned stop number one. A closer airfield was selected for the first refueling. "All our tedious preflight planning was out the window," recalled the student. "While planning the next leg, I agonized over the charts and [instrument flight rules] supplements – but they were difficult to read because they were vibrating in rhythm with the aircraft. Three pen drops and numerous chart folds later, I had a plan."

Upon reaching stop number two, the *Sea Ranger* was directed to hold, in deference to airliners landing at the airport. The TH-57 was approaching a low-fuel state when it was finally cleared in. At this point, the crew was beginning to tire and considered terminating the trip and returning to home base, but because "family was waiting," they decided to continue.

It became dark during leg three. "In the back seat, working on the flight logs, I added a flashlight to my juggling act," wrote the student. "But the light began to flicker constantly and increased the size of my headache." By now, the crew was developing a real case of fatigue.

"At stop three, a major-size international airport, our TH-57 hovered momentarily in the wake of a landing 747 amidst a whirlwind of flying grass, scraps of paper, and assorted FOD [foreign object damage] material brilliantly illuminated by our spotlight. I was convinced the engine would ingest something large enough to destroy it, but we landed safely nonetheless. I was worn out and I'm certain my instructor was, too. We looked at each other with glassy eyes and tossed around the



idea of remaining overnight. But since we were close to the final destination – and our families were waiting – we pressed on."

En route to stop number four, the *Sea Ranger* flew toward a restricted area and received a caution from air traffic control. This angered the instructor. Wrote the student: "He passed me the controls and snapped the map out of my hands all in one quick motion. All I could think about was how painful it would be if we got a flight violation."

Thankfully, the TH-57 was given a vector to clear the restricted area. The instructor's temper subsided. The helo

continued and landed uneventfully at the destination airport five minutes before it was officially closed for the day. The student went off with his father and fell asleep in the car within five minutes – after not having seen his Dad for a year.

To his dismay, the instructor learned that all rent-a-car offices were closed, leaving him no choice but to stay at the airport until the next day.

"If we'd had an in-flight emergency, I doubt any of us would have been sharp enough to handle it properly." So concluded the student Naval Aviator.



Grampaw Pettibone says:

You got that right! So concludes Ole Gramps.

The phrase "family is waiting" equates to "get-home-itis," a phenomenon that has been singing my whiskers since ole Gramps was a nugget. These fellows pushed it and got away with it. Dumb luck prevailed. Now let's learn from the mistakes of others: have a plan, stick to it, use common sense. "How will I explain all this to the accident board?" is a good question to ask if it ain't all comin' together right.

A tip of Gramps' leather helmet to Ensign Joseph A. Vasile.

Helo Horror

A UH-46D *Sea Knight* was on a night vertical replenishment (vertrep) mission



overseas. The pilot at the controls (PAC) and pilot not at the controls (PNAC) briefed in the cockpit. Emergencies, including use of emergency throttle, were not discussed. Also onboard were the crew chief and the second crew member (SC).

They flew at altitudes from 25 to 125 feet moving stores between two ships. The receiving ship's flight deck was 12 feet above the surface. The aircraft encountered light salt spray during the sortie.

The *Sea Knight* departed one ship for the other, 300 yards away. After traveling a third of the distance, the PAC noted that rotor speed was at 98 percent and dropping. The PNAC saw 88 percent rotor speed but did not report this over the intercom. The PNAC used the "beep" trim switches for about six seconds to adjust engine condition actuators and rotor speed/free power turbine speed to maximum, then reported going to max beep.

"We should pickle the load," said the PNAC.

"I think I can save it," said the PAC.

The crew chief advised the second crewman to use the emergency cargo release to jettison the external load. The PNAC ordered, "Pickle the load," and the PAC began a climbing right turn, accelerating to 70 knots. The load fell clear.

The PAC armed the emergency throttle (ET) but did not recall reporting that he was doing so. This action converts the beep switches on the collective from engine trim functions to emergency throttle use whereby the pilot controls the fuel input manually. The PNAC did not know ET had been armed. The crew chief noted the engines accelerating, creating a "screaming" sound. The helo experienced a noticeable airframe shudder. Witnesses from a ship saw a flare-like object depart from the No. 2 engine compartment followed by an explosion and fireball. The crew chief saw the engine burst into flames with pieces coming from the exhaust area. He told the pilots to pull the fire T-handle for the engine, which the PNAC did, activating both fire extinguishing agent switches.

The PAC called, "Mayday," and began a turn back toward his ship. No. 2 engine was now at 10 percent free power turbine speed. The PAC observed No. 1 engine falling from 95 to 85 percent and told the crew it was also failing. At 100 feet of al-

titude, the PAC called for ditching. The helo struck the water upright but the cargo ramp departed the aircraft and the *Sea Knight* began to sink tail first, rolling left. The overhead cabin lights illuminated along with the HEELS (helicopter emergency egress lighting system), as advertised. The pilots and crew chief egressed safely, but the second crewman was lost at sea.



Grampaw Pettibone says:

Holy helos! What happened to aircrew coordination? Although this detachment was deployed on short notice, which prevented normal training evolutions, seems the crew could have at least conducted a complete briefing – 'specially on the subject of power failures and emergency throttle use. There was confusion in the cockpit over use of "beep" (engine trim) and the emergency throttle. The PAC armed the ET while the PNAC activated beep switches, causing the No. 2 engine to overtemp and explode. Plus, the PAC decreased collective with No. 1's ET actuator extended, causing the "good" engine to overspeed and flameout.

Ole Gramps admits this is an exciting scenario (night, low altitude) for engine failure that requires quick actions and correct procedures. But if the PAC and PNAC had had a better idea of what each other was going to do when

things started turnin' to worms, it sure woulda helped. The H-46 emergency throttle arrangement is confusin' enough – that's why it's practiced over and over – but fast hands in the cockpit never helped much that I can recall.

The second crewman was secured by his gunner's belt rather than the seat belt, as required, and knelt on the cabin floor as the helo descended. The investigators learned that the SC preferred being attached to the gunner's belt in emergencies, but NATOPS (Naval Air Training and Operating Procedures Standardization) says the SC should be seated with safety belt fastened.

Sea Knights and their vertrep crews perform hard, demanding duty at altitudes favored by only angels and birds. Ole Gramps salutes 'em. But they still need solid emergency briefings just like everybody else.



*Man-made
Mayday*



Kitty Hawk's Wing Punishes Iraqi Violations

Kitty Hawk (CV 63), on her first deployment in more than five years, sent her air wing, Carrier Air Wing (CVW) 15, into combat in January to punish Iraq for provocative violations of United Nations resolutions, in particular the "no-fly zones" established to protect Shiite and Kurdish minorities in the country.

Relieving *Ranger* (CV 61) on December 19, 1992, off Somalia, *Kitty Hawk's* aircraft assumed the missions of photoreconnaissance, armed reconnaissance, and show of force to discourage opposition to Operation Provide Hope, the effort to relieve mass starvation in the strife-torn country. The E-2Cs of Airborne Early Warning Squadron 114 provided vital air traffic advisory services to aircraft bringing troops and relief supplies into the country (see article, p.16).

When Iraqi jets violated the "no-fly zone" below the 32nd Parallel on December 27, resulting in the loss of a MiG-25 to an AIM-120 AAMRAM missile fired by a USAF F-16D, *Kitty Hawk* dispatched F-14A and FA-18A fighters to the region to beef up Operation Southern Watch coalition air patrols. The fighters

VFA-97 Executive Officer Cdr. Ernie Wattam flies his FA-18A Hornet over Gialalassi, Somalia, in support of Operation Provide Hope.

rejoined the carrier when she arrived in the Persian Gulf.

On January 13, 1993, more than 100 coalition aircraft, including 35 FA-18A, A-6E, F-14A, and EA-6B aircraft from CVW-15, struck surface-to-air missile (SAM) sites in the southern no-fly zone in response to continued Iraqi violations. All aircraft returned safely. Tomahawk missile strikes from Navy ships in the Persian Gulf and Red Sea against the Zaafaraniyah nuclear fabrication facility followed on January 17. CVW-15 was back in action on January 18 in strikes against command-and-control and SAM sites. On January 23, an A-6E of Attack Squadron 52 launched a laser-guided bomb at an anti-aircraft site after the crew thought it was being fired upon.

The *John F. Kennedy* Battle Group, deployed to the Mediterranean, moved to the eastern Med in late January in response to the Iraqi violations.

Chief of Naval Operations Adm. Frank B. Kelso praised the Navy crews: "I am proud of the performance turned in by our aviators as well as the crew of *Kitty Hawk* and individuals aboard other supporting ships in the Persian Gulf. This operation reinforces the importance of

firepower from the sea in dealing with problems in some of the world's most unstable regions. The unquestioned capability of our people, our platforms, and our procedures guarantees a quality Navy as a critical part of this nation's defense capabilities in the future."

Marine Helos Swirl over Somalia

Marine helicopters deployed to Somalia in support of Operation Provide Hope proved their worth in security and transport roles, with helicopter gunships occasionally called upon to combat armed vehicles opposing the relief efforts.

Initially, Marine Medium Helicopter Squadron (HMM) 164 (Reinforced) from Tripoli (LPH 10) provided all of the Marine helicopter support to ground forces in Somalia starting December 9, 1992 (see article, p.14). On December 12, a UH-1N "Huey" was slightly damaged by small arms fire. Shortly afterward, two AH-1W *Super Cobra* gunships were fired upon by Somali "technicals" – armed light trucks. The gunships returned fire, destroying two vehicles. A second pair of AH-1Ws destroyed an armored personnel carrier. Gunships opened fire again on January 7 against a weapons compound after U.S. troops were fired upon.

Units of the 3rd Marine Aircraft Wing (MAW) in California were dispatched to Somalia in late December, with the commanding general of the 3rd MAW, MGen. Harold Blot, being designated Joint Forces Air Component Commander and Air Control Authority in Somalia for Operation Restore Hope. Squadrons deployed with Marine Aircraft Groups 11, 16,

and 39, Marine Wing Support Group 37, and Marine Wing Control Group 38 to Somalia included Helicopter Light Attack Squadrons (HMLA) 169 and 369 with UH-1Ns and AH-1Ws; Marine Heavy Helicopter Squadrons 363 and 466 with CH-53Ds and CH-53Es, respectively; Marine Aerial Refueler Transport Squadron 352 with KC-130s; Marine Wing Support Squadron 372; Marine Air Logistics Squadrons 11, 16, and 39; Marine Wing Control Squadron 38; Marine Air Traffic Control Squadron 38; Marine Air Support Squadron 3; and Headquarters and Headquarters Squadrons 37 and 38.

The Marine helicopters were soon engaged in myriad tasks providing medical evacuations, reconnaissance, close air support, and logistics of every kind. On January 2, a UH-1N from HMLA-369 returned fire near Baidoa, Somalia, after being fired upon.

Ranger Leaves "Hope" in Final Wake

Ranger (CV 61), with Carrier Air Wing (CVW) 2 embarked, returned to NAS North Island, Calif., on January 31, 1993, from her final deployment, having supported U.S. relief efforts in Somalia and vigilance against Iraqi sanctions violations.

Relieving *Independence* (CV 62) in the Persian Gulf, *Ranger* launched combat air patrols over Iraq in support of Operation Southern Watch, and in December launched photoreconnaissance missions over Somalia before Marines landed there to restore order and relieve mass starvation there. E-2Cs from Airborne Early Warning Squadron 116 provided air traffic advisories for Operation Provide

Hope relief aircraft, and other CVW-2 aircraft flew armed reconnaissance missions in support of the Marines.

Ranger will be decommissioned this summer. CVW-2 will undergo significant change as it shifts to *Constellation* (CV 64), which completes the Service Life Extension Program in Philadelphia, Pa., and rejoins the Pacific Fleet this year. Fighter Squadrons 1 and 2 are slated to transition from the F-14A to the F-14D; Air Antisubmarine Squadron 38, which just completed the last S-3A deployment, will equip with the S-3B; and Helicopter Antisubmarine Squadron 14 will trade its SH-3Bs for the SH-60F and HH-60H. Attack Squadron (VA) 155 will be disestablished in April (leaving VA-145 as the sole A-6 squadron in the wing), and will be replaced by Strike Fighter Squadrons 137 and 151 with their new FA-18Cs.



VAW-116 E-2C Hawkeye

1992 Mishap Rate Below 3.00

The Navy/Marine Corps Class A flight mishap rate for CY 92 dipped below 3.00 for the fifth year in a row, finalizing at 2.99 mishaps per 100,000 flight hours. The rate was slightly higher than those of 1990 (2.96) and 1991 (2.86).

A total of 57 Class A flight mishaps occurred, which cost the lives of 67 personnel, down from 78 the previous year.

The Navy rate of 2.66 made 1992 the eighth consecutive year below 3.00, tying last year's rate as the fourth lowest on record. The Marine Corps rate of 4.23 was its fifth lowest on record.

Most noteworthy was the Marine Corps Reserve 4th Marine Air Wing's zero-mishap year.

SH-2G Enters Reserve Service

Helicopter Antisubmarine Squadron Light (HSL) 84 greeted its first SH-2G *Seasprite* helicopter (BuNo 163541) on December 14, 1992, at NAS North Island, Calif. The new *Seasprite* variant is replacing the SH-2F in the Naval Air Reserve's HSL squadrons.

Assisting in the transition, the SH-2G Fleet Introduction Team, led by LCdr. Mike Murphy, is a department of Commander Helicopter Wing Reserve. The team provides liaison, training assistance, publication development, and other support to squadrons receiving the new helicopter.

The SH-2G embodies several improvements over the SH-2F, with only the basic airframe, rotor, and flight control system carried over from the older version. The new T700-GE-401 engines drive a new gearbox, providing the ability to hover with one engine, out of ground effect, at maximum gross weight. On-board are the UYS 503 acoustic processor, 1553 data bus, ASN-150 tactical display, digital radar processor, ALQ-144 infrared countermeasures, ALE-39 chaff dispenser, and an integrated infrared detection set.

HSL-33 at NAS North Island was originally programmed to equip with the SH-2G, but will retain the SH-2F in view of force-level reductions in active ships that carried the SH-2F instead of the larger SH-60B, and the greater economies achieved by limiting use of the SH-2G to the Naval Air Reserve. A total of 24 SH-2Gs are planned, including six new production examples and 18 conversions from SH-2Fs, including prototypes.



(Artwork by Fred Church and Fred Olive)

Battlecats Get Block I Seahawks

Helicopter Antisubmarine Squadron Light (HSL) 43 became the first operational squadron to transition to the Block I upgrade to the proven SH-60B *Seahawk* helicopter. *Battlecats* CO Cdr. Frank E. Pagano officially accepted SH-60B BuNo 164177 at the IBM facility at Owego, N.Y., on August 6, 1992.

The Block I upgrade consists of the Global Positioning System (GPS), the Penguin antiship missile, and a 99-channel sonobuoy receiver system.

The GPS provides greatly increased navigational accuracy by automatically cross-fixing the aircraft's position anywhere in the world to an accuracy of three yards using satellites in orbit around the earth. The GPS also provides aircraft altitude, airspeed, and magnetic variation information corresponding to the aircraft's position.

The Norwegian-built Penguin is the first antiship missile approved for installation on Navy antisubmarine helicopters, giving the SH-60B a formidable offensive "punch."

The 99-channel sonobuoy receiver represents a major improvement over the 31-channel capability of earlier systems. The channel expansion enhances ability to monitor sonobuoys deployed from other aircraft and helps to eliminate radio frequency conflicts.

New Arctic Fox – Oceanographic Development Squadron (VXN) 8 took delivery on November 25, 1992, of RP-3D BuNo 154587 from Naval Aviation Depot, Jacksonville, Fla., which extensively modified the former P-3B to perform ice reconnaissance and surveys as part of Project Birdseye. The aircraft, the fourth Orion to bear the Arctic Fox cartoon over many years (worn previously by two RP-3As and one UP-3A), differs from its predecessors in that it is dual-mission capable, available for use in Project Outpost Seascan, an oceanographic survey normally handled by another RP-3D, BuNo 153443, bearing the cartoon character El Coyote. When VXN-8 is disestablished in late 1993, the RP-3D assigned to Projects Birdseye and Magnet will be transferred to the Naval Research Laboratory Flight Support Detachment, located at NAS Patuxent River, Md., along with VXN-8.

Also last year, the *Battlecats'* Detachment 10 deployed an SH-60B for a month of operations aboard HMAS Adelaide, an Australian *Oliver Hazard Perry*-class frigate, during a RIMPAC exercise.

(Thanks to Lt. Adam Taylor, HSL-43, for this report.)

NAWC Tests P-3 Counter-Drug Upgrades

Personnel of the Naval Air Warfare Center Aircraft Division (NAWC AD) at Patuxent River, Md., and Warminster, Pa., have been testing three avionics

upgrades to the P-3C *Orion* to enhance its effectiveness as a drug-interdiction platform. The upgrades are sponsored by Commander Joint Task Force 4 and Commander in Chief, U.S. Atlantic Fleet, and executed by the Naval Air Systems Command and NAWC AD.

Following engineering and feasibility studies, three systems were identified as excellent multi-mission enhancements: the APG-66 air intercept radar, the Cluster Ranger electro-optical system, and a dual-station communications system. For maximum flexibility under current funding limitations, the three systems are being packaged in a roll-on/roll-off configuration that can be used on any fleet P-3.

New Traverse Trial at Sea

George Philip (FFG 12) accomplished a Naval Aviation "first" on October 27, 1992, by becoming the first guided missile frigate not configured for the Recovery, Assist, Secure, and Traverse (RAST) system to land an SH-60B *Seahawk* at sea. The Naval Air Warfare Center Aircraft Division and Helicopter Antisub-

marine Squadron Light (HSL) 49 assisted in the test of an experimental lightweight traversing system installed aboard the ship.

Until now, only 26 of the 51 *Oliver Hazard Perry*-class guided missile frigates were capable of safely operating the SH-60B because they were equipped with the RAST system to land the helicopter. The new system, designed by the Naval Air Warfare Center Aircraft Division, Lakehurst, N.J., consists of a hard-mounted winch and dual cables that are connected to the deck by portable roller blocks. The blocks are hooked into the flight deck tie-down pads and may be shifted into various configurations to move the helicopter around the deck. Once the winch is in operation, the helicopter may be moved with only four personnel – a plane captain, winch operator, brakeman, and tail steering bar operator.

The tests ran for a two-week period during which the frigate performed landing trials to determine acceptable wind envelopes and demonstrated the ability to handle the SH-60B on deck and into the hangar in heavy sea states.

(Thanks to Lt. Joseph Desantis, HSL-49, for this report.)

New Cobra WST Delivered

The first AH-1W *Super Cobra* Weapons Systems Trainer (WST) was delivered in November 1992 to the 3d Marine Aircraft Wing (MAW) at MCAS Camp Pendleton, Calif., followed by delivery of the second in January 1993 to the 2d MAW at MCAS New River, N.C.

The AH-1 WST, developed by CAE-Link, is a complete advanced flight simulator for crews training to fly the *Super Cobra* in a wide variety of scenarios. The WST consists of separate trainer stations for the pilot and copilot and two 24-foot-diameter domes mounted on six-degree-of-freedom motion systems. Data bases for the WST include a variety of geographic areas and more than 50 threat target models, including aircraft, ships, and railroads, with each data base being night-vision goggle compatible.

New Radar IFF System Developed

The Microwave Technology Division of the Naval Air Warfare Center Aircraft Division at Warminster, Pa., has developed an unparalleled radar system that helps identify moving aircraft as friend or foe by utilizing the return radar signature. The "fingerprint" return signal is added to a data base on noncooperative target recognition.

The new system was developed with the intention of preventing tragic engagement of friendly or nonhostile aircraft. "We will utilize all of the salient features of the radar signatures that are available to identify the aircraft and avoid a mistake – saying that it's an enemy when

it's really an air bus," said Frank Plonski of the Microwave Technology Division.

Identifying small targets up to 20 miles away provides widespread applications. The Drug Enforcement Administration and the United Kingdom Ministry of Defense have already expressed interest.

Skunk Works to Submit ASTOVL Proposal

The Lockheed Advanced Development Company, long famed as the "Skunk Works" that has produced many exotic aircraft over the years, has teamed with Pratt & Whitney, Allison, and Rolls-Royce to submit a technology demonstration proposal for the advanced short takeoff vertical landing (ASTOVL) aircraft envisioned as a future replacement for the AV-8B *Harrier* and FA-18 *Hornet*.

The ASTOVL project is sponsored by the Defense Advanced Research Projects Agency (DARPA) in conjunction with the Navy and Marine Corps. Proposed as a multimission aircraft, the ASTOVL will combine low-observables (stealth), supercruise (sustained supersonic speeds without afterburner), and vertical landing capabilities. In 1993, DARPA will select two contractors to explore, refine, and validate propulsion and other key technologies during a 36-month risk-reduction effort that could lead to development and flight testing of an ASTOVL technology demonstrator aircraft.



Robert Brennan, NAWC AD Lakehurst, observes cable alignment of the new SH-60B traversing system on *George Phillip* (FFG 12).



Kaylee Eger

Last of the Mighty Mike prototypes – NAS Dallas, Texas, has enshrined the last of three stripped-down A-4M Skyhawks recently retired from its Operations and Maintenance Department (OMD), which still flies other A-4Ms as adversary aircraft against Dallas-based reserve fighter squadrons. Replacing three TA-4Js in 1987, three A-4Ms joined the OMD and, by permission in 1989, each were stripped of 1,500 pounds of cable, armor plating, and avionics, as well as their distinctive humpbacks. The modifications provided greatly improved performance, resulting in the "Mighty Mike" nickname. The first two "Mighty Mikes" were retired in early 1992, and A-4M BuNo 159789, shown here, flew for the last time on October 8, 1992.

(Thanks to Cdr. Mark Danielson, NAS Dallas, for this information.)

For the Record...

→ The Navy has changed the project designation of its planned replacement of the A-6 from AX to **AFX** to more accurately reflect dual-role capability envisioned for the aircraft.

→ The Navy and McDonnell Douglas Aerospace finalized the \$3.715-billion development contract for the advanced **FA-18E/F Hornet** on December 7, 1992. The cost-plus-incentive contract covers 7.5 years of engineering and support activities, including the manufacturing and testing of seven flight test aircraft and three ground test airframes (see *NANews*, Nov-Dec 92, p.6).

→ **VS-32** deployed three S-3B *Vikings* along with a **VP-49 P-3C** to Cartagena, Columbia, in late 1992 for a week of joint operations with the Columbian navy. The aircrews shared antisubmarine warfare (ASW) expertise with their Columbian navy counterparts and participated in shallow-water ASW exercises with Columbian corvettes against the Columbian Type 209 submarine *Pijao*.

→ Two more Marine Corps squadrons have been named to join Navy carrier air wings for upcoming deployments. **VMFA-122**,



Lt. Bill Johnson

an FA-18A squadron based at MCAS Beaufort, S.C., and **VMAQ-1**, an EA-6B squadron based at MCAS Cherry Point, N.C., will displace one Navy F-14A and one Navy EA-6B squadron in Carrier Air Wing 1 aboard *America* (CV 66) in December 1994 (see *NANews*, Nov-Dec 92, p.6.)

→ **Marine Aircraft Group (MAG) 32** will be deactivated at MCAS Cherry Point, N.C., on April 30, 1993. MAG-32's *Harrier* squadrons will shift to MAG-14, also based at Cherry Point.

→ **VA-65** will be **disestablished** at NAS Oceana, Va., on March 31, 1993. The *Tigers* were most recently part of Carrier Air Wing 8 as one of two A-6 squadrons assigned.

→ **VS-35** received its first of six S-3B *Vikings* on January 13, 1993, as it began transition from the S-3A. The *Blue Wolves* will eventually deploy aboard *Carl Vinson* (CVN 70) with Carrier Air Wing 14.

→ **VRC-30**, NAS North Island, Calif., transferred its last **CT-39G Sabreliner** rapid-response airlift jet into the Marine Corps in September 1992, ending the T-39's career with the Pacific Fleet. VRC-30 continues to operate the C-2A and UC-12 turboprop transports.

The first Beech-built PC-9 MkII production prototype of the company's Joint Primary Aircraft Training System (JPATS) competitor made its first flight on December 23, 1992, and is shown here (foreground) in formation with the engineering testbed aircraft. These two aircraft will be joined by another production prototype to participate in the future operational evaluation.

Two FA-18C Hornets from: **VFA-37** embarked on *John F. Kennedy* (CV 67) fly over the French Alps on their way to the Netherlands for an air-to-air exercise. The Hornet marked 10 years of operational service in the Navy and Marine Corps on January 7, 1993, the 10th anniversary of VMFA-314's transition to the FA-18A. The Hornet prototype first flew almost 15 years ago in November 1978. As of December 1, 1992, the Navy and Marine Corps had taken delivery of 836 Hornets, out of a total of 1,150 delivered worldwide.

→ **Naval Weapons Evaluation Facility**, Albuquerque, N.M., shut down its flying operations in September 1992 in preparation for closure as part of the structuring of the Naval Air Warfare Center Weapons Division. Its last FA-18As were transferred to Naval Air Weapons Station, China Lake, Calif.

→ The Chief of Naval Operations has established the designation **UP-3B** for P-3B *Orions* stripped of antisubmarine systems and modified as utility transport aircraft. This designation will apply mainly to P-3Bs assigned to Fleet Air Reconnaissance Squadrons 1 and 2.

→ **CGAS Kodiak**, Alaska, recently became the sixth Coast Guard air station to transition to the **HH-60J Jayhawk** rescue helicopter, which replaced the **HH-3F Pelican**.

→ **MCAS Camp Pendleton**, Calif., suffered from severe flash-flooding on January 18, 1993, losing several buildings. Many of the 70 UH-1, AH-1, and OV-10 aircraft on the base at the time were battered by flood waters and floating debris. The cost of



Beechcraft

repairs to the base and flood prevention measures are expected to run into the millions of dollars.

→ **Naval Aviation Depot, Cherry Point, N.C.**, has been named to provide logistics, engineering, and depot-level maintenance support for the **V-22 Osprey** tilt-rotor aircraft now under development, as well as for its engines.

→ The Navy and the City of Millington, Tenn., signed an agreement on January 13, 1993, that would allow the city joint usage of an 8,000-foot runway at **NAS Memphis**. Sharing the runway will allow the city to establish a civilian airport without having to build an entire facility.

→ The remains of **Ltjg. Ralph E. Foulks, Jr.**, were recently identified from sets turned over by Vietnam in 1988. Ltjg. Foulks' A-4E was shot down over North Vietnam on January 5, 1968, while on a mission from *Oriskany* (CVA 34) with VA-163.

Disestablished...

NAS Chase Field



Naval Air Station, Chase Field, Beeville, Texas, was disestablished on February 1, 1993, after nearly 50 years of training Naval Aviators. Capt. H. M. Durgin was the last CO.

Selected for closure by the Base Realignment and Closure Committee on July 1, 1991, as part of the post-cold war military drawdown, Chase Field was one of six air stations assigned to Commander Naval Air Training Command, and one of three

which hosted training wings that provided strike jet syllabus training. Commander Training Air Wing 3 and its three training squadrons were disestablished in 1992 (see *NANews*, May-Jun 92, p. 5; Jul-Aug 92, p. 6-7; and Sep-Oct 92, p. 7-8).

With a pressing need to train more aviators during WW II, the U.S. government leased the Beeville, Texas, airport then under construction. Established on June 1, 1943, as a naval auxiliary air station, Chase Field (named after LCdr. Nathan B. Chase, an aviator killed in a 1925 mishap), became an outlying field for NAS Corpus Christi, Texas. The field enjoyed the whole-hearted support of the citizens of Beeville right from the start.

With the end of WW II, Chase Field was reduced to a caretaker status on July 1, 1946, and disestablished on January 24, 1947. However, with the build-up brought on by the Korean War crowding the Navy's training fields, the Navy purchased Chase Field from Beeville for \$100,000 in August 1952. The first jets, nine F9F-2s and seven TV-2s, arrived on May 27, 1954, and Naval Auxiliary Air Station, Chase Field, was established on July 1, 1954, as were its three training units, Advanced Training Units (ATU) 203, 204, and 802, to train jet pilots.

Over the next four decades, Chase Field churned out thousands of Navy and Marine Corps aviators. In 1960, the field was home to three newly established training squadrons (VTs 24, 25, and 26) which evolved from several ATUs. On July 31, 1968, Chase Field was upgraded to a full naval air station. In October 1971, it became host to the staff of Commander Training Wing 3.

With disestablishment, the training mission of Chase Field has been absorbed by NAS

Kingsville, Texas, and NAS Meridian, Miss.

The Navy is working with local leaders to find a civilian use for the base. Representative Greg Laughlin said that the smooth transition could serve as a model for future base closures: "If the military were looking for a facility anywhere in the nation to monitor cooperation between the military and civilian communities, Bee County should be high on their list."

(Thanks to Lt. T. P. McCarrick for this information.)

VR-24



A January 29, 1993, ceremony at NAS Sigonella, Sicily, marked the disestablishment (officially March 31) of Fleet Logistics Support Squadron (VR) 24 after over 46 years of service. Cdr. Allen M. Murphy was the last CO of the *Lifting Eagles*, formerly known as the "World's Biggest Little Airline."

Established as Utility Squadron (VRU) 4 on December 3, 1946, at RAF Hendon, England, the squadron provided logistics support to naval activities and fleet units throughout Europe and the Mediterranean area with its R4D *Skytrain* (in its 5/5C/5R/6/6R/6Z/8 variants) and JRB-3/4/6 *Expeditor* aircraft. In 1949, the R5D (later C-54) *Skymaster* (in its -1Z/2/2Z/3/3Z variants) and PBM-5A *Mariner* were added to VRU-24's fleet.

The squadron was redesignated Air Transportation Squadron (VR) 24 on September 1 of that year, also moving to Port Lyautey, Morocco, on August 1 and leaving a detachment at Hendon. In December 1951, an R4D detachment was set up in Naples, Italy, until



VR-24 C-2A

relieved in June 1952 by VR-25, which also relieved the detachment at Hendon. The Naples det was reactivated in April 1954 after the VR-25 detachment became Fleet Aircraft Service Squadron 77. At one point, the Naples det also operated a PBY-6A *Catalina* rescue aircraft, later replaced by a UF-1 *Albatross*.

VR-24 entered the carrier-on-board (COD) business in February 1952 with the arrival of TBM-3R *Avengers* at its Naples detachment. The TF-1 (later C-1A) *Trader* replaced the *Avengers* in 1956, and the squadron was renamed Fleet Tactical Support Squadron 24 in 1957.

Cargo capability was strengthened with the arrival of R4Q *Flying Boxcar* transports in 1960, replaced in 1962 by GV-1U (later C-130F) *Hercules* transports. The C-54s were replaced by C-118B *Liftmasters* in 1964. In August 1964, VR-24 shifted its home to NS Rota, Spain, followed by a move to Naples in 1966. During that year, the Rota detachment augmented VR-21 in the Pacific with logistics flights to Vietnam.

In 1976, VR-24 was renamed Fleet Logistics Support Squadron 24 and moved to NAS Sigonella, Sicily. In 1967, a giant leap in COD capability occurred with the addition of the C-2A *Greyhound* aircraft. The last C-118Bs were transferred from the Rota detachment in 1972, and three CT-39G rapid-response airlift jets were added at Naples in October 1973. In 1977, the squadron acquired a vertical-onboard-delivery capability with the arrival of RH-53D *Sea Stallion* helicopters, a mission the squadron filled until December 1983 after the May es-

establishment at Sigonella of Helicopter Combat Support Squadron 4.

On April 19, 1984, VR-24 flew its last mission in the C-1A, ending three decades of service with the *Trader*. More changes occurred on October 15 of that year when the C-130 detachment at Rota was established as a separate squadron, VR-22. In September 1985, the first reprocurd C-2As arrived, allowing eventual retirement of the older C-2As and increasing the squadron's mission capability.

Over the years, VR-24 provided service in myriad missions from Norway to the Persian Gulf, including fleet logistics, medical evacuation, VIP transport, and disaster relief, often during crises too numerous to detail here. More recently, the *Lifting Eagles* provided support to Operations Desert Shield/Storm, moving over 3 million pounds of mail and cargo and 14,000 passengers in 8 months.

VR-24 also supported the Kurdish relief effort in Iraq and carrier operations in the Persian Gulf well into 1992. Right up to its last COD flight, in November 1992 to *John F. Kennedy* (CV 67) in support of UN sanctions in Bosnia-Herzegovina, VR-24 did everything asked of it with style.

VR-24 transferred its C-2As to VRC-40, which deploys two C-2As to the Mediterranean with each carrier. The CT-39Gs are now operated by NAS Sigonella.

Atlantic Functional Wings Disestablished

On September 30, 1992, the four functional wings (Helicopter Wings, Atlantic; Patrol Wings, Atlantic; Strike-Fighter Wings, Atlantic; and Tactical Wings, Atlantic) of the Naval Air Force, U.S. Atlantic Fleet (ComNavAirLant), were disestablished in a sweeping change that eliminated an entire echelon of command in

the administrative structure of Naval Aviation on the East Coast. The change, driven by force-level reductions that affected flag-level staffs as well as squadrons, resulted in consolidations of staff responsibilities, reductions in billets, and direct control of the various aircraft type wings by ComNavAirLant. (A similar process is being implemented in the Pacific Fleet and will be reported as details become available.)

Directly reporting to ComNavAirLant now are the Commanders of Patrol Wings 5 and 11, Fighter Wing 1, Medium Attack Wing 1, Airborne Early Warning Wing 12, Light Attack Wing 1, Sea Strike Wing 1, Helicopter Tactical Wing 1, Helicopter Antisubmarine Wing 1, and Helicopter Antisubmarine Light Wing 1, as well as Air Test and Evaluation Squadron (VX) 1, Oceanographic Development Squadron (VXN) 8, and the patrol fleet readiness squadron, VP-30. The type wings maintain administrative, training, readiness, and maintenance responsibilities for their assigned squadrons.

Shore activities formerly assigned to the functional wings, such as naval air stations, now fall under command of existing or newly organized regional flag-level commands, specifically Commander Naval Base, Norfolk, Va.; Commander Naval Aviation Activities, Brunswick, Maine; and Commander Naval Aviation Activities, Jacksonville, Fla.

ComHelWingsLant



Commander Helicopter Wings, Atlantic (ComHelWingsLant), traces its origins to Deputy Commander Naval Air Force, U.S. Atlantic Fleet/Commander Sea Control Group 1 at NAS Quonset

Point, R.I. On February 1, 1974, the command moved to NAS Jacksonville, Fla., and on July 1, 1974, was redesignated Commander Sea-based Antisubmarine Wings, Atlantic, "Sea Bear," absorbing the mission of Commander Fleet Air, Jacksonville, which was disestablished on that date.

"Sea Bear" exercised command over Air Antisubmarine Wing 1, Helicopter Antisubmarine Wing 1, Helicopter Sea Control Wing 1, VX-1, Weather Reconnaissance Squadron 4, NASs Jacksonville and Cecil Field and NS Mayport, Fla. The command was realigned and redesignated Commander Helicopter Wings, Atlantic, on October 1, 1986, transferring Air Antisubmarine Wing 1 and NAS Cecil Field to newly established Commander Strike-Fighter Wings, Atlantic, and acquiring Helicopter Sea Control Wings 1 and 3 and Helicopter Tactical Wing 1.

ComHelWingsLant also served as the Atlantic Fleet's regional coordinator for northern Florida and southern Georgia, and also maintained a detachment at NAS Sigonella, Sicily, to support helicopters deployed to the Mediterranean aboard surface ships. RAdm. Frank M. Dirren, Jr., was ComHelWingsLant when the command was disestablished on September 30, 1992.

ComPatWingsLant



Commander Patrol Wings, Atlantic Fleet, dates back to September 1948 when Commander Fleet Air Wings, Atlantic (ComFAirWingsLant), was established at NAS Norfolk, Va., with RAdm. Robert F. Hickey as administrative and training commander over the Atlantic

Fleet's fixed-wing and airship patrol squadrons, fleet aviation support squadrons, and seaplane tenders grouped in four wings: Fleet Air Wings (FAW) 3, 5, and 11, and Airship Wing 1. The commander also served as Commander Fleet Air Wing (ComFAirWing) 5.

In May 1961, ComFAirWingsLant also became operational commander of the Atlantic Fleet's Patrol Air Task Force (TF-85, later TF-26), comprised of all non-deployed patrol squadrons in the Atlantic, with the mission of providing patrol forces to conduct long-range operations and surveillance in support of the Second Fleet and other operational commanders. In September 1961, Special Antisubmarine Task Group Delta (later evolving into Patrol ASW Development Group) was formed within TF-85 to develop ASW tactics and doctrine. Lighter-than-aircraft were phased out from the force in October 1961, followed by its last SP-5B flying boats in December 1963, becoming an all-landplane force with SP-2 and P-3 aircraft.

In July 1971, ComFAirWingsLant/ComFAirWing-5 moved to NAS Brunswick, Maine, and assumed the duties of Commander Fleet Air, Brunswick; concurrently, ComFAirWing-3 was disestablished there. The command was redesignated ComPatWingsLant/ComPatWing-5 in July 1973; in July 1974, ComPatWing-5 became a separate command under ComPatWingsLant. By this time, the wing controlled a force of 12 P-3 squadrons and one patrol special projects unit in Patrol Wings 5 and 11, as well as the Atlantic Fleet P-3 fleet readiness squadron, VP-30; VXN-8; NAS Brunswick; NAS Bermuda; and NAF Lajes, Azores. Eventually, Fleet Air Reconnaissance Squadron 4 was added to the command.

Throughout its long existence, ComPatWingsLant trained the patrol squadrons that tracked the Soviet fleet and made major con-

tributions to winning the cold war, including service during the Cuban Missile Crisis, the Vietnam war, the Persian Gulf War, and countless other international crises. RAdm. Jon S. Coleman was serving as the last ComPatWingsLant when it was disestablished on September 30, 1992.

ComStrikeFightWingsLant



Commander Strike-Fighter Wings, Atlantic, was established at NAS Cecil Field, Fla., on October 1, 1986, with RAdm. Henri B. Chase commanding. The command was responsible for training, readiness, and support of the Atlantic Fleet's A-7, FA-18, and S-3 squadrons.

Assigned to the command were Commander Light Attack Wing 1; Commander Sea Strike Wing 1; Light Attack Weapons School, Atlantic; NAS Cecil Field; NAS Key West; and Fleet Area Control and Surveillance Facility, Jacksonville.

RAdm. John A. Moriarty was the commander of ComStrikeFightWingsLant when it was disestablished at Cecil Field on September 30, 1992.

ComTacWingsLant



Commander Tactical Wings, Atlantic (ComTacWingsLant), was established at NAS Jacksonville, Fla., on April 1, 1973, as

Deputy ComNavAirLant and Commander Tactical Air, Atlantic. On July 1, 1974, the command was redesignated Commander Tactical Wings, Atlantic, under RAdm. Lawrence R. Geis, and moved the same month to NAS Oceana, Va.

Initially, five type wings and three air stations were assigned to the command (Fighter Wing 1, Light Attack Wing 1, Medium Attack Wing 1, Airborne Early Warning Wing 12, Reconnaissance Attack Wing 1, NAS Oceana, NAS Key West, Fla., and NAS Norfolk, Va.). On October 1, 1986, the command was redesignated Commander Fighter Medium Attack Airborne Early Warning Wings, Atlantic, but reverted to the name Commander Tactical Wings, Atlantic, on April 27, 1989.

Assigned commands changed over the years and in its final years, ComTacWingsLant commanded Fighter Wing 1; Medium Attack Wing 1; Airborne Early Warning Wing 12; NAS Oceana; Strike Weapons and Tactics School, Atlantic; and the Fleet Area Control and Surveillance Facility, Virginia Capes. The command was responsible for the training and readiness of all Atlantic Fleet F-14, A-6, E-2, and C-2 squadrons.

RAdm. Paul W. Parcells was the last flag assigned, departing in July 1992, with Capt. James B. Dadson relieving him until the command was disestablished on September 30, 1992.

Permanent Battle Groups in Place

A coordinated effort between the Atlantic and Pacific fleets in 1992 resulted in the formation of six permanent battle groups in each fleet. Each group – comprised of one carrier, one carrier air wing, several cruisers, destroyers, and frigates, and two attack submarines – is commanded by a carrier group or cruiser-destroyer group commander, with a tactical destroyer squadron staff assigned as well.

In the past, battle groups were formed for planned workups and deployments and disbanded upon return. With permanent groups, the staffs, ships, and squadrons will train and deploy together over long periods, enhancing battle readiness through cohesion. The new plan is expected to produce great benefits in scheduling, maintenance, training, and operations, including more stability in personnel and operational tempo. Ships that do not deploy with their group will be available for such tasks as drug interdiction patrols and operations with other navies.

Listed below are the staffs, carriers, and air wings assigned to the groups. For brevity, assigned surface ships and submarines are not listed here.

Atlantic Fleet	
Washington Battle Group ComCruDesGru 2 ComDesRon 26 <i>George Washington</i> (CVN 73) Carrier Air Wing 7	America Battle Group ComCarGru 8 ComDesRon 14 <i>America</i> (CV 66) Carrier Air Wing 1
Roosevelt Battle Group ComCarGru 8 ComDesRon 22 <i>Theodore Roosevelt</i> (CVN 71) Carrier Air Wing 8	Saratoga Battle Group ComCruDesGru 8 ComDesRon 24 <i>Saratoga</i> (CV 60) Carrier Air Wing TBA*
Eisenhower Battle Group ComCruDesGru 12 ComDesRon 32 <i>Dwight D. Eisenhower</i> (CVN 69) Carrier Air Wing 17*	Kennedy Battle Group ComCarGru 2 ComDesRon 20 <i>John F. Kennedy</i> (CV 67) Carrier Air Wing 3*
Pacific Fleet	
Ranger Battle Group** ComCruDesGru 1 ComDesRon 7 <i>Ranger</i> (CV 61) Carrier Air Wing 2	Lincoln Battle Group ComCarGru 3 ComDesRon 21 <i>Abraham Lincoln</i> (CVN 72) Carrier Air Wing 11
Kitty Hawk Battle Group ComCruDesGru 5 ComDesRon 17 <i>Kitty Hawk</i> (CV 63) Carrier Air Wing 15	Vinson Battle Group ComCruDesGru 3 ComDesRon 5 <i>Carl Vinson</i> (CVN 70) Carrier Air Wing 14
Nimitz Battle Group ComCarGru 7 ComDesRon 23 <i>Nimitz</i> (CVN 68) Carrier Air Wing 9	Independence Battle Group ComCarGru 5 ComDesRon 15 <i>Independence</i> (CV 62) Carrier Air Wing 5

Notes:

ComCarGru = Commander Carrier Group
 ComCruDesGru = Commander Cruiser-Destroyer Group
 ComDesRon = Commander Destroyer Squadron

* Carrier Air Wing (CVW) 17, once slated to shift from *Saratoga* to *George Washington*, is now assigned to *Dwight D. Eisenhower*. CVW-3 will shift from *John F. Kennedy* when the carrier begins a two-year overhaul in September 1993. *Enterprise* (CVN 65) is slated to replace another carrier in one of the groups upon completion of overhaul and refueling in 1994.

***Constellation* (CV 64), completing the Service Life Extension Program in 1993, will replace *Ranger*, which will be decommissioned in August 1993, and the battle group will be renamed Constellation Battle Group.



Raison d'etre...A Marine CH-46 lifts off from Okinawa.

Okinawa Decommissioned

By LCdr. J. E. Higgins

Amphibious assault ship *Okinawa* (LPH-3) was decommissioned December 17, 1992, at NS San Diego, Calif., after more than 30 years of outstanding service.

The second of the LPH-type ships, *Okinawa* was commissioned in 1962 and named after the largest land, air, and sea battle of the Pacific theater in WW II. Originally designed to airlift combat-ready Marines and equipment behind enemy lines, her mission has expanded to include Marine expeditionary forces with special operations capability.

Originally home-ported in Norfolk, Va., *Okinawa* received her first call to duty six months after commissioning when she participated in the naval blockade which resulted in the resolution of the Cuban Missile Crisis. This marked the first of her many achievements at the forefront of world affairs.

In 1967, she changed home ports to San Diego and embarked on a remarkable 25-year career of operational and humanitarian service in the waters of the Indian-Pacific Ocean Rim. From the late 1960s to 1975, *Okinawa* participated in 19 major operations in support of the Vietnam conflict. In

1969 alone, she was the lead vessel in six amphibious assaults including Operation Bold Mariner, the largest of the war. In an amazing string of deployments during this period, *Okinawa* served as recovery ship for Apollo VI and XV, provided relief to Philippine victims of Typhoon Joan in 1970, and became the first LPH to fire a missile as part of the newly incorporated Basic Point Defense Missile System.

During the withdrawal of American forces from Southeast Asia in 1975, *Okinawa* and her Marine helicopters were again on the scene to evacuate the U.S. Ambassador and Acting President of Cambodia along with 250 others from Phnom Penh. She then assisted in the final evacuation of more than 1,200 refugees from Saigon. In 1980, *Okinawa* became the first amphibious assault ship to enter the Arabian Gulf and was the first on station during the Iranian Hostage Crisis. In 1987, she again entered the politically tense region on an unscheduled deployment to assist in mine clearance efforts. Returning home, *Okinawa* headed west instead of east, and transited both the Suez and Panama canals en route to San Diego.

Deployed to the Arabian Gulf in June 1990, she and her escorts were the first amphibious ships on station in support of Operation Desert Shield and remained in place as one of 31 amphibious ships in the Gulf for Operation Desert Storm. During the war, she and her embarked Marines participated in the liberation of Umm al-Maradim Island, the amphibious feint off the Kuwaiti coast and the repatriation of Faylaka Island resulting in the capture of over 1,400 Iraqi prisoners of war. *Okinawa* returned to San Diego in April 1991 after a record-setting 10 months/305 days under way.

Following another short turnaround, *Okinawa* commenced her final deployment in January 1992, becoming the only flagship to deploy three times in support of Arabian Gulf national tasking. She celebrated her 30th anniversary while under way in April.

Okinawa is being retired due to age, budgetary considerations, and planned force drawdown. Although likely to be stricken from the Navy Register, she was towed to Suisun Bay, Calif., in January 1993, to be maintained as a logistics support asset. ■



JO1(SW) Eric S. Sesit

A CH-53D Sea Stallion arrives on deck after completing its mission during the SPMAGTF exercise.

"By taking entire squadrons off the ship, we provided the work spaces needed to accommodate the 10 Marine helicopters.

"It is important, however, to remember that this is just one possible configuration of the SPMAGTF. It can be adapted to many scenarios, including noncombatant evacuation operations, disaster relief, humanitarian relief, and tactical recovery of aircraft and personnel. Each of these situations could require a different combination of aircraft and personnel.

"We tailored this battle group for the national needs, as determined by the scenario chosen for this exercise,"

Johnson continued, "and ... it will hopefully be the prescription the Commander in Chief needs to fix whatever ailment he's got."

The admiral also pointed out that the SPMAGTF was not a replacement for an Amphibious Ready Group (ARG). "The SPMAGTF can be dispatched rapidly, then, once a situation stabilizes, you can follow it up with an ARG," he said. "It complements the ARG and gives us a little more flexibility. The ARG may be in Somalia and the SPMAGTF could be needed elsewhere."

According to Johnson, the exercise did not please everyone. "I am sure that [the squadrons left behind] are not happy to be on the beach," he commented. "But I also think the pilots understand why. In addition, the squadrons not embarked fly missions everyday to keep up their skills."

The scenario for the SPMAGTF exercise began with a fictional international incident in the imaginary country of "Redonda."

According to Lieutenant Timothy S. Schipke, *Theodore Roosevelt's* Intel-

Special Marine Air-Ground Task Force Tests "...From the Sea"

By JO1(SW) Eric S. Sesit and JO3 Robert B. Carr

The Chief of Naval Operations' plan for the future, "...From the Sea," came to life this past January.

Marines and sailors onboard *Theodore Roosevelt* (CVN 71) tested a complex and novel new approach to joint operations — the Special Marine Air-Ground Task Force (SPMAGTF). The exercise developed and tested the skills, coordination, and integration necessary to deploy a SPMAGTF aboard an aircraft carrier.

"The SPMAGTF combines the speed and firepower of an aircraft carrier, especially a nuclear carrier, with the tremendous ground capability and mobility

of the MAGTF," Rear Admiral Jay L. Johnson, Commander Carrier Group Eight, said.

In order to accommodate the six CH-53D *Sea Stallions*, four UH-1N "Hueys," and 600 Marines which comprised the SPMAGTF, one F-14 squadron and one S-3 squadron that normally deploy with *Theodore Roosevelt* stayed on the beach.

"We took whole squadrons from the air wing instead of just a few planes from different squadrons," RAdm. Johnson said.

A VMFA-312 FA-18C Hornet launches from *Theodore Roosevelt* to provide support to the SPMAGTF.

JO1(SW) Eric S. Sesit



ligence Division Officer, "Redonda resembled a third world African nation. In the northern part of the country, rebel forces tried to take over the local government.

"The whole country was in chaos. Their president sought asylum and left for Venezuela. In the capital, the American Embassy experienced riots and looting, and American citizens came under attack."

In this type of operation, the SPMAGTF's orders call for the force to perform a Noncombatant Evacuation Operation (NEO) – noncombatant because they were not expected to encounter any heavy resistance. One SPMAGTF Marine described an NEO this way: "We go in and reinforce the embassy. All the American citizens report to the embassy, and we get them out."

The CH-53Ds, flown by Marine Heavy Helicopter Squadron 362, and UH-1Ns, flown by Marine Light Attack Helicopter Squadron 167, traveled in shifts to take 150 of the SPMAGTF personnel from the

carrier to the landing zone – the American Embassy in Redonda (actually Camp Lejeune, N.C.). Hours later, the helicopters returned to *Theodore Roosevelt* with the first wave of evacuees. A crew of security personnel stood by to take charge of the men and women.

"When the evacuees stepped onto the flight deck from the helos, security personnel escorted them to Elevator Two and then down to the hangar bay," MACS Joseph R. Brown, the carrier's chief master-at-arms, said. "The evacuees were checked onboard and categorized as military, diplomats, dependents, etc., for easy identification."

As armed Marines kept the check-in area secure, the ship's master-at-arms force searched bags and processed the evacuees. "We had the evacuees sit down and tried to make them feel comfortable. We didn't treat them like prisoners. We were concerned with their safety," Brown added.

Marine First Lieutenant John R. Giltz, commanding officer of the Combat Service Support Element, oversaw the operation in the hangar bay and supported the idea of working with sailors on this mission. "Flexibility is the word of the day. The Marines know what to do, the Navy knows what to do, and together we made this operation a success," Giltz said.

Nevertheless, the SPMAGTF posed some unique problems for the officers and crew of the carrier. Commanding Officer Captain Stanley W. Bryant said, "We integrated quite a bit of helicopter operations into our fixed-wing cyclic operations. When six CH-53Ds and four UH-1Ns come onboard, not only do we have to find space on the flight deck, but the handling characteristics [of these helos] on the flight deck differ as well. Of course, when we launch a strike or raid to the beach, we have to clear out major por-

tions of the flight deck to stage the helicopters."

Since all carriers maintain a Marine detachment aboard, the sight of Marines walking through the passageways usually goes unnoticed. A company of 600 Marines and all their gear, however, represents a much larger challenge.

Lance Corporal Branden C. Millard said, "It takes a little getting used to ... the tight quarters and all. But we can adapt to just about anything."

The berthing accommodations concern Capt. Bryant as well. "We will continue to look closely at the berthing situation for the Marines. They don't have their usual routes to get to their helos. They also have to consider getting their ammunition, supplies, and equipment to the flight deck. But having commanded an [amphibious ship], I can tell you that the differences between Marines on an amphib as opposed to a carrier are minimal," Bryant said.

Theodore Roosevelt also carries a Marine FA-18C *Hornet* squadron, Marine Fighter Attack Squadron (VMFA) 312. Permanently assigned to Carrier Air Wing 8, VMFA-312 replaced Attack Squadron 65, one of two A-6 squadrons assigned to the air wing. It represents one of three Marine FA-18 squadrons presently planned for integration into Navy carrier air wings as an initiative from the Secretary of the Navy.

"Close air support has always been a mission of the Navy," Captain Bill Moore, Commander Carrier Air Wing 8, said in regards to the Navy's role in providing air support to the Marines. "VMFA-312 played an important part in this exercise. The Marine pilots put the Navy pilots into a ground mode, thinking like the Marines. VMFA-312 helped in communicating and planning for this mission."

Adm. Johnson added, "The Marine's *Hornet* squadron has really put our heads into the Marine context with regard to close air support and what it means to the guys on the ground.

"This exercise has been a learning experience for both the Marines and for the Navy. We're exploring a new concept. We're trying to be smarter about how to use these marvelous national assets, and I think we have to be innovative and not afraid to try some new concepts," Adm. Johnson concluded.

Theodore Roosevelt will deploy this spring with the SPMAGTF onboard. ■

Many thanks to JO3 Carr and *Theodore Roosevelt* Public Affairs for their contributions to this article.

JO1 (SW) Eric S. Sesit



SPMAGTF personnel disembark a CH-53D Sea Stallion after their mission to "Redonda."

JO1 (SW) Eric S. Sesit



UH-1N Hueys depart Theodore Roosevelt. The helicopters led the way to the imaginary country of "Redonda," the setting for the SPMAGTF exercise.

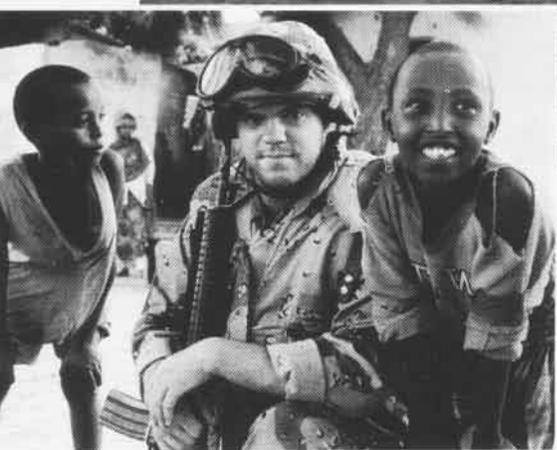
Restoring Hope in Somalia

Photos courtesy of Ltjg. K. D. Meyers, PAO, USS Tripoli (LPH 10).



PH1 Bruce Gray

An SH-60B flies past Rushmore (LSD 47) off the coast of Somalia.



JQ3 Jeffrey Wells

LCpl. Jon Seybold makes new friends near Mogadishu Airport.



PH1 Bruce Gray



One of the first waves of Marines embarks on HMM-164 CH-46Es aboard Tripoli (LPH 10) during the early hours of Operation Restore Hope on December 9, 1992.



An armed UH-1N Huey from HMM-164 heads for operations in Somalia.

PH1 Bruce Gray



Tripoli CO Capt. J. R. Hutchinson, foreground, and Capt. Michael Lutkenhouse, XO, watch the first wave of Marines head for Somalia on December 9, 1992.

PH1 Bruce Gray

An HC-11 HH-46D readies for takeoff from Tripoli (LPH 10) as an HMM-164 AH-1W Super Cobra heads for Somalia.

PH1 Bruce Gray



Cargo personnel attach a pallet of supplies bound for Somalia to an HMM-164 CH-53E aboard Tripoli.



PH1 Bruce Gray



PH1 Bruce Gray

An HMM-164 CH-53E shuttles supplies and personnel to Somalia from Tripoli.

Since UN forces secured Somalia's capital, more than 70 flights per day have been landing at or leaving Mogadishu International Airport. Most of these are UN relief flights carrying food and other humanitarian supplies to the famine-stricken people of Somalia.

This massive airborne influx of aid would not have been possible without the expertise and dedication of Navy and Marine Corps air traffic controllers or the crews of the Navy's E-2C *Hawkeye* early warning aircraft.

When U.S. troops arrived in Somalia as part of the UN's humane mission, Operation Restore Hope, Mogadishu had the only airport capable of handling the aircraft which would bring in relief supplies; unfortunately, that airport was without power or radar capable of coordinating the effort. The initial task of setting up an effective air traffic control system was given to five air traffic controllers from *Kitty Hawk* (CV 63) – ACC(AW) Mark J. Minikowski, AC1(AW) Don Sigley, AC2 Gail M. Campbell, AC3 Kenneth E. Margavio, and ACAN Donald C. Skaug – and to embarked Airborne Early Warning Squadron (VAW) 114 of Carrier Air Wing 15.

The five men were sent aboard *Leahy* (CG 53) on December 16, 1992, to establish approach control services in and out of Mogadishu at the request of Rear Admiral Phillip J. Coady, Commander Cruiser-Destroyer Group 5, and commander of U.S. naval forces involved in Operation Restore Hope. The system that the five men set up allowed approaching aircraft to be picked up from a VAW-114 E-2C *Hawkeye*, which tracked flights and issued advisories from about 200 miles out. Once the flights were within 50 miles, the *Leahy* team took over and led them to within visual range of the airport, about 10 miles away.

Leahy's commanding officer later requested that Sigley and Minikowski travel to Mogadishu's airport and aid Marine air traffic controllers in installing and operating their Marine Air Traffic Control Automatic Landing System, which would take over for *Kitty Hawk's* controllers when the ship left the area. Within the first 10 days of the operation, the Marine controllers began picking up approaching aircraft from 50 miles away.

Without the team's combined skills, according to their division officer, the relief

Eyes and Ears over Somalia

By JO2 W. Scott Permer and JO3 Lee Zion



A VAW-114 E-2C Hawkeye positions for launch from *Kitty Hawk* (CV 63).

flights would not have been coming in at the rate they were. Lieutenant Terry Martin explained that what his men did allowed "probably triple the number of flights into and out of the airport because of the positive control" they provided. Without it, "the relief effort would be slowed down considerably because the aircraft would have to be separated by a much greater distance in the interest of safety."

The E-2C *Hawkeye* crews of VAW-114's *Hormel Hawgs* were the "eyes in the sky" helping the relief planes land safely. The *Hawkeye* usually tracks enemy aircraft for early warning and directs other planes in the air wing to intercept. In support of relief operations in Somalia, however, the E-2C crews had to think in terms of keeping the planes as far apart as possible to avoid collisions while in flight.

"Imagine learning how to do a task a

certain way, and then, literally overnight, tasked to do this duty 180 degrees from what all your training is," said Lieutenant Brad Margeson, pilot training officer for VAW-114.

"We provided an advisory to incoming aircraft, allowing them to come into certain areas in Somalia in support of Operation Restore Hope," said Lieutenant Bill Barrett, aircraft division officer.

When relief planes first began entering Somali airspace, they were required to get in touch with the control tower. Since Mogadishu's tower was essentially inoperative, an E-2C took over that role, communicating with and directing the relief flight toward the airport. The *Hawkeye* crew also provided "sequencing," the aerial equivalent of standing in line to be the next one to land. The *Hawkeye* was kept very busy, handling a large number of aircraft, all trying to communicate, all on the same frequency, with just one person.



Lts. Dave Hina, Bill Barrett, and John Bennett, Naval Flight Officers aboard a VAW-114 E-2C, track UN relief flights landing at Mogadishu, Somalia.

PH3 James E. Gallagher

"A dense number of aircraft were operating in an environment that they weren't used to without air traffic control services that are normally there," said Lieutenant Grant Sbrocco, line division officer for VAW-114. "They [usually] have dozens of controllers, many different radios, and all sorts of facilities."

The difficulty was compounded by language problems, as the relief effort is an international operation. All pilots do speak English, but some of them don't speak it very well. Sometimes it would take the pilots almost five minutes to get a pilot's call sign, something that should only take three seconds.

Barrett said that, unlike the *Leahy* team and the Marines, the crew of the E-2C could not provide air traffic control, only advisories. The radar equipment of a *Hawkeye* is not sensitive enough for true air traffic control, and the crew is not trained for that mission.

The Marines were able to set up radars and a control tower by December 23. Even so, the need for backup was important. At one point, communications onboard *Leahy* were down, and the Marines hadn't yet set up their tower, so the crew of the E-2C had to provide advisories all the way up to the final approach. Barrett stressed that it was a team effort; without all three working together, it wouldn't have been possible to land as many planes as they did.

The *Hawkeye* crew was impressed with the operation's universal outpouring of generosity. "In one four-hour mission, hearing the incredible number of accents and nationalities, all inbound to one place – Mogadishu – the amount of support was incredible," Margeson said. "This is a once-in-a-lifetime thing to participate in something like Restore Hope."

"Since this started, the air traffic has greatly increased," Sbrocco said. "It means more food's getting in, more troops are getting in, and the relief efforts are getting better. It's because the aircrews feel it's a safer environment to come into."

"I firmly believe that if we hadn't been there doing what we were doing, and the *Leahy* wasn't doing what it was doing, the relief efforts would have been backed up months," Sbrocco continued. "The aircraft wouldn't be coming in every few minutes ... just because they'd be so afraid of the back-up, having no radar contact, and flying into unfamiliar airspace. I believe that our getting in there and helping out allowed this tremendous volume of relief to get in so quickly."

The scope of the operation was phenomenal: "747s, C-5s, DC-10s, L-1011s, heavy jumbo jets that carry hundreds of tons of relief supplies," Barrett said. "You think, 'Well, we've got them there, but now what about the Marines and the guys on the beach that are unloading all this?' It's a major, complex undertaking. We were just a small supporting group."

"I think our whole division felt very proud to be doing this at Christmastime," Martin said. "I think most of our people, if you ask them, felt that since they couldn't be home with their families and loved ones – for most of them it's their first time away – being involved in a project like Operation Restore Hope was really fulfilling." ■

Petty Officers Permer and Zion are assigned to *Kitty Hawk* Public Affairs.

A VAW-114 E-2C about to return to *Kitty Hawk*.



TA/RA

By Hal Andrews

Even old-timers who grew up with the Navy's former aircraft designation system – now 30 years gone – have trouble with the Marines' Fokker trimotor transports of the late 1920s being designated "TAs." The T, otherwise for torpedo planes – along with other class letters used for early Navy/Marine transport planes – was changed to the new R for transports in the early 1930s, late in the life of the Fokkers. And the A for Fokker traces to the company's history in this country.

Readers will find some currently familiar terms in the TA/RA story. U.S. military intervention in foreign affairs, expeditionary forces, Nicaragua, guerilla operations, off-the-shelf aircraft, joint Army Air Corps/Navy procurement, and even contract termination all played a part.

In aviation history, "Fokker" is almost synonymous with "German WW I

fighter." A. H. G. "Tony" Fokker's significant role in this country's transport aircraft development is less well-known. After the WW I armistice, Fokker moved his operations to his native Holland – an often-told story. In the early 1920s, both civil and military designs were built, capitalizing on the standard Fokker advanced design features, welded steel tube fuselage structures and plywood-covered wooden cantilever wings. With U.S. military interest in Fokker designs, Tony Fokker established a U.S. company for importing his Dutch products as well as manufacturing aircraft. Recognizing the lingering stigma of his wartime enemy associations in the popular view, his new company was titled the Atlantic Aircraft Corporation.

During the early 1920s, Fokker developed a series of transport models; by 1925, the F.VIIA was as large a transport as could be effectively powered by any one of several available 400 to 450-hp water-cooled engines. It was a high cantilever wing

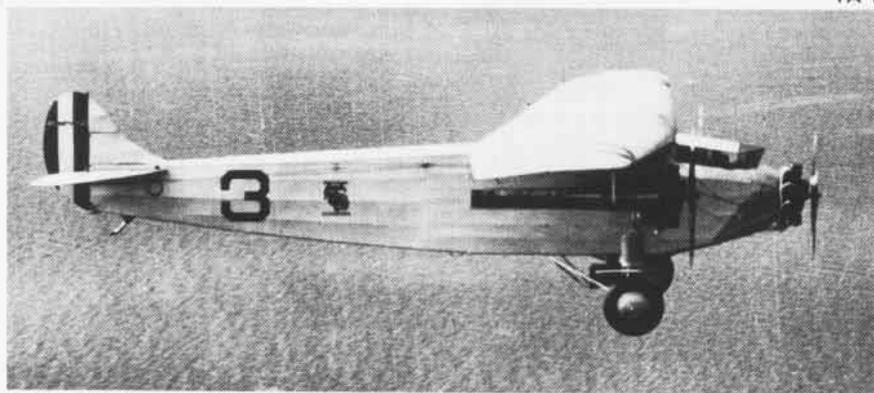
airplane carrying eight passengers. Fokker himself traveled back and forth across the Atlantic.

In 1925, the Ford Motor Company's new interest in aviation led to the announcement of a Commercial Airplane Reliability Tour starting and ending at Ford's new Dearborn, Mich., airport in the fall. Tony Fokker had his Dutch company redesign the F.VIIA as a three-engine airplane using the new 200-hp Wright J-4 air-cooled radial engines. As one of the first-place awardees, the F.VIIA/3M attracted much attention, including an Army Air Service evaluation, after which it was sold to Ford for Commander Richard Byrd's North Pole flight. Ford, having purchased the Stout Metal Airplane Company, redesigned its single-engine transport, which led to the well-known and remembered all-metal Ford trimotor transports.

The Army ordered three C-2 transports (the second cargo plane design ordered by the Army) from Atlantic in 1926; by this time, the company's airplanes were clearly identified as Fokkers. The C-2 was developed as both a civil and military transport; Cdr. Byrd would use one of the civil airplanes for his 1927 transatlantic flight. A twin-engine redesign was also ordered by the Army as the XLB-2 light bomber prototype.

Events in China and Nicaragua in 1927 led to the TA-1s. With Marines, including air squadrons, deployed to both countries, the Navy's Bureau of Aeronautics (BuAer) placed an order for the Navy's first transport aircraft – three TA-1s for the Marines. These were C-2s with special features to meet Marine needs. Principal among these was the use of the XLB-2 center fuselage structure, allowing a large removable floor section for loading either stretchers or heavy concentrated loads. The latter could be hoisted up and suspended from the upper longerons – as bombs were in the XLB-2.

By the time the first TA-1 flew in October, "General" Augusto Sandino's forces in Nicaragua had overturned the Marine-enforced truce. With the Marines in combat, all three TA-1s were consigned to the East Coast Expeditionary Force for Nicaraguan operations. After initial trials at Anacostia, D.C., and Quantico, Va., and some minor mods at the plant, the first TA-1 departed via Miami, Fla.; Cuba; and Honduras in late November – a ven-



TA-1



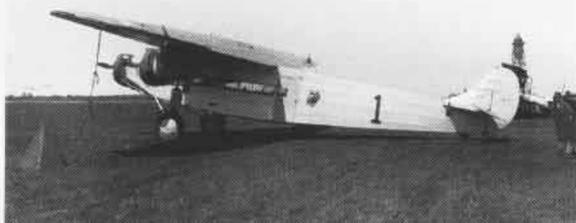
RA-4



TA-2

Ken Molson

RA-3



turesome flight for its Marine crew.

Unfortunately, it nosed up while taxiing on a Florida beach on the way. With minor damaged repaired, it returned to the Teterborough, N.J., factory where the nose engine was replaced, making its successful delivery flight to Managua in late December. The other two followed in early 1928; all three saw extensive service supporting Marine garrisons and antiguerrilla operations.

Expanded Nicaraguan operations brought the purchase of three more TAs. The Army had ordered eight improved C-2As featuring increased span wings; Fokker initiated production of 12. With the Marines' urgent requirements, the Army released the first two of their order – to be replaced with Navy funding – and a BuAer contract for the third was filled with the fifth Army plane, the Army receiving another later one. For these, designated TA-2s, standard C-2As with only finish and furnishing changes were accepted to expedite delivery. Both TA-1s and -2s had 220-hp Wright J-5 engines.

The first TA-2 followed the TA-1s to Nicaragua in May 1928, but the second was lost near Richmond, Va., on a night flight in marginal weather from Anacostia to Quantico. The third joined the others in Nicaragua in August.

Fokker proposed a replacement sixth TA – the 12th C-2A being built – and a contract was signed for a modified version with the nose J-5 replaced by a 450-hp Pratt and Whitney Wasp. However, problems with the TA-2 wings required replacement of one and repairs to the other with the assistance of factory mechanics sent down along with the wing by steamship. The Army inspection of the 12th fuselage raised other problems. When Fokker wanted a delivery delay early in 1929, it was turned down and the contract canceled.

The five TAs saw heavy use through 1929, one unfortunately was lost when it stalled following failure of all three engines after takeoff. By the end of the year, it was decided to fly each of the TAs back to the Naval Aircraft Factory (NAF) at Philadelphia, Pa., in rotation for overhaul. The first TA-1 was first to go in December; unfortunately, it suffered a nose-up accident in Belize on the way, but was repaired and reached NAF in January 1930.

The crew had borrowed radio equipment from Pan American for the trip, and a radio was installed during overhaul. Replacement of the J-5 engines with later 300-hp Wright J-6-9s was also un-

dertaken, based on the Army's having converted one of its C-2As to the J-6-9 powered XC-7.

By this time, with the post-Lindbergh aviation boom, Fokker was building Wasp-powered F-10 trimotors for the budding airlines and Ford produced its competitive all-metal trimotors, one of these joining the remaining Marine Fokkers in Nicaragua. The VR class had been established for Navy transports, but those already in Navy/Marine use continued under their prior designations. The first TA-1 was redesignated TA-3 with the new engines on completion of its overhaul in March 1930, returning to Nicaragua. The third -1 was next, completing the same transformation by October, but the second was surveyed after a landing accident in July before returning, leaving only the remaining TA-2 for overhaul and engine conversion.

When the post-financial crash decline left a surplus of transport airplanes, Fokker – by now a part of General Motors – sold one completed and civil certified F-10A to the Navy for the Marines in December 1930 as the RA-4. Tested at Anacostia in January 1931, it was found to be longitudinally unstable and returned to Fokker for correction. While a larger tail was being fitted, a civil F-10A crashed after losing a wing in bad weather, killing all aboard, including famed Notre Dame football coach Knute Rockne. The crash gained national attention and a number of F-10A characteristics came into question. Even with extensive changes by late 1931, Navy pilots considered the lack of stability dangerous in other than clear daylight flying and the contract was terminated.

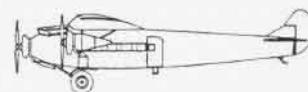
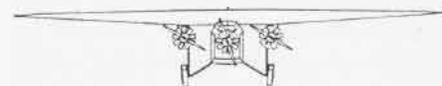
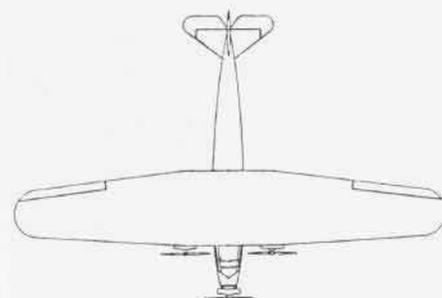
In February, the TA-3s and TA-2 had been redesignated as RA-3s and RA-2. The -2 had been modified to include additional streamlining during its overhaul. Back in service, it also acquired the RA-3 designation and the three RA-3s continued in service. One, the third of the original TA-1s, had crashed in Nicaragua in March 1931. The first one was overhauled again and returned to Nicaragua where it was surveyed in early 1932. The other continued service in the States, as the Marines were withdrawn from Nicaragua. It was scrapped in December 1932, as the time of the trimotor transports was coming to an end.

TA-2



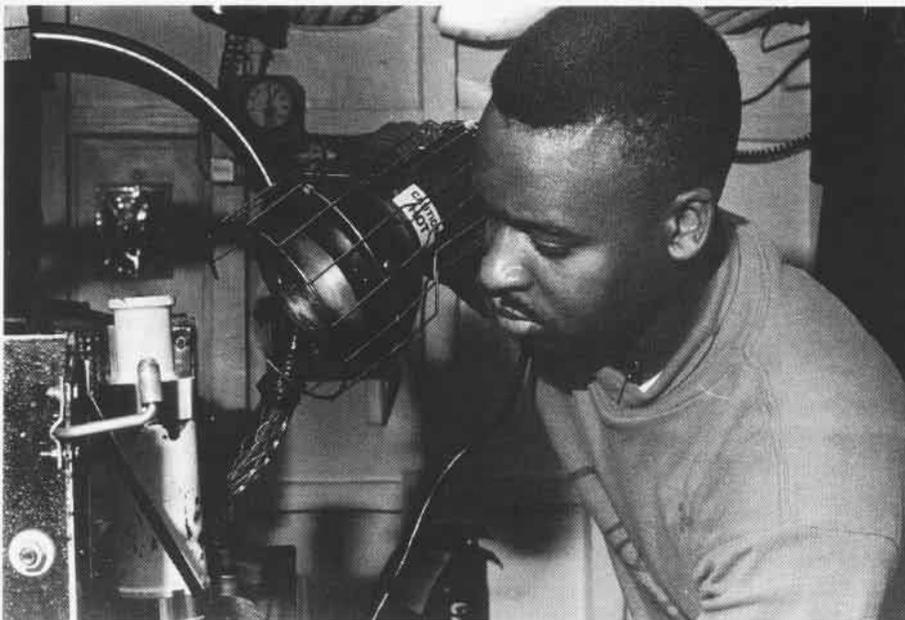
	TA-1	TA-2
Span	63'4"	72'10"
Length	49'1"	48'7"
Height	13'3"	13'6"
Engines:	Three Wright J-5 (R-790) 220 hp	
Maximum speed	116 mph	115 mph
Service ceiling	12,050'	12,800'
Range (full fuel)	460 mi.	540 mi.
Crew	2	2
Cargo (full fuel)	1,850 lbs.	1,750 lbs.

TA-2





Aviation Structural Mechanic (AMS)



During a magnetic particle inspection, AMS2(AW) Vernon Brown checks for cracks and defects in a hydraulic cylinder. Brown is assigned to the AIMD onboard Theodore Roosevelt.

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

The Aviation Structural Mechanic rating is divided into three specialties: Aviation Structural Mechanic Hydraulics, AMH; Aviation Structural Mechanic Safety Equipment, AME; and Aviation Structural Mechanic Structures, AMS. In this issue, the AMS rating will be explored.

They work around the clock at sea, maintaining and preserving the Navy's aircraft in combat readiness. Demanding, precision work requiring great skill and knowledge drives the 7,000-plus men and women Aviation Structural Mechanics to excellence. It is their way of life.

"After boot camp, a sailor with an enlistment guarantee of becoming an AMS

attends "A" school in Memphis, Tenn.," AFCM(AW) Rod A. Peralta, the head AM detailer, said. "At school, the airmen learn the fundamentals of aircraft maintenance, such as riveting and basic patching. Undesignated sailors already in the fleet may also be sent to A school if they have decided to strike for the AMS rating.

"After completion of A school, the sailor ships out to a Fleet Replacement Aviation Maintenance Program (FRAMP) squadron where he or she learns the intricacies of the aircraft they will work on," Peralta added.

"Back in the fleet, a sailor can be assigned to a squadron working O-level [operations] maintenance, or possibly to an Aircraft Intermediate Maintenance

Department, working I-level [intermediate] repair," explained AMSC(AW) Philip J. Lindros, a chief petty officer assigned to the AIMD onboard *Theodore Roosevelt* (CVN 71).

"At the O level, squadron personnel perform service of a minor nature, such as routine maintenance and fixing the day-to-day type problems an aircraft may encounter," Lindros said. "If they have problems that can't be fixed at a squadron level, it's brought to AIMD where we can spend more time fixing a part.

"Keep in mind, the squadrons must keep their aircraft flying. If they encounter a problem that may take excessive hours to fix, or just have too many other jobs they're working on, they turn to AIMD to

help them out."

The third type of maintenance performed on aircraft takes place at the depot level where planes go for total reworking.

"There are advantages to working at all three levels," added Lindros. "When an AMS works O level, he probably becomes more familiar with the entire aircraft. The squadron AMSs work closely with all the other ratings in that squadron to keep the plane in the air. Naturally, some of the other rating skills rub off on them. When AMSs get back to AIMD, they tend to work more in their specialty."

And there are many specialties an AMS may choose from. "There are 29 different Navy Enlisted Classification (NEC) codes in the AMS rating," Master Chief Peralta said. "Each NEC requires a new school or assignment to a FRAMP."

Specializing is crucial in today's Navy. AMS1 Glenn D. Simon, the tire shop supervisor aboard *Theodore Roosevelt*, said, "In the 15 years that I've been in, I've seen a lot of changes in the rating. It used to be okay if the work was 'close enough.' But that attitude is gone. Our work has to be dead on the money."

Advances in aircraft design have caused the AMS rating to change from a body shop atmosphere to one of a complex science. New, exotic materials and composites require advance training and equipment to repair the Navy's aircraft. An AMS needs a sound knowledge of metallurgy, welding, and even x-ray technology to advance in the rating.

"The advancement tests for AMSs cover all areas of the rating. A sailor must learn the fundamentals of each area in order to do well and make rate," said Peralta. "Not only must the sailors know the practical applications of their job, but they must be able to use the many different Navy publications and manuals to find the information needed to get the job done."

Advancement for AMSs remains consistent despite the reduction in the military force. It is also an exciting field for women to choose, although, presently, only 459 females work as AMSs.

"The key to making rate in this field is hard work, learning as much as you can, and taking the hard-to-fill billets," Peralta emphasized. "Don't be afraid of challenging yourself."

It is also important for AMSs to learn as much about the other aviation ratings as they can. Once an AMS reaches the senior chief level, the rating combines with AMHs and AMEs to become AMs. At the



In the *Theodore Roosevelt* tire shop, AMSAR Brian Ward puts split rims together on an F-14 nose tire.

master chief level, AMs combine with the Aviation Machinist's Mate rating to become AFs.

In this sea-intensive rating, junior AMSs, E-5 and below, usually spend from 42 months to their entire first enlistment at sea before going to shore duty for 36 months. Chiefs spend 36 months at sea and 36 months at shore, and senior chiefs will spend 42 months at sea and 36 months at shore. "A senior chief spends more time at sea because his expertise and experience are really needed onboard a carrier," Peralta said.

AMSs were offered exit bonuses during last year's downsizing but so far, not this year. In fact, there is talk of Selective Reenlistment Bonuses being offered to service members with critical NECs.

"The AMS rating is an outstanding job. For people who like to work hard and make rate, this is the place to be," Peralta concluded. ■

At the Merge and Beyond:

Fighting and Working Together

Part 1

By LCdr. Bob Frantz, USNR

"Going to Nellis for Red Flag or Green Flag or to fight the Air Force Fighter Weapons guys is always good training when the money and scheduling flexibility exists," explained Commander John Stufflebeem, XO of the VF-84 *Jolly Rogers*. "Unfortunately, when money is scarce, your opportunities become limited and you must pick and choose those things very carefully. You try to fit in similar training that has minimum impact on your budget."

Tasked with "fitting in the similar training" is VF-84 Air to Air Training Officer, Lieutenant Joe Burns. "We look for Air Force guys who want to fight and are based within a couple of hundred miles of Oceana. That means that most of our local Air Force players will be based across the river at Langley or down the road in North Carolina at Seymour Johnson. It makes it convenient for required face-to-face briefings and access to common op areas.

"I check messages looking for invitations to play. If nothing's cooking there, I get on the phone and go down the list and try to drum something up," he went on. "The problem I have is that there is typically very little time available during the turnaround cycle, and I'm usually trying to fit something in on short notice. The Air Force likes to schedule weeks in advance.

"It also has larger squadrons and more jets available for sorties. The Air Force tends to fight in larger numbers, division size or greater, and we mostly work in sections. Therefore, its division tactics are more developed than ours

and we've done a good job exploiting section tactics."

Burns related, "We recently had some good training with the F-15E aircrews at Seymour Johnson. Their main focus has been on bombing and they're now in the process of setting up their air combat training program. They were glad to have us as adversaries and help get their folks [air combat maneuvering] qualified.

"Fighting F-15s gives us another opportunity to see a different aircraft and different system capability as well as different tactics related to those capabilities. It also helps us refine our tactics. For example, their RWR [radar warning receiver] gear is a lot better than ours and they can tell when they are [radar locked] much further out than another F-14 would know. Therefore, when you fight an F-15, you're less likely to lock him up at range to avoid RWR detection and his ensuing evasive maneuvering to avoid being shot."

Lt. Burns, whose nugget cruise was a Desert Storm combat tour, said, "It is obvious from the Gulf experience that jointness is the wave of the future. The more we train together the more effective we'll both be."

Ultimate responsibility for achieving combat readiness rests with the commanding officer. Commander Ronald R. Rahn, *Jolly Roger* CO since July 1991, said, "There really isn't as much flexibility as there may seem. When you block out dates for things like air wing and ship commitments, FFARP [Fleet Fighter Air Combat Readiness Program, a three-week training program typically conducted by VF-43 for Oceana-based fighter squadrons], and sending crews to Top Gun, you run out of options quickly."

Rahn chose participation in Coronet Sentry 92-1 as the squadron's primary formal opportunity to interact with the Air Force:

"Coronet Sentry is an annual Air Force AWACS [Airborne Warning and Control System]-sponsored exercise held at Tinker AFB, Okla. We played the part of the Blue offensive counter air force. We escorted USAF and Air National Guard strike and strike support elements, including F-16s, A-10s, and F-111s. It was our job to maintain air superiority and we were opposed by Red Force F-15s. The target range was controlled by AWACS. There was a great deal of coordination required during the strike and it gave us, especially the guys who joined us after Desert Storm, good exposure to Air Force methodology and procedures."

Cdr. Stufflebeem commented, "It was good for us to see how the Air Force conducts business. The Air Tasking Order came to life for the Navy in the Gulf. Since Coronet Sentry also used a computer-generated message for the exercise plan, we got a good look at the Air Force combined force, centralized command philosophy.

"The joint briefs were also very beneficial, particularly for the junior officers, in eliminating potential misconceptions about each service's equipment and capability," he continued. "Some of the new AWACS folks were surprised to learn the F-14 doesn't really have a 1,000-mile unrefueled combat range."

"There's going to be more and more emphasis on joint operations," said Stufflebeem. "My guess is that we're going to see more Commander in

Chief-sponsored joint exercises during the training cycle. It may be common to see things like F-14 strike fighter missions in concert with F-15Es where we coordinate together and attack the same target.

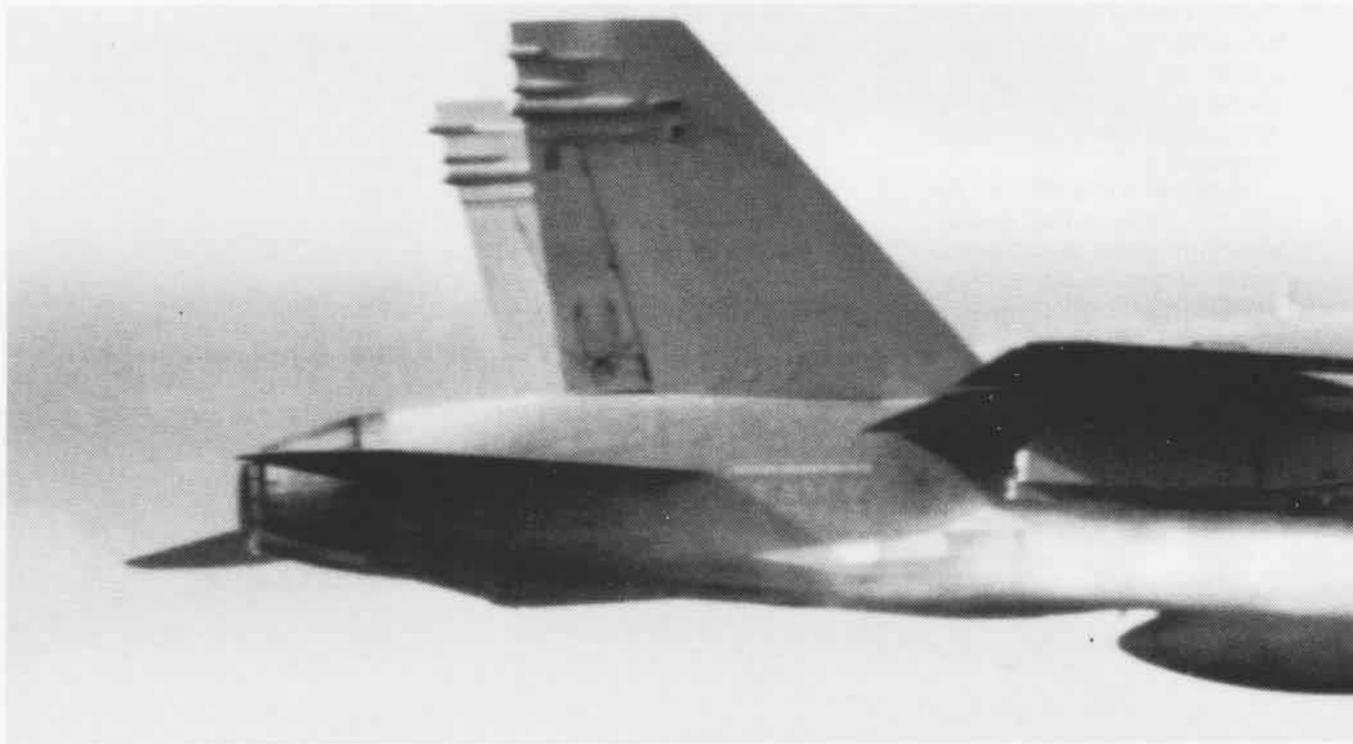
"Right now, more is still left to the CO's prerogative, but I can envision where in the not-too-distant future, one third of our operating budget will be expended in support of joint training, he added."

Lt. Gerald B. Parsons

Although he supports joint training, Stufflebeem offered the following caveat: "When we fly Navy against Air Force, we have to keep in mind as we study the current threat list, we probably aren't going to be fighting a USAF-equipped, trained, and indoctrinated enemy anytime soon. Therefore, we still need to train against dedicated adversaries that are proficient at replicating the various threats we are likely to encounter." ■

VF-84 Jolly Roger F-14A Tomcats are refueled by an Air Force KC-135.





Tactical/Environmental Strike

By J. Michael Sierchio and Sam Brand

The strike warfare community requires accurate meteorological analyses and forecasts to properly plan and effectively execute tactical operations. This point was vividly illustrated during the Persian Gulf War and documented by the Center for Naval Analyses in its quarterly progress report of April-June 1991: "Analysis of Desert Storm TACAIR operations indicated that unfavorable environmental conditions were responsible for 29 Navy strike mission aborts or cancellations and for 63 strike diversions from the primary target. Moreover, at least one-third of all missions executed by Navy TACAIR were impaired by restricted meteorologic visibility."

The Air Force Center for Studies and Analyses has examined the expected tactical gain of a land/air strike as a function of improved weather information. This study examined a central European winter tactical air strike scenario with an electro-optical weapons mix. The baseline selected for comparison was the target kill rate for operations for which there was no weather data support. Improvement in tar-

get kill rate was tracked as the level of weather support increased. When limited weather data was available, there was an increase of roughly 22 percent in the target kill rate. When weather data classified as "good" was available, the increase in kill rate was approximately 40 percent. Finally, when the weather forecast provided was "perfect," the increase in target kill rate was 60 percent.

The advent of "smart weapon" technology has resulted in a new arsenal of sensors and weapon systems which are extremely accurate. Unfortunately, as is often the case with sophisticated equipment, this increased accuracy comes at a cost. Not only are these systems expensive, but they are also very sensitive to environmental conditions, such as precipitation. Strike planners must know beforehand if environmental conditions will permit use of such costly systems with a high likelihood of success. Also, aircrews should not be placed at risk carrying a weapon into a hostile zone when environmental conditions would preclude its use.

While meteorological information is important, it is generally more valuable to the tactical decision maker if it is presented in a tactically relevant form. An example of such an environmental tool is the automated electro-optical tactical decision aid (EOTDA) under development at the Naval Research Laboratory, Monterey, Calif. This product was derived from the Mark III EOTDA, which was originally developed at the U.S. Air Force Phillips Laboratory. These EOTDAs (one each for infrared, laser, or television systems) are simply computer programs which process information concerning the target, its background, the weapon system and the environment, and produce output in the form of predictions of system detection or lock-on ranges.

The automated EOTDA under development will reside on the third phase of the Tactical Environmental Support System (TESS (3)). TESS is an on-scene workstation with many environmental applications and a data base containing information from a variety of sources, including numerical model output, meteorological



An FA-18D Hornet launches a Maverick missile.

Decision Aids for Naval Warfare

satellite data, and both manual and automated meteorological observation station data.

The Mark III required that all input data be manually entered at some point. This proved extremely labor intensive even if environmental data was available to the user, which it often is not. With the automated EOTDA, the user will input the latitude and longitude of the target, its elevation, and the date and time over target. The EOTDA will access the TESS (3) data base, extracting the environmental data required to make the performance predictions. Keyboard data entry time will be dramatically reduced compared to the Mark III, resulting in more timely delivery of output to the user. This will also allow for the addition of a wide variety of new output products tailored to the needs of various users.

Other applications similar to the EOTDA exist which help planners take into account environmental effects. With increased computing power and improved visualization techniques, output from these products can be combined to com-

plete the "big picture" for planners from an environmental viewpoint. Such products depict the tactical/environmental concerns of a pilot of an attack aircraft armed with infrared precision guided munitions (PGMs) as the aircraft approaches the target. Knowledge of the existence and location of clouds can be used to conceal the aircraft from some threats during its mission.

EOTDA output predicts when the target will first be detected on the aircraft's forward looking infrared display. Enemy surface-to-air missile threat envelopes are of interest for obvious reasons. The aerodynamic envelope and predicted target acquisition and lock-on ranges for the PGMs will tell the pilot when to launch the weapon. The optimum region for successful launch and egress from the target area are displayed. The environment affects all facets of this display, demonstrating the importance of providing sound meteorological information to strike mission planners, particularly for a coordinated strike involving tactical aircraft and cruise missiles.

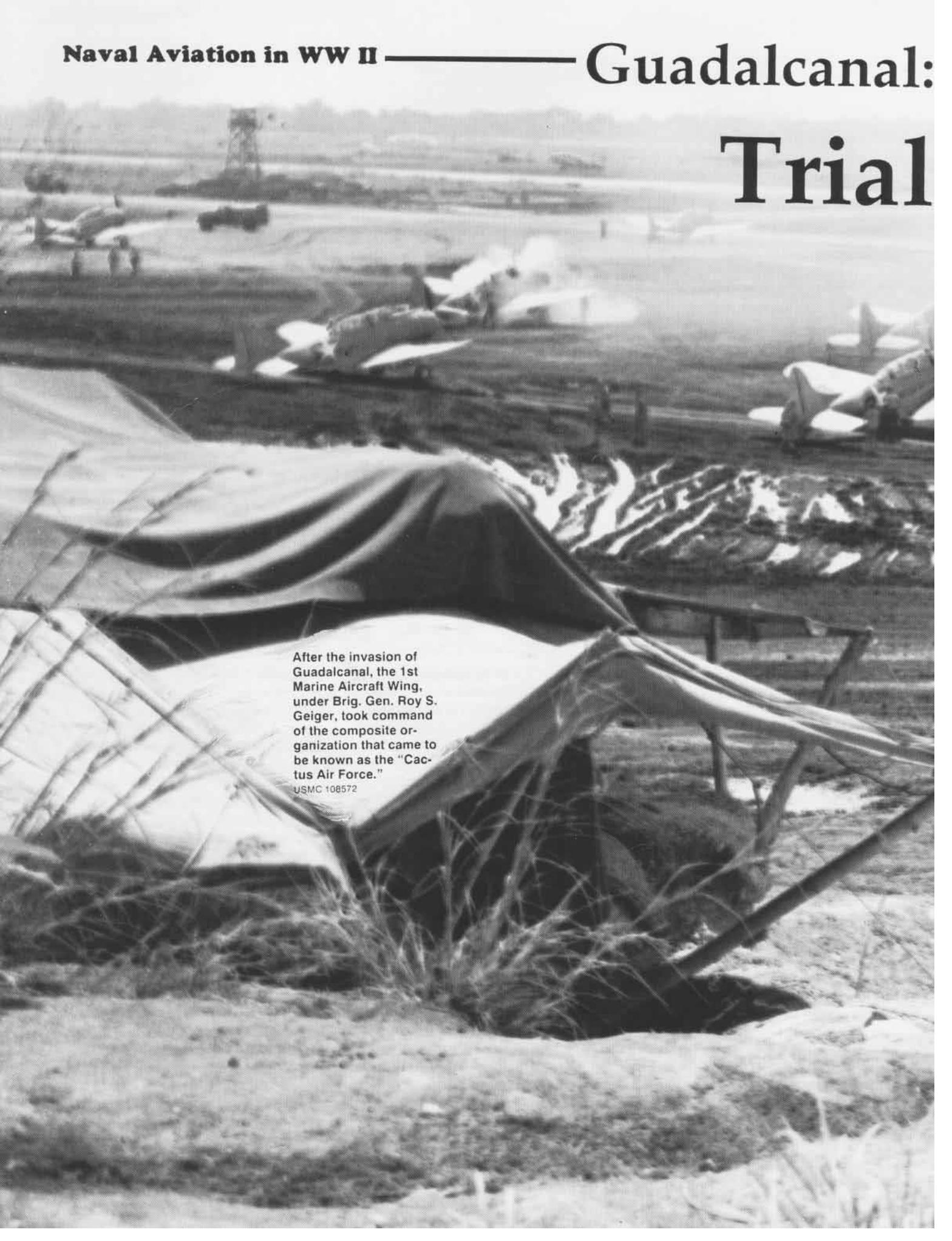
Historically, the meteorological community of the Navy has been support oriented, but that support has been limited to purely environmental data. Over the past decade, there has been a shift in emphasis toward applications of meteorological data – the goal being the creation of products to aid naval commanders in making tactical decisions.

Navy ships, aircraft, sensors, and weapon systems are being tested operationally in a wide range of climatic regions of the world and have proved to be very sensitive to environmental conditions. The challenge to the Navy's environmental community is to understand how the environment affects modern weaponry, and to convey this understanding to commanders in the form of clear, concise, and insightful products. ■

The authors are research meteorologists at the Naval Research Laboratory, Monterey, Calif. (formerly Atmospheric Directorate, Naval Oceanographic and Atmospheric Research Laboratory).

Naval Aviation in WW II ————— Guadalcanal:

Trial



After the invasion of Guadalcanal, the 1st Marine Aircraft Wing, under Brig. Gen. Roy S. Geiger, took command of the composite organization that came to be known as the "Cactus Air Force."

USMC 108572

by Fire

Part 2



By Edward J. Marolda

Vice Admiral William F. Halsey, who took the helm of the South Pacific Command in mid-October 1942, was the right tonic for the hard-pressed defenders of Guadalcanal. The 60-year-old admiral with bushy eyebrows and the visage of a friendly "sea dog," inspired confidence in the men who fought under him. Having missed the Battle of Midway because of a debilitating case of dermatitis, he was eager to close with the Japanese and drive them from the island and the sea around it.

Halsey had little time to ease into the job, for the enemy was determined to force the Marines off Guadalcanal and destroy any U.S. naval forces that steamed to their assistance. From October 20 to 26, Japanese Lieutenant General Masai Maruyama's troops launched one frontal assault after another against the thin Marine-Army line protecting Henderson Field. In

bloody, hand-to-hand combat, the Americans beat off the attackers. Thousands of Japanese soldiers died in the assaults across the Mantanikau River and against what the Marines called "Bloody Ridge."

Undeterred by this setback, Admiral Isoroku Yamamoto, Commander in Chief of the Combined Fleet, ordered his powerful armada of 4 aircraft carriers, 5 battleships, 14 cruisers, and 44 destroyers to seek out the American fleet and eliminate it as a fighting force.

That goal would not be easily achieved. For, although Japanese submarines had sunk *Wasp* (CV 7) and severely damaged *Saratoga* (CV 3) – temporarily knocking her out of the war – *Enterprise* (CV 6), the "Big E," joined *Hornet* (CV 8) in October. Newly assigned Rear Admiral Thomas C. Kinkaid led the two-carrier task force. In addition, the Navy reinforced the South Pacific Command with 24 submarines and the battleships *Indiana* (BB

58) and *South Dakota* (BB 57). Both ships bristled with a lethal array of the new 40-millimeter anti-aircraft guns. Determined to spare no resources in the death struggle for Guadalcanal, Washington also dispatched 2 Army B-17 bomber squadrons and 50 fighter planes to the combat theater.

Like bees roaming far from the hive, Japanese and American patrol planes searched for enemy fleets in the vast expanse of the Pacific north of the Santa Cruz Islands. Soon after American aircraft began sighting ships of the Japanese fleet, in the early morning hours of October 26, Adm. Halsey ordered his forces to "Attack – Repeat – Attack."

The Battle of the Santa Cruz Islands opened a few minutes before 0800 when two SBD dive-bombers struck Japanese light carrier *Zuiho* with their 500-pound bombs, knocking her out of the action. The Japanese got their licks in next. With *Enterprise* temporarily concealed by a rain squall, 27 enemy planes concentrated on

Naval Aviation in WW II

Hornet. The valiant ship took hit after hit from bombs, torpedoes, and flaming aircraft piloted by self-sacrificing Japanese pilots. Dead in the water and burning fiercely, the carrier had to be abandoned. American attempts to scuttle her failed, but the Japanese later dispatched her with torpedoes.

Meanwhile, *Hornet's* air group, which had passed the Japanese air contingent heading in the opposite direction, jumped carrier *Shokaku*. Dive-bombers led by Lieutenant James E. Vose reduced the enemy ship's flight deck to a twisted, burning mass of metal and wood. *Shokaku* survived – at least until a U.S. submarine sent her to the bottom in June 1944.

Swarms of aircraft from the two remaining enemy carriers, *Juno* and *Zuikaku*, then pounced on *Enterprise*, now bereft of cloud cover but defended by her superbly trained antiaircraft gunners and those aboard *South Dakota*. Even though they suffered bomb hits, the battleship and cruiser *San Juan* (CL 54) put up a lethal curtain of fire that decimated *Enterprise's* attackers. The fire from these ships and American fighters downed numerous Japanese "Val" dive-bombers and "Kate" torpedo planes, some of the 97 aircraft lost by the enemy that day.

Erroneously believing that his forces had by then sunk all of the Pacific Fleet's carriers, Adm. Yamamoto failed to move quickly in the Solomons. Instead, he methodically prepared for what he thought would be the final campaign against Guadalcanal. During the first week of November, Japanese cruisers and destroyers of the "Tokyo Express" reinforced the Guadalcanal garrison with thousands of infantrymen. The following week, Yamamoto dispatched a large convoy escorted by capital ships of his Combined Fleet.

Halsey learned of these Japanese movements from intercepted radio communications. Even though Halsey knew that *Enterprise* had not fully recovered from wounds she suffered in the previous fight, and that powerful enemy warships were steaming toward Guadalcanal, he again sought battle. He understood that in battle, fortune often smiles on the bold.

He deployed the still-scarred *Enterprise*, battleships *South Dakota* and newly arrived *Washington* (BB 56), 2 cruisers, 8 destroyers, and 24 submarines to the waters of the southern Solomons so they could cover his reinforcement task force. This latter formation consisted of

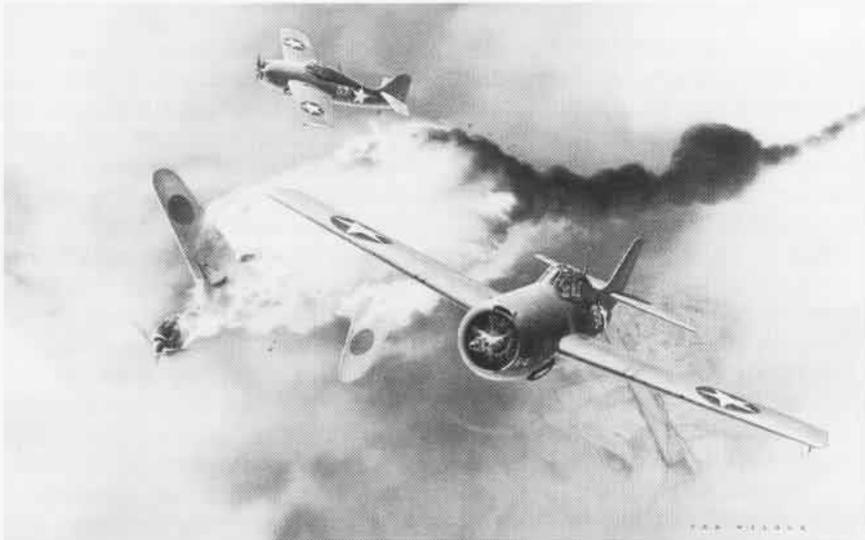
seven troop and cargo transports under the command of Rear Admiral Richmond Kelly Turner. These ships were escorted by 13 cruisers and destroyers led by Rear Admiral Norman C. Scott, victor of the Battle of Cape Esperance, and Rear Admiral Daniel J. Callaghan.

The Naval Battle of Guadalcanal opened with an attack on November 12 by Japanese two-engine bombers, "Bettys," on Turner's transports unloading at the island. F4F *Wildcats* of the joint-service "Cactus Air Force" based at Henderson Field and antiaircraft guns on the ships shot down many of the bombers. These Japanese forces, however, were only the tip of the iceberg, for Turner knew from intel-

ligence that battleships *Hiei* and *Kirishima*, light cruiser *Nagara*, and 14 destroyers were to bombard Henderson Field that night. Despite the unfavorable odds, Turner decided that he could not allow the aircraft and troops ashore to bear the full brunt of Japanese naval gunfire. He directed Callaghan, 15 days senior to Scott, to lead the American cruisers and destroyers in a night engagement against the Japanese. All understood that this was a desperate, if noble venture.

The American ships proceeded into "Ironbottom Sound" off Guadalcanal in single column, with 4 destroyers leading and 4 destroyers following cruisers





"Victory Over Guadalcanal" by Ted Wilbur. This painting depicts Marine ace Joseph J. Foss shooting down a Zero, one of 26 Japanese aircraft that he destroyed in the southwest Pacific between October 9, 1942, and January 25, 1943. When he retired in 1981, Capt. Wilbur was head of what is now the Naval Historical Center's Aviation History and Publication Division.

Atlanta (CL 51), Adm. Scott embarked; *San Francisco* (CA 38), Adm. Callaghan embarked; *Portland* (CA 33); *Helena* (CL 51); and *Juneau* (CL 52). Surprisingly, Callaghan did not position the latter three ships, equipped with state-of-the-art SG radar, in the van where they would be most useful for his management of the battle. Even though *Helena's* radar warned of the Japanese approach before the enemy had spotted the Americans, Callaghan did not exploit this advantage. Furthermore, he did not carry out his original intention to cross the enemy "T," a classic battle-winning naval maneuver. In fact, in the ensuing battle, the two opposing formations became intermingled and fought a confusing, close-range free-for-all. At 0124 on November 13, destroyer *Cushing* (DD 376) had to veer hard to port to avoid colliding with a Japanese combatant. For eight minutes, Callaghan would not allow his ships to open fire for fear they would shell one of their own wildly maneuvering ships. That delay was fatal for Adm. Scott and his flagship *Atlanta*, which was ripped open by shells from *Hiei's* 14-inch naval rifles (as well as a number of 8-inch rounds from *San Francisco*).

Soon afterward, the Japanese battleship sent *Cushing* to the bottom. To avenge this loss, destroyer *Laffey* (DD 459) sprayed *Hiei's* bridge with machine gun fire, killing her commanding officer. The Japanese ended this uneven match when one of their destroyers torpedoed and sank *Laffey*. Then, U.S. destroyer *Sterett* (DD 407) and Japanese destroyer *Yudachi* traded fire. Both ships were severely damaged. *Kirishima* joined the fracas, pouring a deluge of fire into *San Francisco*, killing Adm. Callaghan and devastating the cruiser. Cruisers *Helena* and *Portland*, although the latter was damaged by a torpedo strike, raked *Hiei*

The flak-filled sky over the U. S. carrier task force portrays the fury of the Battle of Santa Cruz.



USN 20989

Naval Aviation in WW II

with their gunfire. In addition, U.S. fire ended the existence of destroyer *Akatsuki*.

The American ships in the rear of the column fared even worse than those in the van. Enemy torpedoes cut *Barton* (DD 599) in two and she quickly plunged to the bottom with many of her crewmen. The Japanese blasted *Monssen* (DD 436) with 37 rounds of naval gunfire, leaving her a twisted wreck. The last cruiser in the column, *Juneau*, was slightly damaged by a torpedo but she was able to retire from the scene.

The dawn of November 13 brought no respite from death and destruction for both sides. *Portland* dispatched *Yudachi* with six salvos of fire. Marine and Navy planes from Henderson, spared the devastating bombardment meant for the airstrip the night before, showed their appreciation for the fleet's sacrifices by sinking the enemy's flagship, *Hiei*.

The Americans suffered, too. *Atlanta*, beyond salvage, was scuttled by her crew. The wrecked and abandoned destroyers *Monssen* and *Cushing* finally slipped beneath the surface. The greatest disaster, however, befell *Juneau*. Japanese submarine *I-26* snuffed out her life and that of most of her crewmen, including the five Sullivan brothers. Sharks and a blazing sun claimed all but 10 of the sailors who survived the sinking.

When comparing the loss of 6 U.S. ships and 1,439 seamen to the Japanese loss of 6 ships and 552 sailors, one might conclude this was a Japanese victory. In a strategic sense, though, the Americans emerged victorious. The continued operation of Henderson Field enabled American aircraft to dominate the waters of the southern Solomons on the 14th and frustrate the enemy's last serious push to take Guadalcanal.

Teaming up with aircraft from *Enterprise*, which had steamed north from Noumea, Marine Major General Roy S. Geiger's "Cactus Air Force" planes sank Japanese heavy cruiser *Kinugasa* and damaged three other cruisers. Then, the Marine, Navy, and Army airmen pounced on enemy reinforcement convoys, sending six transports, most of their embarked troops, and desperately needed supplies to the bottom. The U.S. units were unable to prevent Rear Admiral Raizo Tanaka's four destroyers and four transports from disgorging some troops and supplies onto Guadalcanal, but the latter ships never

sailed again. Beginning at dawn on November 15, Henderson-based aircraft, *Enterprise* fighters and dive-bombers, Marine and Army shore batteries, and a Navy destroyer utterly devastated the beached transports.

Meanwhile, during the night, the American surface fleet had evened the score in the bloody waters near Savo Island. Vice Admiral Kondo had led a formidable force of battleship *Kirishima*, 2 heavy cruisers, 2 light cruisers, and 10 destroyers south to once again rain shells on Henderson. Beginning at 2317 on November 14, a U.S. task group under Rear Admiral Willis Augustus Lee and comprised of *Washington*, *South Dakota*, and destroyers *Preston* (DD 379), *Walke* (DD 416), *Benham* (DD 397), and *Gwin* (DD 433), exchanged salvos of gunfire and torpedoes. Japanese lookouts reported the first contacts, even though the American ships carried the advanced SG radars. Initially, the battle went against the Americans. For the loss of one of their own destroyers, the Japanese sank *Preston* and *Walke* and severely damaged the other two "tin cans." *South Dakota* lost electrical power and thereafter became a magnet, drawing enemy fire. Adm. Lee pressed ahead into the maelstrom with his flagship *Washington* and her powerful 16-inch, radar-assisted naval rifles soon found the range to *Kirishima*. Within minutes, American shellfire had reduced the enemy battlewagon to a flaming and rudderless hulk and before the night was out, her crew had scuttled her. With *Washington* on the rampage in the midst of his task force, Adm. Kondo wisely chose to withdraw.

The Naval Battle of Guadalcanal marked a turning point in the bitter struggle for the southern Solomon Islands. Thereafter, the Japanese were on the defensive on land, in the air, and at sea. Months of hard fighting, however, remained before the Allies could claim victory in the South Pacific. In fact, there were several setbacks that delayed the end of the campaign and revealed that American forces were still learning painful lessons of war.

One such lesson occurred late at night on the last day of November. RAdm. Tanaka, labeled "tenacious Tanaka" by naval historian Samuel Eliot Morison out of respect for his bravery and perseverance, once again

attempted to reinforce the Japanese garrison on Guadalcanal. His modest force of eight destroyers, all but two carrying troops, was met off Tasafaronga Point by Rear Admiral Carleton H. Wright's newly organized cruiser-destroyer striking force of 4 heavy cruisers, 1 light cruiser, and 6 destroyers. Despite the advantage of spotting the enemy first and launching torpedoes first, the Americans fared worst. Due to Wright's poor tactical direction, all of the torpedoes launched by his ships missed the mark and their naval gunfire concentrated on just one doomed enemy destroyer, *Takanami*. Conversely, torpedoes from Tanaka's destroyers hit all four of Wright's heavy



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A Mitsubishi Betty bomber in the water off Guadalcanal.

cruisers, and sank one of them, *Northampton* (CA 26). On the bright side, however, the Japanese had failed in their reinforcement efforts.

With growing superiority at sea and in the air, at least during daylight, the Allied command was able to pump troops and supplies into Guadalcanal. On December 9, Major General Alexander M. "Sandy" Patch, commanding officer of the Army's 24th Infantry Division, replaced the redoubtable Major Alexander A. Vandegrift as commander of the forces ashore, which included the 24th and elements of the 2d Marine Division. This occurred as the exhausted, but victorious Marines of the 1st Marine Division, the "Old Breed," boarded Navy transports for passage to Australia and well-deserved liberty.

On several occasions during January 1943, following Tokyo's con-

clusion that Guadalcanal could not be held, the Japanese evacuated their 11,000-man garrison. They successfully carried this off because the Allies believed the enemy to be still beefing up the island force, not withdrawing. Moreover, concentrations of Japanese naval and air forces in the northern reaches of the Solomons kept Halsey's rapt attention.

The Americans had one more lesson reaffirmed – the importance of air cover for surface naval operations – before the close of the Guadalcanal campaign. At the end of the month, Halsey dispatched four transports to the island with a covering force, under Rear Admiral Robert C. Giffen, of six cruisers and eight destroyers. Two escort carriers, recently assigned to the South Pacific Command, were available, but Giffen failed to keep them within supporting range of his surface formation. Hence, when Japanese torpedo planes dove on the flotilla north of Rennell Island on the evening of January 29, the enemy was able to put two "fish" into *Chicago* (CA 29), last survivor of the August Battle of Savo Island. The following day air units from carrier *Enterprise* arrived over the stricken ship, being towed by fleet tug *Navajo* (AT 64) at four knots, but they could not fend off all the determined Japanese attackers. The enemy torpedo bombers hit *Chicago's* starboard side with four more torpedoes and 20 minutes later she went down by the stern.

Despite the loss of this veteran cruiser, the American mission to deliver more troops and supplies to Guadalcanal succeeded. The diversion of the enemy allowed the four transports to unload safely off Lunga Point. Several days later,

Mar 1: A revision of the squadron designation system changed Inshore Patrol Squadrons to Scouting Squadrons (VS), Escort Fighting Squadrons (VGF) to Fighting Squadrons (VF), Escort Scouting Squadrons (VGS) to Composite Squadrons (VC) and Patrol Squadrons (VP) operating land-type aircraft to Bombing Squadrons (VB). This action also redesignated carrier Scouting Squadrons as VB and VC and, as a result, the number of squadrons on *Essex*-class carriers was reduced to three. In spite of this change, the aircraft complement of their Air Groups remained at the previous levels of 21 VF, 36 VSB, and 18 VTB.

Mar 4: Changes to the characteristics of *Essex*-class carriers were authorized by the Navy Secretary, including installation of a Combat Information Center and Fighter Director Station, additional anti-aircraft batteries, and a second flight deck catapult in lieu of one athwartships

another five transports did the same. At the same time, of course, the Japanese completed their evacuation of the island, unbeknownst to Halsey and Patch. Finally, on February 9, 1943, Gen. Patch's ground troops secured all of the island. He radioed Halsey the good news: "Tokyo Express' no longer has terminus on Guadalcanal."

The six-month battle for Guadalcanal proved a costly victory for American arms. Several thousand American fighting men gave up their lives in the epic struggle. The U.S. Navy lost 2 aircraft carriers, 6 heavy cruisers, 2 light cruisers, and 14 destroyers, which approximated in terms

on the hangar deck.

Mar 5: *Bogue* (ACV 9), with VC-9 on-board, joined Task Group 24.4 at Argentia, Newfoundland, and began the escort of convoys to mid-ocean and return. Although *Santee* (ACV 29) had previously operated on hunter-killer duty, *Bogue* was the center of the first of the hunter-killer groups assigned to convoy escort.

Mar 29: Tests of forward-firing rocket projectiles from naval aircraft were completed at the Naval Proving Ground, Dahlgren, Va., using an SB2A-4 aircraft.

Apr 1: The first Navy night-fighter squadron, VF(N)-75, was established at NAS Quonset Point, R.I., Cdr. W. J. Widhelm commanding.

Apr 21: Capt. Frederick M. Trapnell flew the Bell XP-59A *Airacomet* jet at Muroc, Calif., recording the first jet flight by a U.S. Naval Aviator.

of number of ships and tonnage the losses of the Imperial Japanese Navy. Allied air losses to all causes totaled 615 aircraft for the campaign, compared to about 682 for the Japanese. (The Japanese lost many of their experienced airmen during the campaign, a blow from which Japanese naval aviation never fully recovered.) But the lessons learned by the American sailors, Marines, soldiers, and airmen who fought on, over, and around the island were not forgotten. They became the foundation for the tactical and operational skills that enabled U.S. and Allied forces to win WW II in the Pacific.

Years after the war, retired Japanese Admiral Tanaka succinctly described what made the difference in the Japanese-American struggle for Guadalcanal: "We stumbled along from one error to another," he observed, "while the enemy grew wise." ■

Dr. Marolda is head of the Contemporary History Branch of the Naval Historical Center. He has authored several books on naval history.

Japanese torpedo and dive-bombers attack *Hornet* (CV 8) during the Battle of the Santa Cruz Islands, October 26, 1942. A moment later, the dive-bomber at upper left center crashed into the signal bridge of the carrier.

40298





One of VAQ-33's two EP-3Js shown with a variety of external stores.

Jammin' Orions Train the Fleet

By David Reade and LCdr. Rick Burgess

A modified Lockheed P-3 *Orion* recently proved itself to be a valuable platform in training a carrier battle group as the ships sailed toward a Mediterranean deployment. With over 30 years of service to the fleet, the *Orion* made an impressive showing in yet another role.

An EP-3J operated by Tactical Electronic Warfare Squadron (VAQ) 33 shadowed the *Kennedy* (CV 67) battle group in October 1992 as it steamed across the Atlantic Ocean, jamming radars and communications, giving the group's combat systems operators a real workout in sharpening their skills against simulated enemy electronic and missile threats.

The EP-3J was one of two assigned to VAQ-33, an electronic warfare aggressor squadron based at NAS Key West, Fla. Modified in early 1992 from P-3Bs by Chrysler Technologies Airborne Systems, Inc., of Waco, Texas, the two EP-3Js (BuNos 152719 and 152745) replaced a P-3A and an EP-3A in the squadron and embodied a significant increase in capability.

The leap in capability came from the EP-3J's fast scanning USQ-113 com-

munications intrusion, deception and jamming set, capable of monitoring and jamming multifrequency bands of radio communications. The aircraft is also equipped with the ALQ-170 missile seeker simulator, the AST-6 radar signal simulator, and the ULQ-21 noise/deception jammer pod. Among the many antennas sprouting from the EP-3J are aeriels for secure high-frequency, ultra-high frequency, and satellite communications. Wing-mounted pylons are equipped with universal equipment connections for quick installation of various simulator and jammer pods. Like many electronic warfare aircraft, the EP-3J also carries pods that dispense chaff, which are clouds of tiny metal strips that confuse radar systems.

The EP-3Js are under operational control of the Fleet Readiness Training Group (formerly the Fleet Electronic Warfare Support Group) at Norfolk, Va. The aircraft normally pounce, unannounced, on carrier battle groups during fleet exercises, simulating hostile maritime patrol and reconnaissance aircraft, generating foreign antiship missile radar signals, and jamming fleet communications. The transit of the *Kennedy* battle group, however,

marked the first time VAQ-33 provided an announced "Transitex" (as the exercise is called), giving the ships and air wing an additional valuable opportunity to sharpen their electronic warfare edge. The EP-3J provided the group's ship and aircrews an intimate display of the electronic warfare threat that the battle group might encounter in the Mediterranean. To enhance the training, VAQ-33 provided two officers to the battle group to coordinate electronic warfare operations aboard the ships.

The *Kennedy* battle group's embarked flag officer - Commander, Carrier Group Two, Rear Admiral Jim Lair - praised VAQ-33's employment of the EP-3J in a message to the squadron CO, Commander Jim Powell: "The EP-3J aircraft proved itself an extremely versatile platform in providing electronic surveillance measures/electronic countermeasures situational training in a dynamic environment. The ability to tailor scenarios to the specific area of interest gave the battle group a head start in preparing to meet any known threat during the Mediterranean 1-93 deployment."

This article is based in part on information provided by VAQ-33 public affairs.

Awards

NAS New Orleans, La., received the FY-92 **Conway Trophy** which is given each fiscal year to the most efficient naval air station or naval air facility.

Antisubmarine Warfare Operations Center, Cecil Field, Fla., received the CNO 1991 **Bronze Hammer Self Help Award** for four extensive facilities and communications improvement projects which saved the Navy over \$100,000.

Lt. Eugene L. Garbaccio of the Atlantic Fleet's VS-31 was selected as the 1992 winner of the IBM Federal Systems Company-sponsored **S-3 Electronic Warfare Excellence Award**. The award is given annually to the naval officer who most furthers the tactics or employment of the electronic warfare assets in the S-3 *Viking*.

Naval Air Warfare Center Aircraft Division, Lakehurst, N.J., earned the Navy's **Gold Nugget Award** for the Acquisition Streamlining and Standardization Information System (ASSIST). ASSIST was designed, developed, and brought on line by the center and provides greater visibility over the use of specifications, standards, and other standards-related documents implemented during the acquisition process.

HM2 John H. Pilotte, HM-19, attached to NavAiRes Alameda, Calif., was selected as **Aerospace Medicine Technician of the Year**. In his position, he is trained to deal with quality assurance in the aviation medical community.



HM2 Pilotte administers an inner-ocular test which detects glaucoma to Marine Sgt. Lynch of MAG-46 at NAS Alameda, Calif.

Records



Members of the HMM-365 Blue Knights.

Members of **HMM-365** of MAG-29, 2d MAW, MCAS New River, N. C., have logged the following flight hours: Lt. Col. W. G. Duncan, 3,344; Maj. W. K. Lee, 2,233; Maj. D. O. Comer, 2,955; Capt. J. F. Vasquez, 1,594; Capt. J. R. Webster, 2,195; Capt. R. F. Hedelund, 3,276; Capt. D. W. Hackman, 1,300; Col. G. M. Karamarkavich, 3,550; Lt. Col. K. J. Glueck, 6,056; Col. F. McCorkle, 5,002; Maj. P. E. Paquette, 1,572; Capt. O. F. Leberman, 3,616; Capt. J. T. Murtha, 1,696; Capt. J. L. Woolley, 1,528; Capt. L. E. Killmeier, 1,060; Capt. D. L. Burchinal, 1,070; Capt. T. R. Story, 1,006; Capt. T. L. Peterson, 1,778; Capt. M. R. Connolly, 1,320; Capt. S. T. Russell, 3,677; and Capt. S. L. Sadler, 1,000.

Cdr. James K. Stark, Jr., C.O., VA-65, logged his 1,000th trap, onboard *Eisenhower* (CVN 69).

ATC Mike Krause, VP-67, logged 4,000 flight hours as a naval aircrewman. He has logged flight time in the P-3B as a naval reservist and in the EC-130Q on active duty.

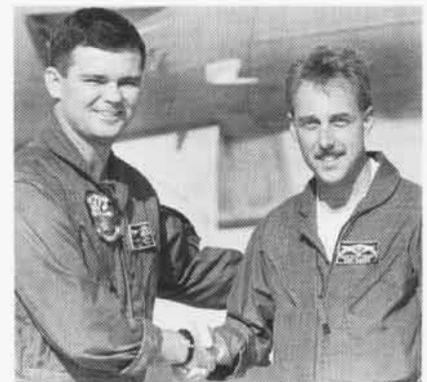
Cdr. Dan Cain, C.O., VF-21, accumulated more than 5,000 total flight hours and 1,000 carrier landings.

Cdr. Ken Parks, XO, VAQ-139, recorded his 3,000th flight hour, in an EA-6B.



Cdr. Don Watkins, XO, VA-115, recorded his 1,000th trap in an A-6 aboard Independence (CV 62).

AE1(AW) William F. Langston surpassed 3,000 flight hours as a flight engineer attached to the Royal Netherlands Navy 320 Squadron under the Personnel Exchange Program.



ADCS Scott Mensen is congratulated by LCdr. William Halsey after surpassing 10,000 P-3 flight hours during a flight from Utapao, Thailand, to Kadena AB, Okinawa, on October 26, 1992. Halsey and Mensen are assigned to VPU-2, NAS Barbers Point, Hawaii.

JO2 Steve Hansen

PH1 Pierpoint

Several units marked **safe flying time:**

Unit	Hours	Years	Unit	Hours	Years
HC-5		5	VF-74		5
HCS-4		6	VF-302		6
HMT-301	100,000	18	VFA-25	70,000	
HS-2	21,400	7	VFA-105	4,120	1
HS-7		2	VFA-113	80,000	
HS-10		6	VFA-127		4
HS-12		5	VFA-146	30,000	
HS-75		14	VP-8		14
HS-85	40,000	18	VP-9		14
HSL-33	25,000	4	VP-60		22
HSL-44	40,000	7	VP-64		22
HSL-49	15,000		VP-66		22
HSL-51		1	VP-67		22
HSL-74		22	VP-68		22
NAF Atsugi	9,061	16	VP-91		22
NAF Washington, DC		14	VP-92		14
NAS Barbers Point	4,800	6	VP-94		22
NAS New Orleans		34	VR-48		12
NAS Lemoore		12	VR-51		22
NAS South Weymouth		14	VR-52		20
NS Rota		25	VR-56		16
VA-36	20,000	5	VR-57		15
VA-128	40,000	3	VR-58		15
VA-155	4,000	1	VR-59		10
VA-304		18	VR-60		10
VAQ-140		7	VR-61		10
VAQ-209		15	VR-62		7
VAQ-309	14,379	13	VRC-40	39,039	9
VAW-88	30,000	22	VS-24		9
VAW-116	34,800	17	VS-37	41,800	10
VAW-120		7	VT-22	100,000	
VAW-123		24	VX-5		9

based at NAS New Orleans, La., which had completed a logistics mission and was on its trip home from NS Roosevelt Roads, P.R.

Searching the west coast of the island at 200 feet, copilot Lt. Dave Devine spotted a stranded pilot in his raft. The C-130 crew informed a sailboat which they had spotted earlier five miles from the ditching site; flight engineer trainee ADC Quinn had suggested putting a note in a bottle and throwing it overboard.

The rescue note read: "Stranded pilot in water on west side of island needs your help. Follow us to him." The note was placed in an empty two-liter Coke bottle that was then put in an empty ice cooler, which provided a larger target for the people in the sailboat to recover. The drop was a success; the sailboat had no problem sighting and retrieving the floating ice chest and wasted no time following the aircraft to the stranded pilot.

Scan Pattern

On November 13, 1982, the Vietnam Veterans Memorial was dedicated in Washington D.C., as national recognition of the sacrifices made by Vietnam veterans. On October 24, 1992, in Pensacola, Fla., the All Veteran Memorial Park and **Vietnam Veterans Wall South** were dedicated. The brain child of a former Marine Corps lance corporal, the idea for Wall South was conceived in 1987 after the Moving Wall, a portable replica of the Vietnam Veterans Memorial, visited Pensacola.

Rescues

The helo from **NAS Oceana's search and rescue (SAR) unit** was called into service December 15, 1992, after an F-14 from VF-33 crashed into the Atlantic Ocean during a training mission about 30 miles east of Oregon Inlet off North Carolina.

Radar Intercept Officer (RIO) Lt. Gregg Hilliard was recovered by a helo from the guided missile frigate *Clark* (FFG 11). Hilliard was then transported from *Clark* to Portsmouth Naval Hospital by *Oceana's* SAR helo. The pilot, Lt. Joseph Burns, rescued by a Coast Guard helo from Elizabeth City, N.C., joined the RIO at Portsmouth, where both officers were held overnight for observation and released the next morning.

A Cessna 172 operating in the southern Bahamas lost engine oil and the pilot was unsure whether he could make it

to land. The last report received by Miami was that the Cessna was preparing to ditch just off the coast of Mayaguana Island. Miami Center contacted a Naval Reserve C-130T assigned to **VR-54**,



Wall South is the only permanent Vietnam veterans memorial outside Washington, D.C., to list the names of all 58,201 Americans killed or listed as missing in action from the Vietnam war.

Art Giberson

Flag Selections

Then-Secretary of Defense Dick Cheney, acting for the President, approved reports of the selection board which recommended the following officers for promotion to Rear Admiral (lower half) (Navy) or Brigadier General (Marine Corps) as appropriate:

Aviators

William "V" Cross II
James O. Ellis, Jr.
Dennis V. McGinn
Dana B. McKinney (MP)
Harry T. Rittenour
Norbert R. Ryan, Jr.
Charles R. Saffell, Jr.
Robert C. Williamson
Paul A. Fratarangelo (USMC)
David A. Richwine (USMC)
Larry S. Taylor (USMCR)

Naval Flight Officers

Lyle G. Bien
William J. Fallon
Joseph S. Mobley

Aerospace Engineering Duty Officers

Craig E. Steidle

Flag Moves

RAdm. Bruce B. Bemner, from Commander, Medium Attack Tactical Electronic Warfare Wing, U.S. Pacific Fleet, to Director for Operations, J-3, U.S. Space Command, Peterson AFB, Colorado Springs, Colo., Jan 93.

RAdm. Walter J. Davis, Jr., from Commander, Carrier Group Six, to Director, Warfare Systems Architecture and Engineering, Space and Naval Warfare Systems Command Headquarters, Oct 92.

RAdm. Robert P. Hickey, from Staff of the Chief of Naval Operations as the Director for Aircraft Carrier and Air Station Programs and as the Director, Aviation Manpower and Training Programs to Carrier Group Seven and *Nimitz* Carrier Battle Group, Dec 92.

RAdm. Frederick L. Lewis, from Commander, Carrier Group Four, to Commander, Naval Doctrine Command, Mar 93.

RAdm. Robert J. Spane, from Commander, Carrier Group Eight, to Director, Aviation Manpower and Training Branch, Office of the Chief of Naval Operations, Oct. 92.

RAdm. Richard A. Wilson, from Carrier Group Seven to Staff of the Commander in Chief, U.S. Pacific Fleet as Deputy Chief of Staff, Plans, and Operations, Jan 93.

Change of Command

CAEWing-12: Capt. Edward F. Caffrey relieved Capt. William C. Liebe, 3 Dec 92.

CVW-14: Capt. Michael J. McCabe relieved Capt. Patrick D. Moneymaker, 4 Dec 92.

HC-1: Cdr. John W. Mullarky relieved

Cdr. Michael J. Fitzsimmons, 9 Sep 92.

HC-2: Cdr. Roy A. Merrill III relieved Cdr. John L. Dailey, Jr., 18 Sep 92.

HC-3: Cdr. James P. Butler relieved Cdr. Lloyd T. Stites, Jr., 29 Jul 92.

HC-6: Cdr. David Mawhinney relieved Cdr. Ron Keys, 4 Sep 92.

HMM-162: Lt. Col. J. E. Schleining, Jr., relieved Lt. Col. T. L. Patton, 19 Nov 92.

HMT-302: Lt. Col. David S. Libbey relieved Lt. Col. James A. Storey, 22 Oct 92.

HS-8: Cdr. Lars A. Wallis relieved Cdr. Alan M. Haefner, 30 Sep 92.

HS-75: Cdr. Thomas J. Henderson relieved Cdr. Richard L. Osterlund, 21 Nov 92.

HSL-32: Cdr. Gary R. Jones relieved Cdr. Kenneth E. Clements, 19 Nov 92.

HSL-41: Cdr. Edward J. Quirk relieved Capt. David A. Rannells, 5 Aug 92.

HSL-49: Cdr. William R. Farawell relieved Cdr. Daniel S. Zazworsky, 3 Sep 92.

HT-18: Col. Michael A. Coulman relieved Capt. Paul E. Roberts, 11 Dec 92.

NAF Mildenhall: Cdr. Thomas E. Denham relieved Cdr. William J. McDonough, 9 Sep 92.

NAS Barbers Point: Capt. Timothy A. Rocklein relieved Capt. Alan L. Ross, 14 Oct 92.

NavAir Jacksonville: Capt. Craig Howerter relieved Capt. Royce Mattson, 21 Nov 92.

Saratoga: Capt. Donald A. Weiss relieved Capt. James M. Drager, 4 Dec 92.

VA-42: Cdr. Bernard M. Satterwhite, Jr., relieved Cdr. Daniel J. Franken, 15 Dec 92.

VA-128: Cdr. Terry J. Toms relieved Capt. Bernis H. Bailey, 20 Nov 92.

VAQ-34: Cdr. Phil Tomkins relieved Cdr. Floyd Weaver, 3 Dec 92.

VAQ-131: Cdr. Justin Wallace relieved Cdr. Bob Maslowsky, 6 Oct 92.

VAQ-309: Cdr. David Cronk relieved Cdr. Thomas Wood, 5 Dec 92.

VAW-117: Cdr. James C. Tellefson relieved Cdr. Frank N. Clark, 7 Jan 93.

VC-6: Cdr. Mark S. Rindler relieved Cdr. Edward C. Ferriter, 16 Oct 92.

VF-11: Cdr. Bruce W. Clingan relieved Cdr. Leo F. Enwright, 7 Dec 92.

VF-84: Cdr. John D. Stufflebeem relieved Cdr. Ronald R. Rahn, 6 Nov 92.

VF-201: Cdr. Lawrence M. Muczynski relieved Cdr. Robin M. Macklin, 19 Sep 92.

VFA-25: Cdr. Carl Simmons relieved Cdr. Don Fennessey, 5 Nov 92.

VFA-81: Cdr. Patrick O'Keefe relieved Cdr. Bill McKee, 5 Nov 92.

VP-23: Cdr. Keith T. Weaver II relieved Cdr. James L. Campbell, 6 Nov 92.

VQ-4: Cdr. Kristopher L. Strance relieved Cdr. Paul J. Jackson, 8 Jan 93.

VR-57: Cdr. Van E. Moir relieved Cdr. Philip J. Swartz, 14 Nov 92.

VS-24: Cdr. Steve Turcotte relieved Cdr. Claude Swaim, 5 Nov 92.

VS-29: Cdr. Christopher D. Owens relieved Cdr. Joseph J. Paulis, 8 Jan 93.

VS-30: Cdr. Maurice Joyce relieved Cdr. Gary Peterson, 10 Dec 92.

VS-31: Cdr. William Carey relieved Cdr. James White III, 10 Nov 92.

VS-38: Cdr. David L. Logsdon relieved Cdr. Stanley W. Douglass, 3 Oct 92.

VT-3: Lt. Col. Dean T. Lucas relieved Capt. Wayne E. Smith, 10 Dec 92.

VT-19: Cdr. David S. Tyson relieved Cdr. Terry L. Daugherty, 29 Jan 93.

VT-27: Cdr. Robert Kernan relieved Cdr. Ben Francisco, 10 Dec 92.

By Cdr. Peter Mersky, USNR

Cooling, Benjamin Franklin, ed. *Case Studies in the Development of Close Air Support*. Office of Air Force History, USAF (GPO), Washington, DC. 1990. 606 pp. Ill. \$30.

This collection of 10 lengthy essays discusses close air support (CAS) from several national and service viewpoints. The initial chapter deals with "developments to 1939," while the WW II portion includes case studies of the German Luftwaffe, Soviet, and Anglo-American CAS experiences as required by specific theaters and available equipment. Each essay ends with a copious list of endnotes and a bibliographical essay, certainly welcome additions to this scholarly volume's impact.

This is an excellent book, but the writing is on an esoteric, almost academic plane. There are numbers, people, and dates, but you'll have to look elsewhere for a popular history of CAS.

The book has a series of well-drawn maps that go a long way in supporting text. The majority of photographs are reasonable selections, but a few errors inevitably creep in. There is a full-page photo of a Republic F-84F firing rockets "on a North Korean target." While the straight-wing F-84 *Thunderjet* saw considerable service in the Korean War, its swept-wing

derivative, the *Thunderstreak*, was too late for combat.

We don't have enough room to do this book justice on its scope and detail. Each chapter gives enormous new insights into specific theaters, from the struggles of birth in WW I and adolescence in WW II, to the first full-blown CAS operations in Korea and a maturation in Southeast Asia.

Although written with a USAF bias, Navy and Marine Corps CAS operations are included, especially in the chapters on Korea and Vietnam. Here, the main focus is the fight between the USAF and Navy-USMC teams about who controls aircraft, especially the Navy and Marine assets.

The penultimate chapter is a surprising look at CAS from the Israeli perspective and also gives tantalizing glimpses of ancient *Magister* jet trainers sweeping in over beleaguered troops in 1967, or *Mirages* disposing of Libyan fighters to go to the rescue of surrounded ground troops in 1973. The chapter on Korea describes how well Marine CAS aircraft serviced Army troops in 1950.

This book will be a revelation to the discerning reader and researcher; it should be read by members of all services.

ANA Bimonthly Photo Competition

Taken during George Washington's shakedown cruise, this photo by PH3 John K. Sokolowski won the bimonthly ANA Photo Contest. HS-5 passes on a package of cherry pies, highlighting CVN 73's first vertical replenishment with a submarine, Hammerhead (SSN 663).

The Association of Naval Aviation Photo Contest

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.



Operation Torch

Cdr. Peter Mersky's "Naval Aviation in Operation Torch," *NANews*, Nov-Dec 92, was easily one of the best articles available on the subject during the 50th anniversary of this milestone operation — particularly his coverage of French aviation.

I'd like to add two additional Navy aircraft losses during Torch: On November 4, 1942, en route to Casablanca, *Massachusetts* (BB 59) encountered heavy weather which resulted in severe damage to one of the ship's OS2U *Kingfishers*. The aircraft, tied down on the fantail between the catapults, was struck by a wave that pushed it against the starboard catapult, tearing away the main float and rendering the aircraft unserviceable. After usable items had been stripped, the *Kingfisher* was jettisoned.

On November 8, *Massachusetts* launched her *Kingfishers* as spotters for the bombardment of Casablanca. One of the aircraft was attacked by French fighters, probably *Hawk* 75As, and shot down. The pilot and radioman could not be found after the battle and were declared missing in action; memorial services were held for them aboard the battleship.

When *Massachusetts* returned to the Boston Navy Yard later that month, the

USS *Massachusetts* Memorial Committee, Inc.



One of three OS2U *Kingfishers* aboard *Massachusetts* (BB 59) was damaged by heavy weather on November 4, 1942, while the battleship was en route to Casablanca for the invasion of North Africa, code-named Operation Torch. Advice to 20mm gunners to "Lead, Dammit, Lead" is stenciled on the gunshield on the extreme right.

1993 Naval Aviation Ball

The 20th annual Washington-area Naval Aviation Ball, sponsored by the Director, Air Warfare, will be held on Saturday, April 3, at the Crystal Gateway Marriott, Arlington, Va.

This formal gathering is open to all active duty and retired Navy and Marine Corps aviators, Naval Flight Officers, and other aviation-related officers, as well as supporting corporate personnel. The evening will commence with a reception at 1830. Dinner will be followed by dancing and entertainment. Cost: \$95 per couple. Dress: Dinner Dress Blue or Civilian Evening Dress (Black Tie).

For information/reservations, contact Capt. J. M. Munninghoff, N889F, DSN 224-6027 or 703-614-6027.

two missing men strolled up the gangway none the worse for wear. Throughout her wartime career, *Massachusetts*, now enshrined in Fall River, Mass., never lost a crew member to enemy action.

Mark Newton, Curator
USS *Massachusetts* Memorial
Fall River, MA 02721

Good Public Relations

This letter was addressed to the CO of VT-86, NAS Pensacola, Fla.:

On Wednesday, December 30, 1992, a pilot in your command made a special gesture of kindness to my son Adam, 3, and daughter Heather, 7. This pilot stopped and gave my children each an insignia patch from his uniform as he was leaving the terminal to return to his plane at the air facility in Parkersburg, W.V. The Navy jet was either N316NT or N316JT. Hopefully, you can track him down from the above information. I was unable to get his name and would like you to know of this very special moment for my children. Adam will never forget that day and has said he would like to become a Navy pilot when he gets bigger. Heather was speechless with excitement.

The simple kindness shown was noted by many and did much for military public relations. I hope in some small way I have been able to say thank you to the right person.

William E. Neylans, Jr.
7675 Oak Drive
Keystone Heights, FL 32656

Ed's note: J. B. McKamey, Public Affairs Officer, NAS Pensacola, Fla., forwarded this letter to *NANews* with the following note: "Those of us who know Naval Aviation, associate 'Tailhook' with acts such as the one described." The pilot was Lt. Scott Bartkowski, VT-86.

Reunions, Conferences, etc.

VP-6 disestablishment, MAR 19, NAS Barbers Point, HI. POC: Lts. Beamish or Youngberg, DSN 484-0536 or 808-684-0536.

Yorktown (CV 10) reunion, APR 15-18, Charleston, SC. POC: Joe Sharkey, USS Yorktown Assoc., POB 1021, Mt. Pleasant, SC 29464, 803-849-1928/881-2096.

VP symposium/reunion, APR 22-23, Washington, DC. POC: LCdr. Steve Briganti, DSN 224-6025 or 703-614-6025.

HS-9 disestablishment, APR 23, NAS Jacksonville, FL. POC: LCdr. Chilton, DSN 942-4687/8 or 904-772-4687/8.

PBM Mariner/P5M Marlin reunion, MAY 26-30, New Orleans, LA. POC: James Thompson, 1510 Kabel Dr., New Orleans, LA 70131, 504-392-1227.

Naval Test Pilot School symposium, MAY 28-29, Patuxent River, MD. POC: Lt. Dave Gay, USNTPS, FTEG, NAWC AD, Patuxent River, MD 20670-5304, DSN 326-4107 or 301-863-4107.

VA-75 50th anniv. reunion, Summer 93, NAS Oceana, VA. POC: LCdr. Dee Mewbourne, VA-75, Unit 60115, FPO AE 09504-6215, 804-433-9452/9443 after APR 93.

Guadalcanal (CVE 60) TG 22.3 reunion, JUN 93, Pensacola, FL. POC: Jack Dutton, 5530 Winchelsea Dr., Normandy, MO 63121, 314-522-3975.

VFs 53/141 reunion, JUN 93, Pittsburgh, PA. POC: Harold Dolin, 9646 Hamilton Hills Dr., Fishers, IN 46038, 317-849-0218.

VMFA-115 50th anniv. reunion, JUN 4-6, Beaufort, SC. POC: Capt. P. Jackson, DSN 832-7760 or 803-522-7760.

VC-35 reunion, JUN 3-6, El Paso, TX. POC: Ruben Escajeda, 7664 Le Conte Dr., El Paso, TX 79912, 915-585-3468.

NAS New York reunion, JUN 10-13, Norfolk, VA. POC: Chet Atkinson, POB 62066, Virginia Beach, VA 23466, 804-495-1338.

Assoc. of Aviation Ordnancemen reunion, JUN 17-20, Reno, NV. POC: Jerry Gannon, 1245 Cunningham Ave., St. Charles, MO 63301, 314-946-0503.

VC-61/VCP-63/VFP-63 reunion, JUN 18, NAS Miramar, CA. POC: Taco Bell, 9940 Red Rock Ct., San Diego, CA 92131, 619-530-2320.

VP-5 reunion, JUN 24-26, Pensacola, FL. POC: Gayle Cooper, POB 10119, Pensacola, FL 32524, 904-477-9663.

NAVAL AVIATION NEWS

March-April 1993



ANA Annual Photo Contest Winner

PH3 Franklin P. Call won the annual ANA Photo Contest for 1992 with this shot of two VQ-2 EA-3B Skywarriors flying past Gibraltar.

1993 Blue Angels Air Show Schedule

March	
20-21	NAF El Centro, CA
28	NAS Lemoore, CA
April	
3-4	Sanford, FL
10-11	Easter Weekend Off
17-18	MCAS Cherry Point, NC
24-25	MCAS Yuma, AZ
May	
1-2	Yakima, WA
8-9	Willow Run, MI
15-16	Lexington, KY
22	NAS Patuxent River, MD
24	Naval Academy, MD
29-30	Columbia, MO

June	
5-6	Kalamazoo, MI
12-13	NAS South Weymouth, MA
19-20	Oklahoma City, OK
26-27	Kankakee, IL

July	
3-4	Elmira, NY
10-11	NAS Whiting Field, FL
17-18	Hibbing, MN
24-25	Offutt AFB, NE
31	Seattle, WA

August	
1	Seattle, WA
7-8	Eugene, OR
14-15	NAS Miramar, CA
21-22	Avoca, PA
28-29	Malmstrom AFB, MT

September	
4-6	Cleveland, OH
11-12	NAS Oceana, VA
18-19	Reese AFB, TX
25-26	Lafayette, LA

October	
2-3	NAS Cecil Field, FL
9	San Francisco, CA
16-17	Hawaii
24	NAWS Point Mugu CA
30-31	El Paso, TX

November	
6-7	NAS Dallas, TX
12-13	NAS Pensacola, FL

