NAVAL AVIATION NEWS

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The Early Carrier Raids

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COVERS – Front: Artist John Charles Roach depicts the Halsey-Doolittle Raid showing a B-25 launching from *Hornet* (CV-8), protected by *Enterprise* (CV-6), in background. Back: VAW-123 *Screwtops* are shown to advantage in this E-2C trail formation.

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By VAdm. Dick Dunleavy, ACNO (Air Warfare)

Leadership and Long-range Strike

On the cover and later in this issue, we mark the fiftieth anniversary of the Halsey-Doolittle Raid. We are planning to stage a small reenactment this April with the carrier *Ranger* and two vintage B-25s off the coast of California. More important, however, are the lessons that we can glean from the planners and executers of that incredibly bold operation; they are as fresh and applicable today as they were in the darkest days of the war in the Pacific.

The idea to hit the Japanese homeland in early 1942 originated with a Navy captain. The Navy had precious few carriers and no bombers on them with enough range to hit Japan without placing the carriers in certain peril. The Army Air Corps had long-range bombers, but no airfields close enough to Japan from which to stage a raid. Captain Low's inspiration to marry carriers to B-25 medium bombers made possible the improbable. Another Navy captain, Donald Duncan, planned with the Air Corps, which selected a proven leader and aviator, Lieutenant Colonel Jimmy Doolittle, to fly the raid. Early detection by Japanese picket boats forced the operational commander, Admiral "Bull" Halsey, into a quandry: launch sooner than planned or cancel the raid. Halsey and Doolittle agreed to launch. The rest, as they say, is history.

To those in Naval Aviation, the Halsey-Doolittle Raid accentuates four points of our professional art:

Imaginative thinking – High in the bureaucracy, an officer crossed the threshold of the routine and ordinary and came up with a bold idea that defied convention. He had the courage to push the idea at potential risk to his career. Men like him are always in short supply, and needed on our staffs and in our ready rooms today as much as ever.

Bold execution – The organizational and combat leadership displayed during the operation by Halsey, Doolittle, and many others, in the face of so many "show stoppers," was nothing short of splendid. "Fortune favors the brave;" their courage deserved success if ever any did. Bold leaders like them are still needed today, too.

Joint cooperation – The dire necessity of a morale-lifting blow against Japan mothered the invention of the raid and pushed two services, normally reluctant to cooperate, into their first major joint venture of the war. The result was a model of joint cooperation. We've come a long way in institutionalizing that spirit of cooperation, *Desert Storm*'s success being the fruit of that effort. We can't stop now; that cooperation will only increase in importance as the defense budget shrinks.

Mission capability – The raid was a mission for which Naval Aviation didn't have an aircraft to carry out; the technology had not yet come that far. For decades now we've had the technology to equip our carriers with a long-range punch, but the current manifestation, the A-6, is "mature" and in need of replacement. It's stealthy replacement, the AX, will surprise a future enemy as much as Doolittle's B-25s shocked Japan. Now in the design stage, the AX will have to fly through a gauntlet of budget batteries to reach the decks of our carriers in the next decade. We owe it to the country to see that we never lose our capability to strike future enemies from afar.

Even though Naval Aviation is reducing its force structure as the nation relaxes from the cold war, it will still remain the tip of the spear in future crises, the President's force of choice. By embodying the leadership that made the Halsey-Doolittle Raid a success, the spear will always be sharp and ready. Keep strokin'.

80-G-41197

Hornet (CV-8) launched Doolittle's B-25s in America's first strike against Japan's home islands.

Osborn

Tigercat Tangle

This mishap report was discovered adrift in some old Naval Aviation History Office files and comprises an account, circa January 1948, involving Grumman F7F-1N Tigercats. *Following is a statement by Marine Corps Aviator MSgt. D. R. Francisco, who ferried one of the* Tigercats *from NAF Weeksville, N.C., to NAS Atlanta, Ga.*

Lieutenant Commander McCollum, MSgt. Castles, and I test hopped our planes on Monday. We took off for Atlanta but had to return because one of the engines on LCdr. McCollum's *Tigercat* was cutting out. McCollum said he would fly my aircraft to Atlanta while I stayed behind for repairs to his plane. Castles and I would then proceed, assuming weather was clear.

On Tuesday, Castles and I took off for Knoxville, Tenn., but after 30 minutes in the air had to come back because of rain and instrument conditions. Plus, my beam receiver was noisy and garbled. Castles' plane required a plug change.

We couldn't launch on Wednesday due to bad weather.

Thursday morning, Castles and I took off for Atlanta but had to return because of lost oil pressure. I extended my wheels but had to use both hands to push the stick forward for landing. I got the aircraft down OK but when an inspector checked the baggage compartment, he could find no reason for the controls to bind. Later, I had a new battery installed because the plane wouldn't start. I also told Castles that my beam receiver wasn't working. He said his was, so that same Thursday we took off for Atlanta via Goldsboro, N.C., and Columbia, S.C., to avoid a front moving in from the west.

Southeast of Columbia we turned west. We passed over Athens, Ga., and I still had about 60 gallons of gas, flying at 1,500 rpm and 26 inches of manifold pressure. I figured Castles and I would reach Atlanta in about 20 minutes.

We kept on the lookout for Stone Mountain and when my gas gage read 30 to 35 gallons, I started to look for a place to land. Visibility was restricted due to smoke. Since a mountain loomed ahead of me, I made a 20-degree right turn to avoid it. But the weather looked bad ahead and I saw a town to the right, though I didn't recognize it from my chart. I descend-

The sit down Comic!

ed and dragged the town for an airport but couldn't find one. I then dragged a highway north of town and decided to set the plane down on it. But there was a car on the road so I did a 180 to land on the road going the other way.

I set the F7F down under power. I turned all switches off on the roll-out, got tangled in some telephone lines, and took them across the highway with me. The telephone poles were about 15 to 20 feet on each side of the highway.

I applied brakes and after about 100 yards, a tire blew. The *Tigercat* swerved to port and I hit the right brake hard, trying to keep it straight. But the plane then swung right and skidded sideways until I went off into a three-foot dip.

I got out of the airplane and waited for help. The State Highway Patrol arrived and stood by the aircraft while I called NAS Atlanta. Then I stood guard until the National Guard arrived. The Navy representative from Atlanta got there about midnight. We met at the police station where MSgt. Castles and myself were waiting. We returned to NAS Atlanta, arriving at 0700.

Grampaw Pettibone says:

Old Gramps can only assume the Tigercat lived to fly again. Seems to me the MSgt. did OK, 'though I'm awful curious about why the stick wouldn't go forward with the landing wheels down.

Anyway, once in a while it's nice to look back and see how it was in the good old, gentler days. I guess LCdr. McCollum made it. We know Francisco pulled through. But did Castles also land on the road?

Gramps' Mailbag

The following letter is from retired Commander David C. Shelby.

Dear Grampaw Pettibone:

Jumpin' Jehoshaphat! Yesterday, I picked up the January-February 1992 issue of *Naval Aviation News*. This is the first one that I have gotten my hands on since retiring in 1984. I immediately turned to your section. You've lost some of your fire! I think that you're getting mellow in your old age. During my 23 years in Naval Aviation, you were always very feisty and intolerant about human errors in aircraft accidents/incidents.

I thought you were especially easy on the "Orion Ordeal." I flew P-3s for 10 years and understand what the crew was doing.

I remember an old sea dog named Captain "Tex" Coleman, my patrol wing commander, saying that the reason the Navy had a flight demonstration team was to do just that. No other unit had a demonstration mission of any kind! The rest of us were there to carry out our unit's mission to the best of our abilities. Static displays and fly-bys were OK, because they are not demonstrations. How many people would have been impressed if this accident had taken place during the scheduled "...official demo at an air station."? How many times must we repeat this type of folly?

Where was this aviator's supervisor? Was the copilot blind or asleep? Who authorized the official demo in the first place?

1991 Third Best for Air Safety

Despite the hazardous operations tempo of a major combat air campaign, Operation *Desert Storm*, 1991 turned out to be the third safest year on record for Naval Aviation.

Flying over two-million flight hours, a Class-A flight mishap record of only 2.90 was incurred by Navy and Marine Corps flyers, slightly lower than 1990's rate and slightly higher than the rates for 1988 and 1989. The 1991 mishaps resulted in 61 aircraft destroyed and 78 fatalities (27 of those fatalities occurred in a midair collision of two P-3Cs). Fourteen of the fatalities were Marines, the lowest number recorded by the Marine Corps since 1941.

USMC Air Plans Cuts

The Commandant of the Marine Corps has approved force reductions of Marine Corps aviation squadrons in the next three years. The cuts will trim nine active and two reserve fixed-wing tactical squadrons from the Corps.

The commandant signed out the recommendations of the Force Structure Planning Group on December 16, 1991. Two fighter-attack (VMFA) FA-18A and two reserve attack (VMA) A-4M squadrons will be deactivated during FY 92, followed by one active VMA AV-8B squadron each in FYs 93 and 94. Both active observation squadrons (VMOs 1 and 2), along with reserve squadron VMO-4, will be deactivated by the end of FY 94. The cut of the three VMO squadrons will mark the end of the OV-10 *Bronco* aircraft in Marine Corps service.

VMFA-333 at MCAS Beaufort, S.C., and VMFA-531 at MCAS El Toro, Calif., are the two FA-18A units slated for deactivation. The Marine Corps is in the process of identifying the specific VMA units to be deactivated; their identities will be announced as formal information becomes available.

Daryl Stephenson/McDonnell Aircraft Co.

The first Kuwaiti FA-18C Hornet (Serial 401) is en route to Kuwait City during the first delivery flight of three FA-18s to Kuwait. Navy pilots flew the aircraft from St. Louis, Mo., to Egypt, where Kuwaiti pilots assumed the ferry flight to Kuwait City, arriving on January 25. A total of 40 Hornets will be delivered to Kuwait by September 1993.

SecNav Directs CVW, MC Integration

The Secretary of the Navy (SecNav) has directed the Navy and Marine Corps to more closely integrate Marine tactical aviation into Navy carrier air wings (CVWs).

In a January 13 memorandum, SecNav directed that the Navy and Marine Corps "undertake innovative measures to enhance the efficiency of naval aviation through the closer integration of Navy and Marine Corps forces." He ordered planning to integrate Marine fighter-attack (VMFA) and electronic warfare (VMAQ) squadrons into Navy CVWs, in order to reduce "requirements for F-14s, FA-18s, and EA-6Bs by at least 140 aircraft and achieve a commensurate reduction in operational aviation squadrons."

Historically, Marine tactical squadrons have frequently operated as part of carrier air wings, but rarely has this concept been institutionalized in any permanent form. The secretary was to be briefed on a plan by mid-February.

Subic to Close by Year's End

The Philippine government announced December 26, 1991, that the United States must withdraw its military forces from the Subic Bay naval complex by December 31, 1992. The announcement came after negotiators failed to agree on terms that would allow the U.S. forces to withdraw gradually over a three-year period.

Naval Air Station, Cubi Point, adjacent to Naval Station, Subic Bay, will shut down by year's end, closing decades of service to U.S. Naval Aviation, highlighted by support to the naval air effort against North Vietnam during the Vietnam war. Commands located at NAS Cubi Point will either be disestablished or dispersed to other bases in the Pacific region. Fleet Logistics Support Squadron 50 will move to Andersen Air Force Base in Guam. The fate of Fleet Composite Squadron Five has not yet been announced.

Forrestal Returns; CVW-6 to Retire

The Navy's first "supercarrier" completed its final deployment as a fleet combatant in December 1991, releasing its air wing and its squadrons for retirement preparations or dispersal.

Forrestal (CV-59), with Carrier Air Wing (CVW) 6 embarked, returned to NS Mayport, Fla., on December 21, 1991, after an almost seven-month deployment to

the Mediterranean. During that time, they supported Operation *Provide Comfort*, the European Command's effort to protect and supply Kurdish refugees that were displaced by Iraqi forces during and after the Persian Gulf War.

Forrestal is replacing *Lexington* at NAS Pensacola, Fla., as the Navy's training carrier and was redesignated as an aviation training ship (AVT) upon arrival at Pensacola in February.

CVW-6 is being disestablished this spring, reducing to 11 the number of active carrier air wings. Some of its squadrons are also being disestablished, while others are being reassigned to the Pacific Fleet (see table for fates of individual units). Specific disestablishment dates have not yet been publicly announced but all actions are planned for completion by October 1992.

CVW-6's two fighter squadrons, VFs 11 and 31, are relocating to CVW-14 and NAS Miramar, Calif., in March and will become the fleet's first operational F-14D *Super Tomcat* squadrons. (The planned transition of VFs 51 and 111 and the stand up of VFs 191 and 194 were canceled.) VF-31 is one of the Navy's oldest squadrons and will carry its "Felix the Cat" tradition back to the West Coast. VF-11 carries on the insignia and traditions of an earlier VF-11, with the "Red Ripper" tradition dating back to 1927.

NAWC Stands Up

The massive reorganization of the naval air research, development, test, and evaluation (RDT&E) establishment, ordered in an April 12, 1991, directive from the Secretary of the Navy, came to fruition effective January 1, 1992, with the establishment of the Naval Air Warfare Center (NAWC) in Arlington, Va. The new activity's first commander, RAdm. George Strohsahl, reports to the Commander, Naval Air Systems Command (CNASC).

NAWC will be a "full spectrum center responsible for all aspects of the acquisition and support of naval aircraft and weapons systems." It encompasses and streamlines, in its two divisions described below, the field activities that primarily supported CNASC.

CVW-6 Disestablishment

Squadron	Aircraft	Air Station	Fate
VF-11	F-14A	NAS Oceana	Move to NAS Miramar, Transition to F-14D
VF-31	F-14A	NAS Oceana	Move to NAS Miramar, Transition to F-14D
VFA-132	FA-18A	NAS Cecil Field	Disestablish
VFA-137	FA-18A	NAS Cecil Field	Move to NAS Lemoore, Transition to FA-18C
VA-176	A-6E KA-6D	NAS Oceana	Disestablish
VAW-122	E-2C	NAS Norfolk	Disestablish
VAQ-133	EA-6B	NAS Whidbey Island	Disestablish
VS-28	S-3B	NAS Cecil Field	Disestablish
HS-15	SH-3H	NAS Jacksonville	Transition to SH-60F, March 1992

NAWC Aircraft Division

The Naval Air Warfare Center Aircraft Division (NAWC AD) was established at NAS Patuxent River, Md., on January 2, 1991. RAdm. George Strohsahl, the new commander of NAWC, also took command of NAWC AD until RAdm.(sel) Barton Strong was scheduled to arrive in February or March to assume command of the division.

NAWC AD will be responsible for aircraft, engines, avionics, and aircraft support, and will absorb such activities as the Naval Air Development Center, Warminster, Pa., the Naval Air Engineering Center, Lakehurst, N.J., the Naval Air Propulsion Center, Trenton, N.J., the Naval Avionics Center, Indianapolis, Ind., and the Naval Air Test Center (NATC), Patuxent River, all of which have been or will soon be disestablished as separate commands. The operating site at Warminster will eventually be consolidated at Patuxent River. NAS Patuxent River will report to Commander NAWC AD as well.

NATC Patuxent River was also disestablished on January 2, with its directorates coming under the new Flight Test and Engineering Group (FTEG), established the same day, which reports to NAWC AD. These directorates include Strike Aircraft Test, Force Warfare Test, Rotary Wing Test, Systems Engineering Test, and Computer Sciences directorates, as well as the U.S. Naval Test Pilot School. Capt. Robert Parkinson, former NATC deputy commander, became the director of FTEG.

VS-29 S-3A Vikings are seen over burning Kuwaiti oil fields during Abraham Lincoln's 1991 maiden deployment. VS-29 is scheduled for transition to the S-3B in 1992.

NAWC Weapons Division

The NAWC Weapons Division (NAWC WD) was established in a ceremony held January 21 at Point Mugu, Calif., with RAdm. William E. Newman as its first commander.

NAWC WD will be primarily responsible for aircraft weapons and weapons systems, simulators, and targets. It will absorb the activities of the Pacific Missile Test Center, Point Mugu; the Naval Weapons Center, China Lake, Calif., the Naval Weapons Evaluation Facility, Albuquerque, N.M.; and the Naval Ordnance Missile Test Station, White Sands, N.M.

NAWC WD headquarters is located at Point Mugu and China Lake, with a facility at White Sands.

Also on January 21, Naval Air Station, Point Mugu, was disestablished, with Naval Air Weapons Station, Point Mugu, taking its place the same day. On January 22, Naval Air Weapons Station, China Lake, was established at the site of the former Naval Weapons Center. These redesignations reflect changes in the scope of their activities.

Last A-6 Delivered

The Navy took delivery of the last production A-6 *Intruder* from the Grumman "Iron Works" on January 31, closing out over 31 years of *Intruder* production.

A-6E BuNo 164385, the 205th production A-6E, is the last of 708 *Intruders* built for the Navy and Marine Corps, which included 488 A-6As, 15 EA-6As, and 205 A-6Es. The aircraft was ferried out of the Grumman facility at Calverton, N.Y., on February 3 by LCdr. Dick Manski and Lt. Dean Seward to the Grumman facility at St. Augustine, Fla., for further modification. The aircraft eventually will be delivered to Attack Squadron 145 at NAS Whidbey Island, Wash.

Mine Helo Unit Sweeps for Arsenic

Three Navy mine countermeasures helicopters were called into action in January to hunt for containers of hazardous cargo that fell from a ship off New Jersey by the mouth of the Delaware Bay.

Twenty-one containers, including four which contained 400 drums of arsenic trioxide, fell off the merchant ship *Santa Clara I* during rough weather. A multi-agency local response team requested Navy assistance, which took the form of a detachment of three MH-53E *Sea Dragons* from Helicopter Mine Countermeasures Squadron 14 based at NAS Norfolk, Va.

The detachment, with squadron C.O. Cdr. Robert B. Jones in charge, staged out of Pomona, N.J., on January 11, using AQS-14 side-scanning sonar to search for the missing containers. Within six days, approximately 30 sonar contacts were located along the ship's track which could correlate to the lost cargo. Rough weather had slowed confirmation by an Environmental Protection Agency research vessel.

Lex Retires to Texas

An intense competition among three U.S. cities to be the resting place of the last WW II aircraft carrier in service came to an end when the Secretary of the Navy selected Corpus Christi, Texas, to be the permanent home of the ex-*Lexington* (ex-AVT-16), pending congressional approval.

Corpus Christi competed with Mobile, Ala., home of Battleship Park, where the battleship *Alabama* rests as a memorial, and with Quincy, Mass., where *Lexington* was launched during WW II. *Lexington*, decommissioned in November 1991, left its longtime home of Pensacola, Fla., on January 24 under tow.

Oriskany to Showcase USA in Tokyo Bay

A nonprofit quasi-governmental entity in Japan, International Information Friendship Foundation, is developing a project to include the decommissioned aircraft carrier *Oriskany* (ex-CV-34) as the centerpiece of a cultural exhibit in Tokyo, named City of America (COA).

Oriskany, an *Essex*-class veteran of the Korean and Vietnam wars and decommissioned in 1976, has been stricken from the register of naval ships and sold to the COA project. The former warship's exterior will be restored, and her interior will be converted to house a variety of cultural and educational exhibits. Portions of the ship will allow visitors to view the story of the U.S. Navy and experience life aboard an aircraft. Most of the hangar bay will be dedicated to a separate tour, titled "Story of America," which will allow visitors to experience historical, cultural, ethnic, and geographical diversity of the United States.

COA plans also call for *Oriskany* to house an American school for Japanese students, a broadcast facility featuring American programming, rotating exhibits from American museums and art galleries, and theaters which will feature American performing arts. The ship will be moored next to a 200,000-square-foot pavilion for trade shows and an Omnimax theater.

For the Record...

✈ **April 11** has been selected as the **decommissioning ceremony date** for ***Midway*** (CV-41). After the ceremony, the carrier will be towed from NAS North Island, Calif., to the inactive ship facility at Bremerton, Wash., for storage.

✈ ***Wasp*** (LHD-1) returned to Norfolk, Va., in December 1991, completing its first operational deployment. As flagship of Mediterranean Amphibious Ready Group 2-91, *Wasp* embarked HMM-162 (Composite), which included a large detachment of AV-8B *Harriers* from VMA-223.

✈ A February 6 ceremony at NAS Barbers Point, Hawaii, marked the beginning of **HSL-37**'s transition from the **SH-2F** *Seasprite* helicopter to the **SH-60B**. The first SH-2F squadron to transition to the SH-60B, HSL-37 is unique in that it will operate a mix of the two types until the older ships based at Pearl Harbor which operate the SH-2F are replaced by ones that can handle the larger SH-60B.

✈ **VAW-110**, NAS Miramar, Calif., has commenced fleet replacement training in the **E-2C Group II** version, with **VAW-113** being the first fleet squadron to operate the upgraded version of the *Hawkeye*.

✈ **VAQ-34**, NAS Lemoore, Calif., is back in business after receiving **FA-18A** and **FA-18B** *Hornets* to replace its retired EA-7L *Corsair IIs*.

✈ **VS-37**, NAS North Island, Calif., is transitioning to the **S-3B** *Viking* from the S-3A.

✈ **VMFA-225** took delivery of the first fleet two-seat Lot 14 **FA-18D** *Hornet* (BuNo 164649) on February 14 at MCAS El Toro, Calif. The Lot 14 FA-18D is the first aircraft

Lockheed

Hummer Hoover – Lockheed Aeronautical Systems Co. and LTV Aerospace and Defense Co. are developing a proposal for a new carrier-based airborne early-warning (AEW) aircraft based on the Lockheed S-3 Viking antisubmarine warfare aircraft, built by the same team in the 1970s. An electronically scanned phased array radar would be housed in a triangular dome atop the fuselage, giving the crew a full 360-degree view of the surrounding airspace and affording more flexibility in battle management than is possible with the current E-2C AEW aircraft. An S-3 AEW variant would retain the S-3's ejection seats, in-flight refueling, and auxiliary power capabilities, as well as its low deck spotting factor and 13,000-hour service life.

Dr. Joseph G. Handelman

capable of operating the new **Advanced Tactical Aerial Reconnaissance System**. VMFA(AW)-225 will be fully equipped with 12 of the new aircraft by July 1992.

✈ The **Fleet Electronic** Warfare Support Group (FEWSG) is merging with the Fleet Deception Group, Atlantic, in April to form the **Fleet Tactical Readiness Group**. The new command, based at Naval Amphibious Base, Little Creek, Va., will assume operational control of FEWSG's electronic aggressor squadrons VAQs 33, 34, and 35.

✈ **CGAS San Francisco**, Calif., is the latest Coast Guard air station to acquire the **HH-60J** *Jayhawk* rescue helicopter, replacing its HH-3F *Pelicans*.

✈ The Chief of Naval Operations has directed the **retirement** of the remaining **A-7** aircraft in the active inventory by April 1, 1992. Twenty-three *Corsair IIs* remained on strength at various test establishments as of January, including seven A-7Es, three EA-7Ls, and 13 TA-7Cs.

✈ A reduced pilot training requirement brought about by ongoing force level reductions and the introduction of the new T-45A is allowing the **Naval Air Training Command** to place 84 older training aircraft into desert storage at the Aerospace Maintenance and Regeneration Center, Davis-Monthan AFB, Ariz., during FY 92. The planned number includes 30 TA-4Js, 30 T-34Cs, 19 T-2Cs, and 5 TH-57Cs.

✈ **VR-24** became the first carrier-on-board delivery squadron to operate behind the crumbling "Iron Curtain"

Just Droppin' In – A Marine Corps AV-8B Harrier, assigned to VMA-231 at MCAS Cherry Point, N.C., gave Naval Academy midshipmen an opportunity to examine the aircraft during Marine Corps Demonstration Week last October at the academy.

Will the real T-1A please stand up? On January 17 the Air Force took delivery of its new Beech T-1A Jayhawk training aircraft (R), a version of the Beechjet 400A corporate jet, 77 of which have been ordered to train student pilots to fly tanker and transport aircraft. Alas, the aircraft is not to be confused with the Lockheed T-1A Seastar (L), a 1950s-vintage Navy carrier-capable variant of the T-33 redesignated from T2V-1 in 1962, nor the Coast Guard's new HH-60J Jayhawk rescue helicopter.

when its C-2A *Greyhounds* flew in 4,000 pounds of foodstuffs to the U.S. Embassy in Bucharest, Romania, in November 1991. The squadron's CT-39G *Sabreliners* also flew in VAdm. William Owens, Commander, Sixth Fleet, to meet with Romanian navy officials.

✈ ***Mercury*** is the new popular name for the Boeing E-6A TACAMO aircraft in service with VQs 3 and 4. The new moniker is the Roman equivalent of the old name, *Hermes*, messenger of the Greek mythological gods. The name change came about because of the unpopularity of the Greek name, which according to one source, "sounded too much like a disease."

✈ **EP-3J** is the new designation for two P-3B *Orions* (BuNos 152719 and 152745) used by VAQ-33, NAS Key West, Fla. The aircraft, equipped with the USQ-113 communications intrusion deception and jamming set, AST-4/6 stimulator pods, ALQ-167 jamming pods, and ALE-43 chaff pods, are used to portray hostile patrol and reconnaissance aircraft in fleet exercises.

✈ A VH-3A *Sea King*, BuNo 150614, used by the NAWC Aircraft Division at NAS Patuxent River, Md., as a common avionics integration test bed for VH-3A and VH-3D executive transport helicopters, was recently designated **NVH-3A** to reflect its permanent test modifications.

✈ **McDonnell Aircraft Co.** was awarded a Navy contract to design, develop, and demonstrate a **fluidic flight control system** to be flight tested on an FA-18 in 1994. Fluidics is the only known non-electric technology that can be used to counter advanced threats to digital flight controls found in modern aircraft.

✈ **Kaman Aerospace Corp.** was awarded contracts in December 1991 to design, develop, and produce two advanced development models of "**Magic Lantern**," a new airborne mine countermeasures system used in prototype form aboard an SH-2F during Operation *Desert Storm*. "Magic Lantern" rapidly detects, classifies, and localizes mines.

✈ The first contingent of **Republic of Korea navy** (ROKN) airmen will arrive at **NAS Jacksonville**, Fla., during the spring of 1994 for training with VP-30 to operate eight new **P-3C Update III** patrol planes. The ROKN students will first complete a 13-week English course at San Antonio, Texas, before proceeding to technical training.

✈ The **Japanese Maritime Self Defense Force** (JMSDF) delivered its two new **EP-3C** *Orion* electronic reconnaissance aircraft (serials 9171 and 9172) to Training Support Squadron 81 at Iwakuni, Japan, on November 22. The aircraft, with the same mission as that of the U.S. Navy EP-3E, are replacing the UP-2J *Neptune* in JMSDF service.

✈ With the ongoing Congressional ban on arms sales to Pakistan, the three **P-3C** Update II.5 patrol planes purchased by the **Pakistani navy** (BuNos 164467-9) were transferred in January from VP-30 at NAS Jacksonville, Fla., to desert storage at the Aerospace Maintenance and Regeneration Center, Davis-Monthan AFB, Ariz. Training of their crews at Jacksonville was also terminated.

✈ **KA-3B** BuNo 147666, formerly of VAK-208, was recently barged from NAS Alameda, Calif., to its new home at the **Western Aerospace Museum** in nearby Oakland, where it will stand as a monument to former *Whale* crews.

NASA via David Regal

The two Navy EC-130Q Hercules (BuNos 161494 and 161495) shown here were transferred to the National Aeronautics and Space Administration (NASA) at Wallops Island, Va., in December 1991. With their TACAMO submarine communication gear stripped out by their former squadron, VQ-4, the aircraft will allow NASA to retire NP-3A BuNo 148276, the prototype of the P-3 Orion patrol plane that served NASA for over 26 years. The Hercules are expected to serve as airborne remote sensing research platforms.

PH3 Paul A. Hawthorne

The first T-45A grabs the wire aboard John F. Kennedy for its trap.

T-45 Quals on JFK

The McDonnell Douglas T-45A *Goshawk* earned its "sea legs" in December 1991 during the new training jet's recently completed carrier qualifications, conducted aboard *John F. Kennedy* (CV-67) off the coast of Jacksonville, Fla.

The first T-45A (BuNo 162787), fitted with wing leading slats fixed in the extended position, trapped aboard *John F. Kennedy* at 1340 on December 4, with Naval Air Test Center test pilots Commander Dave Venlet and Lieutenant Wade Knudson as its crew. The testing, conducted over five days, comprised four flights, 33 catapult shots and 33 arrested landings, 12 "touch and goes," four bolters, and 26 practice approaches to a waveoff.

During the trials, the T-45A demonstrated all aspects of carrier suitability, including catapult and arresting gear use, deck handling and taxi characteristics, engine start-up and shutdown, towing and elevator operations, and post-flight handling.

Overall, the test pilots were impressed with the *Goshawk*'s landing characteristics. Engine response, airspeed control, and corrections from off-nominal approaches were singled out for positive comment.

Additional carrier suitability testing will be conducted during Spring 1992.

In another development, the first T-45A produced at St. Louis, Mo., made its initial flight on December 16, 1991. This aircraft, BuNo 163601, is the fifth T-45A built (the first two were development prototypes built at Long Beach, Calif., and the second two production examples assembled at Palmdale). This aircraft is the first T-45A to incorporate the changes required by the Navy, including the wing slats, the Rolls Royce F405-RR-401 engine, and improvements to longitudinal control, lateral and directional stability, and speed brake systems.

Formally accepted by the Navy in a January 23 ceremony, BuNo 163601 will be used to train the initial cadre of instructors at Training Wing 2, NAS Kingsville, Texas. Training Squadron (VT) 21 will become the T-45 instructor training unit, and VTs 22 and 23 will train student Naval Aviators in the new aircraft. Operational evaluation of the T-45A is scheduled for August 1992, with official initial operational capability reached in January 1993.

Information courtesy of Cdr. J. Noel, T45TS Requirements Officer, and Kim Kitson of McDonnell Douglas. See NANews, *March-April 1991, pp. 12-15, for a description of the T45TS program.*

Lt Col W H Bowers

VMFA-112's F-4s will no longer grace the skies over Texas.

Phantom Pharewell

USMC

Gen. Duane Wills bids "phond pharewell" to the Phantom for the Corps.

By LCdr. Rick Burgess

After 31 years of phabulous phlying, the *Phantom II* is phinally gone, at least as a Naval Aviation combat aircraft.

The last Naval Aviation squadron to operate the F-4, reserve Marine Fighter Attack Squadron (VMFA) 112 of Marine Air Group (MAG) 41, hosted the "Phantom Pharewell" retirement ceremony held at Naval Air Station, Dallas, Texas, on January 18.

At the gathering, Lieutenant General Duane Wills, Deputy Chief of Staff for Aviation, Headquarters, U.S. Marine Corps, told the guests: "I didn't come here to bury the F-4. I came here to praise it. I wish I could fly it again."

"In the hands of the Marines, the F-4 became a true strike fighter, scoring hits on the ground and kills in the air," said John Capellupo, president of McDonnell Aircraft Company. "We're writing the final page on the F-4's military [naval] service. And what a history it's been."

A month earlier, the last two F-4 fighters in active Navy service were retired. The Pacific Missile Test Center, Point Mugu, Calif., dispatched its last two F-4Ss on December 16, 1991, to Naval Aviation Depot (NADep), Cherry Point, N.C., for eventual conversion into QF-4S target drones. "Bloodhound 91" (BuNo 158360) was flown out by Captain Samuel Vernallis and Colonel David Watson, and "Bloodhound 92" (BuNo 155740) by Lieutenant Commander Richard Cummings and Commander Keith Crenshaw.

Entering service first with VF-121 in December 1960, the F-4 served in 59 Navy and Marine Corps squadrons (see Table 1), with 1,264 *Phantoms* being furnished by McDonnell Douglas for the two services, produced or modified in a number of variants (see Table 2). Navy *Phantoms* faced off against Cuba during the October 1962 missile crisis, and provided the tip of the spear for U.S. military response in dozens of crises since.

The F-4 was a workhorse for Naval Aviation during the Vietnam conflict, carrying the war to the enemy, from the August 1964 Tonkin Gulf incident

Table 2

Navy and Marine Corps F-4 Versions

F-4A	TF-4A	F-4B	DF-4B
EF-4B	NF-4B	QF-4B	RF-4B
F-4G	YF-4J	F-4J	DF-4J
EF-4J	QF-4J	F-4N	QF-4N
F-4S	QF-4S		

to the April 1975 evacuation. Navy and Marine F-4 squadrons made 84 Tonkin Gulf deployments, operating mainly over North Vietnam. Marine squadrons also staged to bases in South Vietnam and Thailand, flying mainly close air support missions. Navy and Marine F-4 crews downed 45 enemy aircraft during the war, losing only six of their F-4s to enemy aircraft, and producing the Navy's only aces of the war – Lieutenant Randall H. Cunningham and Lieutenant (jg) William P. Driscoll of VF-96. The intense enemy ground fire took its toll, however, with 66 Navy and 71 Marine F-4s lost to missiles, antiaircraft guns, and attacks at air bases.

The slow phaseout of the F-4 began as the war ended, replaced by the F-14A *Tomcat* and FA-18 *Hornet*, both of which incorporated lessons learned by *Phantom* crews over Vietnam.

MAG-41 and VMFA-112, slated to transition to the FA-18A *Hornet* in 1992, held on to four F-4Ss at the time of the ceremony, eight others already having been transferred to Cherry Point for the drone conversion. One aircraft (BuNo 157293, a Vietnam MiG killer) will be placed on permanent display at Alliance Airport near Dallas. Colonel John Brennan, commander of MAG-41, flew out one of the last two, which left on January 29. He spoke for a lot of F-4 crewmen: "It's sort of a bittersweet time for us, those of us who grew up with the F-4."

Phantoms will still be flying in Navy markings, however. NADep Cherry Point will be continuing its program of converting F-4s and RF-4s into QF-4 target drones for use in missile testing by the new Naval Air Warfare Center Weapons Division at the Naval Air Weapons Centers in Point Mugu and China Lake, Calif. For a long time to come, a few privileged pilots assigned to ferry these aircraft will be able to call themselves "Phantom Phlyers."

China Lake will also maintain YF-4J BuNo 151473 in flyable storage for possible future testing of ejection seats. ■

Special thanks to MAG-41 at NAS Dallas for information and photographs, and to Rene J. Francillon for information in his book, McDonnell Douglas Aircraft Since 1920: Volume II, Naval Institute Press, Annapolis, Md., 1990.

Table 1

Former Navy and Marine Corps F-4 Operators

VF-11	VF-14	VF-21	VF-31	VF-32	VF-33
VF-41	VF-51	VF-74	VF-84	VF-92	VF-96
VF-101	VF-102	VF-103	VF-114	VF-121	VF-142
VF-143	VF-151	VF-154	VF-161	VF-171	VF-191
VF-194	VF-201	VF-202	VF-213	VF-301	VF-302
VF-22L1	VMFA-112	VMFA-115	VMFA-122	VMFA-134	VMFA-212
VMFA-232	VMFA-235	VMFA-251	VMFA-312	VMFA-314	VMFA-321
VMFA-323	VMFA-333	VMFA-334	VMFA-451	VMFA-513	VMFA-531
VMFA-542	VMFAT-101	VMFAT-201	VMCJ-1	VMCJ-2	VMCJ-3
VMFP-3	VX-4	VX-5	VAQ-33		

Navy Flight Demonstration Squadron (*Blue Angels*)
Naval Air Test Center, Patuxent River, Md.
Pacific Missile Test Center (ex-Naval Missile Center), Point Mugu, Calif.
Naval Weapons Center (ex-Naval Ordnance Test Station), China Lake, Calif.
Naval Air Development Center, Warminster, Pa.
Naval Aerospace Recovery Facility (ex-National Parachute Test Range), El Centro, Calif.
Naval Air Test Facility, Lakehurst, N.J.
Naval Weapons Evaluation Facility, Albuquerque, N.M.
U.S. Naval Test Pilot School, Patuxent River, Md.

USMC

The Phantom II showed up for retirement.

Lt Col W H Bowers

F-4S BuNo 157293, a Vietnam MiG-killer, will remain near Dallas as a museum piece.

Richard Mullen

CH-53Es from HMH-461 carried the first wave of Marines and SEALs into Mogadishu.

Rescue

By Adam B. Siegel

In early January 1991, U.S. military forces executed Operation *Eastern Exit*, a noncombatant evacuation operation (NEO) of the U.S. Embassy in Mogadishu, Somalia. The primary forces involved in this 10-day operation were U.S. Navy and Marine forces diverted from Operation *Desert Shield*.

Eastern Exit received relatively little attention as it was conducted on the eve of the war with Iraq. In other circumstances, the execution of such a short-notice and high-risk operation might have garnered front page headlines around the world. The operation's noteworthiness was the evacuation of 281 people from over 30 nations, including 12 heads of diplomatic missions and 39 Soviet citizens, from amidst a bloody civil war.

The military operation itself might seem more like a Hollywood script than reality. Around New Year's Eve 1990, the situation in Mogadishu rapidly deteriorated, leading the U.S. Ambassador, James K. Bishop, to request military assistance to evacuate the embassy. In response, on January 2, U.S. Air Force C-130 transports flew to Kenya and two U.S. Navy amphibious ships, *Guam* (LPH-9) and *Trenton* (LPD-14), with elements of the 5th Marine Expeditionary Brigade embarked, were ordered south from the north Arabian Sea toward Mogadishu.

Almost immediately, the Marine Heavy Helicopter Squadron (HMH) 461 detachment aboard *Guam* started planning for a 1,500-nautical mile flight for an immediate execution of an NEO from the north Arabian Sea, if necessary. This was not considered a particularly viable option, because five refuelings would be needed and there would be two occasions in which the helicopters would have to refuel successfully or make a forced landing. Despite this, the squadron's CH-53E *Super Stallions* were reported ready on three hours' notice for insertion of forces (as long as refueling could be coordinated). For the CH-53Es, the next option considered was an 890-nautical mile flight, with one "must-have" refueling. This plan was put on hold when the situation in the embassy compound appeared to stabilize while the ships steamed southward. By the 4th, however, it was clear that the USAF aircraft would be unable to land at Mogadishu's airport and that the amphibious forces were now the only viable rescue force.

Therefore, by late afternoon, a long-range CH-53E insertion of a security force looked probable as the question became *when* rather than *if* the rescue force would be launched. A dawn arrival the next day in Mogadishu was chosen by the HMH-461 planners to improve the chance of mission success. A mission under 500 nautical miles was preferable due to lowered in-flight refueling requirements, and a dawn/daylight arrival in Mogadishu would facilitate insertion of the security force/liaison group. One of the more difficult problems then faced was coordinating flight times between the KC-130 tankers and the CH-53Es they would refuel in flight on the way to Mogadishu. Three KC-130s from Marine Aerial Refueler Transport Squadrons 252 and 352 departed Bahrain shortly before 1600 (Somalia time) for an airfield closer to Mogadishu, where they assumed a two-hour alert posture at 1730. At that point, planning called for the first refueling to occur at 0830 the next day.

On the afternoon of January 3, the two *Super Stallions* were fitted with refueling probes, which had been removed due to shipboard space limitations, and two .50-caliber machine guns were mounted in each. The two CH-53Es departed *Trenton* at 1715 for *Guam*, where the crews conducted final flight planning and received intelligence briefings. Somali threats to aircraft included SA-2 and SA-3 missiles (both high-altitude, surface-to-air missiles (SAMs)) and many antiaircraft artillery guns throughout the city. The SAM threat led to a decision to make a low-altitude ingress to the embassy compound on arrival in Mogadishu. With the distances involved in the operation, three aerial refueling control points (ARCPs) were required – two inbound and one on the return from Mogadishu.

At 0345, the two CH-53Es took off with 60 Marines and SEALs (sea-air-land team members) aboard. The helicopters flew at 6,000 feet, an altitude used for in-flight refueling. At 185 nautical miles from *Guam*, the CH-53Es rendezvoused with the KC-130s. The crews of the KC-130s, which are not night vision goggle capable, were unable to see the CH-53Es as they approached because the helicopters' formation lights were not visible from more than a mile away. This in-flight refueling was vital to the mission; if it failed, the helicopters would be forced to return to the ships.

The two helicopters plugged successfully, each from a separate

from Somalia

KC-130, and began receiving fuel. The lead helicopter developed a fuel leak inside the cabin with more than one Marine described as having his helmet filled with jet fuel. After the crew chief fixed the leak, the aircraft replugged without further incident. The two CH-53Es now had enough fuel to reach Mogadishu and the operation was a "go."

The leg to the second ARCP was 225 nautical miles. If this refueling failed, the CH-53Es would fly to the compound, insert the security teams, and then fly into the desert, where they would wait for the ships to steam within range. The second refueling was completed on schedule, each helicopter having taken on a total of 24,000 pounds of fuel in the two refuelings. The refueling ended with the helicopters just 53 nautical miles from the embassy. At this time, the KC-130s gave a last navigation fix to the helicopters, which then began a descent in preparation for a low-level insertion profile. The KC-130s began a high-level orbit and established communications with *Guam*. The CH-53E crews test-fired the .50-caliber machine guns and warned the security/liaison force to prepare for insertion. Just at dawn, the CH-53Es crossed the coast at approximately 25 to 50 feet altitude and 150 knots (175 mph).

The CH-53Es crossed the beach south of the harbor with the sun at their backs. Major Dan Schultz, the CH-53E det commander, planned the ingress route to avoid the major fighting, which was reported to be in the northern section of the city and around the presidential palace near the harbor area. Based on the map on hand, the embassy compound was supposed to be clearly in an isolated area, and they had been told it was distinguishable by its golf course and large white stucco wall. In addition, there was to be a man waving a white flag marking the helicopter landing zone. The map, however, was from 1969 and turned out to be highly inaccurate. The area of the embassy compound was heavily built up and, according to the pilot, virtually every building seemed to have "a large white stucco fence" around it. The pilots were unable to identify a golf course.

After flying around the city for 10 to 15 minutes, Maj. Schultz pulled the CH-53Es back over the water to try his backup approach, which involved flying over the airport and then a one-minute-ten-second leg to the embassy compound. On the way in the second time, the two CH-53Es flew over a column of trucks, including several mounting 12.7-mm antiaircraft guns. The Somalis jumped off their trucks and ran for cover as the helicopters approached.

Within minutes, the lead pilots saw what they thought might be the embassy compound. A large number (100 to 150) of Somalis were gathered with ladders by one wall and, reportedly, a large volume of gunfire was being directed into the compound. As the

CH-53Es flew into the compound, the Somalis scattered. The Deputy Chief of Mission reportedly said, "When I saw the word 'Marines' on the sides of those large helicopters, I knew we were safe."

With the Marines and SEALs protecting the embassy, the two *Super Stallions* remained on the ground for an hour awaiting evacuees for the 350-nautical mile return flight to *Guam*. Eventually, 61 evacuees, including all nonofficial Americans then in the compound, three ambassadors (from Turkey, United Arab Emirates, and Nigeria), and the Omani Charge D'-Affaires, were loaded on the helicopters which took off at 0720. The CH-53Es headed straight out to sea, where they contacted the third KC-130 which refueled them.

At 0940, the two CH-53Es arrived on *Guam* and offloaded the evacuees. They then took off for *Trenton*, where almost the entire crew was on deck to greet "their" CH-53Es. The Lee Greenwood song "God Bless the USA" – which shouts, "I'm proud to be an American" – was blaring from the ship's loudspeaker. With this, the *Super Stallions*' mission was complete. The KC-130s remained on call to support another CH-53E mission until 1600 when they were released from contingency tasking.

At midnight, the final evacuation from the embassy compound commenced. The operation called for both CH-46E squadrons (Marine Medium Helicopter Squadrons (HMM) 263 and 365) aboard *Guam* to have five aircraft flying, each of which would fly two times into the embassy compound. Each flight had a helicopter assigned to act as a rescue aircraft in the event of a crash; additional helicopters were on alert aboard ship. Planning called for each flight to remain on deck until the previous flight had taken off from the embassy. Two UH-1N helos from Marine Light Attack Helicopter Squadron 269 were on alert to provide gunfire support, but they were not put in the air because an Air Force AC-130 gunship was scheduled to be overhead.

The operation was conducted at night, the pilots and crew operating with night vision goggles. The first wave of five helicopters from HMM-263 took off from *Guam* at 2343 and landed one minute early in the compound. Evacuees and Marines without night vision devices reported that the helicopters were essentially unseen until they were already on the ground, and then only dimly. The evacuees smoothly moved to the helicopters,

"When I saw the word 'Marines' on the side of those large helicopters, I knew we were safe."

with the exception of delays in putting cranial helmets and life preservers on evacuees. Twenty minutes after landing, the five helicopters took off with the first 75 evacuees aboard. At 0021, the second wave of five helicopters from HMM-365 lifted off from *Guam*.

En route to the embassy, the CH-46Es' and the AC-130's radar warning receivers lit up as an SA-2 radar went active. The SA-2 was not viewed as a threat to the CH-46s because it has almost no capabilities against low-altitude targets, and the helicopters were flying at an altitude of 150 feet (the highest obstacles the pilots were concerned about were 100 feet high). The second wave arrived in the embassy compound at 0033 at the same time the first wave was landing on *Guam*.

As the second flight landed in the compound, a Somali major came to the front gate and demanded to speak to the ambassador. The major, with hand grenade in hand and two truckloads of soldiers behind him, demanded that the evacuation cease immediately as the Somali government had not granted the United States permission to mount such an operation. He threatened to shoot the helicopters down if they took off. Ambassador Bishop began negotiating with the Somali.

The second wave took off from the embassy at 0051 and the third departed *Guam* on the news that the second had lifted off. The ambassador, his staff, and the Marine security guards were to leave on the third flight. The negotiations with the Somali major continued; the head of security, a contract security officer, the SEALs, and the five Marine security guards remained with the ambassador. Ambassador Bishop successfully negotiated with the major. Several thousand dollars and keys to some of the cars in the compound secured an agreement not to attack the helicopters. The ambassador walked with the Somali toward the helicopter landing zone, keeping him engaged in conversation until the very last moment so that he would not have an opportunity to interfere with the evacuation.

Thus, only four of the five CH-46Es in the third wave were filled; they took off at 0100. The fifth remained on the ground to join the final evacuation wave, which landed in the compound at 0120. With the arrival of the fourth wave, the Marines on the perimeter fell back from their positions and moved to the helicopters (the SEALs protected the ambassador and boarded helicopters when he did). With the confusion created when the ambassador did not leave on the third wave, the boarding of helicopters in the final wave was disrupted. Some Marines were sent running from aircraft to aircraft looking for seating, which complicated attempts to account for all personnel. Several times, all personnel were reported accounted for; the helicopters were about to lift off when one CH-46E crew chief reported two Marines near the landing zone. The two radio operators had not realized that this was the final wave and had remained intent on maintaining communications. The crew chief ran over to them, helped them stow their equipment, and got them aboard. The final helicopter lifted off from the compound at 0149.

Looting in the compound began almost as soon as the last helo lifted off, and within hours, rocket-propelled grenades were fired through the front door of the Chancery and the building was ransacked.

The final helicopter landed on *Guam* on January 5, 1991. Twenty minutes later, with 281 evacuees safely aboard ship, the ambassador declared the evacuation complete. ■

Mr. Siegel is a Ph.D. candidate in military history at the University of Illinois, Urbana-Champaign, while on leave of absence from the Center for Naval Analyses. He deployed with the Amphibious Group 3 staff for Operation Desert Shield/Storm. *See the author's article in the upcoming May 1992* U.S. Naval Institute Proceedings *for an overview of the entire operation. Mr. Siegel is currently working on a book on Operation* Eastern Exit *and would appreciate hearing from other participants. Please write* via Naval Aviation News.

Hawkeye Soars to 14 World Records

By Joseph Norris

December 17 is recognized as a historic day in aviation history. It was on that date in 1903 that Orville and Wilbur Wright made their first flight at Kitty Hawk, N.C. At the Naval Air Test Center (NATC), Patuxent River, Md., December 17, 1991, was also a special day in Naval Aviation history. It marked the beginning of three days in which an E-2C (Plus) *Hawkeye* from NATC's Force Warfare Aircraft Test Directorate broke 14 world records set by a Soviet Antonov aircraft in 1982. In addition to surpassing the 14 former marks, the E-2C also set six new records.

The E-2C (Plus), designed and built by Grumman, has been bolstered by a new Allison T-56-A-42 engine that boosts performance and efficiency.

The first day of flight, the *Hawkeye* set three records. In the "time-to-climb" event, which is the time it takes to get to altitude, the E-2C (Plus) recorded two new marks – in the C-1.I category of aircraft between 35,274 and 44,092 pounds.

The first record fell when the plane reached 3,000 meters in altitude in two minutes and 48 seconds; the second when it reached 6,000 meters in 5:38. The crew also set a record for speed over distance in its weight class by marking 373 miles per hour over a 100-kilometer course, breaking the old record of 314 mph. Lieutenant Commander Matt Klunder and Lieutenant Pete Tomczak were the pilots.

The second day saw two different flights in separate categories. The first flight, piloted by Lieutenants Eric Hinger and Steve Schmeiser, were recorded in the C-1.J category (44,092 to 55,115 pounds). The E-2C (Plus) set two records in the time-to-climb event in that category.

The first mark was set when the crew climbed 3,000 meters in three minutes and one second; and the second record fell when the *Hawkeye* soared 6,000 meters in 6:16, shattering the old mark by eight minutes. In addition, the E-2C (Plus) reached a maximum altitude of 39,954 feet with a 2,000-kilogram payload, bettering the old mark of 38,584 feet.

In the second flight of the day, this time in the C-1.I category, the E-2C (Plus) reached an altitude of 39,722 feet with a 2,000-kg payload, breaking the old record by 4,582 feet.

The third and final day of flight took place on December 19 when the *Hawkeye* reached a maximum altitude of 41,067 feet without a payload in the C-1.I category. The aircraft then climbed to a maximum altitude of 41,067 feet with a 1,000-kg payload and a maximum altitude of 39,814 feet in horizontal (sustained) flight. Schmeiser and Klunder were the pilots.

The last four records were set in the C-1.J category on flights piloted by Hinger and Klunder. Three of the marks were for maximum altitude. They reached a maximum altitude without payload of 41,253 feet, a maximum altitude with a 1,000-kg payload of 41,253 feet, and a maximum altitude of 40,464 in horizontal flight. The final record was set when the *Hawkeye* reached a speed of 370 mph without a payload over a 100-km course. A record of 370 mph also was established with a 1,000-kg payload over a 100-km course.

Cdr. Steve Silvino

Capt. J. D. Keen, director of Force Warfare, left, and Capt. Jay Sprague of Nav-Air E-2C program office, join the record setting team: Lts. Eric Hinger, Pete Tomczak, Steve Schmeiser, and LCdr. Matt Klunder.

Six new records also were chalked up during the three days of flights. On December 17, pilots Klunder and Tomczak set two new marks in the C-1.I category, reaching a previously unestablished height of 9,000 meters in 10 minutes, and a speed of 373 mph over a 100-km closed course with a 1,000-kg payload. A new record speed of 373 mph also was set over a 100-km course with a 2,000-kg payload.

The second day of flight marked two unestablished records in the C-1.J category, reaching 9,000 meters in the time-to-climb event in 11 minutes and 25 seconds. That particular series of flights, piloted by Hinger and Schmeiser, also clocked a speed of 369 mph in the 100-km speed event with a 2,000-kg payload.

One more record was established on the third day of flight in the C-1.J category by pilots Hinger and Klunder, who reached a speed of 370 mph over a 100-km course with a 1,000-kg payload.

The records were broken and established under what Captain Jay Sprague of the Naval Air Systems Command's E-2C program office described as the "normal limits of everyday fleet operation." The aircraft, except for being instrumented for the record attempts, is a fleet airplane which already has completed two deployments with West Coast squadrons.

All figures are preliminary results and must first be examined by the National Aeronautics Association for verification as national records before they are sent to the Federation Aeronautique Internationale in France for verification as world records.

Data for verification was obtained using the Range Directorate facilities, the Chesapeake Test Range, and the Real Time Telemetry Data System. The E-2C (Plus) was instrumented by the Airborne Instrumentation Department.

NATC's Force Warfare Aircraft Test Directorate was responsible for the aircraft maintenance and aircrew. Engineering support was provided by Tracy Wathen, Tom Rudowsky, and Jeff Kumke of the directorate's technical department. Wathen investigated the possibility of setting the records and getting the approval. Rudowsky handled the performance analysis and modeling for the E-2C (Plus). Kumke coordinated the aircraft configuration. ■

Mr. Norris is a staff writer for Tester, *NAS Patuxent River, Md.*

PH2 Vise

Kuznetsov, the former Soviet Union's first full-scale carrier, steams in the Mediterranean Sea.

Kuznetsov: New Kid on the Block

By LCdr. Rick Burgess

When the Admiral Flota Sovetskogo Soyuza (Admiral of the Fleet of the Soviet Union) *Kuznetsov* transited the Turkish Straits into the Mediterranean Sea on December 2, 1991, she emerged as the first true aircraft carrier to deploy under the flag of the Soviet Union. By the time she docked at her Northern Fleet home port in the Kola peninsula on December 26, the Soviet Union no longer existed.

Kuznetsov's timely transit took her out of the political struggle for possession of the Black Sea Fleet between the newly independent states of Russia and the Ukraine. As of this writing, it appears that part of the Black Sea Fleet will belong to the Ukraine, and the remainder will operate either under the Russian flag or under the auspices of the Commonwealth of Independent States (CIS), an economic and defense union of most of the former Soviet republics. However, given the political and economic instability in the former Soviet Union, the future of former Soviet naval aviation, including its new carrier and ones under construction, is uncertain at best.

Launched in 1985 and commissioned in January 1991, *Kuznetsov* represents a progressive evolution in Soviet sea-based air power, which began in earnest in the late 1960s with the two antisubmarine warfare (ASW) cruisers *Moskva* and *Leningrad*, both assigned to the Northern Fleet. The aft half of their main decks are flight decks from which ASW and over-the-horizon targeting helicopters operated. In the 1970s, the *Kiev*-class cruiser appeared, with a heavily armed cruiser

bow, but with an angled flight deck that handled Yak-38 *Forger* vertical/short takeoff and landing (VSTOL) fighters as well as helicopters. *Kiev* joined the Northern Fleet and her two sisters (*Minsk* and *Novorossiysk*) transferred to the Red Banner Pacific Ocean Fleet. A much-modified fourth unit, *Admiral Gorshkov* (formerly *Baku*), joined the Northern Fleet in the late 1980s.

Displacing 65,000 metric tons, *Kuznetsov* (formerly named *Tblisi*, and before that *Leonid Breshnev*), entered service as the first Soviet carrier designed with conventional cross-deck pendant arresting gear, and qualified the Soviets' first "tailhookers" during trials in the Black Sea that began in November 1989. Lacking catapults, however, the carrier features a ski-jump bow over which conventional fixed-wing aircraft perform rolling takeoffs. (The ski jump is also used on "Harrier carriers" operated by Great Britain, Spain, Italy, and India).

Although potentially capable of operating in the power projection role, *Kuznetsov* was designed with the mission of extending the air defense of the Soviet Union seaward. The carrier is capable of operating about two dozen naval variants of the modern Su-27 *Flanker* fighter, as well as the several versions of Ka-27 *Helix* helicopter. (During its Black Sea trials, the ship has also operated the MiG-29 *Fulcrum* fighter and the Su-25 *Frogfoot* attack aircraft, as well as the *Forger*.) During her transit to the Northern Fleet, however, the only aircraft evident on deck were *Helix* helicopters. Reported delays in fighter deliveries are expected to slow workups to full war-fighting capability for the new carrier.

Like preceding classes of Soviet aviation ships, *Kuznetsov* is heavily armed with missiles, including SS-N-19 antiship cruise missiles and vertical-launch, surface-to-air missiles.

Even with delivery of *Kuznetsov*, Soviet naval aviation was proceeding apace with the strengthening of its land-based strike component with transfers of more Tu-22M *Backfire* long-range strike aircraft from the Soviet air force. A new maritime patrol aircraft, the A-40 *Albatros* amphibian, was also introduced and may enter production.

Replacement of the *Forger* VSTOL fighter, apparently being retired from use, recently suffered a setback with the crash of a prototype of the Yak-141 *Freestyle* VSTOL design.

A second *Kuznetsov*-class ship, *Varyag* (formerly *Riga*), was launched in 1988 and is currently fitting out at a Black Sea shipyard. A larger carrier, however, has been under construction at the Nikolayev shipyard on the Black Sea; this nuclear-powered unit, named *Ul'yanovsk*, will displace 70,000 to 75,000 metric tons and may have aircraft catapults installed. The fate of these two ships, however, rests in the outcome of the political and economic turmoil in the CIS. That turmoil may also decide whether *Kuznetsov* attains full potential as a regular presence on the high seas, "trappin'" with the best of them. ■

Information and photos courtesy U.S. Navy Chief of Information.

PH2 Vise

Kuznetsov tracks west through the Mediterranean Sea to join the Northern Fleet.

Retrieving the Fallen Warriors

Salvaging Naval Aircraft

By JO2(SW) Eric S. Sesit

Off the coast of the Hawaiian islands and resting peacefully below the waves, a Grumman F3F biplane sits undisturbed except for an occasional visit by a fish or crab. The plane, now encrusted with coral, has made this spot of ocean floor its home for the last 50 years. This F3F, like so many other fallen aircraft, will remain where it went down – either underwater or buried under dense jungle foliage – until someone happens to find it, by chance or by calculated search. When an aircraft is found, the Navy wants to know about it.

"Anyone involved in salvaging a naval aircraft must understand the bottom line is that the Navy, by law, still owns these planes," said Roger D. Copeland, Naval Air Systems Command (NavAir) Public Affairs Officer. "A commercial salvager must get permission from the Navy in order to bring an aircraft to the surface."

There are many reasons for this according to Copeland. "The Navy never abandons equipment without an overt act of abandonment. Additionally, the passage of time and the lack of pursuit of an aircraft does not warrant abandonment on the part of the Navy. There is also a possibility of classified equipment or ordnance onboard an aircraft. If that is the case, diving on the wreck could prove to be extremely dangerous," added Copeland.

Another reason the Navy does not want salvagers to bring up aircraft without the Navy's permission is that "many of these aircraft went down with crew members onboard. These planes are considered grave sites and the Navy wants to know about them," according to Dr. William S. Dudley, Senior Historian at the Naval Historical Center in Washington, D.C.

"One of the first groups called in when a crash site is found is the Navy Bureau of Personnel's Office of Decedent Affairs," said Robert Macon, Deputy Director of the National Museum of Naval Aviation, Pensacola, Fla. "They will check out the aircraft and if remains are found, they will recover them and try to identify them before burial."

National Museum of Naval Aviation

Top, an SBD-4 awaits renovation at the National Museum of Naval Aviation after being lifted from the depths of Lake Michigan. After six months to a year of detailed work, the plane will be ready for display. Above, an SBD on a mission during WW II.

The National Historic Preservation Act of 1966 is also a factor in salvaging aircraft. According to Dr. Dudley, by law, the Navy must comply with the act and has an obligation to preserve many of these crash sites.

Why would the Navy leave a wrecked aircraft on the ocean floor? There are as many answers to this question as there are aircraft underwater.

During WW II, the vast numbers of planes shot down or lost in mishaps made it impossible to recover them all, and during the war there just wasn't enough time or manpower. In addition, with America's industrial capability, it was less expensive to build new aircraft then to search for and recover damaged ones. In many cases, the technology wasn't advanced enough to reach aircraft in very deep water.

Today, many aircraft are lost in waters that make salvage efforts too expensive, or the cost of salvaging the wreck would not be worth the knowledge gained. On the other hand, if a series of mishaps is plaguing a current model of aircraft, the Navy might salvage the wrecks in order to track down a problem and to prevent further mishaps. Simply put, a salvage operation must provide the maximum information acquired for the money spent.

Other wrecks might not be salvaged because there is no need. A trainer without classified gear or sophisticated weapon systems onboard could very well remain in its watery grave.

But aircraft do make it to the surface, are restored and put on display. According to Macon, "Many aircraft are found by commercial salvagers who are looking for commercial ships or aircraft that have gone down. By chance, their sonar comes across a military aircraft and they want to know what to do with it. The first place the salvagers should call is either NavAir or the National Museum of Naval Aviation.

"I talk to people almost everyday

who think they might have discovered one of our planes," added Macon. "It is an important part of our job here at the museum, and at NavAir, to make sure these people understand that these aircraft are still owned by the Navy and that the Navy has a very keen interest in what happens to them."

The F3F in the beginning of this article is a fictional aircraft. But there are many aircraft out there just waiting to be found. By working with the Navy, people who salvage fallen aircraft can contribute significantly to our country's Naval Aviation heritage. Some aircraft that are recovered are the only surviving examples of their type. Not every aircraft that is recovered can be rebuilt, but those that can provide us and future generations a window into the past where pilots once strapped on the leather and took to the skies in planes that amazed us with their grace and power – and continue to do so today. ■

Legends Reincarnated

By JO2(SW) Eric S. Sesit

Half a century ago, two paddle-wheel aircraft carriers, *Wolverine* and *Sable*, cruised the waters of Lake Michigan. As training carriers for the multitudes of new Naval Aviators needed to fight in WW II, both ships saw their share of mishaps. Fledgling aviators practiced landings and takeoffs from these ships, and many of them learned their lessons the hard way – resulting in a splashed aircraft.

The fresh icy waters of Lake Michigan has kept many of these aircraft in good condition over the years. The wreckage of an SBD-4 was recovered in 1991. According to Robert Macon, Deputy Director of the National Museum of Naval Aviation, Pensacola, Fla., the SBD-4 is waiting to be refurbished to its original state. "It will take approximately six months to a year to restore this aircraft," said Macon. "The amount of work depends upon the condition of the aircraft. More than likely, the plane will be restored here at the museum, but there are many contractors out there whose business is restoring aircraft."

Lone Star Flight Museum

Above, an F3F-2 recovered from a mountainside in Hawaii nears completion of its two-year-long rebuilding effort. The plane will be ready to fly by the end of Summer 1992. Below, an F3F-2 as it looked prior to WW II.

Around the country, private individuals and organizations with an interest in all naval aircraft go to great lengths to breathe new life into these legendary planes.

According to Jim Fausz, President of the Lone Star Flight Museum in Galveston, Texas, restoring aircraft is an expensive proposition. Fausz, a retired Navy fighter pilot, currently has an F3F-2 undergoing restoration. "Many of the parts needed to build this aircraft no longer exist," Fausz explained. "This means that we have to actually machine the parts and, in some cases, we even have to manufacture special tooling to make those parts."

Fausz's F3F-2 was found by a civilian in Hawaii. The plane was basically a pile of scrap and is currently being built from the ground up by Herb Tischler of the Texas Airplane Factory, Inc., in Fort Worth, Texas.

"Herb Tischler does beautiful work on these aircraft," Fausz said. "He's been working on this plane for almost two years now and, if all goes well, I'll be flying it by the end of the summer." ■

ANA Annual Photo Contest Winners

Below, Angelo Romano, C.O. of the Association of Naval Aviation's Med Centurion Squadron in Naples, Italy, won the 1991 Annual ANA Photo Contest with his photograph of HSL-46 SH-60B Seahawks over the Farallioni Rocks of Capri. Below left, second prize went to 1st Lt. Duane Clark, VMO-2 Det B, for his shot of OV-10 Broncos over erupting Mount Pinatubo. Below right, VF-24 X.O. Cdr. "T-Bear" Carson received third prize for capturing on film a squadron F-14 Tomcat over Kuwait's burning oil wells.

A model of the current and proposed expansion of the museum.

The National Museum of Naval Aviation

Story and Photos by Cdr. Stephen R. Silverio

There can be no better place to tell the story of Naval Aviation than in the "Cradle of Naval Aviation," Pensacola, Fla. And no place does it better than the National Museum of Naval Aviation.

It not only houses the finest collection of U.S. Navy, Marine Corps, and Coast Guard aircraft in the world, it also honors the men and women who have been instrumental in the history and advancements made in Naval Aviation through displays of aviation art and artifacts. The photos on this page show you only a small sampling of what is in store when you visit the museum. We can only give you a taste, but, oh, what a banquet of sights and sounds await you and your family's arrival. And what is there today is still only the beginning. The Naval Aviation Museum Foundation plans to initiate many new and exciting programs and exhibits in the future. This is our history, our museum, and our legacy for tomorrow.

The hands-on "Flight Adventure Deck" is great for kids.

The contributions of enlisted Naval Aviation Pilots are not forgotten.

Guided tours by Naval Aviation Museum Foundation volunteers are educational and informative.

This EC-121K Super Constellation was transferred from VT-86 to the museum in October 1973.

The T-28 Trojan was every student's dream – and nightmare.

This A-7 Corsair II from John F. Kennedy (CV-67) was flown during Operation Desert Storm.

Are You a Curator?

By Cdr. Stephen R. Silverio

Do you have a bunch of stuff around the house, in the attic, or down in the basement? Those special mementos of your illustrious career and world travels that no one, especially your spouse, appreciates? Well, take heart. You may not be just accumulating a bunch of junk as I am certain that you have been accused of doing. You may be the curator of a collection of artifacts. The big difference between your private collection and that of a museum is that you don't have the official sanction and respectability of a museum. Nor does the public have access to view your collection. To the unenlightened, the value of your artifacts is elusive. To the knowledgeable, they may help present a historical picture of Naval Aviation. You were there yesterday and, today, you are tomorrow's history. History is not about dates and famous people; it is about events and the people who participated in those events. Those artifacts that you may be considering as disposable may help the National Museum of Naval Aviation tell our story, the story of Naval Aviation.

If you think that what you have is of no historical value because no one has ever asked for it, or that historians collect everything of significance at the time of the event, you are wrong. Artifacts are those items that have been used as the event took place. Who would realize the significance of a cup, a scrap of paper, and a shred of lead until they were identified as being used by a former prisoner of war; or that a briefing card or navigational chart was important until used on a raid into enemy territory. One item that has eluded everyone to date is a blood chit from Operation *Desert Storm*. We often fail to see that our individual contributions to an event effect its outcome unless the spotlight is brought to bear. Collectively, we have written history every day. Look and see what you have in your possession that tells our collective story.

Well, now that you have discovered the treasure buried among your belongings, what do you do? Contact the National Museum of Naval Aviation at (904) 452-3604 (AV 922-3604) and talk to Mr. Frank Matson. He will be delighted to help you evaluate what you have and then take it off your hands. You will be recognized for your contribution. Take a minute and look to see if what you have at home or in your work spaces might be useful to the museum. A final note to all the JO's: Don't try to send in the Skipper. He may seem to be an old relic now...but just wait.

A display of the type of artifacts needed from aviation personnel for the National Museum of Naval Aviation.

A Voice in the Slipstream

By Donal James Black

Charles C. Cooney


RAF pilot Black

It's October 13, 1943. I'm strapped into the rear seat open cockpit of a U.S. Navy training airplane. She's a Boeing/Stearman biplane, looking much like a WW I fighter. Official designation: N2S-4. Bright yellow. Fixed undercarriage. Powered by a Continental engine, she's great for aerobatics, such as loops, rolls, and spins.

In the front cockpit sits a U.S. Navy instructor, name of Lt. Summerville. Mostly I can only see the back of his head, except that I can also see his eyes in his rear-view mirror, in which he looks back at me frequently.

I've so far done a little over 85 hours of flying, the first dozen or so in Britain, in a De Havilland *Tiger Moth* with its Gipsy Major engine, the rest over here in Michigan, based at Naval Air Station, Grosse Ile.

On August 29, I was tested for what was called "A" Stage (takeoffs, landings, turns, climbs, gliding, stalls, and spins). Lieutenants Gunderman and King gave me separate checkrides on the same day and both passed me as ready to move on to the next stage.

In "B" Stage, I learned to land the Stearman accurately in a 100-foot white circle painted on the airfield – also to do steep turns, side-slips, and to land on small emergency fields.

On September 23, Lieutenant Forger checked me out, and again I passed.

Now came "C" Stage and the real aerobatics. We knew a lot of trainees got eliminated ("washed out," we called it) in this stage, so it was with considerable trepidation, as well as excitement, that we looped and spun and split-essed and Immelmann-turned and falling-leafed and snap-rolled our way through "C" Stage.

Most of us, that is. As usual, quite a few didn't make it and went on to become navigators, radio operators, and gunners. (It was too well known that the most dangerous job in WW II air operations was that of tail gunner in a bomber, and NOBODY wanted to flunk the pilot's course, but not everyone could hack it).

The toughest maneuver of all, for me, anyway, was the inverted spin. You either half-loop or half-roll so you're fully inverted, then you pull the throttle all the way back so your engine is just idling. Then, against all instinct, you push the stick *forward*, so your upside-down nose reaches for the sky. When the plane starts to judder into a stall, ram the stick hard forward and kick on full rudder. (If you don't care for right-side-up spins, don't do this, believe me!)

From that point on, all your senses tell you that you're going to come apart, a zillion pieces of you will fly in all directions, and no remnant of you will ever be found again. Your head feels like it's full of blood (it probably is) and about to burst. Your feet keep trying to pull away from the rudder bar. You have to force your hands to grip the throttle and the stick. Earth and sky whirl around as if you're in a tornado. The slipstream howls and screams in the struts and wires. You want nothing more than to let go of everything and allow the plane to right itself (a Stearman will do that; it has incredible stability and "forgiveness").

But you *don't* want to flunk out, so you hold that leg rigid to keep your foot firmly against the rudder bar, and you hold that stick as far forward as it'll go. And somehow, in all that tumult, you manage to count "three" as the plane spins, because you're only supposed to let it go round three times.

Then, with relief, you pull the stick back and shove on opposite rudder, and the Stearman stops whirling, dives straight down for a moment, and then you curve up and, hallelujah! You're straight and level again. And you breathe again.

Well, somehow, Ensign Reinhart taught me to do all that starting September 26. He flew with me four times, and I went up solo 13 times to practice what he'd preached.

It got to the point where my snap rolls really snapped, Mother Nature would have been proud of my falling leaf, Herr Immelmann would have said, "Ja, sehr gut !" when I did his famed maneuver, and when I did a loop, as often as not, I felt a bump as I passed through my own slipstream on the way down.

So I began to think, hey, ace, no problem! Until October 11, that is, when Lieutenant Gockel took me up for the checkride – and I flunked it. I don't recall exactly why. I think I was overconfident and probably did some sloppy flying.

Luckily we got two chances, and they sent me up solo on October 12 to practice and try to get the polish back on my performance.

Later that same day, Ensign Bernstein took me up. I passed! But after a "down check," you had to get two "up checks," by two different instructors, and my second checkride was scheduled for the next day.

My confidence was back when I went up with Lieutenant Summerville on October 13, and my solo practice session seemed to have done a lot of good. The checkride went smooth as silk, and I was flying as well as I ever had. "Okay," Lt. Summerville said, after an hour or so of near-faultless aerobatics, "just gimme the inverted spin and we can go home."

Well, I thought, that sounds good. Don't blow it now. So I looked carefully around to make sure nobody was close, tightened my shoulder straps still more excruciatingly, then rolled the plane over and went into the spin.

I was determined to make good, and stretched my leg as rigidly as I could, holding the stick forward until my arm felt like a steel rod. I quivered with effort and blanked everything else out of my mind except what I had to do to hold the Stearman in that whirling spin. I heard the whine and howl of the slipstream and gritted my teeth, thinking only: "No washout! No flunk!"

My shoulders pressed achingly against the straps. The foot that wasn't straining against the rudder bar kept trying to fly free and I had to jam it against the floor. The world became a blur and I found myself in an almost hypnotic state.

I'd gone into a right-hand spin, and my right foot started to feel a bumping sensation, as if the rudder was bucking. "No way," I muttered to the

airplane. "You're not coming out till I say so." And pressed harder. Then I also noticed the stick seemed to be trying to jerk against me. I gritted my teeth and growled: "Keep spinning, you brute. Keep spinning!" And held the stick forward harder, too.

I'm not sure when I became aware that there was an unfamiliar noise mixed in with the screaming of the slipstream – almost like somebody yelling, I thought vaguely. But it was about the same moment I realized that the voice pipe in the front cockpit, a long tube with the mouthpiece at the end, was standing straight up. And, was that a hand, kind of scrabbling at it, trying to pull it in? "Oh, God! Oh, my God! I've blown it now, haven't I?" I thought miserably.

Quickly I slammed on opposite rudder and hauled the stick back into my belly. That perky little plane straightened instantly, dived down, curved up smooth as cream, and we were blessedly right side up again. As we leveled off, I eased the throttle forward till we were steady at normal cruising speed. I looked up at the instructor's rear-view mirror, and my blood chilled. His eyes were fixed on me, with a grim look. I saw he had the talk-back mouthpiece over his lower face, and I heard some heavy, deep breathing. I waited apprehensively.

Then he finally spoke, his voice sounding like icicles. "Black," he said, slowly, deliberately.

"Yes, sir," I replied, trying to sound alert and confident.

"Black," he repeated, "how many turns are you supposed to do in an inverted spin ?"

"Three, sir," I responded, brightly, my heart sinking.

"How many did you do?" he asked, implacably.

I tried to look cheerful, but I knew it wasn't working.

"Uh, four?" I tried holding up four fingers, as if that could make it more credible.

He merely shook his head. I tried again.

"Five, sir?" This time, five fingers did their best.

"Six, Lieutenant?" My voice was beginning to quiver.

"Seven," he barked. "You did seven turns. Damn it, man, I thought you were gonna spread us all over Michigan! What happened? You freeze up?"

Freezing up is what happens when you get scared. I hadn't been scared, I'd simply got so engrossed in that damn spin that I'd forgotten to count the turns. Indignantly, I replied: "No sir, I did not freeze up, sir! I made a mistake, sir, but I did not freeze up!"

"Didn't you hear me yelling to come out of it? Didn't you feel me trying to kick the rudder and pull the stick back?"

Somebody's advice came back to me. Never, never argue with an instructor. Especially a checkride instructor. Always apologize. Be humble. So I said: "I'm sorry, sir. I thought it was the slipstream."

He glared at me a few moments longer, then quietly said:

"I've got her. I'll fly us back."

I thought, uh oh, that's bad; he doesn't even trust me to fly us back to base. But all I said was: "Okay, sir. You have control."

I let go the stick, rudder and throttle, and Lt. Summerville took over. After about five minutes, his voice came on again: "I'm gonna do some aerobatics myself. Kinda rusty. Need some practice. Seat harness secure and tight?"

I checked, then answered him: "Yes, sir. All secure and tight."

"Okay, then. Here we go."

And for the next 20 minutes or so he threw that little plane all over the sky. I think he did every stunt I knew, and some I'd never heard of (I think he made some of them up on the spur of the moment). He left no space in between, just transitioned from one into the next.

Now, any pilot can tell you that it's almost impossible to make yourself airsick. You can fly stunt after stunt, but as long as you're doing the flying, you're fine. But if somebody else is handling the aircraft, and especially if they're doing stunts with a lot of negative "Gs" (as the lieutenant was that day), even the most experienced pilot can start to feel queasy.

The worst of it was, when I began to feel a bit uncomfortable, there wasn't much I could do about it. You just don't tell your checkride instructor to quit doing aerobatics. So I just kept doing deep breathing and trying not to think about being airsick.

It didn't work. I felt myself getting worse. A couple of times, when I glanced up, I saw Lt. Summerville looking at me. At last he said: "Black, you look a bit green!"

I tried a weak grin as he guffawed at his corny joke, and that didn't work either. He set the plane straight and level.

"You feel sick, Black?" he asked. "If you feel sick, best thing is to put your head over the side and let go."

Well, that did it. I'd been fighting it, but when he put it into words, it was like a trigger. I threw up, and threw up, and threw up. It seemed to go on forever, but at last it was over. I slumped back into my seat, and looked up at my tormenter again. I couldn't see his mouth, but I could tell from his eyes that he was grinning.

When we landed and were walking toward the hangar, chutes slung over our shoulders, he said, sounding casual: "Black, you're a good pilot. I'm going to pass you."

My heart sang as he continued: "But remember this: Flying isn't just talent. It's attention to detail. It's thinking ahead. It's taking care. Sure, it's also fun. But it can stop being fun awful fast anytime you think you know everything, or lose concentration. You know the slogan: 'It's better to be late, Mister Pilot, than the late Mister Pilot.' I did what I did to make sure you remember!"

Thanks, Lieutenant Summerville. I did.

I went on to qualify for my pilot's wings at Pensacola, Fla., flying the big Consolidated PBY *Catalina* flying boats, then back to England, where I also qualified as an aerial navigator. Then it was the Far East from 1945 to 1947 – first India, then Burma, and then Singapore.

There, we flew the Douglas *Dakota* (DC-3), without doubt one of the best and safest aircraft ever built. We flew all over: Calcutta, Rangoon, Bangkok, Saigon, Penang, Kuala Lumpur, Singapore, Hong Kong, Sumatra, Batavia, and a host of places I'll probably never see again (including an emergency landing in southern Thailand at a spot called Nakhaun Si Thammarat).

We flew in some of the most terrifying weather in the world: the southwest monsoon, when the cumulonimbus clouds build up faster than a DC-3 can climb, and tower up into the skies till the tops are nothing but dazzling ice crystals, despite the sweltering tropical heat below and the blazing sun above. The turbulence in those huge clouds, and even between them, is horrendous and can tear a plane apart and scatter the pieces all over the jungled mountains or into the ocean below, never to be seen again.

But through it all, the lessons learned from the instructors named above, among others, kept me flying safely – and brought me through.

Especially Lt. Summerville.

I like to think he might see this.... ■

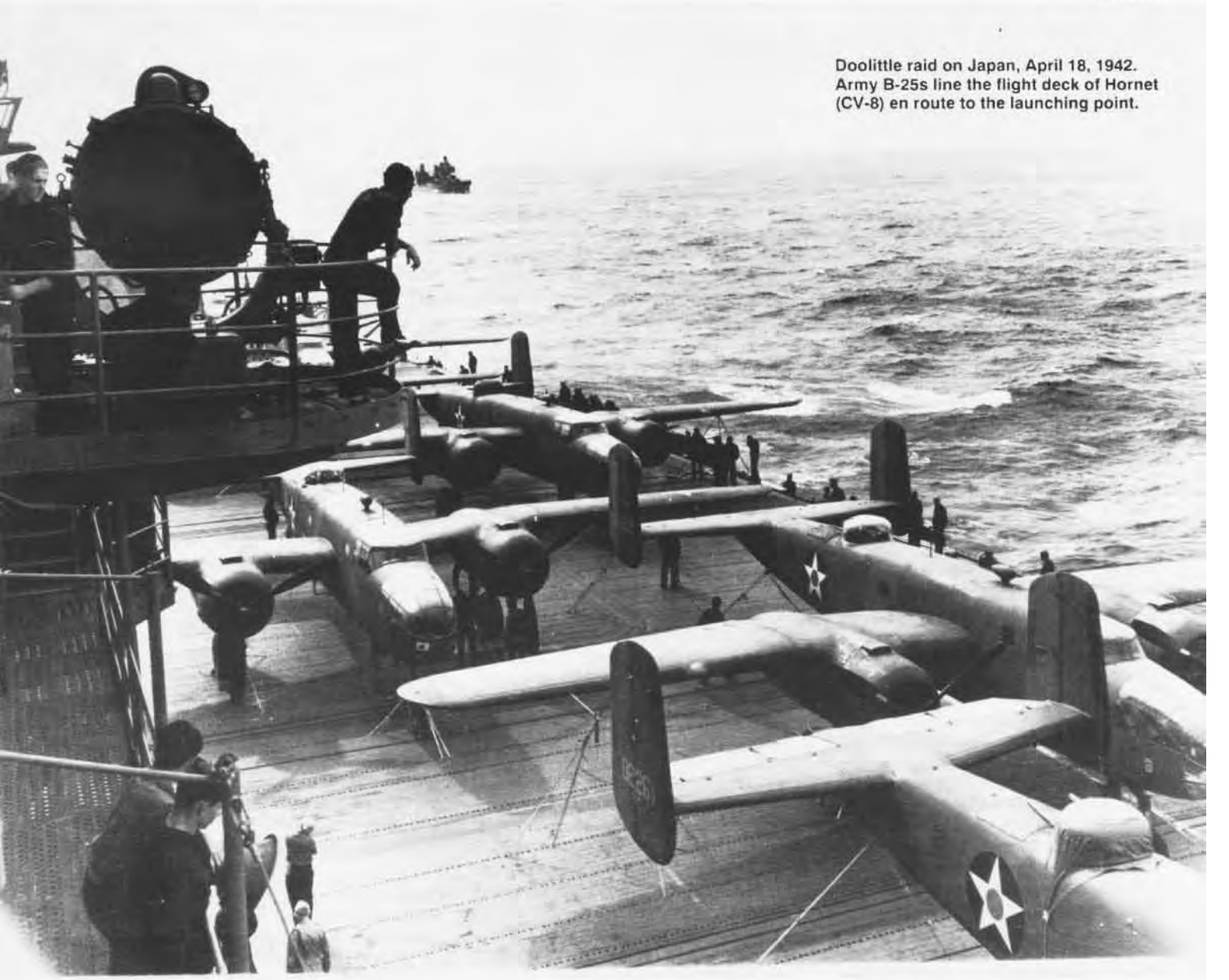
Mr. Black is a freelance writer based in Atlanta, Ga. During WW II, he was a Royal Air Force exchange pilot who received his training at U.S. Naval Air Stations, Grosse Ile, Mich., and Saufley Field, Whiting Field, and Pensacola, Fla.

The Early Carrier Raids:

Proving Japanese Vulnerability

By Marc D. Bernstein

NH 53293



Doolittle raid on Japan, April 18, 1942. Army B-25s line the flight deck of Hornet (CV-8) en route to the launching point.

The events of December 7, 1941, placed the United States Pacific Fleet in the then-awkward and unanticipated position of having to rely upon carrier airpower as the principal striking arm of a battered and presumably overmatched naval force. Prewar planning for war with Japan, which had anticipated a thrust across the Pacific led by battleships, necessarily had to be discarded in light of the Pearl Harbor attack. The carrier admirals would have the opportunity to demonstrate the value of seaborne airpower, but they would have to operate under circumstances where success was anything but assured and where defeat could leave the whole West Coast of the U.S. open to attack. The prospect was a daunting one, but the officers and men of the Pacific Fleet in early 1942 were to prove themselves more than equal to the task.

In the early days, before Coral Sea and Midway, carrier warfare was a novelty, a wholly untested mode of combat from the American perspective. Aircraft carriers were in short supply. The day Pearl Harbor was attacked, the U.S. Navy had seven fleet carriers and one escort carrier, embarking a total of 441 combat aircraft. In the Pacific, the fleet had only three carriers: *Enterprise* and *Lexington*, operating out of Pearl Harbor and on separate missions to deliver much-needed aircraft to island outposts on December 7; and *Saratoga* at San Diego on the date of the Japanese attack. By later standards, the Pacific Fleet air arm was not a formidable force but remained the only force available at that time for hitting back against the Japanese. The issue became one of deciding how, when, and where U.S. carrier forces could be most effectively employed against Japan's imperial outposts and her powerful fleet.

On December 10, Admiral Husband E. Kimmel's staff, in a new estimate of the situation in the Pacific, emphasized that the surviving U.S. striking force of carriers, cruisers, and destroyers "must be operated boldly and vigorously on the tactical offensive in order to retrieve our initial disaster." Of the three carrier groups immediately available for action in the Pacific, two would be kept at sea, while the third replenished at Pearl Harbor on a rotating basis. The first order of business was, however, to be an attempt to support the embattled garrison on isolated Wake Island.

The Wake relief expedition centered on the carrier *Saratoga*, sailing from the West Coast as the flagship of Rear Admiral Aubrey W. Fitch with Marine Fighter Squadron (VMF) 221 (embarking 18 Brewster *Buffaloes*), intended to reinforce VMF-211, already in the process of being decimated on Wake. Adm. Kimmel named Rear Admiral Frank Jack Fletcher, senior to Fitch, as overall Task Force (TF) 14 commander. In addition, TF-11, commanded by Vice Admiral Wilson Brown and built around *Lexington*, was to raid Jaluit in the Marshalls as a diversion to the Wake operation.

NH 53422

Army B-25Bs and Navy F4F-3s share Hornet's flight deck while under way to the raid's launching point.

Delays plagued the Wake relief effort. TF-11 departed Pearl Harbor on December 14 bound for the Marshalls, but was later ordered to turn to the north and assist Fletcher's TF-14 in the Wake operation. On December 16, three *Lexington* scout planes reported sighting and attacking a Japanese "*Ryuzyo*-class carrier" 95 miles south of the task force. Adm. Brown launched an attack group of 29 bombers and 7 fighters against the target, but the "carrier" turned out to be only a drifting U.S. Navy dynamite barge. TF-14 left Pearl the morning of December 16, but its progress thereafter was sluggish due to the painfully slow speed of the fleet oiler *Neches*.

The Japanese proceeded to attack Wake in force and captured the island on the 23rd, while the U.S. task forces remained too far away to provide any support for the Marines and never engaged any element of the Japanese invasion or covering forces. Fleet intelligence estimated that at least two Japanese carriers, plus battleships and heavy cruisers, were in the vicinity of Wake at this time. Vice Admiral William S. Pye, by then the acting Commander in Chief, Pacific Fleet, decided not to risk his carriers and recalled Fletcher and Brown to Pearl Harbor.

On December 31, 1941, Admiral Chester W. Nimitz took formal command of the Pacific Fleet at Pearl Harbor, while Admiral Ernest J. King became the new Commander in Chief, United States Fleet, in Washington. King instructed Nimitz to hold the Hawaiian Island chain while also maintaining the line of communications between the West Coast and Australia through establishment of a string of bases along the route from Hawaii to Fiji. A new TF-17, organized around the carrier *Yorktown* (which had passed through the Panama Canal in late December en route to San Diego) was designated to cover delivery of Marine reinforcements to Samoa. Adm. Fletcher flew to San Diego to take charge of TF-17, which departed on January 6 bound for the South Pacific.

The arrival of *Yorktown* in the Pacific at this time was fortuitous, because on January 11 *Saratoga* was torpedoed by the Japanese submarine

NH 95435

Douglas SBD-3 dive-bombers from Yorktown (CV-5) head for the target during the Lae-Salamaua strike, March 10, 1942.

I-6 near Johnston Island and had to return to the West Coast for repairs. *Saratoga* remained out of action for months, and until April Nimitz would have to make do with only three fleet carriers.

The key question at this stage of the war concerned the direction of the next Japanese advance. The expanding Japanese presence in the Marshalls and Gilberts indicated that the next major Japanese move might be in the direction of Samoa or Fiji. As insurance against such an eventuality, Halsey's TF-8 and Fletcher's TF-17 were earmarked for early raids against the Marshalls and Gilberts. Halsey was directed to hit Wotje and Maloelap, two seaplane bases in the eastern Marshalls, and elected also to attack Japanese shipping and aircraft at Kwajalein Atoll. Fletcher was given the mission of raiding Makin in the northern Gilberts and Jaluit and Mili in the southern Marshalls.

Approaching their respective targets from the direction of Samoa, the two task forces parted company on the evening of January 31 and launched their strikes before sunrise on February 1, 1942. Halsey brought *Enterprise* within 40 miles of Wotje before launching his attacks. The initial strike, led by Commander Howard L. Young (*Enterprise* air group commander), headed for Kwajalein Atoll with 37 dive-bombers and 9 torpedo bombers. The principal targets were the air base at Roi on the north end of the lagoon, Kwajalein Island on the south end, and any shipping lying in between. On the way in, the force had trouble identifying its targets on Roi in the early morning mist and surprise was lost.

The Japanese were able to respond with heavy antiaircraft fire and were also able to put a number of fighters into the air. Four SBD *Dauntlesses* were downed in the attack on the airfield. But the rest of Young's force, heading for Kwajalein, achieved a marked degree of success. Aided by a follow-up strike from nine TBD *Devastators* of Torpedo 6, the Kwajalein attack force was credited with sinking two ships and damaging at least seven others. Eighteen enemy planes were destroyed or badly damaged and the area commander, Rear Admiral Yashiro, was killed.

Taroa airfield on Maloelap Atoll was attacked by *Wildcat* fighters and later by SBDs which had returned from the Kwajalein raid and were relaunched. On the Taroa strike, Lieutenant (jg) Wilmer E. Rawie became the first U.S. Navy fighter pilot in WW II to down an enemy plane when he splashed a fighter.

Wotje was attacked initially by *Wildcats* carrying 100-pound bombs and gunfire from Rear Admiral Raymond A. Spruance's cruisers and destroyers. Near midday, Young led another force of eight SBDs and nine bomb-armed TBDs against Wotje, causing substantial damage on the island.

To the south, Fletcher's TF-17 encountered greater difficulties, due to bad weather, especially over Jaluit. Commander Curtis S. Smiley (*Yorktown*'s air group commander) led 17 SBDs and 11 TBDs against Jaluit, but succeeded only in damaging two ships in the harbor while losing six aircraft. The attacks on Makin and Mili achieved, if anything, even less than the Jaluit raid. One Japanese four-engined flying boat attacked the task force but was shot down by *Yorktown*'s combat air patrol. Fletcher decided that the results obtainable, given the weather conditions and the already heavy losses suffered, did not warrant another attack on these targets and he ordered a retirement after recovery of the initial strikes.

These raids exposed weaknesses in the American effort. The mix of aircraft in the carrier air groups was inadequate, because more than a single squadron of fighters was needed. Fighters were required for combat air patrol and bomber escort duty, as well as for supplemental attacks on land targets and shipping. This problem of a shortage of fighters (and badly needed reserve pilots in the carrier squadrons) was gradually rectified. By the end of the war, fighter-type aircraft,

including those serving as fighter bombers, constituted over 70 percent of a fleet carrier's aircraft complement, as opposed to only 25 percent fighters in early 1942. Machine guns on the *Wildcats* also tended to jam easily, due to a shifting of ammunition belts in their trays, which occurred as a result of violent combat maneuvers. This problem was quickly resolved. However, other complaints, such as a shortage of incendiary ammunition and unreliable aerial torpedoes, which tended to run too deep or fail to explode on contact, took longer to remedy.

While the *Enterprise* and *Yorktown* groups were engaged in central Pacific operations, Adm. Brown's *Lexington* force was providing cover for two critical convoys that passed through the Panama Canal in late January carrying much-needed men and equipment for island outposts stretching from Bora Bora to New Caledonia. By the end of January, the Japanese threat to Noumea and Port Moresby was becoming increasingly real, with the possibility existing that the Japanese might invade New Caledonia even before American garrison troops could reach that destination. Using Rabaul as a base, the enemy could strike out in a number of directions and there were few Allied forces located at that time between Rabaul and the northeast coast of Australia.

Adm. Brown, directed by Adm. King to operate west of Fiji in conjunction with other Allied naval and air forces, determined that the time was appropriate for a carrier strike against Rabaul itself. But certain problems were evident in any attempt to hit Rabaul: the distance from the fleet support base at Pearl Harbor was huge (some 3,000 miles) and the availability of fuel could present a serious issue (especially given the vulnerability of the slow-moving fleet oilers to submarine attack); repairs could not be readily effected in the South Pacific; the charts of the waters around New Guinea, New Britain, New Ireland, and the Solomons were woefully out of date; and the Japanese 24th Air Flotilla, operating out of Rabaul, was known to conduct regular air searches to the eastward, with coverage of up to 600 miles from base.

Brown hoped to elude such searches and sneak within 125 miles of Rabaul before launching his strike. Unfortunately, at shortly after 1000 on February 20, while TF-11 was still 450 miles east of Rabaul, *Lexington*'s radar detected an enemy floatplane 43 miles from the task force. Although *Lexington*'s combat air patrol succeeded in downing the intruder and a second Japanese scout plane, at least one other flying boat escaped the *Wildcats*. Brown had to assume that his presence had been discovered and reported, as was in fact the case. But he decided to continue on toward Rabaul in an attempt to bluff the Japanese into thinking that he was proceeding with the planned attack.

The Japanese responded to Brown's incursion by launching a two-wave attack against the task force, involving a total of 17 "Betty" twin-engined bombers. At 1611, the first wave of nine "Bettys" was picked up on *Lexington*'s radar and the carrier's fighter director vectored the six *Wildcats* flying combat air patrol at that time to intercept the raiders, as the deck crew scrambled to get additional *Wildcats* aloft. The *Wildcat* pilots succeeded in shooting down all nine in the first wave, and though several of the raiders were able to drop their bombs, the attacks were wildly inaccurate and caused no damage to the task force.

At 1705, eight more "Bettys" bore down on Brown's ships, but these too were effectively fought off, with Lieutenant Butch O'Hare single-handedly destroying three "Bettys" and seriously damaging two more. One of the crippled bombers attempted to crash *Lexington*, but splashed 1,500 yards off the carrier's port bow. By 1745, the battle was over. The Japanese air attack had been a total failure, with 15 "Bettys" and two "Mavis" flying boats destroyed. *Lexington*'s Fighting 3, under Lieutenant Commander Jimmy Thach, suffered two downed *Wildcats*, includ-

80-G-10150

Douglas SBD Dauntlesses and Grumman F4F Wildcats pack the forward flight deck of Enterprise (CV-6), April 4, 1942.

ing one pilot killed and another wounded.

All told, it was a startlingly one-sided victory for *Lexington*'s fighter squadron and a defeat with strategic implications for the Japanese. The 24th Air Flotilla's medium bomber force had been gutted and would have to be replaced with additional planes to be flown in from the Marshalls and Marianas. The planned Japanese landings at Lae and Salamaua on the north coast of New Guinea were delayed for five days as a result of the new need for redeployment of air assets to the southwest Pacific. Butch O'Hare was officially credited with downing five enemy planes in the February 20 action, and was later awarded the Medal of Honor for the feat, thereby becoming the first popular hero of the naval air war in the Pacific, somewhat to his embarrassment.

As Adm. Brown's *Lexington* group retired southeastward from the vicinity of Rabaul, Adm. Halsey's TF-8, which had departed Pearl Harbor on February 14, neared Wake Island, the objective of the next central Pacific raid, scheduled for February 24. *Enterprise* sent 36 bombers and 6 fighters against the island, effecting only limited destruction, including the sinking of a single Japanese patrol boat and several Kawanishi flying boats.

Following the Wake raid, Halsey retired northeastward to refuel and then proceeded westward to raid Marcus Island, another isolated Japanese outpost. No enemy aircraft were engaged over Marcus and none were sighted on the ground. One SBD, however, was lost to antiaircraft fire. After the raid on Marcus, the *Enterprise* force swung back toward Pearl, arriving there on March 10. It would be nearly another month before Halsey again put to sea.

The idea of attacking Rabaul was not shelved after TF-11's first unsuccessful attempt to raid that target in February. Adm. Brown, however, believed that another attempt would require more than a single carrier to fend off the strong air opposition anticipated. On February 27, Nimitz's staff came to the conclusion that two carriers could operate against Rabaul with a reasonable expectation of success and that *Lexington* and *Yorktown* should be tasked for the job. Brown and Fletcher arranged to rendezvous on March 6, about 300 miles north of New Caledonia, at which time the two task force commanders agreed to make combined air and cruiser bombardment raids against Rabaul and Gasmata on New Britain.

The Japanese, however, landed on March 8 at Lae and Salamaua on the north coast of New Guinea, and that event caused a change of target for the American task forces. In order to reduce the chances that their carriers would be discovered on the way to attack the vulnerable shipping lying off Lae and Salamaua, Brown and Fletcher decided to approach the targets from the south rather than from the east. Task Forces 11 and 17 traversed the Coral Sea and the combined attack was launched at 0800 on March 10.

The day before the raid, Brown had sent two officers on missions to gather information on flying conditions over the towering Owen Stanley mountains, which form the spine of New Guinea's Papuan peninsula. It was determined that the planes could clear the mountains through a 7,500-foot-high mountain pass that was generally free of mist between 0700 and 1100. But there was serious question as to whether the short-ranged *Wildcats* and heavily laden TBD torpedo bombers could successfully accomplish the mission. During the event, the carriers closed to within 45 miles of the Papuan shoreline before launching, and the single TBD squadron (Torpedo 2 from *Lexington*) carrying torpedoes on this raid was able to take advantage of a fortuitous updraft to clear the mountains.

In all, 18 F4Fs, 61 SBDs, and 25 TBDs participated in the raid on the village of Lae and Salamaua harbor. The attack was well-coordinated in multiple waves. The airstrip at Lae was aircraft serviceable, but few enemy planes were in evidence at the time. However, 16 ships were present in the Lae-Salamaua area on the date of the raid, and the combination of surprise and lack of fighter cover proved highly damaging to Japanese forces ashore and afloat. At the cost of one SBD downed by antiaircraft fire, the raiders sank three transports and damaged six other ships (including a light cruiser and two destroyers) and caused nearly 400 Japanese casualties.

By noon of March 10, the *Lexington* and *Yorktown* task forces were withdrawing southeastward at high speed. Neither force saw action again until Fletcher's raid on Tulagi in early May, which was a prelude to the Coral Sea encounter.

In January 1942, Captain Francis S. Low, Adm. King's operations officer, had conceived the idea of flying B-25 *Mitchell* medium bombers off the deck of an aircraft carrier as a means for raiding Tokyo. Adm. King found the idea interesting and directed his air operations officer, Captain Donald B. Duncan, to work out the details in coordination with the Army Air Force. Lieutenant Colonel James H. Doolittle was selected to lead the raid under Adm. Halsey's operational command. A conventional carrier-borne attack had been ruled out due to the fact that the Japanese were capable of operating shore-based aircraft well beyond carrier strike range and that a line of early-warning picket boats was known to be patrolling the waters at least 500 miles off the Japanese home islands. B-25s could carry a 2,000-pound bomb load and could be launched at 500 miles from Tokyo. After dropping their bombs, the B-25s would continue on to land at airfields in China.

The Army pilots received training at Eglin Field, Fla., in the unfamiliar art of carrier takeoffs, though they never had the opportunity to perform such takeoffs from a real carrier until they struggled into the air off *Hornet*'s flight deck on the fateful morning of April 18, 1942. *Hornet* herself was a newly commissioned carrier under the command of Naval Aviation pioneer Captain Marc A. Mitscher. She sailed from the East Coast to Alameda, Calif., where, on April 1, the 16 B-25Bs of Doolittle's squadron were hoisted aboard. The next day, the *Hornet* task force, including two cruisers, four destroyers and an oiler, set out for a mid-ocean rendezvous with Halsey and his *Enterprise* force.

Halsey departed Pearl Harbor on April 8, meeting Mitscher's group on April 13, well to the north of Midway. The combined force was officially designated Task Force 16 and marked the first instance in the Pacific war where two U.S. Navy carriers operated as part of a single task force (as opposed to the Lae-Salamaua operation, where two task forces operated together for a while and later proceeded independently). The presence of *Enterprise* as an integral part of the mission was necessitated by the fact that *Hornet* was incapable of providing her own defensive fighter cover prior to launching the B-25s. Due to the size of the Army bombers,

they could not be stored on the hangar deck and were retained on the flight deck until launching. *Hornet*'s own planes were kept on the hangar deck until the flight deck was cleared of all B-25s. Therefore, the *Enterprise* air group was responsible for flying combat air patrol for the entire task force until such time as *Hornet* could assist in those duties.

The lead bomber (Doolittle's) had only 476 feet of deck to launch from – adequate, as events proved, but hardly reassuring. The original plan was for a night attack against Tokyo and three secondary targets, with the carrier launches to take place on the afternoon of the 18th.

As TF-16 approached within 1,000 miles of Tokyo, the weather turned sour. Just past 0300 on the morning of April 18, while the task force was still more than 700 miles from Japan, radar contact was made with Japanese picket boats. Halsey deftly changed course to avoid them. Three hours later, *Enterprise* planes encountered another picket boat some 42 miles ahead of the force. At 0744, a third picket boat contact was made, and Halsey had to assume that Tokyo was now aware of TF-16's presence. Halsey was at that time over 650 miles east of Tokyo but could not risk closing further on the target due to loss of the element of surprise. He decided (with Doolittle's agreement) to launch the B-25s as soon as possible, despite the fact that Doolittle's raiders would probably not have enough fuel to reach any friendly airfields in China.

The launching operation took place in heavy seas beginning at 0825 and lasted 59 minutes. Mitscher, for one, was not impressed with the facility of the Army pilots in getting their planes into the air. In his after-action report, he noted that "with only one exception, takeoffs were dangerous and improperly executed. Apparently, full back stabilizer was used by the first few pilots. As each plane neared the bow, with more than required speed, the pilot would pull up and climb in a dangerous near-stall, struggle wildly to nose down, then fight the controls for several miles trying to gain real flying speed and more than a hundred feet altitude."

Nevertheless, all 16 B-25s were successfully launched and proceeded to their targets. The 13 raiders bound for Tokyo appeared over the city near midday, surprising the Japanese high command, which had figured that no raid could be launched from the sighted carriers until that force had approached much closer to the Japanese coast. All of the planes succeeded in dropping their bombs on the city and continued onward, despite sometimes substantial antiaircraft fire and the presence of Japanese fighters. The three bombers hitting secondary targets also completed their bomb runs and headed for China. None of the planes were able to reach Chinese airfields, however, and with the exception of one B-25 that flew to Siberia and was impounded by the Soviets, all of the planes either crashed for want of fuel or crash-landed in China.

The view from a VT-5 TBD-1 off Yorktown (CV-5) shows Japanese seaplane tender Kiyokawa Maru under attack. Note the bomb splash astern and what may be a hit aft.

NH 95444

All told, 71 out of the 80 pilots and crewmen participating in the mission survived it; of the nine who did not, three were executed by the Japanese after capture in Japanese-occupied areas of China, and a fourth later died in captivity. The damage caused to the targets was not severe, but the psychological effect on both the American and Japanese public perception of the war was enormous.

After the Doolittle raiders were launched, Halsey immediately commenced an eastward retirement. The Japanese attempted a pursuit with aircraft and surface ships but were unsuccessful at overtaking TF-16, which reentered Pearl Harbor on April 25 after a job well done, despite the loss of all of Doolittle's planes. The American public persisted in viewing the attack as simply "Doolittle's raid." Halsey, however, should be accorded his fair share of the glory, given his bold decision to continue with the raid under less than ideal circumstances rather than retire without launching, which was his only other alternative after surprise had been lost.

The Doolittle raid was the last of the early carrier raids conducted in the Pacific during the five-month period between Pearl Harbor and the May operations in the Coral Sea. The net effect of these raids was to force the Imperial Japanese Navy to deal with the Pacific Fleet on terms that were not particularly favorable to the Japanese. American commanders attempted to take advantage of the element of surprise and the dispersion of the Japanese fleet as counterweights to the heavy Japanese numerical advantage in ships and aircraft that existed in early 1942.

The Tokyo raid settled an argument within the Japanese high command as to whether an attempt should be made to strike the Pacific Fleet a final, crippling blow or to pursue other, more indirect options. Admiral Yamamoto, an advocate of seeking to destroy the remainder of the Pacific Fleet's striking power, won that argument, and the Battle of Midway followed as a direct consequence. ■

Mr. Bernstein is a Ph.D. candidate at Georgetown University, Washington, D.C.

50 Years Ago-WWII

Mar 1: Carrier Air Group 9 was established at NAS Norfolk, Va. It was the first numbered air group in the Navy and marked the end of the practice of naming air groups for the carriers to which they were assigned.

Mar 1: Ens. William Tepuni, USNR, piloting a Lockheed PBO *Hudson* of VP-82 based at Argentia, attacked and sank the U-656 southwest of Newfoundland – the first German submarine sunk by U.S. forces in WW II.

Mar 2: Regularly scheduled operations by the Naval Air Transport Service were inaugurated with an R4D flight from Norfolk, Va., to Squantum, Mass.

Mar 7: The practicability of using a radio sonobuoy in aerial antisubmarine warfare was demonstrated in an exercise conducted off New London, Conn., by the blimp K-5 and the submarine S-20. The buoy could detect the sound of the submerged submarine's propellers at distances up to 3 miles, and radio reception aboard the blimp was satisfactory up to 5 miles.

Mar 9: VR-1, the first of 13 VR squadrons established under the Naval Air Transport Service during WW II, was established at Norfolk, Va.

Mar 26: Unity of command over Navy and Army air units, operating over the sea to protect shipping and conduct antisubmarine warfare, was vested in the Navy.

ANA Bimonthly Photo Competition

Above, Rick Mullen of Malibu, Calif., won the bimonthly ANA Photo Contest with this shot of an HMM-365 CH-53E Super Stallion in the early morning fog at LeLuc Army Air Base, France. Below, Mullen also received honorable mention for capturing a Marine CH-53E crew chief of HMH-464 checking the rotor blades after a night flight, MCAS New River, N.C. Below left, Daniel Bayer of Simi Valley, Calif., took this photograph of VFA-305 FA-18s from a KC-130 tanker during Exercise "Lobo Flag" in August 1991.

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.

Awards

AC1(AW) Clark G. McMakin is the recipient of the **Vice Admiral Robert B. Pirie Naval Air Traffic Controller of the Year** award and Marine Sgt. Raymond T. LeBlanc is the recipient of the **Vice Admiral William P. Lawrence Air Traffic Control Technician of the Year** award for 1991.

Lt. Raymond T. Fuller, a former Naval Flight Officer instructor at Training Squadron 10, NAS Pensacola, Fla., received the **George M. Skurla Award.** The award is presented annually to the top Naval Flight Officer instructor in the Naval Air Training Command. Sponsored by Grumman Aerospace Corporation, it is named in honor of the company's former Chairman of the Board and is permanently displayed at the National Museum of Naval Aviation in Pensacola.

Pilot/NFL/LSO Tailhookers of the Year Award for 1991 are: ComNavAirLant – Pilot: Lt. Michael Myers, VFA-81; NFO: LCdr. Dave Buss, VA-35; and LSO: LCdr. Mark Guadagnini, CVW-8. ComNavAirPac – Pilot: LCdr. Matt Pasztalaniec, VFA-151; NFO: LCdr. Eddie Daniel, VF-2; and LSO: Lt. Spence Miller, CVW-2.

The 1991 **LCdr. Michael G. Hoff Attack Aviator of the Year Award** was presented to LCdr. Martin Allard, VA-65. The award was established in 1987 in honor of LCdr. Hoff of VA-86, who was listed as missing in action in 1970 after failing to return from a combat mission from *Coral Sea* (CV-43) over Southeast Asia.

VFA-97 received the 1990 **Rear Admiral Clarence Wade McClusky Award** for the best attack squadron. The award is in memory of RAdm. McClusky, who as an air group commander distinguished himself in leading a bombing attack that destroyed an enemy carrier force during the Battle of Midway in WW II.

Records

Several units marked **safe flying time.**

Unit	Hours	Years
HC-5:	22,000	
HS-1:	6,000	
HS-2:	18,000	6
HS-12:	14,750	4
HS-75:	32,460	13
HSL-31:	25,200	6
HSL-33:	20,300	3
NAF Atsugi:	7,600	15
NAF Mildenhall:	77,200	32
NAS Barbers Point:	4,000	5
NAS Lemoore:	27,582	11
VA-95:	64,200	13
VAQ-134:	27,000	21
VAQ-140:	9,700	6
VAW-116:	32,700	16
VAW-125:	45,000	23
VF-11:		4
VF-301:	65,194	21
VFA-94:	25,000	5
VFA-192:	35,492	8
VFA-305:	57,226	15
VMA(AW)-332:	50,000	13
VRC-30:	103,000	16
VRC-40:	36,500	8
VS-37:	38,000	9
VX-5:	42,200	8

Cdr. Kolin M. Jan, C.O., VA-75, logged his 1,000th arrested landing on *Kitty Hawk* (CV-63) in an A-6E *Intruder*.

LCdr. Steve Gnassi, VAQ-135, logged his 1,000th trap aboard *Abraham Lincoln* (CVN-72) while deployed in the Arabian Gulf.

LCdr. Rodney Baker, VA-95, recorded his 1,000th career trap in an A-6 Intruder aboard Abraham Lincoln (CVN-72).

Since ***Peleliu*** (LHA-5) was commissioned more than 11 years ago, helos have landed nearly everyday on her flight deck. A recent landing by a Navy helo, however, marked an historic 60,000th landing aboard the ship.

Rescues

Four Jacksonville, Fla., fishermen were rescued from their foundering boat November 9, 1991, about 50 miles off the coast of Mayport, Fla., by embarked Navy helos from **HS-9** on ***Saratoga*** (CV-60) and a shore-based Coast Guard helo.

The 45-foot fishing boat, *C-Oats*, was returning to Mayport after fishing the previous week when the boat began to founder in rough seas. *Saratoga* responded to the fishing boat crew's Mayday message by launching two helos to locate the boat and rescue the crew.

Two Navy rescue swimmers from the helos assisted the three crewmen while the Coast Guard helo rescued the fourth. The fishermen were then taken to *Saratoga* for medical evaluation and treatment; all were in good condition.

Scan Pattern

October 25, 1991, marked the first time an aircraft with an **all-female crew** flew on the frozen continent of Antarctica. A National Science Foundation ski-equipped LC-130 *Hercules* flew to the South Pole from McMurdo Station to open up the science station for the 1991-92 Operation *Deep Freeze* season. Aircraft commander Lt. Rhonda Buckner, along with six

LCdr. Baker's 1,000th trap.

other crew members, guided the LC-130 attached to VXE-6 to a smooth touchdown in -55° temperatures at the bottom of the world.

The crew transported 39 passengers and 1,150 pounds of cargo to the Amundsen-Scott South Pole Station and spent five hours on the deck due to the extreme cold temperature, which caused some minor aircraft difficulties. These were overcome and the aircraft made a safe journey back to McMurdo Station for landing on the sea ice runway.

Also on this historic flight were copilot Lt. Patricia Turney; navigator Lt. Susan Wells; flight engineer AE2 Tami Tudor; loadmasters AT2 Jane Alstott and AD3 Nancy Kelson; and utility crewman PH2 Tammy Trefts.

The all-female crew arrive at Antarctica to open up the science station for the 1991-92 season.

PH2 Tammy Trefts

1992 Blue Angels Performance Schedule

March

14 NAF El Centro, CA
21 Luke AFB, AZ
28-29 MCAS Beaufort, SC

April

4-5 Wilmington, NC
11-12 MacDill AFB, FL
24-26 MCAS El Toro, CA

May

2-3 Redding, CA
9-10 Cape Girardeau, MO
16-17 Chattanooga, TN
22-23 Andrews AFB, MD
25 Naval Academy, MD
30-31 McConnell AFB, KS

June

6-7 Front Range, CO
13-14 Portland, OR
20-21 NAS Whidbey Island, WA
27-28 Davenport, IA

July

4-5 Traverse City, MI
11-12 Chicago, IL
18 Pensacola Beach, FL
25-26 NAS Brunswick, ME

August

1-2 Seattle, WA
8-9 Abbottsford, Canada
14-16 NAS Miramar, CA
22-23 Grissom AFB, IN

August 27-September 27

European Tour

October

3-4 Houston, TX
10 San Francisco, CA
11 NAS Fallon, NV
17-18 NAS Moffet Field, CA
24-25 NAS New Orleans, LA
31-Nov 1 NAS Jacksonville, FL

November

7-8 Miami, FL
13-14 NAS Pensacola, FL

The "Black Knights" of VF-154 landed the first F-14 Tomcats on Iwo Jima, the island that became famous when U.S. invasion forces assaulted its beaches nearly a half century ago. VF-154 made the 650-mile flight from NAF Atsugi for field carrier landing practice which will become more common on Iwo Jima in the future for VF-154 and other CVW-5 squadrons.

In Memory Of...

General Vernon E. Megee, USMC(Ret.), died January 14, 1992, in Albuquerque, N.M., at the age of 91. He retired from the Corps in 1958 having risen from private to four stars after more than 40 years service.

Gen. Megee, as the colonel in command of Landing Force Air Support Control Unit One at Iwo Jima, told his pilots to "go in and scrape your bellies on the beach" in support of the ground troops. At the battle for Okinawa, both Marine and Army units utilized close air support under Col. Megee's command to help "dig the enemy out of caves" as the ground units advanced. He has since been recognized as a pioneer in the development of close air support. In 1956, Gen. Megee became the first Marine aviator to hold the post of Assistant Commandant/Chief of Staff of the U.S. Marine Corps.

Change of Command

CLAW-1: Capt. Paul C. Campbell relieved Capt. John W. Curtin.

CVW-1: Capt. Paul D. Cash relieved Capt. Michael L. Bowman.

CVW-17: Capt. George N. Crim, Jr., relieved Capt. Dean M. Hendrickson.

Guadalcanal: Capt. J. A. Cassidy relieved Capt. Harry M. Highfill.

H&HS MCAS New River: Maj. B. R. Fetzer relieved Lt. Col. M. W. Walker II.

HMT-303: Lt. Col. James D. Hildreth relieved Col. Louis A. Rehberger III.

HSL-34: Cdr. Kenneth E. Clements relieved Cdr. Jan C. Gaudio.

HSL-42: Cdr. Clyde T. Walters relieved Cdr. John Lynch.

HT-8: Cdr. Steven T. Weir relieved Cdr. Mark Eubanks.

Independence: Capt. Carter B. Refo relieved Capt. Robert L. Ellis, Jr.

Kitty Hawk: Capt. James I. Maslowski relieved Capt. Daniel L. Rainey, Jr.

NAR Memphis: Capt. David W. Hundt relieved Capt. W. J. DiFilippo.

NAS Bermuda: Capt. James L. Arnold relieved Capt. Joseph F. Phelan.

NATSF: Cdr. Michael J. Dougherty relieved Cdr. Robert J. Heifner.

StrWpnTacScolLant: Cdr. Mark J. Himler relieved Cdr. George K. Starnes.

TacGru-1: Capt. Richard J. Jaeger III relieved Capt. Henry Grady Perkins.

TacGru-2: Capt. Roger R. Burbrink relieved Capt. Dennis D. Anderson.

Tripoli: Capt. J. R. Hutchinson relieved Capt. G. Bruce McEwen.

VA-95: Cdr. Randolph S. Dearth relieved Cdr. John R. Worthington.

VA-165: Cdr. R. J. Taylor relieved Cdr. J. W. Indorf.

VA-205: Cdr. Michael K. Horne relieved Cdr. Randall C. Schultz.

VAQ-131: Cdr. Robert D. Maslowsky relieved Cdr. Patrick D. O'Neil.

VAQ-140: Cdr. Larry G. Salter relieved Cdr. Steven J. Underriter.

VAW-126: Cdr. William J. McCarthy relieved Cdr. Terrence M. Dudash.

VF-14: Cdr. Mark Checchio relieved Cdr. Douglas Jay Law.

VF-21: Cdr. Dan L. Cain relieved Cdr. C. J. Heatley III.

VF-51: Cdr. David M. Tyler relieved Cdr. Tom G. Sobieck.

VF-74: Cdr. Charles A. Wyatt relieved Cdr. Doug K. Dupouy.

VF-126: Cdr. Peter C. Chisholm relieved Cdr. Michael A. Szoka.

VF-211: Cdr. David R. Bryant relieved Cdr. William W. Reynolds.

VF-213: Cdr. Stephen L. Drake relieved Cdr. Lee C. Mason.

VFA-37: Cdr. Robert Christensen relieved Cdr. Carroll White.

VFA-81: Cdr. William L. McKee for Cdr. Michael T. Anderson.

VFA-87: Cdr. John Stevenson relieved Cdr. Craig Stencil.

VFA-136: Cdr. David R. Miller relieved Cdr. Jeffery R. Nelson.

VFA-137: Cdr. Charles T. Nash relieved Cdr. Craig B. Henderson.

VFA-203: Cdr. Stephen C. Hallam relieved Cdr. William C. Bailey.

VMA-311: Lt. Col. Russel J. Currer relieved Lt. Col. Dickie J. White.

VMA(AW)-332: Lt. Col. John F. Thornell relieved Lt. Col. Robert S. Melton.

VMFA(AW)-225: Lt. Col. J. A. Gallinetti assumed command of the Marine Corps' newest FA-18 squadron.

VMGR-252: Lt. Col. A. J. McAnelly relieved Lt. Col. R. F. Franks.

VMGRT-253: Lt. Col. Gerald W. Sternal relieved Lt. Col. Mark E. Robbins.

VP-16: Cdr. David K. Oliveria relieved Cdr. John L. Bohn II.

VP-22: Cdr. Dennis M. Corrigan relieved Cdr. John T. Sting.

VP-67: Cdr. E. A. Perry relieved David L. Caswell.

VP-94: Cdr. Ron Cosgrove relieved Cdr. Howard C. Norton.

VQ-2: Cdr. Robert A. Kusuda relieved Cdr. David W. Durfee.

VQ-3: Cdr. Robert E. Young relieved Cdr. Hartwell T. Trotter.

VR-56: Cdr. Murray R. Todd relieved Cdr. Lindsay C. Blanton, Jr.

VS-32: Cdr. Matthew Tuohy relieved Cdr. Mike Kikta.

VT-19: Cdr. Terry L. Daugherty relieved Cdr. Billy D. Murray.

VX-1: Capt. James M. Farley relieved Capt. Randall O. Abshier.

VXN-8: Cdr. Gavin D. Lowder relieved Cdr. Jerome P. Boyle.

PROFESSIONAL READING

By Cdr. Peter Mersky, USNR

Shipman, Cdr. Richard P., USNR. *Wings At the Ready: 75 Years of the Naval Air Reserve.* U.S. Naval Institute, Annapolis, MD 21402. 1991. 320 pp. Ill. $32.95.

August 29, 1991, was the Diamond Anniversary of the U.S. Naval Air Reserve. As part of the long list of festivities commemorating this important event, this well-illustrated volume traces the rather humble origins of the Naval Air Reserve to the *Hornet* and *Tomcat*-equipped squadrons of today.

My status as the photo editor of this book prevents me from making any subjective comments about it. I include it in this issue's column so that readers may know about it.

Cdr. Shipman is an experienced Naval Air Reservist and Naval Aviator and has assembled a detailed text filled with facts and anecdotes. With more than 300 photographs and squadron insignia, *Wings At the Ready* will hopefully satisfy most readers and provide a useful reference on the Naval Air Reserve.

Polmar, Norman, and Thomas B. Allen. *World War II: America At War 1941-1945.* Random House, New York. 1991. 960 pp. Ill. $35.

This book is an outstanding herculean effort. It is filled with facts, explanations, and trivia about the greatest war in history. The well-known and the not-so-well-known can be found in the encyclopedic collection of biographies, mini-histories, and various other entries. Battles are synopsized, code words defined, and programs explained.

What did a third-class petty officer earn in 1942? It's here. What were the casualty rates during the war and how were various groups – children, Japanese-Americans – affected by the war? This book is one of the few I have seen that explains why the Medal of Honor is not the more familiar, but incorrect, Congressional Medal of Honor.

Written by two military affairs authors with tremendous credentials to compile such a work, *World War II* covers various aviation subjects with attention to detail and a welcome economy of words. Most of the war's famous aircraft are discussed, as is their use and contribution to the effort. Separate entries discuss the role of various types of ships, including the aircraft carrier as the new capital ship.

There are the usual typos, and the selection of photos and their reproduction are not the best – surprising for such a mammoth volume. However, the authors were obviously restricted in the number of photographs they could include in order to concentrate on the huge text. And that's where the book shines.

In this time of 50th-anniversary commemorations, I would say that if you had to limit the books on the war in your library, this book would have to have a place on your shelves.

FLIGHT DAC

We've Moved

The *Naval Aviation News* and Naval Aviation History Office staffs have relocated to: Bldg. 157-1 Washington Navy Yard, Washington, DC 20374-5059. Phones: *NANews* AV 288-4407/8/9, Comm 202-433-4407/8/9; History AV 288-4355, Comm 202-433-4355; FAX 202-475-2104.

F-86 Sabre History

I am writing a history of the F-86 *Sabre*, which will cover the design, development, and operational and combat history of the aircraft in all versions, including the Navy/Marine Corps FJ *Fury* series. I would like to hear from anyone who can share information or photos, including Naval Aviators who flew Air Force F-86s on exchange tours. I particularly wish to interview *Sabre/Fury* veterans in the Washington, D.C., area. Please contact Robert F. Dorr, 3411 Valewood Dr., Oakton, VA 22124, 703-264-8950 or FAX 703-255-6434.

Sea Dart

The F2Y *Sea Dart* story in your January-February 1992 issue was most meaningful to me, since I became Convair's project engineering test pilot after Charles Richbourg was killed in the No. 2 aircraft. I got the job because of my WW II VO/VS floatplane experience.

My 100-plus tests involving both the twin and single-ski aircraft completed the program. This included the final flight of the XF2Y single-ski aircraft with an open sea landing and takeoff in Seastate 5.

These unique aircraft were the ultimate thrill in seaplane operation and much better than most historical accounts. Thanks for remembering the *Sea Dart*, and please thank Mr. Hal Andrews for relating the Navy's effort to develop a supersonic water-based fighter.

Naval Aviation News has been my favorite aviation publication since I became a Naval Aviation Cadet in 1943. It is a great magazine, and I am pleased that you continue the historical articles.

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The Battle of Coral Sea: A Historical Perspective

The Gulf War: A Critical Analysis

Symposium '92
May 7-8, 1992

The Naval Aviation Museum Foundation and the U.S. Naval Institute are presenting their sixth annual joint symposium in Pensacola, Fla. This series of educational and social events presents a historical review of the Battle of Coral Sea and an analysis of Naval Aviation's participation in the 1991 Gulf War. For information/reservations, call 800-327-5002 or 904-453-NAVY.

USS Midway Decommissioning

America's last WW II-era aircraft carrier, *Midway* (CV-41), will be decommissioned after 46 years of naval service at NAS North Island, Calif. The ceremony has been tentatively set for April 11, 1992.

More than 200,000 members of the

1992 Naval Aviation Ball

The nineteenth annual Washington area Naval Aviation Ball, sponsored by the Assistant Chief of Naval Operations (Air Warfare), will be held on Saturday, April 4, 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. S. M. Dwyer, OP-503D, AV 224-3284 or 703-614-3284.

Navy-Marine Corps team have served aboard the carrier during her proud career in operations ranging from the Vietnam conflict to *Desert Storm*. Interested former *Midway* crewmen are urged to contact the following to be included in the ship's decommissioning mailing list: Decommissioning Ceremony Officer, USS Midway (CV-41), FPO AP 96631-2710.

Pearl Harbor

There are two points of interest concerning the November-December 1991 issue. First, the artist's rendition of Pearl Harbor on December 8, 1941. The lower right corner shows *Cassin* (DD-372) and *Downs* (DD-375) in drydock with USS *Pennsylvania* aft at the destroyer base. *Downs* took a bomb which exploded fuel tanks, and the ensuing fires and explosions resulted in her smashing into *Cassin*. Both destroyers suffered uncontrollable fires and *Downs* was gutted. Both were decommissioned on December 7, 1941. *Cassin* was towed to Mare Island Navy Yard for rebuilding, then was recommissioned on February 5, 1944. Through the remainder of the war, she received six battle stars and rescued several flight crews. Our flight crew from VH-3 was rescued on January 17 south of Iwo Jima, and a second crew from our squadron was rescued on January 20, 1945.

Second, on page 23, the photo of *Curtiss* (AV-4) after being hit on December 7, 1941, at Pearl. The caption states a "Val" crashed into her. If true, she was the only Navy ship to be crashed by "enemy aircraft" in separate battles. She was crashed by a Japanese suicide in Kerama Retto at 1832 on June 21, 1945.

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CNN: War in the Gulf

I am grateful to Peter Mersky for his most favorable review, in your January-February 1991 issue, of *CNN: War in the Gulf*, of which I was a coauthor and the editor. However, I would take issue with his statement, "...it is clear the authors believe that the most important contribution by naval 'aircraft' was made by cruise missiles."

The book gave naval aircraft coverage far out of proportion to its contribution to *Desert Storm* (i.e., less than 20 percent of the combat sorties). For example, the book contains 26 photos of U.S. military aircraft – 13 are naval aircraft and 13 are Army-Air Force aircraft. There are also several photos of aircraft carriers in the book.

The chapter on the "air war" begins with the Tomahawk strikes, but cruise missiles and Air Force F-117s did lead the strikes. Indeed, cruise missiles were the unique aspect of sea-based strike operations in the war. And, while there is much discussion of Navy and Marine aircraft in the "air war" chapter, the "sea war" chapter has no mention of those other guys who fly.

Again, thank you for the fine review.

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Blue Angels 1993 Openings

The U.S. Navy Flight Demonstration Squadron, *Blue Angels*, is looking for applicants for its 1993 billets. Two Navy flight demonstration pilots, a naval flight officer (events coordinator), a flight surgeon, and a Marine C-130 pilot will be selected. Interested officers should submit their applications no later than April 30, 1992. For further information, contact applications officer Capt. Ken Switzer, USMC, at AV 958-8502 or 619-339-2502 (until March 14, 1992); or AV 922-2583 or 904-452-2583 (after March 14, 1992).

Also, all aviation ratings are available at the PO1/PO2 levels, as well as YN, PH, JO, DM, and one maintenance CPO/SCPO. Outstanding performers at the PO3 level will be considered. For details, call the appropriate point of contact. Aviation ratings: AZC(AW) Kathryn Hall, AV 922-2466/4475 or 904-452-2466/4475. YN, PH, JO, and DM ratings: YNC Roberta Masciangioli, AV 922-2583/4 or 904-452-2583/4.

Cruisebooks Needed

During the night of December 27, 1991, the Navy Department Library suffered water damage to its cruisebook collections. The library would welcome donations of cruisebooks, for all time periods, for ships whose names begin with the letters A through C. Please send the books to the Navy Department Library, Bldg. 44, Washington Navy Yard, Washington, D.C. 20374-0571.

Correction

***NANews*, Nov-Dec 91, "Jack C. Rittichier: Coast Guard Aviation Hero," p. 26: LCdr. Lonnie L. Mixson's name should have been spelled Mixon.**

Reunions, Conferences, etc.

VU-1 reunion, POC: Don McLean, 225 Union Ave., Oakdale, PA 15071, 412-693-9128.

SERE instructors reunion, 1992, POC: Jess McElroy, 4402 Huerfano Ave., San Diego, CA 92117.

VAW-112 officers (*Enterprise*, April 1967) **reunion,** APR 92, POC: Stu Rutkin, 602-997-5703/840-7374.

Nehenta Bay (CVE-74) reunion, APR 9-12, St. Louis, MO. POC: Stewart Wasoba, 10533 112 Ave. N., Largo, FL 34643, 813-397-4871.

San Jacinto (CVL-30) reunion, APR 16-19, Oakland, CA. POC: J. C. Lohr, 738 Campell Dr., Belpre, OH 45714, 614-423-7373.

U.S. Naval Test Pilot School reunion and symposium, APR 25, NAS Patuxent River, Md. POC: Reunion Coordinator, USNTPS, Naval Air Warfare Center Air Div., Patuxent River, MD 20670-5304, AV 356-4107 or 301-863-4107.

VPB-20 reunion, MAY 13-17, Va. Beach, VA. POC: C. D. Roush, 5 Plaza East, Bradenton, FL 34208, 813-748-4265.

NAS Hutchinson reunion, MAY 15-17. POC: Jim Powell, Box 113, Newburg, PA 17240, 717-423-5236.

Breton (CVE-23) reunion, JUN 11-14, San Diego, CA. POC: Larry Eckard, PO Box 5145, Hickory, NC 28603, 704-256-6274.

Shangri-La (CV/CVA/CVS-38) reunion, JUN 28-JUL 3, Falmouth, MA. POC: Tom Hill, PO Box 68386, Va. Beach, VA 23455, 508-746-3692.

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