naval aviation news

August 1979

COVERS — Front, the HM-12 Sea Stallion was photographed by Ltjg. W. H. Vaughan. See story beginning on page 8. TBF launches from USS Santee (CVE-29) in June 1943, back. An Avenger story begins on page 34. Here, HM-12 RH-53D refuels from an Air National Guard Hercules during record-breaking transcontinental flight. For details see photo caption on page 11.

NAVAL AVIATION NEWS

SIXTY-FIRST YEAR OF PUBLICATION

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editor's corner

Creature Corner. AGS3 L. D. Sills examines a nest constructed by two starlings in the tail section of a Point Mugu-based LC-130R *Hercules* from VXE-6. Built over one weekend while the transport was parked in the hangar, the birds used cigarette packages, rubber O-ring seals, bits of cloth

and backing from embossing tape to do the job. According to a PMTC Point Mugu press release, there were no eggs in the nest and the starlings have since found a new home.

Special Delivery. *NANews* assistant editor Sandy Nye took advantage of a visit to the Washington Navy Yard by a helo and crew from HS-75, based at NAEC Lakehurst, N.J. After seeing the aircraft land, she gathered up copies of the latest issue and personally presented them to crewmen AWH1 Jerry McKeever, left, and AWH2 Phil Morgan. NANew's office is in the background.

The Cousteau Connection. The Dahlgren Division of the U.S. Naval Sea Cadet Corps, which shares some working spaces with *NANews* at the Washington Navy Yard, met the eminent oceanographer and explorer, Captain Jacques-Yves Cousteau, last spring during National Oceans Week in Alexandria, Va. Cousteau is surrounded by unit members including, second from left, Lt. Hank Mooberry, the unit's commanding officer.

Whirly-Fans? "If ongoing tests by the federal government and Lockheed-Georgia Company prove successful," says the press release, "propellers will be quietly making a faster and more efficient whirl into the future with the prop-fan." Using the prop-fan concept, propeller-driven (see photo) aircraft could achieve the same speeds as turbofan passenger planes that fly today while saving large amounts of fuel. Under research contracts with the

National Aeronautics and Space Administration, the Lockheed-Georgia Company is proceeding with studies and testing the prop-fan's fuel efficiency and reduced noise capability.

Unlike conventional propeller planes, the prop-fan, or advanced turboprop aircraft, would be powered by a reduced-diameter eight to ten-bladed propeller. A thin swept-back blade allows the engine to turn at high speeds while minimizing compressibility and noise problems encountered with conventional propellers. The amount of fuel burned would be reduced with a resultant reduction in direct operation costs.

Prop-fan research is part of NASA's aircraft energy efficiency program for future aircraft applications.

NAVAL AVIATION NEWS

did you know?

BQM-74C Testing

The first phase of testing on Navy's BQM-74C surface and air launchable aerial target began at the Pacific Missile Test Center, Point Mugu, Calif. It's an improved version of Northrop's MQM-74C *Chukar*. "We will be conducting a three-phase test program at PMTC," explained Commander R. W. Brown, director of the threat simulation department. The first phase is captive flight tests designed to evaluate how well the target can withstand the rigors of being

attached to a high performance aircraft. The second phase is technical evaluation of surface and aerial launches, and the third involves an operational evaluation. "Eventually this new target will be in fleet use as the primary air and surface launch target, and we want it to be as reliable and maintainable as it can possibly be when it goes to the fleet," said Cdr. Brown.

Navstar Development

The Navstar Global Positioning System is completing two years of concept validation testing in which Navy aircraft have played an important part. The satellite navigation system is being developed jointly by the Navy, Army and Air Force to provide continuous position, velocity and time information to users anywhere on or near the earth. Although only four Navstar satellites are now in orbit, the final constellation will consist of 24 satellites in 12-hour, 11,000-nautical-mile orbits.

Some 45 Navstar test missions have been flown aboard an NATC Patuxent River P-3B. The aircraft was used to assess Navstar's susceptibility to propeller blade signal modulation and to jamming. The P-3B also holds the current record for the longest Navstar navigation mission – four hours and eleven minutes on satellite signals during a flight from Barbers Point, Hawaii, to Moffett Field, Calif.

A Navy F-4J operated by the Pacific Missile Test Center carries Navstar

equipment in a modified, center-line fuel tank. Besides assessing Navstar performance in a high-dynamic, fighter environment, the F-4J has accomplished air-to-air rendezvous with an Air Force C-141, and landing approaches and precision weapons delivery, using Navstar's exact navigation information to enhance the mission. Navy and Marine Corps pilots have dropped over 200 Mark 82, low-drag bombs from the F-4J, using both level and toss modes of delivery.

Space Medicine NASA and Soviet life scientists have joined in a ground-based space study to investigate physiological changes in humans produced by simulated weightlessness. The objectives are to help standardize physiological measurements and analysis techniques used on astronauts and cosmonauts, reduce test duplication and increase the flow of information between the two groups. Another objective is to improve bed-rest procedures, since many of the effects on individuals of the weightless environment of space flight can be simulated on earth by bed rest.

The research study includes two identical experiments with 10 test subjects, ages 35 to 40 years. Each experiment will last five weeks, with two weeks of controlled observations, one of bed rest and two of post-bed-rest measurements. Five test subjects remain horizontal in a total bed-rest condition, and five experience bed rest with their heads lowered six degrees from the horizontal. Previous studies in the United States have placed the subjects in a horizontal position only. Soviet scientists have placed subjects both in the horizontal position and exposed to varying degrees of head-down tilt. The current studies will determine the best features of each procedure.

The first five-week study took place at the Institute of Biomedical Problems in Moscow in May, the second is scheduled for this summer at Ames Research Center, Calif. Each of the experiments involves an exchange of NASA and USSR scientists.

Essays The Naval Aviation Foundation, in conjunction with the Association of Naval Aviation, has announced an expanded program of essay contests (*NANews*, June 1979, page 4).

Additional essays are:

- "The Role of Naval Aviation in the Implementation of National Policy," open to all students at the Naval and Army War Colleges and the Air University.
- "Ethics in the Military Profession," open to all midshipmen or cadets at the Naval, Military, Air Force and Coast Guard Academies.
- "Ethics in the Military Profession," open to all ROTC students, Army, Navy and Air Force in any U.S. college or university.
- "A Case for (or against) a National Draft Registration Program," in which any drilling reservists below the rank of lieutenant in the Navy and Coast Guard, captain in the Army, Marine Corps and Air Force, and all enlisted personnel may participate.

These essays must be submitted by April 1, 1980. Each winner will receive $500.

In addition, any high school senior, sponsored by a member of the Association of Naval Aviation, may participate in an essay contest entitled "The Right to Vote." All entries must be submitted by March 1, 1980; prize is an all expenses paid trip to Washington, D.C., during spring vacation, 1980.

All entries are to be 2,000 to 2,500 words.

The stated purpose of the newly chartered Naval Aviation Foundation is to engage in charitable, scientific and educational activities including participation in and operation of seminars; appearances before congressional committees when invited; collection of data and publication of feasibility studies in various naval areas; awards for distinguished accomplishment (through active service or scientific development); relief to needy widows of naval personnel; scholarships; essay contests; and promotion of naval sciences.

Anyone interested in making a tax-deductible contribution in support of Naval Aviation is invited to send a check to: Naval Aviation Foundation, 5205 Leesburg Pike, Suite 502, Falls Church, Va. 22041.

Gray Eagle

Vice Admiral Maurice F. Weisner, Commander in Chief, Pacific, became the new Gray Eagle in June when Lieutenant General Thomas H. Miller, Deputy Chief of Staff for Aviation, Headquarters, Marine Corps, retired.

The award, which honors the Naval Aviator on active duty who has the most longevity as a pilot, is sponsored by Ling-Temco-Vought Aerospace Corporation.

Tallman Memorial

Members of Orange County's Grampaw Pettibone Squadron and friends of former Naval Aviator and movie pilot Frank G. Tallman III gathered at a luncheon this past spring in a memorial tribute to him. Film clips were run of some of Tallman's flying sequences in *It's a Mad, Mad World, The Great Waldo Pepper, Catch 22* and other films. Tallman, a veteran Navy flyer, refined

aerobatics and precision maneuvers as a movie pilot. At the time of his death in a plane crash in the Santa Ana Mountains in 1978, he had just begun another film involving precision flying. Tallman held every pilot rating issued by the FAA. Following a non-flying accident in which he lost a leg, he regained all of these ratings as an amputee.

Rear Admiral J. D. Ramage, USN(Ret.), was one of the guest speakers. He and squadron skipper Mel Blixt presented a bronze plaque to Mrs. Tallman which will be installed in the passenger terminal at the John Wayne Airport, formerly the Orange County Airport. The plaque bears a bas-relief likeness of Tallman in Navy helmet, goggles, flight jacket and aviator's insignia.

The Grampaw Pettibone Squadron got its name about seven years ago when a group interested in Naval Aviation asked and received permission to call itself the Grampaw Pettibone Squadron. When the members joined the Association of Naval Aviation, they kept the name for their local chapter of ANA.

grampaw pettibone

FFFFFFFFFFF

Following facts ferreted from friendly frightened female flight surgeon's first fam fright flight.

Lt. Joe Beaulieu, VT-6 Natops instructor pilot, was demonstrating a series of aerobatic maneuvers to the female flight surgeon occupying the rear seat of the T-34C *Mentor*. He had just completed an Immelmann maneuver and was accelerating through 130 knots at 8,000 feet when he noted fluctuating engine torque, airframe vibrations and loud popping noises from the engine. He promptly reduced the throttle to idle and the malfunctions appeared to subside. Subsequent throttle movements resulted in no engine response.

Lt. Beaulieu secured the engine and established maximum glide airspeed. He restarted the engine but it would not accelerate beyond idle. Again, loud engine noises were heard. He secured the engine once more and prepared the aircraft for an emergency landing. Since he was operating in the L-3 area, he was aware of the location of Choctaw outlying field, approximately six miles to the south.

Sighting the field, he continued the glide, confident that he could make it. He maneuvered the aircraft to position for "high key" over the long (8,000 feet) runway. He continued the gliding descent to position the aircraft over the field at 4,000 feet, intercepted the high key at 2,000 feet, and extended the landing gear early to ensure that there would be sufficient time available should he have to mechanically crank it down. Passing the 90-degree position, he lowered the flaps and executed a flawless no-power landing.

Grampaw Pettibone says:

Holy frightened surgeons! This demonstration was probably a little more than Lt. Beaulieu or his passenger bargained for. Old Gramps is proud to say that the pilot handled this emergency like a real pro, giving his passenger a firsthand look at what Natops is all about. The cause of this menacing Mentor's malfunction was failure of a first-stage turbine blade, compounded by further turbine section damage and failure.

Lt. Beaulieu's cool and professional efforts resulted in the safe recovery of his aircraft and crew, nomination as "man of the hour" by his passenger and citation as "Flying Pro" by the Chief of Naval Air Training. Old Gramps would like to add some sounds of applause and an additional "round for the cause." Well done, Lt. Joe Beaulieu, VT-6 Flying Pro!

Corsair Pair with Flair

Break left! Harder! Now reverse, hard right. . .a little more G! Keep the

ILLUSTRATED BY Osborn

nose up. . .hang in there! There he goes, over the top! Don't lose him in the sun! Watch his nose – he's falling through! Unload it. These were a few thoughts flashing through Lt. Larry Booth's mind as his instructor pilot transmitted, "Okay, knock it off. Let's get back up to altitude and set up the next series."

As Booth, a VA-174 replacement pilot flying the A-7, initiated a climb back to base altitude, he quickly made a visual sweep of the cockpit gauges to ensure everything was in order for the next run. Prior to level-off at 18,000 feet, he pulled back on the throttle. Surprisingly, the throttle stopped abruptly after about one inch of movement. He checked throttle friction "off" and again attempted to reduce power, but with the same negative results. The throttle would not retard below the 85 percent rpm position. Fuel flow was 2,800 pounds per hour at 18,000 feet msl. A quick scan of the cockpit showed all other indications to be normal. He informed Lt. Greg Lane, the weapons instructor chase pilot, of his problem and requested an external visual check of his aircraft. The instructor joined in close formation and directed the flight to return to home base, about 30 nautical miles away.

En route to MCAS Yuma, the instructor reviewed the appropriate stuck-throttle Natops procedures with his troubled wingman. The flight proceeded southwest and set up a six-mile straight-in for an engine-off approach to an arrested landing. Using aircraft speed brakes the flight slowed to 220 knots approach speed. The emergency generator was extended to ensure availability of hydraulic power following engine shutdown. The emergency landing gear extension system was activated so that the speed brake could be used in the landing configuration if the gear handle was subsequently raised. Gear and flaps were lowered normally. Approaching the six-mile initial at 86 percent with engine fuel flow now 4,600 pph, the flight was a little high and fast. A 360-degree turn was executed in order to acquire a more optimum start. The aircraft then intercepted the glide slope at 1,600 feet AGL and began a descent, maintaining 220 knots along the glide slope.

The "hoop" position, an imaginary circular window in space, was intercepted perfectly with a centered meatball at 5,000 feet from the end of the runway, 300 feet above the ground. At this point, Lt. Booth moved the engine fuel master level to off. The engine stopped operating about three seconds later, as advertised. The *Corsair* continued in gliding flight to the runway for approximately 15 seconds. The airspeed had decreased to 130 knots at touchdown. The landing was completed safely.

Grampaw Pettibone says:

Holy high-speed heroes! Old Gramp's buttons are poppin' with pride over the way these pros handled this one. Other aircraft have been damaged or lost under similar conditions. Lt. Lane flew Lt. Booth's wing throughout the evolution, maintaining the same aircraft configuration in order to more fully assess the situation. Natops and approach procedures were discussed throughout the emergency. Each pilot was well versed on what to do and to expect during the approach, landing and roll-out phase. The A-7E Natops notes that the engine can be secured any time one of the key points is met; and a safe landing can be expected at 130 knots, 750 feet down the runway, if the approach is properly executed. Excess airspeed puts the touchdown point further down the runway and at a higher landing speed. This team's decision to execute the 360-degree turn, when all was not quite right, was probably the difference between their professionally executed approach and others which have resulted in "hot" landings, blown tires, overshooting the arresting gear and damaged aircraft off the runway.

Gramps gives a hearty well done to this pair and orders up a "round" for saving a *Corsair*.

AMCM

By Lt. Pete Burdett and Ltjg. W. H. Vaughan

One of the newest and fastest growing aviation communities in the Navy, Airborne Mine Countermeasures (AMCM), is now three squadrons strong: Helicopter Mine Countermeasures Squadrons 12, 14 and 16. To accomplish their primary mission of providing the U.S. Navy with a worldwide, quick reaction, mine countermeasures capability, the NAS Norfolk, Va., squadrons fly the Sikorsky RH-53D *Sea Stallion*. HMs 14 and 16 are deployable units, ready to go to any part of the world, transported by a USAF C-5A *Galaxy*. HM-12, a shore command, is the replacement training squadron for all RH-53D personnel.

The original squadron, HM-12, was commissioned on April 1, 1971, at NAS Norfolk with a complement of 34 officers, 108 enlisted personnel and 4 CH-53As. It was the first of its kind

HM-16 conducts vertical on board delivery operations from Independence.

in the world and functioned as an operational unit and as a readiness training squadron.

The first major test of the *Sea Dragons'* operational capability came in November 1972 when the entire squadron received orders to prepare for immediate deployment to WestPac. Within 10 days, the unit was airlifted to NAS Cubi Point, R.P, to prepare for participation in Operation *End Sweep*, the clearing of mines from the harbors and coastal waters of North Vietnam. HM-12, as part of TF 78, flew its first operational minesweeping mission in Haiphong Harbor on February 27, 1973, and detonated its first live mine on March 9 – a first in Naval Aviation. When *End Sweep* ended in July 1973, the squadron returned to Norfolk and transitioned to RH-53Ds, modified *Sea Stallions* built expressly for AMCM.

In April 1974, HM-12 received orders to prepare for Operation *Nimbus Star,* the clearance of mines from the Suez Canal and associated lakes. When the mine-clearing operations were completed the Canal and lakes were considered 99 percent clear of active mines.

In July 1975, an HM-12 detachment returned to the Med to participate in Operation *Nimbus Stream,* the clearing of mines from the coastal waters of the United Arab Republic of Egypt. Following the successful completion of *Nimbus Stream,* in October, HM-12 Det 2 deployed to NAF Sigonella, Sicily, where it remained until January 1976 performing vertical on board delivery operations in support of the Sixth Fleet.

HM-12 entered the record books on April 30, 1979, when a squadron crew flew an RH-53D nonstop from Norfolk, Va., to San Diego, Calif. The 18.5 hour, 2,077-nm flight marked the Navy's first coast-to-coast, nonstop helicopter flight utilizing air refueling and was the longest distance flown by an H-53 without landing. Inflight refueling was conducted with an Air National Guard HC-130 from the 102nd Aerospace Rescue and Recovery Squadron based at Suffolk County Airport, N.Y. Previous holder of the Navy distance and endurance record was an SH-3 which, on May 6, 1965, was flown 15.9 hours covering a distance of 1,862 nautical miles. Plane commander on the milestone journey was Lt. Rod Davis. Copilots were Lt. Bill Meeley, LCdr. John Yearwood, and Lts. Harry DeButtes and Louis Morris. Aircrewmen were AE1 Ray Stanley, AD1 Andy Anderson and AMS2 Al Sorensen. The flight was also the first simulated airborne mine countermeasures mission flown using air refueling to reach the AMCM site.

The squadron maintained a two-detachment AMCM readiness posture, simultaneously deploying detachments to the Pacific and Atlantic, operating with all four numbered fleets and various foreign allies.

In 1978, two new squadrons were formed in the AMCM community. On May 12, Mine Countermeasures Unit Alpha and Det 1 of HM-12 were combined and redesignated HM-14. Five months, later, the third squadron was formed: Mine Countermeasures Unit Bravo and Det 2 of HM-12 were combined and redesignated HM-16. HM-12 shrank from 600 to 130 men.

After HM-14 and HM-16 were commissioned, HM-12 was designated the Fleet Readiness Squadron charged with managing the fleet readiness aviation maintenance program; the training of maintenance personnel; the fleet readiness aircrew program, the training of aircrews; and the training of fleet replacement pilots for the RH-53D.

Prior to the commissioning of HMs 14 and 16, Mine Countermeasures Units Alpha and Bravo and Detachments One and Two were four specialized units dividing the tasks of airborne mine countermeasures. Alpha and Bravo had two responsibilities as part of HM-12: first, command and control during exercises and actual mine-clearance operations; second, the operation, maintenance and movement of the squadron's mine countermeasures devices and precise navigation equipment. Dets One and Two oper-

Opposite page, an HM-16 helo approaches an LPH. AMCM magnetic pipe, MOP, is prepared for operations, top left. Ens. Harv Wilkinson, Jr., top right, receives his fleet replacement training at HM-12. Left, AD2 Jerriell Reeves, HM-12, works on an RH-53D. HM-12 conducts carquals on board Guam, above. Carquals are part of the fleet replacement training program.

ated and maintained the RH-53D *Sea Stallion* during minesweeping exercises and mine clearance operations.

HM-14's initial complement was 30 officers and 144 enlisted personnel with 8 RH-53Ds and associated AMCM tow devices. Led by Commander Robert E. Jones, the squadron's first major deployment was in October 1978 to Marseille, France. There it participated in Operation *Olives Noires* with the French Navy. From France, the squadron went to Luni, Italy, where it participated in Operation *Crazy Horse* with the Italian Navy. In December it returned to the U.S.

The commissioning of HM-16 on October 27, 1978, marked the final phase of the community's reorganization. Under the command of Commander Robert V. Goodloe, Jr., the *Seahawks* had 38 days to prepare for their first at-sea period. During the one-week deployment on board USS *Guadalcanal* (LPH-7), intensive training and major shipboard adjustments took place while the squadron conducted AMCM operations.

The *Seahawks* flew to Key West in February 1979 for a month of intensive training in the operation of the MK-103 mechanical minesweeping gear. The weather was excellent; the squadron exceeded its training goals.

All three squadrons fly the RH-53D *Sea Stallion,* a dual-turbine, single-rotor helicopter which can operate from land or ships. Its automatic flight control and engine anti-icing systems provide an excellent all-weather capability. It is equipped with external auxiliary fuel tanks (which can be jettisoned), external dual rear-view mirrors, rescue hoist and an external cargo hook. For internal cargo transport, the aircraft is equipped with a rear ramp loading system, cargo winches, roller conveyors and cargo tie-down facilities. Internal auxiliary fuel tanks can be installed and it is capable of air-to-air and helicopter inflight refueling. It has structural provisions for two guns.

The *Sea Stallion* can carry 24 litters, internal cargo, 37 full-dress combat troops or 25,000 pounds of ex-

ternal cargo. Its mission, airborne mine countermeasures, includes minesweeping, mine neutralization and spotting; destruction of floating mines; marking channels; and towing of surface crafts and ships. The helo can also transport special weapons, cargo, equipment and passengers, and it can be used for rescue of personnel and external transportation of inoperable aircraft.

The AMCM squadrons use various devices towed by the *Sea Stallion* to accomplish their mission. These are either influence or mechanical. The influence devices create sounds or magnetic fields similar to those a ship emits. The sounds and fields detonate mines. The mechanical device physically cuts the mooring cable of the mines.

Three devices are used to sweep influence mines:

- The MK-105 (the Sled), used to sweep magnetic influence mines, consists of a gas turbine-powered generator mounted on a hydrofoil platform. The generator powers a two-electrode tail which produces a magnetic field imitating the magnetic field of an undegaussed ship.
- The AN/SPU-1/W AMCM Magnetic Pipe (MOP), used against magnetic influence mines in shallow water, is a 30-foot iron pipe weighing 1,000 pounds and filled with polystyrene. It

HM-16 practices Mk-105 operations.

An Mk-105 under tow.

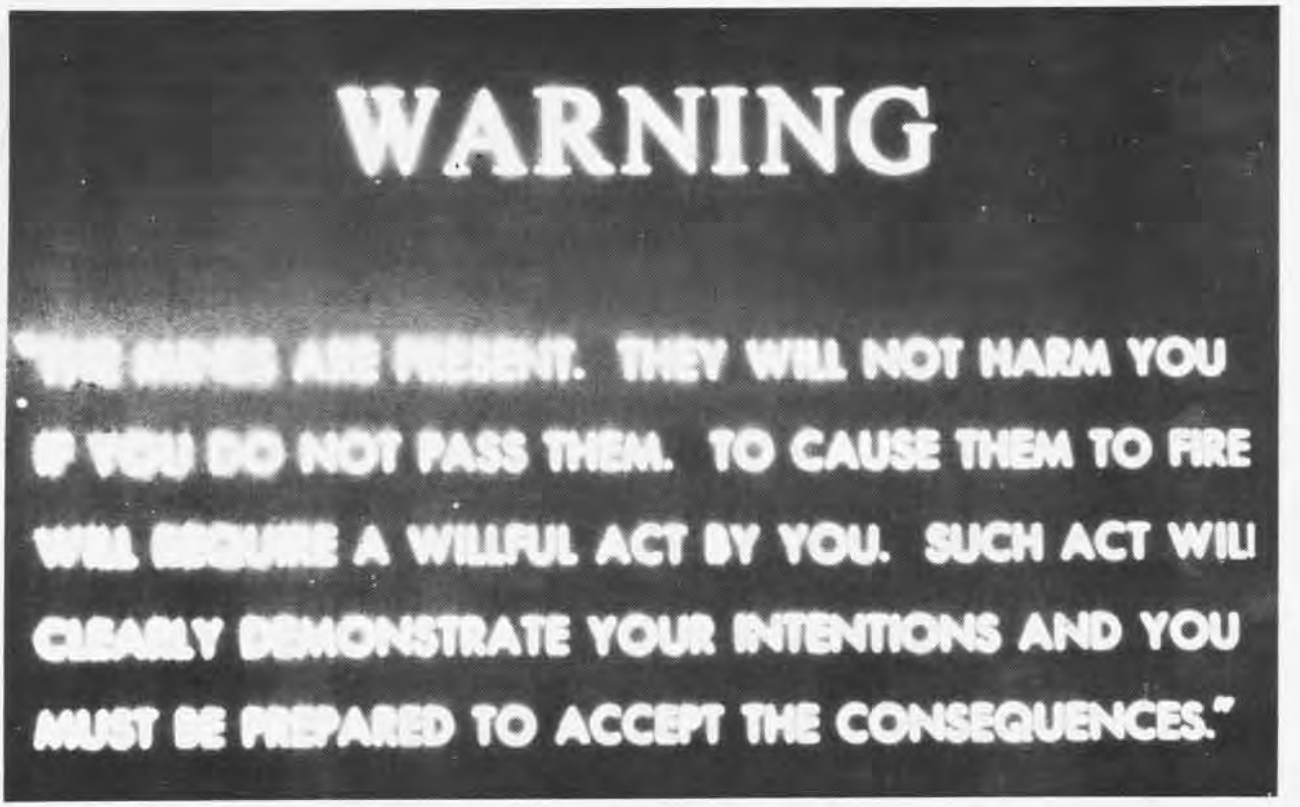
is magnetically charged before each flight to create a magnetic field similar to an undegaussed ship.

• The MK-104, a sound-producing, light-weight device, is employed to sweep against acoustic influence mines. Used in combination with the Sled against magnetic-acoustic influence mines, it becomes the MK-106.

The current mechanical minesweeping device used to sweep against moored mines, is the MK-103. It cuts the mooring cables on the mines, allowing them to float to the surface where they can be detonated.

The Airborne Mine Countermeasures community has proved its ability to meet its mission requirements during its short but distinguished history.

In recognition of these abilities and efforts, HM-12 has received three Meritorious Unit Commendations, two Battle Es and the Navy Unit Commendation Award for the period October 10, 1976, to September 30, 1977. Commander Francis M. Dreessen is HM-12's C.O.



AMCM helo at work

F7

The airborne portion of the LAMPS MK III has resurrected a name that is over 50 years old in Naval Aviation: *Seahawk*. Official names were authorized just before Pearl Harbor, but some American companies named their airplanes from the Twenties on – and many of these names were assigned officially to the same companies' later products during WW II. Curtiss, one of the Navy's prime producers of aircraft from 1911 through WW II, came up with the *Sea Hawk* name for its competitive "battleship fighter" of 1927, and this name was later officially assigned in WW II to its SC-1 battleship/cruiser scout (*NANews,* August 1975).

The first U.S. Navy *Sea Hawk* traces its origins to 1926. After deliberations early that year, the Bureau of Aeronautics solicited proposals from the major aircraft companies to submit a prototype battleship fighter for competitive evaluation. This was to be a convertible design, capable of operating as a seaplane with a single main float and wing-tip auxiliary floats catapulted from battleships, or on wheeled gear from the upcoming new carriers. By early 1927, only three companies had submitted their prototypes to the Navy's flight test activity at Anacostia, D.C.: Boeing, Curtiss and newcomer Eberhard. Eberhard's initial entry failed to pass its demonstration tests, while the other two completed their Navy tests. The results were nearly a draw – and BuAer ordered 18 of each: the Boeing F3B-1 (*NANews,* October 1978) and Curtiss F7C-1.

Overall, the Curtiss prototype differed from the Boeing primarily in having sweepback in the upper wings. Both were typical biplanes of the period, powered by P&W Wasp engines. While Boeing's fighter entry was completely redesigned for the production version – including incorporation of larger wing-area sweptback upper wings – the main changes in Curtiss' *Sea Hawk* were an increase in wing area and a new landing gear design.

By the time production models were delivered in 1928, the battleship-fighter concept had been abandoned and the seaplane provisions were deleted. Unlike the F3B, no further orders were placed for the F7C-1 and the 18 airplanes delivered were used as land-based fighters with the Marines, and for experimental and utility duties. New concepts of propellers, streamlined NACA engine cowls and leading edge automatic "Handley-Page" slats were all tested on the Navy's *Sea Hawks.* Typical of the period, the F7C-1s were soon outclassed and were phased out of the operating inventory in 1933.

C-1

XF7C-1

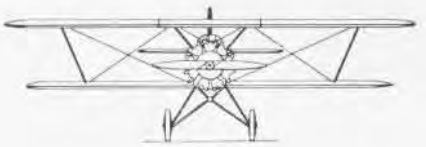
F7C-1

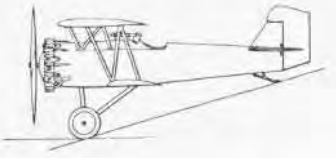
XF7C-1

F7C-1

XF7C-1

Span		
XF7C-1		30'8"
F7C-1		32'8"
Length		
XF7C-1		20'11"
F7C-1		22'2"
Height		
XF7C-1		9'0"
F7C-1		10'4"
Engine		
XF7C-1	P&W R-1300	425 hp
F7C-1	P&W R-1340B	450 hp
Maximum speed		
XF7C-1		155.5 mph
F7C-1		151.0 mph
Service ceiling		
XF7C-1		22,100'
F7C-1		23,350'
Range		
XF7C-1		335 miles
F7C-1		325 miles
Armament		two .30 machine guns underwing bombs





PEOPLE · PLANES · PLACES

Awards

Enterprise's AIMD received the ComNavAirPac Black E. The ship's C.O., Capt. J. W. Austin, presented the award to the department, headed by Cdr. N. M. Prose, for sustained superior performance during the competitive cycle ending December 31, 1978, and including a seven-month WestPac deployment.

The VF-211 *Checkmates,* Miramar, won the CVW-9 Golden Tailhook Award for their 1978-79 cruise to WestPac and the Indian Ocean aboard *Constellation.* Flying the F-14 *Tomcat,* the squadron flew 1,205 passes "on the ball" during their seven-and-one-half-month cruise and maintained a 3.3278 landing grade average. Individual honors went to LCdr. Keith Shean and Lt. Jim McArthur.

Acting on behalf of SecNav, RAdm. R. R. Hedges, ComPatWingsLant, presented the Navy Unit Commendation to VP-8 during a recent ceremony at Brunswick. Under the leadership of Cdr. E. R. Riffle, the *Tigers* were cited for "innovation, planning and on-station tactical execution . . . during the most complex coordinated operations," while deployed in Bermuda from February 8 to August 9, 1978. Present VP-8 C.O. is Cdr. T. F. Hall.

In a ceremony aboard *Eisenhower* in the Med, VF-143 was awarded the CVW-7 Golden Tailhook Award for superior performance in carrier landings, achieving a 3.5 landing grade average for the first operating period of its current deployment (January 30, 1979, through March 10, 1979). The squadron also captured 4 of the first 10 spots in individual landing competition. Winners were Ltjg. Bill Kelley, Lts. Greg Quist and Doug Eddy and LCdr. Billy Boatright.

Rescues

VP-47's Crew Seven recently conducted a medevac flight from Diego Garcia, Indian Ocean, which proved to be most gratifying for the flight crew. They were transporting a seriously injured member of the Navy's Seabee Unit to Clark AFB, R. P., for treatment; however, during the flight it was determined by the accompanying two-man medical team that the victim would not survive to reach Clark. An inflight change of destination to Thailand was effected and, less than nine hours after notification, the plane landed in Bangkok where a medical team was standing by to transfer the patient to a nearby hospital. Crew members receiving letters of commendation were: Lts. Jack Boniface and Skip Vibert; Ltjgs. Denny Parker, Terry Shepersky and Tom Vonnegut; AO1 Rod Snyder; AT1 Keith Norris; AD1s Jay Leavenworth and Tom Templeton; AW3s Joel Eddins and Richard Myllenbeck and AWAN David Nelsen.

While en route to the Indian Ocean on board *Ranger* to relieve *Constellation,* a VS-29 crew spotted a small fishing boat during one of its surface search missions. It was a small Vietnamese fishing junk, sitting dead in the water, dangerously overcrowded with people. The stranded victims began waving the SOS distress signal and the crew, consisting of Lt. Kirk Johnson, Ltjg. Chuck Kaul and AW3 Tom Payne, radioed the situation back to *Ranger.* The carrier dispatched two helos from HS-4 to airlift the refugees to one of *Ranger's* escort ships which took them safely to port.

Records

During *Midway's* recent cruise off the coast of Okinawa, VA-115's Cdr. Tim Thomassy and LCdr. Roger Burbrink paired up for an *Intruder* mission which, upon their return, marked over 2,000 A-6 flight hours for each – equivalent to about three months of continuous flying. Another pilot logged his 2,000th hour in the A-7E *Corsair II* while aboard *Constellation* in the Indian Ocean. Cdr. Philip S. Gubbins, C.O. of VA-147, first flew the aircraft on September 4, 1968, as a replacement pilot in VA-122.

Three *Swordsmen* of VA-145 recently surpassed 1,000 flight hours in the A-6 *Intruder.* They are LCdrs. Mark Brady and Phil Lame and Lt. Mike McCamish.

Several squadrons achieved milestones in accident-free flight hours: VF-124, 9,000; VA-145, 20,000; VF-301, 30,000; VP-24, 75,000; VP-46, 125,000; and VP-30, 150,000 In photo, maintenance officer LCdr. Steve

Wilson, left, and Cdr. Mike J. Knosky, X.O. of VP-46, proudly tack on the extra zero to a P-3C marking the *Grey Knights'* 125,000th safe flying hour.

A milestone for *Independence* was marked when an aircrew from VAW-122 logged the ship's 205,000th arrested landing. Cdr. R. J. Malla, squadron C.O., was on hand to congratulate the crew: Ltjg. John P. Labella, LCdr. John F. Wilson, Lts. Mark R. Milliken and Paul R. Skurski, and AT1 Russel E. Nolan.

Two squadrons marked accident-free flight-hour milestones in years: HS-6, 4 and VAW-121, 12.

During the course of their recent Med deployment aboard *Kennedy*, the *Blue Blasters* of VA-34 flew over 4,000 hours, logged over 1,800 traps and transferred more than 6.3 million pounds of JP-5, all without an accident. Another highlight of the cruise was CinCLantFlt's presentation of the Golden Anchor Award for retention excellence to the squadron. Skipper is Cdr. John M. McNabb.

Honing the Edge

The *Gunslingers* of VA-105, *Bulls* of VA-37 and *Checkmates* of VS-22 led the Blue Force during *National Week XXVI*, an international exercise that included *Saratoga* and *Enterprise*, 37 combatant units and six support ships. The nine squadrons of CVW-3 compiled over 1,500 flight hours and 650 traps. *National Week XXVI* was designed as a test of the ability of a two-carrier task force to provide protection to a large amphibious force from various threats ranging from enemy submarines to surface combatants and aircraft.

During a recent five-day air war at Yuma, the fighter squadrons of CVWRs 20 and 30 tested the combat tactics and expertise of all

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aircrews. Their F-4Ns fought against an extremely capable adversary, TA-4 *Skyhawks,* piloted by a select group of VC-13 "bad guys." Each squadron entered its 10 best aircrews in the fighter meet, each crew flying two missions. Although all squadrons displayed exceptional talent in air combat, VF-301 brought home the top honors.

VA-145 recently made a transPac of eight A-6Es from Barbers Point to Cubi Point. Stopping at Wake Island and Guam en route, the *Swordsmen* were supported by KC-135s of the USAF.

Before departing for deployment to WestPac, *Ranger* unveiled her new mascot, a large black panther. This ferocious feline

has a long and colorful history, originating in VF-121 where it was kept in a cage for the past several years. Through the generosity of the squadron's skipper, Cdr. Frank Mezzadri, the cat has escaped its cage and gone to the welcoming arms of the VF-21 *Freelancers.* Cdr. James H. Ruliffson, VF-21 C.O. (center), pets "Lance" prior to departure. Armed Marines guard against pet thieves.

The *Boomers* of VA-165 completed contingency operations in the Arabian Sea recently, during which time they flew 98 percent of scheduled missions, logging more than 800 hours in 22 days while aboard *Constellation.* Aircrew centurions were: LCdrs. Dave Newton and Dave Warren; Lts. Larry Cleghorn, Star Streck, K. J. Matson, Frank Edwards, Greg Haynes, Ken Showalter, Rich Dodd, Fred Cook and Mike Messick; and Ltjgs. Mike Carpenter, Wayne Sidie, Leon Galecki, Phil Wheeler, Gary Shaw, Kirk Hunter, Scott Gunderson, Ken Bates and Bob Wolfe. LCdrs. Bob Baratko and Dean Dolquist and Lts. Bagex Amelon and Joe Nortz made double centurion, while Cdr. "Woodie" Sprouse and LCdrs. Jim Clancy and Ray Wojcik made triple centurion.

During a gunnery syllabus training flight from Miramar recently, three F-14s from VF-124 scored an unprecedented 132 hits on a towed banner. The pilots were Lt. Dave "Action" Jackson, 71 hits; and LCdrs. Greg "Boot" Booth, 42, and Jim "King" Ellis, 19. The hits were attained during a four-plane banner pattern with each shooter loaded with 300 rounds.

The VS-37 *Sawbucks* returned to North Island recently following an eight-month deployment to WestPac. While aboard *Constellation,* the squadron participated in numerous antisubmarine warfare and fleet exercises against opposing friendly forces. Highlights of the cruise included war-at-sea exercises against *Midway,* ASW ops with Japanese and U.S. subs, assistance in the rescue of the shipwrecked crew of a Philippine fishing boat in the South China Sea, and several aircraft intercepts.

Et cetera

What good is a dining facility with cooks that don't cook? What's a field mess doing in a Marine aircraft wing? Even more, what's George Foreman doing in that mess? MABS-36 is situated in three storage buildings on the East China Sea end of the MCAS Futenma runway. The squadron devotes one whole building to housing its field mess,

which is designed to enable deployed Marines of the 1st MAW to have hot chow the minute they touch down. It's George Foreman the staff sergeant – not the boxer – who, along with SSgt. John Potts, surpervises seven cooks who cater the mess which feeds no one, most of the time. "We don't cook," says Foreman, "except when we go on a deployment. Most of the time it's packing and unpacking the equipment, cleaning it, getting it ready for inspection and having it ready to go on a moment's notice." Left to right in photo, LCpl. Ken Ray and Pfc. Gerald Robinson await the verdict of SSgt. Foreman as he inspects the squadron's field mess

What does one do if he is in the middle of an at-sea period, has seen the movies that are being shown and has a few quarters in his pocket? The answer is simple – you go to the forward mess deck and play the newly installed electronic games. *Independence* is testing a program designed to improve the day-to-day life on board ships while both at sea and in port. "Our test period will last about six months, "explains Ltjg. Barry Boyd, sales officer, "while we monitor the crew's reaction to the machines. The first 23 days, close to $5,000 was collected and turned in to the crew's welfare and recreation fund." *Ranger* was the first ship to try the test program, followed by *Constellation* and now *Indy*.

This unusual photo was sent to *NANews* by Ens. John W. Lutz of VT-24, Chase Field. The TA-4J's lead plane is reflected in his helmet visor while he rides in the back

seat of the wingman's plane on a formation hop.

ABF1 William M. Tucker took this photo of *Ranger* departing for "points west" from Pearl Harbor, where she had docked recently.

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Since WW II, naval aircraft have not participated in exercises with Japanese Air Self Defense Force (JASDF) fighters. All that changed on April 2 as F-4J *Phantoms* from VF-151 went into simulated aerial combat against the F-1s and F-86s of JASDF at Misawa. Normally based on board *Midway*, VF-151 aircrews got the chance to operate from land bases and to concentrate exclusively on air combat maneuvering. Who really won? It was a victory for everyone: valuable training and experience for the squadron, comradery for the personnel, and a demonstration of strength, good will and cooperation between two nations.

This unusual photo of an RF-8 from VFP-63 Det 3 was taken by Lt. Peck while the squadron was deployed aboard *Coral Sea*. The aircraft was piloted by Lt. Pampe.

Change of Command

CVW-6: Cdr. Richard C. Allen relieved Capt. George W. White, Jr.

CVWR-20: Cdr. Gordon Goldenstein relieved Cdr. Melvin Seidel.

HSL-36: Cdr. Charles Kiseljack relieved Cdr. Michael D. McClelland.

LAtkWepScolPac: LCdr. Dennis V. McGinn relieved Cdr. Donald L. Dill.

MAG-31: Col. Jack P. Monroe relieved Col. Jacob W. Moore.

MAtVAQWingPac: Capt. Richard A. Zick relieved RAdm. Henry D. Arnold.

NAESU: Cdr. Wallace C. Courtney relieved Cdr. Philip A. Monroe.

NATC: RAdm. John G. Wissler relieved RAdm. James H. Foxgrover.

PatWingsLant: RAdm. Paul J. Mulloy relieved RAdm. Ralph R. Hedges.

VA-46: Cdr. Philip Rooney relieved Cdr. James Matheny.

VA-56: Cdr. Leon C. Bryant relieved Cdr. Roger P. Flower.

VC-6: Cdr. David H. McCulloch relieved Cdr. Charles A. Futch.

VMAQ-2: LCol. M. C. Brush relieved LCol. T. J. Fallon.

VP-19: Cdr. Paul C. Moessner relieved Cdr. Norman C. Lord.

VP-26: Cdr. Ralph H. Stowell, Jr., relieved Cdr. Richard J. Petrucci.

VP-50: Cdr. John H. Grotenhuis relieved Cdr. Robert J. Arnold.

VRC-30: Cdr. William J. Dooley relieved Cdr. Hendon "O" Wright.

VRF-31: Cdr. David F. Silseth relieved Cdr. William H. Siegel.

VT-3: Cdr. Robert E. Duchesne relieved Cdr. Bruce A. Beebe.

VT-6: Cdr. James R. Edgar relieved Cdr. Richard B. Mills.

VT-27: Cdr. Arthur L. Kilpatrick relieved Cdr. John S. Glaeser.

VT-31: Cdr. Edward J. Schneider relieved Cdr. Merle E. Huston, Jr.

Ack - Ack Encounter

By Samuel S. Richards, NA #822

I received my HTA designation on April 20, 1918, and, in order to get overseas quickly, I joined the USMCR and was placed in Squadron C. At that time, four squadrons were part of the AEF (Allied Expeditionary Forces) under the command of Captain Alfred A. Cunningham, NA #5.

On October 18, 1918, a DH-4 – powered by a Liberty 400-hp engine and fitted with four 150-lb. bombs, two machine guns synchronized forward (Marlin and Vickers), a double barrelled Lewis on a scarf mount on the rear cockpit – left LaFresne Field in Pas de Calais for a raid on the German U-boat depot at Brugge, Belgium. Vince Young, NA #519, was the pilot and I was acting as gunner in the rear. The trip north was uneventful with only sporadic gunfire. We circled our objective and dropped four bombs on the U-boat haven. By that time the ack-ack was so severe that we high-tailed it for the safety of the English Channel. But a small piece of shrapnel had punctured our radiator and without water our engine heated up and the rpms dropped from 1,600 to 1,000 to 800 to 400 – and crunch – it was dead.

We stayed over the water with a dead stick as long as possible and landed on the beach at Nieuport, Belgium, under machine-gun fire from the German trenches. We were safe and sound in the sand dunes on the Allied side, without a scratch. We spent a horrible, sleepless night with incessant cannonading. We were frustrated by the language barrier, but finally got a phone message to our field.

The next day a squad of mechanics arrived in a truck, took the wings off the DH-4 and towed it back to France. It was well perforated by machine-gun bullets and when the engine was dismantled, the aluminum pistons were practically dust. I still have the largest piece, approximately 2"x21'2".

That was 60 years ago.

Dive Bombing

By D. W. Tomlinson, NA #2923

Dive bombing was a decisive factor in the critical naval battles of WW II throughout the Pacific. Few remain who were involved in the original development efforts which led to its approval and inclusion in the formal gunnery exercises for the early VF squadrons, VFs 1 and 2, based at North Island, Calif.

I joined VF-2 in October 1925. Lt. F. W. Wead, one of the brilliant Naval Aviators of that time, was C.O. He conceived the idea of glide or dive bombing and went ahead on his own to try it out. The squadron was equipped with VE-7s.

The squadron obtained several dummy bomb racks from the naval air station. At that time the racks were being used by F-5Ls. Lt. Jack Tate, gunnery officer, and I had these installed under the right wing of the VE-7s and arranged a release wire with a toggle to the pilot's cockpit. Target practice began in November 1925 at Ream Field. Because the VE-7s had limited steep-dive capability, the first results were not impressive; however, the possibilities were obvious.

The squadron shortly received three F6Cs (Army P-1s) and three FB-1s (Army PW-9s). These planes with their good dive characteristics were quickly fitted with the dummy bomb racks. The resulting scores obtained were so good that Lt. Wead submitted a report to BuOrd with the recommendation that dive bombing become a standard gunnery exercise. As a result, in the fall of 1926, VF-2 conducted a formal dive-bombing exercise with live 75-lb. bombs on a water target off the Lower Strand. This was the beginning of dive bombing.

Jack Tate and I felt that Lt. Wead should in some way be given credit for having conceived and brought about the development of dive bombing.

Of the pilots in VF-2 who took part in the early dive bombing at Ream Field, I think Vice Admiral Robert F. Hickey, Captain Henry F. McComsey and I are the only survivors.

TECHNOLOGY TRANSFER

By Colonel Charles E. Thompson, USMC

The articles in the March 1979 issue of *Government Executive* concerning technology transfer were intesesting and informative for all Americans. The areas discussed are in the lofty circle of U.S. Government to Soviet Government and relate to whether technology transfer should be severely controlled and, if so, how, etc. But, by the way, what is technology? These topics, their interpretations and concerns are important and very interesting for persons who deal in those realms. However, one doesn't have to move into the hierarchy of the Department of Defense or the State Department to find knotty problems with identification of technology and implementation of technology transfer. It is in a more mundane arena where lack of technology transfer is a detriment to progress, productivity and cost effectiveness — military capability and readiness.

The Navy has an extensive and respected research and development community which for years has been adding to the knowledge of military hardware, its use and application. There are more than 30,000 people involved in this effort, 20,000 under the Chief of Naval Material and 13,000 in research and development laboratories. A major consideration which must be recognized is that everything the research and development engineers produce in a weapons system which is not totally expendable must be fixed by someone — sooner or later. In Naval Aviation this is primarily the job of the six naval air rework facilities (NARFs) under the Naval Aviation Logistics Center. The current population of the NARFs is about 23,000, including 1,435 in the NavAir engineering support offices (NESOs) divided among the NARFs. NESO personnel are weapons systems engineers who exercise maintenance and/or design engineering cognizance over assigned weapons systems. The NARFs also have production engineers and technicians who interface weapons systems requirements and the realities of rework or overhaul. (Production engineering encompasses the area of manufacturing technology.)

The problem for years has been how to transfer the new technologies (designed by the R&D world and built into new products) to the facilities who must repair the products. This technology transfer must be timely if expensive interim contractor support is to be avoided. Time can be minimized if proper expertise (based on experience) and adequate resources are applied. In any case, some lead time is needed to attain rework capability. No facility can immediately jump in and overhaul a complex and sophisticated product which it has never seen before — without time to learn how to perform such tasks. Special tooling, training, test equipment, software programs, spare parts and rework procedures, to name a few, must be

obtained before an item can be reworked.

As yet, there is no established mechanism to effect the transfer of R&D know-how to the naval air rework facilities. Transfer just happens, on an ad hoc basis, and seldom in an effective or timely manner. But progress is being made toward establishing a system which will accomplish the transfer. At a recent meeting in Jacksonville, Fla., the two communities discussed a draft NavAir notice which, if adopted, will establish a technology assignment board responsible for assigning the various areas of technology between the six NARFs/NESOs. As the R&D community finds an application for a new design or technology, the board will assign it to an appropriate NESO for coordination with the responsible R&D agency. A feedback loop will be established between the NARF engineers and the scientists/engineers on how to repair that item. Within the facility, the cognizant NESO engineer informs the in-house production engineers that they are to establish manufacturing technology for the rework/overhaul of the new equipment.

An example: a NARF/NESO has been assigned the technology of hydraulics. An R&D activity has developed a high-pressure (say, 8,000 psi) hydraulic system which has been so successful that the R&D managers are ready to try it out on an aircraft or missile system – in existence or on the drawing board. Air-03 would advise the NESO board that this new hydraulic system is ready to be installed in an aircraft or missile system. The NESO board would advise the NARF/NESO previously assigned the technology of hydraulics to contact the R&D activity and begin close liaison concerning the maintenance of the new high pressure hydraulic system. The NARF-NESO engineers would then contact the R&D personnel and learn all they could about the new hydraulic system, feeding back to the developing activity points of maintainability which may not have been previously realized. Such areas might include sealing, safety, filtration, specified tools, environment required for overhaul, etc.

The R&D activity may or may not be able to accommodate suggestions by the NARF/NESO, but would be apprised of certain conditions that could cause field maintenance and operational problems. If the size of this new installation program is such that a formal integrated logistics support plan is required, the NESO would also become an integral part of the formal procedures – on a programmed basis and much earlier than previously experienced.

It is envisioned the NESO will be involved about DSARC (Defense Systems Acquisition Review Council) Zero milestones. Early in the development stage a NARF would be selected as the depot repair point (DRP) for this new system and the NESO engineers would assist the DRP in preparing for the overhaul or repair of the item. (NESO may or may not be designated as DRP.) At this point, the production (manufacturing technology) engineers/technicians would definitely get involved; however, they could be involved earlier if necessary. After designation of the DRP and the implementation of maintenance support, the NARF/NESO engineer(s) gives the responsibility for the manufacturing technology and attainment of rework capability to the production engineering department of the selected DRP.

It should be understood the primary reason for the new NavAir notice is the establishment of a communications network through which all activities concerned with naval aircraft and weapons systems research, development and depot maintenance will be kept informed about what is going on. This will preclude surprises at the depots and thereby greatly enhance the fleet readiness status of the new system or component.

Many people seem to know about, understand and express concern for technology transfer between the United States and Russia or between and among NATO allies. Few people understand we have the same problems in a microcosm within the Navy. The Navy hopes this new approach to technology dissemination throughout the Naval Air Systems Command, the Naval Aviation Logistics Center, and the research and development activities associated with the Naval Material Command will enhance attainment of depot maintenance capability on items involving new technologies and new applications of older technologies.

With the rapid rate of technological increase and application, unless some formal mechanism for technology dissemination is established as a trigger, the NARFs will find themselves further and further "behind the eight ball" as they attempt to repair new high technology components for the fleet. It makes good sense to apply technology as soon as possible after it is developed. This includes maintaining developed weapons systems. The proposed NavAir notice provides the mechanisms.

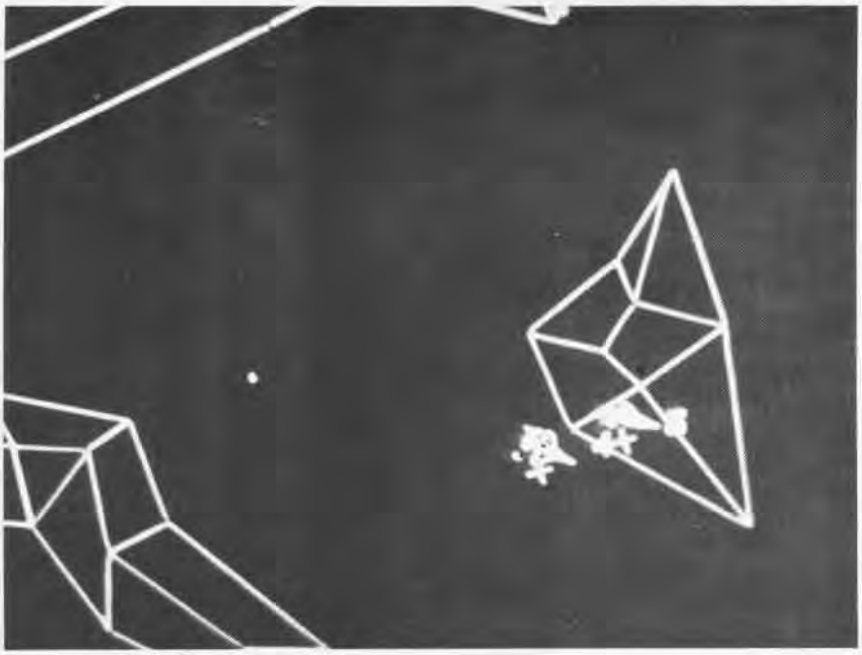
Battle E

When they handed out the latest Battle Es, *Midway* was right in line for her second consecutive one. *Midway* and her air wing, CVW-5, garnered nine Es this time around. The air, operations, engineering and communications departments each received an E as did VAs 56 and 115, VF-161 and VAW-115. Home-ported in Yokosuka, *Midway* is commanded by Captain Thomas F. Brown III.

Clockwise from left above, Ltjg. Michael Baker puts final touches to an E on a VA-56 *Corsair II, Midway* heads out of Yokosuka, Cdr. R. E. Ames and YNSN Paul McElroy put first coat on engineering department E, and a VF-161 *Phantom* displays the significant E as *Midway* and CVW-5 officers form the E for excellence.

FIGHT ZONE

By JO2 Wayne Dalton



I am absolutely elated," said Commander Milburn J. Holmes, C.O. of VF-301, upon hearing that his Miramar, Calif., reserve squadron had won the Second Annual Reserve Forces Jet Fighter Meet held at the MCAS Yuma, Ariz., air combat maneuvering range (ACMR). "Everyone worked very hard."

Everyone in the competing reserve squadrons did work hard – in the desert's pre-dawn light, right through meal hours and, often, into the night – in pursuit of victory.

The efforts paid off. On any given day, right up to the final dogfight of the meet, each of the participating CVWR-20 *Phantom* squadrons, VFs 301 and 302, Miramar, and VFs 201 and 202, Dallas, Texas, was a serious contender for the number one position.

As in any combatant event, winning is especially meaningful when accomplished against a strong adversary. The TA-4 *Skyhawks* of VC-13, Miramar, and VC-12, Oceana, Va., proved wily and tough competitors for the F-4s.

Two *Phantoms* and two *Skyhawks* participated in each dogfight. The close competition, all within the boundaries of the ACMR which covers hundreds of miles, was often conducted at altitudes approaching 30,000 feet. Dogfights were recorded on ground-based TV screens complete with small images of the *Phantoms* and *Skyhawks*. The geometric shapes in the photo represent the mountains on the range. (See *NANews*, March 1978.)

VF-301 won, but, in a larger sense, all the reservists who participated were winners.

CVWR-20, Cecil Field, Fla., is led by Commander Mel Seidel.

INDIAN HEAD

One of the most unusual airfields has plenty of planes but no runway. The tower is a collection of mobile homes, old containers and prefab building under a cedar tree. While there have been a few landings — by boats and tractor-trailers — there has never been a successful takeoff. There are, however, several wrecks around. It is not a normal flight-line operation. It is a training ground for explosive ordnance disposal technicians (EODs) who respond to real crashes all over the world.

At the "Bandit Airfield," Naval Ordnance Station, Indian Head, Md., students learn to deal with bombs, dispensers and missiles — on and off aircraft. They learn the finer points of "safing" armed aircraft guns, ejection seats, bomb racks and assorted explosive hazards that an airplane possesses, not only when it is in one piece, but when it it scattered over the countryside.

By Capt. Carol King, USAF

Photos by
PH1 Tom Dougherty

The aircraft have been obtained from a variety of sources and include crash residue and old test models, some externally complete and some almost unrecognizable. But they all represent hazards with which the EOD technicians must be familiar.

The Explosive Ordnance Disposal School is a Navy-managed, jointly-staffed organization which conducts all U.S. and some foreign EOD training. Students are taught to clear an accident site of explosive dangers. They also learn to handle explosive, chemical and nuclear ordnance.

The air ordnance practical area (Bandit Airfield) is an unusual assortment of "has beens" which continue to serve a very real mission. The cockpit and wings of an A-1E lay under pine and apple trees. An F-4D, lying upside down with its wings torn off, was assembled from two crashes in Turkey and Thailand. A *Cobra* gunship once used to test an ejection seat mechanism, now shades the local deer.

But these old, junked, worthless aircraft help ensure that the EOD technicians of all services will be able to accomplish their dangerous duties safely and efficiently.

The Avengers

By Robert J. Cressman

In late June of 1942, readers of *Time* magazine thrilled to the debut of a new combat airplane – a torpedo bomber christened *Avenger*. Popular imagination must have been fired by that name, coming along as it did within six months of Pearl Harbor. *Time* claimed that there would have to be many more incidents "such as that which took place at the Battle of Midway. . .when squadrons of the new Grumman *Avengers* – swift, long-ranged, deadly – the first batch to come from the factories, went out, fresh from the assembly lines, to finish off the enemy."

The report, dated June 28, 1942, from Admiral Chester W. Nimitz, CinCPac, to Admiral Ernest J. King, CinC U.S., told a story of the *Avenger's* debut in less colorful terms, but more truthfully. When describing the near-suicidal low-level torpedo attack conducted by the half-dozen Grumman TBF-1 *Avengers* (far from *Time's* squadrons) and the Army B-26s flying the same type of mission, Nimitz wrote: "The TBFs made a similarly gallant attack almost simultaneously with the B-26s and against an equally-determined and overwhelming number of fighters. . .at least two of them were shot down before they could launch torpedoes. Only one badly shot up plane returned."

Indeed, if *Time's* report were accurate, there would have been more elation around the Grumman factory in Bethpage, Long Island, than there was. As it stood, there was reason for gloom. Of the six TBFs that sortied from *Midway* that morning, only one heavily-riddled plane returned. If naval planners were to evaluate the performance of a new aircraft simply on the basis of its maiden combat mission, it would have been the *Avenger* that would have been "finished off."

Fortunately, no one expected six torpedo planes, without fighter cover, to do much against carriers heavily defended by screening ships and planes. The *Avenger*, christened with that name on October 1, 1941 (long

before either Pearl Harbor or Midway gave Americans something to avenge), would eventually prove a rugged and reliable airplane, performing valuable service in both the Atlantic and Pacific, through the end of WW II.

Simultaneously with the *Avenger's* entry into service, the Douglas TBD-1 *Devastator* was facing obsolescence. The first TBFs to see combat, at Midway, were slated to replace the aging TBD-1s of Torpedo Squadron Eight (VT-8), in the air group assigned to *Hornet* (CV-8). VT-8 was formed at NAS Norfolk, Va., on July 26, 1941, and commissioned on September 2 the same year. Initially equipped with the Naval Aircraft Factory's barrel-fuselaged SBN-1s for training purposes, VT-8 graduated to TBDs as they became available.

When *Hornet* sailed for the Pacific in February 1942 to take part in the Halsey-Doolittle strike on Tokyo (April 18, 1942), she took a partially-equipped VT-8 with her. The detachment initially left behind at NAS Norfolk soon travelled north to the Grumman Aircraft plant at Bethpage, N.Y., where, in March, they took delivery of 21 TBF-1s, the first Navy squadron to receive *Avengers.* The men expected to fly them learned about the planes directly from the Grumman people but the shakedown was abbreviated by the exigencies of war. After practicing torpedo drops from NAS Quonset Point, R.I., the squadron of TBFs flew to Norfolk and

TBF-1 drops a torpedo.

then to the West Coast.

Loaded on board *Kitty Hawk* (APV-1), at San Diego, Calif., the 21 TBFs of VT-8 were ferried to Hawaii. Departing San Diego on May 9 in convoy 2074, *Kitty Hawk* (the former train ferry *Seatrain Havana*) arrived off Oahu on the 17th, and moored off Ford Island. Soon after the *Avengers* were off-loaded, VT-8 began further familiarization flights from NAS Ford Island's Luke Field, preparing to join its carrier.

Meanwhile, naval intelligence had cracked the Japanese naval code and had accurate information pertaining to an impending Japanese assault against Midway. As American sea and air forces prepared feverishly to catch the Japanese off guard, CinCPac dispatched reinforcements to the atoll.

Nimitz gave Midway "all the strengthening it could take." He realized that the *Catalinas* on the water and *Flying Fortresses* on the ground were difficult to protect, but he dispatched them to Midway anyway. His basic concern was providing the atoll forces with the ability to discover the enemy at a distance and to attack before he got too close.

As another part of the buildup, Lt. Harold H. Larsen, commanding the VT-8 detachment on Ford Island, received orders, on May 31, 1942, to send six planes to Midway. Those six, in addition to the Marine reinforcements already there or en route, were to provide essential close-in striking power and support the Marines' dive bomber units equipped with SBDs and SB2Us. Accordingly, six volunteer crews were picked — every man in the detachment wanted a crack at the enemy and volunteered when the call went out. The half-dozen *Avengers* were placed under the command of Lt. Langdon K. Fieberling.

Fieberling, a 32-year-old native of Oakland, Calif., enlisted in 1935, and later became an aviation cadet and earned his wings at Pensacola. He flew with VP-1F and with the aviation unit of the heavy cruiser *Quincy* (CA-39) before a tour as an instructor at Pensacola. He reported to VT-8 three days after the squadron was commissioned.

Ordered to report to Commander, Base Air Defense, Midway, the detach-

ment took off on the 1,300-mile flight from Luke Field at 0730 on June 1. Navigating the six planes were two Naval Reserve ensigns from VP-24, Jack Wilke and Joseph Hissem. (None of the VT-8 crews had ever been to Midway, and finding such a tiny spot in the ocean required pin-point navigation.)

The detachment completed the eight-hour flight without incident and, on arrival, loaded each plane with a torpedo. RM3c Harry Ferrier (the radioman and tunnel-gunner in the plane flown by Ens. Albert K. Earnest (USNR), having thought the outward-bound flight boring to the point of monotony, felt "tension in the air" at Midway, and noted that the men with him "seemed exhilarated about the prospect of meeting the enemy." That evening, Fieberling called the men together and briefed them, confirming their suspicions that something was afoot. He told them a Japanese thrust toward Hawaii was imminent and Midway was certainly a target.

He was not kidding. A veritable Japanese armada was bearing down on Midway. To combat this attempt to extend the "Greater East Asia Co-Prosperity Sphere" into the United States' Hawaiian backyard, American preparations were in high gear. Fieberling and his men found a busy island; its excellent airfield was crammed, in every available flat space, with planes

Aviation Cadet Fieberling

– Army's Boeing B-17s and Martin B-26s (each of the latter equipped with a torpedo); Marine's Vought SB2U-3 *Vindicators,* Douglas SBD-2 *Dauntlesses,* Grumman F4F-3 *Wildcats* and Brewster F2A-3 *Buffaloes* (the latter had been Navy planes attached to VF-2 in *Lexington* before their transfer to the Marines); and Navy's consolidated PBY patrol bombers. Living out of tents pitched near their planes, the men of VT-8 daily prepared for action as the alerts intensified with the approach of the Japanese fleet. It was the same routine every day, get up at the crack of dawn, warm up the armed planes, then stand down when the orders to go into action did not come. Meanwhile, the VT-8 detachment at Ford Island continued putting its TBFs through their paces, and the remainder of the squadron on board *Hornet* led a comparatively relaxed existence with "no school or unnecessary work."

Before dawn on June 4, PBY *Catalinas* departed Midway for their patrol stations. One sent a contact sighting at 0545 (later called by Admiral Nimitz "the most important contact of the battle") reporting Japanese ships in the vicinity, heading for Midway – the tocsin for the atoll.

At 0552 a second contact report came in. The die was cast. Fieberling's men manned their planes and prepared for battle as usual that morning but, soon after the prowling PBYs' reports arrived, a Marine officer ran up to the parked TBFs' dispersal area with urgency in his voice: "Bogies at angels 11, 96 miles and closing fast."

Midway now buzzed with activity, like a stirred nest of angry hornets. By 0600, as part of the scramble to clear the island of everything "serviceable," the deep-bellied TBFs taxied out and took off. They joined up in two three-plane sections. Fieberling led the first section. Ensigns A. K. Earnest, C. E. Brannon (USNR), O. J. Gaynier and V. A. Lewis (USNR) and AMM1c (NAP) D. "D" Woodside completed the group. They climbed to 2,000 feet and, at 160 knots, set their course at 320 degrees true.

No sooner were the *Avengers* at altitude when two, or possibly three, Japanese planes swept by, making one pass before breaking off – obviously preoccupied with bigger game elsewhere. As one of the enemy planes flashed by, Earnest identified it as a Messerschmitt 109. (Given the standard of recognition artwork of the time, the plane may actually have been a Yokosuka D4Y-1 *Judy*, a scout/dive bomber seeing its first combat that day – in a reconnaissance role – and hence never before encountered by American pilots.) Earnest followed Fieberling to 4,000 feet. Shielded by the clouds, the six *Avengers* droned on, their attention only momentarily distracted from the duty that lay ahead.

At the same time that the TBFs arrived at the half-way point of their flight to engage the Japanese fleet, an outward bound force of Marine Corps *Vindicators* and *Dauntlesses* from VMSB-241 and four Army B-26s were winging their way toward the enemy. Behind the bombers, a furious air battle raged as the attacking Japanese planes tangled with the defending *Wildcats* and *Buffaloes* of VMF-221 over Midway. The results were tragic. The nimbler *Zero* fighters, escorting the *Vals* and *Kates* of the attack force, flew rings around the Marines. The defenders' failure to extract a heavier toll from the enemy was not for a lack of sheer determination but because their equipment could not match the performance of the *Zeroes.* The Japanese bombed the oil tanks on Sand Island, setting them afire, and destroyed the seaplane hangar for the second time in the war. But the vital hard-surfaced, all-weather runways were not touched.

At 0700, Fieberling and his men, far from the fray, sighted what looked like about 10 enemy ships deployed 15 miles ahead and bound for Midway. From his vantage point in the cockpit of plane 8-T-1, Earnest counted at least "two long carriers" with a screen that included destroyers, cruisers and at least two battleships. The B-26s arrived almost simultaneously and went after what most probably were the Japanese carriers *Akagi* and *Hiryu.*

The TBFs dove, full-throttle, but Japanese combat air patrol fighters soon pounced on them. Still 15 miles from the fleet, the six TBFs leveled

off at 150 feet and bore in toward the enemy. Without proper fighter protection, the attacking bombers became sitting ducks for the equally-determined Japanese fighter pilots. The *Zeroes* overwhelmed the B-26s and TBFs.

The first attack on Earnest resulted in no major damage. The ball-turret gunner, Seaman first Jay D. Manning, probably kept the Japanese fighters at a respectful distance at first. Soon, however, the plane's charmed life seemed to run out. On its second pass, a *Zero's* machine guns and cannon spat bullets and shells that smashed open the top of the turret. The blast killed Manning instantly.

Radioman Ferrier, down in the tunnel position of the charging TBF – hoping to get a shot at the enemy – looked up and forward when he heard Manning's gun stop abruptly. Like Stephen Crane's nameless adolescent hero in *The Red Badge of Courage*, Harry Ferrier was brought face to face with death. He matured swiftly. Startled by the sight of the dead and bleeding gunner, Ferrier suddenly became "a seared, mature old man of 18."

But for Earnest and Ferrier the ordeal was far from over. Shells demolished part of the TBF's hydraulic system. The plane's tail wheel dropped limply in the slipstream, blocking Ferrier's .30 caliber "tunnel" gun's field of fire, now the only rearward defense.

Within a split-second, the concussion from exploding cannon shells knocked Ferrier senseless. He slumped, dazed, against the metal side of the fuselage, blood trickling down his face from a wound where shrapnel had creased his scalp. Earnest, meanwhile, felt the sharp pain of shrapnel in his right cheek as a shell exploded outside the cockpit.

Still several miles from the Japanese carriers – the onslaught against his plane had taken less than minutes – Earnest's plane continued to be hit again and again. Two other TBFs (possibly Fieberling and Brannon) splashed into the sea. Had Earnest's strength and sense of self-preservation failed, he might have joined them because his plane's elevator wires were shot away and the riddled *Avenger* bucked toward the waves below.

With his turret gunner dead, his radioman unconscious, Earnest mustered all of the flying skills he had ever learned, and combined them with an intense desire to get out of the area. Thinking that he had lost control when the plane bucked after the elevator wires went, Earnest jettisoned his torpedo at what looked to him like a light cruiser and hoped for the best. He then applied a trim tab and gained a few needed feet of altitude. Relieved of the burden of the torpedo, the plane responded and jolted upward and remained airborne.

Two more Japanese fighters chased the crippled TBF for about 10 more minutes before they tired of the sport and flew away. Earnest looked back at the enemy ships, but to his disappointment, saw no signs that they had been hit.

Although there were fighters around, Earnest's predicament was not good. His compass was out and the amount of control he had over the lumbering *Avenger* was marginal at best. But the plane was still flying! Armed with the basic knowledge that he had set out on a westerly course from Midway that morning, Earnest detoured around the Japanese fleet.

These photos show damage to Earnest's plane, the only Avenger to survive the Battle of Midway.

One time through the gauntlet was enough!

Ferrier, who had regained consciousness but with his vision impaired by the blood from his head wound, climbed up into the "greenhouse" (the canopy behind the pilot). After what must have seemed like an eternity, the two men sighted a black smudge on the horizon. It was the burning oil tanks, set afire by the Japanese that morning. That smudge guided the survivors of VT-8's Midway detachment back to the airstrip on Eastern Island.

Making his approach to the bombed island, Earnest discovered that the main landing gear had been damaged and he would have to bring the plane in on its belly. Faced with no alternative, he did. And did it well. Earnest and Ferrier emerged from the plane — the only survivors of the Midway-based detachment of Torpedo Eight. An agonizing task remained — sorting out the effects of their dead shipmates.

The six *Avengers* had a harrowing baptism of fire. Apparently, none got near enough to hit the Japanese carriers but their gallant attack, like that of the B-26s (which had a similar lack of success), had not been made in vain. The strike convinced Vice Admiral Chuichi Nagumo, the Japanese commander, that further air strikes against Midway were necessary.

While the Japanese ships prepared to launch that strike against land targets, TBD *Devastators* from *Yorktown* (CV-5), *Enterprise* (CV-6) and *Hornet* showed up. LCdr. John C. Waldron, commanding VT-8's base group, led 15 *Devastators* in at about 0920, two hours after the first VT-8 planes (the TBFs) had gone in. Only Ensign George H. Gay, Jr., of the *Hornet*-based torpedo planes, survived. The torpedo attacks had not been for naught. Preoccupied with the torpedo bombers, the Japanese fighters came down to deal with that threat, leaving the skies above wide open. At the same time, the frenzied rearming of the Japanese planes on their carriers' flight and hangar decks proved their undoing. Carelessly leaving previously unloaded ordnance lying around, with fueling going on at the same time, the Japanese flattops were like accidents waiting to happen. Dive bombers from the three American carriers soon subjected the Japanese flattops to a punishing rain of bombs that eventually succeeded in sinking all four: *Akagi, Soryu, Kaga* and *Hiryu*.

It is ironic, in retrospect, that the plane designed to supplant the TBDs of VT-8 actually preceded them into combat. The Battle of Midway was the battle debut of each increment of VT-8. In each case it was disastrous. Those attacks, made without proper fighter protection, further solidified the conviction, borne of bloody experience, that unescorted torpedo planes were simply no match for defending fighters. Midway marked the demise of the *Devastator* and the advent of the *Avenger* — a plane that would prove itself capable of yeoman service well into the 1950s.

Adm. Nimitz, summing up the Battle of Midway, provides a fitting epitaph for Langdon Fieberling and the men of VT-8, indeed for all men who lost their lives at the pivotal battle: "All participating personnel, without exception, displayed unhesitating devotion to duty, loyalty and courage. This superb spirit in all three services made possible the application of the destructive power that routed the enemy."

letters

Whose on First?

The *Tomcatters* of VF-31, one of the oldest Navy squadrons, were quite dismayed to find VMAQ-2, Cherry Point, using our squadron motto, "We get ours at night" in their letter to the editor in the March 1979 issue of *NANews*.

In 1958, the *Tomcatters* topped all other jet squadrons in total hours and sorties while deployed to the Med aboard *Saratoga*. It was during this record-breaking evolution that the squadron motto originated. VF-31 has retained this motto for the past 20 years and the *Tomcatters* believe they are the only ones who can rightfully claim it.

Sean K. Hanrahan, Ltjg.
PAO, VF-31
FPO New York 09501

Cobra

In the "Naval Aircraft" feature of the April 1979 issue of *NANews*, the photo labeled "AH-1T" is of the first prototype. The production aircraft is a little different. Enclosed is a picture of the latest model, the AH-1T firing a TOW missile.

K. H. Johnson
C.O., VMA-269
MCAS(H) New River
Jacksonville, N.C. 28545

Tailhook Reunion

The 23rd annual reunion of the Tailhook Association will be held at the Las Vegas Hilton in Las Vegas, Nev., September 7-9. The reunion offers the opportunity for those interested in carrier aviation to meet, exchange ideas and participate in symposia, all of which are designed to enhance professionalism and foster the pride that has been such a valuable ingredient in the history of Naval Aviation.

The technical symposia will, tentatively, include briefings on the F/A-18 flight test program, S-3 weapons system, NASA's space shuttle, and aviator retention issues. There will also be a discussion on tomorrow's Navy by two distinguished speakers presenting different views. The always lively panel discussions will provide tailhookers with a chance to ask questions of senior aviators and other distinguished visitors.

Main speaker at the banquet will be Admiral Donald C. Davis, Commander in Chief, U.S. Pacific Fleet.

For further information contact the Tailhook Association, P. O. Box 40, Bonita, Calif. 92002. Telephone: 714-479-8525.

Correction

I would like to point out an oversight in the caption on page 17 of the April 1979 issue which says "the gloved hand of a pilot starts the engines for flight."

Please be advised that the *flight engineer* and not the pilot is responsible for starting the engines on a P-3, just one of his many responsibilities.

Anthony M. Vaicius, AEC
Aircrew Training CPO
NARU Point Mugu, Calif. 93042

Hornet

I am building a wooden model of *Hornet* (CV-8) and need some additional photos to use as reference sources — views of the port side and straight-on shots of the bow and stern. Any assistance will be appreciated.

I would also enjoy hearing from anyone who served aboard CV-8.

James N. Riddle
Rt. 1, Box 8
Roland, Okla. 74954

NANews

I would appreciate hearing from *NANews* readers who may have the following back copies: 1947 (5, 6), 1953 (6), 1954 (2, 3, 4, 10), 1955 (1, 2, 3, 4, 10), 1956 (8), 1957 (5, 11), 1958 (1, 2, 3, 10), 1959 (8).

Steve Ginsberg
125 Beach 17th St.
Far Rockaway, N.Y. 11691

Help

I would like to contact former pilots and enlisted pilots of VF-2 who flew the Grumman F2Fs (1935-1940).

Johnny Burnett
976 N.E. Oneonta St.
Portland, Ore. 97211

Kudos

Congratulations tall as the stars and wide as the Milky Way. Your article on the test tunnel in the March 1979 issue is superb.

I have been teaching physics for 30 years, and this is by far the best article I've read on the subject. You may be sure I'll use it in my work.

For many years the information offered in *Naval Aviation News* has been a gold mine of reference material which I have used time and again in my science classes.

My thanks for making such dynamic information available.

John M. Scott, S.J.
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SQUADRON INSIGNIA

Reconnaissance Attack Squadron 12 was commissioned on July 1, 1965, at NAS Sanford, Fla. From its beginning, the squadron's call sign was Speartip, symbolized by a speartip climbing into a clear blue sky at supersonic speed. The squadron motto, "We Point the Way," complements the insignia. On July 2, 1979, when RVAH-12 was decommissioned, its RA-5C Vigilantes were flying out of NAS Key West, Fla. Last squadron skipper was Commander O. P. Burch.

naval aviation news