naval aviation news

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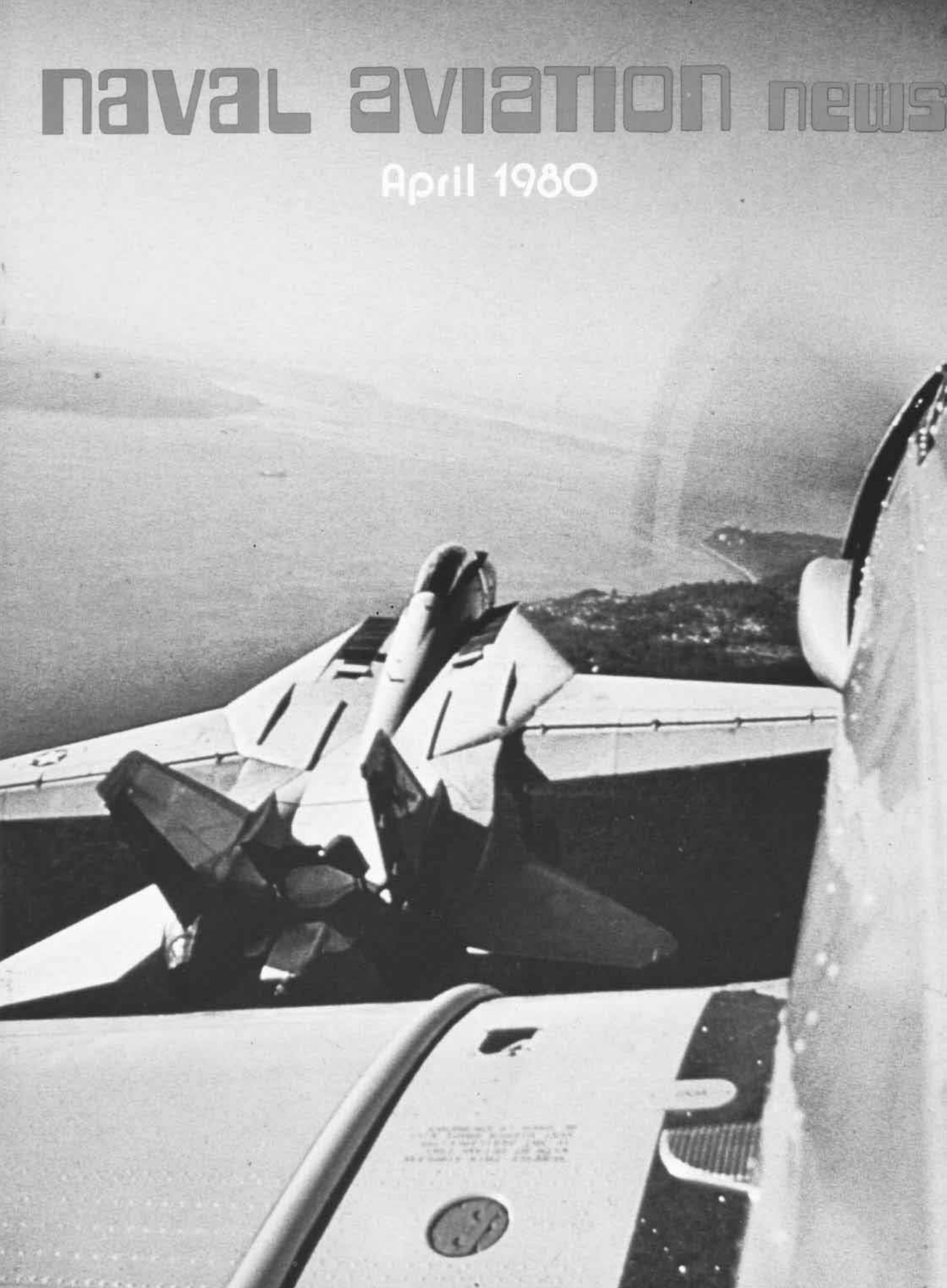



U.S.NAVY

naval aviation news

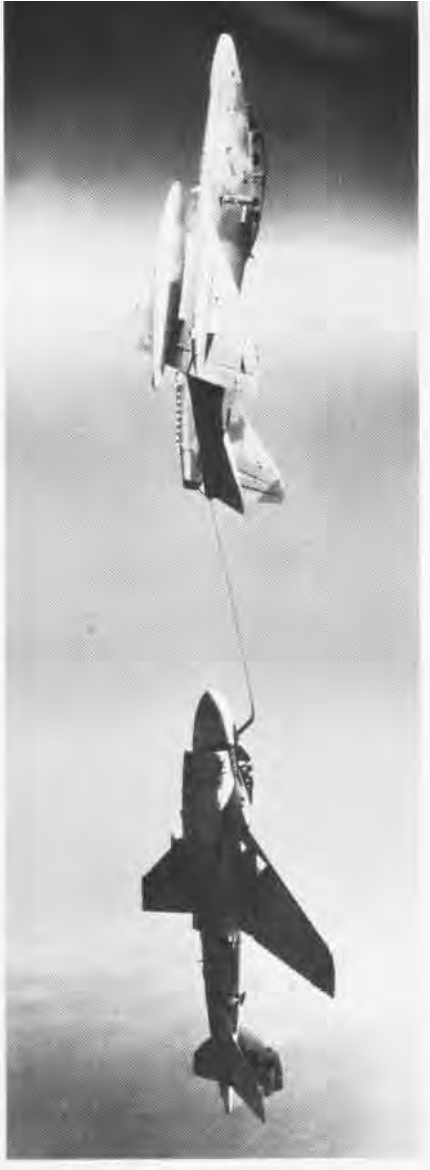
SIXTY-SECOND YEAR OF PUBLICATION

COVERS — Front: Jim Larsen, an aeronautical engineer and expert aerial photographer, was in the rear cockpit of an AT-6 Texan when he filmed an SNJ flown by Ben Harrison in trail behind a VF-2 Tomcat during the International Air Show held in Seattle, Wash., last year. Lt. Bob Baker was flying the F-14 with Lt. Chris Quinn, his RIO. Back: Naval Aviation History Office staffer, Mike Walker, filmed the AT-6 Texan with Japanese Zero markings and the B-17 at the Confederate Air Force's AirSho 79 in Harlingen, Texas, last October. CAF supplied the formation shot of an F4F Wildcat leading an F6F Hellcat and F8F Bearcat. Here, McDonnell Douglas' Harry Gann filmed the Blue Angels, with Cdr. Bill Newman in lead, as they passed the Washington Monument in the nation's capital last September.

EDITOR'S CORNER

Cockpit Quiz. Can you identify the airplane this cockpit belongs in? Test your knowledge. Examine the photo for five seconds; then give a guess. Sean Milligan, a Naval Aviation buff from Rhode Island, sent us the photo. Answer is at bottom of the page.

Which One's One? Lt. Bart Everett began building this *Skyhawk* as a toy for his four-year-old son, Todd, in 1978. The endeavor soon blossomed into a major design challenge and after 500 hours of labor and a lot of sweat, the one-third-scale, battery-powered model was unveiled last fall in Pensacola. Many people helped with the project including personnel from VT-4 and the *Blue Angels'* ground crew who gave the aircraft a perfect paint job. Lt. Everett, who flew the TA-4 *Skyhawk* in the training command, completed the project in behalf of the Navy Recruiting District, Montgomery, Ala., where he is assigned as engineering recruiter for officer programs. The little *Skyhawk* will be appearing on high school and college campuses, in fairs, parades and at air shows to help the Navy recruiting effort. That's Todd in the cockpit. Answer: AJ *Savage.*



Just Hang On. McDonnell Douglas' Harry Gann sent us the picture of a *Skyhawk* hauling an *Intruder* "straight up," with the following information: "I greatly admire the photograph of the Grumann A-6E going vertical that appeared in the July issue of *Naval Aviation News.* However, I wondered how the Grumman photographer, Larry van Wallendael; LCdr. Bob House, pilot; and LCdr. Lou Lally, B/N, could get that product of the Grumman Iron Works to go vertical. It is a well acknowledged fact that the A-6 can carry an infinite number of bombs but going straight up is not one of its noted feats. After some research, I think I have discovered how it was accomplished. The enclosed photograph shows how they probably got the *Intruder* in that position."

Over to you, Grumman.

DID YOU KNOW?

At the Naval Air Test Center

Aircraft Store Compatibility Tests

Aircraft store compatibility is defined as the ability of an aircraft and a store to coexist without unacceptable interference; and the capability of the store to be separated from the aircraft under tactical conditions.

The research which precedes testing includes a survey of literature on the new weapon and an analysis of photographic data of similar tests, in order to predict the behavior of the store. Computer mathematical models and wind tunnel test data are required for new stores and/or new aircraft to predict carriage and separation characteristics. This identifies problems and sometimes reduces separation flight test requirements.

The initial phase of compatibility testing – clearance and fit checks – ensures that the store is physically compatible with the aircraft suspension system; and that sufficient clearance exists between adjacent stores, aircraft surfaces, flight control surfaces and the ground. Electrical tests determine the compatibility of electrical connectors, available aircraft electrical power, interference with other electrical/electronic systems, hazards of environmental electronic radiation and interference between installed instrumentation and aircraft. Structural tests investigate aircraft/store integrity to withstand all the forces during ground handling, captive carriage, carrier operations, separation and jettison. Maintainability checks, loading tests, fuzing and arming wire checks, and control and release mechanism tests establish procedures, evaluate support equipment and ensure proper performance of all systems.

The final phase of testing involves flight tests, including both captive carriage and actual separation checks. Strain, acceleration, vibration, flutter and other critical parameters can be measured by transducers. Instrumentation may be monitored via real-time telemetry. Range facilities provide tracking data and real-time video monitoring. A combination of on-board cameras, chase aircraft photography, and/or theodolite coverage provides high-speed photographs. There are captive carriage tests to ensure satisfactory conveyance of the store under all operational conditions. A program of rolling maneuvers, symmetrical/asymmetrical pull-ups and sideslips at different airspeeds defines the safe carriage envelope.

Store separation tests ensure satisfactory separation of the store from the aircraft during normal release and jettison. The goal of testing is to provide the fleet with a release envelope as large as possible, to give the operational units maximum operational flexibility. Mixed loading tests follow to establish mixed loading limits. Finally, jettison tests are conducted, using various aircraft loadings.

After Test Center store testing is completed, a recommendation is made to the Naval Air Systems Command to list the store in the applicable tactical external store limitation tables.

K. Agiriadis

LAMPS MK III

NATC Patuxent River, Md., is the principal test site for the technical evaluation by NavAirSysCom of the LAMPS MK III ship/air weapons system. The LAMPS MK III program will develop a manned helicopter which supports and acts as an extension of a ship's weapons system. The MK III system consists of four major elements: the helicopter (SH-60B), aircraft avionics, shipboard electronics, and shipboard support facilities.

To fulfill its primary mission of antisubmarine warfare, LAMPS MK III

DID YOU KNOW

incorporates the latest technology and a new air vehicle, the SH-60B *Seahawk*. Antiship surveillance and targeting, and other related secondary missions will be supported by the weapons system to extend the ship's tactical, decision-making capabilities beyond previous line-of-sight limitations. The recovery, assist, secure and traverse (RAST) system will enable safe helicopter operations in heavy sea states with its haul-down, clamping and traversing hardware components.

LAMPS MK III is one of the most complex and diversified weapons systems ever to be evaluated at NATC. Although it has an independent capability to perform its missions, the primary mode of operation is designed to be under ship control. A fundamental objective in the testing is to use a whole system approach, i.e., ship/air combined testing. LAMPS MK III will not be evaluated with the historical black box individual system approach but as a totally integrated weapons system, flying realistic mission profiles that will be encountered in its intended mission environment. This type of testing, involving separate contractors for the aircraft, the weapons and shipboard recovery systems, plus concurrent Navy developmental and operational testing, requires a complex schedule.

LCdr. Robert W. DuBeau

Automated Inflight Antenna Pattern Measurements

Navy tactical aircraft typically have 10 or more separate antennas. They allow the on-board systems to respond to the external environment as well as communicate, navigate and otherwise perform as part of the fleet mission. The performance of each antenna is a major factor in the aircraft's overall operational capabilities.

NATC's Systems Engineering Test Directorate has developed a facility which is providing the Navy with the capability to evaluate airborne antenna systems designed for operation in the 10 MHz to 18 GHz frequency range. Pilots no longer have to fly what were exhausting 24-point cloverleaf patterns. The aircraft under test can now fly skid turns or straight inbound or outbound runs, offset from the ground measurement facility. Data is taken during approximately 80 percent of the flight test time so that the measured antenna patterns consist of several thousand data points instead of just 24. The facility has been installed in a new modular building and the entire system is linked directly to the Chesapeake Test Range by several data lines. The test range provides radar space position, tracking and aircraft vectoring services for the antenna flight tests.

The heart of the automated inflight antenna measurement facility is a Hewlett Packard 9603 minicomputer based data acquisition and control system. It automatically tunes and calibrates the ground receiver systems, measures the amplitude of test signals received, and then determines and plots the antenna radiation pattern as a function of the aircraft azimuth angles. The facility utilizes two antenna systems, depending on the frequency of the antennas being tested, from 10 MHz to 700 MHz, or above 700 MHz.

The capabilities of the facility to measure aircraft antenna patterns in flight with a high degree of accuracy will continue to be refined and expanded so that the Navy's aircraft mission systems will not be compromised by poor antenna performance.

J.R. Seale and D. DeCarlo

RAdm. Seiberlich Retires

Rear Admiral Carl J. Seiberlich, Commander Naval Military Personnel Command, retired on January 31, completing 37 years of service. He is the first graduate of the Merchant Marine Academy to become a flag officer in the U.S. Navy.

A Naval Aviator since April 1947 RAdm. Seiberlich was one of the few pilots and only flag officer on active duty who had commanded an airship (dirigible) and also qualified in fixed wing and rotary wing aircraft. He was awarded the Air Medal in 1952 for his achievement in aerial flight as commanding pilot of a Navy airship involved in test flights under complex and dangerous conditions. The same year, RAdm. Seiberlich received the Harmon International Trophy for the year 1951 in recognition of the development of the world's first variable depth towed sonar.

While RAdm. Seiberlich was commanding officer of *Hornet,* he directed the recovery of the *Apollo 11* and *12* astronauts in July and November 1969. The admiral and *Hornet's* crew received the Meritorious Unit Commendation for these historic missions. His decorations also include the Legion of Merit with a silver star.

Tomcat Smoke

These cigar-shaped tanks provide extra fuel for the F-14 *Tomcat.* Here, Grumman technician Bill McCormick inspects the tanks before they are installed under the *Tomcat's* fuselage. Two tanks can add over 500 gallons of fuel capacity to the aircraft.

Grampaw Pettibone

Exercise "Dawn Patrol"

Following an 0430 brief as the spare "alert fighter" the crew of this ill-fated F-14A *Tomcat*, CAP-04, launched as the duty combat air patrol (CAP) fighter. Climbout and overhead tanking were uneventful. CAP-04 then proceeded to intercept incoming contacts participating in the spirited "Dawn Patrol" exercise. After two hours of flight, CAP-04 was directed to remain airborne through the next event and vectored to a tanker, taking on 9,000 pounds of fuel. With a full load of fuel and 1,700 pounds of assorted missiles, CAP-04's gross weight topped out at 60,000 pounds.

Immediately after refueling, the F-14 was vectored to intercept two targets proceeding inbound at approximately 30,000 feet altitude. The intercept was initiated in zone 2 afterburner with the pilot acquiring visual contact with a pair of USAF F-15s in a right, line-of-bearing formation. CAP-04 passed the lead F-15 head-on and maneuvered to meet the trailing aircraft head-on. The second F-15 executed a starboard turn which CAP-04 matched with a port turn.

After more turning the two aircraft again passed head-on and then reversed. CAP-04 directed his RIO to keep track of the lead F-15 (7 o'clock low) while he executed a climbing right turn toward the trailing F-15 now at his 4 o'clock position. Climbing through 30,000 feet at 150 kias, gross weight estimated at 59,000 pounds, in a decelerating 20-degree nose-up right turn, the aircraft stalled and departed controlled flight.

Anti-departure controls were immediately applied with military power selected. No recovery was effected. Instead, the aircraft rapidly entered an upright spin to the right, verified by turn needle and visual cues. Anti-spin controls were applied. After two 360-degree horizontal turns, engine "chugs" were heard, accompanied by simultaneous aural warnings

of turbine overtemp. Both throttles were retarded from military to idle power. The aircraft's nose made two oscillations and the tail was felt to settle as the F-14 became firmly established in a flat upright spin. The pilot was progressively incapacitated by the increasing "eyeballs out" G force and was pinned against the glare shield with his lap belt loose and shoulder harness unlocked.

The RIO, with lap belt tight and shoulder harness locked (but with several inches of slack) was bent forward with his helmet forced against the glare shield. While passing through 19,000 feet he transmitted "Mayday, Mayday, 04's in a spin, 04's in a spin." Ten seconds later, he transmitted, "16,000 feet, canopy's going." The RIO experienced extreme difficulty reaching and pulling the canopy jettison handle. It required both hands due to the excessive G forces.

His oxygen mask, which was sliding up over his eyes, was removed in an unsuccessful attempt to reach the ejection seat face curtain. However, he was able to reach the lower ejection seat handle and pulled it with both hands, ejecting himself and the totally incapacitated pilot as they passed through 12,000 feet. The flyers had made eight or nine spin revolutions. During the descent, the RIO communicated on his PRC-90 survival radio with the circling F-15 pilots who called for rescue assistance. Two SH-3D helos located approximately 50 miles away were dispatched to the scene and rescued the *Tomcat* crew.

Grampaw Pettibone says:

Going into a spin is like stepping out on your wife. It may be exciting and you may get away with it, but if she (or the Grim Reaper) finds out about your "spinning" around, you're in for trouble.

The cause of this accident is tagged plainly and simply as pilot error. This experienced aviator is known to be aggressive and flies his aircraft to the edge of its limits. Old Gramps supports this philosophy wholeheartedly. But dang-it-all you gotta know what those limits are and be able to effect recovery should they be exceeded. If you can't, then don't!! Although highly experienced, this was the first time this pilot had flown the F-14 into such a high altitude, high gross weight, and low airspeed regime. He misjudged the situation badly, lost control of his aircraft, and nearly lost his and his RIO's life.

Thanks to the RIO, the rescue that followed was more successful than the intercept and resulted in a comparatively brief raft ride. Despite bad positioning during ejection, neither crewman suffered significant injury.

Gents, it's more than well-documented that the F-14 exhibits a flat-

ILLUSTRATED BY Osborn

spin tendency following departure/ engine stalls, and recovery from one is like pulling a scrapping cat out of a wire basket. No more demonstration or ad hoc flight test data is desired or required, please!

Flaming Phantom on Deck

The section of F-4Js split up and proceeded independently to marshal for a night recovery. After pushing over for descent, the pilot of the first *Phantom* observed an A-7 close ahead. He executed several S turns and slowed his aircraft in order to increase separation.

During the S turns his attitude directional indicator (ADI) froze in azimuth at 150 degrees but continued to function normally in pitch and bank. The horizontal situation indicator functioned normally and was used for heading information until the *Phantom* was about four miles from the carrier, at which time the ADI began working properly. Final radar contact was established with the F-4J left of course. Shortly thereafter, the pilot was given a heading correction, informed that he was approaching glide slope and advised to commence further descent. He responded late, holding well above glide slope until the one and one-half-mile point where he went below glide slope.

From one and one-half to three-quarter miles, the aircraft was on centerline. At the ball call, the aircraft settled below glide path. The landing signal officer (LSO) transmitted, "Don't settle." The aircraft continued to settle. The LSO advised, "You're settling." Power was added, causing the aircraft to go above glide slope. Then power was reduced and the aircraft decelerated, falling below glide path. "Power back on," advised the LSO. There was no response from the aircraft. "Power!" called the LSO. "Wave off! Wave off! Wave off! Wave off!" Simultaneously, the wave-off lights were actuated but there was still no response from the pilot.

In close, the aircraft drifted right, then rolled back to the left. The aircraft struck the ramp in a left-wing-down, nose-high attitude and exploded into flames. The radar intercept officer (RIO) initiated dual ejection and the crewless aircraft continued up the deck and engaged the number one arresting cable, stopping in mid-deck after 155 feet of rollout.

The pilot was ejected to the left, landing in the water off the ship's port side, and was rescued within 20 minutes. The RIO was ejected forward. His chute drifted over and onto the flight deck. With 40 knots of wind across the deck, the RIO was dragged by his chute into the burning F-4. He came to rest under the wing and belly of the burning aircraft with his shroud lines entangled in the left wing pylon. He was pulled to safety.

Holy roastin' RIO! To escape a ramp strike and then become shroud-bound in flames on the flight deck is asking too much. The cause of this accident was pilot error. Had it not been for the quick reaction of the *Forrestal* flight deck crew, and the gallant efforts of V-2 division officers, Lieutenant Commander Denny Bergo and Lieutenant Dave Hastings, this RIO, who was severely injured, may not have survived.

Observing the bright fireball as the aircraft impacted the ramp, LCdr. Bergo and Lt. Hastings ran aft to assist with rescue operations. Fire-fighting teams had broken out fog foam hoses and were approaching the aircraft. Some delay was experienced in getting the hoses activated. LCdr. Bergo could see the RIO lying under the burning aircraft, engines running with afterburners ignited. Upon seeing the RIO move his arm in an attempt to free himself, LCdr. Bergo dashed under the left wing and tried to pull him free, but he remained entangled in his shroud lines. Lt. Hastings appeared simultaneously to assist. Together, the two officers managed to free the six-foot three-inch, 250-pound RIO from his harness and drag him away from the burning aircraft. The engines were ultimately secured by a heavy dosage of fog foam.

The quick reactions of LCdr. Bergo and Lt. Hastings resulted in saving the life of a fellow shipmate. They are highly deserving of the Navy-Marine Corps Lifesaving Medal which they received for their actions.

Grampaw Pettibone says:

Calverton

By Bill Miller of NavPRO Bethpage

At the end of an island in the northeast sector of the United States is the Navy's biggest little air facility, and the least understood.

The air facility is at Calverton, N.Y., on Long Island, located 50 miles east of the Grumman Aerospace Corporation and Navy Bethpage facilities. Officially, it is titled Naval Weapons Industrial Reserve Plant (NWIRP), Calverton. NWIRP, which recently celebrated its 25th anniversary, is a government-owned contractor-operated facility.

Although the airfield is listed on aviation charts and publications as the Peconic River Plant (Grumman), NWIRP Calverton is an industrial aircraft plant which is part of the Navy's industrial reserve. It is under the control of the Naval Air Systems Command and the local cognizance of the Naval Plant Representative Office (NavPRO) Bethpage.

Grumman's main complex is located at Bethpage, 30 miles east of New York City, and includes the corporate headquarters, the principal engineering and manufacturing facilities, and research and electronic systems centers. It also is home for most of the people assigned to the NavPRO, which is responsible for government contract administration at Grumman. Headed by an aeronautical engineering duty officer (1510) of captain rank, the office is the largest NavPRO the Navy has, with an assigned ceiling of 210 civilian and 13 military personnel.

The air facility at Calverton grew out of a necessity which still plagues air operations in other areas today. That problem is the continual strangulation from residential growth, right up to the facility property lines, which makes it virtually impossible to conduct safe jet aircraft operations.

This became apparent at Bethpage

Captain Nori Endo, Naval Plant Representative Bethpage, climbs out of an F-14 Tomcat after a test flight. He is most proud of the Calverton facility which comes under his command:

"I don't know of another place where the Navy has built a facility with such profound consideration for its integration into the surrounding community. This is especially impressive since Calverton is near one of the most densely populated parts of the U.S. Utmost concern has been exercised to preserve the natural setting of the area and to keep the environment as unmolested as possible.

"We also have an outstanding relationship with air control authorities. Through the cooperation and coordination of the North American Air Defense Command, the Federal Aviation Administration and other organizations, air crews are able to operate out of Calverton with relative ease. We can receive clearance into a working area over the water with minimum complication. This is especially important considering the heavy flow of air traffic in this area."

in the early 1950s. Planners decided to extend their airfield by 1,000 feet, giving them a 6,550-foot runway. This was adequate for prop aircraft but still was not long enough to provide a sufficient buffer crash zone for jets. In the meantime, they conducted a search for a more suitable site as a replacement airfield. Calverton was selected because it consisted mostly of farm and wooded land and possessed the other required characteristics for a jet aircraft installation.

Construction began in 1952, after the Navy acquired 4,400 acres, and Calverton was operational by 1954. Three thousand acres were leased to Grumman for final assembly and flight test of Navy aircraft, with the remaining 1,400 reserved as a buffer zone. Barely four years later, residential development around Calverton accelerated to the point where additional acreage was needed to prevent a repetition of the Bethpage encroachment. In 1958, an additional 2,600 acres were acquired for a total of 4,000 acres of buffer zone land.

Today, a visitor to Calverton gets a feeling of total serenity. And a breath of fresh, country air. The general appearance is one of complete organization with immaculate facilities and manicured grounds. If you arrive by car you are more likely to encounter a herd of deer on nearby roads than a snarl of traffic. As you enter the gate, it's not unusual to see people feeding swans or Canadian snow geese; a woodchuck or two stretching their necks up through the grass for a better view of Navy supersonic planes being flight tested overhead; or largemouth bass and other pan fish in the clear streams that trickle through the facility.

Should you be one of the lucky pilots delivering an aircraft, such as an A-6E *Intruder,* for induction into the TRAM program and maybe later picking up a new F-14 for delivery to a fleet squadron, you might encounter an EA-6B on short final, an E-2C downwind, or F-14 lifting off the runway. You'd be impressed by the mosaic view from aloft. The airfield is beautifully situated in a completely forested area spotted with a few farm tracts. Taxiing toward the parking ramp, you might notice A-6Es, EF-111s, F-14s, EA-6Bs, a TC-4C or an E-2C parked along the ramps. You'd most likely be welcomed aboard by Lieutenant Commander Jim Berry.

Berry is the government flight representative and flight test director at Calverton for NavPRO Bethpage. Assisted by a staff of flight test pilots and civilian experts, he is responsible for recommending and implementing policies and procedures of flight test operations with Grumman Aerospace Corporation (GAC) and the NavPRO. His job includes insuring that GAC's flight program is satisfactory and complies with contract requirements; evaluating and approving GAC's flight crew qualifications and training program; approving minimum crew requests for flight activities; evaluating programmed flights and insuring proper use of aircraft for each flight; monitoring production and experimental flight testing; monitoring Navy/Air Force flight testing to ensure that each meets specified requirements; conducting briefings for ferry pilots and coordinating deliveries; presenting pilot and flight crew member recommendations for flight test changes; conducting long-range planning for flight facilities; and maintaining liaison with the Federal Aviation Administration.

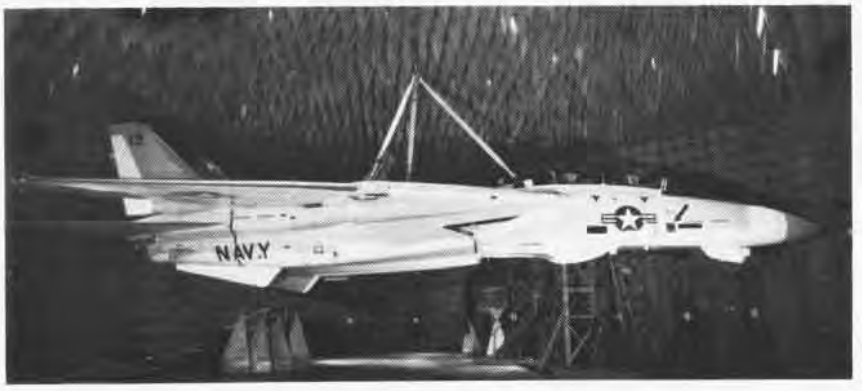
Questions, problems and coordination with respect to noise abatement,

LCdr. Jim Berry receives flight test briefing in his Calverton office. Berry is the flight test director at Calverton.

land management, zoning, fire fighting, conservation, leases and permits to farmers are all part of Berry's explicit and implicit areas of responsibilities. These responsibilities parallel those of the skipper of a naval air station.

Assisting Berry are Lieutenant Commanders Rick Phillips (F-14 production test pilot and operations officer) and Larry Smith (A-6E/EA-6B production test pilot/Natops); and Lieutenant Karl Bayer (F-14 NFO and safety officer). To the local community, representatives of various federal agencies and GAC, Berry is the Navy's man on the scene. He is the focal point through whom flight operations, routine business and technical activities at Calverton are performed.

The Calverton facility is one of the finest in the country today. It is located within reach of urban areas



Calverton scenes clockwise from left: an F-14 suspended in anechoic chamber; aircraft on production line; hunting fowl in the southwest buffer zone; F-14 on approach; and pilot's view of air facility looking from West to East.

and yet provides an ample clear zone surrounding the flying area. There are about 900,000 square feet of floor space leased to Grumman for final assembly and testing of aircraft. Aircraft manufactured by GAC at Bethpage are trucked in sections 50 miles to Calverton where they are joined.

Component-system installation and checkout are performed by GAC personnel in an aircraft assembly hangar. The aircraft then moves to the paint hangar where the final finish coat, insignia and all markings are applied. Aircraft compass calibration, ordnance tests, fuel calibration and engine ground tests are also performed here. After preflight tests and inspections, it is placed in flight status.

After its first flight, it is housed in a flight test hangar which features communications capability, IFF and radar equipment, and an automated telemetry station. The hangar is home for the aircraft until all flight acceptance tests of the aircraft are completed by Grumman and the Navy flight crews.

The Calverton facility has unique features which make it ideal for aircraft production and invaluable for development testing. The previously mentioned telemetry station, operating in conjunction with a Navy-owned relay station on a hill two and one-half miles to the south of the airfield, can monitor development flight tests in real time. This allows engineers to analyze test results while the flight is taking place. Operating as a computerized data reduction center, it can monitor and record multipurpose test flights, significantly reducing the number of flights needed to run a test program on new or modified aircraft, while shortening the aircraft develop-

Gun-firing test

ment time.

An anechoic (sound suppressing) chamber, the largest of its kind in the free world, can house an entire aircraft within its 87-square-foot area. While suspended in the chamber with its radiation absorbent surfaces, an aircraft can undergo tests of all electronic systems under full power in a simulated free-space environment. The chamber construction prevents electronic radiation leakage to the outside and permits classified testing to be conducted under secure conditions.

Other facilities include a noise check hangar, an electronic countermeasures test range, a gun-firing test area and bore-sighting equipment to check aircraft armament.

The field has two runways oriented at right angles to each other. One is 7,000 feet long and the other 10,000, enough to accommodate the largest jet aircraft. The former has an operational ILS installation. Both are equipped with arresting gear.

At the end of 1977, 902 acres of the buffer zone were transferred to the Veterans Administration for a Calverton national cemetery, serving veterans of New Jersey, Connecticut and metropolitan New York. The remaining 3,100-acre buffer zone consists of terrain diverse enough to please most naturalists or outdoorsmen. There are many fresh water streams, marshes, bogs, watershed ponds and wetlands branching off from the Peconic River which flows through the Calverton property. Migrating waterfowl stop here on their journey to and from their north country home. Some remain to winter in this area. Several former farms on the land sustain deer, pheasant, quail, grouse, rabbit, squirrel and woodchuck. The ponds carry pickerel, large-mouth bass, yellow perch and other pan fish. This entire area comes under the protection of the Federal Coastal Zone Management Act.

There are approximately 410 acres of active farmland within the buffer zone. These are leased to local farmers for agricultural crops. Another area is provided free of charge for raising crops and teaching the rudiments of farming to handicapped children and young adults. Other areas of the Navy buffer zone are used for public recreation, hunting, fishing, trapping, dog and field trial training. Last August, for example, 12,000 Boy Scouts convened in the woodland of Calverton. It was the largest jamboree gathering of the year on Long Island.

Certain areas of the buffer zone are also used by the Navy and Marine Corps Reserve and the New York National Guard for bivouac and training exercises.

As one can see, Calverton is far more than just a place where aircraft are built and flown away to the fleet. It's the Navy's biggest little air facility, and the least understood.

Crash and Carry

By JO1 Ken Cronk

In days of old, gallant knights would venture forth on their trusty steeds to slay fire-breathing dragons. We all know the last dragon bit the dust some time ago but his nemesis, the knight, has simply taken on a new form. He now wears a shiny fire-resistant suit, slightly more comfortable than his predecessor's armor, and his trusty steed is a 300-horsepower diesel monster called an MB-5 crash truck. The knight is a member of the USS *Nimitz* crash and salvage team, and his enemy is still fire.

Aboard *Nimitz,* this highly trained crew is responsible for the operation and maintenance of all flight deck fire-fighting and crash removal equipment. Crew members fight fires, carry out aircrew rescues, and remove crashed or crippled aircraft from the deck.

Fire-fighting training for crash crewmen is given at Memphis, Tenn., Lakehurst, N.J., and NAS Oceana, Va. Crewmen become familiar with the general characteristics of different air-

craft and with ejection seats, canopy jettison systems, emergency access areas, etc.

The *Nimitz* crash and salvage team continuously upgrades its training with an aggressive program. The multi-place rescue basket is one result of this training; another is supersling.

The rescue basket is a square metal basket, conceived by CWO2 Robert Henderson, flight deck boatswain, and built by ABH3s Bret McIntyre and Larry Shultz. It can be put in position with a forklift or can be slung from the crash crane for forcible entry and personnel rescue.

The idea for the basket occurred to Henderson when he read about an incident on another carrier where an aircraft was hanging off the edge of the flight deck with the cockpit over the water. "The rescueman had to put on a safety line, crawl out on the fuselage over the water and help the pilot out," he said. "I thought to myself, 'there's got to be a better way.'" Now there is. "With the basket," he explained, "all we'd have to do would be to sling a rescueman out over the side from the crane – he'd have a working platform, fire extinguisher and forcible entry tools right there with him." The idea is being considered for production and placement on all U.S. aircraft carriers.

The other invention, supersling, is also the product of need, Henderson's ingenuity and his crew's hard work. "For years, aircraft have occasionally wound up in the catwalk for one reason or another," he said, "and that situation always required belly straps around the aircraft fuselage. Trouble is, when you pick up the aircraft, it stays in the same attitude in the air as it was in the catwalk, which may be with one wing pointing straight down. When it is set down, more damage may result – perhaps more than the accident caused."

Supersling has changed that, and *Nimitz's* crash and salvage team has proved it. Using an out-of-service F-4 *Phantom,* they experimented for weeks with different types of rigs. Finally, with approval from *Nimitz's* C.O., Captain J. R. Batzler, the *Nimitz* load adjuster, alias supersling, was put to the ultimate test. The F-4 was lowered into a catwalk to simulate a real crash. The crew backed off and checked its gear, the alarm was sounded and in eight minutes the *Phantom* was rigged, hoisted, rotated in midair, and lowered squarely onto the deck with no further damage to the fuselage, landing gear or wings. ABHAN Robert Johnsen summed up the spirit and intent of the project when he declared, "Now that's realistic training!"

Basically, supersling is a heavy block, with two pulleys, which is held up and manipulated by the crash crane. A hoisting cable runs through each pulley and on both ends of each cable are devices which attach to the belly straps around the aircraft. "The weight of the aircraft puts enough friction on the pulley axle so that it stays at the same angle it was at before being picked up," explained Henderson. "But it is just free enough so that one man can rotate the whole thing once it's up in the air."

The crash and salvage gang on *Nimitz* is a highly motivated group, always looking for a better, safer way to do its job. This is particularly commendable in a job where many hours are spent perfecting techniques which may never be used in a man's tour of duty.

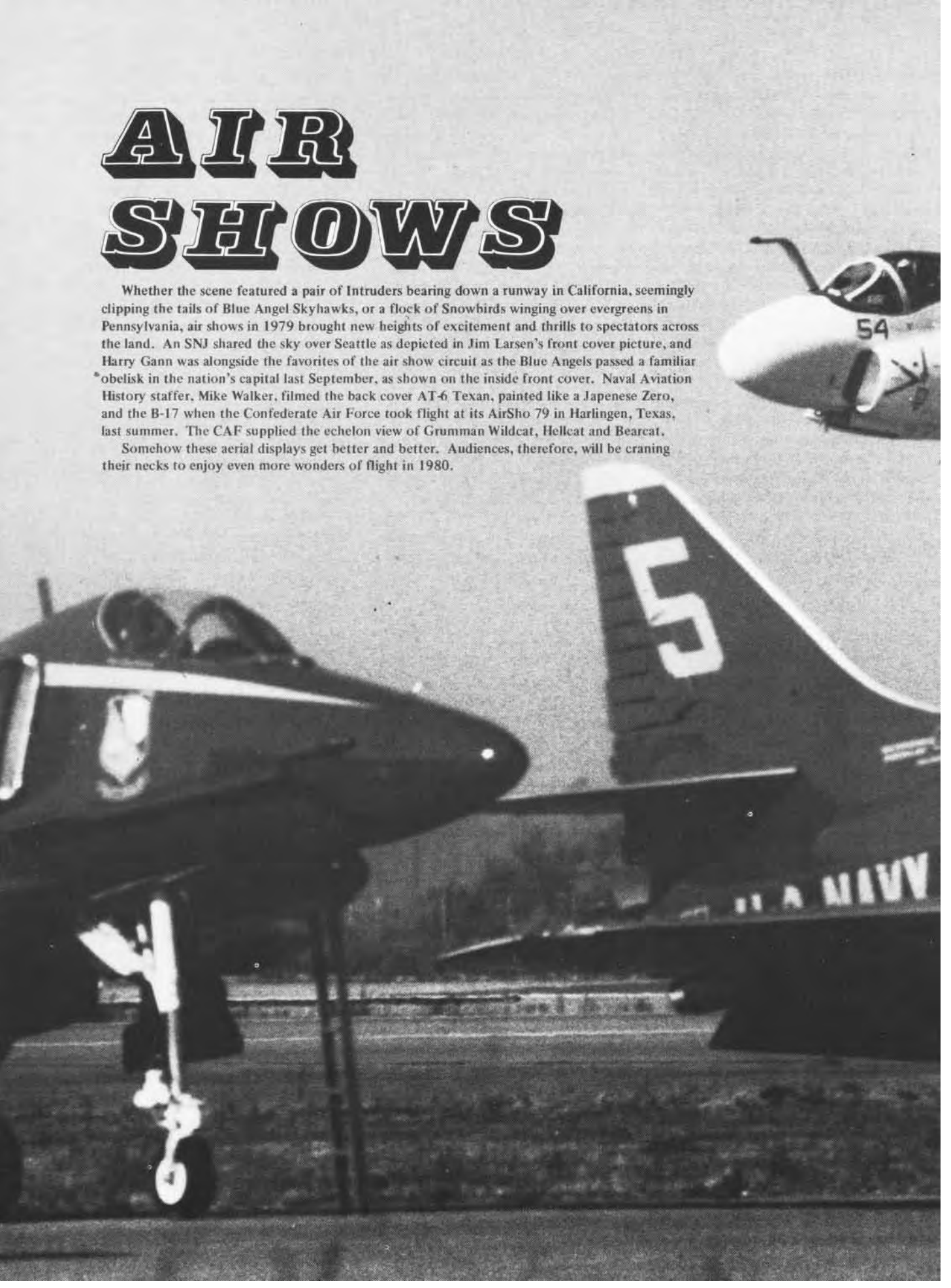
According to crash crew members and Warrant Officer Henderson, credit goes to ABHC Myrl Brown who is directly responsible for the day-to-day operations. "Chief Brown lends truth to the old saying that 'Chiefs run the Navy.'" said Henderson. "He deserves a lot of the credit for the high level of training for the crew and all of the credit for keeping it there."

Under the guidance of CWO2 Henderson and the positive supervision of ABHC Brown, these modern day knights aren't just extinguishing burning dragons; they are technicians in saving lives and aircraft. They work very hard perfecting skills they hope they'll never have to use.

AIR SHOWS

Whether the scene featured a pair of Intruders bearing down a runway in California, seemingly clipping the tails of Blue Angel Skyhawks, or a flock of Snowbirds winging over evergreens in Pennsylvania, air shows in 1979 brought new heights of excitement and thrills to spectators across the land. An SNJ shared the sky over Seattle as depicted in Jim Larsen's front cover picture, and Harry Gann was alongside the favorites of the air show circuit as the Blue Angels passed a familiar obelisk in the nation's capital last September, as shown on the inside front cover. Naval Aviation History staffer, Mike Walker, filmed the back cover AT-6 Texan, painted like a Japenese Zero, and the B-17 when the Confederate Air Force took flight at its AirSho 79 in Harlingen, Texas, last summer. The CAF supplied the echelon view of Grumman Wildcat, Hellcat and Bearcat.

Somehow these aerial displays get better and better. Audiences, therefore, will be craning their necks to enjoy even more wonders of flight in 1980.



A-6 Intruders from Pacific Missile Test Center make a low pass during Point Mugu's air show last October.

Boyington, Catalina and Gay photos by C. Cooney; Tennessee Ernie by Mike Walker.

Clockwise from far left are: a CAF PBY Catalina; George Gay with posters advertising the book Sole Survivor, an account of his ordeal as an ensign in Torpedo Squadron Eight at the Battle of Midway; Tennessee Ernie Ford, who was master of ceremonies at the Harlingen affair; Canadian Air Force CT-114 Tutor Snowbirds who had fans agape at Reading, Pa.'s annual air extravaganza; and WW II Marine Corps ace, Maj. Gregory L. "Pappy" Boyington, on hand to talk flying with fans at the CAF show.

LCdr. C. Carson

THE ANDREWS CONNECTION

By Commander Rosario Rausa

It began more than 20 years ago. A young engineer in the Bureau of Aeronautics telephoned the *Naval Aviation News* office and informed one of the staff members that an aircraft had been misidentified in a caption of the current issue. The editor checked the source material for the photograph in question and, sure enough, the caller was right. A month later the engineer called once more. "I don't like bothering you," he said, "but you missed again." Whereupon he correctly named an aircraft which had been improperly described.

Magazine staffers had prided themselves on accuracy and attention to detail, so they were both chagrined and thankful that the engineer had called. But when he phoned a third time, about a month later, the man from BuAer was dealt with in a more forthright manner.

"Look," said the editor, "why don't you save us both the trouble. Could you come over here and look at all the captions before we go to press?"

Since the Pentagon, where the magazine was housed in those days, was only a short bus ride from the Main Navy/Munitions Building complex (no longer standing) on Constitution Avenue in Washington, D.C., it would not be too great a distance to travel in the interest of accuracy.

"I'd be happy to," answered Hal Andrews.

It wasn't long after the engineer and aviation enthusiast began scrutinizing photo captions on a continuing basis that Hal displayed his literary talent. He wrote a couple of articles which were published in the magazine and very well received by the readership. Realizing they had an ace in their midst, the editors asked Hal to join the staff as a contributing editor and technical advisor on a permanent basis – non-salaried, of course. Hal agreed and in April 1960, 20 years ago this issue, his name appeared on the masthead for the first time. Thus was launched an association between *Naval Aviation News* and one of the most redoubtable experts on current and past aircraft in the world of flying today.

A native of Ithaca, N.Y., Hal was bitten by the model-building bug as a 12-year-old and has been intrigued by machines that fly ever since. He knew he wanted to be an engineer early in his life and interrupted his education to join the Navy in 1944. He passed a special test and qualified for a demanding one-year radar/radio technical school. He earned an Aviation Radio Technician rating, but the war was over before he could apply his skills in the theater of combat. He was discharged from the service, attended Cornell University in his hometown and graduated with a bachelor's degree in mechanical engineering in 1948. His interest in aeronautics had been solidified as a Navy man, so it was a natural consequence that he seek employment in the aviation industry.

He went west to Washington State and took a position as a design engineer with the Boeing Aircraft Company in Seattle. There, he was involved primarily with Air Force planes such as the B-47, B-50, B-54, and in its early development stages, the B-52. Although he would have preferred working in the field directly with pilots and aircrews as a service engineer, he enjoyed laboring on design problems.

"The B-54 was a novel design," remembers Hal. "It was a stretch version of the B-50, designed for long range. Development of the in-flight refueling boom, however, curtailed the project. The capability of extending range through aerial refueling diminished the need for the B-54."

He was gaining valuable experience at Boeing and was also actively drilling as a Naval Reservist with a local unit. In fact, because he wanted to seek a commission as an engineering officer, he was taking courses in aircraft mechanics. Under existing rules, this was the best way to qualify for the engineering officer program.

One day in 1950, however, the roof fell in on Hal Andrews. It was not a catastrophic event, but it did serve to alter his career path.

"It was 2 p.m.," Hal remembers, "and I was called to the phone. A voice on the other end said I had one hour to report to my naval unit. We had been activated."

"I was quite perturbed at the time," says Hal, "but as it turned out, I felt I became more useful to the Navy than I was to Boeing. Our squadron was ordered to Whidbey Island, returning to Seattle to conduct operational training in the *Privateer*.

Released from active duty in 1951, he moved with his family back east. Hal signed on with the Cornell Aeronautical Lab in Buffalo, N.Y., and after a year there, returned to his alma mater to graduate school in aeronautical engineering.

He was interested in applying his talents to the military aircraft field and arranged for an interview with Navy officials at the Naval Air Test Center in Patuxent River, Md., in 1955. He stopped, en route, at BuAer's Washington headquarters, a delay that proved significant. He never did get to Patuxent River and instead started working as an engineer in BuAer, where he's been ever since. (BuAer was reorganized as the Bureau of Weapons on August 18, 1959, then became the Naval Air Systems Command on May 1, 1966.)

Hal currently holds a key position in NavAirSysCom as Director of Advanced Aircraft Developments and Systems Objectives Office. He deals with Naval Aviation's requirements for the future. His deep involvement in important aircraft programs of the past helps him today with his demanding duties. Through the years, for example, Hal has worked on the F11F *Tiger*, F4D *Skyray*, F3H *Demon*, TT-1 *Pinto*, F-8 *Crusader*, T-2 *Buckeye*, F-4 *Phantom*, A-6 *Intruder* and the tri-service VSTOL aircraft.

Not surprisingly, the ways of doing business at NavAir-

Hal examines structural component and, inset, in flight gear for orientation flight.

SysCom have changed over the years. Budget restrictions and the ever-changing tactical scenarios in a sometimes volatile world have made the engineer's job more complex than ever. Comments Hal, "The Navy developed excellent engineers in earlier years when each one was working with several aircraft projects simultaneously. Technical challenges tested the engineer's mettle in those days with the very rapid progress in aeronautical technology. Today's engineers are equally challenged by our more complex aircraft and missile systems, and must be able to function effectively in a much more involved decision-making/management process."

In any event, Hal Andrews has precious little spare time and *Naval Aviation News* is most fortunate that he spends so much of it on magazine business. He dutifully reads all copy for each issue, makes notes in the margins — which are read by the editors with great care — and manages to visit the office at least once a month to examine the page paste-ups before they are sent to the printer. With his practiced eye, he helps spot caption and other errors, somehow missed earlier.

In 1961, the 50th anniversary year of Naval Aviation, he wrote monthly articles on naval aircraft which comprised a definitive source work. Since 1973, he has authored the Naval Aircraft Series, a regular two-page feature, complete with drawings and performance data, on aircraft old and new from the Navy/Marine Corps inventory. He has participated in non-literary projects, like the emplacing of the NC-4 (first aircraft to fly across the Atlantic) flying boat on the Mall in Washington, D.C., celebrating the 50th anniversary of that achievement.

Hal also provides sage editorial judgment. If a certain story strikes him as inappropriate for the readers, he says so directly. If another story carries a message that needs beefing up, he recommends doing so. Invariably, editors have not only followed but welcomed his advice. As one staffer put it, "He's like a tough critic. But if we get the copy by him, we know we're probably O.K."

Hal has a vantage point which is detached from the daily routine of the magazine. At the same time, he is reasonably intimate with the production process. He qualifies, therefore, as a sort of super editor. Because of his track record (No one can ever recall Hal being wrong on an aircraft identification problem, for instance.), his astute, helpful criticism and his abiding support, Hal has become an invaluable fixture. Staff members feel much better after he has scrutinized their work and, in this sense, Hal Andrews is like an insurance policy for *Naval Aviation News*. It's hard to imagine putting an issue together without him. It helps, of course, that in addition to his extraordinary qualities of intellect and dedication to accuracy, Hal possesses an affable and highly engaging personality. He is as popular and well-liked as he is respected by his colleagues and that says a lot about the measure of a person.

A genuine aviation buff, he has a passion for precision where facts and details are concerned. He also helps other writers by reviewing their manuscripts. "It's important to set the record straight," he says. Hal contributes pieces to other magazines and wishes he had time to write even more. In the article on the *Sparrowhawk* which follows, Hal chronicles the story of one of Naval Aviation's most fascinating flying machines. Highly detailed and quite technical in nature, the story reflects the complexities and decision-making processes involved in developing an airplane 50 years ago. He writes from his perspective as an engineer and traces the events which preceded and followed the production of this remarkable aircraft.

Although he is not a pilot, Hal soloed years ago and flies occasionally nowadays. Last year, in connection with NavAirSysCom duties, he flew on several orientation flights in Europe, getting a firsthand look at possible contenders for a Navy/Marine Corps VTX training aircraft.

Why does Hal Andrews do it? Why does he spend so much time and effort apart from his regular job and family to help make this magazine a meaningful, if not enlightening voice for Naval Aviation? (He and his wife, Ellen, have two sons and a daughter.) Hal's answer is as forthright as the man himself.

"I feel very strongly that Naval Aviation is an outstanding military aeronautical activity," he says. "I enjoy working with the pilots and Naval Flight Officers, especially because of their highly positive outlook. If I can contribute in any way to sustaining the quality of Naval Aviation, and that positive outlook, I will surely try to do so."

We add without reservation that he certainly succeeds. We extend to him a special tip of the hat and, from deep down, a most sincere thanks.

Sparrowhawk –

By Hal Andrews

Along with the Sea-Air Hall at the National Air and Space Museum in Washington, D.C., a Navy exhibit that always attracts attention is a small, colorful biplane suspended among the lighter-than-air displays. While the *Sparrowhawk's* presence in the lighter-than-air section might be questioned initially by the unknowing, this is where it belongs. Without the U.S. Navy's dirigibles, *Akron* and *Macon* of the early Thirties, it never would have existed. And the fact that the plane flew from a trapeze lowered from these airships is a major part of its appeal – even to the handful of Navy pilots who flew it and its sisterships.

For many years it was the only fighter of its era that could be readily inspected in a museum setting. Fortunately, this situation has been corrected during the last two decades. However, its unique operational role, marked by the airship hook mounted to its upper wing roots, still gives it a special place among old aircraft enthusiasts. And that role was responsible for its being saved in the Smithsonian Institution collection while almost every one of its fighter aircraft contemporaries was reduced to scrap.

Beginnings

The story of the *Sparrowhawk* begins in a different vein, among the routine actions of the Navy's Bureau of Aeronautics (BuAer) staff, who had developed a reputation for aeronautical pioneering and technical excellence during the 1920s. The names on documents which passed through Bureau offices included those of many officers who would reach flag rank and wide recognition during WW II (Towers, Ofstie and Radford, for example). The engineers, both military and civilian, would become nationally recognized as leaders in the aeronautical engineering profession during the next two decades, e.g., Diehl, Sullivan, Burgess and Frizbie in the fields of aerodynamics, airborne equipment, lighter-than-air and design evaluation, respectively.

Those involved with fighter design were wrestling with a number of issues in 1929. Among them were armament (.50 vs. .30 machine guns), two-seater fighters, speed vs. maneuverability, range requirements and whether fighters should be designed for or be capable of carrying bombs. The degree of engine supercharging, metal airframe structures, and even air-cooled vs. liquid-cooled engines were all receiving attention. Fighter configurations were also of interest: low-mounted high wings on biplanes to improve combat visibility was a feature of great interest, and monoplanes were actively under consideration.

Based on rate of fire, lighter weight and their effectiveness against all portions of contemporary fighter aircraft except the engine, a pair of .30 machine guns was generally considered adequate for new fighters, although it was decided that new tests of their effectiveness should be performed on stricken aircraft. Development of higher speed fighters was also considered important, with the Assistant Secretary of the Navy for Aeronautics, David S. Ingalls, highlighting this aspect.

By fall, the concept of "pure fighters" had evolved and the Bureau design staff developed a series of designs using different engines, including the P&W Wasp, the supercharged Wright Whirlwind and the liquid-cooled Curtiss Conqueror. The staff of that period prepared complete design layouts for aircraft of interest to the Navy, assigning them numbers in a single design series sequence. Plans were made to procure one supercharged Whirlwind design, representing the smallest fighter that could be built around the military load (pilot and fuel) and one Conqueror-powered fighter under the FY 1930 experimental aircraft program. The Wasp-powered Berliner-Joyce XFJ-1, already under contract, was considered the latest design in this engine, with little further improvement possible. Interest eventually centered solely on Design 96, the Whirlwind-powered design. The design and type specification were released to industry for proposals early in 1930.

In the aftermath of the stock market crash, and the decline of the post-Lindbergh flying expansion, most of the airplane industry was tightening its belt. Curtiss Aeroplane and Motor Company, by then only one part of the Curtiss-Wright interest, was consolidating its Garden City, N.Y. operations and concentrating all of its efforts on military business. Chief Engineer T. P. Wright had just begun a new project using a small staff drawn from all technical and design areas, together with experimental shop personnel, to develop each new experimental airplane design. Normal procedures had become too cumbersome (in a staff of around 100!) to be fully competitive on new projects. The project engineer was to be job manager with full company authority to get his particular new airplane ready for customer test and production orders.

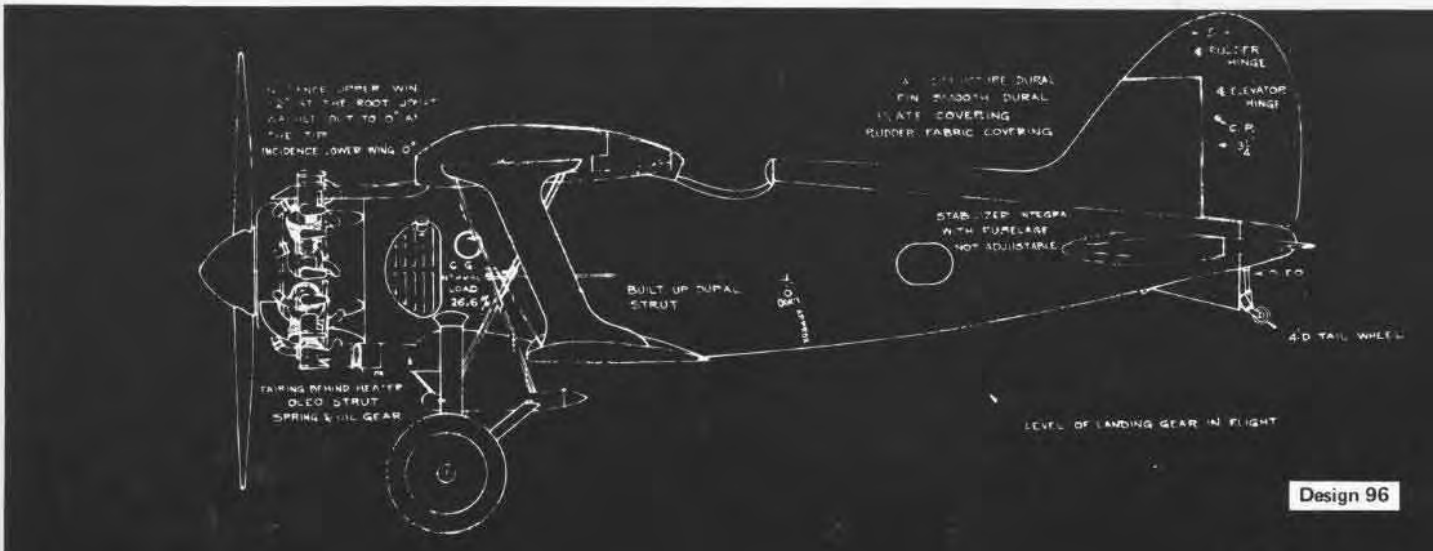
On receiving BuAer's request, and aware, from his active Washington representatives' reports of BuAer's considerable interest in Design 96 as a lightweight, high performance fighter, T. P. Wright called his senior engineers together to discuss action on a proposal. After a time, he asked, "Why don't we bid the Navy design; why do we always have to develop a design of our own?" Finally, it was decided to do just that, changing the design as little as necessary to make a viable proposal. George Page, a long-time Curtiss engineer and pioneer pilot, was given the job of project engineer. Arthur Butler, who had joined Curtiss to help with the drafting of the NC-4, was his assistant and had overall responsibility for developing the design drawings.

The semi-monocoque fuselage incorporated in the Navy

The Airship Fighter

Part one of two parts

This view of USS Macon Sparrowhawk comes from a color painting by aviation artist John Amendola



Design 96

design was a feature Curtiss had yet to install in an airplane, although the company had built some experimental metal wing structures and other aluminum alloy components. The small group of engineers tackled the new features, and developed their own more easily manufactured features where appropriate. An example was the spar section for the wings. Aluminum alloy shapes other than circular section tubes were not readily available at that time, so round tubes were run through rollers, flattening the sides and extending the sections vertically to provide the proper section properties for wing spars. They also turned back to the lines of the last Curtiss R2C/R3C series racers to provide the best possible streamlined form for the fuselage, since the upper wings on these racers were also joined to the upper fuselage. With the details worked out, their proposal went to BuAer. By late spring, they were one of the two companies to be awarded an experimental contract. The job of building a mock-up proceeded with enthusiasm while the details of the specifications and contract were worked out. The other winner was the Fokker Company of America – originally Atlantic Aircraft and later General Aviation Company – with a design that deviated somewhat more from BuAer's Design 96 but still generally followed its features. The Curtiss was to be designated the XF9C-1, following the use of F8C for both *Falcon* and *Helldiver* series two-seater fighter aircraft. The Fokker was to be the XFA-1.

By late May, the Curtiss mock-up was ready and BuAer officers and engineers arrived, two or three at a time, to inspect it and provide comments. As usual, there were many differences of opinion, and Curtiss engineers tried a number of cut-and-dry changes for BuAer personnel to examine. While one pilot wanted the headrest eliminated to improve all-around visibility, another wanted it reduced to a small fairing, and yet another wanted it maintained at its full length with an emergency raft carried inside. The minimum cockpit size was of concern to most of the Navy pilots. They recognized this was necessary to meet the objectives of the design and, with certain changes, would be adequate. The brake pedal arrangement, requiring lateral movement of the feet for use of the brakes, was also noted, but final evaluation would have to wait for flight testing. There was no room for the compass in the cockpit; a location on the left wing seemed a possible alternative although there was disagreement on this point. Overall, the enthusiasm of the Curtiss project group made as much of an impression on the BuAer visitors as the airplane's design. At least one officer noted with concern that the predicted performance, even with the supercharging of the Whirlwind and the minimum size of the airplane, fell short of that contemplated.

By late June, the details were all worked out, and the contract for the XF9C-1 was signed on June 30, 1930, just meeting the deadline when funds would have expired. It contained an option for purchasing a second airplane. The Curtiss Company felt a second prototype would be of enough value in such an experimental project to build it at its own expense, though hoping to be able to sell the second to the Navy.

XF9C-1

With the award of the XF9C-1 contract, the job of designing the airplane in detail began, along with reaching agreement between the Navy and Curtiss on the many issues already raised and those that were to arise as the design progressed. The approval letter for the mock-up and subsequent approval of the contract-required design information pinned most of these down. Such items as the headrest extending back to the fin, as in Design 96; an externally-mounted arresting hook; metal-covered rather than fabric-covered control surfaces; N-shaped wing struts replacing Design 96's I struts; a tubular structure engine mount in place of the monocoque type of Design 96; and the compass mounted on the inboard trailing edge of the left upper wing became part of the final design during this period, as well as many other less significant or apparent features. A Curtiss anti-drag ring cowling was added around the engine, and the propeller spinner deleted.

The emphasis on minimum weight dictated that structural tests of components, such as typical wing ribs, be conducted early in the program so that adequate strength would be available without undue conservatism. These were followed by more major structure tests, such as an entire fuselage aft end with the tail surfaces mounted. A wooden fuselage form for use in shaping the skin panels was built and a rudimentary fuselage jig welded up from standard steel components. Approval was given for Navy inspection of the material and parts for the second airplane for the duration of the 150-day contract option, although BuAer stated it had no intention of exercising the option. One late major design change occurred when the Wright R-975C engine was found to be overweight. This necessitated moving it rearwards three inches to maintain balance. BuAer also requested an increase in propeller clearance, resulting in minor changes to extend the landing gear length – any further increase would have required major changes.

Construction of parts and subassemblies proceeded during the fall and structural analysis reports were submitted, revised and approved. While Curtiss had built some experimental metal wing structures previously, this was their first all-metal, semi-monocoque fuselage. Somewhat surprisingly, the detail design analysis and manufacture proceeded with no more than the usual minor snags. In November, inspection approval for the second airplane was extended, even though the option had expired. By early December, it was evident that the contract delivery date of December 26 could not be met; from this time on, progress reports predicted successively later dates, finally extending into February 1931. Late in December, BuAer again raised the question of vision angles past the fuselage mounted upper wing, based on unsatisfactory results from initial Navy flight tests of the Berliner-Joyce XFJ-1, which had a similar upper wing position. A single seat position was unsuitable both for using the gunsight and seeing the signalman on landing aboard ship. With the airplane close to completion, action was deferred pending flight testing. In mid-January the fuselage structural proof tests were satisfactorily accom-

The XF9C-1 shipboard fighter during flight tests.

plished, after which assembly of the airplane was completed.

On February 12, Curtiss pilot William Crosswell took the XF9C-1 up from Mitchell Field, L.I., for its flight. Its small size and apparent performance attracted favorable attention, including a *New York Times* writeup. However, the Curtiss engineers still had a job to do, since many of the airplane's characteristics were less than satisfactory. After more than a month of flight testing and fixing, with only a few clearly identified questionable characteristics remaining for which no ready solution could be found, the XF9C-1 underwent its preliminary demonstration for the Inspector of Naval Aircraft at the plant. Obvious changes were a taller vertical tail with shorter chord rudder and refairing of the upper wing to fuselage intersection.

In late March 1931, the XF9C-1 was ferried by Bill Crosswell to NAS Anacostia, in Washington, D.C., for final demonstration and Board of Inspection and Survey (BIS) trials. Arthur Butler, now project engineer, and a mechanic met him there. Curtiss personnel were enthusiastic that the airplane met the Navy's expectations, and that fixes for any remaining deficiencies were identified and could be incorporated in the production aircraft which they confidently expected would follow. In fact, some were already being incorporated in the second airplane still under construction. Lowering the engine (necessary because the R-975E engine was replacing the C as a production engine), extending the landing gear, raising the upper wing, using a different fixed pitch or a controllable pitch propeller, and installing an adjustable pilot's seat were all pointed out to BuAer as solutions to varying recognized problems at the time the airplane went to Anacostia.

Following the installation of special flight test instrumentation to measure and record dive and pullout parameters by engineers and technicians from the National Advisory Committee for Aeronautics (predecessor of today's National Aeronautics and Space Administration), Bill Crosswell began the dive tests on March 31. A minor engine failure caused him to abort the initial flight. Tests were resumed on April 3, the required contractor demonstration being completed on two flights that day. It was established that some internal brace wires in the upper left wing were loose, apparently due to misrigging. Rerigging and a complete inspection were accomplished and the actual trial flights were under way on April 28.

In accordance with the contract and the airplane's design, the trials addressed the XF9C-1 as a carrier fighter. But at the same time that the airplane arrived at Anacostia BuAer asked the Naval Aircraft Factory (NAF) for a quotation on installing an "airship attaching hook" similar to those being installed on N2Y-1s but with appropriate strengthening. By the time the flight trials were under way, necessary drawings and data had been sent to NAF for the engineers there to develop a design and cost and schedule estimate.

When the airplane left the Curtiss Garden City plant, the facility was closed and all of its operations moved to Curtiss' Buffalo, N.Y. production plant. Construction of ongoing projects such as the second XF9C-1 resumed with little delay.

With the flight test work that Curtiss had done, BIS trials went forward quite rapidly. Firing the guns, which had not been done previously, presented the biggest problem. The ring cowl, the blast tubes and the ejection chutes all required modification before the guns could be fired with any degree of success. This was finally achieved on June 6. With a final flight on the 8th, the XF9C-1 went to NAS Hampton Roads (now Norfolk), Va., for carrier operations and arresting gear tests on the 10th. The first test flight on June 16 nearly ended in disaster as the airplane, piloted by Lt. A. M. Pride (*NANews*, August 1976), ended up on its nose after catching the wire. Investigation revealed that a rudder brake pedal modification which allowed easy lateral foot movement from the rudder to the brake plus a somewhat high tail rise characteristic probably accounted for the accident which ruined the propeller and damaged the cowl. By the 19th, with the pedal situation modified to require a deliberate lateral foot shift for braking, the tests were resumed and completed. The new propeller had a slightly larger diameter and improved takeoff performance.

The BIS trials preliminary report of June 22 listed all the problems, noted that the XF9C-1 had excellent flight characteristics and met all of its guarantees except climbing to altitude in 10 minutes. Then the report delivered the blow. Because of its high power and wing loading, the XF9C-1's performance was inferior to that of contemporary carrier fighter airplanes, with their higher power Wasp engines. BuAer dutifully passed the comments on to the Inspector of Naval Aircraft in Buffalo, for Curtiss. The major items had long been recognized and early in July Curtiss reported that not only were all being incorporated in the second airplane, but the R-75E engine offered a large power increase and, with planned changes, the aircraft weight would not be greatly increased. A single strut, low drag landing gear, although longer, would also help. Minor changes were made to the Navy's XF9C-1 to make it acceptable as an experimental aircraft, these being agreed to and finally incorporated in early August. In September, the XF9C-1 went to NAF for installation of the hook-on device and other needed changes, one of these being an electric starter operating from external power provided by the airship.

The Airship Fighter

On July 20, 1931, a BuAer conference addressed the problem of production fighter-type aircraft for the airships *Akron* and *Macon*. With *Akron* approaching completion, procurement would have to be expedited to fill the airships' hangar on schedule. Six aircraft were to be procured, probably the designed operating number of four, plus 50 percent spares. A fifth could be contained in the hangar on the retracted trapeze but if it were not up for flight, it would have to be jettisoned before another could be moved with its trolley to the trapeze and lowered for flight.

The XF9C-1 and the XFJ-2 were the two contenders; the XFA-1 which had been built competitively with the XF9C-1 had still not flown. These were the only fighter aircraft that would fit in the airship hangar. Even the F4B series, remembered by most pilots as very small, were too large. Both the XF9C-1 and XFJ-2 had low-mounted upper wings, an excellent arrangement for the hook-on task, and Berliner-Joyce (or B/J as it had become known, a forerunner of today's alphabet corporate world) had corrected many of the major problems uncovered in their design's initial XFJ-1 version. Curtiss had done its homework well and could promise an interim test aircraft to evaluate all required changes, expediting delivery of production aircraft. The preliminary type specification for the F9C-2 airship fighter was dated July 20, 1931.

By mid-August the F9C-2 project was on its way. The preliminary detail specification had been sent to Curtiss for comment, with Curtiss engineers shunting back and forth to Washington to iron out all manner of engineering detail. Arthur Butler continued in the role of Curtiss project engineer. Both BuAer and Curtiss engineers came up with new details for resolution. Some of these related to the still undefined hook-on device and others related to potential improvements in the design. The second experimental airplane was to be completed with as many of the production changes as possible, but without the hook-on device. Since the F9C-2s were not expected to operate regularly aboard carriers, and since the extended landing gear improved the arresting geometry, it was agreed that the hook attachment would not be moved aft. A number of changes, such as use of aluminum castings for certain types of parts, were approved to reduce production costs and/or weight. In September 1931, the XF9C-2 began its flight test program. In addition to the other major changes based on the trials, it was equipped with a single strut landing gear and streamlined "pants" over the wheels. On September 30, while ground loop tendencies were being checked, it suffered a severe ground loop, collapsing one main gear under the fuselage and damaging one lower wing panel. On the basis of this experience, a new steerable tail wheel was proposed for the production airplanes, in lieu of the free-swiveling type, at no increase in contract price.

The question of landing gear design was difficult to resolve; along with the XF9C-1 tripod type and the XF9C-2's single strut, an even lighter single strut type with wire bracing and the oleo at the wheel was being considered.

The XF9C-2 while undergoing tests at NAS Anacostia.

While an untested type was not desired for the production aircraft, XF9C-2 tests and other examinations of the new types could pre-test the selected gear. In all cases, the time and manpower required to remove and reinstall the landing gears in the dirigible hangar were important considerations.

On October 14, contracts were signed for six production airplanes and for demonstration tests of the XF9C-2, the latter for the sum of one dollar. The first F9C-2 was to be delivered March 1, 1932; the XF9C-2 was to be at Anacostia for testing in 30 days.

The Naval Aircraft Factory had begun modifications to the XF9C-1 to equip it for hook-on operations in September. To expedite the first trials on *Los Angeles*, actual installation of the electric starter and other changes were postponed, and only installation, static strength and release testing of the hook-on device were completed. On October 23, the *Sparrowhawk* made its first "landings" on the *Los Angeles* trapeze, completing 10 hook-on landings during the day's trials. Realignment of the auxiliary arms on the trapeze with the auxiliary hooks on the upper wings was the major corrective action taken. Although *Akron* was commissioned only four days later, her trapeze installation was still under construction at NAF, with completion and installation scheduled early in the new year. For the time being, *Akron*'s heavier-than-air unit pilots would be confined to test hook-ons with *Los Angeles*.

Flight testing of the XF9C-2 resumed after repair of the ground loop damage. The steerable tail wheel was installed and the vertical tail modified to remove the balance area from the rudder, making it part of the fin. By November 12, it was considered ready for demonstration and Navy trials; a day later, the XF9C-2 was ferried to NAS Anacostia by Bill Crosswell even though excessive engine vibrations were noted at high speeds. Continued engine vibrations plagued the new *Sparrowhawk* and the dive demonstrations were not completed. Navy pilots did conduct preliminary trials, including successful firing tests of the revised gun installation. The airplane was then sent to the Wright Aeronautical Company for engine replacement before the tests could be completed. The new features and fixes were judged satisfactory, particularly cockpit visibility, with the upper wing raised four inches. However, the Navy pilots finally took a strong stand that the rudder-brake pedal arrangement should be replaced by a hanging pedal design with toe-operated brakes. They recommended that the ammunition boxes be reduced in size at the bottom if additional space for foot action was needed. They also wanted increased rudder area. The extra weight of the airplane offset any benefit from increased engine power, although performance tests were not conducted because of engine vibrations.

With the F9C-2 contract signed, resolution of other design details proceeded at a rapid pace. Because of other changes planned for *Akron*'s operations the airplanes were not needed as soon as originally planned. However, the schedule for production BIS trials was still tight for the first aircraft. BuAer and Curtiss finally agreed on a final configuration for the "airship suspension gear," as the hook-on device came to be labeled, for the F9C-2. It had provisions for transfer to the trolley inside the airship hangar which moved the aircraft from the retracted trapeze to one of the four stowage positions. The landing gear was changed to the Jenkins gear (named after Curtiss' chief structures engineer), which was the wire-braced, single strut gear with the shock absorber at the lower end. Also, provisions were made for a 30-gallon auxiliary fuel tank to be carried under the fuselage. The Jenkins gear was considered more easily removable and with the gear removed the tank and additional fuel could be carried to increase the operating range from the airship.

The rudder area was increased and the rudder/brake pedal design revised, conforming to that recommended for the XF9C-2. As the year came to a close, the F9C-2 design had nearly reached its final stage.

PEOPLE·PLANES·PLACES

Records

The *Lancers* of VAQ-131 have completed eight years and 12,000 hours of safe flying. Cdr. Ken A. Walden commands the Whidbey Island-based squadron, which recently completed a Med deployment aboard *America*, providing tactical ECM support for various multination NATO exercises, with their EA-6B *Prowlers*.

Several squadrons achieved milestones in accident-free flying: VC-5, 9,000 hours; VA-115 and VAW-112, 10,000; HMM-161, 25,000; VQ-2, 30,000; HC-3, 40,000; VRC-30, 42,000; VT-26, 50,000; HML-267, 60,000; VQ-4, 71,000; VT-10, 10 years; and VS-24, 14 years.

Three A-6 pilots marked personal milestones. Cdr. Mike Luecke and LCdr. Dick Parker, VA-35, flew 2,000 hours in the *Intruder*, while Cdr. Anthony J. Lynch, C.O. of VA-75, passed 3,000.

LCdr. David Kanning, VP-19, achieved what is believed to be a first in the Pacific Fleet patrol community, passing 5,000 flight hours in the P-3 *Orion*.

Other notable achievements were made in the fleet. VA-56: LCdr. Jim Gill, 300 traps, and LCdr. Tony Colantoni, 100 traps, aboard *Midway*. VF-51: Skipper Cdr. Frank L. Tillotson, 600 traps, *Kitty Hawk*. VA-82 on board *Nimitz*: Cdr. D. M. Gist, C.O., and Cdr. R. B. Newell, X.O., 700 traps; LCdrs. Mike Scott, Ed Ohlert and Mike Longardt, 500; Lts. Bill Henderson, Ron Hoppock and Pete Wilson, 200; and Ltjgs. Wayne Moran, James Bangma and Dominique Depaz, 100.

Cdr. Steve Briggs, CAG-5 (left), presents VF-151 skipper, Cdr. Gary M. Hughes, with the CVW-5 Tailhook Award during a ceremony on board *Midway*. Flying the F-4J

Phantom, the *Vigilantes* achieved the highest landing grades in the air wing for the competitive cycle September 30 to November 9, 1979.

The *Black Knights* of HS-4, North Island were selected as winners of the Sikorsky Aircraft Superior Helicopter Maintenance Award for FY 1979. ComASWWingPac quoted the squadron's mission capability statistics as "benchmarks of excellence for all concerned to strive to beat."

RAdm. Joseph J. Barth presented the CNATra Retention Award for FY 1979 to Cdr. A. L. Kilpatrick, C.O. of VT-27, Corpus Christi. The award recognizes "superior performance in enlisted retention," and further cites the "command's wide support and commitment to the personal welfare, professional development and retention of the men and women upon whom we depend to accomplish our Naval Air Training Command mission."

The FY 1979 Pacific Fleet Golden Anchor Award winners for career motivation were announced by Adm. Donald C. Davis, CinCPacFlt. Among the aviation units cited were: *Kitty Hawk*, VF-161, and HC-3. Runners-up included: *Midway*, VA-97, and VP-31.

Honing the Edge

Navy's newly modified and most versatile fighter – the F-4S *Phantom* – was welcomed to Miramar's Fightertown last December at a rollout ceremony hosted by VF-21. RAdm. P. T. Gillcrist, ComFitAEWWingPac, christened the fleet's first slatted F-4S, while Capt. L. L. Hamilton, commander of the NARF, presented the keys to Cdr. "Bullet" Bob Canepa, *Freelancer* skipper. The F-4S can deliver a variety of air-to-air and air-to-ground weapons on both fleet defense and power projection missions. It features high-lift leading edge slats and a 60-percent increase in turning ability with no degradation of other qualities, complete structural and electrical rework, and new radar and electronic warfare systems. Six Navy and nine Marine squadrons are scheduled to receive the new *Phantom*. MCAS Beaufort's VMFA-251 recently received its first F-4S.

An F-4N *Phantom* from VF-301 screams up from the desert runway at Fallon during CVWR-30's AcDuTra in the fall of 1979.

It was just another graduating class of air intercept control (AIC) school, but this time the diplomas were presented on the flight deck of *Midway* while deployed in the Indian Ocean. OS2s Robert Shirley and Joseph Bracken, both of *Worden* (CG-18), were the first graduates of the first at-sea AIC "C" school conducted aboard the carrier. Capt. E. I. Carmichael, C.O. of *Midway*, made the presentation, with Cdr. Jay Grafton, ops officer, assisting.

Et cetera

AE1 Roy Rutland, Moffett Field, is shown with his daughter, Carla, who was recently chosen to become a member of the

Oakland Raiderettes. "I almost left before the tryouts were over," she said. "I didn't think I had a chance."

PEOPLE·PLANES·PLACES

The last C-117D used by the Marine Corps in CONUS warms up on Merritt Field at Beaufort, S.C., prior to starting its final flight on December 20, 1979. Number 140 will be stored in the "boneyard" at Davis-

Monthan AFB, Ariz. The C-117 will be replaced Marine Corps-wide with the UC-12B, a twin-engine, propeller-driven utility aircraft.

Energy-saving electric vehicles are being used on the flight line at Miramar, even though it will probably be years before they are available to the general public. The

electric carts run on batteries which last for two years and are charged daily. They are used for delivering messages for supply trips and as transportation for monthly inspections of nearly 30 squadrons. AMCM John Tommiser coordinates the foreign object damage prevention program for ComFitAEWWingPac and pioneered the use of electric vehicles on the air station. He believes that as soon as the initial cost of $4,405 each is paid, the money the Navy saves on gas and oil will be significant. The carts have been in use for four years.

Change of Command

ComNavAirPac: VAdm. Robert F. Schoultz relieved VAdm. Robert P. Coogan.

HM-12: Cdr. John M. Quarterman relieved Capt. Francis M. Dreessen.

HS-15: Cdr. Robert R. Hanke relieved Cdr. Andrew A. Granuzzo.

RVAW-120: Cdr. Robert A. Allen relieved Cdr. John J. Dittrick, Jr.

VA-42: Cdr. William R. Galbraith relieved Cdr. John K. Peiguss.

VA-174: Cdr. Robert Naughton relieved Capt. John Rasmussen.

VAW-116: Cdr. Marty P. Morgen relieved Cdr. Kenneth D. Denbow.

VC-1: Cdr. Robert E. Curtis relieved Cdr. Lawrence A. Lantzer.

VF-1: Cdr. Doyle J. Borchers II relieved Cdr. Brad W. Gordon.

VF-33: Cdr. Frederick H. Vogt relieved Cdr. John E. Allen.

VF-126: Cdr. James W. Nunn relieved Cdr. Robert W. Castle, Jr.

VF-171: Cdr. L. F. Norton relieved Cdr. R. J. McGuire.

VF-201: Cdr. Charles L. Hill relieved Cdr. Jonathan H. Jordan.

VMAT-203: Maj. Pete Rounseville relieved LCol. Fred Ogline.

VP-40: Cdr. Allen D. Branch relieved Cdr. Allan W. Hadley.

VR-24: Cdr. Richard J. Palma relieved Cdr. Richard D. White.

VS-41: Cdr. Henry Lemle Phillips, Jr., relieved Capt. William Penn Behning.

VT-2: Cdr. Robert A. Montgomery relieved Cdr. Ronald L. Folse.

VT-9: Cdr. S. F. Chappell relieved Cdr. E. O. Rhodes.

TOUCH and GO

Aircrew Training

Naval Aircrewman Candidate School (NACCS), NAS Pensacola, celebrated the first anniversary of its first graduating class this past October. Since establishment, more than 1,000 aircrewmen and aviation antisubmarine warfare operators (AWs) have been trained for fleet service. Training during the five-week course involves land and sea survival, physical conditioning and classroom studies.

Commenting on the graduates, RAdm. Richard A. Miller, ComASWWingPac, said, "... since implementation, aircrew graduates entering ASWWingPac fleet replacement squadrons have exhibited significantly higher airmanship, adaptability, motivation and performance than their predecessors." These remarks are echoed by East Coast squadron commanders as well. One noteworthy fact is that NACCS graduates have significantly improved the completion rate in the East Coast SAR school.

The school's founder and supervisor, SCPO Robert W. Davidson, has been awarded the Navy Commendation Medal for his work in establishing the school.

"The same demanding training — physical conditioning, swimming, physiology, water and land survival — that is provided to Naval Aviators and Naval Flight Officers is offered at NACCS" said LCdr. J. R. Arthur, division officer. "The physical stresses encountered in flying do not differentiate between ranks, so we cannot afford to either."

Students are taught survival swimming techniques, swim strokes, the proper method of jumping from heights, and how to cope if caught in a burning oil slick. Candidates learn proper aircraft escape procedures through the use of two crash simulators: the Dilbert Dunker, a jet cockpit simulator; and the multipurpose dunker, a submerged multiseated aircraft simulator. In addition to receiving lectures, candidates must show proficiency with all types of personal survival equipment and signaling devices. They are also taught ejection seat and bailout procedures.

Land survival classes cover topics such as edible plants, poisonous snakes, shelters and basic land navigation. Prospective aircrewmen are tested during a three-day excursion to the wilds of nearby Eglin AFB. Students are divided into groups and given only minimum equipment. They must construct shelters, forage for food and solve problems in land navigation.

Physical conditioning includes a daily program of about 45 minutes of calisthenics, a two-mile run and a couple of laps through the body-building training course. This daily conditioning prepares students for the obstacle and cross-country courses. Both must be completed in prescribed times before a candidate is allowed to graduate.

Classes offer basic information the aircrewman will need when entering his or her specialty. Courses include basic navigation, in-flight safety, ground handling, cardiopulmonary resuscitation and first aid.

At present, the school is mandatory for AWs only. However, future plans will make NACCS required for all aircrewmen. It is also available for aircrewmen who have been away from flying and need refresher courses before returning to flight status. The school's goal is to increase its staff to accommodate 1,750 candidates per year.

The theory at NACCS is that the aircrewman is an integral part of the Naval Aviation team. "For any aviation mission, a professional job is required from every man," said LCdr. Arthur. "The pilots, the NFOs and the enlisted aircrewmen all have a critical role to fulfill. Therefore, more than anything else, professionalism is what we teach at NACCS."

Career in C-130s

ADCS R. A. McClinton has achieved a milestone which less than 50 people in the world have attained: 10,000 flight hours in the C-130. He is believed to be the only person on active duty to do so. McClinton accomplished this feat on October 2, 1979, and was recognized for it by Lockheed Aircraft Corporation, manufacturer of the *Hercules*, in ceremonies at VQ-4, NAS Patuxent River, Md.

McClinton began flying in C-130s as a flight engineer in June 1960, and has since flown in all models Lockheed has produced. He began as an AD3 attached to VX-6 at Quonset Point, R.I., when he flew to Marietta, Ga., to accept the first four C-130s the Navy purchased. McClinton was also flight engineer on flights at both the North and South Poles. During his 10,000 hours, McClinton has survived three C-130 crashes. Once, the landing gear fell off; another time, the plane overran the runway and crashed into a couple of fences; and the third time, part of the right wing burned off, causing the plane to land in a cornfield.

McClinton transferred to the Fleet Reserve at the end of January after 22 years in the Navy, 19 of those years flying in C-130s. A veteran of numerous flights into Vietnam, with VRCs 50 and 21, SCPO McClinton departed with these words: "The C-130 is a forgiving aircraft. No matter what you do to it, it always gets you where you're going and back again."

GERMAN NAVAL AVIATION

We did more than just interdict enemy aircraft. Indeed, our mission was mainly devoted to surveillance of maritime traffic in the entire blockade sector from the English coast to Holland. On many occasions, our aircraft pursued vessels and either dropped bombs near them or signaled them to halt by directing a stream of machine-gun fire across their bows, after which a German boarding party would take over. In these instances, the squadrons reported the ship's presence by wireless telegraphy and gave the precise location. Then a large seaplane would come out with a "prize officer" who was put aboard the captured vessel while our aircraft circled overhead and observed their slow progress toward our shore. Thus, many large sailing ships, as well as two steamers, did not reach their intended ports of call and were, instead, brought into Zeebrugge. One of these prizes of war served as a barracks ship for the petty officers among our flying personnel.

While observing maritime traffic beyond our blockade nets, we usually flew close to the water when we got close to the English coast. That gave us an advantage in attacking British convoys, which were generally divided into two sections and were accompanied by torpedo boats and light cruisers. Coming in low from the east, with the sun at our backs, we would not be spotted by the enemy until we were right on top of them. Then we flew right down the middle of both sections, firing away at both sides. To our great joy, the enemy ships had to hold their return fire for fear of hitting one of their own number if they missed us. By the time they were able to open up on us, we would be almost out of range and quickly flying out of danger.

During one return trip to Zeebrugge, which took about 10 minutes, my rubber radiator hose was torn. There was a relatively calm sea, so I told my pilot to land on the water. That done, we temporarily sealed the leak and I scooped up sea water in my leather helmet to replace what had been lost from the radiator. That fill-up lasted until just before we got to the Mole. Then the engine finally quit, as salt water was not good for it. A motor boat had to come out and tow us in the last few miles to the harbor.

New aircraft assigned to the front-line squadrons always had to be ferried from the testing center at Warnemünde. Those occasions were always splendid days for the aircrews, as they could go home to briefly see their families and in Warnemünde itself were all the good things in life. In May 1918, one of the pilots and I picked up a Hansa-Brandenburg W.29 there, flew over to Kiel, where the aircraft was examined once again; then we went over the Kaiser Wilhelm Canal and on to Nordeney to refuel. From there we accompanied a squadron to Höhe Texel, where we were required to make special arrangements to fly past Hoek van Holland – without, of course, violating Dutch neutrality – and then on to Zeebrugge.

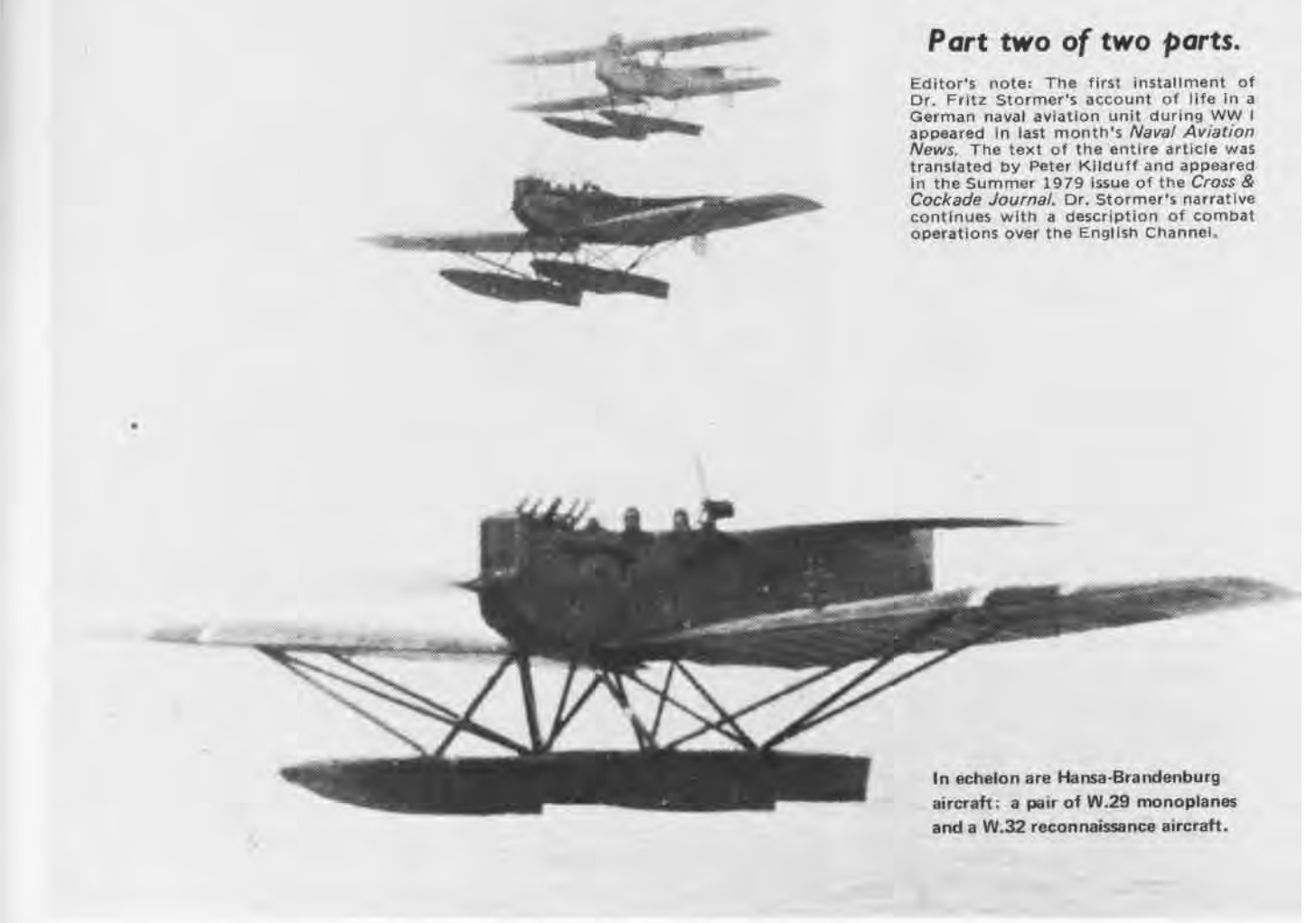
Just before we got to Texel, my engine began to act up. When it continued to run roughly, I signaled the rest of the formation that we would be turning back. The engine held out only until we got to the small island of Rottumeroog and then it finally stopped altogether and we had to land in a heavy northwest wind and in choppy seas. Everything went alright, but in the course of this erratic landing we found ourselves driven over to the Dutch coast with a relatively new type of aircraft. As the Dutch were not very well disposed toward us and, despite their official neutrality, were strongly sympathetic to the British, in no case could the aircraft be allowed to fall completely undamaged into their hands.

The squadron that I was accompanying radioed Borkum for help in the form of a three-bay Friedrichshafen seaplane, which landed near us with its engine running. Unfortunately, in the turbulent sea the towline did not function according to plan and the line fell into the water during every attempt to link the two craft. I undressed, inflated my life jacket and jumped into the water. As I had to swim in choppy water and against a strong current, I soon used up my strength and had to be pulled aboard the Friedrichshafen. My pilot was also ordered to jump into the water and to swim over to the rescue aircraft.

Meanwhile, we had gotten so close to the coast that we could easily make out the Dutchmen on the shore waiting to meet us. When my pilot came aboard, I manned the machine gun at the front of the big twin-engine rescue aircraft. Even though we were within the three-mile limit of Dutch jurisdiction, I directed a stream of incendiary and tracer fire at the fuel tank of my beautiful new airplane, which contained my uniforms and other utensils, but which had to be set afire to keep it from being seized. Although I was firing in the direction of the open sea, I was now committing a hostile act that the Dutchmen did not like, as they apparently assumed they were going to take possession of the aircraft we had to abandon. They immediately opened fire at us, shooting as long as we remained idling in the water. But

Part two of two parts.

Editor's note: The first installment of Dr. Fritz Stormer's account of life in a German naval aviation unit during WW I appeared in last month's *Naval Aviation News*. The text of the entire article was translated by Peter Kilduff and appeared in the Summer 1979 issue of the *Cross & Cockade Journal*. Dr. Stormer's narrative continues with a description of combat operations over the English Channel.



In echelon are Hansa-Brandenburg aircraft: a pair of W.29 monoplanes and a W.32 reconnaissance aircraft.

their shots fell short and we were able to take off. Thus, I returned to Barkum dressed in little more than a life jacket and had to borrow from comrades just about everything needed from head to foot. I chanced to meet Krischan in Kiel and he signed the authorization entitling me to a new uniform to replace the one I lost in action. The next aircraft I picked up in Warnemünde was delivered according to plan.

Our submarines were particularly interested in changes of the buoys set out in our sector of the sea, as well as new blockade nettings, minefields, wrecks and other underwater obstacles, all of which we were supposed to report upon our return or landing at sea. Even if we could not convey the exact nautical positions, we could usually mention enough recognition points to make our reports essentially clear, which was especially important when we pushed as far forward as High Margate in the Thames. The reaction of the British was at times really vigorous when we poked our noses so far into their sovereign territory.

During one of these incursions at a time of heavy seas, one of our aircraft suffered a mechanical malfunction. The airplane crashed on landing, turned over and slowly but surely sank. The crew managed to get out and swim into the mouth of the Thames. Without really thinking about it, Krischan managed to set his airplane down in one piece as the water rose around him. He taxied over to the swimming crewmen, who clambered up onto the pontoons and fastened themselves between the struts for the trip home.

The most difficult part of this undertaking, however, was taking off in the rough seas and in plain view of the enemy coast. But Krischan mastered this problem and brought the shipwrecked back in good condition to Zeebrugge. After Christiansen himself demonstrated that it was possible to use our craft to pick up people in heavy seas, we rescued other crews the same way and carried them over broad stretches of water to safety. Except for the takeoff and landing aspects, this mode of transportation was quite agreeable to those clinging to the pontoon struts – and certainly better than spending a long time in the North Sea or surely suffering a sailor's death.

Krischan also had a crash for which he was surely not responsible. While he was taxiing in the harbor, one of his pontoons hit a piece of wreckage just

below the surface of the water and was torn right off. But as quick as a flash his observer jumped out onto the opposite wing to offset the imbalance caused by the incident. He stayed there until the arrival of a motor launch, which was always ready for action whenever flight operations were in progress. Thus, all that was needed was to replace the lost pontoon, which was quickly done and the aircraft was saved.

The comradeship among the crews – officers and enlisted men, alike – was splendid! Each would have sacrificed himself for the other. Among the officer corps at the seaplane station this feeling was of course advanced by Christiansen's leadership ability. Many happy and festive occasions were celebrated at the Grand Hotel on the beach at Zeebrugge. Among these, of course, was the birthday, promotion and *Pour le mérite* presentation of our seaplane station commander. There were many guests and review parties, often made up of the highest superiors, including: His Majesty, Kaiser Wilhelm II; the commander of the naval corps, Admiral von Schröder, whom we called the Lion of Flanders; Kemal Pascha; General von der Goltz; the Lord Mayors of Bremen and Hamburg, who mainly came to bestow decorations; and many more, all of whom came because Krischan was here.

One of these occasions particularly comes to mind because it offers evidence of the ready wit so often attributed to Berliners. In 1918, it was arranged for the Kaiser to attend a special review at Dienze for troops in Flanders who had been selected to receive the Iron Cross. The only people selected from our unit were those ground personnel who had spent a long time at Zeebrugge, servicing aircraft or performing other basic support functions that were important to our mission. The whole group was temporarily assigned to the previously mentioned Oberleutnant Killinger, who drilled them on what they should answer in case His Majesty should question them. In order to now determine whether his instructions had fallen on receptive ears, Killinger said to a cabinet maker from Berlin, who was also responsible for cleaning the officers' toilet: "Pretend now that I am His Majesty and I ask you this question: 'What have you done to deserve the Iron Cross?'"

To which the Berliner answered: "Your Majesty, for four years I have taken care of a single-seater."

Every morning our administrative officer, Lt. Herrenknecht, processed all of the official mail and part of the private mail. During periods of secret operations all of the private mail had to be censored, which gave him plenty to do. Since he also had to dictate and sign all the replies to the official mail, everything that needed his signature was chaotically placed into a thick portfolio. He gradually got into the habit of saying: "Don't tell me what is so special about your document, just tell me where to sign it."

After that procedure had enjoyed a practical function for some time, we young lieutenants devised an official piece of correspondence containing the words: "I pledge to distribute a case of champagne this evening." Promptly and without reservation Lt. Herrenknecht unsuspectingly signed everything that had been submitted to him. That evening at dinner, an event that should have been no different from lunch, he was asked quite innocently where the champagne was. "Why should I know anything about champagne for all of you?" was his reply. Then the document he signed was presented for his inspection and, after he protested vigorously, there was great fun for all – except him – as a case of champagne, assigned to his mess bill, was brought out. From that time forward, Lt. Herrenknecht thoroughly read the contents of every piece of correspondence.

On July 24, 1918, I celebrated my birthday and a cousin of mine in another frontline unit came over to pay me a visit. Our visit went on in a very "wet" and happy fashion until well past midnight. How I actually got into bed is no longer quite clear. As the squadron to which I belonged was assigned to fly an early reconnaissance, the officer of the watch in the hotel sent someone to wake us and then took the precaution of checking again to make sure all of the officers were awake and on their feet. Conscientiously the man on duty reported that he had been able to awaken everyone but me. Shortly thereafter a friend of mine came by and poured a pitcher of water all over my body, after which he pulled my covers off.

"What the heck is going on?" I asked in an unsober fog.

"You are supposed to take off immediately!"

I leaped out of bed, threw on my clothes and in fast paces made it over to the air station, where the squadron captain was already at the end of his briefing. To my mumbled apology he later whispered softly to me: "Man, are you drunk!"

Taking off and flying in the hot summer air was not at all pleasant. There was an order at this time that if anyone noticed anything special that the flight leader did not see, that person was to fly to the head of the formation and take a course for the target he identified and to hold this course until the leader also had it in view. On this occasion I spotted some enemy aircraft and brought them to the attention of the flight leader, who made the appropriate gestures to inform the squadron and lead the way. Then I resumed my position in the flight. In my still foggy head I perhaps doubled the numbers of enemy aircraft I had actually seen. However, after the aerial combat, which resulted in no casualties on either side, I was singled out for praise during the briefing held after we returned. But it was also quietly communicated to me that I should hasten back to bed, because I was still not sober.

On September 29, 1918, I was on a visit to an old schoolmate who was an officer aboard a torpedo boat that operated from Zeebrugge and Bruges. It was a stormy day with a sea state so rough that waves were crashing over the wall at the Mole. We had just drunk a few pleasant glasses of wine when a messenger arrived bearing an order for all officers to report for a briefing by the station commander. What could he possibly want in this weather? We were annoyed that the

W.32s launching

old man had disturbed our nice party and we cursed him under our breath.

When my friend returned a short time later he said only: 'You must go ashore immediately. We are going out. I cannot give you any further information."

I tried to learn why the boats, which usually never poked their noses beyond the Mole point in such weather, were going out in this gale. Shortly thereafter the boats went out and did not return until the all clear was sounded. Meanwhile, I pressed on along the Mole wall before the waves thundering in gushed over me. Even though I was wearing a raincoat, I was soaked from head to foot by the time I reached the shelter of our hotel billet.

During the officers' briefing the next morning we learned the enemy had used tanks and had broken through our lines at Cambrai. Therefore we had to evacuate the front and consolidate our positions on the coast. Later that day the order came for us to evacuate, but it was later countermanded and we stayed put.

On October 1 the personnel and equipment from the naval station at Ostende arrived at Zeebrugge on the first leg of their evacuation. All of the baggage was shipped by barge to Antwerp, while the people streamed into Zeebrugge, where we all had a splendid time. There were many special provisions brought in by all of the submarines, so we had our choice of the best wines, chocolate, cognac and liqueurs.

Soon, however, the order came for us to evacuate. As I had long been trying for a transfer to landplane operations, I was pleased to finally be transferred to See 3, the naval landplane unit at Zeebrugge. My new unit did not stay there long, however. In short order, the military installations at the Zeebrugge Mole were blown up, the able-bodied Belgians were sent to our other bases, the livestock was fetched from nearby pastures, and we then began an orderly retreat.

We were first transported to Nieuw-Munster, where we made further preparations to move east. We had packed up and arranged everything necessary for the march back, as we had no way of knowing that the enemy was not yet ready to push forward and had only a few mobile troops available at the coast. From the air one could see the explosions that wrecked the electrical power plant, the wireless telegraphy installations, and the heavy guns and bunkers in the dunes. The sight of the rearward flow of the Army troops hauling their belongings was depressing and demoralizing.

Suddenly came the order: "The aviation units are to occupy their old quarters, the mobile batteries their old positions and, likewise, the able-bodied Belgians will remain in their homeland."

This was followed by our transfer to Ekloo, east of Bruges, from whence we flew reconnaissance missions. My new duties with See 3 now consisted of reporting daily the slow but certain advance of enemy units. Apparently enemy antiaircraft units were either with or just behind the leading elements of the enemy advance, as they fired at us as soon as we crossed the lines. We observed no enemy fighter squadrons and at this time we were not attacked in the air. From Ekloo we were transferred to Maldegem, near Antwerp, where I soon became one of the many people in our unit confined to bed by the devastating influenza then sweeping Europe.

The peace offer made by the Social Democratic Party leaders Erzberger (later Secretary of State) and Scheidemann (later a cabinet minister) after Kaiser Wilhelm II fled to Holland aroused shame among us officers and the greater part of the enlisted men, as we had hoped it would conform to Wilson's 14 Points and be an honorable peace.

We were subsequently ordered by our headquarters to hold elections among our troops for seats on a Workers' and Soldiers' Council. This came after many aviation units requested authorization to bomb and strafe the mutinous naval units in Kiel to restore discipline among troops in our homeland. At first our station commander, some squadron captains and a sergeant were elected to the Soldiers' Council. Although it had not been influenced by our officers, the result of the election was not recognized by our *Generalkommando* and the election had to be held again, this time with the provision that no officers be elected to the Council.

When the peace negotiations returned to the Wilson proposals – i.e., evacuation of Belgium and France in organized stages and being able to

maintains a portion of our materiel – we were transferred to Stekene, where we officers were billeted in a castle in the vicinity of the center of town.

On November 10, 1918, we learned that a Workers' and Soldiers' Council had been established in Kiel and that throughout the homeland the red (communist) movement was spreading virtually without resistance from city to city. This movement attacked the military withdrawal zone arrangement because there was no apparent revolutionary movement among many of the frontline units, a point that was expressed in the first elections to the Soldiers' Councils.

As we lay in bed at night there suddenly appeared groups of soldiers from unfamiliar units. They came into the castle and right up to our beds, where they pointed their loaded weapons at us and asked the question: "Are you with us or not?" At that moment there was no free choice.

The next morning we discovered that they were marauders who had carried off all sorts of things, including our weapons, which we had left hanging in the cloak room. They also took provisions, fur jackets and other equipment, as well as objects that belonged to the owners of the castle.

Our aircraft and other squadron equipment were supposed to be conveyed to reserve units in Germany within a reasonable period of time in order to be at designated surrender points when required. Orders to that effect were issued and they clearly specified the air routes and priorities of units, as well as land routes to be used by vehicles carrying equipment and spare parts, and the time intervals for these movements that had been approved by the armistice commission.

My diary entry for November 11, 1918, reads: "There are automobiles with red flags driving to Antwerp. The leaders of the Workers' and Soldiers' Councils do not know what they really want. There prevails a rage against everything that bears the imperial emblem. Everywhere one sees officers who have ripped the national emblems and shoulder rank insignia from their uniforms. (Observation: but not in our unit.) The people are selling rifles and machine guns to the Belgians without considering at all that they are cutting our own flesh. The Belgians are already quite arrogant. The conditions of the armistice have been published. They are completely settled. It is hard to believe the demands that have been made. There is a rumor that things are going as badly for the enemy as they seem to be for us."

On November 12, I wrote: "Yesterday morning at 11:55 o'clock (German time) the armistice was signed. At 12:00 the last shot was fired. It has been whispered that (Maréchal Ferdinand) Foch has gone and the Workers' and Soldiers' Council has taken his place. The conditions are not as hard as those first discussed."

Early on the 13th our people began to pack up. Gruppenkommandeur von Roques quickly transferred his command to the Armee-Ober-Kommando to facilitate the order to depart the area within the shortest amount of time.

The next morning I was supposed to fly back to Germany with Oska, my old pilot. But when I looked out the window early in the morning, it was thick soup – heavy fog. Therefore we had to wait.

After awhile I heard the sound of an engine and took it to mean that I had only to wait until my airplane was warmed up and then we would go. But at 7:30, when I showed up at the fog-covered airfield, my crate was gone. It turned out that two petty officers who had newly arrived at the 3. squadron, one quite young fellow trained as a pilot and the other as an aerial gunner, had taken matters into their own hands and had taken off in spite of the heavy fog and the fact that the ground was barely visible. Since neither had any navigation experience, they soon became verfranzt (Among German two-seater crews the pilot was traditionally called the Emil and the observer the Franz. Hence, the slang word verfranzt was created to indicate a condition in which the Franz had gone awry.) and landed within enemy lines. There they had to surrender their aircraft intact, and were taken prisoner. As we later learned, they had to wait a long time for repatriation.

As there was no longer an aircraft available for me, I had to do the best I could in the back of a truck, clattering along toward home amid the infantry columns. We went through several towns, ending up in Lüttich, where we fueled the vehicles in our group. Just past Lüttich one of the vehicles overturned, severely injuring two men and causing minor injuries to 10 other men. It became obvious that it would be impossible to have the vehicles proceed in a close line amid the ragtag columns of men streaming home. Hence, I gave the order for each vehicle to make its way through to Aachen and to wait there, on the other side of the demarcation line, for further orders. Eventually, everyone would go on to Berlin-Johannisthal.

Shortly after we separated, my vehicle, which was loaded up with all the provisions for our group, broke an axle. I tried to negotiate access to spare parts from the Workers' and Soldiers' Council and argued with them until 3:30 in the morning. But no luck! Hence, I had to leave the vehicle on the street, where it remained under the watchful eye of the local militia all night long. Meanwhile, I caught a ride to Haute-Fontaine, where there was a motor pool with many serviceable vehicles. But the authorities there would not turn one over to me, as "the vehicles have already been registered and must be surrendered." Typical bureaucracy!

When I returned to Lüttich in the early morning hours and tried to obtain some provisions from my well-guarded vehicle, there was nothing left. The bacon I had bought in Lüttich, all the gasoline in the fuel tank and even my gloves had all been stolen. These dolts had allowed everything to be pilfered!

The next morning I sent two sergeants to Park 23 in Lüttich to pick up a new vehicle, as there were a great number available there. But when they were getting ready to drive away with the new vehicle, it was taken from them by someone who outranked them. It seems that all of these vehicles were also registered! We tried in vain to get our old vehicle fixed.

On November 16, after we stored

our newly purchased provisions in a small railway car, I ordered a group of my people to push on, while I remained in Chenee with 12 men. Then we succeeded in hitching the car to a locomotive whose fireman and engineer were a couple of obnoxious characters. When they noticed that we had liquor among our provisions, they demanded we let them into our larder as the price for hauling us through the hilly countryside. I could only explain that it was necessary to get to our headquarters as quickly as possible, but they continued to pester about the liquor.

Eight kilometers (five miles) from Verviers we stopped overnight and I stretched out on the empty, cold floor of a small room after I got through arranging with the local garrison commander to have my people put up for the night. It was a terribly cold night.

On the 17th we came upon the 222. Regiment, with whom I had served while I was in Munster-Lager. They had just thrashed a troop of sailors carrying a red flag. I was ordered to make a full report to the divisional commander, who wanted to know all about what had happened in the Navy and who could only imagine what might happen among his own troops in the days to come. This troop marched back to Darmstadt displaying the most proper military bearing and discipline.

During the night my people had, without my knowledge, borrowed a farmer's cart and had loaded our provisions into it so we would not have to depend on the locomotive to haul it. They gave back the small railway car we had been using. Now, pushing the cart ourselves, we traveled past Verviers on to Eupen at the border, where, despite all that had happened, we were greeted with a loud "Hurrah!"

After arranging for accommodations for my people, I found quarters for myself in a cloister hospital, where the nuns were very helpful. The Workers' and Soldiers' Council leader in Eupen responded to my questions about our main column of troops and my request for assistance with a phrase that was becoming quite familiar: "Help yourself!"

Following stops in Aachen and Cologne, we finally secured fourth class railway tickets to Berlin, where we arrived at 7:00 p.m. on November 20. At about 11:00 o'clock I turned over the enlisted men to a sergeant and went looking for my relatives in the Charlottenburg section of the city. I was stopped several times by patrols on duty to maintain order. Since my relatives did not hear my knocking at the door, I had to ask an old couple passing by if they could recommend a good hotel. It was already 1:30 a.m. The couple recognized that I had just come from the front and invited me to go home with them, where I was served a wonderful meal. After a good night's rest, I was sent off with a good breakfast under my belt.

I finally saw my relatives and, on the 22nd, reported to Johannisthal, where all of my people had also been sent. The following day I made a full report to the chief of aviation and, on the 25th, traveled back home to Kiel, where my mother was beaming with joy at the train station.

As I was still in full uniform – umgeschnallt with sidearm, medals and orders, etc. – I was approached from behind by three patroling soldiers. They carried their rifles with the barrels pointed toward the ground, but paused menacingly when I voiced loud and clear my thoughts on free speech and military bearing. The situation was eased by the arrival of an officer candidate who had once trained under me. To keep the peace, he asked me to at least remove my sidearm, a small sword with a tassle indicating commissioned rank. I could not resist drawing his attention to the fact that this was not what I had learned in the first days of my military career. But my mother stood trembling during this confrontation and pleaded with me to follow instructions. I made the concession, fastened my sword belt and sidearm beneath my overcoat, which was usually buttoned up, but which I ostentatiously left open.

On November 28 I traveled to Celle to fetch all of the luggage and belongings I had packed in Zeebrugge and which were shipped home with the troops. On December 4 I finally went home, although I was not discharged. All of my comrades who returned home continued to wear their uniforms, as our old civilian clothes were scarcely in any condition to be worn.

On January 8, 1919, I traveled back to my old outfit, the II. Seebataillon, then at Wilhelmshaven, to be discharged. I was unable to obtain a hotel room in Wilhelmshaven, so my accommodations were a straw-filled sack on the floor of a cold barracks. Following the final pay settlement and other usual formalities the next day, I was discharged from the district command and the battalion by the Workers' and Soldiers' Council. Near its own rubber stamped approval the Council affixed one bearing the words "Imperial Navy, Headquarters, II. Seeflieger-Abteilung." A military travel authorization for second class accommodations was the last document I received from the Imperial Navy.

Then I began my university studies to prepare for a civilian career.

Golden Eagles

Five Finger Exercise and Old No. 8

By H.H. Karr, NAP #1 (Deceased)

In the early days of Naval Aviation it was difficult to communicate with crew members on the twin-engine flying boats of the Atlantic Fleet Aircraft Squadron. Some of the boats had the radio "shack" in the compartment between the pilots and the gas tanks; in others, it was almost in the tail. To get a message to the radioman or to the chief mech was a problem, particularly if he were transmitting or receiving.

When I was in school, one of my classmates was a deaf mute. Many of us learned the one-hand deaf-and-dumb alphabet in order to talk to him. I was copilot on one of the flying boats and one day I realized we could speed up our inter-crew communication if we would use the deaf alphabet. I suggested this to the crew. They were all for it, so whenever we had any slack time we would get back on the stub wing and "make" with the hand alphabet. Then the next time we were in the air, we would practice sending and receiving.

We became so proficient that we were able to discard all written instructions except the messages given the radioman to transmit. (He had to have a written original to keep.) How easy it was then, when the chief pilot had the wheel, for me to "finger ask" the chief mech how much gas we had left by just sticking my hand up and wiggling my fingers. Communication speeded up 100 percent.

The word got around the rest of the squadron and soon we found out they were calling us "the dummy crew" which was soon shortened to Dummy. At first we were not happy about this, but it worked out in our favor.

I found out our first mech had suggested when our crew was with other crewmen, they talk only with their hands for a few moments and then laugh heartily. This bugged the "listeners" and made them want to know what our crew was saying that was so funny. The others asked if we would teach them the alphabet. We got together and decided that since they had laughed at us, we would make them pay. Pay, they did. We decided that not one of us would teach any other crewman for less than $5, and that was real money in 1922.

It was expensive for them and we had the last laugh.

In January 1942, at the outbreak of WW II, I was ordered to NAS San Diego to help form Carrier Air Group 10. I had a completely empty hangar and 675 men — 98 percent "sorearm" recruits from the training station. There was not a bench or a screwdriver in the hangar nor a stick of furniture in the balcony offices. Officer personnel had been ordered to report but were held up by the lack of transportation from different points in the Pacific.

I could (and did) draw a truck, but absolutely no furniture. I sent the truck to the station dump with a working party which grabbed every wooden box that was thrown away. My yeomen had been handscripting orders and notices by using the hangar deck for a desk. As soon as the boxes arrived we had "desks and chairs," but when I went to NAS to get typewriters, the supply officer told me that even SecNav couldn't draw a typewriter there. "There just warn't none."

I had been living in San Diego, so I jumped in my car and went home and got my old Remington #8 Portable. Then I installed a yeoman in the group office and started him typing up the prepared group and squadron orders, notices, etc. With only one machine and a backlog of work, the yeoman was at it from dawn to dusk.

It was truly amazing. I drew trucks, machine guns, work benches, tools of every sort, even airplanes — but no typewriters! The four squadrons worked out a schedule so each would have the use of my typewriter at specified times. Later I was able to outfit the four squadron offices with desks and chairs, but still no typewriters. Three months went by with one machine doing the ordinary work of at least eight and, finally, they started trickling in — one at a time. But the group boasted they had fought a victorious war with one machine. (It is the same 40-year-old machine I am using today, still reliable — except that it misspells a word now and then.)

Rescue at Sea

An apparent engine malfunction and in-flight fire sent a Naval Training Command T-2 *Buckeye* trainer crashing into the ocean 12 miles southwest of Key West, early last December.

The student aviator flying it, Marine Corps First Lieutenant James G. Ross, ejected from the aircraft two miles southwest of Sand Key Light. He had been flying solo from USS *Eisenhower* to NAS Key West following carrier qualification exercises. Within minutes, Navy SAR Helicopter pilots, Lieutenants Mike Huffman and Eric Heublein, with crewmen AMH1 Toby Rask and AMEAN Joe Porco, were airborne. They soon spotted the downed pilot's life raft and flare. They lifted Ross into the helo and flew him to NAS Key West, where a medical examination showed that he was unhurt except for some minor burns.

SAR wetcrewman, AMEAN Porco, who helped lift Lt. Ross from the Atlantic, accepts grateful pilot's flight patch as a thank-you memento.

Letters

The First and Only?

You ran an article in your December 1979 issue stating that VR-24 is the first and only squadron to operate jets, helos and props. Wrong again! The *Vampires* of VX-5, commanded by Capt. Paul D. Stephenson, have been operating all of these aircraft since 1974 when they received their first helo. We currently operate A-4s, A-6s, A-7s, AH-1Js, AH-1Ts, AV-8Bs, OV-10s and a C-1A.

Ens. M. M. Smith, USNR
Public Affairs Officer
VX-5
China Lake, Calif. 93555

Book Wanted

RAdm. William T. Rassieur, USN(Ret.), a Naval Aviation Golden Eagle, is seeking the whereabouts of a book issued after WW II called *Escort Carriers in Action*, published by Ruralist Press. *Naval Aviation News* and the admiral would be most grateful for any information on the book. Please contact the magazine (see address below) or RAdm. W. T. Rassieur, Box 1364, Rancho Santa Fe, Calif. 92067.

Naval Aviation Problems

Most of us good ole boys down here in Meridian, Miss., thought your October 1979 issue was downright refreshin'.

We've noticed right along that y'all have generally steered clear of them controversial issues over the years, but our aviator retention problem shore needs maximum airin' and y'all made a right good start. It ain't as though *Proceedings* doesn't give all Navy and Marine Corps officers a chance to contribute their views, but lotsa times a brownshoe's beefs don't draw nuthin' but flak from blackshoes and sailors in reply.

Maybe y'all might want to make some sorta aviation officer and Group IX enlisted forum a reg'lar feature, encouraging some kinda constructive exchange of ideas 'mongst us who face Naval Aviation's problems on a reg'lar basis in the trenches. Along that line, we hadda coupla circuit-riders from OP-59 visit TraCom and CNavRes in early December 1979. They hadda lotta eye-opening facts 'bout aviator manning and retention problems, and some pretty interestin' ideas to help square 'em away. Mebbe you could start off by askin' us troops fer some comments on their program. And mebbe you could tell us when we kin start wearin' our good ole brown shoes agin. Yours fer better aviatin'.

Buck I. Skyhawk
909 Murray Road
Meridian, Miss. 39301

Ed's Note: We invite any comments, especially those on Naval Aviation and Group IX retention issues. Can't help you on the brown shoes, though.

Night Attack

I read with interest "Night Attack" by Lee M. Pearson. It brought back memories of my two tours in the South Pacific and the Indian Ocean. Mr. Pearson can stand by for some flak about CAG-10 making the first night, radar-guided bombing attack on a Japanese target.

I was a turret gunner in VT-12 of CAG-12, operating from *Saratoga* (CV-3). We made three strikes on Nauru Island on November 19, 1943. The first strike was made before daylight, the other two were made later, at short intervals. I think the last one was about noon or shortly after.

I enjoy *Naval Aviation News* very much and would like to see more articles on WW II.

Robert S. Grier, Jr.
Rt. 2, Box 31
Seale, Ala. 36875

WW II Crashed Aircraft

I am writing a book about the many aviation losses in my local area of the Pennine hills. Over 200 military aircraft have crashed in this area, mainly during WW II. Over 20 U.S. aircraft are lying in these hills. One arrived unmanned.

On December 18, 1943, while returning from an operational sortie in bad weather, Lt. G. H. Charno, pilot, Lt. R. G. Wissman, copilot, and Ens. C. R. Colyer, navigator, and ten crewmen, of VB-110, were diverted from their base at Dunkswell to Beaulieu in their PB4Y-1. While they were attempting a controlled descent through the clouds, their radio became unserviceable and they regained height with little fuel left. The crew bailed out in the vicinity of "Boston" Lincolnshire after the captain had set the plane on automatic pilot. The aircraft then proceeded across country unmanned and crashed into a local hillside during a blizzard. The pilot was later commended for his decisive action by the fleet air wing commander, Commodore Hamilton.

I have no other names except that of ACRM B. S. Barber, a passenger. I wonder if, through your readership, I may be able to trace a survivor or two. I do hope you can help.

Ron Collier
3 Elm Grove
Glossop, Derbyshire, England

Wings Needed

I need some help. For 10 years I've been collecting pilots' wings and have built up a display of some 300. (I am a pilot with American Airlines.) Recently, I have begun to work on Naval Aviation history exclusively. I wonder if someone could help me locate an enlisted man's Silver Aviator Wings from the Forties, or some other A/C wings no longer wanted. I'd appreciate any help at all. Thank you.

Mark R. Martin
1310 Valley Lake Drive 645
Schaumburg, Ill. 60195

Reunions

The 8th annual reunion of former crew members and squadron personnel of USS *Wasp*, (CV-7) will be held at the Town and Country Hotel, San Diego, Calif., July 18-20, 1980. Contact George Greene, 412 North Green Street, Morganton, N.C. 28655.

MCAF Quantico annual reunion of Marine Aviation will take place on May 31, 1980. All aviation or aviation ground officers who have served with Marine Air are invited to attend. Contact Mrs. Judy Skinner, MCAF Quantico, Va. 22134, 703-640-2442.

Plans are being made for an October reunion in Chicago, Ill., of crew members of LST-312 (WW II). For information, please contact William J. Krumm, 6306 Virginia Avenue, St. Louis, Mo. 63111, 314-752-8074.

Reunion of USS *Brooklyn* crewmen will take place October 2-6, 1980, in Philadelphia, Pa. Please address inquiries to Capt. Conrad A. Wickham, USNR(Ret.), 18 South Buck Lane, Haverford, Pa. 19041.

USS Natoma Bay Association (CVE-62 and Squadrons VC-9, VC-63 and VC-81) will hold a reunion at Seven Seas Lodge, San Diego, Calif., July 11-12, 1980. An invitation is extended to all CVE men. For further information, contact Bill Stringer, P.O. Box 251, Kimberly, Ala. 35091, 205-647-8524.

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Fleet Air Reconnaissance Squadron Two began operations in the summer of 1955 when Det Able of Airborne Early Warning Squadron Two was established in Port Lyautey, French Morocco. On September 1, 1955, the detachment became Electronic Countermeasures Squadron Two. It moved to Rota, Spain, in 1958 and became VQ-2 New Year's Day 1960.

The insignia's bat symbolizes the P4M Mercator originally flown by the squadron. Bats use sharp homing senses to complete their missions, as do the EA-6B Skywarriors and EP-3E Orions operated by VQ-2, providing electronic support to the fleet. The unit also flies a P-3A for logistics and pilot training. Stars and a dark background represent the night sky, the natural element of the bat. Clouds signify high altitude flight and the use of cover to remain undetected during a mission. Captain J. E. Taylor is commanding officer.

squadron insignia

naval aviation news