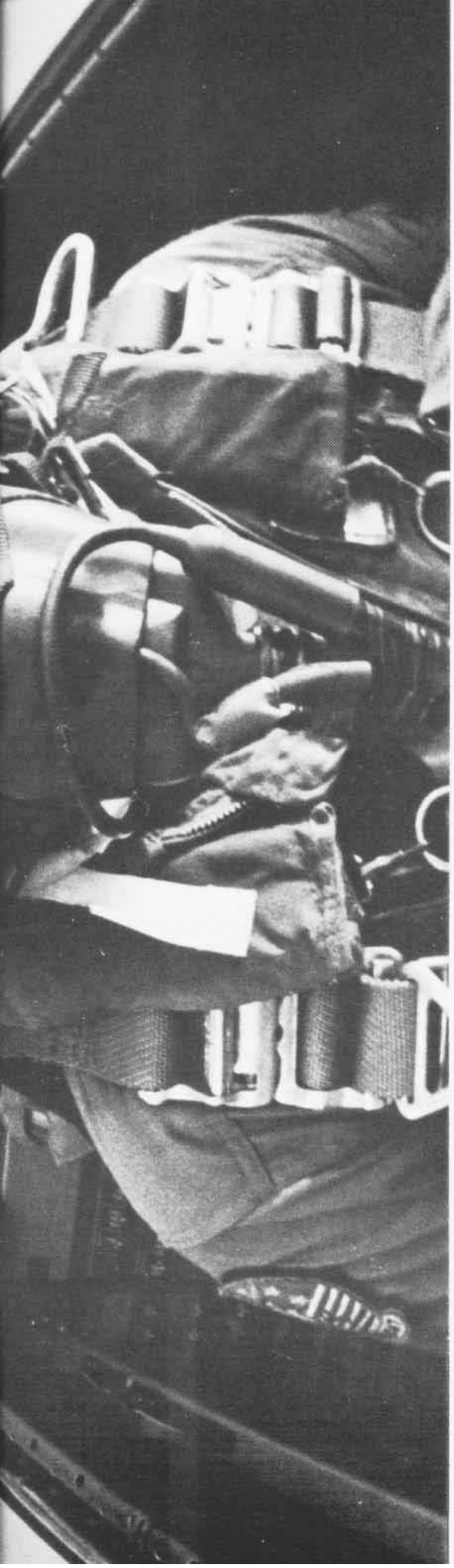
naval aviation news

RIO at work. LCdr. Steve Golle of VF-101 is shown in the rear seat of an F-14 *Tomcat* during a demonstration flight at NAS Dallas, Texas. LCdr. Jon Ault is the pilot.
Photo by Don Jones.



naval aviation news

Sixty-Fourth Year of Publication

Vice Admiral W. L. McDonald Deputy Chief of Naval Operations (Air Warfare)
Vice Admiral E. R. Seymour Commander, Naval Air Systems Command

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COVER – Hank Caruso is back with *Seabirds,* his distinctive cartoon impressions of Navy flight operations. More *Seabirds* appear on pages 24 and 25.

Features

Departments

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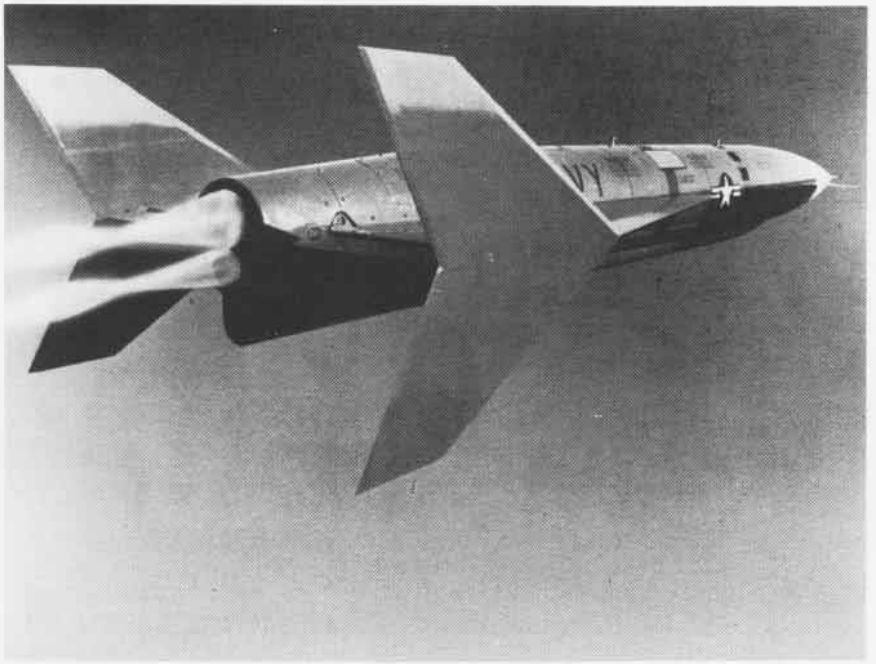
DID YOU KNOW?

AQM-37A Missile Target



The 12-foot-long, 560-pound AQM-37A Challenger is equipped with a refined autopilot which makes it capable of flying at higher speeds and altitudes.

A modified version of the supersonic AQM-37A missile target, designed for expanded altitude and speed capability, has completed flight test and evaluation at the Pacific Missile Test Center (PMTC), Point Mugu, Calif. Called the Challenger by its manufacturer, Beech Aircraft Corporation, it is planned as a high-altitude, high-speed target for use in Navy weapon system evaluation. The Challenger design will increase the flight envelope of the basic AQM-37A to Mach 3 at 80,000 feet and provide a terminal dive maneuver of up to 60 degrees. Its propulsion system consists of a dual-thrust chamber bipropellant rocket engine that uses inhibited red fuming nitric acid as an oxidizer and a mixed amine fuel, which ignite spontaneously on contact with each other.

Use of the Challenger at PMTC will allow the phaseout of the CQM-10B Bomarc target system, as well as provide a capability for deployment to other test ranges. The Navy's plans for the AQM-37A variant include adding command control capability, augmentation devices to make the target appear more like authentic threat missiles and aircraft, and possibly increasing the flight profile to Mach 3.5 at 90,000 feet.

Harpoon on A-6E

In a recent ceremony at NAS Whidbey Island, Wash., Rear Admiral Charles B. Hunter, Commander Medium Attack Tactical Electronic Warfare Wing, Pacific, officially accepted the *Harpoon* missile as an added weapons capability on the A-6E *Intruder*.

Harpoon uses attitude reference mid-course guidance with a self-contained active radar seeker for target acquisition and terminal guidance. It can be fitted with a rocket booster for launch from surface combatants and submerged sub-

marines. Air launch of the missile involves release from the host aircraft prior to sustainer engine start. The missile, carrying 500 pounds of high explosive within a range of 60 nautical miles, was introduced into the fleet on board surface ships and submarines in 1977 and on P-3 aircraft in 1979.

Davison Award

The F. Trubee Davison Award for best Naval Air Reserve tailhook squadron was won by VF-302, NAS Miramar, Calif., for the period from August 1980 to August 1981. The award is given in memory of Lieutenant Davison, who, while a student at Yale in 1971, anticipated U.S. entry into WW I and organized a group of fellow students to take flying lessons. The group formed the First Yale Unit, which became the first component of what later was the Naval Air Reserve. Many members of that unit distinguished themselves in combat during WW I. McDonnell Douglas Aircraft Corporation sponsors the award.

AV-8B Flies for First Time

The AV-8B flew for the first time on November 5 from Lambert-St. Louis International Airport. Test pilot Charley Plummer guided the aircraft through five hovers, or vertical takeoffs and landings to check the *Harrier II's* pitch, roll and yaw stability, with engineers monitoring aircraft telemetry. Total time airborne was 12 minutes.

McDonnell Douglas Corporation unveiled the first V/STOL AV-8B *Harrier II* last October 16. The AV-8B, developed by the corporation's McDonnell Aircraft Company division with British Aerospace participation, is an advanced version of the AV-8A now in service with the Marine Corps.

Four full-scale development *Harrier IIs* will be completed by early 1982 and flown to the Naval Air Test Center, Patuxent River, Md., for flight testing. The Marine Corps will receive the first pilot production aircraft in 1983, with operational capability scheduled for 1985. AV-8Bs will replace five squadrons of A-4 *Skyhawks* and three squadrons of AV-8As.

Harrier II aircraft delivered to the Marine Corps will include improved engine inlets and redesigned nozzles, lift improvement devices, a new all-graphite/composite supercritical wing, forward fuselage, horizontal stabilator and rudder, a new GAU-12 25mm gun, and leading edge root extensions designed to increase the instantaneous turn rate by four degrees per second.

First hover for the AV-8B Harrier II took place on November 5, 1981. The full-scale development aircraft was taxied from the McDonnell Douglas plant to the Lambert-St. Louis airport, where it rose vertically to hover for three minutes.

Pete Ross Trophy

Marine Attack Squadron 124, NAS Memphis, Tenn., was presented the Pete Ross Trophy on October 10, 1981, at the Marine Corps Aviation Association convention in Detroit, Mich. The award is given to the Fourth Marine Aircraft Wing squadron with the best safety record and flight training accomplishments. It honors Marine First Lieutenant Joseph F. Ross who was killed during a training flight in 1950.

F/A-18 Strike Range Tests

An F/A-18 *Hornet,* operating unrefueled off the Atlantic coast, recently delivered four 1,000-pound bombs on a target 620 miles from its base. Upon returning, the aircraft had sufficient fuel aboard to loiter in the area for 10 minutes, simulating a delay that might be encountered in landing on a carrier. The mission was flown with a full-scale development aircraft, which has 700 pounds less fuel than production models. Along with its bomb load, the F/A-18 carried three external fuel tanks, two AIM-9 *Sidewinder* missiles, a forward-looking infrared pod, a laser spot tracker and strike camera pod, and a 20mm cannon with 570 rounds of ammunition.

McDonnell Douglas officials said this level of strike performance is an example of the attack range and capability the *Hornet* will offer the Marine Corps, Navy, Canadian Forces Air Command, and other U.S. allies who are evaluating the aircraft. The Australians recently selected the F/A-18 to meet their defense requirements.

Bell Contract for TOW Missile

Bell Helicopter Textron has received a $10,536,116 contract from the Navy to retrofit the TOW (tube-launched, optically-tracked, wire-guided) missile system on 27 Marine AH-1T *KingCobras.*

The twin-engine attack helicopters will be modified at Bell's Amarillo, Texas facility. Delivery of the aircraft will begin in January 1983. Forty-nine AH-1Ts are currently being operated by the Marine Corps; 22 are equipped with the TOW system.

BQM-74C Aerial Target

Northrop Corporation has delivered to the Navy the first production BQM-74C air-launchable aerial target, under terms of a contract which called for 40 of these targets, as well as 100 of the MQM-74C Chukar II targets now being used in the fleet.

Besides being air-launchable, the BQM-74C uses a small digital computer which is capable of automatically controlling the flight of the aircraft and simplifies checkout and maintenance tasks. It is turbojet-powered and can fly up to speeds of 535 miles per hour and at altitudes of 30,000 feet.

The new targets completed successful operational testing in a Navy mobile sea range exercise where they simulated cruise missiles against surface-launched missile systems, and operated as targets for air-to-air missile firings.

KA-6D Endurance Record

The Naval Air Test Center's Strike Aircraft Test Directorate, Patuxent River, Md., claimed an endurance record after a 7.2-hour nonstop, unrefueled flight in a KA-6D last September 29. The flight by pilot Lieutenant Commander Steve A. Hazelrigg and NFO Lieutenant John T. Ertlschweiger covered approxi-

mately 2,900 nautical miles during a dual evaluation of the KA-6A Omega navigation system and 400-gallon fuel tanks.

Members of the attack branch at the strike directorate believe the flight is the longest, in distance and time, that an A-6 series aircraft equipped with J52-P8 engines has flown without refueling. The purpose of the test was to verify the predicted flight profile and fuel consumption of the A-6 configured with five 400-gallon tanks, and to determine cockpit compatibility, mission suitability and accuracy of the LTN-211 Omega navigation system.

VAW-125 Supports Space Shuttle

Grumman Aerospace Corporation

An E-2C from VAW-125 acts as a flying control center over Cape Canaveral during the second Space Shuttle launch. The Grumman Hawkeye is equipped with sophisticated radar to detect all air and surface traffic in a 300-mile radius.

When the Space Shuttle *Columbia* launched on its second voyage November 12, 1981, air traffic in the Florida skies surrounding Cape Canaveral was monitored by two E-2C *Hawkeyes* from VAW-125, home-based at NAS Norfolk, Va. The *Torchbearers* provided air and surface range surveillance for the launch. Other squadron missions included tracking the reusable fuel tanks dropped by the shuttle after launch, and vectoring support aircraft in recovering the tanks. One NASA offical said, "I don't know how we ever managed these space shots without an E-2C for support." VAW-125's skipper is Commander L. L. Foltzer.

Grampaw Pettibone

Victory at Sea

Theresa Lee, a 185-foot U.S. merchant vessel was floundering in violent 30 to 40-foot seas with a broken rudder and was in imminent danger of sinking in Bristol Bay, 65 miles northwest of Port Heiden, Alaska.

At 1928L, a Coast Guard HH-3F SAR helo was launched from Coast Guard Air Station Kodiak, with Lt. Ng (pronounced Ing) and a crew of three, to rescue the 22 crewmen aboard the endangered vessel. This was their third launch of the day. They had previously accumulated 4.3 flight hours on two search missions for lost hunters and had conducted a hazardous rescue from a cliff along a narrow beach area.

Weather conditions at the scene were miserable with 60 to 70-knot northerly winds, severe turbulence, one-quarter mile visibility, and 300 to 500-foot cloud ceilings with heavy rain and haze on that darkening August night. Lt. Ng assessed the circumstances and thoroughly briefed his crew. Realizing the perilous task which lay before them, they accepted the risks and pressed on through ever-worsening conditions. Their progress en route was hampered by high headwinds, turbulence, heavy rain, mountainous terrain, and low visibility. At one point, they were forced to circumnavigate water spouts.

An HC-130 aircraft, launched simultaneously, arrived on scene prior to the helo and established radio communications with the ship. The HC-130 pilot reported that the *Theresa Lee* estimated only four to five hours remained before flooding would sink the vessel. He expressed serious doubt that rescue hoisting would be possible under the terrible on-scene weather conditions.

Lt. Ng's crew negotiated the 200-mile distance in just under three hours.

The night was pitch black when the helo arrived on scene at 2230L. The ship's skipper requested immediate rescue, informing the pilot that the lives of his crew were also threatened with the presence of leaking cargo ammonia fumes, in addition to the threat of capsizing.

Lt. Ng and his crew moved into position and commenced rescue efforts, but the rough seas tossed the ship violently about like a cork. Large curling waves bashed across the deck washing the listing vessel rapidly down swell. Stacks of cargo, a 50-foot kingpost/mast, radio antenna and other obstructions on the stern area further complicated the hoisting attempts.

Two dewatering pumps were first lowered to bring the flooding under control. Despite efforts to compensate for gusting winds, the cable and rescue basket trailed well downwind, behind the helo. The ship's crew, at great risk of being washed overboard, were required to crawl along the wave-washed decks to the stern to be hoisted. Each hoist was extremely arduous. Repeatedly, the hoist cable became fouled, but was cleared just at the point when cutting the cable would have been necessary. During the three hours of hovering and hoisting, the copilot and radioman were overcome by the violent conditions and experienced severe nausea. After hoisting the seventeenth man, the C-130 pilot reported that the remaining five crewmen were too frightened to attempt the hoist and would remain with the ship. Lt. Ng secured the hoisting operation and attempted to transition the helicopter to forward flight but was momentarily overcome by exhaustion and nausea. He was unable to pull the necessary amount of collective to establish a climb and called for the copilot to take control of the aircraft, which he did and executed a safe climb-out.

Once out of the turbulent hover conditions, the crew recovered somewhat from their severe nausea. However, at 55 miles from their planned destination of Port Heiden, the fumes which had been present throughout the hoisting evolution grew worse. Lt. Ng declared an emergency and the C-130 aircraft proceeded to intercept the helo. The fumes were thought to have been from a malfunctioning aircraft heater but, after equipment isolation, the source was identified as an electrical failure in a windshield wiper motor.

The helo continued to Port Heiden without further complication, landing with an exhausted crew, fuel nearly

ILLUSTRATED BY Osborn

gone and seventeen terrified but grateful passengers.

Grampaw Pettibone says:

Great jumpin' Jehoshaphat! Gents, this has got to be one of the most dramatic rescues recorded in my dusty old log. Just the description of the rigors involved in this "dark and stormy night" rescue left Old Fearless Ferrus Bones here totally exhausted and danged near speechless. I almost became nauseous just reading the narrative.

There might be those who would say that the actions of this crew were irresponsible and foolhardy in view of all the hazards involved. Be that as it may, you can rest assured that the crew of the *Theresa Lee* didn't think it foolhardy. They all know full well this "angel" was "heaven sent!"

Lt. Ng's crew assessed the risks, their capabilities, the value of the 22 lives at stake, and then gave it their best shot. Their above and beyond the call efforts on this exhaustive rescue was truly a victory at sea. This crew's outstanding demonstration of responsibility, decision making, and courage of execution was a true testimony of some mighty high-quality training, professionalism and individual courage.

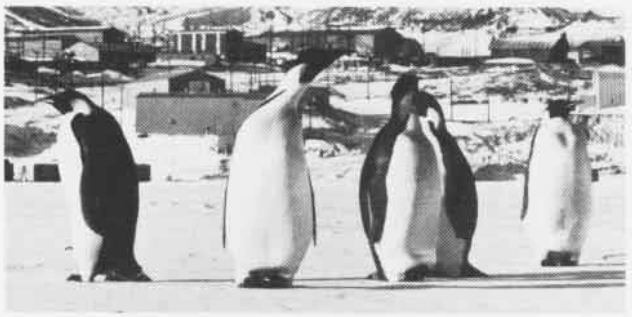
For their gallant efforts the crew, consisting of Lt. Michael B. Garwood (copilot), flight mechanic AD2 Drew E. Bratt, and avionicsman AT1 James H. Ellis, were awarded individual air medals. Lt. Ng was awarded the Distinguished Flying Cross. He was also selected as "Helicopter Aviator of the Year (1980)," by the Association of Naval Aviation.

Old Gramps can't envision a more dynamic demonstration to project the official Coast Guard motto of Semper Paratus.

VXE Six

ANTARCTIC OPS

By Lt. Timothy Coverick



PH2 Jeff Hilton

Here, a C-130 at the South Pole Station. Above right, native Antarcticans (Emperor penguins) on a self-guided tour of the American base at McMurdo.

PH1 G. R. Kessens

For most aircrews, cold weather flight operations represent a significant departure from normal operating routines. For one Navy squadron, however, quite the opposite is true. Antarctic Development Squadron Six (VXE-6), home-ported at Naval Air Station, Point Mugu, Calif., has deployed to the world's polar regions annually since 1955 and, in so doing, has cultivated an expertise in cold weather flight operations second to none.

By nature of its mission — to provide airborne logistic support for the National Science Foundation-sponsored U.S. Antarctic Research Program — VXE-6 is unique. Administrative and operational practices peculiar to VXE-6 have been developed in order to enhance the squadron's mission in one of the world's most severe climatic regions.

VXE-6 is composed of some 400 enlisted and officer personnel, and presently operates two types of aircraft: seven ski-equipped LC-130F and R *Hercules* transports, and seven UH-IN twin *Huey* helicopters. The National Science Foundation's Operation *Deep Freeze* program funds the entire range of VXE-6 requirements, from personnel training and payroll to the airplanes themselves.

Although VXE-6 has, in the course of its 27-year history, made excursions to both the northern and southern polar regions, *Deep Freeze* focuses primarily on exploration and scientific research in the Antarctic. These annual deployments take place during the austral summer months of October through February, around which the VXE-6 deployment cycle has evolved.

Each *Deep Freeze* season, as squadron personnel refer to the deployment, commences in late August with Operation *Winter Fly-in* (*WINFLY*). It consists of a series of six to eight C-130 flights from Christchurch, New Zealand, to the main U.S. installation on the Antarctic continent, McMurdo Station. Roughly 65 percent of the squadron and four C-130s take supplies to those individuals who, for varying reasons, remain in Antarctica during the long months of winter darkness and bitter cold. In traversing the 2,000 miles between Christchurch and McMurdo, aircrews maintain a close watch on prevailing weather conditions in and around the McMurdo area. Pilot reports are of special value and extensively used to monitor meteorological developments. Because August is actually a winter month in Antarctica, flight operations

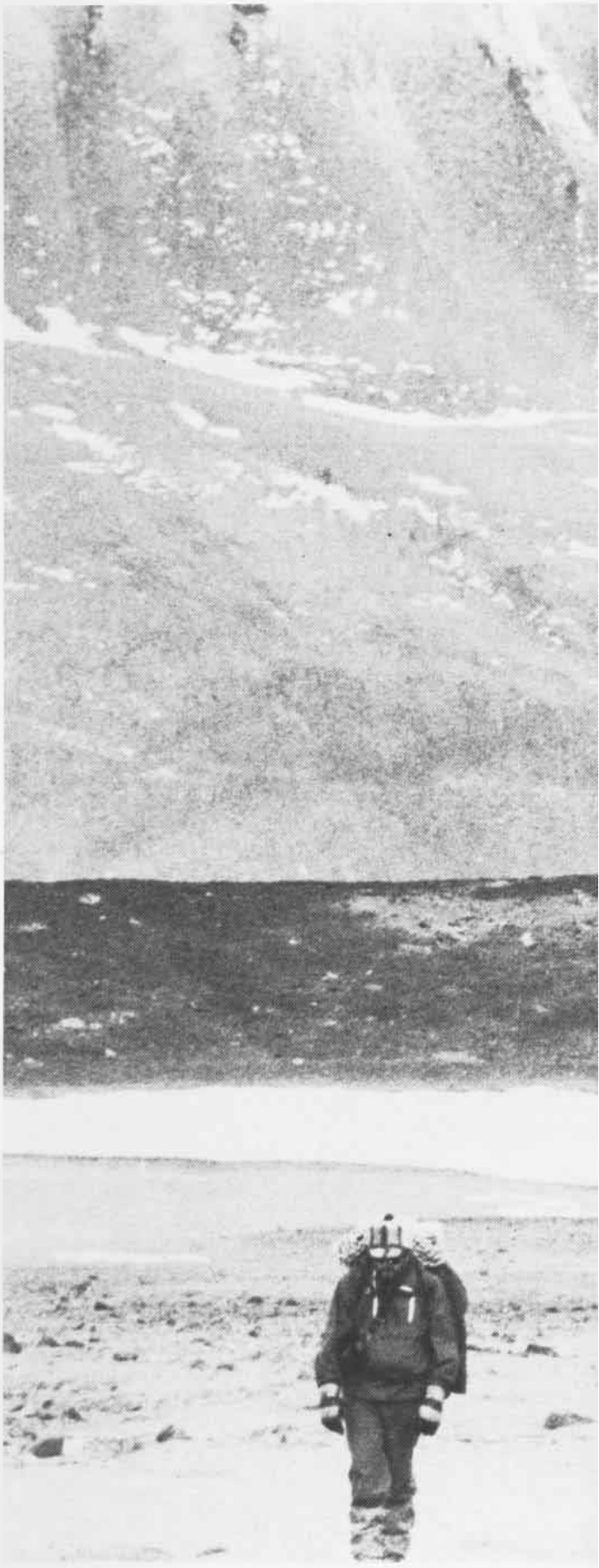
Members of VXE-6 pararescue team prepare for a practice jump. Photo by PH1 Gordon Sobe.

must bracket a four-hour window during which daylight prevails. For obvious reasons, night polar operations are not conducted. *WINFLY* is usually completed in anywhere from 10 days to 2 weeks, depending upon weather conditions.

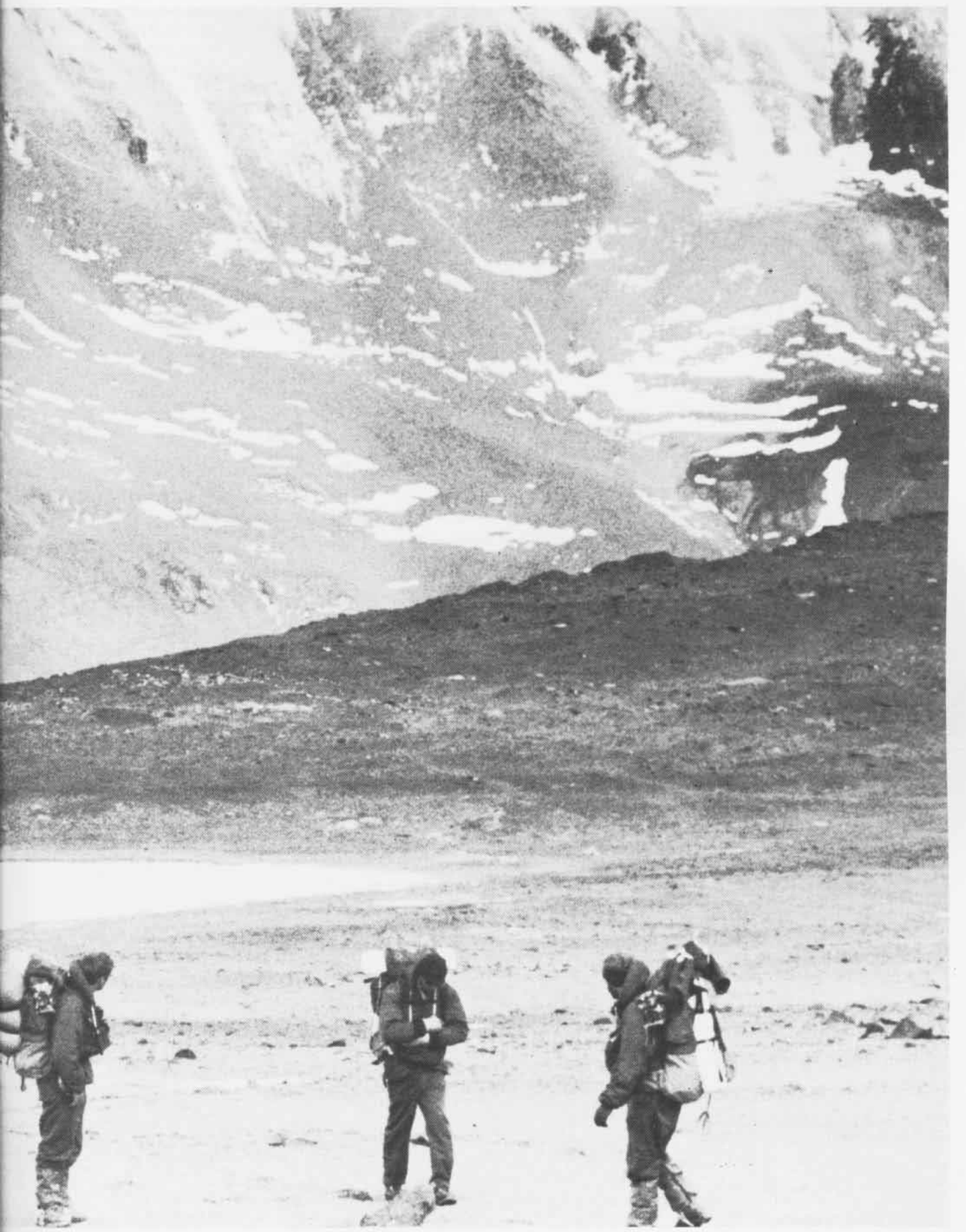
With the conclusion of *WINFLY*, VXE-6 returns to Point Mugu to complete preparations and training for the big move in October. The squadron's helicopter component winds down flight ops and prepares the helos for transport to the Antarctic in the C-130s. As a rule, the squadron operates only three *Hueys* during the non-deployment months at Point Mugu, leaving the remaining four in a preserved state on the ice.

By the first week of October, final preparations are completed and the squadron deploys. A detachment is established at Christchurch and is maintained throughout the deployment to provide administrative and logistic support between McMurdo Station and CONUS, and afford VXE-6 a greater degree of maintenance capability than is normally possible in Antarctica. Austral summer flight operations begin with the transport of summer season scientists, summer support personnel, *Deep Freeze* winter-over crews and cargo to McMurdo. Subsequent flights out of McMurdo involve the relief and augmentation of permanent stations, remanning of summer stations, preparation of facilities for the operating season, and the placement of remote scientific field parties by helicopter.

Flight operations during deployment are conducted daily, with Sunday being the only exception. For *Deep Freeze 82*, some 3,800 flight hours have been allotted which, when compressed into a four-month period, create a tight schedule.



Rescue team keeps in shape by hiking in the dry valleys. Photo by Lt. John B. Hunt.



Because most flights take place outside the umbrella of radar coverage, monitoring flight crews must have an in-depth understanding of their physical surroundings. For this reason, personnel making their initial deployment must undergo antarctic survival indoctrination presented by the squadron's survival support personnel. In addition, a prescribed quantity of minimum survival clothing and equipment must be carried on each flight. This requirement is strictly enforced. Specific items of clothing must be worn when boarding, and on takeoff and landing of aircraft – with additional items required to be on hand for intercontinental flights. Personal survival bags must also be carried by all flight crew personnel.

The aircraft themselves are provided with survival equipment, such as quick-donning exposure suits, food, and first aid supplies. Helicopters operating away from the immediate vicinity of McMurdo Station, as well as all C-130s, carry rations sufficient for seven days of survival.

Crew coordination is exercised to the maximum extent possible. Squadron standardization notes specifically task each crew member in the cockpit with duties on approaches and landings. The copilot (in the right seat) verbally calls indicated airspeed and rate of descent, while the flight engineer informs the pilot in control regarding radar altimeter indications. Visibility limitations and extreme crosswinds encountered in the Antarctic require the pilot's constant attention.

Utilization of cockpit personnel as a backup to the pilot's instrument/visual scan has proved invaluable over the years. Obviously, participation by three people in the landing sequence requires a disciplined and professional flight crew, the product of a great deal of practice and training.

Another rather peculiar feature concerning antarctic

flight operations is the use of altimeter information. Barometric pressures vary considerably from one locality to another on the Antarctic continent. Local readings are often unobtainable and surface elevations are frequently in error or unknown. While considerable reliance is placed on radio and radar altimeters, pilots must be constantly aware of altitude errors inherent in emission type altimeters, when used over snow or ice surfaces. Radio and radar altimeters must be constantly monitored while operating in conditions of poor surface and horizon definition, because gradual rises of upward sloping terrain masses frequently cannot be detected visually.

When operating away from McMurdo at remote landing sites, ground time is kept to a minimum. Engines are kept turning at all times in order to avert the possibility of not being able to bring an engine back on line after having secured it. Under such conditions, the offload of cargo and personnel is anything but routine and professionalism is essential.

The airplanes themselves have proven extremely reliable in the severe climate. After initial exposures, during which various seals contract and re-seat to suit the new environment, power plants operate normally. Inertial radar systems carried aboard the C-130s require significantly longer warm-up periods prior to alignment but, again, once on line the system operates normally.

VXE-6 aircraft, as previously stated, are owned by the National Science Foundation and are rather easily distinguished from other C-130s by the skis which have been installed as a permanent modification to the basic C-130 airframe. The ski system consists of one nose ski and the two main skis, each of which is attached to the wheel axis of its respective landing gear wheel. The skis operate in conjunction with the landing gear and, with the landing gear

Herk and twin *Hueys* provide support for outlying base. Photo by C. R. Hitchcock.

retracted, fit flush against mating fairings to enclose and seal the respective main landing gear wheel well. With the gear extended and skis retracted, the wheels protrude below the ski surfaces and a normal wheel landing can be made. When the skis are extended, the nose gear tires are above the lower surface of the nose ski but the main gear tires still protrude slightly below the lower surfaces of the main ski.

Actuation of the landing gear and ski system is controlled by switches and a control lever in the cockpit with a ski position indicator, similar to the wheel's position indicator, also having been installed. As a result of the permanent ski modification, aircraft speed has been impaired with a NATOPS speed restriction of 235 knots indicated air speed or nose ski flutter in effect. Also, because of the skis, no-flap landings are not recommended.

Since VXE-6 is the only squadron of its kind, operating aircraft on skis in such a hostile environment makes it difficult to qualify new pilots ordered into the squadron. Training is accomplished throughout the months at Mugu but only experience gained under actual Antarctic conditions can provide the necessary expertise. The responsibility for preserving and passing along this expertise in polar operations, which some have paid for with their lives, rests with a nucleus of highly-experienced squadron instructor pilots who, in their tour with VXE-6, have demonstrated thorough familiarity with the peculiarities of antarctic aviating. An additional NATOPS pilot designation of Polar Transport Aircraft Commander (PTAC) has been put into effect and can be earned only after having displayed proficiency under actual antarctic conditions.

The flying itself is basically VFR, although instrument navigation rules and procedures are followed. Flight routes are depicted in the Flight Information Publications but pilots are permitted to modify routes as may become necessary to conform and react to weather observation and deterioration. Helicopters may deviate 20 miles and C-130s some 50 miles from assigned track, in order to accomplish an assigned mission. If these deviations prove insufficient, aircraft are expected to return to base.

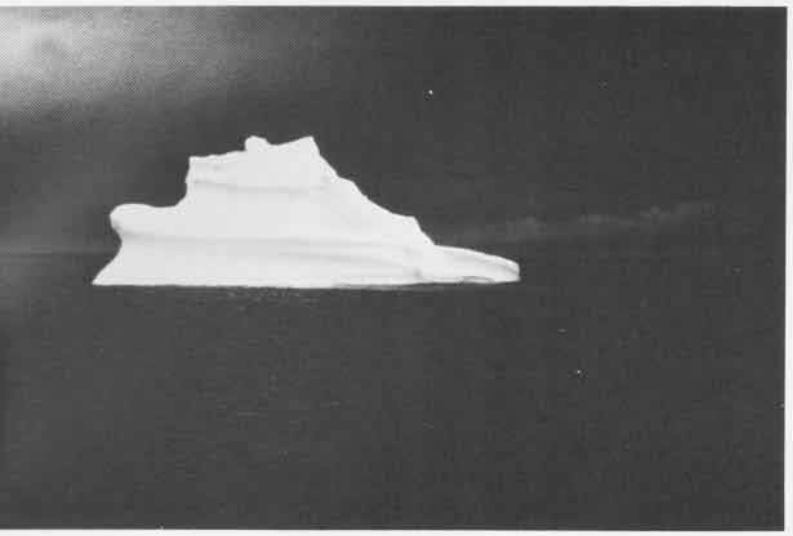
Communications are closely monitored by ground facilities with the HF range most often utilized by aircraft en route. Loss of communications with airborne aircraft for one hour constitutes sufficient cause to alert a search and rescue unit through the SAR coordinator.

The squadron maintains a pararescue unit composed entirely of squadron personnel for insertion into areas in which SAR units might be needed. An additional *Deep Freeze* SAR capability exists under the auspices of Commander Naval Support Force, Antarctica.

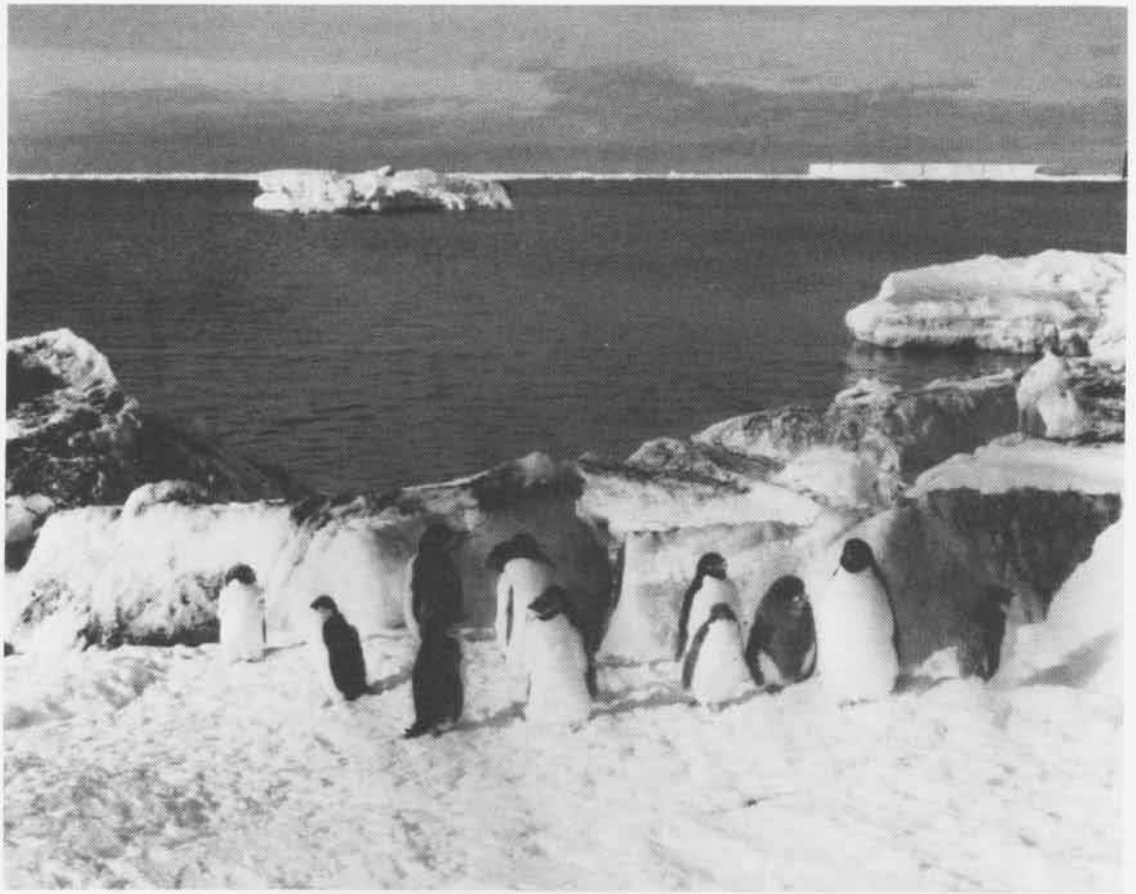
By February, the polar summer yields to the approaching forces of winter. The closing out of summer stations and replenishment of winter camps is completed and the squadron returns to California by March 1. After a brief stand-down and much needed R&R, the training process for the next deployment begins again. Pilot upgrades, replacements for transferred aircrew personnel, and maintenance and administrative support personnel are indoctrinated into the VXE-6 way of doing things. And, in the Antarctic, it is the only way to fly!

Herks line up at South Pole Station.

antarctic



Clockwise from above, the magnificent icebergs which appear on the surface signal danger below. Come on in, the water's fine. The penguin is one of the few creatures which thrive in the harsh environment.



Images

The photos on these two pages serve to establish the Antarctic mood which is conditioned by spectacular scenery and biting cold.

The frozen continent is no place for those who are weak in body or spirit. It has been the setting for acts of incredible courage in the face of overwhelming odds. It is the land of Amundsen, Shackleton, Scott, Byrd and many others.

Amundsen was first to reach the South Pole in December 1911. Scott arrived there a little more than a month later and perished on the return trip only a few miles from his base camp. Shackleton's ship was crushed by the ice in 1915. He and his crew somehow survived and sailed more than 800 miles to safety in an open boat.

Richard E. Byrd was the first to fly over the South Pole in November 1929. This and later assaults on the frozen continent were characterized by the efficient and effective employment of all the available technology of the day, including the airplane. In 1935, Byrd set up camp 100 miles south of his base at Little America II and stayed there alone from March 28 to August 10 of that year. No one had ever wintered over so far south. A subsequent expedition (1939-41) helped to establish the feasibility of operating manned bases continuously in a hostile sub-zero environment.

The U.S. Navy has long been involved in Antarctica. Operation *Highjump* (1945-47) in which Byrd was a key participant was the most ambitious expedition ever attempted. It included over 4,000 men, 13 ships and a number of landplanes, seaplanes, amphibians and helicopters.

Development Squadron Six (VX-6) was established early in 1955 to provide air support for the first Operation *Deep Freeze* (1955-56). Rear Admiral Byrd returned to Antarctica with this expedition which was carried out by Task Force Forty-Three commanded by Rear Admiral George Dufek. Several U.S. stations were established, including one at the South Pole. Dufek himself was aboard the first plane to land at the extreme southern tip of the globe and became the first American to stand at the South Pole.

Today, U.S. operations fan out from the permanent base at McMurdo Sound. The National Science Foundation directs and finances the U.S. scientific program and the Navy provides logistics support by air and sea.

The photographs which appear here are by Ruth E. Hanscomb, who has made 12 trips to the Antarctic and was one of the first women to set foot on the continent.

Above, ice is an ever-present hazard. Below, bust of RAdm. Richard E. Byrd at McMurdo memorializes the man and his exploits.

Cadillac Jack

The Navy Honors an Antarctic Pro

By Lt. Timothy Coverick

The U.S. Navy presence in Antarctica dates back to the 1920s when Admiral Richard E. Byrd's achievements made Antarctic aviation history. Another Naval Aviator was honored last November for his aerial exploits in the world's most hostile flying environment. He is retired Lieutenant Commander John F. Paulus, known affectionately to Antarctic aviators as "Cadillac Jack."

A veteran of no fewer than nine *Deep Freeze* deployments, Paulus was one of the knowledgeable and skillful pilots who contributed much to American efforts in Antarctica where Navy flyers are often forced to land and take off in zero visibility, in whiteouts caused by gale winds which whip the snow to a frenzy.

How did Cadillac Jack get his nickname? It seems to have originated during one of those bull sessions where someone remarked, "Jack Paulus is so smooth that flying with him is like riding in a Cadillac." Pilots and crewmen, as well as scientists and support personnel, were quick to concur in the assessment. From that day to this, Paulus has been known to those who ply the Antarctic wastes as Cadillac Jack.

LCdr. Paulus made his first trip to Antarctica in 1969. He then proceeded to amass 4,500 cold weather flight hours in VXE-6's LC-130 ski-birds before his retirement in June 1980.

During his years with VXE-6, Paulus headed several historic flights. In December 1969, he piloted the first LC-130 to land "in the field" some 2,250 nautical miles from McMurdo — what is now known as Siple Station. Later, Paulus transported the first group of women scientists to the South Pole. During *Deep Freeze 80* he also carried out two medical relief missions to Russian scientific stations.

In one case, he airlifted a terminally ill Russian scientist back to McMurdo for further transfer to New Zealand.

On another mission in 1974, Paulus flew his LC-130 from Antarctica to New Zealand with one of the plane's four propellers feathered, nine hours over an open expanse of frigid water.

VXE-6 Flight Engineer Lamar recalls an incident which pointed up Paulus' familitarity with the terrain. It had to do with closing out a summer research camp and transporting the scientists and equipment back to McMurdo. The aircraft was operating independently and, in the absence of navigation stations along the way, had to navigate visually to the site, which was located in the

Lagorce Mountains. A low scud layer shrouded the surface, obscuring any references to landmarks which would show the aircraft's position. Paulus, thoroughly familiar with the remote mountain range, descended, spotted a glacier whose distinctive features he had committed to memory, and immediately oriented himself. No big thing you say? Try it sometime without navigation aids and where one snow-covered mountain seems to look like every other.

Now retired in Billings, Mont., Lieutenant Commander Paulus recalls his tours in the Antarctic with satisfaction. "Down there", he says, "you're on your own. You're given a plane, a crew and a mission, and told to go out and do the job. It's some of the last really good flying on earth."

Cadillac Jack's ability to deal with the harsh Antarctic on its own terms, year after year, has made him a legend in his own time among cold weather pilots. As testimony to his many contributions and largely unheralded accomplishments throughout his career, the U.S. Navy has officially named the skiway at the South Pole in his honor – a fitting tribute to a remarkable man!

Above, LCdr. Jack Paulus at the South Pole landing facility which bears his name. Below, C-130 offloads cargo at Byrd Glacier.

PHAN T. Barna

Cold Lift

Flying in a UN-1N *Huey* helicopter, garbed in flight suit and boots, and helmet, can be a sweltering experience when the flight is over North Carolina in midsummer. But it's an entirely different ball game when the flight takes place in sub-zero temperatures 140 miles north of the Arctic Circle. Corporal Randy Bevers, an HML-167 crew chief, would have been glad for any relief from the cold as he looked out of the *Huey* window upon the frigid landscape of northern Norway.

Early last year Marine Light Helicopter Squadron 167, home-based at MCAS(H) New River, N.C., deployed to northern Norway as the Aviation Combat Element of the 36th Marine Amphibious Unit commanded by Colonel F. L. Tolleson. Ten *Hueys*, reinforced by four AH-1T *Cobras* from Marine Attack Helicopter Squadron 269, embarked aboard USS *Guam* to take part in NATO Exercise *Cold Winter 81* and *Cold Ex 81*.

Operations began with two weeks of cold weather training with the Norwegian Armed Forces in the Soetermoen and Bardufoss area. There, temperatures ranged from freezing to well below zero, and the average snow depth away from the landing field was about three feet.

Norwegian pilots of the 339th Squadron taught U.S. Marine Corps pilots the proper techniques for snow landings. Training flights also increased proficiency in navigation, formation and night flying.

A Norwegian-designed snow pad which fits onto the UH-1N's skids was tested and found to provide more mobility. Lieutenant Colonel Marvin Pixton III, commander of the Aviation Combat Element, stated that they were compact, and easy to change and transport. He recommended that they be adapted for all *Huey* helicopters.

The weather during operations was unpredictable, changing dramatically in a matter of minutes. Sometimes the weather was completely different from valley to valley.

Marine Corps pilots and crew members were briefed on survival measures in the event they were forced to make an emergency landing. They adjusted to frigid cold and learned to use their cold weather equipment.

The training period was followed by NATO Exercise *Cold Winter 81* and by *Cold Ex 81*. One of the elements of the exercises involved a tri-nation lift of over 500 troops, using a 22-plane helilift made up of Marine Corps and Norwegian *Hueys* and British transport helos, under the command of Lt. Col. Pixton.

Helicopters of the Aviation Combat Element were used to simulate Soviet *Hormones* and *Hind* helicopters in a search and destroy mission against Norwegian fast patrol boats. The *Hueys* and *Cobras* were also used in a series of heliborne raids and assaults.

Many lessons were learned during the cold water operations in Norway. But there was still another significant by-product of the combined exercises – the sound working relationship established between the Marine Corps personnel and their Norwegian hosts, and the memory of warm hospitality.

A British Wessex helicopter gets a drink near Overgard, Norway. Hammer and sickle on the nose indicates this aircraft is playing the Soviet part in the exercise. Photo by GySgt. Mike Branski.

Maj. Gen. E. J. Ingebrigsten, Norwegian Forces, is flanked by Col. F. Tolleson (l.) and Lt. Col. M. F. Pixton III, USMC.

Crew Chief Cpl. Randy Bevers of HML-167 gets a bird's-eye view of northern Norway. Photo by Sgt. D. Layne.

Hercules the

Lockheed's feisty C-130 *Hercules* transports have logged some unusual flights during their 27-year career — the Entebbe rescue of 104 hostages in 1976, live pickups from land and sea, and airlifting from Antarctica of scientists who had become ill. But one of the most daring chapters in the aircraft's logbook occurred when the Navy decided to land one of the big turboprops on an aircraft carrier.

The event, which took place in late 1963 aboard USS *Forrestal* (CVA-59) in the North Atlantic, was a first for a large multi-engine aircraft. It was the heaviest airplane ever to land and take off from an aircraft carrier, setting a world record which stands today.

When the idea was first proposed, there was a bit of scoffing in aviation circles. How could the big four-engine C-130, with its bulky fuselage and 132-foot wingspan, land on the deck of a carrier? Even the assigned pilot, Lt. (now RAdm.) J. H. Flatley III, said, "Operate a C-130 off an aircraft carrier? Somebody's got to be kidding!"

But they weren't kidding. In fact, the Chief of Naval Operations himself had ordered the feasibility study. The Navy was trying to find out whether it could use the *Hercules* as a sort of super COD (carrier onboard delivery) aircraft to transport supplies to ships.

The aircraft selected, a Marine KC-130F (BuNo 149798), received only a few minor Lockheed modifications — installation of an improved antiskid braking system, a smaller nose landing gear orifice and the removal of refueling pods from the wings.

"The big worry," Flatley said, "was whether we could meet the maximum sink rate of nine feet per second." As it turned out, the *Hercules*, with its low-speed controllability derived from propjet engines and prop-pitch reversibility, was able to better the max sink rate by a substantial margin. The initial carrier landings, on October 30, 1963, were made into a 40-knot wind. Altogether, Flatley and his crew negotiated 29 touch-and-go landings, 21 unarrested full stop landings and 21 unassisted takeoffs at gross weights of 85,000 up to 121,000 pounds.

At 85,000 pounds, the C-130 came to a stop in 267 feet, about twice the plane's wingspan! Even with the maximum load, the plane used only 745 feet for takeoff. One 109,000-pound gross weight landing made during a rain squall required a landing roll of only 459 feet. The plane's right wing tip cleared *Forrestal's* island flight deck control tower by just under 15 feet as the plane rolled down the deck on a specially painted line.

After the *Hercules* made its first full-stop landing in front of the captain's bridge, a big cheer arose from *Forrestal's* crewmen. On the side of the aircraft was a message "Look Ma . . . no hook."

From the test data, the Navy concluded that the C-130 could carry 25,000 pounds of cargo and personnel 2,500 miles and land on a carrier. Even so, the plane was considered a bit too risky for routine COD operations and the Navy elected to continue to use a smaller aircraft for this purpose. For his achievement, however, Lt. Flatley received the Distinguished Flying Cross.

The Navy has used the Lockheed C-130 for various purposes since it

KC-130 BuNo 149798 takes off from Forrestal on November 21, 1963.

diehard

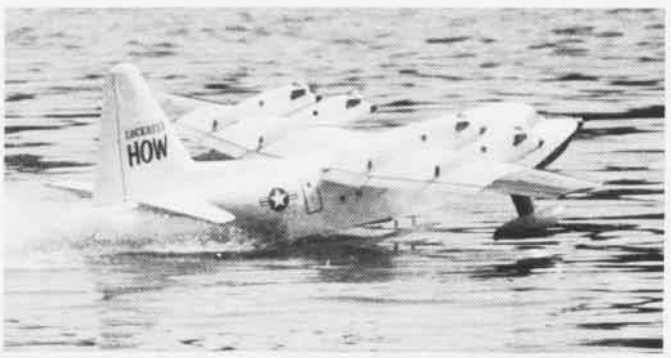
first entered naval service in 1960, when four LC-130Fs (C-130BLs) were employed for Antarctic support missions. These ski-equipped *Hercules* were soon followed by 46 KC-130F (GV-1) models procured by the Marine Corps as dual role assault transports and aerial tankers for fighter and attack aircraft. That same year, the Navy obtained seven C-130Fs without in-flight refueling equipment to serve some of its transport requirements. In 1965 the Navy acquired a number of C-130Gs to provide support to *Polaris* submarines and the exchange of their crews. Other models, the EC-130G and EC-130Q, were equipped with a VLF radio transmitter system used to supplement shore-based communications facilities. The *Hercules* also flies with the Coast Guard, performing air-sea rescue missions.

This airplane has blossomed into more than 30 known versions and is being flown by operators in at least 50 countries. It holds the world record for continuous production of a four-engine cargo/personnel transport, with a total of more than 1,600 aircraft produced. There are versions for hurricane hunting, forest fire fighting, photomapping, iceberg patrol, search and rescue, and recovery of astronauts and their spacecraft.

Except for the "stretching" of the fuselage for some later versions, the plane's external appearance and dimensions have remained nearly the same since the rollout of the original model on August 23, 1954.

The latest H model has increases in payload of 26 percent, speed of 11 percent, range of 52 percent, and decreased takeoff distance of 17 percent. This advanced version, with its higher-power engines, stronger wings, updated avionics and an in-flight operable auxiliary power unit gives this airplane an optimum balance of payload, range performance and life service expectancy.

Present aircraft rolling off Lockheed's assembly line will be flying well into the twenty-first century and technical developments now under way could give the persevering bird an even longer life and greater usefulness.



Clockwise from above: This VXE-6 LC-130 crashed in a remote area of Antarctica; a C-130 model configured as a seaplane was tested by Lockheed but never came to production; an LC-130 equipped with snow skis takes off from Barbers Point; and a KC-130F from VMGR-352 refuels an A-4M and RF-4B.

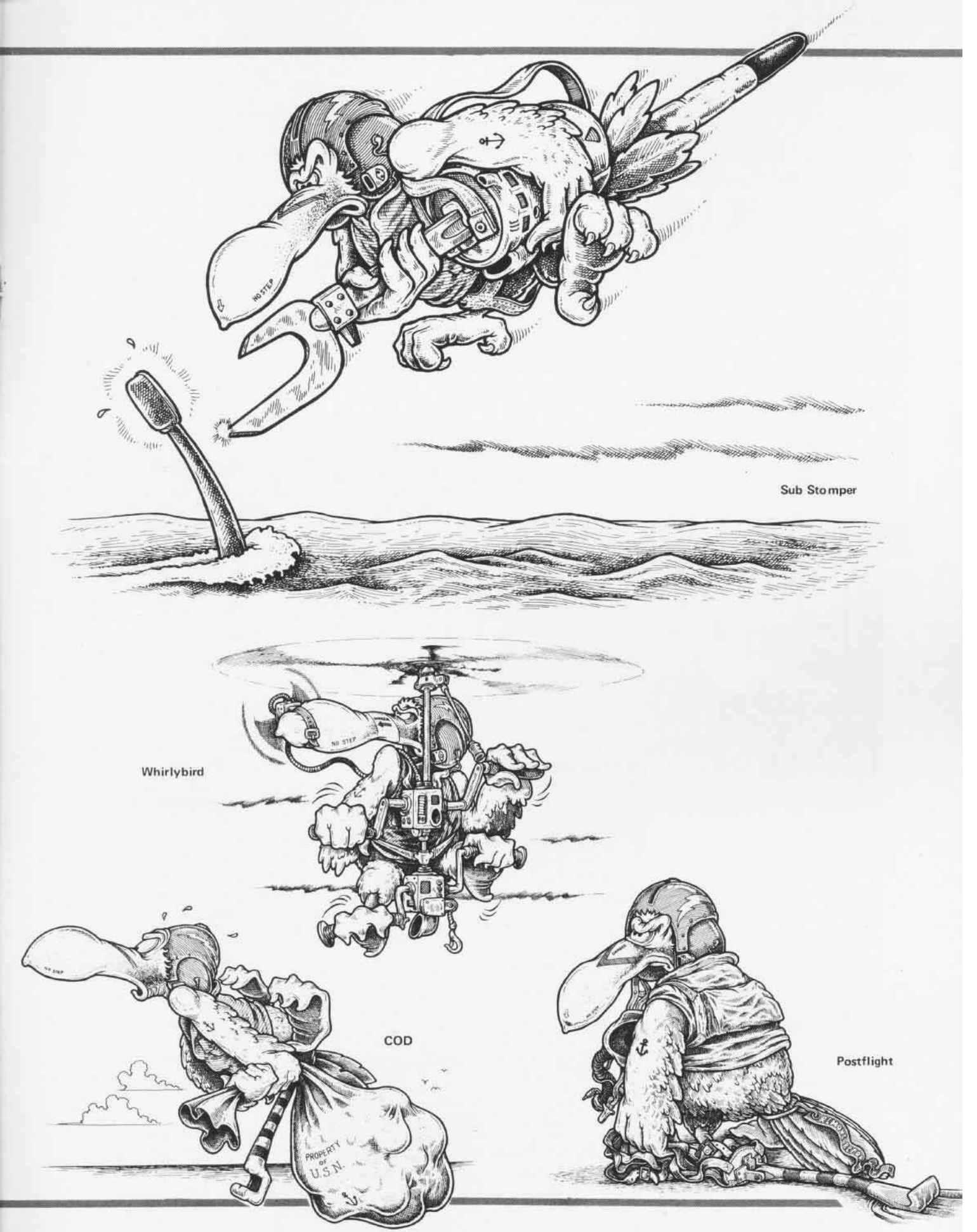
Caruso's Seabirds

Few would deny that Hank Caruso's art is unconventional — certainly not Hank Caruso. His unusual aircraft drawings, which he calls aerocatures, imbue his machines with human characteristics and distinct personalities. (See *NANews*, March 81.)

Sometime ago, we asked Hank to take a good close look at the various forms of Navy flight operations and provide us with his impressions — no holds barred. We wanted him to apply his own special art style to the unique qualities of flight in the marine environment. We did not know what to expect but we knew the result would be interesting and different.

Hank went to work and produced six drawings which reflect his perception of Naval Aviation. He calls them "Seabirds." One drawing appears on the front cover and the other five are reproduced on these two pages.

Close Formation



Sub Stomper

Whirlybird

COD

Postflight

The NWEF symbol marks the tail of an A-7C Corsair being inspected by ADAR Michael Tolmich.

It's Nowhere Near the Water

The Rio Grande Navy

Story and Photos by JOC Kirby Harrison

They call themselves the "Rio Grande Navy." Never mind that the Rio Grande, where it passes near the Naval Weapons Evaluation Facility (NWEF), is more often than not a dry river bed, or that the nearest ocean is 950 miles from the Albuquerque, New Mexico base.

The facility is a long way from salt water and shoehorned into a seven-acre corner of Kirtland Air Force Base. But it is definitely Navy. It says so on the wall of the two-story enlisted quarters — on the outside wall, in very large letters. "Fly Navy," it proclaims to the frequently raised eyebrows of newcomers, and to the occasional consternation of some Air Force people.

Flying is one of the things done best at NWEF. They fly just about every type of aircraft the Navy uses to deliver weapons. The permanent inventory includes five A-7 *Corsair* models, one of them a TA-7 for photographic and observation missions. There is also an OV-10 *Bronco* and two U-8s for transportation. Other aircraft are flown in to the facility for specific weapons evaluation programs, as needed.

NWEF, with its 145 Navy and 100 civilian employees, is a child of the nuclear age, established in 1949 to provide certain Navy aircraft with a nuclear bomb carriage and delivery capability. Today, the facility's air weapons systems department conducts airborne tests and evaluation on aircraft-delivered nuclear weapons, nuclear training weapons, weapon delivery systems, control and monitoring equipment and aircrew protective equipment.

"We've tested and evaluated the B-43, B-57 and B-61 bombs for delivery by various Navy aircraft," says NWEF commanding officer Captain Denis Weichman. Delivery evaluation of the B-57 was instrumental in certification of the P-3 *Orion* and S-3 *Viking* to deliver that weapon. The A-6 *Intruder* and A-7 *Corsair II* were certified to deliver all three nuclear bombs.

Over the years, the job was expanded to include other departments also concerned with nuclear weapons. There is a nuclear safety department which schedules and coordinates Navy nuclear weapon and weapon system safety studies and performs system analyses for these studies. And there

Sun shines through water beaded on an OV-10 Bronco cockpit during a fresh water wash by AMS2 Larry McLean (left) and AE2 Dave Billinger.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127.40
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are departments concerned with the ability of nuclear weapons to survive the progression from stockpile to target, the safety of weapons handling, and reviews of the surface, subsurface and amphibious branches.

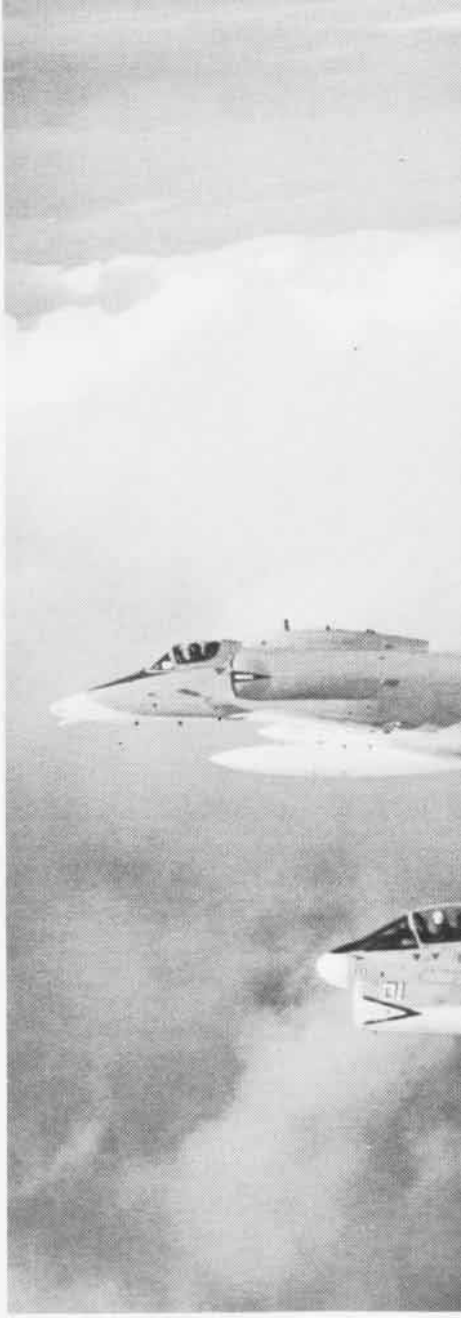
"The job sometimes sounds more exciting than it is in reality," points out Capt. Weichman, explaining that the actual in-flight phase is invariably preceded by hours of planning and followed by more hours in assembling the data collected and in writing up the evaluation.

Paperwork is something NWEF generates the way night produces stars, and a major portion of that comes from the airborne weapons publications department. The 33-person staff of supervisors, artists, clerks and librarians produce the weapons loading manuals for 38 U.S. aircraft, not counting model variations or foreign planes. It adds up to more than 800 publications on the specific loading and unloading of both nuclear and conventional weapons. It also adds up to a lot of travel, since many of the aircraft are not immediately available at the NWEF hangar.

"Anytime there is a modification that would affect the loading of weapons, we have to check to see if it also requires a modification of the loading procedures," explains AOC Terry Hinds, who heads the A-6 desk. Hinds adds that the department is always looking for ways to improve the loading procedures, especially if it will make the process safer. "It's always satisfying to get suggestions from the people in the field, and we've discovered that some of the best ideas come from the airmen and junior petty officers," he says further.

According to Capt. Weichman, the term "satisfying" also applies to NWEF's recent test and evaluation of the advanced tactical bomb, known as ATB. The nuclear bomb employs a unique delivery system that allows the pilot to drop the weapon on a low-level, high-speed run over the target, and allows him to escape the subsequent blast. A parachute deploys with the drop and not only slows the fall of the bomb but lofts it to a point well above the level at which it was initially dropped. "The tests were very successful," says Weichman. "Films showed the bombs actually began falling from points as much as 1,500 feet above the altitude at which they were dropped."

NWEF has also participated in evaluating a parachute recovery system that would allow NASA to send scientific payloads into space aboard



A formation of NWEF aircraft, two bearing the NWEF symbol, fly near Albuquerque. NWEF has an inventory of six tactical aircraft and flies in others as needed for tests.

The airborne weapons publications department produces more than 800 weapons loading manuals. AOC Terry Hinds (left) and Terry Kleindienst, going over library records, are part of the 33-person staff.

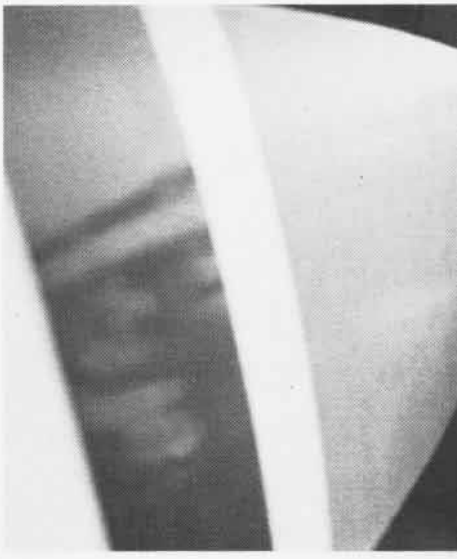
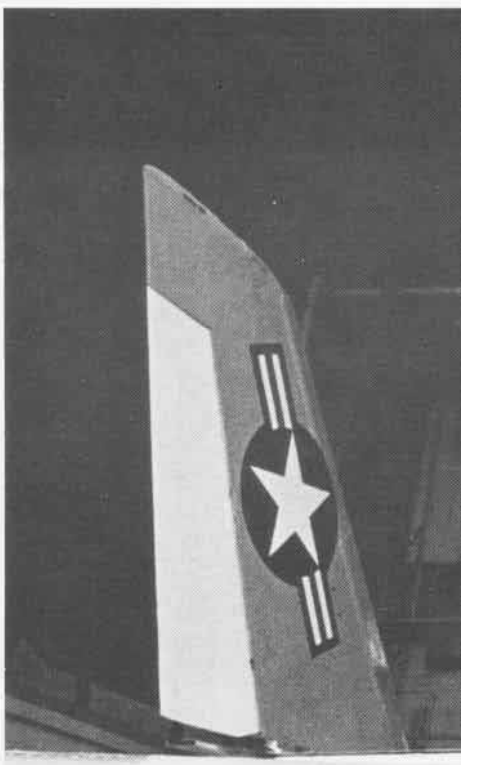


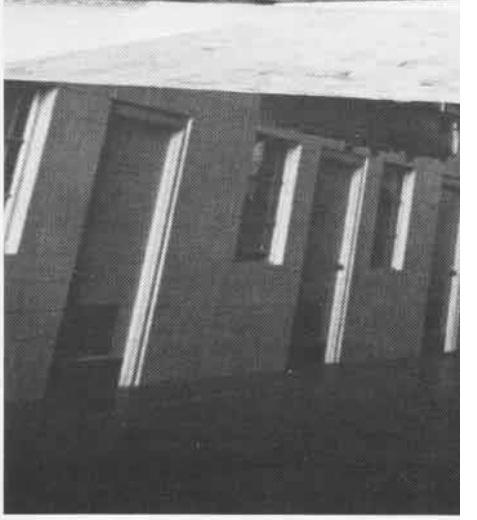
Photo by PH1 John Porter.

In the OV-10 cockpit, PR2 John McCage performs routine maintenance chores.

Lt. Bob Lambert checks figures on bombing runs by an A-6 Intruder pilot.

The A-7 Corsair is one of five permanently assigned at NWEF.





surplus Atlas rockets and recover the equipment. "We received a letter from NASA thanking us," recalls Capt. Weichman. "They said their first payload had been sent and recovered, and the system was working perfectly."

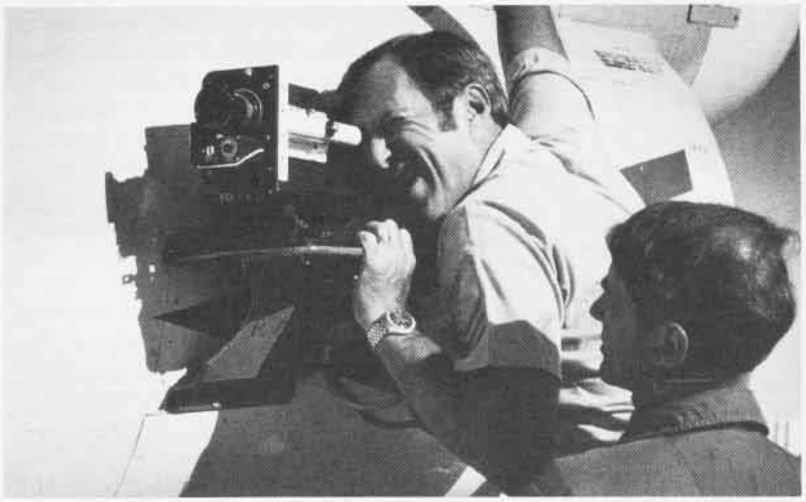
Last year, the facility put more than 140 flying hours on the A-7 and OV-10 aircraft just to test the rolling airframe missile (RAM). The project is aimed at adapting the *Sidewinder* air-to-air missile to shipboard use by adding a booster rocket and radar homing device.

Perhaps the most exciting NWEF project involves the high energy laser weapon. The prototype, not yet classified as a weapon, is under study by the Air Force and mounted in an NKC-135A aircraft for air-to-air testing. The Navy's primary interest at this point, according to a spokesman at NWEF's high energy laser office, is in the weapon's potential for surface-to-air defense of ships.

Unlike the Buck Rogers glamor attached to developing a laser weapon, much of the work at NWEF involves the in-flight evaluation of airframe modifications on weapons systems. Any airframe modification that might affect the fall of a bomb load or missile release must be evaluated, and the proper changes made to give the pilot the right information to ensure accuracy.

Sometimes no changes are needed. But according to NWEF's skipper, often as many steps are required to confirm what you know as are needed to learn something new. "No job is too big. They're all important."

"We're capable of doing even more," says Capt. Weichman. "We're a long way from the ocean, but we're Navy and we can do the job."



PH1 John Porter, with help from Cdr. Richard Butterfield, hangs a high-speed motion picture camera on an A-7C Corsair.

Dwarfed by the super wide-angle camera view, AD2 Ron Bias performs the daily inspection on a TF-30 engine in the A-7 Corsair.

Jump into Darkness

SSgt. Robert Bean (left) and jumpmaster MSgt. Fred Patterson rig primary and backup radios to Wilson's arms.

Story by Wendy Veith
Photos by SP4 Craig Kupras

Navy veteran Walter "Rip" Wilson recently made his first parachute jump — at Fort Bragg, N.C., from an 82nd Airborne Division UH-1H helicopter. A not too unusual event? Rip Wilson is blind.

He was rigged in an MC1-1 Bravo parachute. His static line was hooked to the helicopter and he sat on the edge of the helicopter door with his legs hanging out in the breeze, a safety belt securing him inside the aircraft. He could feel the tension mounting as the helicopter climbed to 3,000 feet.

At the "get ready" command, Wilson removed his safety belt and crouched in the four and one-half-foot doorway. He reminded himself that he had memorized and practiced each movement to perfection. When the "go" signal came, he jumped, assuming a spread-eagle position to slow his descending speed. He held his breath, waiting for the jolt of the opening parachute.

When the jolt had passed, he was assured of canopy control and no malfunction. As he came down, he listened to directions over the radio receiver strapped to each upper arm. Bob Wren, a veteran skydiver, was at the mike to lead Rip safely down, and there was a two-man ground crew to transmit messages to him as a safety precaution. With the help of telescopic binoculars, they assured him that there were no holes in the canopy. They told him to relax and enjoy the ride.

As Wilson glided down, he listened carefully to the directions for steering his canopy so that he faced the wind and headed toward a safe landing spot. Then came instructions from the ground team to prepare for landing. He pressed his knees and feet together with toes pointed to the ground, and raised his arms so that they protected his face.

In moments, the landing was an

accomplished fact. Wilson had executed a good parachute landing fall and was safe on the ground, although he did sustain a sprained ankle in the process.

How did Wilson arrive at this personal achievement? Nothing in his Navy career had prepared him for jumping out of a plane. And his blindness was no small handicap.

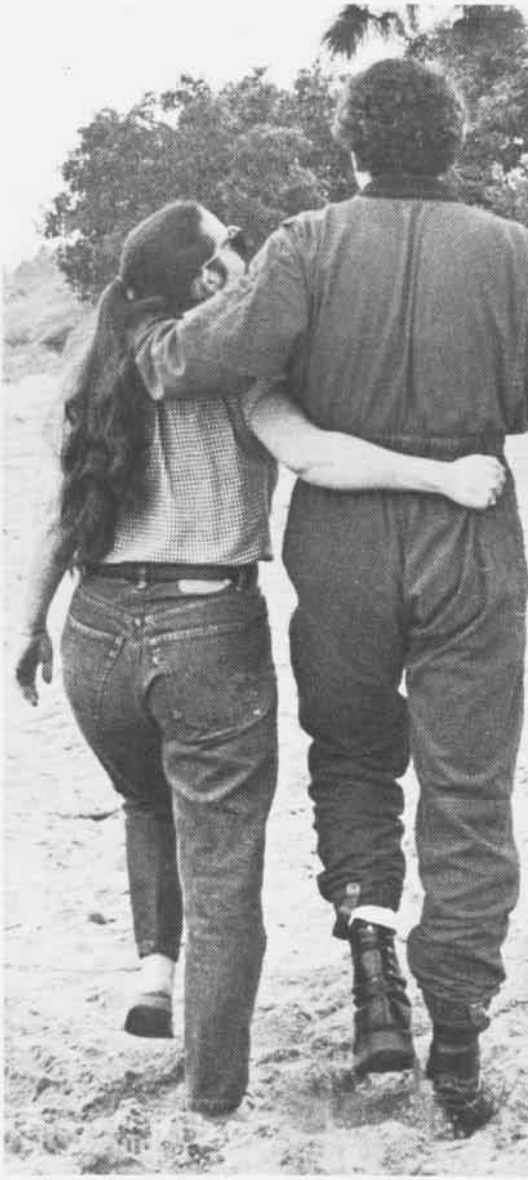
Wilson served for about three of his Navy years as an antisubmarine warfare officer. He lost his sight in March 1977 in a gun mount explosion aboard USS *Manley* (DD 940) while she was deployed off the coast of Cuba.

He refused to let his blindness keep him from an active life. He first went back to the water and snow skiing he had enjoyed before. Then he decided to tackle parachuting, which he had wanted to do since he was a teenager.

A friend introduced Wilson to Master Sergeant Fred Patterson, manager of the 82nd Airborne Division's Sport Parachute Club at Fort Bragg. Wilson became a member of the club and Patterson was his parachute instructor and jumpmaster, giving him private lessons. "When I heard about him, I was a little hesitant about taking him as a student. But after talking to him, I knew this guy was really serious about jumping."

Training included orientation in exiting the aircraft, malfunction procedures, steering a deployed parachute and landings. Then came the weekend when it was off to the drop zone to put into practice all he had learned. It was a standard jump day for club members, who get together every weekend and jump, weather permitting. Patterson felt that Wilson's biggest problem in making the jump was his height — his six feet three inches having to exit the four and one-half-foot doorway of the helicopter. In the end, however, it proved to be no great problem.

In reflecting on his experience, Wilson said that he was lucky to have such professional, supportive and enthusiastic people to help him. He is anxious to jump again as soon as his ankle mends. He says, "Floating through the air gave me a great sense of freedom and independence, and jumping gave me a deep feeling of personal satisfaction."



Left, Wilson gets into pre-jump position and, below left, leaps from the aircraft without hesitation. Lower right, Wilson's wife accompanies him back to the clubhouse to celebrate. He is limping on his sprained ankle.

The Year in Review 1981

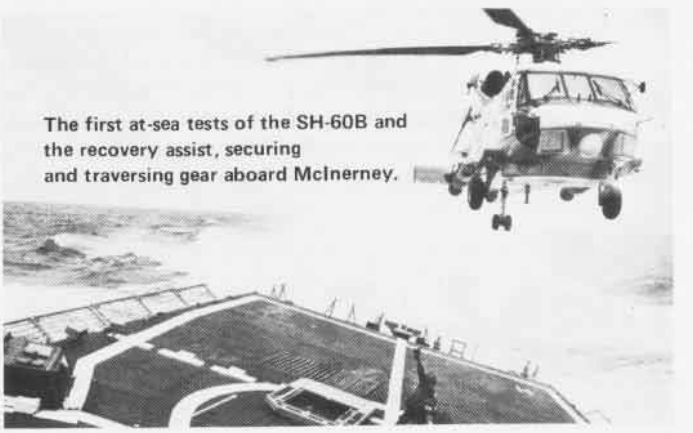
The adage that "history is the story of people" is exemplified in the 1981 Naval Aviation Review. Individuals were in the forefront in 1981 and their accomplishments in Naval Aviation are noted throughout the review. Some of those mentioned have had a profound influence on world and national events but the continuing reputation for excellence enjoyed by Naval Aviation is properly shared by all who labor in its behalf.

By Roy A. Grossnick, Assistant Historian

JANUARY

1 The names of the first group of selectees for the new Naval Aviation Hall of Honor at the Naval Aviation Museum in Pensacola were made public. The 12 men approved for enshrinement by CNO were Adm. John H. Towers; Eugene B. Ely; Lt.Col. Alfred A. Cunningham; RAdm. Richard E. Byrd, Jr.; Cdr. Theodore G. Ellyson; Glenn H. Curtiss; VAdm. Patrick N. L. Bellinger; RAdm. William A. Moffett; RAdm. A. C. Read; LCdr. G. deC. Chevalier; Capt. Holden C. Richardson; and Warrant Officer Floyd Bennett.

6 The LAMPS MK III ASW system went to sea for the first time. Off the northeastern coast of Florida, the SH-60B *Seahawk* landed aboard USS *McInerney* underway by using the new recovery assist, securing and traversing (RAST) gear. RAST is designed to recover its helicopter in seas with ship movements up to 28 degrees of roll, five degrees of pitch and heaving of 15 feet per second. The primary mission of the SH-60B is antisubmarine warfare. It also provides surveillance and targeting information on surface vessels, performs search and rescue operations and is used for vertical replenishment and gunfire support.



The first at-sea tests of the SH-60B and the recovery assist, securing and traversing gear aboard McInerney.

10 Aircraft from the naval stations at Guantanamo Bay and Roosevelt Roads responded to a request by the Jamaican government for assistance in fighting a fuel oil storage tank fire in the Montego Bay area. The aircraft flew in fire fighters, equipment and light water.

15 A *Tomahawk* cruise missile was launched from the submerged submarine USS *Guitarro* (SSN-665) off the California coast and impacted the target at a range of more than 100 miles. The test was repeated six days later with the same results. In another test conducted on March 20, the missile hit the target at a range of more than 200 miles. These tests successfully demonstrated the *Tomahawk's* capability to search for, locate and attack a target at sea.

20 Iran released 52 Americans who had been held hostage since November 4, 1979, when the American Embassy in

Happiness is having the American hostages home again.

Tehran was seized. Twelve members of the hostage group were active duty Navy and Marine Corps personnel. Cdr. Don A. Sharer was the only member of the group from the Naval Aviation community. He is a Naval Flight Officer and was a naval advisor at the time of the embassy takeover and the senior member of the Navy and Marine Corps hostages.

31 The era of Enlisted Naval Aviators came to a close when the last enlisted pilot, Master Chief Robert K. Jones, retired after 38 years of naval service. Enlisted pilots had performed their duties for over 61 years as Naval Aviators on combat missions, as transport pilots and as instructors. The program for Enlisted Naval Aviators officially ended in 1947. Master Chief Jones' career exemplified the fine tradition and accomplishments of Enlisted Naval Aviators.

The last Enlisted Pilot, MCPO Robert K. Jones, preflights an S-2.

FEBRUARY

16 U.S. congressmen visited the carrier USS *Ranger* (CV-61) while she was deployed in the Indian Ocean as part of the U.S. Indian Ocean Battle Group, Senator John Tower

Left to right, Sen. Tower and Rep. Nelson discuss Indian Ocean ops with RAdm. Kirksey aboard Ranger.

and Representative Bill Nelson were reviewing national defense affairs with various countries in the Indian Ocean area, as well as discussing the role of the U.S. in the Indian Ocean. *Ranger* is the eighth U.S. carrier to conduct operations in that area since the Battle Group was formed in late 1979 in response to the American hostage crisis in Iran.

19 Fighter-Attack Squadron 125 (VFA-125) became the first squadron to receive the new F/A-18 *Hornet* for fleet operations. The *Hornet* is the Navy's newest strike fighter and has been undergoing extensive operational test and evaluation at Patuxent River, Md., and by VX-4 at Point Mugu, Calif. VFA-125's mission is to train maintenance personnel and pilots for future *Hornet* squadrons.

23 Capt. Virgil J. Lemmon was made an Honorary Naval Aviator for his extensive contributions to aircraft maintenance. Capt. Lemmon is the 13th person to receive the Gold Wings of an Honorary Naval Aviator since the practice was initiated in 1949.

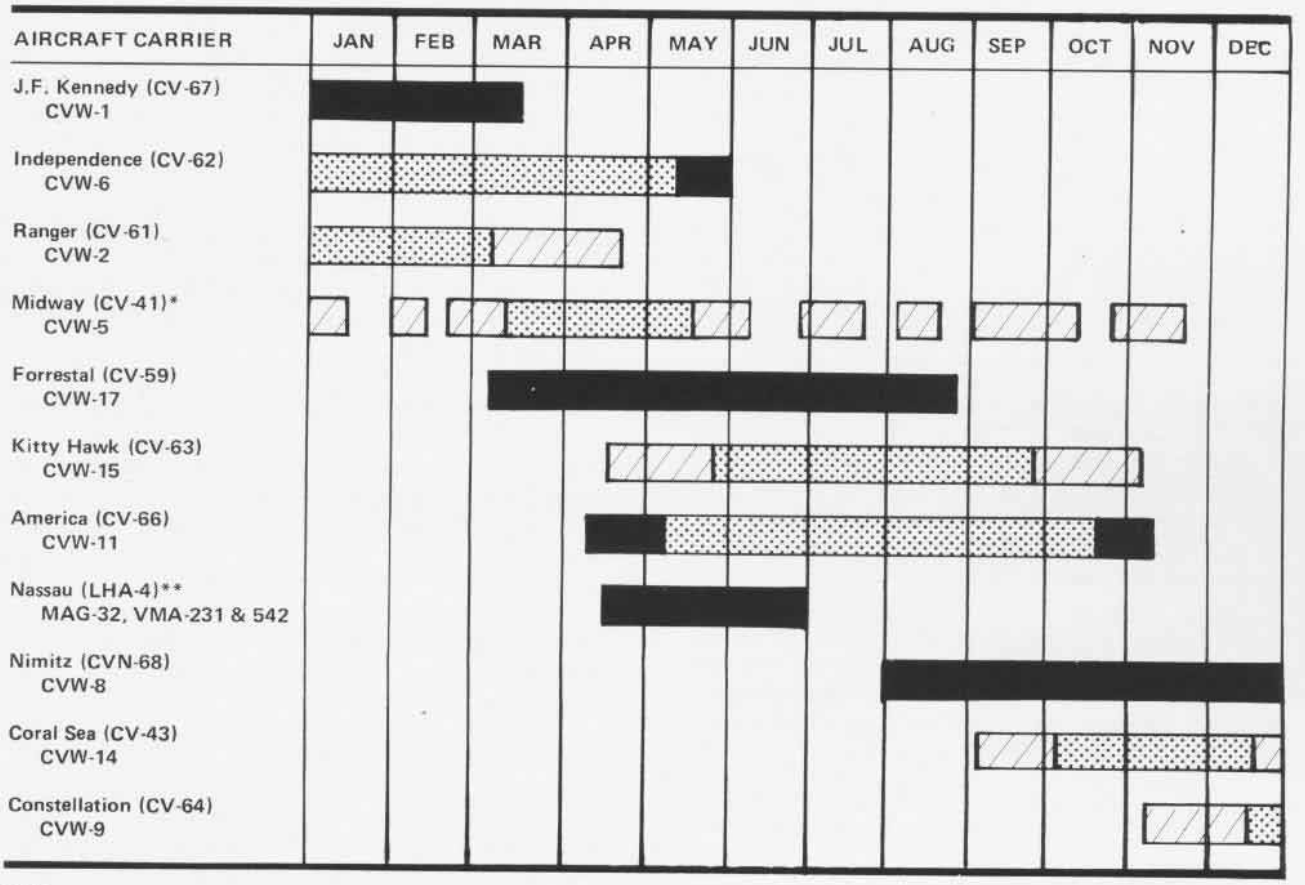
27 Marine Heavy Helicopter Squadron 464 (HMH-464) was reactivated and joined the ranks of MAG-26. HMH-464's missions will include amphibious assault, tactical movement of heavy weapons and cargo, and retrieval of downed aircraft.

MARCH

16 An A-6 *Intruder* from VA-115 on board USS *Midway* (CV-41) sighted a downed civilian helicopter in the South China Sea. *Midway* immediately dispatched HC-1 Det 2 helos to the scene. All 17 people aboard the downed helicopter were rescued and brought aboard the carrier. The chartered civilian helicopter was also plucked out of the water and lifted to the flight deck of *Midway*.

23 The F/A-18 *Hornet* began climatic testing by the Air Force's 3246th Test Wing at the McKinley Climatic Laboratory, Eglin Air Force Base, Fla. The tests were designed to evaluate the F/A-18 airframe's ability to

CARRIER DEPLOYMENTS IN 1981



KEY:

Indian Ocean deployment
Western Pacific deployment
Mediterranean Sea deployment

*USS *Midway* is home-ported in Japan and all operations are considered part of a WestPac deployment.

**Had squadrons of *Harrier* aircraft embarked.

withstand the large range of temperatures and climatic conditions which the aircraft would experience in its everyday operations.

APRIL

12 The Space Shuttle *Columbia* was launched at Cape Canaveral, Fla. The first reuseable space vehicle was manned by an all-Navy crew consisting of Naval Aviators Capt.

NASA

John Young and Robert Crippen bring Columbia in for a landing.

John Young, USN(Ret.), and Capt. Robert Crippen, USN. Two days later, after 36 orbits around the earth, the shuttle returned to earth and touched down safely at Edwards Air Force Base, Calif. The vehicle was then prepared for its next flight into space. The space orbiter is designed to carry satellite payloads into space and conduct manned experiments.

13 AV-8A *Harriers* were deployed as a Marine Air Group aboard an amphibious assault ship (LHA) for the first time. Marine Air Group 32, composed of Marine Attack Squadrons 231 and 542, began its Sixth Fleet deployment aboard USS *Nassau* (LHA-4).

15 Adm. John S. Thach, one of the Navy's early fighter tacticians, died. He was commanding officer of VF-3 when WW II began and is perhaps best known for developing a two-plane fighter tactic which proved to be effective against the highly maneuverable Japanese *Zero*. This innovation became known as the "Thach Weave" and was taught to Navy and Army Air Forces pilots alike.

Adm. Thach and the aircraft he flew during the Battle of Midway.

MAY

4 USS *America* (CV-66) transited the Suez Canal, the largest warship ever to do so. She was the first U.S. carrier to travel through the canal since June 1, 1967, when USS *Intrepid* (CV-11) navigated the waterway.

19 Astronauts Capt. John W. Young, USN(Ret.), and Capt. Robert L. Crippen, USN, were presented medals by the President at White House ceremonies for their successful mission on the first orbital flight of the Space Shuttle. Astronaut Young received the Congressional Space Medal of Honor, the seventh person so honored. Five of the seven have been Navy or Marine Corps Aviators.

20 Tactical Air Control Group One and subordinate commands, Tactical Air Control Squadrons 11 and 12, were established. Their mission is to perform all functions relating to tactical control of aircraft in support of amphibious operations.

26 During night air operations on USS *Nimitz* (CVN-68), an EA-6B *Prowler* from VMAQ-2 crash-landed on the flight deck and careened into parked aircraft on the bow. Fourteen men lost their lives. The men of *Nimitz* and Carrier Air Wing Eight prevented further loss of life and damage to the carrier by prompt rescue, damage control and fire prevention operations.

30 *Nimitz* returned to operations at sea after two days in port in Norfolk to repair the damage incurred as a result of the May 26 crash.

JUNE

1 Patrol Wing 10 was reactivated in ceremonies held at NAS Moffett Field, Calif. The operational patrol wing will act as the middle link between the patrol squadrons and Commander Patrol Wings, Pacific. This marks the third time that Patrol Wing 10 has been activated. It was originally established in December 1940, disestablished in June 1947, reestablished in June 1963 and disestablished once more in 1973. In early 1942, PBY squadrons of the patrol wing fought courageous delaying actions against the Japanese as allied forces were driven southward from the Philippines. Later in the war, the legendary *Black Cats* operated under Patrol Wing 10.

6 The Order of Daedalians presented their Weapon System Award for Outstanding System Achievement to the Naval Air Systems Command. The specific system which occasioned the award was NavAir's A-6E TRAM project.

15 The *Blue Angels*, the Navy's Flight Demonstration Squadron, celebrated their 35th anniversary. Since its beginning, the squadron has flown the F8F *Bearcat*, F6F

U.S. NAVAL AVIATION UNITS AND U.S. AIRCRAFT CARRIERS RESPONDED TO THE FOLLOWING CRISIS SITUATIONS OR CONTINGENCY OPERATIONS DURING 1981

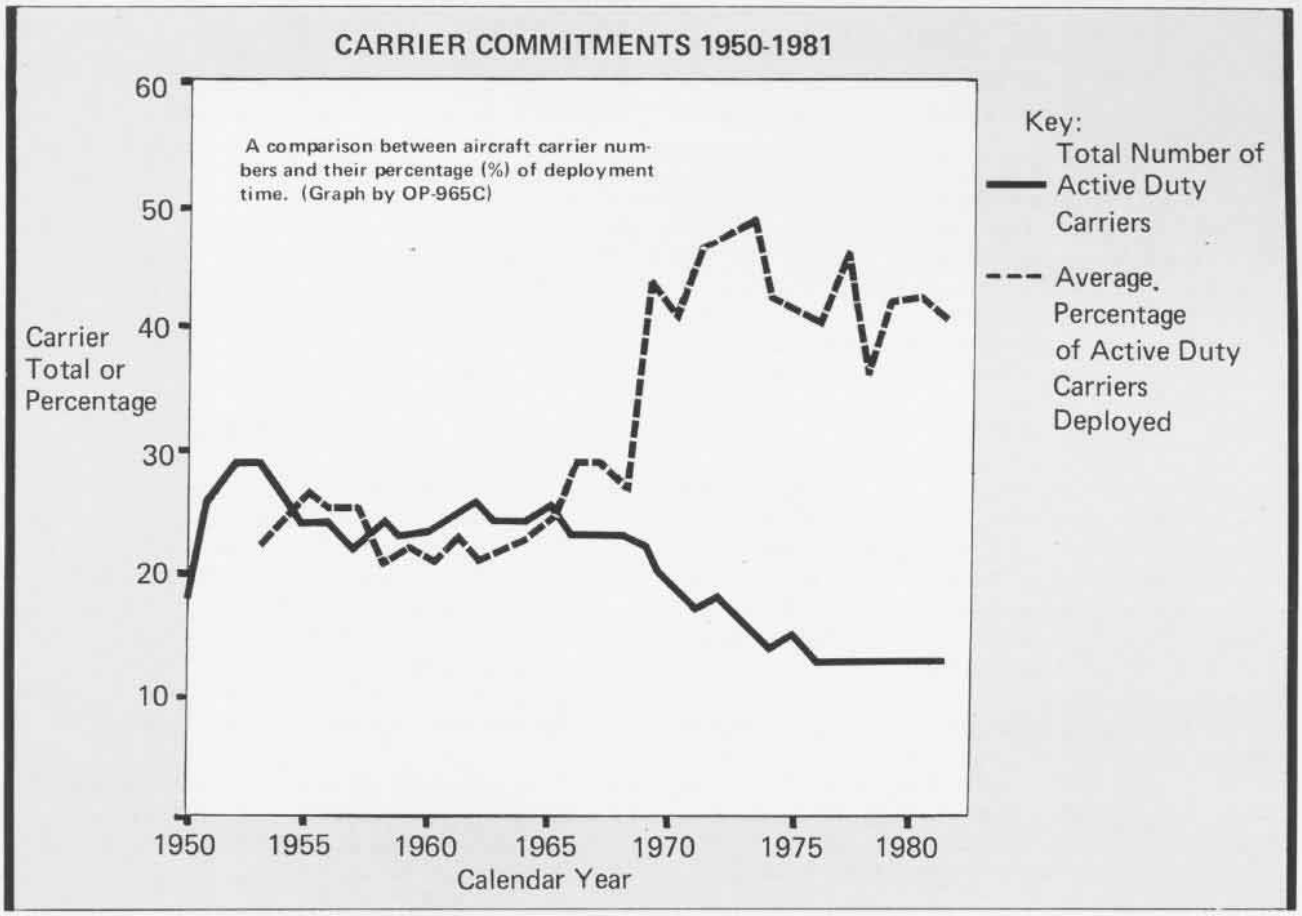
American hostage situation in Iran:
- Independence (CV-61) and CVW-6
- Ranger (CV-62) and CVW-2

Carrier contingency station in the Indian Ocean:
- Independence (CV-61) and CVW-6
- Ranger (CV-62) and CVW-2
- Midway (CV-41) and CVW-5
- Kitty Hawk (CV-63) and CVW-15
- America (CV-66) and CVW-11
- Coral Sea (CV-43) and CVW-14
- Constellation (CV-64) and CVW-9

Tension between Israel and Syria over Lebanon:
- Forrestal (CV-59) and CVW-17
- Independence (CV-61) and CVW-6

Contingency ops in response to the assassination of President Sadat of Egypt:
- Nimitz (CVN-68) and CVW-8

Vietnamese boat refugees assisted:
- Ranger (CV-62) and CVW-2
- Kitty Hawk (CV-63) and CVW-15



Hellcat, F9F *Panther,* F9F-8 *Cougar,* F11F-1 *Tiger,* F-4J *Phantom II.* The *Blues* now fly the A-4 *Skyhawk II.*

16 The first fleet operational CH-53E *Super Stallion* helicopter, built by Sikorsky Aircraft Division, was delivered to Marine Air Group 26 for assignment to HMH-464. The newly improved CH-53E, the western world's largest helicopter, can transport cargo of over 16 tons or ferry 55 fully-equipped Marines. It is also capable of delivering aircraft on board carriers.

29 The Secretary of Defense approved full production of the F/A-18 *Hornet.* The aircraft had met all requirements for use as a Navy and Marine Corps fighter and will replace the aging F-4 *Phantom II.*

JULY

1 Air Antisubmarine Squadron 0294 (VS-0294) was established at NAS North Island, Calif. The reserve unit's mission will be to train and qualify pilots, NFOs, aircrewmen and maintenance personnel to augment fleet carrier ASW squadrons. The reserve squadron, with the exception of maintenance personnel, will train on simulators or trainers, which are realistic mock-ups of S-3A aircraft, thereby reducing the high cost of utilizing actual aircraft.

7 A strike by the Professional Air Traffic Controllers Organization led to the assignment by the President of 116 Navy and Marine Corps air traffic controllers to civilian airport towers.

8 A newly-modified model 24 Lear jet arrived at NAS Patuxent River, Md., to be used as part of the Naval Test Pilot School's fleet of flying teaching aids. The Lear jet is equipped with a flight control system which allows changes in the aircraft's flying qualities to meet instructional needs. Test pilot students can be exposed to handling characteristics ranging from a transport to the F/A-18 in this aircraft.

9 U.S. Naval Aviation officials and representatives from the Federal German Navy Air Arm marked the 25th anniversary of the program established in 1956 for the training of German naval pilots, flight officers and flight surgeons at U.S. Naval Aviation facilities. The ceremonies were conducted at NAS Pensacola and included the Chief of Naval Air Training and the Deputy Commander-in-Chief German Fleet.

23 Marine Fighter-Attack Squadron 312 received a camouflaged F-4S *Phantom II* sporting a new paint scheme which is being tested by the Naval Air Systems Command. The new camouflage is a scientifically designed, counter-shaded gray, tactical paint scheme to help improve the plane's ability to escape visual detection.

AUGUST

19 Two F-14 *Tomcats* of VF-41 shot down two Libyan Su-22 *Sukhoi* aircraft over international waters. The *Tomcats,* flying off USS *Nimitz,* were on a reconnaissance mission for a missile-firing exercise being conducted by U.S. ships from two carrier battle groups, when they were fired on by the Libyan planes. The VF-41 *Tomcats,* part of CVW-8, were piloted by Cdr. Hank Kleeman and Lt. Larry Muczynski with their respective RIOs Lt. Dave Venlet and Lt. Jim Anderson.

Tomcats: 2 Libyans: 0

One of the two F-14 Tomcats involved in downing two Libyan Su-22 Sukhoi aircraft.

28 The airborne self-protection jammer (ASPJ) reached a milestone with the selection of the contractor to complete development of this joint Navy/Air Force program. The winning industry team was ITT/Westinghouse. The ASPJ is designed to protect its fighter and attack aircraft from hostile radar-directed weapon systems.

SEPTEMBER

19 The first night flight of a conventional land attack *Tomahawk* cruise missile was conducted over White Sands Missile Range, N.M. A Navy A-6 equipped with the *Tomahawk* cruise missile took off from the Pacific Missile Test Center, Point Mugu, Calif., and flew to White Sands. The aircraft used *Tomahawk's* terrain contour matching updates to guide it to the range. Once inside the range, the missile was launched from the A-6 and flew a complex night land attack mission.

30 Fleet Composite Squadron 3 was decommissioned after 33 years of providing support services to the fleet. VC-3 was established in December of 1948 as VU-3 and redesignated VC-3 in July 1965.

NAVY AERONAUTICAL PERSONNEL STATUS, END OF FY 81

Officers (in a flying status)*	13,593
Officers (in a non-flying status)	5,661
Enlisted	109,915
Aviation Officer Candidates	451
Total (officers & enlisted)	129,620

The Naval Aviation community comprises 24.2% of all naval personnel

*This figure includes pilots, student pilots, NFOs, student NFOs, technical observers, flight surgeons and others.

SHIPS NAMED FOR NAVAL AVIATORS DURING 1981

FFG-41 named for RAdm. Clarence W. McClusky, Jr., an aviation hero of WW II and Chief of Staff for Seventh Fleet ops during the Korean War.

FFG-43 named for Adm. John S. Thach, famous WW II ace and a fighter tactician famed for the "Thach Weave" technique.

FFG-27 named for three brothers, all graduates of the Naval Academy. Two of the brothers, Cdr. Charles L. Crommelin and LCdr. Richard G. Crommelin, were Naval Aviators who were lost during WW II.

HONORARY NAVAL AVIATORS

Honorary Naval Aviator Wings were officially presented for the first time in 1949. The original concept was designed to recognize qualified pilots who had not attended the Naval Flight Training Program but had promoted and made significant contributions to Naval Aviation. The first Honorary Naval Aviator was Captain Richard Schram, USNR, who thrilled spectators at air shows across the country with his "Flying Professor" act. Since the first wings were presented, the requirements have changed to include both civilian and military personnel who have played important roles in the development of Naval Aviation. The award is administered by the Deputy Chief of Naval Operations (Air Warfare), OP-05.

The following is a list of those persons who have been officially awarded Honorary Naval Aviator Wings:

	Date of Award
Capt. Richard Schram, USNR	October 1949
Sgt. Clifford Iknokinok (Alaskan National Guard)	November 21, 1955
Sgt. Willis Walunga (Alaskan National Guard)	November 21, 1955
Dr. H. J. Schaefer	June 1960
Dr. Dietrich E. Beischer	June 1960
Mr. F. Trubee Davison	July 1966
Capt. Jackie Cooper, USNR	July 10, 1970
VAdm. Hyman C. Rickover	July 21, 1970
Mr. John Warner	October 14, 1972
Mr. R. G. Smith	May 8, 1973
Mr. Jay R. Beasley	July 25, 1975
Mr. Robert Osborn	January 21, 1977
Capt. Virgil J. Lemmon	February 23, 1981
Adm. Arleigh Burke	October 13, 1981
Lt.Gen. James H. Doolittle	December 11, 1981

OCTOBER

5 The AGM-88A *Harm* missile made its first live warhead launch. The missile was fired from an A-7E against USS *Savage*. The test was conducted from the Pacific Missile Test Center.

13 Adm. Arleigh Burke, USN(Ret.), received his Gold Wings and became the 14th Honorary Naval Aviator. Adm. Burke was cited for his extensive contributions to Naval Aviation while he was CNO.

SecNav Lehman pins wings on Adm. Burke while VAdm. McDonald, DCNO(Air Warfare), looks on.

14 The Naval Aviation Hall of Honor was dedicated at the Naval Aviation Museum, Pensacola. The first 12 selectees were enshrined during the dedication.

28 Walter Hinton, who flew the NC-4 on the world's first flight across the Atlantic in 1919, died. He was the last surviving participant in this historic flight.

Walter Hinton, 1888-1981.

Hinton flew the NC-4 on the world's first flight across the Atlantic.

31 The keel was laid for CVN-71 and the name for the new carrier was officially announced as *Theodore Roosevelt*. Secretary of Defense Casper Weinberger delivered the address at the ceremony at Newport News, Va.

NOVEMBER

5 The McDonnell Douglas AV-8B *Harrier* flew for the first time. The AV-8B, developed by McDonnell Aircraft Company with British Aerospace participation, is an advanced version of the AV-8A now in service with the Marine Corps.

7 Marine Tactical Electronics Warfare Squadron 4 was established at NAS Whidbey Island, Wash. The squadron is the first Marine Corps reserve squadron to fly the EA-6A *Intruder*.

13 The Secretary of the Navy announced the forthcoming retirement of Adm. Hyman G. Rickover, Director of the Division of Naval Reactors. Adm. Rickover is known as the father of the nuclear-powered submarine and is also responsible for the development of nuclear-powered surface ships, including aircraft carriers. Adm. Rickover's contributions to Naval Aviation were duly recognized on July 21, 1970, when he was awarded Honorary Naval Aviator Wings.

14 Astronauts Capt. Richard H. Truly, USN, and Col. Joe H. Engle, USAF, brought *Columbia* back to earth after two days in space. They are the first men to fly into space and return in a previously-used spacecraft. *Columbia* had its maiden voyage in April 1981.

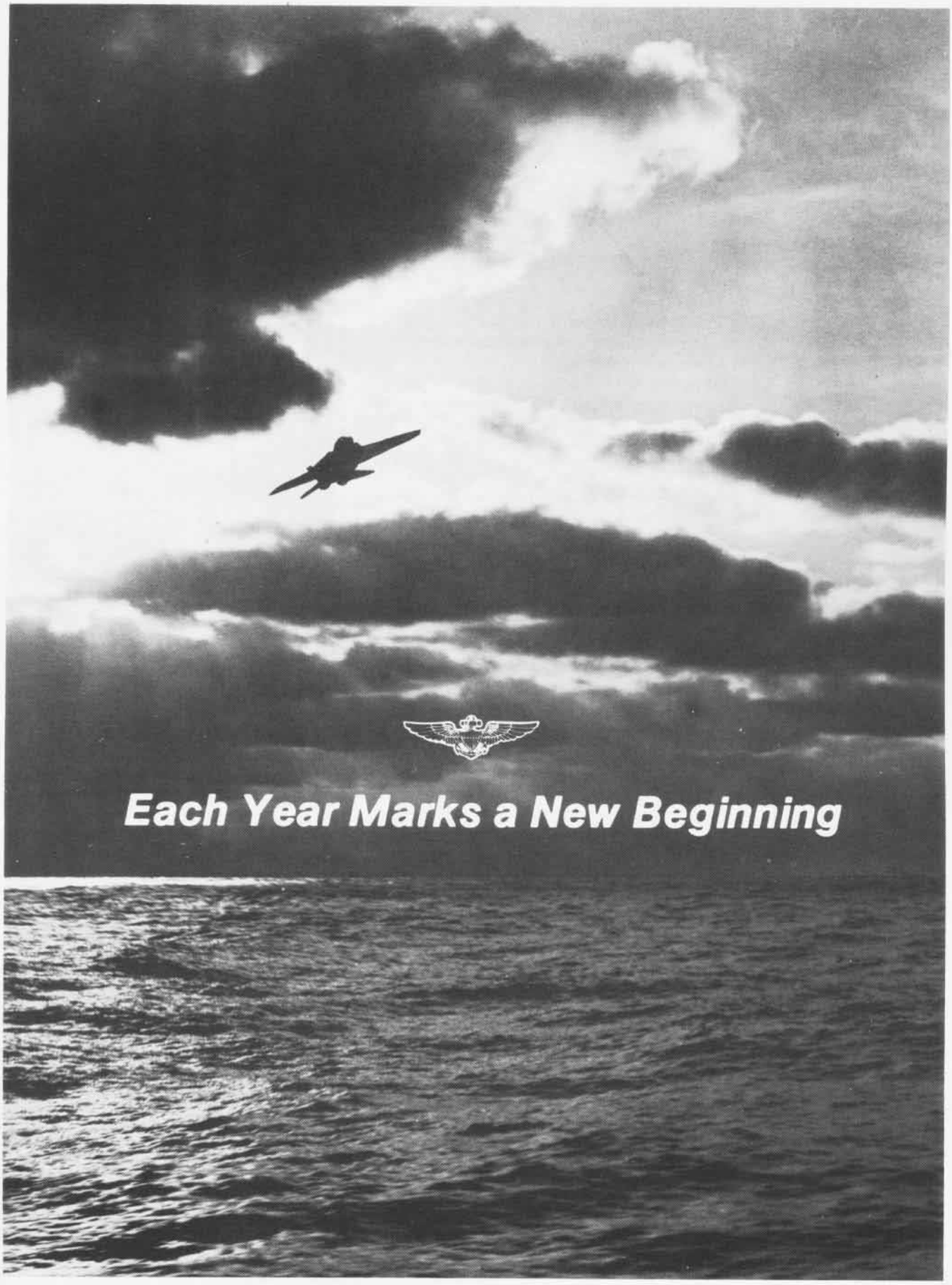
17 The first firing of the *Harpoon* Block IB missile occurred aboard USS *Fletcher*. This successful launch was a milestone in missile development by the Naval Air Systems Command. The air-launched version of the *Harpoon* made its initial carrier deployment in October of this year with VA-65 aboard USS *Constellation*.

DECEMBER

1 HMH-465 was established and became the Marine Corps' second heavy-lift squadron activated this year. The squadron will operate the new CH-53E *Super Stallion*.

2 Capt. Cecil E. Harris, USN(Ret.), died. He was the Navy's second highest scoring "ace" during WW II and was credited with downing 24 enemy aircraft.

11 Lt.Gen. James H. Doolittle became the 15th person to be officially made an Honorary Naval Aviator. Flying a B-25 from the carrier *Hornet* (CV-8) in April 1942, Doolittle led the first U.S. raid on Tokyo.


Each Year Marks a New Beginning

PEOPLE·PLANES·PLACES

Blue Angels

Former *Blue Angel* Gary "Bear" Smith is experiencing new thrills these days participating in offshore powerboat racing in his 30-foot boat named *Wings of Gold*. An ardent Navy supporter, a lieutenant commander in the Naval Reserve and test pilot for McDonnell Douglas, Smith displays "Go Navy" and "Fly Navy" slogans in prominent places on his boat.

Al Muckenheide

Former Blue Angel Gary Smith poses with his offshore racer Wings of Gold.

Awards

Crew 4 of VP-66, Willow Grove, was awarded the Liberty Bell Trophy for the 1981 competition among reserve flight crews. The award was established in 1976 by the Naval Reserve Association in commemoration of the bicentennial year. The trophy is presented to the winner of an annual competition and is inscribed, "For Antisubmarine Warfare Excellence Achieved by a Naval Air Reserve Flight Crew."

SecNav John Lehman (r.) congratulates Cdr. Joseph Mobley, skipper of Oceana's VA-75, on receiving the Intruder Trophy for the most outstanding A-6 TRAM squadron in the Atlantic Fleet. Presenting the award is Dr. Fred Adler (center), a senior

Hughes Aircraft Company

vice president of Hughes Aircraft Company and group president of the firm's Electro-Optical and Data Systems Group, El Segundo, Calif, which sponsors the award. Hughes produces the target recognition and attack multi-sensor (TRAM) detecting and ranging set, a combination laser and infrared device that enables the A-6E *Intruder* to attack ground targets day or night.

Rescues

PH1 John Sheppard

Although AD2 Bob Sherod's job as a jet engine mech with HS-2 doesn't normally involve him in rescues, his training in the need for rapid response certainly paid off.

When AD2 Bob Sherod arrived in the Canadian seaport of Vancouver, B.C., on board *Ranger*, he certainly didn't expect the

mayor and the chief of police to see him off when he left. But that's just what they did on the last day of the carrier's five-day rest and recreation visit to Canada's west coast. The 26-year-old mech encountered a young woman being assaulted in a Vancouver parking lot and went to her assistance. Overpowering the assailant, the 5-foot 8-inch, 145-pound sailor kept him pinned to the ground while bystanders summoned police, who arrived within minutes to take the attacker into custody. For his quick response, Sherod received the attention of city officials, who stopped by the pier where *Ranger*'s liberty boats were docked to inform him that he would receive an award from the city in appreciation of his action.

North Island's HC-1 added another crew to the squadron's honor roll of rescues. The latest lifesaving mission was accomplished by HC-1, Det 2, deployed aboard *Midway*. The pilot of an A-7 ejected after his aircraft failed to catch the arresting cable upon landing. The helo, flown by LCdr. L.K. Tande, was rigged for rescue and the jet pilot was located in the water one-half mile aft of the ship. AMSAN P.S. Warnick, a qualified rescue swimmer, went into the water to assist the survivor, who was returned to *Midway* without injury.

Records

Several flyers marked personal milestones in their careers flying the A-6 *Intruder*. From VA-115: LCdr. Ray Allee, 3,000 hours. From VA-165: Cdr. Don Galbraith, 3,000; LCdr. Bill Washer, 2,000; and LCdr. Bill Stevens, 1,000.

VP-50 surpassed 10,000 accident-free flight hours, while several other squadrons recorded safe flying in years: VS-32, 17 years; VAW-123, 13; HML-267 and VF-301, 11; VT-10, 7; VA-52, 5; VT-21, 3; and VF-33, 2.

Et cetera

It doesn't happen often but every once in a while you run across a father-daughter team in the Navy. Here are two of them.

Not many fathers see their daughters grow up to become aviation mechanics. And not many fathers and daughters are stationed together in the U.S. Navy. But such is the case of Chief Aviation Structural Mechanic William Partridge and his daughter, Michelle, an Aviation Machinist's Mate Airman Apprentice who joined the Navy in July 1981.

Partridge

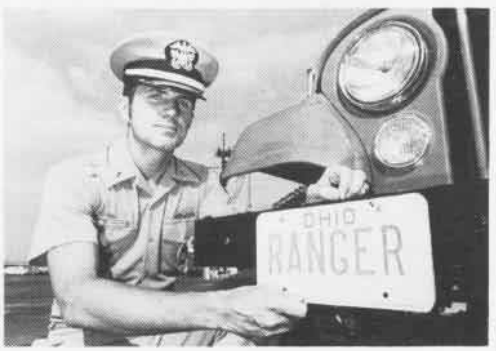
Every Monday morning a large group of fresh faces check in with NAS Cecil Field's indoctrination division. Aircraft Maintenance Master Chief Charlie Stone takes care of the paper work. Little did he know that one of the newcomers would be his only child, Grace, who is now striking for Radioman at Cecil's Communications Department.

Stone

Et cetera

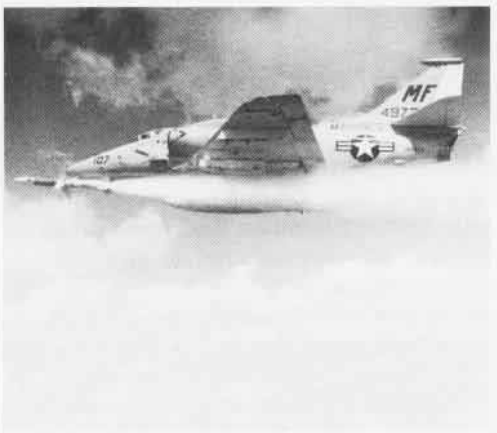
Now that renovations to the UH-34D at MCAS(H) New River, N.C., have been completed, the old helo is once again welcoming visitors at the gate. The UH-34D was a workhorse during the early years of the Vietnam War and a mainstay during the Cuban missile crisis in October 1962. New River's UH-34D belonged to the presidential aircraft section during the Eisenhower administration.

In some circles, personalized license plates are called "vanity plates." But in the case of WO Mike Martin from Ohio, currently stationed aboard *Ranger*, an ex-



ception must be made. Here, he poses with his license plate which proudly displays the name of the 80,000-ton aircraft carrier home-ported in San Diego.

Honing the Edge



Maj. Bill Vaughn

A Shrike missile launched from the A-4 Skyhawk speeds ahead of the aircraft as it seeks out its target. Marine Corps Air Reserve pilots have an opportunity during annual training to fire the various types of ordnance that the aircraft is designed to carry.

Change of Command

CVWR-30: Cdr. Donald J. Wright relieved Capt. James B. Hamilton.

HAL-4: Cdr. Ken Lyons relieved Cdr. Don Yose.

HMM-163: Lt.Col. Tom Wall relieved Lt.Col. Fred Allega.

HSL-34: Cdr. John L. Hilgeman relieved Cdr. Henry L. Clay III.

HSL-36: Cdr. Robert E. Hofstetter relieved Cdr. Martin J. Polsenski.

Independence: Capt. Jerry C. Breast relieved Capt. Thomas E. Shanahan.

NAS Willow Grove: Capt. Russell K. Schulz relieved Capt. Charles A. Buesener.

VA-165: Cdr. Paul S. Bloch relieved Cdr. Michael C. Scully.

VA-176: Cdr. Timothy R. Beard relieved Cdr. Douglas K. Griffith.

VA-205: Cdr. G. C. Ayres relieved Capt. G. S. Gause.

VF-11: Cdr. Donald Sharer relieved Cdr. Peter Pierce.

VF-74: Cdr. Joseph H. Findley, Jr., relieved Cdr. Robert S. Cole.

VP-10: Cdr. Donald P. Hickman relieved Cdr. Edgar B. Darsey.

VP-24: Cdr. Philip C. Perine relieved Cdr. Joseph C. Sullivan.

VT-21: Cdr. R. R. Davis relieved Cdr. Joseph C. Thompson (correction).

Professional Reading

By Lieutenant Commander Peter Mersky, USNR

Dabney, Joseph E. *Herk: Hero of the Skies.* Copple Books, Lakemont, Ga. 30552. 415 pp. Illustrations, appendix, soft cover. $8.95. (Originally published in 1979 as a hardcover book. $12.95.)

Written by the public relations coordinator for Lockheed-Georgia, the manufacturer of the C-130 *Hercules,* this book is perhaps the most complete and most heavily illustrated account of the C-130 and its career. The C-130 reigns supreme as the most produced and most ubiquitous of all post-WW II transport aircraft. It is in service not only with U.S. military forces but with those of several other countries as well. For those who want to know more about the C-130 *Hercules,* the book provides a broad-brush account of this workhorse and its many exploits around the world. It discusses the origins of this versatile aircraft and its subsequent development as a "do-anything, go-anywhere transport." Much of this book concerns U.S. Air Force operations but the use of the C-130 by the Navy is not overlooked. There is a section on the landing aboard *Forrestal* in November 1963, as well as a discussion of the activities of VXE-6 in the Antarctic. *Herk* also treats the employment of this aircraft in Vietnam and there is a chapter on the spectacular rescue mission to Entebbe in 1976. Reports from many of the pilots and ground crew who flew and serviced the C-130 add a personal flavor to the book. A good book on a fine aircraft.

Polmar, Norman & Kennedy, Floyd D., Jr. *Military Helicopters of the World.* Naval Institute Press, Annapolis, Md. 21402, 1981. 370 pp. Illustrated, appendixed, indexed. $29.95

Subtitled *Military Rotary-Wing Aircraft Since 1917,* this book has several things going for it. Most important, it provides in-depth coverage of all military helicopters and autogiro aircraft. It also gives the first English language details of Japanese and Russian autogiro operations of WW II. The book points out, for example, that the Japanese used a design based on the Kellett autogiro of 1936 for sea-based antisubmarine patrols, while the Soviet Union employed an indigenous design, the Kamov A-7 autogiro, during operations against the invading Germans in July 1941. Attention is also given to German rotary wing research and operations, which were very advanced. Appendices include detailed sketches of helicopter companies, Western and Communist-bloc, with discussions of their origins and contributions to helicopter development. The subject of helicopter armament is also treated. Well-chosen photographs, especially some of historical interest and significance help to make this book an excellent reference book.

Green, William and Swanborough, Gordon. *Flying Colors.* Squadron/Signal Publications, 1115 Crowley Drive, Carrollton, Texas 75006. 1981. 208 pp. Soft cover, heavily illustrated. $24.95.

A compendium of profiles, covering more than 100 different aircraft of a number of countries during some 65 years of flight. While not a definitive work on the subject, this book is a fine reference on camouflage and color schemes of many well-known aircraft types. Included are brief commentaries on each aircraft and the hundreds of color schemes shown. Also included are the insignia of many squadrons.

Scrivner, Charles L. and Scarborough, W. E. *PV-1 Ventura in Action.* Squadron/Signal Publications, 1115 Crowley Drive, Carrollton, Texas 75006. 1981. 49 pp. Soft cover, heavily illustrated. $4.95.

One of the latest in the "in action" series, this paperback book covers a somewhat less-well-known twin-engined bomber used by U.S. Navy and Marine forces during WW II. In keeping with the series format, *Ventura in Action* relies on a number of previously unpublished photographs supplemented with supportive text on the aircraft and its employment in both the Atlantic and the Pacific. Contains a full-color center section showing ten different color schemes.

Hoyt, Edwin P. *The Men of the Gambier Bay.* Avon Books, 959 Eighth Avenue, New York, N.Y. 10019. 1981. 278 pp. Paperback, illustrated, indexed. $2.95.

Gambier Bay was an escort carrier (CVE), one of the large group of ships built to fill a gap in U.S. sea-based air capabilities. They were also called "Baby Flattops," "Woolworth Carriers" or "Kaiser Coffins." Whatever the nickname, these small ships augmented the striking power of their larger fleet sisters in both the Atlantic and Pacific, and sometimes made the difference in an operation's success or failure. This well-written, people-oriented book tells the story of CVE-73 and her crew, from the laying of the keel to her demise on October 25, 1944, during the historic battle off Samar in the Philippines where CVEs under RAdm. Thomas L. Sprague intercepted and turned back a powerful Japanese surface force headed for Leyte Gulf. The book is really the story of the crew and, after reading it, one feels he knows many of the personalities firsthand.

Anderton, David A. *Hellcat.* Crown Publishers, Inc., 1 Park Avenue, New York, N.Y. 10016. 1981. 56 pp. Illustrated with photographs and drawings. Artwork by Rikyu Watanabe. $15.95.

The latest in Crown's line of oversize volumes on important WW II fighters, this book deals with the Grumman F6F which did so much to achieve air superiority over the Japanese. *Hellcat* traces the development of this aircraft through several models and includes considerable information on combat operations. The F6F epitomized the Grumman philosophy of the day — "Make it strong, make it work and make it simple." This book incorporates some excellent air brush illustrations in gatefold as well as a good two-page cutaway drawing of the aircraft by Japanese artist Rikyu Watanabe. *Hellcat* is an interesting and attractive short history of the F6F and its relatives.

Letters

Magazine Swap

I would like to purchase several of the books reviewed in the "Professional Reading" section of your fantastic magazine, but nowhere do you list addresses from which to order them. It would be great for your readers if you could list the publisher's address for each book that is reviewed.

I would also like to make a swap with anyone who is interested. I've been collecting the Army's equivalent of your magazine, called *Aviation Digest*, from 1976 to the present. They are in mint condition and I would like to trade for an equal number of *Naval Aviation News* magazines in the same condition. I'd be willing to buy, too.

WO1 A. M. Pereira
5709 Friedman
Ft. Hood, TX 76544

Ed's note: Thanks for the suggestion of listing publisher's addresses. See "Professional Reading" in this issue.

Blimp

On pages 32 and 34 of *Naval Aviation News*, November 1981, in the article "Everybody Waves," there seems to be some question as to the origin or derivation of the word "blimp." The hydroaeroplane (HTA) was divided into two classes: seaplane and flying boat. In lighter-than-air (LTA), the division was: rigid — metal frame (zeppelin); and limp — flexible envelope without framework.

The A-limp was clumsy and did not last very long. The B-limp's nacelle was a good imitation of the fuselage of the HTA training plane, the N-9, and was so successful that the name "blimp" was given to this type of craft. The name remained through subsequent model changes.

At NAS Pensacola, Fla., prior to WW I, the A-limp *Connecticut* was used for training. During the war, two of the B-limps were used for training and were called blimps.

One night about 10 p.m., my two roommates and I were calling on friends in Pensacola about nine miles from the air station. As we were leaving, I remarked, "Look! That's the first time I ever saw a meteor shoot upward!" Then there was an immense blaze of light that lit up the sky as the hydrogen gas in the blimp ignited and burned. What had happened was that the blimp was landing to secure for the night, when the drag line rested on the hot engine exhaust pipe or manifold and ignited. The tiny flame slowly "climbed the rope" until it reached the hydrogen gas bag. The three passengers jumped at about ground level and were not seriously injured, but the hydrogen gas burned with a glorious flame and illuminated the entire area. The blimp rose rapidly when relieved of its load and the tiny light from the burning rope gave the appearance of an inverted meteor.

Capt. Fred R. Maxwell, Jr., USNR(Ret.)
1609 Dearing Place
Tuscaloosa, AL 35401

Oops

Congratulations to the crew of the RH-53 which rescued the pilot of a downed Air Force F-106 off the coast of California and took him to Tyndall AFB for medical treatment ("People, Planes, Places," *NANews*, December 1981). Since that facility is located on Florida's gulf coast, the flight must have set a record for a helicopter evacuation!

John C. Yaney
81 West Street
Whitman, MA 02382

Ed's note: You're right. The item should have read ". . . off the coast of Florida" vice California. We missed the error. Thanks for keeping us straight!

A-limp Connecticut at NAS Pensacola.

Two names, Lt. Robert John Abel and Lt. George F. Ghio, Jr., were inadvertently added to the list of 1,000 traps in the December 1981 issue of *NANews*. We regret the error.

Reunions, Conferences, etc.

1982 Aviation Boatswain's Mate Symposium and Convention is scheduled for July 14-17, 1982, at the Holiday Inn Scope, Norfolk, Va. Questions may be addressed to CWO Gerald White, OIC, NATTC Lakehurst Det Norfolk, Bldg. U-46, NAS Norfolk, VA 23511. Telephone: autovon 690-3517, commercial (804) 444-3517.

Seventh reunion of Hurricane Hunters, comprising former members of VW-4, VJ-2, VP-23, VPHL-3, VPM-3, VPW-3 and VPB-114, is planned for June 18-19, 1982, in Jacksonville, Fla. For further information, write: Hurricane Hunters Reunion Committee, 2818 Cedarcrest Drive, Orange Park, FL 32073.

VPB-135 (PV-1 and PV-2) reunion, May 6, 1982, Marriott Hotel, Anaheim, Calif., in connection with the Association of Naval Aviation's seventh annual meeting. Contact Pat Patteson, 9 Everett Court, Danville, CA 94526, (415) 837-5109; or Bob Littleton, 624 Don Vincente Drive, Boulder City, NV 89005, (702) 293-1858.

VPB-132 (1943-45) reunion, May 6, 1982, Marriott Hotel, Anaheim, Calif., in conjunction with the Association of Naval Aviation's seventh annual meeting. Contact Tom Whitlow, 1910 Grant Avenue #5, Redondo Beach, CA 90278.

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The Naval Aviation History Office (OP-05D2) approved the following new or revised insignia during 1981:

Commander Reserve Patrol Wing, Atlantic

Naval Air Reserve Center, Patuxent River

Naval Air Reserve Unit, Whidbey Island

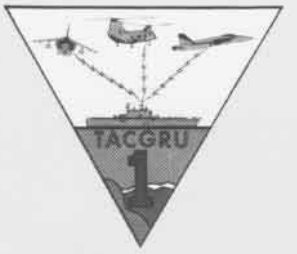
Tactical Air Control Squadron 23

Marine Headquarters & Maintenance Squadron 10

Fleet Logistics Support Squadron 46

Fighter Squadron 126

Marine Aircraft Group 70



Tactical Air Control Group 1

Marine Wing Transportation Squadron 37

Marine Headquarters & Headquarters Squadron, Naval Air Rework Facility MCAS Cherry Point

Tactical Air Control Squadron 12

Fighter Squadron 213

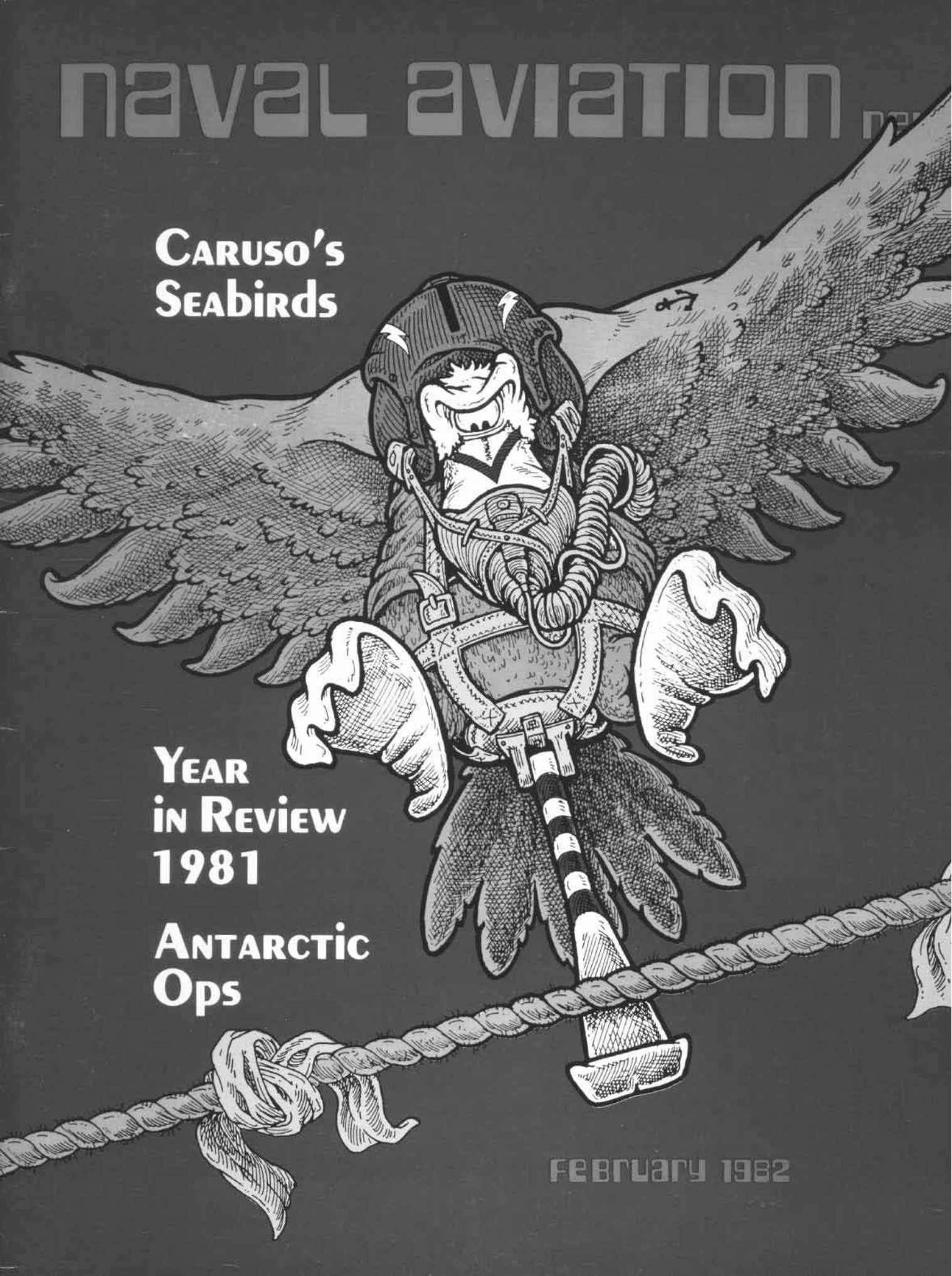
Commander Patrol Wing 2

Aerial Refueling Squadron 308

Air Systems Program, Volunteer Training Unit 0591

Tactical Air Control Squadron 11

NAVAL AVIATION



CARUSO'S SEABIRDS

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