

NAVAL AVIATION

NEWS

In this issue :

Naval Aviation 1975



FEBRUARY 1976



NAVAL AVIATION NEWS

FIFTY-EIGHTH YEAR OF PUBLICATION

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COVERS — PHCS(AC) Bob Lawson rode in the rear cockpit of a T-28, canopy open at 200 knots, to film North Island-based VS-41 Vikings on a tactics training hop, front. 1st Lt. Randall M. Flick captured HT-18 helos from NAS Whiting Field banking toward USS Lexington during carquals. Flick was in the right seat of the third TH-1L. Informal portrait of Senator John Glenn on the back cover was taken by JOC Bill Bearden in the former astronaut's Washington office. The Senator was scanning a 1962 issue of NANews which highlighted his orbital flight (see page 30).



editor's corner

"The only important jump is the next one." So says Harold Picard, Master Chief Parachute Rigger. Picard ought to know. He logged his 2,000th premeditated jump last October. PHAN Jerry Ferrin, who sent us the story, claims that the chief, who has tested parachutes and related systems for 12 years, is the first Navy test jumper to make 2,000 planned jumps. Picard favors cigars and a dry humor and is stationed at El Centro, Calif. He made his historic leap at the National Parachute Test Range exactly 26 years after he graduated from the PR school at Lakehurst, N.J. He was with the *Chuting Stars* for a tour and made 534 jumps with the traveling demonstration team. Yet his most exciting



project was the one called "Man-Tow." Recalls Picard, "It was started during the Vietnam era. The concept involved having a high performance plane snag a balloon above a chute with a sky-hook and then towing the pilot, who had ejected, to friendly territory where he'd be released for a safe landing. We needed to know how much physical stress a guy could take, so I soon found myself being dragged on a 400-foot line behind a C-130 at airspeeds that eventually reached 170 knots. My physiological responses were monitored throughout the test. I'd be wound back into the plane like a fish on a line." Picard is no stranger to the wide open spaces. He has accumulated 13½ hours of free-fall time.

Colonel Gooch of the Underground Balloon Corps helped promote Connecticut General Insurance Company's recent United Way Campaign. Gooch, alias Charlie Orr, a company executive, was a feature character during the drive. A cloth flight deck helmet from USS *Enterprise* (CVN-65) and an Air Force flight suit adorned the Colonel and helped the company go

over the 100 percent mark in contributions. Pete Kilduff, who is writing a book on carriers when not functioning in the company's advertising and public relations department, helped procure the *Big E* helmet. The former JO2 in HS-5 and *Deep Freeze* veteran, is flanked by Gooch and Ted Hillman, another executive, in the photo. Hillman, ex-Navy, piloted helos in HC-4.



Who's the yellow sheet expert? Ltjg. Bob Noziglia has no excuse these days for improperly completing the aircraft discrepancy forms. As a replacement pilot at NAS Lemoore's VA-122, Bob flies A-7s. His wife, Mary, is also a lieutenant junior grade and is assigned



as maintenance administration officer. We presume that part of Mary's job is to ensure that her flying hubby and his *Corsair* comrades get the data down correctly on the yellow sheets.

This has to be a first. CWO3 Kenneth Jaye, USS *Lexington's* boiler material maintenance officer, retired last September. Selecting a going-away gift was difficult for his B division troops. Said BM1 John Angelo, "We wanted to get him something real nice. He's a great guy. But we found out he didn't smoke, or drink, or fish. About the only thing he did on liberty was go home and work on his ranch." Inge-

nity was combined with practicality by B division. When the day came to send Jaye ashore for the last time, the men gave him the best gift they could think of, a 200-pound Black Angus yearling.

Not a bad idea. Mr. R. H. Dahlstrom, a retired Navy man who served on 15 ships during 30 years of service sent us some of his reminiscences. He recalled a certain admiral who always insisted on having at least one very stupid individual on his staff. "When I write a directive," said the Admiral, "I run it by that one individual. If he understands it, then I know that everyone else up the line will."

Night Attack System

The Navy's Night Attack missile successfully intercepted a target in December in its first flight test at the Naval Weapons Center, China Lake, Calif. Launched from an A-6 at a tactical range, the missile was guided to the target by a non-imaging infrared seeker.

Other elements of the missile system, which have been in advanced development by the Naval Weapons Center since 1970, include a *Maverick* missile airframe, a Texas Instrument Forward Looking IR set (FLIR), and a correlator developed by the Naval Weapons Center.

The Navy has scheduled five more test shots against realistic ground and ocean targets to complete the missile's readiness for engineering development.

Employment of the FLIR for target acquisition, with the correlator for automatically boresighting the seeker to the FLIR designation, permits use of the low-cost, non-imaging missile seeker.

The night attack system is planned for use with FLIR-equipped Navy A-6E and A-7E aircraft.

Women Train for Spacelab

Mary Johnston and Carolyn Griner, material engineers, and Ann Whitaker, physicist, hope to be among the first American women to travel into space. They are shown here practicing in a neutral buoyancy simulator, which is the working area for handling experiment packages in a zero gravity environment. These studies will help to develop techniques in manipulation of experiments on NASA's Spacelab. The women work at the Marshall Space Center.



New Survival Gear

A new wrinkle in an old vest promises to add to the safety and comfort of helicopter crewmen flying over land or sea.

The new vest is an improved version of survival equipment gear worn during the Vietnam conflict. In addition to the ceramic plates which provide protection from flak and small arms fire, a personal miniraft is now included. Yet, the entire pack is less bulky than the old one. The new

configuration is being tested at Point Mugu for the Naval Air Development Center, Warminster, Pa.

The ceramic plates are made of silicon or boron carbide. The same material is used to harden steel or is used alone as the cutting edge of saws and chisels. Although harder than steel, the ceramic is quite brittle. When hit with enough force, it shatters like a clay pot dropped on a hard surface. The shattering absorbs the impact. An anti-spalling sheet prevents the ceramic particles from flying or being pushed through the vest. The plates slip into pockets on the back and front of the vest. Other pockets and pouches carry survival items such as smoke generator, radio, knife and water bottle.

The new configuration is said to be more comfortable than the old, largely because of the wider shoulder straps and cut of the vest. However, the theoretical time of use is only eight hours. The vests used in Vietnam were designed to keep a downed pilot alive for as much as two weeks. The shortened time reflects the advances that have been made in rescue, chiefly with the aid of helicopters.

When the jumper hits the water, he pulls toggles which automatically inflate the life vest. Another toggle inflates the miniraft and pushes the back ceramic plate off. The front plate must be removed from the vest by the swimmer.

As he pops to the surface, the downed flyer can roll to the top of the inflated raft, over its side, and into it. His helmet can be used as a bucket to bail out the tiny craft. He can get his radio going and, hopefully, be heard or seen within minutes.

Rotary Wing Aerodynamics

A four-bladed, 6.7-foot-diameter wind tunnel rotor has been successfully operated up through the critical transition flight regime at the David W. Taylor Naval Ship R & D Center, Bethesda, Md.

A high speed variant of the circulation control rotor, the new rotor employs air blowing through thin slots located at both the leading and trailing edges of the blades. The critical transition regime corresponds to full-scale flight speeds in the range of 200 to 250 knots. The retreating side of the rotor disc is almost completely immersed in rearward (trailing edge) approaching flow. Airfoils on the new rotor are double-ended and thus attain high lift with airflow coming from either direction.

This achievement paves the way for a 400-knot helicopter and for the X-wing, a new concept for a stopped-rotor aircraft potentially capable of flight at transonic speeds.

Carrier Air Traffic Control

The Naval Electronic Systems Command has a program under way to develop a new air traffic control system for use on Navy aircraft carriers. The system, known as Carrier Air Traffic Control Center-Direct Altitude Identity Readout (CATCC-DAIR), will provide air traffic controllers aboard carriers with a display of alphanumeric tags of flight identity, altitude and other pertinent data superimposed over the usual blips that now appear on their radarscopes.

The equipment is a programmable shipboard version of the AN/TPX-42A(V) system presently installed on shore-based naval air stations. CATCC-DAIR will utilize a standard U.S. Navy AN/UYK-20 computer

did you know?

adapted to the TPX-42 and programmed to meet the particular needs of the carrier's environment.

The systems are intended for all aircraft carriers eventually. The first two will be delivered in late 1976—one to the Navy test facility at NAS Patuxent River, Md., for integration testing and the other for installation aboard USS *Ranger* (CV-61). Four systems are scheduled for 1978 delivery.

CATCC-DAIR has been designed to accept flight plan information via a controller's keyboard up to 24 hours prior to launch or recovery. Fifteen minutes prior to scheduled launch or recovery, this information will appear on the appropriate controller's radar display. When a particular aircraft's beacon reply code is detected, the system will automatically begin tracking it, associating with it the proper identification from the flight plan tabular list. As an aircraft leaves the controller's area of responsibility, its track will be "handed off" either to another CATCC control position, a combat information center (CIC) controller or the automated carrier landing system (ACLS), as appropriate. CATCC responsibility covers a 50-nautical-mile radius around the carrier.

The system will also accept ship's data such as speed, heading, position, clock time and barometric pressure, and display the information in a tabular list on the controller's indicators. The final recovery bearing will also be automatically computed and displayed as a vector on the indicators.

New Calibration System

In the Atlantic area, aircraft precision test and measurement equipment is being calibrated at the Norfolk Naval Air Rework Facility Type III and Type II Calibration Laboratories. Management control for the inventory, scheduling and production reporting of this equipment is accomplished by the Calibration Automated Scheduling and Reporting System (CASARS).

Another system is in use on the West Coast, the Metrology Automated System for Uniform Recall and Reporting (MEASURE), which performs similar functions.

To provide a more standardized system which can be used interchangeably on each coast, Naval Air Systems Command Representative Atlantic (Rep Lant) and NARF Norfolk personnel are implementing the MEASURE program at the NARF.

Input data for MEASURE is processed at the Data Processing Facility in Concord, Calif. Until all customer activities using the NARF's calibration laboratories have placed their inventories in the master file in California, CASARS and MEASURE will operate in conjunction with each other on the East Coast.

Eventually MEASURE will provide the Naval Air Systems Command and participating DOD commands with a standardized program. The system will automatically recall equipment to calibration facilities for periodic servicing. It will also document data pertaining to the calibration/servicing actions and provide monthly recall schedules.

To facilitate and streamline MEASURE, a prototype on-line computer terminal unit is being tested on the East and West Coasts simultaneously. If proven acceptable to the Navy, the computer terminals will provide instantaneous information regarding the calibration/repair and work-in-process to calibration labs and their customer activities. All information is now sent to and from the computer through the mails, a slow, work-delaying method.



grampaw pettibone

Right Day, Wrong Field

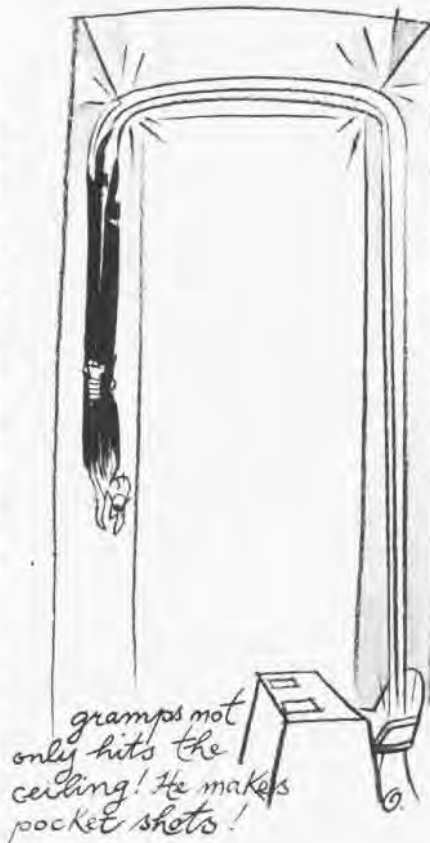
Two Naval Aviators were on a scheduled logistic flight in a T-39. The flight was to deliver some additional pilots for pickup of another aircraft at a civilian field where an overhaul activity was located. The departure and en route segment of the flight were uneventful. The pilot-in-command was occupying the right seat with the copilot in the left seat.

Upon arrival in the vicinity of the field, the T-39 was cleared to descend to 2,000 feet. Vectors were given and the pilot was told to expect a visual approach to the runway. The pilot called the field in sight and was cleared to switch to the tower. Tower contact was established and the tower operator sighted the T-39 and issued landing clearance.

The pilot then queried the tower regarding a light aircraft on the runway. The tower replied, "No traffic in the air between you and the runway." The pilot answered, "OK, the Cessna is lifting." Tower tapes indicate the tower then transmitted, "Are you sure you're lined up for our runway?" Further transmissions from the tower yielded no response from the pilot.

The T-39 touched down 350 feet from the approach end, six feet left of center line, and commenced braking. Number one engine was secured in accordance with normal procedure on the initial portion of the rollout. The pilot then realized that he had landed at the wrong airport which had a single runway 3,000 feet by 30 feet instead of the intended runway which was 7,200 feet by 100 feet. At approximately 1,000 feet from the approach end, the pilot-in-command directed go around and advanced power on the #2 engine. Realizing that #1 engine had been secured, he directed the pilot at the controls to "ride it out" and simultaneously secured #2 engine.

The aircraft had commenced a



slight left drift at touchdown and the port mainmount left the runway, followed shortly by the starboard mainmount. The aircraft departed the runway at a slight angle and was guided

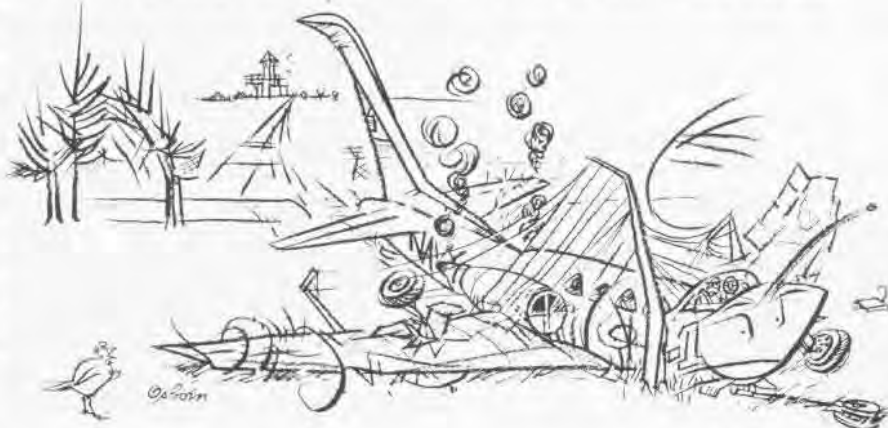
toward a gap in a line of trees. The aircraft impacted a 30-inch earthen embankment with the left wing striking a tree and the right wing striking fence posts and wire fencing. The nose landing gear sheared during this evolution. The T-39 continued into a plowed field, coming to rest 320 feet from the departure end of the runway.

The pilot-in-command ensured that the cockpit was secured and ordered evacuation. All personnel exited via the normal egress route. No injuries were sustained. Civil authorities were on the scene within a short period and safeguarded the aircraft.



Grampaw Pettibone says:

Jumpin' Jehoshaphat! Someone could have got kilt! Boy, the fog count was high in that cockpit. Would you believe that the following comments were made in the cockpit? Copilot: "The runway sure looks narrow." Crew chief (who was in the cockpit during the landing contrary to procedures but who was observant): "I don't think this is the right field." Both comments were made on final approach before touchdown! How much warning does a pilot need? Then to really get my dander up, the "investigators" laid it on the copilot and crew chief for not more strongly voicing their convictions!!! Baloney! This pilot-in-command got more than his share of clues — and blew it.



Concerned Natops User

We aircrews here at a major test center need your learned advice concerning a new (local) Natops program rumored to be just around the corner. The program about to be implemented is apparently the result of problems encountered in controlling Natops updates for some 50 aircrews.

Staff's solution is to take all manuals from aircrew members and issue two or three to controlled libraries in each of several sections. The result would be a centralized control that would allow an AXI to go around to the sections and incorporate changes in all manuals as they come in.

The consensus is that the staff is creating more problems than are being solved. What can we do? Availability of Natops manuals will be one to every five to ten flyers. The obvious tendency will be to not look it up in Natops when it is not at our fingertips or, perhaps, not even in the library.

Rumor also has it that the pocket checklist will be assigned to and left in applicable aircraft. The aircrew member will have no PCL.

Jeeppers, creepers, Gramps. Is this the way to run an airline? Or has wise ole staff got a great idea?

Please, ancient mentor, lend us your advice.

Grampaw Pettibone says:



Great horned toadies! I have to say that "limiting distribution of Natops manuals" is not a good idea. It seems to me that having to go to the "library" every time a pilot wants to look up something can only discourage the use of Natops.

There must be some other solution. Think!

Gross Flight Planning

The pilot and copilot of an E-2B were returning to NAS Coast following an RON at NAS Opposite Coast. The first portion of the flight was scheduled for two stops to pick up a crew member and passenger prior to a refueling stop. The crew planned a mid-morning takeoff. The pilot-in-command (PIC) was going to occupy the right seat to allow the copilot to gain additional experience.

The copilot had only a minimal amount of experience in the E-2B. At altitude, headwinds of 35 to 40 knots



were forecast. These were depicted on the weather map held by the crew. The pilot and copilot were alone on the first leg. The two intermediate stops were uneventful.

Takeoff from the last pickup point was also uneventful. The flight climbed to 10,000 feet in intermittent IFR conditions. During this climbout, the port low fuel warning light illuminated and the PIC instructed the pilot at the controls to actuate the tank interconnect to balance the fuel load. That action caused the light to go out.

The flight continued and the aircraft leveled off at 10,000 feet. Between 50 and 60 nautical miles from their intended fuel stop, both low fuel warning lights illuminated and the PIC declared "minimum fuel" to the center. He elected to continue the flight to his final stop. The E-2 was cleared direct to a VORTAC and switched to local approach control.

The crew was informed that the duty runway had been changed and was asked if a short final GCA was desired. It was and they were vectored to a three-mile final. After the E-2 was turned to the final approach heading, visual contact with the runway was made and at around two miles the pilot at the controls felt the engines start to run intermittently. At approximately 1,000 feet, both generator lights illuminated as engine rpm decayed.

The PIC took control of the aircraft, announced double engine failure and attempted an engine relight. That being unsuccessful, he tried to raise the gear handle, but could not due to loss of electrical power. He then instructed the copilot (in the left seat) to raise the gear handle. The co-

pilot did, utilizing the landing gear solenoid override. The PIC then instructed the copilot to attempt a relight, which was also unsuccessful. This was immediately followed by the order to prepare for impact.

The aircraft struck the ground in a slightly right wing down, little nose-high attitude with gear down, approximately $\frac{3}{4}$ mile from the end of the runway. The aircraft was destroyed. Both pilots sustained injuries; however, the passengers were unhurt.

Grampaw Pettibone says:



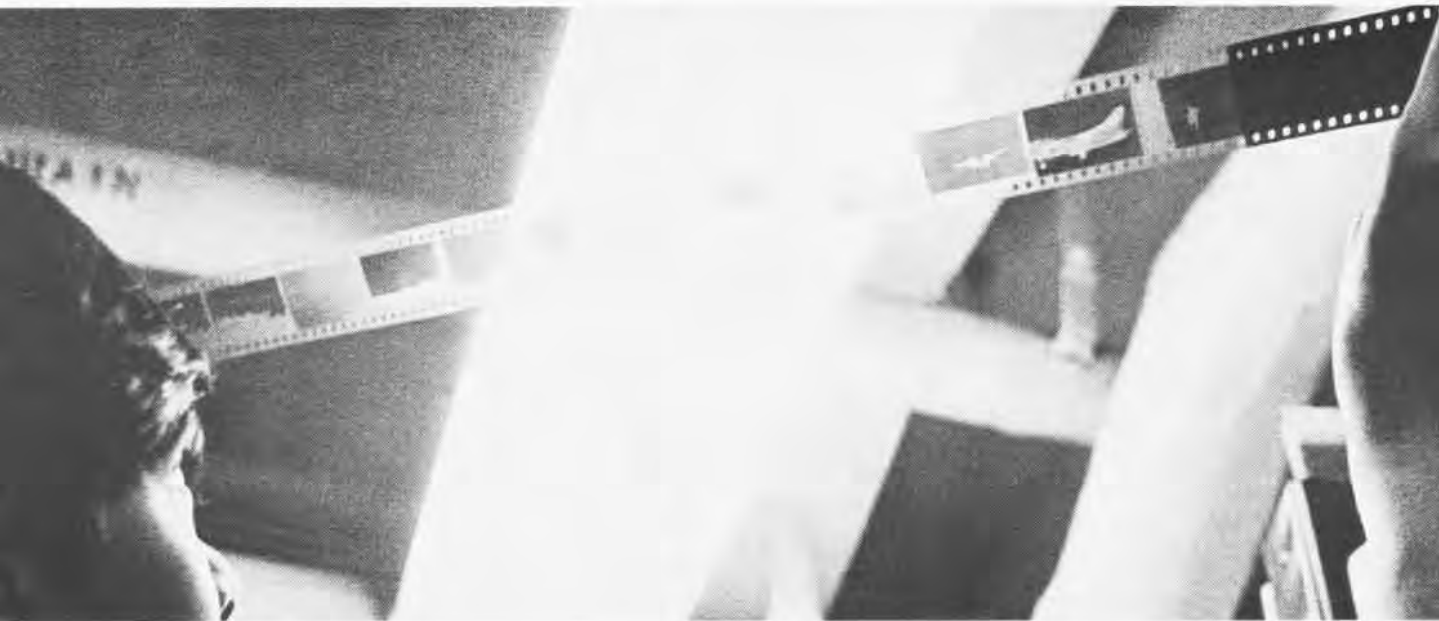
Sufferin' catfish! This is one of those accidents that make everyone comment, "I can't believe it." This pilot had a great reputation in his community. Words like "really knows the machine, a good stick, etc." were used to describe him.

Why is it, then, that a young feller would allow himself to be involved in the most primitive type of accident — "running out of go-juice?"

What bothers me is that this driver may have been pulling things like this in the past and they finally caught up!

Let me offer some advice to what is probably a very small percentage of our aviators. If you enjoy a good reputation in your squadron, a good reputation in your community, a good reputation for knowing your machine, and have been in one community and one aircraft for a long time — beware of the next ingredient which could get you eventually.

If, because of all the above, you have a tendency to violate sound procedures and be complacent about flight planning and other flight duties, you are a candidate for a mishap. Think about it!!!



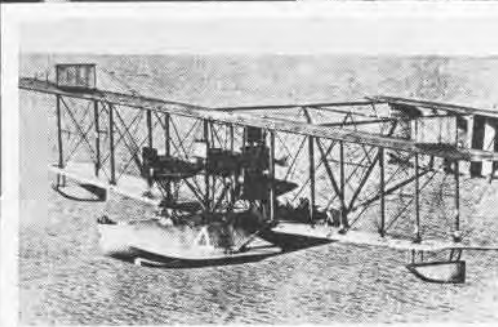
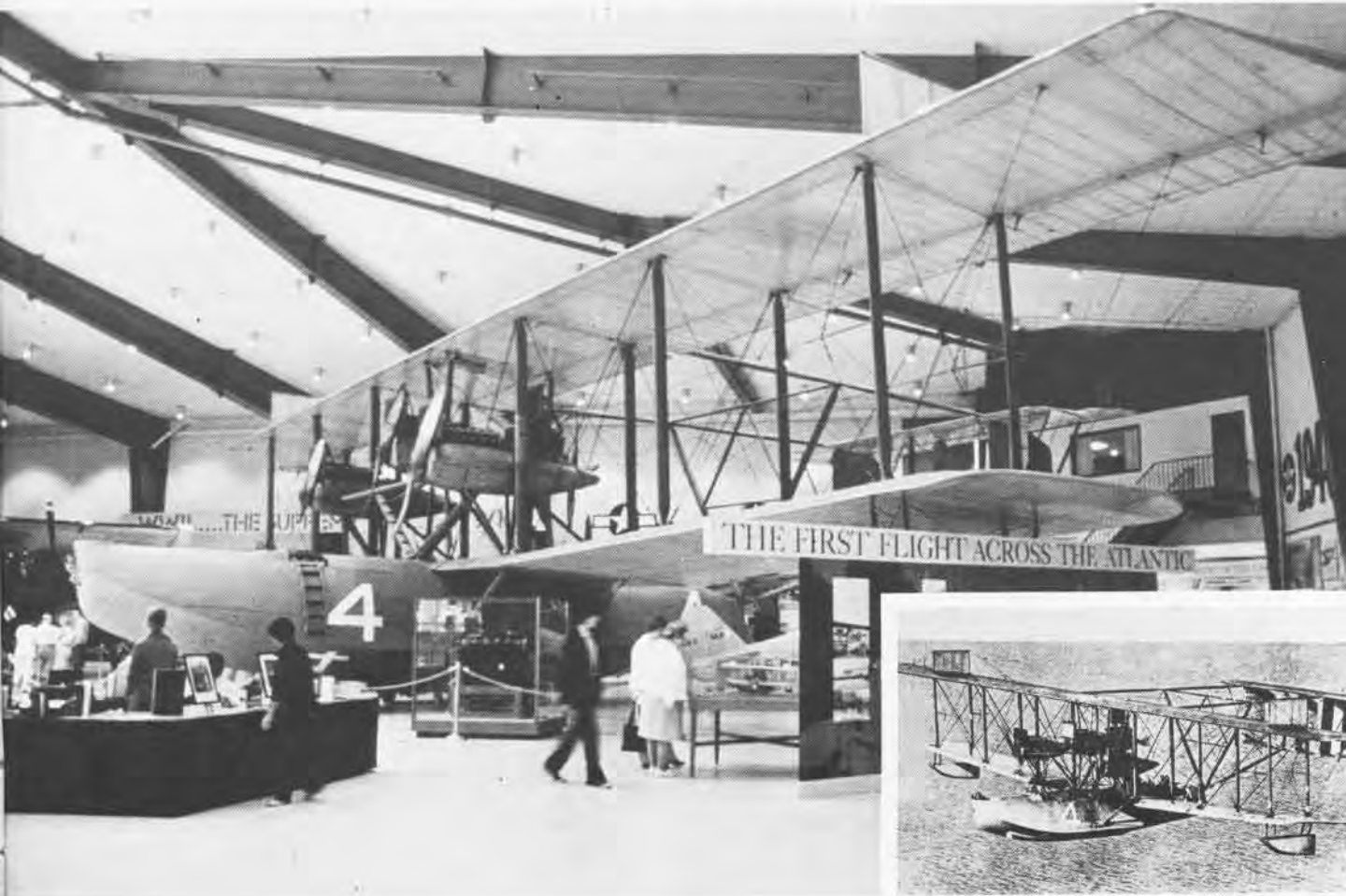
NAVAL AVIATION

1975

By Clarke Van Vleet

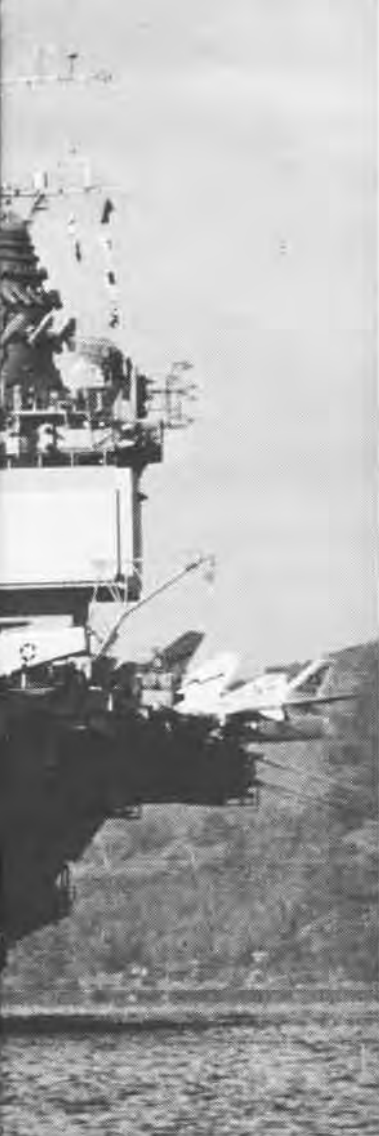


Visitors began touring the new U.S. Naval Aviation Museum in January. Displays were finally completed and the museum was dedicated at NAS Pensacola on April 13. All funds for construction of the 68,000-square-foot structure were donated privately. The building was presented to the Navy by the Naval Aviation Museum Association, Inc. It impressively replaced the temporary museum set up in 1962. Among the 72 vintage aircraft at the museum, a feature attraction is the original NC-4, the first aeroplane to fly the Atlantic Ocean, in May 1919.



Following the strike of a devastating cyclone on Mauritius, February 6, 1975, Enterprise (CVN-65) joined USS Camden and USS Mars to provide more than 10,000 man-hours of relief assistance to inhabitants of the wind-torn island in the Indian Ocean. It was another in a long list of humanitarian acts performed by Naval Aviation over the years.

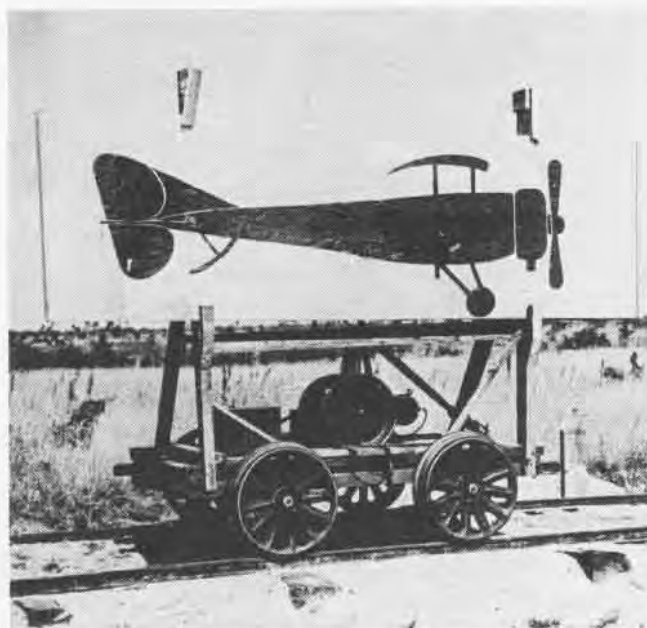




One of the first occurred in 1931 when the carrier Lexington, steaming off Nicaragua, sent planes loaded with equipment and medical supplies to aid earthquake victims there .



In March, the Navy acquired two F-5E Tigers, bringing to five the number of this type aircraft in the inventory. The Tigers serve as simulated enemy fighters for mock combat against the F-14 Tomcat at the Air Combat Maneuvering Range in Yuma, Ariz. The Tigers' Mach 1 plus speed and agility are "giant steps" over the wheeled targets used for gunnery practice by the Navy's aviators in WW I.



Returning to a carrier 30 years after he served aboard one, President Gerald Ford was the principal speaker at the commissioning ceremony May 3 for USS Nimitz (CVN-68). President Ford entered the U.S. Navy in 1942. He served four years during WW II, nearly two of which were on the light carrier USS Monterey. He participated in nine major wartime operations, including the Gilbert, Marshall and Marianas Islands campaigns. He is the fourth consecutive president with service in the Navy and the 22nd president who has experienced combat with U.S. military forces. The following squadrons under Carrier Air Wing Eight received the honor of sailing in Nimitz on her maiden cruise: VAs 35, 82 and 86, RVAH-9, VAQ-130, VAW-116, VMFA-333 and HS-15.



On May 14, U.S. naval forces participated in the recovery of the American merchantship SS *Mayaguez* and her 39 crewmen, illegally seized on May 12 in international waters by a Cambodian gunboat. About 200 Marines were airlifted in Air Force helos from Uta-pao, Thailand, for an assault on Koh Tang Island, Cambodia, where the crew was believed held. Meanwhile, Marine Corps landing parties from USS *Holt*, and the Military Sealift Command ship, *Greenville Victory*, boarded and recovered *Mayaguez* as Navy planes from Coral Sea struck Ream Field near Kampong Som to neutralize any Cambodian response. During the action, a fishing boat approached USS *Wilson* and gave up the *Mayaguez* crewmen. Throughout the operation, U.S. naval gunfire and Navy and Air Force tactical air support were employed “. . . to ensure that the lives of Americans, the American vessel, as well as the freedom of the seas would be protected,” as pointed out by Defense Secretary James Schlesinger.





"I've been in the evacuations of Dunkirk and Korea, but I have never seen anything like this," said a civilian mariner reflecting on the evacuation of refugees as South Vietnam fell to Northern troops during the spring of 1975. From the end of March through mid-May, over 180,000 South Vietnamese were evacuated to safe havens from Vietnamese coastal areas and islands and, subsequently, from Saigon as the capital fell

to the communists. Over 75 Navy-controlled ships, including the aircraft carriers Midway, Hancock, Coral Sea, Enterprise and Okinawa, supported the mass movement of people. Admiral James Holloway III, CNO, said, "This operation will stand as a tribute to the courage, determination and perseverance of the Navy men, Marines and Military Sealift Command crews who brought it off. I proudly congratulate each of them. . . ."

Photographed from a rendezvous window of the American Apollo spacecraft in orbit is the Soviet Soyuz spacecraft with the earth's horizon below. The two craft hooked up for two days, July 17-19, during the "international orbit." The Apollo program ended, in effect, July 24 when Helicopter Antisubmarine Squadron Six, operating off USS New Orleans, picked up astronauts Thomas Stafford, USAF, and civilians Vance Brand and Donald Slayton 340 miles west of Hawaii. Slayton was one of the original seven astro-

nauts. This was also the last at-sea recovery. Space Shuttle, the next planned program, will include a craft designed to land as a plane on return from space. Since the initial space effort began in 1959, the Navy has contributed significantly. Thirty-nine of the 73 men in the astronaut program have been either in the Navy or Marine Corps or were Navy-trained in their early careers. Little did the first Naval Aviators, who lifted off in the A-1 Triad 64 years ago, realize their successors would be orbiting the earth.





On August 29, retiring Rear Admiral Leroy Swanson passed the Gray Eagle Trophy to Admiral Noel Gayler, left, as he became the most senior Naval Aviator on active duty. Adm. Swanson became Naval Aviator #5921 on December 9, 1938. Adm. Gayler was designated Naval Aviator #6879 on November 14, 1940. Shown here in his early flying days, right, he became the fourth Naval Aviator to pilot a jet aircraft, January 13, 1944, and the first to take off in the YP-59A model Airacomet at Patuxent River, Md.



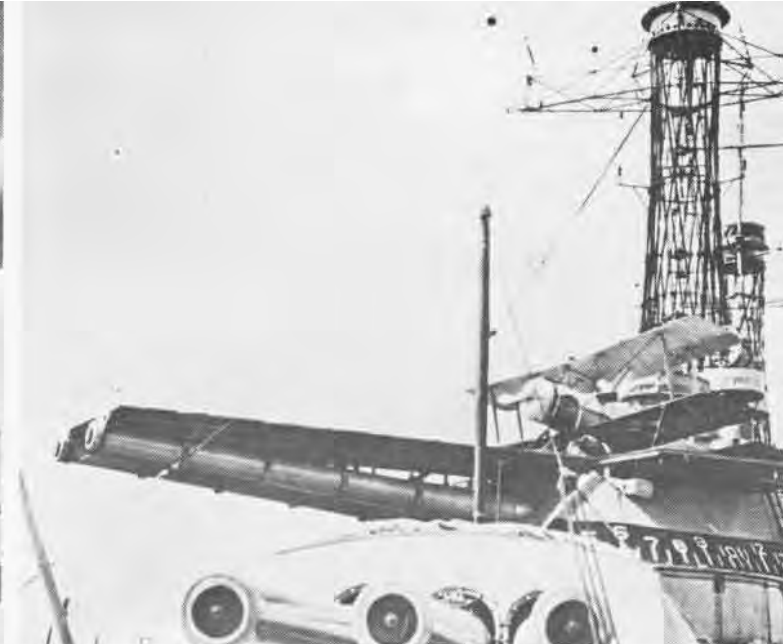
Also honored during the year was the late Major General L. G. Merritt, USMC. The airfield at MCAS Beaufort, S.C., was named after him in a ceremony held September 19.





On the Navy's 200th birthday, October 11, America's third nuclear-powered aircraft carrier, USS Dwight D. Eisenhower (CVN-69) was launched at Norfolk. Breaking the traditional bottle of champagne across the bow was the late General's widow, Mamie Eisenhower. That same day the keel of a fourth nuclear carrier, Carl Vinson (CVN-70), was laid. These 95,000-ton floating airfields, with flight deck areas of some four and one-half acres, point up the change in "flattops" of 54 years ago when the first carrier, Langley, 11,500 tons, had a considerably smaller landing platform built on her hull.





For Naval Aviation in 1975, the eve of the Bicentennial was, appropriately, a year for museums. In addition to the opening of the new building at Pensacola in April, two others were established. These were old aircraft carriers, the first such museums to be developed in the U.S. USS Intrepid's hangar deck

opened as a major exhibit center in October at the Philadelphia Naval Base and the Fighting Lady, Yorktown, was acquired by the Patriot's Point Development Authority of South Carolina at Charleston, S.C. Intrepid is shown as the massive artifact she is today and as she was on the battle line in WW II.

In a sense, Naval Aviation has been completing a circle. Aircraft have been returning to non-aviation ships which was the case in the Twenties. Then, planes first began operations at sea from cruisers and battleships. Today, the certification program of helicopter facilities on non-aviation ships, which got its start in 1968, continues with vessels equipped for helo operations, such as the cruiser Newport

News shown here. The U.S. Navy is progressively becoming a surface force with airborne capabilities. As to active ships in general, the total has dropped from 976 in 1968 to 483 today. Naval leaders have called for a rebuilding of the active fleet to about 600 ships by the mid-1980s. These would include 14 aircraft carriers, eight V/STOL support and sixty-eight amphibious ships.



Another significant showcase under development during 1975 has been the Sea-Air Operations Hall for the new National Air and Space Museum of the Smithsonian Institution scheduled for opening July 4, 1976. Special films, sound techniques, authentic vintage aircraft and portions of carriers will give the visitor a "you are there" dramatization of aviation activities at sea.

LOENING AMPHIBIAN

The Loening Amphibian, with its unique combined fuselage-hull design, brought new capabilities to Army and Navy aviation when it was introduced in 1925. Having retractable wheel landing gear, the first aircraft in regular service to incorporate this feature, it permitted operations to and from a wide variety of land and water bases. The Army first recognized this advantage for use in river and island areas and ordered the first Loening Amphibian as the COA-1 (Corps Observation Amphibian). The Navy followed with an order for two OL-1s, using the inverted Packard V-12 engine in place of the Army's inverted Liberty. These were to be three-place fleet spotter aircraft.

However, before the first was completed, three of the two-place COA-1s were obtained for the 1925 MacMillan Arctic Expedition with then LCdr. Richard Byrd commanding its naval air unit. Two more OL-2s, as these were designated, were subsequently added. All five OL-2s eventually saw service with the Marine Corps. Six Packard-powered, three-place OL-3s were then ordered for use with the fleet and the Marines. But four Liberty-powered, generally similar OL-4s were next delivered for use in the 1926 Alaskan Survey. Three OL-5s purchased for the Coast Guard came next, followed by the first big Navy order, 27 Packard-powered OL-6s.

Based on catapulting tests done with one of the OL-1s and carrier operations with an OL-3, the OL-6s were three-place aircraft for general fleet observation duty, including both catapult operations from capital ships and carrier operations. Two of these OL-6s became prototypes: the XOL-7 with single bay, folding wings to reduce shipboard stowage space, and the XOL-8, a two-place model with an air-cooled P&W Wasp replacing the water-cooled Packard. While the modified wing design didn't pay off, the Wasp-powered prototype led to a total of 66 similarly powered OL-8, -8A and -9 models being purchased, used primarily as utility aircraft. The "flying shoe-horn" was delivered in 1932, and the Wasp-powered models served through most of the Thirties in the utility role.



OL-2



OL-6



OL-8



AMPHIBIAN

OL-1



OL-8



OL-7



OL-9



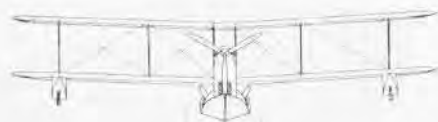
OL-3



OL

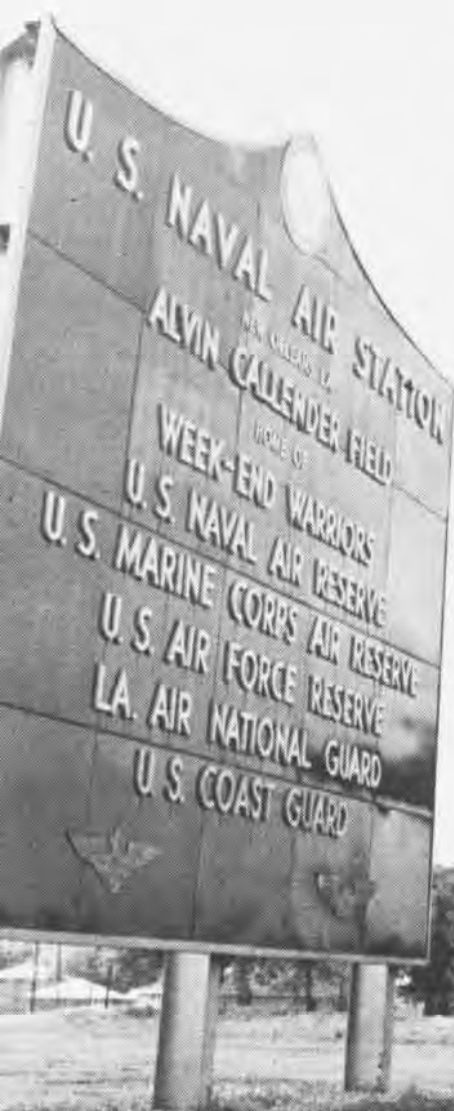


	OL-1	OL-2	OL-6	OL-8	OL-9
Length	35'4"	33'10"	34'11½"	34'9"	34'9"
Height	12'8½"	12'1"	12'11½"	13'	12'9"
Wing span	45'	45'	45'	45'	45'
Engine	Packard 1A-1500	Liberty	Packard 2A-1500	R-1340B	R-1340C
Horsepower	440	400	525	450	450
Maximum speed, mph	125	121	122	121.5	122
Service ceiling	12,750'	12,100'	13,000'	14,300'	14,300'
Range, statute miles	415	405	323	396	388
Armament: thru	OL-8	2.30 flexible machine gun plus four 116-lb. bombs	OL-8	1.30 fixed machine gun plus 1.30 flexible machine gun or machine gun plus four 116-lb. bombs	OL-9



NAS NEW ORLEANS

By LCdr. Al Ildas





N2S-3s near New Orleans, 1944. Today, looking south, Mississippi River is on left, Gulf Intracoastal Waterway on right.

The history of Naval Air Station, New Orleans, La., is actually the story of two air stations. The original installation was established in 1941 at the northern edge of the city on the shores of Lake Pontchartrain. The lake, which connects with the Gulf of Mexico, covers an area of 610 square miles. In 1957 the air station moved to a new location 15 miles south of New Orleans. The vacated lakefront air station was turned over to the city and is now the site of the University of New Orleans.

In the fall of 1940 the Navy began to improve its primary flight training facilities by building up its system of naval reserve air bases. Construction of three bases began at Dallas, Atlanta and New Orleans. Facilities at these stations were identical. They included a steel hangar, barracks for 100 cadets, a small assembly and repair shop, and storage for 50,000 gallons of gasoline. In 1945, the three stations had accommodations for 3,000, 3,400 and 1,700 personnel, respectively.

Naval Reserve Air Base, New Orleans was commissioned in July 1941 and by January 1942 was experiencing rapid expansion. New Orleans knew it was in the throes of World War II when Mardi Gras was cancelled that year. Two million dollars of additional construction funds were provided for two barracks, a ground school and an auditorium. By May the base had 27 N3N-3 primary trainers and 21 instructors.

Prospective Naval Aviation cadets, selected by boards located near train-

ing bases, were enlisted as seamen second class (Class V-5, Aviation) in the naval reserve. They reported to NRAB: New Orleans and 15 other NRABs: Boston (Squantum), Mass.; New York (Floyd Bennett Field), Brooklyn, N.Y.; Navy Yard, Philadelphia, Pa.; Washington (Anacostia), D.C.; Atlanta, Ga.; Dallas (Grand Prairie), Tex.; Detroit (Gross Ile), Mich.; Chicago (Glenview), Ill.; Minneapolis (Wold-Chamberlain Airport), Minn.; St. Louis (Robertson), Mo.; Kansas City (Fairfax Airport), Kan.; Long Beach, Calif.; Oakland, Calif.; Seattle, Wash.; and Miami, Fla.

The prospective cadets received approximately ten hours of dual instruction and one hour of solo time. The balance of the 30-day curriculum was devoted to ground school and military training. The purpose of the course was to select those students who showed an aptitude for further pilot training.

Because of Navy's pressing need for Naval Aviators, the New Orleans activity was designated a naval air station in November 1942 and became a primary training base. By the end of 1943 the student input had stopped and the base was training flight instructors.

In July 1946, the air station assumed the primary mission of instructing Navy and Marine Corps air reservists. There were a light carrier squadron, two fleet maintenance squadrons, an escort carrier squadron and a Marine fighter squadron on board.

Squadron readiness proved its worth

when a New Orleans-based reserve unit, VF-821, was called to active duty in July 1950, soon after hostilities began in Korea. The squadron operated first from USS *Princeton* (CV-37) and later USS *Essex* (CVA-9). It flew 1,626 missions, more than 50 percent of them flak suppression sorties — without losing a single aircraft.

By the late 1940s it was already apparent that the lakefront site would soon be inadequate. Urban growth in the area of the air station made future jet operations unfeasible. The Secretary of Defense designated the Navy as monitor for a joint engineering survey conducted by the Navy, Army and Air Force. The survey was to determine if the requirements of their respective reserve forces could be met by a joint air reserve training center near New Orleans.

The most promising area was about 16 miles south of the business center, in Plaquemines Parish. It included the old 515-acre Alvin Callender Field, originally a grassy area cleared in the late 1920s to provide a landing place for Charles Lindbergh when he visited the city on a nationwide tour. It was named after Alvin A. Callender, a native of New Orleans, who served with the British Royal Flying Corps in WW I. He lost his life when he was shot down over France in 1918. Callender Field had been a commercial airport until it was acquired by the Navy in 1940 as an outlying field for NRAB New Orleans.

The remaining 2,727-acre tract was low and swampy. It was covered with



dense brush, trees and vegetation. Because of subsoil conditions, it was necessary to excavate muck and mud to a depth of three feet and backfill with river sand to obtain a suitably stabilized foundation.

Construction was started in August 1954 and on December 13, 1957, the new naval air station was commissioned. Aircraft, supplies, equipment and personnel were transferred from the lakefront. Navy Captain William A. Hood, Jr., directed the move and served as commanding officer of the new installation. Air Reserve units of the Navy and Marine Corps moved from the old station. An Air Force reserve unit moved from Ellington AFB, Texas, and a Louisiana Air National Guard unit moved from the Lakefront Municipal Airport. A Coast Guard air detachment also transferred from the old air station. This search and rescue helicopter unit provided a beginning for the Coast Guard Air Station now located aboard NAS New Orleans. (At present a detachment of a Michigan Air Force squadron has the air defense mission for this region of the Gulf Coast, flying F-106s.)

On April 26, 1958, NAS New Orleans' Alvin Callender Field was dedicated. Admiral Arthur W. Radford, USN (Ret.), now deceased, made the dedicatory address.

The units on board NAS New Orleans today consist of tactical and nontactical units of the Naval Air Reserve, including VR-54 flying C-118s, VP-94 flying SP-2Hs, and VC-13 which operates A-4Ls. The Marine Air Reserve Training Detachment supports two CH-46 helicopter squadrons. The 926th Tactical Airlift Group, Air Force Reserve, operates C-130s; the 159th Tactical Fighter Group, Louisiana Air National Guard, flies F-100Ds; the 87th Fighter Interceptor Squadron (Detachment One) stands air defense alert in F-106s; and the Coast Guard Air Station uses HH-3F helicopters on its search and rescue missions.

From top, N2S Yellow Perils flown by student flyers at NAS New Orleans in 1944. Early photo of NAS's flight line. FG-1D Corsair appeared on scene in 1949. TBF Avenger of VJ-4 towing banner, 1944. VC-13's A-4Ls provide targets for fleet, reserve, and surface units.



PEOPLE PLANES AND PLACES

Ten pilots and 24 crewmen from NAS Whidbey Island's Search and Rescue Unit flew over 40 hours aiding 114 flood victims near Oak Harbor, Wash.

Snowpack thaws in the Cascade Mountains and heavy December rains caused flooding and the overflow of five major rivers. Estimated damages exceeded \$50 million in a seven-county disaster area.

The aircrews were assisted by a doctor, corpsman, and men from the Snohomish County Sheriff's Office.

The rescues included entire families and pets, a pregnant woman, a WW I Marine with a broken leg and an infant who was hoisted into the CH-46D *Sea Knight* after being zipped in a parachute bag.

The mayor of Oak Harbor in commending the men said, "The Navy has again shown that they are more than willing to volunteer to alleviate human suffering and need, not only in their own community, but wherever it occurs."

No, Jo Ann Worley, it's not another chicken joke and it's no "laugh-in" for the men of USS *Saratoga* (CV-60). They've actually adopted a registered fighting rooster as their ship's mascot. He has no name yet, but he'll soon have his own ID



card and service papers. "No Name" lives on the signal bridge where he proudly struts about and flaps his glistening red, black and white feathers. Rumor has it that he is the relief for a first class signalman. Sure sounds like a chicken joke. . . .

Janna Lambine and Vivien Crea will become the first women to undergo flight training for the Coast Guard when they report to NAS Pensacola, Fla., this year. The two will become fully qualified Coast Guard aviators authorized to fly all missions, including search and rescue.

The Third Marine Aircraft Wing, headquartered at MCAS El Toro, has been awarded the FMFPac Management Improvement Award for FY 75. The award signifies outstanding managerial competence and efficiency.

Changes of command:

VA-35: Cdr. B. K. Bryans relieved Cdr. R. P. Hyde.

VA-56: Cdr. G. L. Starbird relieved Cdr. R. N. Artim.

VA-72: Cdr. R. F. Brennock relieved Cdr. E. D. Estes.

VA-125: Cdr. D. R. Weichman relieved Cdr. R. C. Taylor.

VA-155: Cdr. R. D. Miller relieved Cdr. L. E. Kaufman.

VF-32: Cdr. A. H. Fredrickson relieved Cdr. J. G. Knutson.

VP-10: Cdr. D. F. Parker relieved Cdr. N. E. Koehler.

VP-24: Cdr. S. F. Gallo relieved Cdr. B. T. Hacker.

VP-31: Cdr. G. W. MacKay relieved Cdr. E. K. Anderson.

VP-46: Cdr. J. J. Hernandez relieved Cdr. T. W. Halm.

VP-56: Cdr. J. E. McNulla relieved Cdr. W. H. Compton.

HS-6: Cdr. K. M. Warmbir relieved Cdr. A. E. Pellerin.

HSL-34: Cdr. R. L. Johnson relieved Cdr. B. W. Borgquist.

RVAH-7: Cdr. R. E. Gasser relieved Cdr. J. T. Osborne.

VAQ-137: Cdr. G. Miller relieved Cdr. J. K. Flyum.

Numerology buffs, notice the twosomes . . . the *Blue Geese* of VP-22 have achieved an unprecedented and most commendable achievement of 22 years of accident-free flying. In doing so in the Navy's 200th anniversary year, VP-22,



attached to ComPatWing 2 and operating for CTF 72 as CTG 72.2 and CTU 72.2.1 (as well as 72.2.2), compiled over 182,000 flight hours in 22 accident-free years. Not "2" bad, eh? Druids notwithstanding, this was the year of the 2 for VP-22. So, when they had a cake-cutting ceremony, what was the price of the cake? What else . . . \$22!

Lt. Ron Boraten of VA-93 is congratulated by his commanding officer, Cdr. William Dougherty, after becoming a *Midway* double centurion, achieving his 200th landing as a *Raven* attack pilot.



The *Storkliners* of VRF-31 have recorded 50,000 consecutive accident-free flight hours. VRF-31 pilots made 7,500 safe aircraft deliveries, flying 37 different models and 62 types of aircraft. Since 1972, VRF-31 has been the Navy's only ferry activity.

The Pacific Missile Test Center's range instrumentation ship, USNS *Wheeling* (T-AGM-8) has returned from a 91-day cruise, logging more than 16,800 nautical miles in support of 16 operations. Commanded by Capt. C. F. Moon, *Wheeling* is operated as a special projects vessel. On this cruise, she provided missile tracking, telemetry, command control and range safety.

Capt. Charles Miller, master of SS *Mayaguez*, recently paid a call on the officers and men of USS *Coral Sea*. He personally thanked them for their part in the rescue of his ship and 39 crewmen off the Cambodian coast in May 1975. He said, "If it hadn't been for *Coral Sea* and the destroyers *Wilson* and *Holt*, we probably would be in a Cambodian prison camp today."

A Battery, 2nd Light Antiaircraft Missile Battalion, home-based at MCAS Yuma, has completed a four-day, 100-percent helo-borne field exercise near the Mexican border. The training and evalu-

ation mission was an exercise to test the helo transportability of an entire improved *Hawk* missile battery.

The Navy has accepted delivery of the 100th S-3A *Viking* antisubmarine warfare aircraft from Lockheed Aircraft Corporation. The company will deliver 87 more of the new carrier-based subhunters by December 1977. VS-1 is the first S-3A squadron to be operationally deployed and is now on board USS *JFK*. Plans are for seven squadrons to be operating from carriers by the end of 1976.



VS-29, the first Pacific Fleet S-3A operational squadron, is scheduled to take the *Viking* on a WestPac deployment in mid-1976 aboard USS *Enterprise*.

The jet-powered S-3A is equipped with a general purpose digital computer and acoustic data processor. The specially-designed computer is used with navigation, communication and weapons systems. It can process data from a variety of sensors including a high resolution radar, infrared sensor, magnetic anomaly detector, sonobuoys and electronic surveillance measures equipment.

VT-9 has recorded over 43½ months of accident-free flying and set a new CNATra jet training squadron record. This record was set by VT-9 while instructing student aviators and helicopter and fixed wing transition pilots in jet familiarization, aerobatics, instruments, formation and carquals. The previous record was set by VT-4 in May of 1966.

PR3 Regis Harrington made the 40,000th parachute jump recorded by Navy test parachutists at the National Parachute Test Range, El Centro, Calif. It was Harrington's 170th jump as a Navy test parachutist. Ten volunteer test parachutists and two trainees stationed at NPTR test not only new developments in parachutes and their systems, but prototypes of life rafts, survival kits and survival gear prior to their introduction into fleet operational use.

The Marine Corps Reserve's only *Cobra* attack helicopter squadron is scheduled to transfer from MCAS El Toro to the East Coast in July.

Attack Helicopter Squadron 773 will move to NAS Atlanta as part of the realignment of the all-Reserve 4th MAW. HMA-773 will replace HML-765, which will be disestablished.

All of the *Cobra* squadron's helos and equipment will be transferred during June. Reservists now in the unit will be reassigned to other reserve organizations at El Toro.

NASA's interplanetary spacecraft *Pioneer 6* passed its tenth year in space in mid-December. Having a design life of six months, the workhorse spacecraft has made discoveries about the sun, helped chart solar wind, solar cosmic rays and solar magnetic fields, all three of which extend far beyond the orbit of Jupiter. It

has measured the sun's corona, returned data on solar storms from the sun's invisible side and measured the tail of the comet Kohoutek.

Pioneers 6, 7, 8 and *9* make up a network of solar weather stations which circle the sun, usually in locations millions of miles apart. Two other *Pioneers*, *10* and *11*, flew past Jupiter in 1972 and '73 and are now headed for the outer reaches of the solar system.

The 63-kilogram (140-pound) *Pioneer 6*, like a tiny planet, has circled the sun almost 12 times, covering over six billion miles. The spin-stabilized, solar-powered craft has been radioing back measurements 24 hours a day from all sides of the sun.

Pioneer 6 is drum-shaped, about 87.5 centimeters (35 inches) high and 92.5 centimeters (37 inches) in diameter. It has more than 56,000 parts. It is powered by solar cells and is stabilized by its frictionless 60-rpm spin.

Two Sides of a Helo Pilot

Clement G. Tourigny spends an awful lot of time at the controls of a helicopter.

He's a full-time pilot with the Mas-

sachusetts State Police and a part-time aviator with the Naval Air Reserve at NAS South Weymouth, Mass.

Civilian Tourigny flies the Bell 206 JetRanger for the state police on assignments ranging from traffic control and mercy missions to disaster response.

Navy Tourigny flies the twin jet SH-3 *Sea King* one weekend a month for the Naval Air Reserve. He also flies the SH-3 on assigned missions during his two weeks of active duty for training each year.

A lieutenant commander and the operations officer for his squadron, HS-1101, Tourigny began his association with helicopters while on active duty in December 1964.

Most of his active duty flying was logged with Helicopter Combat Support Squadron Two, which deployed with several East Coast aircraft carriers for action in Vietnam. He was released from active duty in 1969 and joined the Naval Air Reserve program.

Tourigny served four years with the state police traffic department before being assigned to air wing

headquarters at Norwood as a full-time pilot.

He holds a commercial license for helicopter and fixed wing aircraft.



... as a Massachusetts State Trooper



... as a Navy Lieutenant Commander

- 1913 Chief Constructor of the Navy approved construction of a wind tunnel. The tunnel, built at the Washington Navy Yard, remained in operation until after WW II.
- 1915 The Division of Naval Militia Affairs in the Bureau of Navigation directed that an aeronautic corps could be organized in each of the State Naval Militia.
- 1917 Capt. Francis T. Evans, USMC, performed first loop with a seaplane, an N-9, then forced it into a spin and successfully recovered — at Pensacola.
SecNav directed that 14 Class B non-rigid airships be procured. Contracts were later issued to the Connecticut Aircraft Corporation, the Goodyear Tire and Rubber Company and the B. F. Goodrich Company.
- 1918 Aerial gunnery training for prospective Naval Aviators and enlisted men began, under Canadian RFC instructors, at Camp Tafiaferro, Fort Worth, Texas, an Army field.
NAS Bolsena, the first of two air stations established in Italy during WW I, was commissioned.
The President issued a proclamation, effective in 30 days, that prohibited private flying over the U.S., its territorial waters and possessions without a special license issued by the Joint Army and Navy Board on Aeronautic Cognizance.
- 1919 Capt. G. W. Steele, Jr., assumed command of Fleet Air Detachment, Atlantic Fleet on board his flagship, USS *Shawmut*, at the Boston Naval Yard. The new command, established to test the capabilities of aviation to operate with fleet forces, marked the beginning of a permanent provision for aviation in the fleet.
First aerological data obtained at various naval air stations was submitted to the U.S. weather bureau by NAS Pensacola for use in coordinated studies of weather conditions.
- 1922 The Washington Treaty, limiting naval armament, was signed at Washington, D.C.
- 1923 Transfer of the Aeronautical Engineering Laboratory from the Washington Navy Yard to the Naval Aircraft Factory made the Philadelphia installation the center of Navy's aeronautical development and experimental work.
Tests of aircraft handling were conducted aboard USS *Langley* with Aeromariners operating in groups of threes. Results showed it took two minutes to prepare the deck after each landing. In the best time for the day, three planes were landed in seven minutes.
- 1924 VS-3 was authorized to fly one division of CS seaplanes from Anacostia to Miami, Key West and return, conducting service tests under actual operating conditions.
- 1928 Contract for an XPY-1 flying boat was issued to the Consolidated Aircraft Corporation. This first large monoplane flying boat procured by the Navy was the initial configuration which evolved into the PBV *Catalina*.
- 1930 First monoplane designed for carrier operations, a Boeing Model 205 fighter, later purchased by the Navy and designated XF5B-1, was delivered to NAS Anacostia for testing.
- 1935 The prototype of the *Yellow Peril* primary trainer, XN3N-1, was ordered from the Naval Aircraft Factory.
USS *Macon* crashed off Point Sur, Calif.
- 1940 BuAer issued a contract for television equipment, including camera, transmitter and receiver, that was capable of airborne operation. Such equipment promised to be useful both in transmitting instrument readings obtained from radio-controlled structural flight tests and in providing target and guidance information necessary should radio-controlled aircraft be converted to offensive weapons.
- 1941 As an initial step in training patrol plane pilots to make blind landings, using radio instrument equipment which was being procured for all patrol aircraft and their bases, a one-month course of instruction began. One pilot from each of 13 squadrons, one radioman from each of five patrol wings and two radiomen from each of five naval air stations attended.
- 1942 First carrier offensive. Task Force 8 (VAdm. W. F. Halsey) and Task Force 17 (RAdm. F. J. Fletcher), built around *Enterprise* and *Yorktown*, bombarded enemy installations on Wotje, Kwajalein, Jaluit, Makin and Mili Islands in the Marshalls and Gilberts.
VAdm. Halsey led a strike force, composed of *Enterprise* with cruiser and destroyer screen, which made the first raid on Wake.
Seaplane tender USS *Langley*, formerly the first carrier of the Navy, was sunk by enemy air action.
- 1943 The Vought F4U *Corsair* was flown on a combat mission for the first time when 12 planes of VMF-124, based on Guadalcanal, escorted a PB2Y to Vella Lavella to pick up a downed pilot.

FEBRUARY

The advance up the Solomons chain began and lasted until November.

Naval Photographic Science Laboratory was established at NAS Anacostia under BuAer to provide photographic services to the Navy and to develop equipment and techniques suitable for fleet use.

- 1944 First detection of a submerged enemy sub by the use of MAD gear was made by *Catalinas* of VP-63 in the approaches to the Strait of Gibraltar. They attacked and sank the U-761 with retrorockets and with the assistance of two ships and aircraft from two other squadrons.
- 1945 Beginning of the capture of Iwo Jima.
- 1951 First trans-Atlantic flight by carrier type aircraft (six AJ-1s and three P2V-3Cs from VC-5).
- 1957 LCdr. Frank H. Austin, Jr., MC, became the first Navy flight surgeon to qualify as a test pilot.
- 1958 Keel of the world's first nuclear-powered aircraft carrier (*Enterprise*) was laid at Newport News, Va.
- 1959 Units of the Naval Air Reserve participated in a full-scale fleet exercise for the first time. Fifty-five crews and 36 P2Vs and S2Fs took part in an ASW exercise with elements of the Pacific Fleet and the Canadian Navy.
- 1960 Navy Mine Defense Laboratory and Navy Air Mine Defense Development Unit, Panama City, Fla., successfully demonstrated two new advances in airborne mine countermeasures: an air-portable minesweeping gear that enabled a helo to become a self-sufficient aerial minesweeper, and equipment for transferring a minesweeping gear towline from a surface minesweeper to a helo, from one helo to another, or from a helo to a surface minesweeper.
- 1961 Space Surveillance System, headquartered at Naval Weapons Laboratory, Dahlgren, Va., placed in commission.
Transit 3B with a *Lofti* pickaback was placed in orbit from Cape Canaveral. The planned orbit was not achieved. But, during the 39-day orbit, prototype navigational messages were injected into the *Transit's* memory and reported back. This provided the first complete demonstration of all features of the navigation satellite system.
- 1962 A detachment of VP-11 at Argentia began ice reconnaissance flights over the Gulf of St. Lawrence to aid in evaluating satellite readings of ice formations transmitted by *Tiros 4*.
LCol. John H. Glenn, USMC, in *Friendship 7*, made three turns about the earth in the first U.S. manned orbital flight.
- 1963 A VX-6 *Hercules* made the longest flight in Antarctic history covering territory never before seen by man. The 3,470 mile flight, from McMurdo Station, south beyond the South Pole to the Shackleton Mountain Range and then southeastward to the pole of inaccessibility and return to McMurdo, took ten hours and ten minutes.
- 1964 An HU-1 made the first landing on the deck of USS *Mars* (AFS-1). Although the concept of vertical replenishment at sea had been discussed and tested as early as 1959 and helo platforms had been installed on certain logistics ships, *Mars* provided the first real opportunity to incorporate the helo into the fleet logistic system.
- 1969 The Naval Air Systems Command issued a contract to Grumman Aircraft Corporation for development of the F-14A.
- 1971 First live warhead test of the air-to-surface *Condor* missile. Direct hit scored on target ship — near San Clemente Island.
- 1972 The *Apollo 14* flight of Alan B. Shepard, Edgar D. Mitchell and Stuart A. Roosa splashed down in the Pacific after recording 33 hours and 31 minutes on the moon.
- 1973 The first group of American prisoners of war to be released by Hanoi and the Viet Cong arrived at Clark Air Base in the Philippines.
Minesweeping operations conducted in Haiphong Harbor. Operation *Endsweep* was performed by CH-53 *Sea Stallions* from HM-12.
- 1974 First female Naval Aviators, Barbara Rainey and Judy Neuffer, won their wings.
Skylab IV was recovered by an HC-1 helo and flown aboard *New Orleans* after splashdown southwest of San Diego. This marked the 32nd astronaut retrieval by the Navy since the space program began in 1961. Flight set a duration record of 84 days in space.



Marine Astronaut Senator

John Glenn rode *Friendship Seven* into space and history 14 years ago this month. Now in his fifties, the former Marine flyer and astronaut represents the nation and his home state of Ohio as a United States Senator. He still looks as trim and agile as the young major who broke a speed record in a *Crusader* in 1959. The quick and vibrant smile familiar to millions of Americans has remained constant through years of personal achievement and glory. Glenn's successes have earned him accolades afforded to only a few men and women of the 20th century.

Not everyone remembers that, as a first lieutenant, he flew 59 combat missions in the Pacific during World War II. He earned two Distinguished Flying Crosses and ten Air Medals in that global conflict.

In the Korean fighting, he shot down three Migs, earned two more DFCs and eight Air Medals while flying 90 missions. On July 16, 1957, he raced from NAS Los

Alamitos, Calif., to NAS Floyd Bennett Field, N.Y., in an F-8, earning another DFC. On that time-shattering hop, Glenn averaged 723 mph. He crossed the U.S. in 3 hours and 22 minutes.

One of the original seven astronauts, he became the first American to orbit earth when he made three turns around the globe traveling 83,450 miles in four hours. This trip was considerably faster than the *Crusader* run from west to east. The *Mercury* capsule's average speed was 17,400 mph.

At his request, Glenn was released from his assignment to NASA in 1964. He wanted to retire from the Marine Corps in order to enter the Ohio Democratic senatorial race. He was "grounded," however, when he fell in his home and sustained damage to his inner ear. John Glenn eventually prevailed and was elected to office in 1974.

Naval Aviation News talked with Senator Glenn in his office on Capitol Hill, Washington, D.C.



NANews: Of all your accomplishments, the combat missions, the cross-country record, election to the Senate—would you rate the orbital flight as the greatest?

Senator Glenn: I don't rate one over the other. I've been fortunate that success in one area opened doors to another. A combat or war situation is different from test flying but experience in the first eventually helped lead to the latter and so on. One step has led to the next.

After *Friendship Seven* you said, in regard to achievement in space, that we have "only scratched the surface." Have we penetrated the surface yet?

No. In fact, I am more impressed with how little we know than with how much we know. Ever since the cave man looked over the hill to the next valley, man has realized there is so much more to learn, to question, to examine. Even with all our accomplishments through space research, we have just barely scratched the surface.

Do you feel the space program will be accelerated again?

Yes. Not now, however. We have too many problems facing us which we must tackle first. We are learning to control our future, while exercising our curiosity. These first efforts at getting off the planet have been baby steps. We are beginning to maintain our environment more effectively. We've made significant advances in cancer research, in alleviating blood pressure problems, seeking energy sources and studying mineral deposits. But we have a long, long way to go. We will continue looking into the unknown although the pace of our efforts will be slower for the time being.

Do you feel that your military experience provided you with basic training for work in the political arena?

Sure. In the military you discipline yourself for a single purpose. You weigh the available options, then make a decision. The pressures in politics are similar to those in the armed forces.



Right, Glenn adjusts helmet prior to launch in Feb. 1962. He and Mercury capsule were powered into orbit by this Atlas rocket, far right.

Do you see the role of the aircraft carrier diminishing or increasing in the future?

We need conventional land and sea forces and the carrier is a vital part of those forces. Until we come up with super tactical airplanes which could launch from the U.S. and travel non-stop at great speed, fully equipped, to a trouble area, complete a mission and return, the carriers will be needed. Such planes don't exist. If they did, it might alter patterns. I do feel that there is such a preponderance of overkill in the nuclear area that we could split the Soviet Union six ways down the middle. They could do the same to us. This is a standoff in terror. Yet, this mutually assured destruction prevents a possible nuclear exchange. The major powers know this. In conventional forces the carrier fills a need. It also plays a vital role in protecting the sea lanes, helping to ensure the flow of world commerce.

Back to flying, Senator—did you ever have to bail out or eject from an aircraft?

No. Never did. But I've been hit 12 times. Once, in Korea, I took groundfire that put a hole in my F-9 *Cougar*. I got back to the field OK but I was able to put my entire upper torso through that hole.

Do you miss flying?

Definitely. Every day. It's been 24 years since I flew day in, day out in a squadron. I looked forward to every hop. I miss flying now and I will miss it till the day I die. I sometimes wish I were a millionaire. I'd use the first million for security. With the second I would buy my own personal jet and fly it around the country. My wife has expressed some reservations about that notion, however.



**ENLISTED
RATING
SERIES**



THE AVIATION STRUCTURAL MECHANIC

By Bob Moore

Photographs by PHAN William Flynn

The sun still hid behind the horizon as the running lights of the port and starboard plane-guard destroyers twinkled and bobbed in the moonless night. Ahead, on the carrier, planes tied to the four-acre flight deck were bathed in red by banks of floodlights.

To many, these birds at roost are a beautiful sight. But, whether they are at roost or coming in to roost — on a carrier or naval air station — they are an enjoyable sight for the Aviation Structural Mechanic (AM). He shares an active role in making it happen.

Before and after flights, AMs move quickly around the aircraft, check for normal wear and tear or the extent of damage sustained in accidents. The

AM is a man who knows where to look for trouble and how to fix it. He is an expert metal worker, plumber, welder and hydraulic repairman.

He knows the secrets of rubber and how to seal fuel cells and fittings. He knows plastics and fabrics and their repair. He is equally adept with power-driven or hand tools. He can cut and form sheet metal, or weld steel and aluminum.

The Aviation Structural Mechanic can strip old paint and priming with a sandblaster. He's a master painter who ensures a smooth, low-drag surface on an aircraft's skin. He can replace or repair tubing, cables and hydraulic systems.

Since few men come into the Navy with all these capabilities, Aviation Structural Mechanics must be trained on the job and in school. At school, the AM learns the types, uses and characteristics of metals. He studies riveting, bonding and safety wiring. He is trained in gas and electric welding, hydraulics, fabric repair and aviation safety equipment.

Last year, more than 4,000 men

AMH2 Ernest Schueneman, VRC-40, installs a lock cylinder on C-1A aircraft from atop a ladder while structural mechanics of HM-12 combine muscles to change flight control bearing on helos.



were graduated from Aviation Structural Mechanic School at Memphis, Tenn. Courses covered both basic and advanced skill training for the three types of AMs—AMS, AMH and AME.

During their initial training, all AMs receive basic information on publication and maintenance management. Their advanced course includes basic electricity, mechanical drawing, aircraft maintenance, material and management, and corrosion control.

Each year, 1,600 trainees attend an eight-week AMS course in structural repair—drilling, riveting and painting. The curriculum also includes corrosion control, line maintenance and aircraft inspection.

The AMS can weld steel, aluminum or brass. He can make parts from raw materials or inspect them with x-rays, zyglo, fluorescent penetrate, magnaflux or magnetic particles, ultrasonic and eddy currents. The AMS can find

invisible cracks or defects by soaking parts in fluorescent solution, then washing and examining under a black light. His ultrasonic inspection supplements an x-ray check. A vibration base line is an electrocardiogram for engines or gear boxes.

The AMH is the man who provides hydraulic and pneumatic component repair and hydraulic contamination control. He can manufacture flexible and rigid hydraulic tubing and hoses and build up aircraft tires.

Since his particular branch of science deals with liquid in motion, the

AME2 George Abbott, RVAW-120, installs seat and parachute in E-2C cockpit, right, and liquid oxygen converter, below, center. AMH3 Richard Mauldin, VR-1, inspects nose-wheel steering linkage of DC-9 as hands of AMH2 Gary Miller prepare to disconnect and drain the fluid from the hydraulic line.





AMH thinks in terms of brakes and flight controls. These systems are activated by a combination of pumps, tubing and actuators that may leak, fail or accumulate bits of rubber or hunks, chips, filings and shavings of metal.

AMs work through maintenance control. This central office has a tie line to the aircraft maintenance department which, in turn, has a closed loop with an outside ground support equipment shop. So, when a part is needed, the shop readies the unit for quick transport to the aircraft and repairs are made.

In school, the hydraulic specialist learns aircraft operational checks and systems trouble-shooting. He takes seven weeks to study aircraft technical publications, hydraulic systems and landing gear units. He also learns overhaul and repair of power systems.

The AME is the man responsible for the inspection and repair of all

flight safety and survival equipment aboard the plane. He checks parachutes, ejection seats, flotation gear and oxygen tanks.

In school, the AME spends eight weeks studying fundamentals of aircraft air conditioning and pressurization. He learns fire extinguishing, life raft release and emergency escape systems.

Most Naval Aviation courses are taught at the Naval Air Technical Training Center in Memphis, Tenn., where 25,000 students attend various schools each year. Generally, students undergo a two-week course in aviation familiarization, five weeks of basic electricity and electronics or two weeks of aviation mechanical fundamentals.

Presently, the majority of students are being taught by conventional classroom instruction. Plans are being formulated at NATTC Memphis for transitioning in the near future to self-

pace, the computer method. This system is being used today for basic training of the AME.

The first enlisted aviation school was established at Pensacola, Fla., in 1914. The initial class of enlisted mechanics graduated in 1916. They came from the general service ratings and were designated Quartermasters (Aeroplanes). Later, several of these men became Naval Aviators or Enlisted Pilots.

They studied engines, aeroplanes and balloons. They were graded on hydrogen gas plants, structural maintenance, obedience and sobriety.

It was July 1921 before the Aviation Metalsmith rating was established. The rating changed to Aviation Structural Mechanic in 1948.

There are more than 16,000 structural mechanics in the Navy — skilled men who meet the demanding requirements of keeping today's sophisticated and complex airplanes flying safely.

AM2 Matthew Greenlaw, HSL-30, adjusts SH-2F flight controls as AMH2 Gary Miller, VAQ-33, lubricates aircraft's components.





Patrol Community

Holy Hannah! Jumpin' Jehoshaphat! Sufferin' catfish!

Have the horizontal cuts of operating funds or the regionalization of photo labs kept the VP community from taking pictures?

A cursory scan of the pictures in the October issue of *Naval Aviation News* shows approximately 27 pictures of carrier aircraft and two pictures of VP. This count of two is very generous, indicated by the following breakdown: Picture #1 shows a PB7Y *Catalina* of WW II fame and picture #2 is a cockpit view of a P-3.

I'm certain that discrimination is not a factor because VP is not a minority in Naval Aviation. Que pasa?

T. K. Anaston, Capt.
 C.O., NAS Bermuda

Ed's Note: The Captain's point is well taken. We had hoped that the quote which accompanied the view of the P-3 crew in the cockpit reflected the importance of the VP community in Naval Aviation: "The finger that turns the dial rules the air." We also hope that the VP types could step up their flow of photos to *NA News* as we're a little shy in that category.

VC-19

We are trying to contact former WW II squadron mates from VC-19.

We were together in USS *Bogue* (CVE-36) in 1943 and in USS *Guadalcanal* (CVE-60) in 1944 and are interested in contacting *Bogue* or *Guadalcanal* ship's company personnel who have reunions.

W. A. L. Fleur
 Lafayette, La.

R. B. McAshan, Jr.
 1719 S. Post Oak Lane
 Houston, Texas 77027

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Reunions

The 23rd reunion of former members of the crew, squadrons and Marines who served aboard *Lexington* (CV-2) from 1927 to 1942, when she was sunk in the Battle of Coral Sea, will be held in San Diego, Calif., July 14-17 at the Town and Country Hotel. For further information contact Walter D. Reed, P.O. Box 773, Oakland, Calif. 94604.

For information on the 1976 reunion of former members of the crew, squadrons and Marines who served aboard *Wasp* (CV-7) from 1939 to 1942 contact George M. Millican, 3337 Delia Lane N.W., Huntsville, Ala. 35810.

Seaplanes

Windsor R. Purdum is compiling a book on seaplanes and would appreciate names, dates, events or memories of the Martin XP6M-1 and P6M-2 *Seamasters* from 1955 to 1959. His book will include a list of contributors. Send any information to Mr. Purdum at 6386 Wager Drive, Rome, N.Y. 13440.

Spartan Angels

It was gratifying to see the ol' CVT-16 *Spartan Angels* Plane-guard Det recognized in the article "Rescue" in the October 1975 issue of *Naval Aviation News*. The "infant det" began its transition to operational status in April 1970 with one UH-2B, BuNo 151325, five previously qualified H-2 aviators and one savvy E-8. One month (27 training flights) and five more H-2s later, the Plane-guard Det flew its first plane-guard mission, making its first rescue on its first flight.

The *Spartan Angels*, as we had dubbed ourselves, went aboard *Lex* on June 2, 1970, with six pilots and about 35 maintenance types. The Det, from a meager beginning, became an almost operational-

size squadron within a month. The men who served in the *Spartan Angels* during those first six months are among the most professional and finest shipmates with whom I've had the pleasure to serve.

R. A. Hargis, LCdr.
 Air Operations Officer
 USS Tripoli (LPH-10)

Credit Where Due

The inside back cover for August 1975 should have one more insignia. Although not primarily concerned with training, HC-2 has been *Lex's* primary SAR outfit for all at-sea periods since March of this year.

Not meaning to steal any of HCT-16's thunder, but credit should be given where credit is due.

R. F. Toonk, ATI
 HC-2, Det 3
 USS Little Rock

Wing Insignia

I noted a curious anomaly in your functional wing insignia display inside the back cover of the September 1975 *Naval Aviation News*. While five of the wings depicted are East Coast organizations, the sixth is a West Coast outfit. One must conclude your reasons for including this aberrant filler in an otherwise pristine display were twofold: First, your obvious dedication to symmetry which is most commendable; the second is that you apparently lack a copy of CAEWW-12's patch, which is provided herewith.

CAEWW-12 is the functional wing for E-2C aircraft of the Atlantic Fleet. We are as proud of our patch as we are of the aircraft we fly and of the men and women who maintain and operate them. I am hopeful that the officers and enlisted personnel of CAEWW-12 may soon have the privilege of seeing their patch displayed in your outstanding magazine—a tribute I feel they have earned and richly deserve.

R. A. Pettigrew, Capt.
 ComCAEWW-12
 NAS Norfolk, Va. 23511

Ed's Note: So be it.



Carrier Air Wing Five, home-ported at Yokosuka, Japan, deploys aboard USS Midway. Carrier Airborne Early Warning Wing Twelve, the functional wing for E-2C units of the Atlantic Fleet, operates out of NAS Norfolk. Carrier Air Wing Nine, based at Lemoore, deploys aboard USS Constellation.

