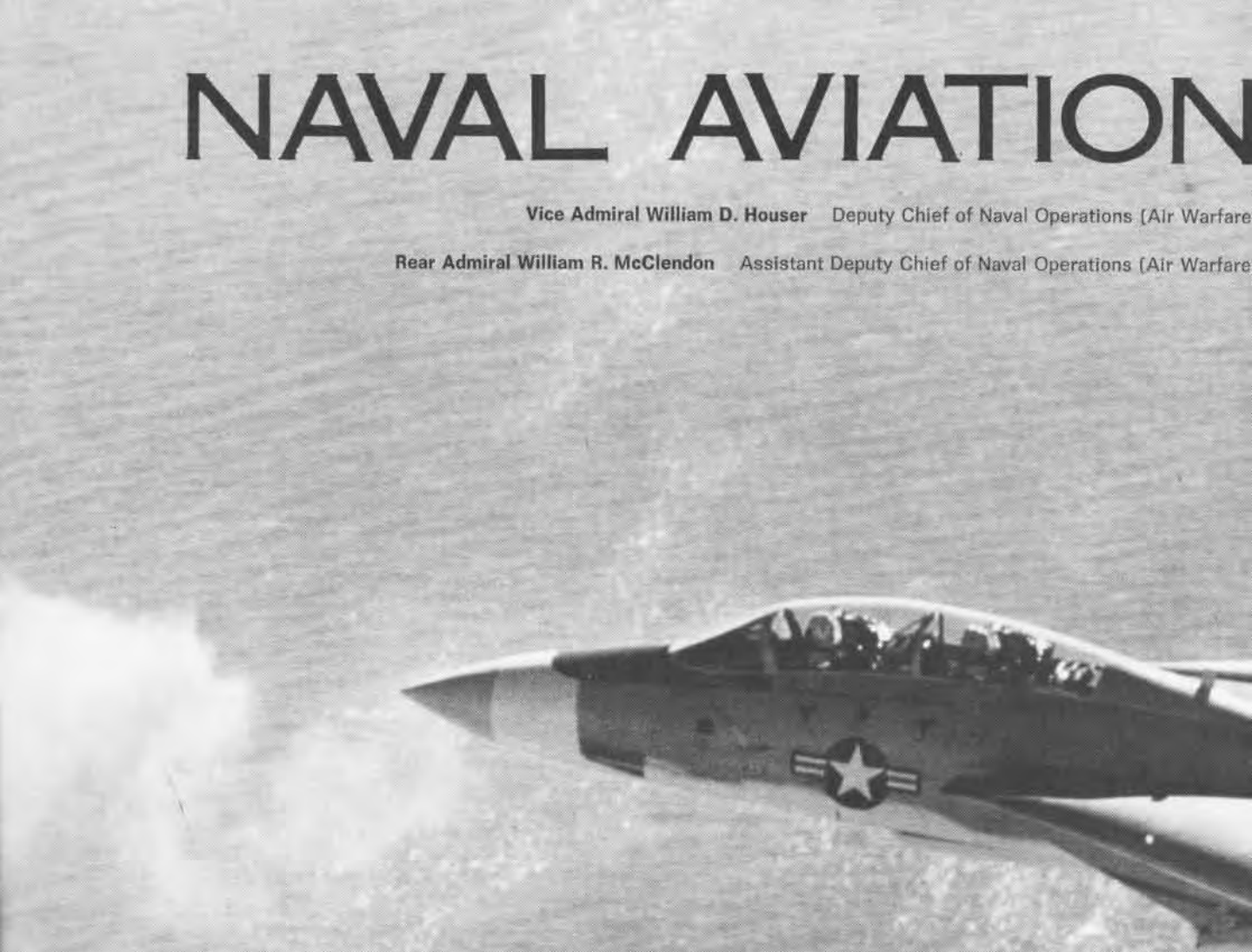
NAVAL AVIATION NEWS

In this Issue:

Historic Naval Aircraft

DECEMBER 1972

NAVAL AVIATION



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NEWS

FIFTY-FIFTH YEAR OF PUBLICATION

Rear Admiral Thomas R. McClellan Commander, Naval Air Systems Command

Major General Edward S. Fris, USMC Assistant Deputy Chief of Naval Operations (Marine Aviation)

Front cover of old aircraft was taken in the display area at the Naval Aviation Museum, Pensacola, Fla. Back cover features four VA-303 Corsairs from Naval Air Reserve Unit, Alameda, Calif., with the Golden Gate and San Francisco in the background. Photo of the Tomcat on these pages is courtesy of Grumman.

EDITOR'S CORNER

In this issue, NANews *examines the preservation and display of historic naval aircraft at various locations around the country. Although a great deal of effort has gone into collecting, preserving and restoring these planes, much more needs to be accomplished in the way of placing them on public display. While steps are under way in that direction, a reader has pointed to yet another symbol of Naval Aviation's historic role that deserves equal concern. We feel his letter warrants the attention of all who have an interest in Naval Aviation.*

Since *Naval Aviation News* has designated this "The Year of the Carrier," perhaps some of your readers may be interested in the final chapter of two of these great ships, as seen in the accompanying photo which I took the latter part of August. In the background is USS *Lake Champlain* (CVS-39), currently being cut up for scrap at the shipyard in Kearny, N.J. The big chunk of metal in the foreground is a section of double bottom (and all that remains) of another Essex-class carrier, USS *Boxer* (LPH-4). During the next 14 months, *Lake Champlain* will gradually be reduced to the same state.

My interest in *Lake Champlain* arises from the fact that I once served aboard. But, more than that, the scrapping of *Lake Champlain* and other carriers in recent years poses an historical question which should concern everyone connected with Naval Aviation: Is the future history of aircraft carriers to be confined to still photos and motion picture film? Can none of these ships be preserved for historical purposes, as several battleships have been? For obvious reasons, several states (Massachusetts and Alabama, to name two) have preserved the battleships which bore their names. Perhaps states which have not in recent times had battleships named for them, but which have "adopted" aircraft carriers, could become interested in preserving "their" ships. *Lake Champlain*, for example, was adopted by New York and even used the state's motto, *Excelsior*, as its own.

Whatever the solution, if future generations are to have the historical advantage of physically seeing (and perhaps walking aboard) some of the present aircraft carriers, measures will have to be taken now to ensure that some of these ships — or at least a representative vessel — are not scrapped. In view of the fact that 24 Essex-class CVs (more than any other class) were built, it seems apparent that at least one of these ships should be of historical value. Indeed, *Essex* (CVS-9) itself, which is now in mothballs in Brooklyn, would make an excellent historical exhibit.

The potential for any of these veteran carriers as museums is intriguing. The hangar bays and adjacent shop areas would make fine display facilities. There is no doubt in my mind that a considerable amount of history could be preserved and displayed aboard a permanently berthed aircraft carrier. I certainly hope that the Naval Aviation community will make an effort to perpetuate this key factor of its history. At least one of the old carriers should be preserved.

Peter Kilduff
57 Sefton Drive
New Britain, Conn. 06053

Mr. Kilduff has raised an important issue, and he is not alone in proposing the preservation of an aircraft carrier as a lasting monument to a significant development in aviation history. At present, at least two groups are working toward this end. The Bunker Hill Association is actively raising funds to save USS Bunker Hill *(CVS-17) and the Massachusetts Department of Education is interested in acquiring USS* Wasp *(CVS-18). Under U.S. statute, the Secretary of the Navy may donate naval vessels to qualifying agencies that meet certain requirements. It is here that projects to preserve ships run into difficulty. Since the non-profit agencies which receive a vessel must provide proper upkeep, ensure adequate safety standards and arrange for sufficient insurance coverage, the cost of meeting the legal requirements often presents problems. Repainting alone may run to $1 million.*

Such financial obstacles forced one group to give up its attempt to acquire USS Valley Forge. *But we should not despair, other groups have been successful. Four WW II battleships and numerous smaller vessels have joined such historic vessels as USS* Olympia *of Spanish-American War fame and the sailing ships* Constellation *and* Constitution. *Perhaps, with the aid of interested citizens and the aviation and sea-going communities, an aircraft carrier may one day join these great ships.*

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1911 1972

Viking Undergoing Carrier Suitability Tests

PATUXENT RIVER, Md. — The Navy's new carrier-based ASW aircraft, the Lockheed S-3A *Viking*, was officially welcomed aboard the Naval Air Test Center on October 16.

The *Viking* is scheduled to undergo ten months of carrier suitability testing as part of the contractor's demonstration of its structural integrity. Specifications require the S-3A to withstand landing impact loads as high as 175,000 pounds, arrest loads up to 162,000 pounds and launch loads of 184,000 pounds.

Vought Aeronautics Company is responsible for the *Viking's* carrier suitability, and Vought pilots will fly the aircraft during the demonstrations. Vought produces the S-3A's folding wings, aft body, tail assembly, stores pylons and its launching and landing gear. The firm is conducting static and drop tests on the airframe as well. The *Viking* being used for the carrier suitability tests is one of four developmental S-3As now flying. All eight of the developmental models will be in flight test early in 1973.

Halfway through its scheduled 20-month flight test program, the *Viking* has accumulated approximately 450 flight hours in more than 180 flights. GE TF-34-2 turbofan engines have accumulated more than 1,000 flight hours on the B-47 flying test bed, the four S-3As now flying, and on two AF A-10A developmental aircraft.

Two of the *Vikings* completed the second of five Navy Preliminary Evaluations in October at Lockheed's Palmdale, Calif., facility. The evaluations were conducted by a team of Navy engineering test pilots and technical personnel from NATC.

Cousins New CinCLant

NORFOLK, Va. — Admiral Ralph W. Cousins relieved Admiral Charles K. Duncan as Commander in Chief, Atlantic and Atlantic Fleet, in a change-of-command ceremony aboard USS *John F. Kennedy* on October 31.

In another ceremony, later the same day, Adm. Cousins again relieved Adm. Duncan, this time as NATO Supreme Allied Commander, Atlantic, and Commander in Chief, Western Atlantic.

SACLant, established in 1952, three years after the signing of the North Atlantic Treaty, was the first international military command to be headquartered on U.S. soil during peacetime.

Adm. Cousins previously served as Vice Chief of Naval Operations. Adm. Duncan retired after more than 39 years of naval service.

100,000 Safe Hours

CORPUS CHRISTI, Texas — Training Squadron 28 passed the 100,000th accident-free flight hours milestone in September — for the second time in five years. VT-28 reached the 100,000-hour mark once before, in 1967.

The hours were accumulated over a period of 44 months of flying the S-2 *Tracker*. Commander D. E. Westbrook is C.O. of the safe squadron.

Secretary of the Navy John W. Warner has announced the awarding of a $46 million contract to North American Rockwell to provide a V/STOL aircraft prototype, shown here in artist's view. Prototype will use components of existing aircraft to reduce time and expense prior to first flight. If prototype is successful, Navy may start engineering development of an operational V/STOL. Contract represents ceiling figure, funded over three years, leading to fabrication and flight testing of two R&D aircraft. Prototype will be powered by single P&W F-401 engine and is expected to be capable of supersonic speed and have a 500-nm operating radius.

First F-14 Squadrons

MIRAMAR, Calif. — The Navy's first two F-14 *Tomcat* squadrons were formed on October 14 at the naval air station. Speaker for the occasion was Secretary of the Navy John W. Warner, who landed at Miramar in an F-14.

After many years of inactivity, the numbers One and Two have been reassigned to the first two combat squadrons scheduled to receive the *Tomcat*. Taking command of VF-1 was Commander Rene W. Leeds and of VF-2, Commander Richard L. Martin.

Preparations for the arrival of the F-14 and the officers and men of the new squadrons have been taking place for several months, and extensive training and maintenance facilities have been planned and constructed. Also based at Miramar is the training squadron for the *Tomcat*, VF-124, which has for the past 14 years taught flight and maintenance procedures for the F-8 *Crusader*.

VF-124's new facilities include a flight trainer building containing operational flight and mission trainers, closed circuit television equipment and classrooms. Commanders Leeds and Martin have been aboard Miramar for some time with a commissioning cadre of officers and men. Personnel of the new squadrons will continue to function with VF-124 until their aircraft are delivered.

Marine Aviation Awards

CHICAGO, Ill. — In ceremonies held in October during the Marine Corps Aviation Association's annual awards banquet, General Robert E. Cushman, Jr., Commandant of the Marine Corps, presented the Silver Hawk Trophy to Major General Arthur H. Adams, Deputy Chief of Staff, CinCLant. The trophy is presented to the active duty Marine who has been designated a Naval Aviator for the longest period of time. Gen. Adams succeeds Major General Norman J. Anderson, retired, who was the first recipient.

Other honors presented included the Alfred A. Cunningham, the R. G. Robinson and Robert M. Hansen Awards and the Pete Ross Trophy.

Maj. Lee T. Lasseter, VMFA-333, received the Cunningham award as the year's outstanding pilot. Maj. Lasseter, deployed with his squadron aboard USS *America* in SEAsia, was recently credited with downing one enemy MiG-21 and damaging another in aerial combat near Hanoi. While returning to *America* after the engagement, Lasseter's F-4 was downed by a SAM but he and his crew ejected in the Gulf of Tonkin and were rescued by a Navy SAR helo.

Capt. William D. Carr, VMA(AW)-224, received the Robinson award as NFO of the year. He distinguished himself as an outstanding bombardier/navigator during a recent deployment to Vietnam aboard USS *Coral Sea*.

The Hanson award went to VMFA-115 for its outstanding performance during FY 72, and VMA-142 received the Ross trophy in recognition of its safety record.

The Marine Corps Aviation Association was formed last year when the First Marine Aviation Force Veterans Association was merged into the new association.

500 Combat Missions

GULF OF TONKIN — When Commander Stanley Arthur, skipper of VA-164, came aboard USS *Hancock* (CVA-19) recently, he had just completed his 500th combat mission over Vietnam.

Commented the commander, "The first and 500th missions I flew, all from *Hancock*, were in the same area — about 15 miles apart." The 500 missions were compiled during three separate cruises to WestPac and were all flown in the A-4 *Skyhawk*.

In August, Cdr. Arthur marked another milestone, his 600th arrested landing. Where else? Aboard *Hancock*.

Newest Hawkeye

BETHPAGE, N.Y. — The first production model of the E-2C *Hawkeye* made its maiden flight in late September at Grumman. The newest version of the *Hawkeye* features some improvements: a new overland radar, an updated computer, a new inertial guidance system, and a passive detection system.

According to the Navy team evalu-

ating the new *Hawkeye*. "The E-2C systems that were evaluated exhibited excellent potential for the carrier-based airborne early warning and tactical control mission and are a significant improvement over comparable E-2A/B systems."

The Navy has contracted for 11 of the new *Hawkeyes* with deliveries to begin in February and BIS trials scheduled for April at NATC Patuxent River, Maryland.

HelSeaConGru-One

LAKEHURST, N.J. — The Navy reached another milestone in implementing the sea control ship concept with the commissioning of Helicopter Sea Control Group One (HelSeaConGru-One) on September 29. Commander T. David Eyres assumed command of the new headquarters unit.

The first of its kind under the sea control concept, HelSeaConGru-One is made up of 15 highly specialized officers and enlisted men who will manage all Atlantic Fleet sea control combat forces.

"Our mission is to provide on-scene management control and to coordinate technical and material assistance for the operational helicopter squadrons based at NAS Lakehurst," Commander Eyres said.

The affected squadrons are HC-2, HSL-30 and HS-15. The latter two are, respectively, the Navy's first LAMPS and sea control ship squadrons.

Hot Helo Refueling

QUONSET POINT, R.I. — Helicopter inflight refueling (HIFR) has been added to the training syllabus of HS-1 at the naval air station. HIFR became part of the program for replacement pilot training when two squadron SH-3 *Sea Kings* hooked up to a destroyer in Narrangansett Bay.

The helicopter, operating with the destroyer USS *Rich*, successfully completed six dry hookups during an hour's flight. Three instructor pilots, three replacement pilots and three aircrewmen participated in the initial hookups.

This system is used by fleet helicopter squadrons to refuel their aircraft from a ship's fuel supply while in flight. The technique was developed to extend the helicopter's range from aircraft carriers while on search and rescue missions. It was first used by units in Vietnam in 1966.

To initiate inflight refueling, the pilot radios the ship that he requires a "hi-drink." When the helo is in position over the stern of the ship, the aircrewmen aboard lower the rescue hoist to the ship where it is attached to a refueling hose.

The hose is raised to the aircraft and connected to the aircraft fuel system. The pilot then stations the helicopter parallel to the ship about 20 to 30 feet over the water while the ship pumps the desired fuel. The pilot notifies the ship when he has received enough fuel, then hovers over the ship as he releases the fuel lines.

Timation Satellite

WASHINGTON, D.C. — The time and navigation (*Timation*) satellite system pioneered by the Naval Research Laboratory has proven to be an ideal method for measuring time to within half a microsecond.

In a joint British-U.S. experiment, time standards at the Royal Greenwich Observatory at Herstmonceux, Sussex, England, and at the Naval Observatory in Washington, D.C., were compared for the first time by means of a cesium-beam atomic clock on board a satellite.

With the advent of supersonic aircraft, the accuracy of worldwide time measurement has become vitally important for proposed aircraft collision avoidance systems. Since knowledge of time affects distance measurement and navigation, highly accurate clocks will ensure that adequate separation can be maintained between aircraft.

Currently, time standards at various sites throughout the world are compared by using portable cesium-beam atomic clocks carried in aircraft or by means of the Loran C navigation system operated by the Coast Guard. The portable clock method yields very good time comparisons but is expensive. The Loran C method has inaccuracies brought about by propagation anomalies of land, sea and the ionosphere.

In the recent experiments, a *Timation II* satellite at an altitude of 500 nautical miles was used as the vehicle for highly accurate time comparisons. Signals from the satellite were first received by a station in Washington, D.C., and approximately 15 minutes later by the Greenwich Observatory. By plotting the location of the satellite and computing the time required for the signal to reach each of these stations, each station was able to compare its time standard with that of the atomic clock aboard the satellite. Then, by adding corrections for clock drift, scientists were able to accurately measure the difference in the time standards at the two stations. The satellite also provides a high speed portable clock which can be used as a check on other time transfer methods.

Art Schoeni, former staffer and editor of NANews, retired in November after almost 19 years at LTV. An aviation writer and photographer of considerable renown, Art has been a frequent contributor to this magazine, his photos gracing more of our front covers than any other photographer's.

NATC Patuxent River recently completed a carrier suitability evaluation of a proposed leading edge slat modification to the F-4J. Tested to determine flying qualities, performance characteristics and carrier suitability, the configuration showed a potential for improving the air-to-air combat effectiveness of the F-4J Phantom.

GRAMPAW PETTIBONE

Hot Machine, Cool Head

A Marine major with considerable experience in jet aircraft was scheduled to fly an A-4C *Skyhawk* from an MCAS to an NAS, both on the West Coast. At 1710, the major filed an IFR flight plan and proceeded to his aircraft. Preflight and start were uneventful, as were the taxi and engine run-up.

The *Skyhawk* was cleared for takeoff and, during climbout, the major switched from departure control to center frequency. Passing 11,500 feet, he received a radar vector to his next radio facility. Commencing the turn, he noted passing 13,500 feet and, at that instant, he experienced "a series of violent chattering shudders and chugs and the engine started to unwind." He made one attempt at emergency communication but the radio had faded. He deployed the emergency generator. The fuel transfer light was on; the RPMs were passing 60 percent; the EGT was normal; however, the fire warning light was on.

The pilot glanced in the rear view mirror and noted flames from the fuselage. He turned toward the ocean and elected to remain with the aircraft until clear of populated areas. During the turn, the entire master caution panel became illuminated and control response became sluggish. In a nose-down attitude (estimated 15 degrees), the aircraft oscillated "much like a falling leaf" and the pilot was unable to control it with rudder or ailerons. The pilot then saw flames "over the top of the canopy extending to the windscreen."

Because of large G forces, he made no attempt to reach the face curtain and instead ejected while inverted, using the alternate firing handle. (His helmet subsequently came off during the ejection sequence.) The pilot feels he lost consciousness momentarily and recalls nothing prior to the opening of the parachute. While descending, he saw the aircraft, on fire, on its way to the water. Water entry was normal, his chute collapsed and he immediately inflated his life vest. No attempt was made to release the parachute. He was spotted by a helicopter and other light aircraft and shortly thereafter was assisted from the water by a police boat.

Grampaw Pettibone says:

Leapin' lizards! I've read a few reports about busted flyin' machines and "drivers" in my day — but this fella behaved like a real pro! Stayed with his aircraft to avoid a populated area until he wore out his welcome in the cockpit.

Guess we'll never know for sure why the machine quit flyin' right, but once it got "mighty warm" in the cockpit, this gent remained cool as a cucumber! Well done! Makes you proud to be a Naval Aviator.

No Oil

A lieutenant junior grade who had just completed his day carrier qualifications was scheduled for his initial night carrier qualifications in an A-7E *Corsair II*. During the day he flew two arrested landings to prepare for his night work.

That evening, following an uneventful preflight and launch, he was vectored to final approach and flew an average pass to a number-three-wire engagement. His first pass was flown at dusk with a good visible horizon.

The next catapult shot was five minutes later under actual night conditions. The lieutenant junior grade flew a good pass and called the ball on fineup slightly below glide slope. He settled further below glide slope and was told to add power and bring the aircraft up.

The aircraft began to make the correction, then rapidly started to go low again. As the *Corsair* continued its rapid descent, the controlling LSO transmitted "Altitude! Power! Wave-off!" and turned on the wave-off lights.

ILLUSTRATED BY Osborn

To the LSOs, a ramp strike appeared imminent and they immediately cleared the platform. No aircraft-to-ramp impact was observed by either the LSOs or the air boss and the aircraft appeared to have executed a successful wave-off.

Turning crosswind, the lieutenant reported that his master caution light had illuminated and that his oil quantity indicated one-half. He then was vectored for another pass, the decision being to attempt the approach and if he waved-off or boltered, the aircraft was to be bingoed.

On his next approach, the aircraft landed in the wires but hook-skipped the #3 and 4 wires and the aircraft was bingoed to the closest shore station. The initial vector given by the CCA controller was 357 /73 nm from the ship. The *Corsair* began a climb to 20,000 feet on this vector and switched to departure control. The pilot was unable to contact anyone on that frequency and as his oil pressure started to drop, he switched to guard channel and activated emergency IFF in an attempt to regain radio contact.

A TACAN lock-on could not be obtained on his field, so he continued on his heading. At 20,000 feet with oil quantity indicating low and oil pressure, zero, the engine seized. After the seizure, the lieutenant declared Mayday and broadcast his intentions to eject. He was asked for several short counts so that aircraft and ground facilities could pinpoint his exact position. He turned toward the lights of a nearby large city and then paralleled the coastline. With the aircraft passing through 7,000 feet, the pilot ejected and the aircraft impacted the water.

The uninjured pilot was rescued by a ship after approximately three hours in his life raft. The accident board concluded that the hook had struck the ramp during the wave-off and was deflected upward, causing damage to the oil lines.

Grampaw Pettibone says:

Great horned toadies! This lad just doesn't heed the LSO's instructions quick enough for my money — one of the most dangerous situations in "postage stamp" operations is not taking quick positive action in response to the LSO!

Of course, once this lad "looked" as if he was going to hit the ramp and then appeared to the LSO that he didn't (when he really did), while reporting an "oil quantity" problem — it's time to be "a suspicious cuss" and send the lad home. I ain't saying that the engine wouldn't have quit anyhow — I just don't think it's smart to continue qualifying an inexperienced driver in a machine that just reported a discrepancy.

Set-Up for a Crash

The SP-2H *Neptune* had just completed a five-and-one-half-hour, day, overwater training flight. The patrol plane commander (PPC), a lieutenant with considerable experience in the aircraft, was in the right seat. A lieutenant, the pilot-under-instruction (PUI), with 11 hours in type, was in the left seat. For training purposes, the lieutenant with the limited experience was to make the home-field final landing.

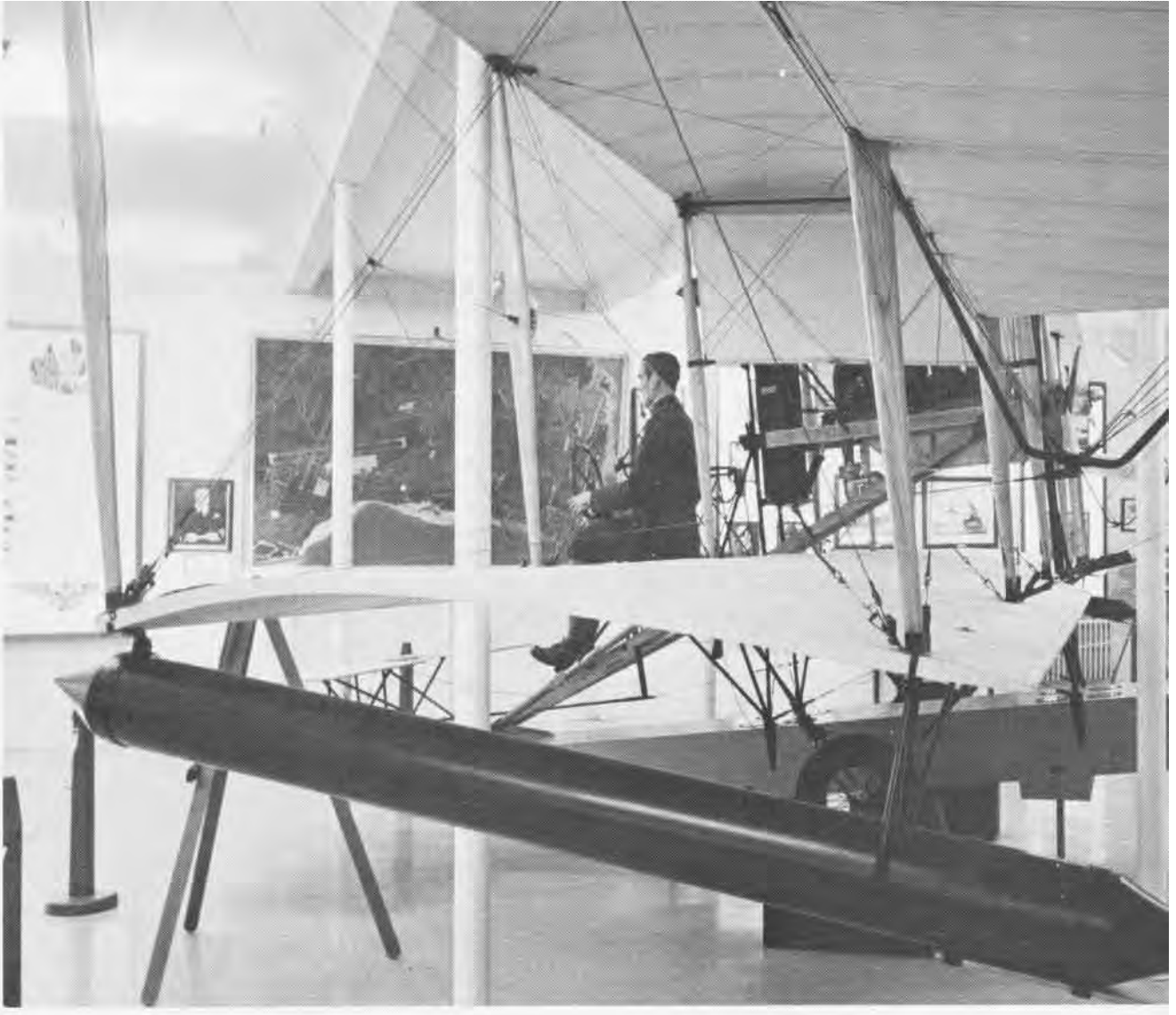
The tower was contacted approximately ten miles from the field and clearance was given for a straight-in approach to a 6,000-foot runway. The weather was good with light and variable winds. The necessary checklists were completed and the PUI was briefed on the approach and landing by the PPC. The *Neptune* commenced the approach, the PUI reported the wheels down, and the PPC noted about five knots' excess airspeed. Touchdown was 1,200 feet from the approach end of the runway.

The PUI experienced some difficulty in applying reverse thrust but, when he did, the aircraft seemed to accelerate. The PPC, with 3,000 feet remaining, took control of the aircraft. Braking began and the main-mount tires blew with approximately 1,400 feet of runway remaining. The PPC, realizing he was going to overrun, set the emergency brake. The *Neptune* continued rolling and departed the end of the runway with approximately 50 knots of airspeed and continued for 600 feet before coming to a stop. The crew exited the aircraft with no injuries; however, the *Neptune* sustained substantial damage.

Grampaw Pettibone says:

Holy Hannah! I got so darned mad when I read this here report — I call this a set-up for a crash. First of all, this fella was a "little fast"; secondly, he landed long; and thirdly, he tore into the reverse like it was trying to escape him! May I inquire — where was the PPC during these "build-up" events? Oh yeah, he took over the aircraft once things were so screwed up that even he had no choice but to ride the machine through the strawberry patch! Poor, very poor, indeed.

Corrective action in this case is obvious — take it around again if you're going to land so far down the runway that reverse is necessary to make a safe stop, and don't wait too long to take over a fast buildin' catastrophe!



Naval Aviation's Heritage on

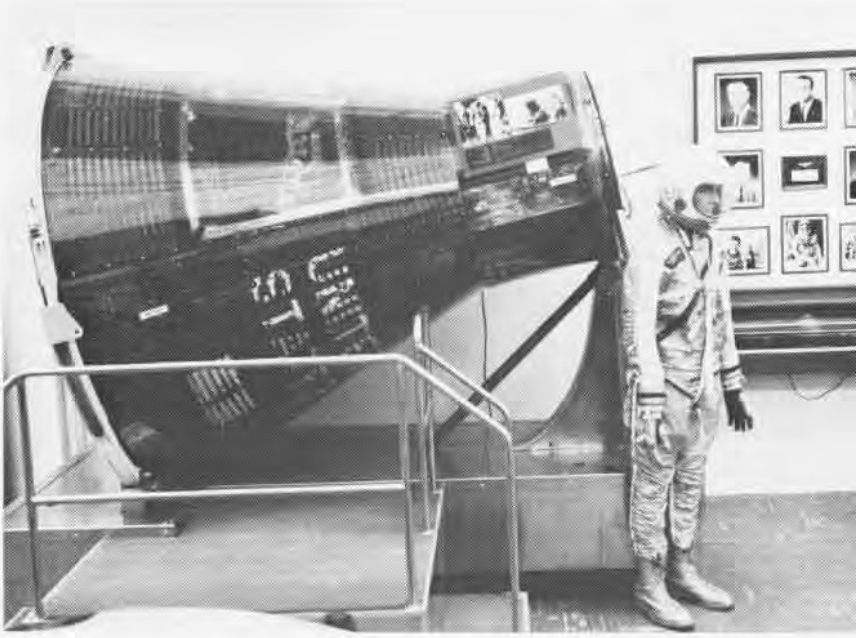
Among the millions of Americans with a passing interest in aviation there are tens of thousands of buffs who collect various symbols of what has become their special interest. Some collect squadron patches or photographs of historic aircraft. Others build amazingly precise detailed models of military aircraft. A very few are able to acquire, restore and fly obsolete military planes. The buff and the general public, however, have little opportunity to see the real thing firsthand. They may find photographs reproduced in aviation magazines but they are seldom able to experience the satisfaction of observing the actual aircraft.

Together with commercial activities such as the World War I flying demonstrations at Old Rhinebeck, N.Y., and Bealeton, Va., and non-profit groups like the Confederate Air Force, many air stations, through static displays, currently offer the public a view of military aircraft of the past. This situation may be dramatically improved in the near future. Plans are being developed to place many of these symbols of our aviation heritage on public display in museum facilities.

Of greatest interest to the Naval Aviation community is the Naval Aviation Museum at NAS Pensacola, Fla. There a small but significant selection of aircraft associated with Naval Aviation is on display. They range from a full scale reproduction of the Curtiss A-1, the Navy's first plane, to a cutaway of *Aurora 7* in which Captain (then Commander) Scott Carpenter became the first Navy pilot to orbit the earth. Other airplanes that may be seen by visitors include a Curtiss N-9, a type of trainer in which thousands of WW I Naval Aviators learned to fly, a Marine Corps F4B-4, one of the most famous fighters of the between-war era, and an FF-1, first of a long line of famous Grumman carrier-based fighter planes. Several other planes are also shown in the museum and on its grounds.

The Naval Aviation Museum is currently housed in Building 679, a small, one-story wooden structure not far from the base chapel at "mainside"

By LCdr. Paul N. Mullane



Naval Aviation Museum exhibits include this Marine F4B-4 as well as Scott Carpenter's space capsule, both on loan from the Smithsonian. Replica of A-1 Triad, opposite, is a major attraction for aviation history buffs.

Display

Pensacola. Established in 1962 by authority of the Secretary of the Navy, the museum staff began to accumulate and store significant artifacts and memorabilia associated with Naval Aviation. Some of these materials have been placed on display, but the amount of materials and the size of naval aircraft soon caused most to be consigned to warehouse space or outdoor storage.

In 1966, Admiral Arthur W. Radford, USN (Ret.), former Chief of Naval Operations and Chairman of the Joint Chiefs of Staff, began organizing a civilian volunteer group to assist the museum financially. This group formed as the Naval Aviation Museum Association, Inc., a non-

Grumman's first Navy fighter, FF-1, bears insignia of famed Red Rippers, right. Below, clear plastic model of Essex-class carrier with scale aircraft gives inside view of WW II CV. Pilot's-eye view of an F4B cockpit, bottom.

profit organization under Florida statutes. Its first concern centered around fund-raising efforts to provide monies with which to pay for construction of a new and permanent building for the museum. The association next engaged a well known New York architect to design an appropriate building. The plan envisioned a concrete and masonry building of approximately 150,000 square feet, at an estimated cost of four million dollars. Problems in fund raising led to redesigning the building so that it could be constructed in increments as money became available. The first increment is planned to increase the present display area by nearly ten times and also provide for administrative space, an auditorium and other facilities. The cost of the first section is estimated to be $1.4 million. Currently, about $1 million in donations and pledges have been received and negotiations for construction are progressing so that work may begin before the end of 1972. Considerable assistance is still needed from the Naval Aviation community in the form of financial donations.

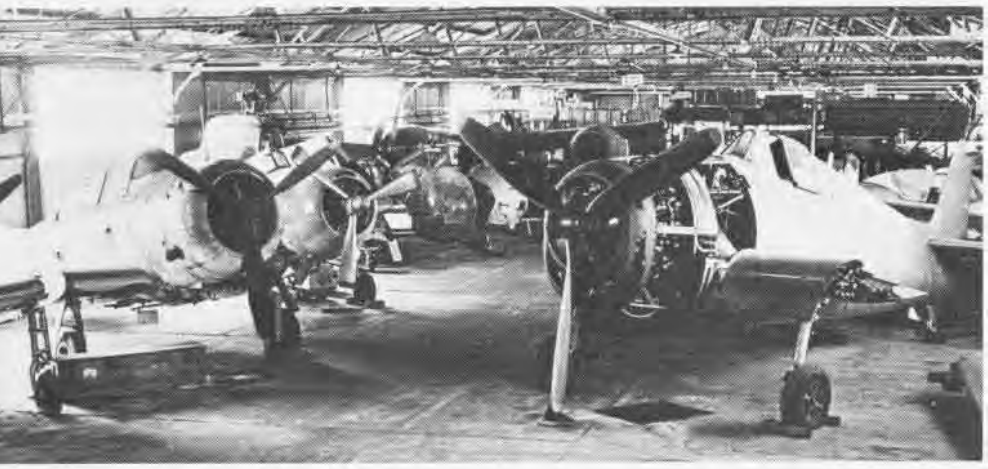
The small museum now in operation provides a rewarding experience for visitors even in its condensed form. On entry, one is immediately immersed in the historical evidence of Naval Aviation. The first, and one of the most impressive exhibits in the path of the visitor, is a full size reproduction of the A-1 *Triad* complete with a mannikin clothed in the flight uniform of the pre-WW I era. On the surrounding walls hang mementos and artifacts of the early days of Naval Aviation. Because of space problems, many exhibits are presented as scale

Inside look at Carpenter's Aurora 7, top left, and combat-loaded carrier model, left, demonstrate range of Naval Aviation activities. Display above commemorates gallantry of Torpedo Squadron 8 at Battle of Midway. Below, aircraft are restored in Naval Aviation Museum's workshop.

models. These range from a detailed copy of the NC-4, first plane to fly the Atlantic, to a clear plastic replica of an *Essex*-class carrier, complete with a to-scale load of aircraft on deck and in the hangar bays.

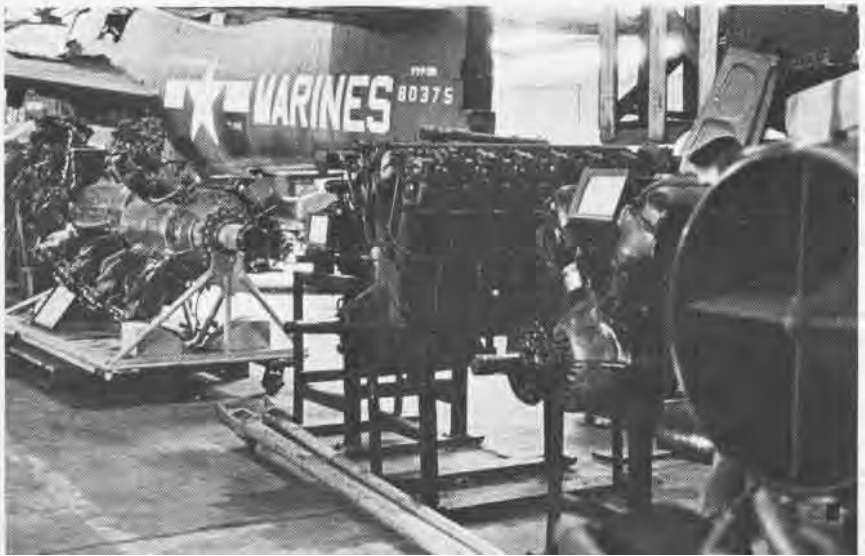
As the visitor moves along past displays of aircraft engines and framed photographs of the pioneers in Navy flight operations, he enters another section of the museum — a tiled and well lighted metal storage building converted to the aircraft display area. Here, famous trainers stand side by side, the Curtiss N-9 of WW I and the NS-1 *Yellow Peril* of WW II. The latter was a gift from Dr. Luther Youngs of Lakeland, Fla., who flew the plane to Forrest Sherman Field to make the donation. Other exhibits in this section include biplane fighters and a display demonstrating the development of flight suits for high G and high altitude flight.

Not open to the visitor but nevertheless a most active area are those spaces utilized for preservation and restoration work. Numerous WW II-vintage planes, stored closely together, receive the cleaning, repair and repainting necessary to maintain their continued good condition and to prepare them for public view when space becomes available with construction of the new museum building. Antique engines, obsolete radio antennas, wing sections, a myriad assortment of nuts, bolts, cotter pins, plexiglass and fabric all vie for position among the fuselages of familiar warplanes of another time. Outdoors, other aircraft are stored, enclosed in protective cocooning and sprayed with preservative agents, waiting passively to be called



Marine Museum aircraft are housed in WW I-era hangars providing storage, shop and office spaces. Aircraft shown include SBD, F4F, HO4S, F7F and F6F.

Marine aviation memorabilia in this WW I exhibit are on view in main Marine Museum building. Historic aircraft engines, below, include P&W 4360, Liberty and Curtiss Conqueror.



from obscurity to spotlighted prominence in an enlarged Naval Aviation Museum that is still in the future.

Marine Aviation has gathered its own collection of naval aircraft at Quantico, Va., under the auspices of the Marine Corps Museum. The building in which the aviation office, shop and storage spaces are sheltered should be considered as part of their historic collection. It consists of two WW I-type aircraft hangars bolted together end to end. These particular hangars once saw service with Marine aviation units in Haiti in the 1920s before being returned to Quantico for further use until their present assignment of housing historic aircraft. The hangars predate any of the planes they hold. One plane owned by the museum, however, can claim even greater longevity: a 1911 Bleriot found in a Massachusetts barn and on display at the Bealeton, Va., Flying Circus Aerodrome. Though not a Marine plane, it is symbolic, as it is the same type in which the first USMC Aviator, Alfred A. Cunningham, learned to fly.

The Quantico collection contains some planes which no other museum can duplicate. One is the only F4F known to exist. All other *Wildcats* in captivity are actually FM-1s or 2s. Quantico's *Wildcat* narrowly escaped destruction over 30 years ago when, for some now unknown reason, it was delayed while at NAS North Island and did not reach Wake Island in time to take part in the defense of that American bastion, a battle which saw the destruction of all Marine F4Fs on the island. The Marine Corps Museum also has two F7F *Tigercats*, the only ones in museums.

Another interesting addition to the collection is a replica of a DH-4B in proper WW I Marine Corps markings. The plane is the product of the interest and dedication of former MSgt. C. W. "Gil" Gillespie, now Curator of Aviation for the museum. The plane, built from original plans found on microfilm, has many authentic parts. Its *Liberty* engine was found in the yard of a Pennsylvania scrap dealer. A scarf ring was located in England and the Lewis guns for it are in the museum's possession. An original wicker seat and many of the fittings and hardware came from a DH-4 that can only be described as a "basket case."

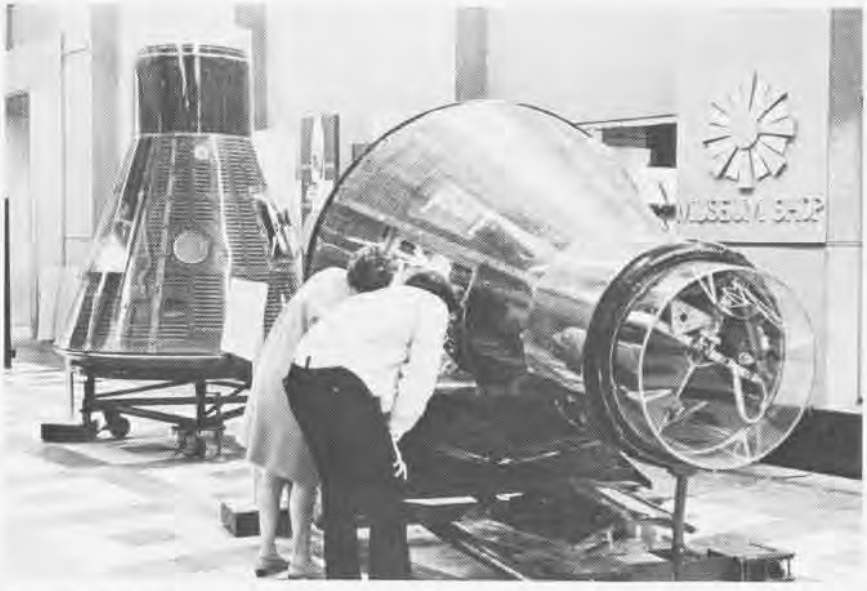
The aviation section of the museum

has a proposed plan for expansion, now under consideration by Headquarters Marine Corps, which calls for 75,000 square feet of indoor display area which would feature Marine aircraft, aircraft engines, dioramas and related memorabilia. The proposal includes provisions for an outdoor display area that would provide examples of materials and equipment used in expeditionary airfield construction and operation. Adjacent revetments would contain facilities or operations typical of the expeditionary field, such as a bomb dump or aircraft maintenance in WW II surroundings.

One of the most important assemblages of naval aircraft is held by the Smithsonian's National Air and Space Museum in Washington, D.C. From time to time, Navy planes have been placed on display in the Victorian-era Arts and Industries Museum but most of the collection has remained unseen at storage and restoration facilities at nearby Silver Hill, Md. At the present time, the only Navy-associated machines on display are two spacecraft in which Naval Aviators have established important records in the U.S. space program. The two are *Freedom 7* in which Commander (now Rear Admiral) Alan Shepherd became the first American in space, and *Friendship 7* which carried Lieutenant Colonel John H. Glenn, on NASA's first manned earth-orbiting mission.

It is at Silver Hill that naval aircraft may be found in large numbers and from all eras. The National Air and Space Museum has collected examples of naval types from the WW I period to recent jet fighters. A few of the planes have been painstakingly restored and others are being renovated. A major project in recent years was preparation of the NC-4 for public display in commemoration of the fiftieth anniversary of its 1919 trans-Atlantic flight (*NANews*, May 1969). Restoration of the plane was the largest such undertaking attempted by the Silver Hill facility. The four *Liberty* V-12 engines alone required the efforts of two men for a two-year period to return them to mint condition. Working with materials as close as possible to the original, they recovered 4,785 square feet of wing surface. Each wing section required an average of one thousand knots of handsewn rib stitching. Even the up-

NC-4 attracted many visitors when shown on the Mall in 1969 commemoration of the 50th anniversary of its transAtlantic flight. The plane had not been on public display since 1926; it is now in storage.



Smithsonian visitors inspect John Glenn's earth-orbiting space ship. Alan Shepherd's capsule stands in background. Below, F-4 and F4F meet at Silver Hill warehouse where NC-4 is stored.

per part of the 40-foot wooden hull was recovered with fabric. Most of the plane's cockpit was reconstructed, including instrument panels and upholstery. Four Navy men joined the effort and, during the summer of 1969, the historic aircraft was placed on view on the Mall, not far from the Washington Monument. Due to the NC-4's huge size, no permanent display area could be made available and it is now disassembled and stored at Silver Hill.

But most Navy planes held by the National Air and Space Museum are stored in more or less the same condition in which they were received. Those outdoors have been affected to some extent by the elements, but cocooning has reduced damage from corrosion. In recent years, an increasing number of aircraft have been moved into new warehouses to further reduce the harmful effects of rain and sun; only a few still remain in the open. These will soon move into a building now under construction, named the Ramsey Building for Admiral DeWitt C. Ramsey, Naval Aviator #45. Adm. Ramsey was Chief of the Bureau of Aeronautics during WW II. In 1967, the will of Admiral Ramsey's widow gave $600,000 to the Smithsonian "for the increase and diffusion of knowledge pertaining to the history and development of aeronautics." A portion of the funds from this bequest is being used to construct the Ramsey Building at Silver Hill, which will shelter those Navy planes still in outdoor storage and take in some naval aircraft now stored in other buildings. The gift also provides for four display cases containing scale models of significant aircraft, from the first Navy planes to the jet age, and procurement of aviation publications for the museum library.

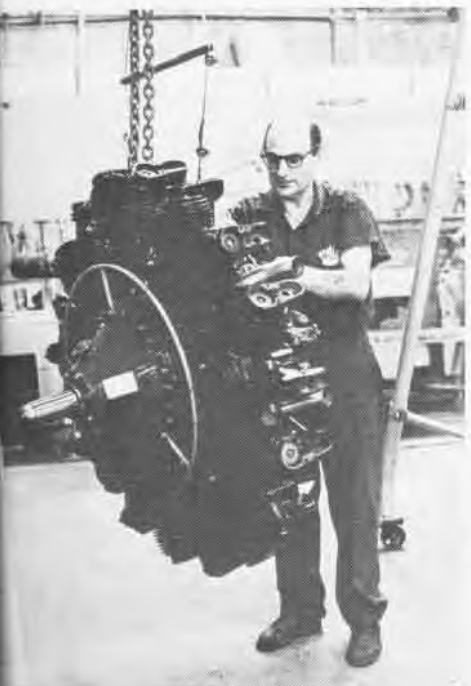
Though the Navy planes at Silver Hill may look forward to better storage conditions, they will still have to await proper display space. This is now under construction on the Mall between 4th and 7th Streets in the form of the National Air and Space Museum building. Though authorized for many years, appropriated funds for actual construction were not available until recently. The new building is to be officially opened to the public on

Navy planes held by National Air and Space Museum are stored in various ways. When possible they are kept indoors as are the FH-1 and F6F, right, and dismantled NC-4, above right. When the Ramsey Building is completed, aircraft such as those above will be brought inside.

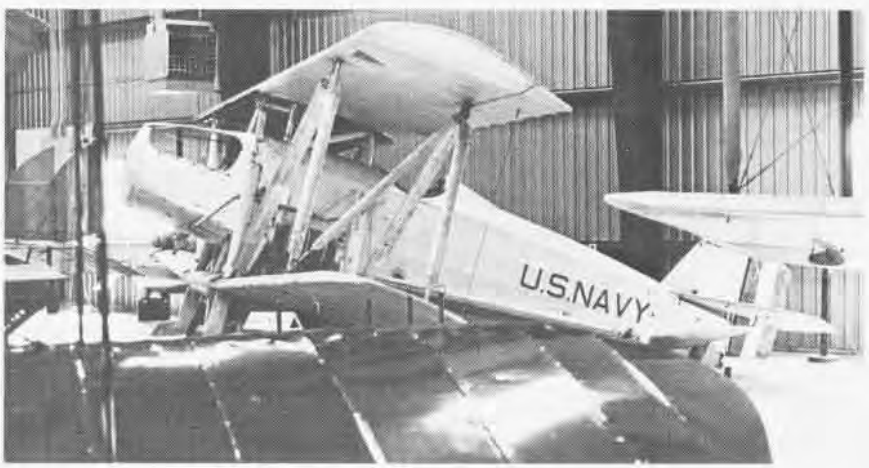
Painstaking effort goes into each restoration at Silver Hill. Here, wing of F9C has doped finish on fabric covering sanded down during repairs.

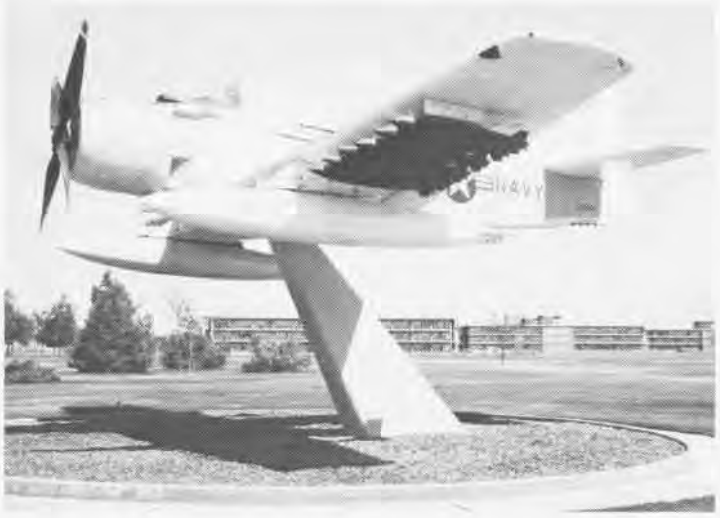
July 4, 1976. In several of its seven marble and glass-curtained modular bays will be displays featuring the Navy's contribution to aviation development and national defense. The Smithsonian has not only collected a great variety of aircraft, it has also compiled a list of all planes known to exist in other museums throughout the world.

Museums are not the only places where historic naval aircraft may be seen. Public parks, naval air stations, municipal airfields and other locations often display planes which have been declared surplus at some time in the past. One of the better collections is located at NAS Willow Grove, Pa., where not only U.S. Navy planes may be viewed, but also Japanese and Ger-



NANews Technical Advisor, Hal Andrews, inspects F9C Sparrowhawk at Silver Hill while, below left, its engine receives final adjustments. TS-2, below, was one of earliest planes designed for carrier use. Wright J-4 engine is needed for restoration.

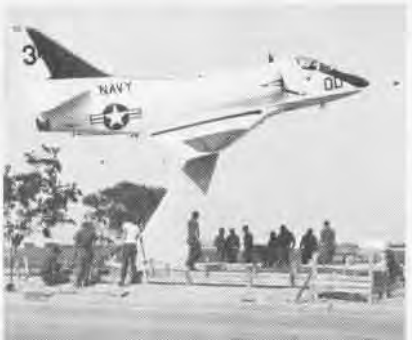




Skyraider at NAS Lemoore, above, is an excellent example of the many fine displays at Navy facilities. F6F at NAF Washington, below, is mounted on pivot allowing the plane to turn into the prevailing wind.

Navy planes of Confederate Air Force at Transpo 72. Clockwise from upper right they are: F4U, SBD, TBM, SB2C and FM.

Panther at NAS Barbers Point sits amid tropical landscaping. Skyhawk at NAS Chase Field is shown as it appeared while its base was still under construction.



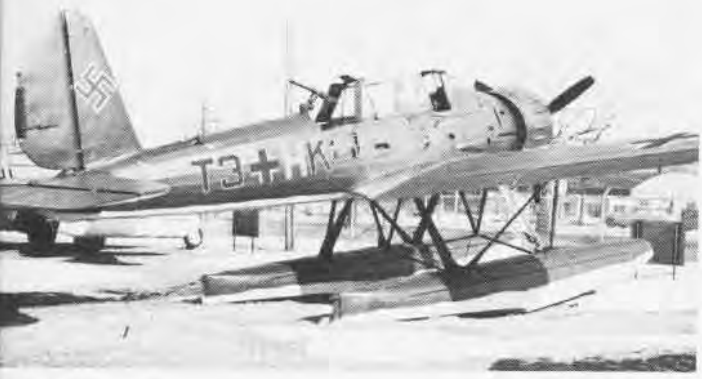
man naval aircraft. Plans are now under way to provide a shelter for these planes, which for many years have sat in the open near the station boundary, making them a well known sight for travelers on U.S. 611.

Naval aircraft are displayed in other ways as well. The retired battleships *North Carolina*, at Wilmington, N.C., and *Alabama*, at Mobile, Ala., each displays an OS2U *Kingfisher* on her fantail to illustrate an important aspect of Naval Aviation which has since passed away.

A number of private museums also have Navy planes among their collections. These may be found in various parts of the country from New England to Texas and California. Most of these are static displays, but one *flying* collection is worthy of particular note. The Confederate Air Force, with headquarters at Rebel Field, Harlingen, Texas, has an excellently restored group of WW II-era carrier planes, plus a few postwar Navy aircraft. A number of Japanese naval planes are also included in the collection. The planes are normally on static display at their home base, but frequently participate in air shows in various parts of the country, allowing a much greater segment of the public to view Naval Aviation as it once was.

For those who find enjoyment in inspecting planes that represent our aviation heritage, whether as casual observers or as aviation buffs, the possibilities are many, if you know where to look. Current plans to make more of these aircraft available for public view will improve the opportunities.

F2H at Orlando stands among pines while T-2A, below, appears in simulated flight at NAS Meridian. Fantail of battleship North Carolina, left, provides appropriate display location of OS2U. German Arado 196A, lower left, at NAS Willow Grove is one of two remaining in existence, saved from Prince Eugen before Bikini atomic tests.



The Naval Aviation Museum at NAS Pensacola will soon see construction begin on the first increment of its new home. Four million dollars will be needed to complete the project with $1.5 million going into the first building. Though the museum store has raised some funds through the sale of large brass pilot and NFO wings mounted on wooden plaques, lithographs of Naval Aviation subjects, models of naval aircraft and other items, an urgent need for more money still exists. Aviation-minded individuals are encouraged to contribute to the building fund. Donations are tax deductible and should be made payable to the Naval Aviation Museum Association, Inc., Pensacola, Fla. 32508. To date, $200,000 has been contributed by naval personnel. Much greater financial support on the part of Navy men is needed if we are to preserve, restore and display our Naval Aviation heritage on the scale it deserves.

THE SELECTED AIR RESERVE

Pilot Programs

Two pilot programs in the Naval Air Reserve are paying dividends in repair projects at regular Navy facilities — repairing and calibrating electronic instruments, and disassembling engines. These time-consuming tasks usually result in a work backlog at regular shops.

At NARDet Seattle, Wash., Air Reservists are reducing the workload at the Whidbey Island calibration laboratory by taking on the repair and calibration of precision measuring equipment at their own newly established lab. An annex to the Whidbey Island lab, the Seattle Det has 70 men in training who add evening hours and days off to their weekend drills. In processing their first 100 pieces of equipment for return to the Whidbey lab, the Air Reservists have a zero defect record.

An engine reclamation in lieu of procurement program has been established by Air Reservists at NARDet Los Alamitos, which is projected to save approximately $263,000 during FY 73. The program was established to disassemble R-3350 engines for usable parts and precious metals. Part of the work previously done at Naval Air Rework Facilities Alameda, Calif., and Norfolk, Va., has now been transferred to the NARDet Los Alamitos lab which has been equipped with special tools and has a training program for Air Reservists and their active duty supervisors. As the reclamation program is refined, Naval Air Systems Command analysts predict even greater savings.

Mini?

The age of "mini," usually reserved for skirts and bikes, arrived at NS Rota, Spain, with VR-52 during the squadron's two week's active duty.

Previously, the entire Willow Grove-based squadron had deployed to overseas air stations. Under the mini concept, only one aircraft with 28 personnel deployed to augment the squadron's fleet counterpart, VR-24, in order to more closely match personnel and aircraft available with fleet logistical requirements. The personnel remaining at Willow Grove used the remaining two C-118s for domestic missions. Four two-week mini-deployments ensured completion of annual active duty for training of all squadron personnel. Detachments will be deployed from other Naval Air Reserve transport squadrons on a continuing schedule to maintain at least one Reserve C-118 in a fleet operational status.

During the major reorganization in 1970, Rear Admiral H. E. Greer, then Chief of Naval Air Reserve Training, said that the Air Reserve "can not afford to have a squadron called to active duty which does not have the support organization, the talent, man-

Marine Air Reserves of Dallas-based HAMS-41 belt 20mm rounds for F-8s of VMF(AW)-112 at NS Roosevelt Roads, P.R., above. PO Steve Comis of Quonset Point's HS-74 built his own miniature gyrocopter, left. Not a Navy pilot, he taught himself how to fly.

power and maintenance that are required to generate the flight hours." Now, under Rear Admiral J. D. Ramage, the NARS — and VR-52 — begin a new look which revolves around an expanded fleet-wide role for the transport forces under the program.

Active Duty for Training

The South Atlantic and Caribbean provided the training area for Attack Carrier Air Wing Reserve 20, composed of eight Naval Air Reserve squadrons from several parts of the U.S. Coordination and teamwork welded into one strike force the nearly 1,200 Reserve pilots and enlisted and officer ground support personnel from two Dallas fighter squadrons, three attack squadrons out of Jacksonville, Memphis and Atlanta, a light photographic squadron from Washington, D.C., a Norfolk airborne early warning squadron and a tactical electronic warfare squadron from Alameda. The air wing skipper, Commander Edmond M. Feeks, praised the wide open weapons training range at Roosevelt Roads, P.R., which extended the realism of their aerial combat training and gave experienced ground crewmen the opportunity to train less experienced personnel under combat-type conditions.

Twenty-nine officers and 136 enlisted men of Replacement Training Unit 92, representing each of the New England states and New York, spent their annual two weeks' active duty at NAS South Weymouth, Mass., under the command of Commander Eugene J. Sich. RTU-92 was formed in November 1970 as part of the new Reserve force concept. Its primary mission is to qualify pilots and support personnel to replace and augment VP-92 personnel.

This year, active duty for training was actually active duty for retraining for Marine Air Reserves of HMM-766. The Marine Air Reservists spent two weeks at Selfridge Air National Guard Base, Mich., retraining with their newly acquired CH-46 *Sea Knights*. The squadron's mission is to provide helo transport of personnel, supplies and equipment for landing forces during ship-to-shore operations and within an objective area.

Sea Cadets

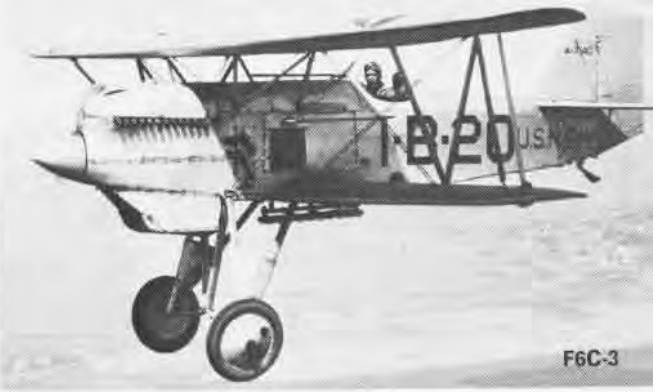
When 82 Sea Cadets from California, Oregon and Washington arrived at NARU Whidbey Island, they found themselves in a disciplined, mentally tough training program. They marched from class to class, and the classes and activities they participated in led to an examination which, when passed, qualified the cadets for advancement. The exam was the same given to Navy active duty personnel for advancement. A graduation ceremony marked the end of cadet training.

Flight crewmen/mechs such as ADR1 W. H. Matthews, handling an R-3350, above, often wished for three hands as NAS New Orleans' VP-94 chalked up over 791 flight hours and 200 qualifications during cruise to Rota, Spain.

Sea Cadets listen intently as Navy mechanic talks to them about jet engines, above. They spent part of their two weeks' training on the flight line. Same intentness is seen as they listen to instructions on other phases of Navy life, left.

NAVAL AIRCRAFT

During the 61 years of Naval Aviation history, a large variety of aircraft have been procured. Not all have played a major role in aviation development and many have been forgotten with the passage of time. This month, *NANews* presents an assortment of pre-WW II naval aircraft, some of which are preserved in museum collections, but most will never again be seen except in a few remaining photos.



F6C-3


FB-3


F3F-1

T3M-1

XPS-2

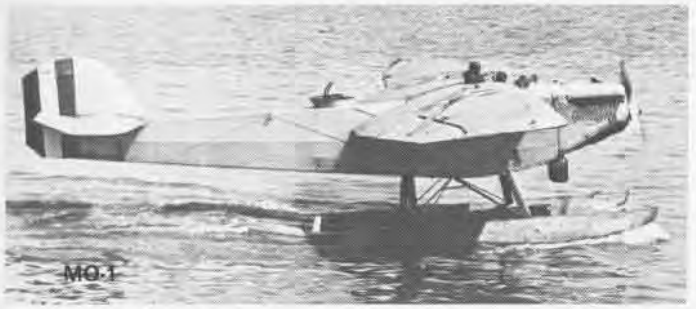
JR-3


XF6B-1

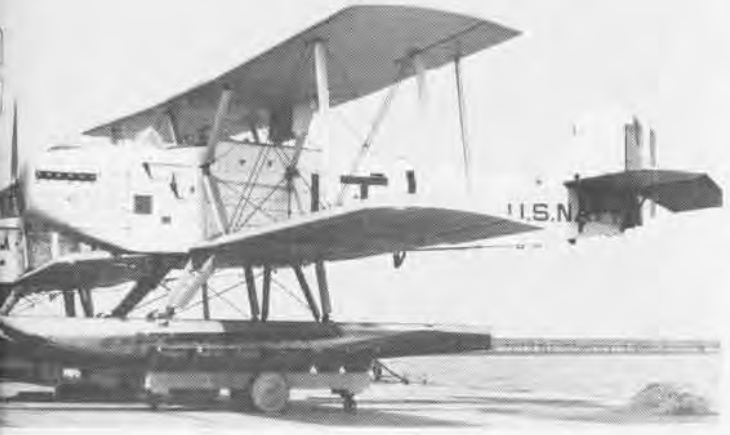
F4B-3

BM-1

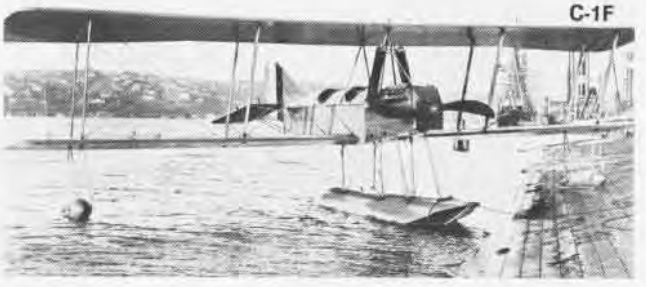
F Boat



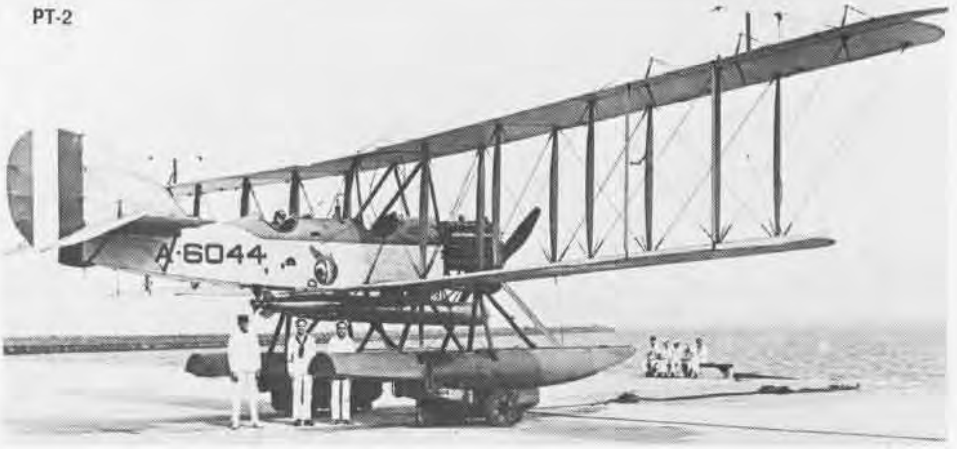
N-1



C-1F

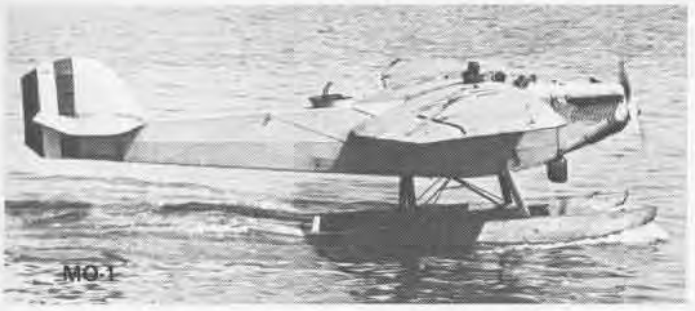


PT-2

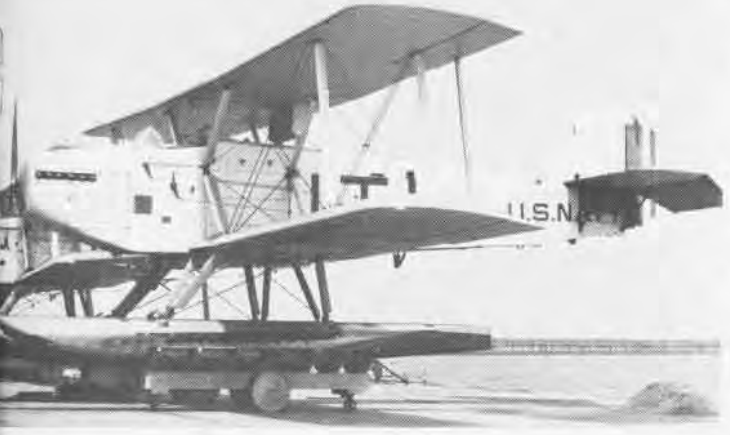


DH-4B

F6C-4

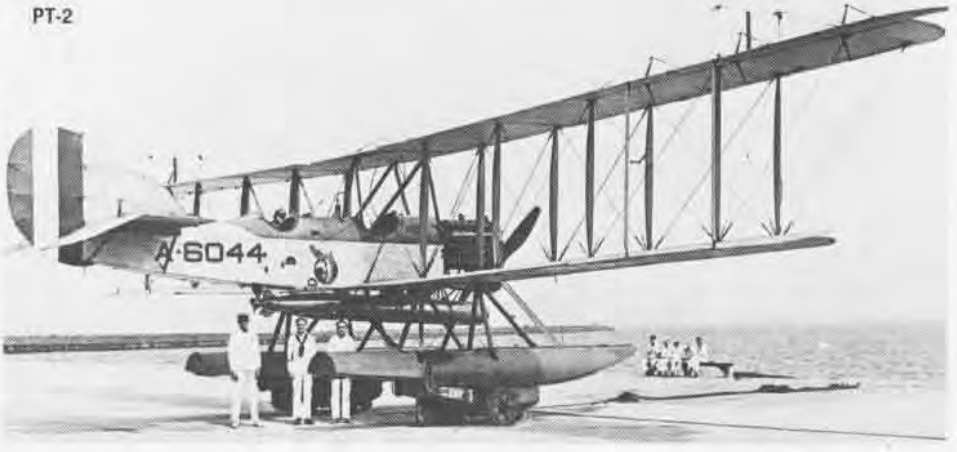


N-1



C-1F

PT-2



DH-4B

F6C-4

F-14A Tomcat gets off its first launch of a Phoenix missile. At right (from foreground), Lt. Dave Borchers, Commander Frank Schluntz and Grumman project flight officer Sam Ammons preflight the air superiority fighter before a scheduled test.

RAZOR SHARP

Tomcat bared its claws again, and they appeared to be razor sharp. The flying feline scratched 100 flight hours out of western skies and met 90 percent of the test objectives during the second phase of its Navy Preliminary Evaluation (NPE).

During the tests, pilot LCdr. Donald G. Klein and missile control officer Lt. Jack H. Hawver became the first military crew to attack separate targets simultaneously with multiple missiles from a single fighter.

NPE-IIB for the F-14A was held at the Pacific Missile Range, Point Mugu, Calif., with tests conducted at PMR's sea test range, the Edwards AFB range and over predetermined inland navigation routes. Aircrews were from the Naval Missile Center and Naval Air Test Center, Detachment West (NANews, October 1972, p. 18).

The comprehensive NPE-IIB was divided into two parts. The first was devoted to evaluating the air superiority fighter's communication, navigation and IFF equipment. Preliminary results indicate that the inertial navigation system's performance far exceeded specifications.

Part two centered on the performance of the Hughes Aircraft Company's AWG-9 fire control system, including air combat maneuvering modes and launch equations. Also evaluated were the performance and interface between the AWG-9 and the Phoenix missile (AIM-54). It was during these tests that Klein and Hawver made their double whammy

launch, firing two Phoenixes against two widely separated QT-33 drones.

Klein and Hawver were flying the Tomcat in a look-down, shoot-down attack against the drones which were approaching at different altitudes and ranges, on courses crossing the F-14 track.

The AWG-9 acquired track on both targets while continuing to scan for other targets as part of the test. Both Phoenixes were launched and guided successfully. The first missile passed within lethal range and was scored as a hit. The second, according to Hughes' engineers, experienced an internal electrical failure near the end of its flight and missed its target. (AWG-9 is designed to fire up to six Phoenixes at six separate targets and keep them on course simultaneously.)

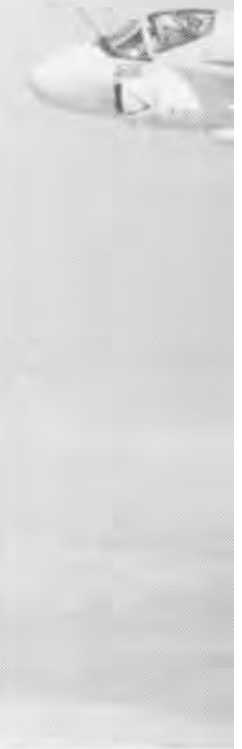
The test reportedly set three firsts: first Navy launch of a Phoenix, first dual launch from an F-14, and first multiple launch against multiple targets by a military crew.

Five Navy crews accumulated the 100 flight hours in the Tomcat. Two flights lasted over five hours each, and most were three hours long. Many included inflight refueling from KA-6Ds of VA-145 based at NAS Whidbey Island, Wash.

Included in the evaluation were tracking in varying environments, simulated dogfights, high and low altitude flights, overland tests, and head-to-head and side-by-side flights.

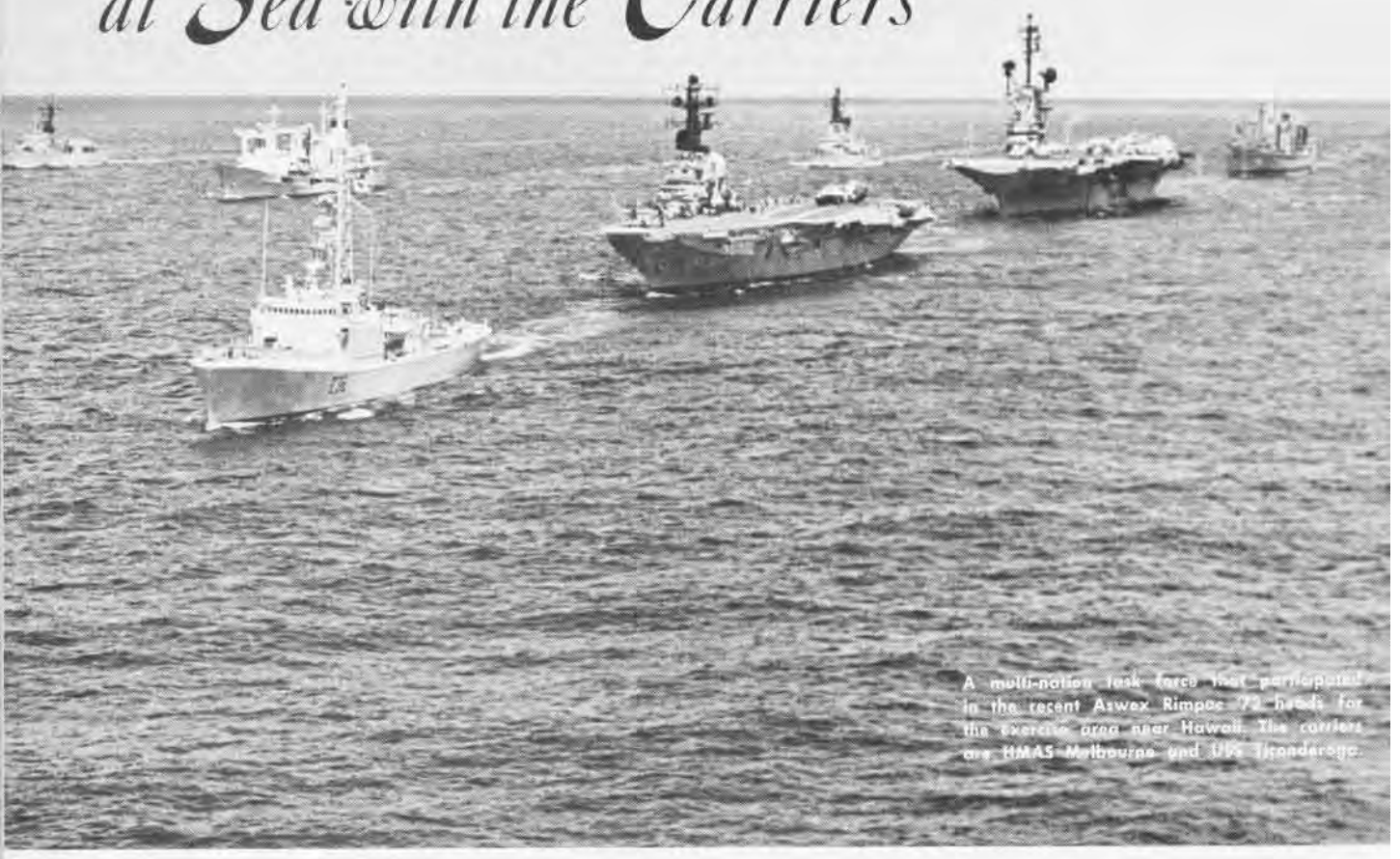
Another 100 hours were accumulated previously during NPE-IIA at Calverton, N.Y., by Naval Air Test Center aircrews who tested the aircraft's basic characteristics.

Continuing test and evaluation of the F-14 will include a later configuration of the avionics system and will take into account those items noted for correction during NPE-II.



Pilot Lt. James Coleman (left) and NFO LCdr. William Denning head out of an NAS Point Mugu hangar prior to a 5½-hour flight in the F-14A, top left. A KA-6D of Whidbey Island-based VA-145 refuels a Tomcat, above. A Tomcat with a Phoenix tucked under each wing, is prepared for takeoff for the multiple missile launch test, far left. Crewmen LCdr. Klein and Lt. Hawver are strapped in for takeoff, left.

at Sea with the Carriers



A multi-nation task force that participated in the recent Aswex Rimpac '72 heads for the exercise area near Hawaii. The carriers are HMAS Melbourne and USS Ticonderoga.

Prior to the end of October and the cessation of air and naval activity above the 20th parallel in Vietnam, the following news releases were received.

Midway (CVA-41)

Pilots from this attack carrier have been flying strikes north and south of the demarcation line in support of the South Vietnamese. Fighter and attack pilots were credited with setting off 105 secondary explosions and 42 sustained fires while destroying or damaging 29 bridges, 10 AAA and mortar sites, 4 radar vans and antennas, 18 supply watercraft and barges, a boat repair facility, 6 petroleum storage areas, 13 bunkers, 49 supply storage areas and warehouses, 47 trucks, 9 railroad cars, 2 military barracks and 45 other buildings, and an airfield.

A-6 *Intruder* pilot Lt. James Horsley rolled in on a large supply warehouse 31 miles southwest of Haiphong. "I laid my bombs across the warehouse," he explains. "First, there was a column of dust and smoke and then the warehouse erupted into an orange fireball about 2,000 feet high."

Other *Midway* pilots reported 30 secondary explosions after knocking out six trucks in a convoy 36 miles north-northwest of Vinh.

America (CVA-66)

Attack and fighter pilots have inflicted heavy damage on the enemy according to Seventh Fleet sources. *America's* pilots reportedly touched off 159 secondary explosions and 46 sustained fires while destroying or damaging 53 bridges, 70 trucks, 36 AAA, mortar and gun sites, 68 supply watercraft and barges, 25 supply warehouses and storage areas, 15 railroad cars, 10 bunkers and emplacements, and 11 petroleum storage areas. Huge fireballs were reported at three supply and fuel sites.

Lt. Charles N. Sapp is credited with knocking out four 57mm antiaircraft artillery guns defending the Phu Yen storage area 17 miles northwest of Vinh.

"I made my first run and dropped part of my bombs on the storage area," says Sapp. "Circling around the target area, I observed four AAA guns firing on another *America* jet making a bombing run. I triggered my bombs on the AAA site; they were all destroyed. Large pieces of smoking artillery were flying through the air. On the ground, I could see lots of ammunition and tracers going off."

CVA-66 pilots also dropped two vital rail links with Hanoi when they destroyed the Phu Ly railroad bridge 31 miles south-southeast of the North Vietnamese capital, and the Thanh Hao railroad and highway bridge two miles north-northeast of Thanh Hoa. The

well known Thanh Hoa bridge was a key north-south enemy supply artery to highway 1A as well as an accompanying railroad line. A-7s piloted by LCdr. Leighton Smith and Ltjg. Marvin Baldwin each delivered a bomb which impacted directly on the center and eastern reinforced concrete piers of the bridge. Commander Don Summer and Ltjg. Jim Brister then rolled in with their A-7s and put four 2,000-pounders on the western section of the bridge, dropping it in the water.

Lexington (CVT-16)

Two squadrons of EA-6B *Prowlers*, among the newest of the Grumman planes, were aboard the Navy's only training carrier recently. The aircraft were from Whidbey Island-based VAQs 129 and 133. Both squadrons were in the Pensacola area to complete carrier qualifications in preparation for deployment. *Lexington* is commanded by Captain Jack E. Davis.

Hancock (CVA-19)

With 900 feet of pennant streaming from her mast, *Hancock* recently returned to her home port in Alameda, Calif., after a nine-month Vietnam deployment.

Nearly 2,000 wives, children and friends waited impatiently on the pier as CVA-19 eased under the Golden Gate for the first time since January 7.

CVA-19's original six-month deployment was extended twice. She was on Yankee Station in late March when the North Vietnamese launched their offensive against the South and was needed to help provide air support for South Vietnamese forces.

Intrepid (CVS-11)

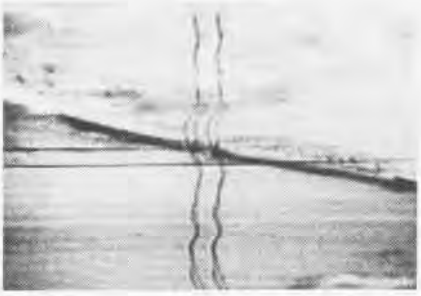
No matter how hard an individual command may try to make shipboard life seem like home, the crew has little difficulty telling the difference. CVS-11 found a temporary remedy for the situation when she invited the crew's wives on board for an overnight transit from Rotterdam, Netherlands, to Portsmouth, England.

Almost 100 wives responded and met *Intrepid* when she arrived in Rotterdam for a three-day port visit. When the time came to sail for Portsmouth, the wives climbed the brow with the crew and entered a world of knee-knockers (hatchways), ladders and overhead pipes.

The wives were given a briefing on the do's and don'ts of life on an ASW carrier. They threaded their way through passageways and between aircraft, listening intently to their husbands' explanations of what an E-1B *Tracer* does and what the pretty purple pipes are for.

No tour, of course, would be complete without a visit to the working spaces, with the sometimes confusing task of matching faces with all the names mentioned in the letters home. After supper on the mess decks and in the wardroom, a concert by the ASW Group Four band was in order, followed by movies on the ship's closed circuit television.

The next morning while *Intrepid* entered Portsmouth, the wives were reminded of their civilian status — as they lined up before customs officials, bringing an end to their adventure.



The three smaller photos (viewed counterclockwise), taken by the guidance camera of a Walleye bomb, show its path as it approaches the Ninh Binh railroad/highway bridge 30 miles north of Thanh Hoa, North Vietnam. The bottom photo shows the results of the aerial strike.

CNO Admiral Elmo R. Zumwalt, Jr., takes time out to talk with a sailor during his recent visit to Seventh Fleet ships. Admiral Zumwalt presents a pretty convincing argument that safety equipment is designed to be worn by everyone. (Photo by JOC T. L. Thompson)

The Ups and Downs of Kitty Hawk

Four pilots recently applauded LTV Aerospace Corporation for providing them with a "smart" airplane for a unique mission, according to an LTV release.

Flying A-7E *Corsair IIs*, the pilots from VA-192 flew a highly successful series of night sorties to within five miles of the Chinese border buffer zone in North Vietnam. It is reportedly the first time such a mission had been assigned to single-seat, single-engine aircraft. Using the A-7Es' fully integrated, computer-oriented navigation and weapons delivery systems, the mission was flown without mishap.

Commander "Bud" Owens, LCdr. Melvin Munsinger and Lieutenants William T. Shelton and Michael L. Coats buckled into their *Corsair II* cockpits and were launched into the Southeast Asian night. Each man was briefed to coast into North Vietnam, fly over the northernmost areas and complete individual armed reconnaissance. In each case, navigation to the coast-in area was accomplished by the aircraft's on-board computer.

Penetration was made about halfway between the Chinese border and Haiphong harbor at low altitude. Despite inclement weather, the pilots navigated precisely to the pre-briefed target areas. One of them even accomplished a second system's check by a radar update on a mountain peak.

Primary mission was to pick moving targets of opportunity on a major highway and railroad in northernmost North Vietnam. The A-7Es' projected map displays and navigation computers enabled the pilots to accurately follow their route and hit their targets.

The low level night attack by the bombers caught the NVA off guard.

"The highway was lit up like the Los Angeles freeway," quips Cdr. Owens. Then the North Vietnamese reacted.

Several hundred AAA rounds were fired at the *Corsairs* but the mission was completed. Twenty trucks and two flak sites were destroyed and numerous secondary fires were started. Targets were hit only four to five miles from one of the enemy's major airfields.

Two MiGs took off from the nearby airfield, but by using an all-lights-out tactic and using the terrain avoidance mode of his A-7E's radar, the pilot nearest the MiGs was able to make a low level, high speed exit.

All four *Corsair IIs* were over land about 40 minutes before safely exiting across the water toward *Kitty Hawk*.

A-7 pilot Lt. Warren Robb did not make as direct a return to *Kitty Hawk* from another mission — he went via a *Big Mother* and USS *Jouett* (DLG-29).

Relaxing in his hospital bed aboard CVA-63, Robb recalls his harrowing experience. "I remember thinking to myself, 'how much longer are you going to wait? The airplane is liable to explode and then you won't have a chance.' As it turned out, just about that time the airplane did explode — a loud explosion — and the A-7 was immediately uncontrollable."

Pulling off a target over North Vietnam, Lt. Robb did not realize he was hit until he began having engine trou-

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John F. Kennedy (CVA-67)

Cloudy skies and rain showers at Norfolk did not stop the happiness from shining through recently when almost 3,000 dependents and friends welcomed *JFK* home after a 311-day extended deployment.

While sailors and Marines lined the 1,051-foot flight deck, several distinguished guests arrived via helicopter aboard the 83,000-ton carrier to welcome the 4,200-man crew home. Among the guests were the Honorable Linwood Holton, Governor of the Commonwealth of Virginia; the Honorable Roy Martin, Mayor of Norfolk; and Vice Admiral Frederick Michaelis, ComNavAirLant.

As friends and loved ones climbed aboard the giant carrier after she was tied up at the pier, one theme was obvious in signs and emotions — Happiness is having JFK home!

Kennedy traveled more than 56,000 miles while serving with the Sixth Fleet in the Med and participating in the NATO Exercise *Strong Express* in the North Atlantic. The ten-month extended deployment became necessary after *Kennedy's* scheduled relief carriers *Saratoga* and *America* were ordered to Southeast Asia and the multimillion-dollar fire aboard *Forrestal* kept her in port.

Kennedy sailors explore the ruins of the Acropolis during one of the carrier's visits to Athens.

Saratoga (CV-60)

Twenty-seven *Sunday Punchers* of VA-75 have made 100 or more arrested landings aboard. Twelve crewmen received Centurion certificates for 100 landings, and 14 received Double Centurion certificates. Lt. Paul H. Wagner, a bombardier/navigator completing his first sea tour, received a Triple Centurion certificate for fearlessly riding through more than 300 carrier landings including over 100 at night.

HS-7, also operating from *Sara*, was

ble, had lost his generator and then spotted the fire.

"I couldn't actually see the flames, but the reflection could be seen quite clearly off the port pylons on the wing. I tried to broadcast a 'Mayday', but I could tell that I wasn't transmitting. I had lost everything.

"Then the engine settled down, it didn't chug anymore. As near as I could tell, the fire had gone out. I proceeded toward the Tonkin Gulf and got myself ready for the ejection I knew was coming.

"I was wet feet over the Gulf, the engine was running okay, and I couldn't see the flames anymore, so I decided to get as far out to sea as I could. I wanted to get out of the range of any of the fishing boats that are normally offshore. I was elated to see one of our destroyers off to my right, and I turned the *Corsair* in that direction. I decided it would be the best place to eject rather than trying to make it all the way back to *Kitty Hawk*.

"As I approached the destroyer, my engine started to act up again and I noticed even brighter flames. That was

Lieutenant Warren Robb, VA-192

it. The aircraft exploded. It flipped over. The nose went — I can't say which way. I was up against the top of the canopy as the aircraft continued its own maneuvers, but I was able to get a hold on the handle and eject.

"My next sensation was that of flailing around in the air. Once my parachute opened, I remember looking down to make sure that I had all my arms and legs and that I could move everything. I decided I wasn't hurt. I got one glimpse of my airplane just before it hit the water. I was sort of dazed, but I knew there was something wrong with it. Remembering back, it didn't have a tail — just the wings and fuselage."

Less than five minutes after Robb hit the water, *Big Mother 70* plucked him from the water and took him to *Jouett* for initial medical treatment.

The HC-7 helicopter was manned by pilot LCdr. Frank Koch, copilot Lt. Lewis H. Smalley, Jr., and crewmembers ADJ3s David Brake and Mike Helow.

During a two-week period, pilots from *Kitty Hawk* caused extensive damage to enemy targets. Over 230 secondary explosions were touched off and 71 secondary fires set as pilots destroyed or damaged 178 supply warehouses and storage sites, 40 bridges, 21 AAA and mortar sites, 3 SAM sites, 59 trucks, 5 railroad cars and a railroad siding, 4 petroleum storage areas, 2 boat yards, a transformer station, 50 buildings, 14 emplacements, a missile support facility and 35 supply watercraft and barges.

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named winner of the ComFAirQuonset Reenlistment Excellence Award for FY '72. While congratulating the squadron, Rear Admiral Joseph B. Tibbets, ComFAirQuonset, noted that a retention rate of 21 percent had been achieved among first-term enlisted personnel, with a nearly perfect retention rate among career personnel. HS-7 is commanded by Commander Leslie R. Edwards.

CV-60 pilots flew strikes north and south of the demarcation line against North Vietnamese and Viet Cong positions. There were over 100 secondary explosions and 24 sustained fires during the strikes which destroyed or damaged 16 railroad cars, 10 supply watercraft and barges, 8 bridges, 71 enemy emplacements and bunkers, 12 AAA/mortar/gun positions, 41 supply caches and warehouses, 31 trucks and a petroleum storage site.

Inchon (LPH-12)

Painting can be a pleasure, even for the air boss of this amphibious assault ship. Commander Edward W. Hille took delight in wielding a paint brush to paint the Air Department E on *Inchon's* superstructure. Five other awards recently presented to the ship are the Battle Efficiency E, Communications C, Amphibious Assault Award, Operations E and Aircraft Intermediate Maintenance E.

Ranger (CVA-61)

Ranger has won the ComNavAirPac achievement award for the best Aircraft Intermediate Maintenance Department in the large carrier category. Selection is based on production efficiency, support for squadrons aboard, and material and equipment management. CVA-61 received the award for performance during her 1970-71 deployment to WestPac.

Oriskany (CVA-34)

Commander Denis R. Weichman, executive officer of VA-153, returned to CVA-34 the morning of September 22 after his 501st combat mission over Southeast Asia. A veteran of over 5,700 flight hours and 733 carrier landings, Weichman believes he has the most combat sorties flown by a Navy fixed-wing pilot in SEAsia. [Any takers?] (See page 5.)

Five 1,000th landing cakes were cut and 30 PACE college course certificates were presented in a double ceremony aboard this attack carrier. Lt. K. C. Cech of VA-155 scored the 173,000th landing; VA-215 pilots Lieutenants E. F. Johnson and R. E. Treis the 176,000th and 177,000th, respectively; and Lt. H. T. Rittenour the 175,000th and 178,000th. The certificate presentation ceremony recognized the 30 ship and squadron personnel who received transferrable college credits by completing courses offered by PACE. *Oriskany*, commanded by Captain John C. Barrow, is making her seventh deployment to Vietnam.

Flying against targets in North and South Vietnam during a ten-day period, pilots from *Oriskany* touched off 145 secondary explosions with 43 sustained fires, destroying or damaging 189 enemy bunkers and emplacements, 37 trucks, 27 supply warehouses and storage areas, 30 military barracks and other buildings, 20 supply watercraft and barges, 6 bridges, 8 bulldozers, 15 gun and artillery sites and a petroleum storage site.

Enterprise (CVAN-65)

When this nuclear-powered carrier left Alameda, Calif., for her sixth deployment to WestPac, she carried Liberty with her. The 200-pound sculptured "Head of Liberty" is an advanced study for the sculpture of Liberty which crowns the Monument to the Alliance at Yorktown, Va. It was donated to the Navy by the sculptor, Oskar III, J. W. F. Hansen. His expressed desire was that it be displayed aboard *Enterprise* so that "people everywhere would get to know liberty, and where there is liberty there could be the pursuit of happiness."

The first combat strike launched from CVAN-65's deck was led by Commander (captain selectee) Joseph F. Frick, CAW-14, in a specially painted "happy face" A-6 *Intruder*.

Flying north and south of the demarcation line in three days of strikes, pilots from *Enterprise* sparked 57 secondary explosions and 13 sustained fires while destroying or damaging 114 enemy bunkers and emplacements, 6 supply storage areas, 5 AAA and artillery sites, and 2 tanks.

Head of Liberty statue aboard Enterprise

Multi-nation Exercises

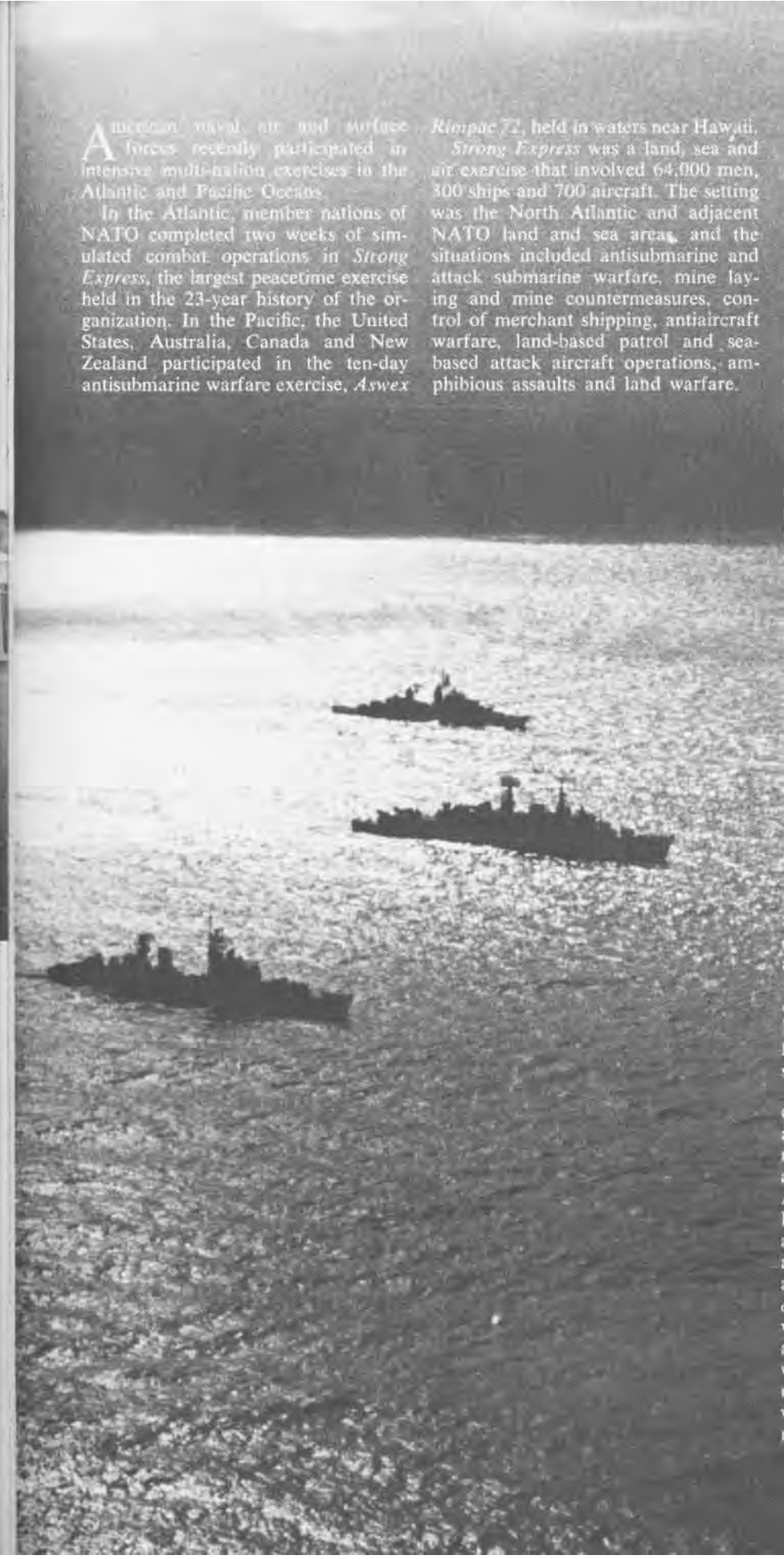
BUSY DAYS

The attack carrier John F. Kennedy steams with other members of a NATO task force that participated in Exercise Strong Express in the North Sea. (Photo by Lt. Rodney C. Mann)

American naval air and surface forces recently participated in intensive multi-nation exercises in the Atlantic and Pacific Oceans.

In the Atlantic, member nations of NATO completed two weeks of simulated combat operations in *Strong Express*, the largest peacetime exercise held in the 23-year history of the organization. In the Pacific, the United States, Australia, Canada and New Zealand participated in the ten-day antisubmarine warfare exercise, *Aswex Rimpac 72*, held in waters near Hawaii.

Strong Express was a land, sea and air exercise that involved 64,000 men, 300 ships and 700 aircraft. The setting was the North Atlantic and adjacent NATO land and sea areas, and the situations included antisubmarine and attack submarine warfare, mine laying and mine countermeasures, control of merchant shipping, antiaircraft warfare, land-based patrol and sea-based attack aircraft operations, amphibious assaults and land warfare.



More than 1,200 sorties were flown from USS *John F. Kennedy* against simulated land, sea and air targets, with additional air strikes flown from the British carrier HMS *Ark Royal*. Other aviation ships in the exercise were the amphibious assault ship USS *Inchon* and the helicopter carrier HMS *Albion*.

One feature of the exercise was a two-day, cross-decking evolution between *Kennedy* and *Ark Royal*. Eight planes from the British carrier made arrested landings aboard *Kennedy*, and an equal number of American planes flew aboard *Ark Royal*.

The Soviet Union showed an interest in the exercise throughout the two-week period. Surveillance was conducted on a regular basis by *Kresta*-class cruisers, *Kashin*-class destroyers and several intelligence vessels. *Bison* and *Bear* aircraft flew in the vicinity of the task force on several occasions, but their flights did not interfere with flight operations of exercise units.

Aswex Rimpac 72 provided ASW forces of the four participating nations with training in detecting, tracking and destroying hostile submarines as well as supporting units, aircraft and missiles. Exchanges of personnel allowed individuals to become more familiar with the procedures and equipment used by the other navies.

The exercise began with a sortie from Pearl Harbor against American and Canadian submarines posing as enemy forces. Surface ASW forces, aided by ASW helicopters and S-2 *Trackers* from the carriers USS *Ticonderoga* and HMAS *Melbourne* and NAS Barbers Point were tasked with finding and neutralizing the simulated submarine threat.

This was followed by a six-day, open-ocean transit by the ASW units against a combined group of submarines and long-range surveillance aircraft from the four navies. Marine A-4s and Hawaii Air National Guard F-102s provided the aerial threat with attacks on the ASW group. The air attacks were opposed by American and Australian *Skyhawks* from *Ticonderoga* and *Melbourne*. The exercise was capped with a return transit and an opposed entry to Pearl Harbor that was almost completely freeplay, with no one being told where anyone else would be — making the situation as realistic as possible.

NAVAL AVIATION NEWS . . . and views

All in a Row

HS-15 Sea Kings flew over NAS Lakehurst, N.J., before squadron deployed aboard USS Guam (LPH-9) for test and evaluation of interim sea control ship concept.

Public Housing, Oceanville

Tropical fish in 100 feet of water off Oahu, Hawaii, make this F4U their home. Open canopy indicates the WW II pilot probably escaped when his aircraft sank.

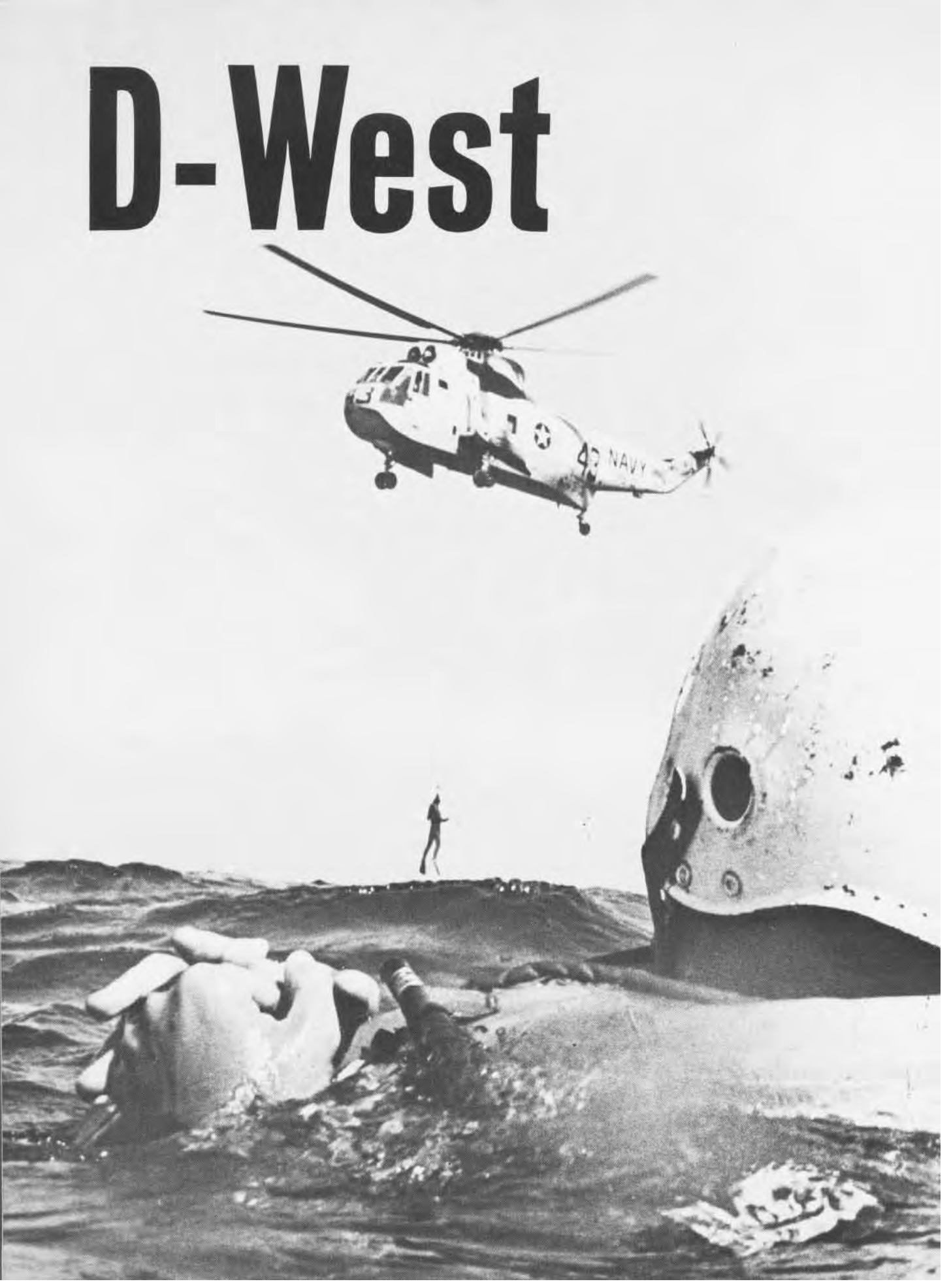
Mother Hen

In a recent visit to NS Rota, Spain, a USAF C-5A Galaxy positions itself behind Navy C-47 Skytrain as they pose for informal interservice family portrait.

Traffic Jam

All nine of the Mad Foxes' Orions line up at Naval Air Facility, Sigonella, Sicily. They were preparing for a flyover to mark a change-of-command ceremony.

D-West



Story and Photos
by CPO Warren Grass

Since 1967 when Helicopter Combat Support Squadron Seven was commissioned, its pilots and crewmen have picked up more than 120 downed airmen in the Gulf of Tonkin. Part of the credit for the success of those recoveries belongs to an NAS North Island-based outfit, the Pacific Fleet Aviation Specialized Operational Training Group, whose rescue experts teach a one-day course labeled D-West — Deep Water Environmental Survival Training.

Although D-West is not a required course, it is recommended, and each Monday and Wednesday when class convenes at 0730 there are between 15 and 40 men in the classroom.

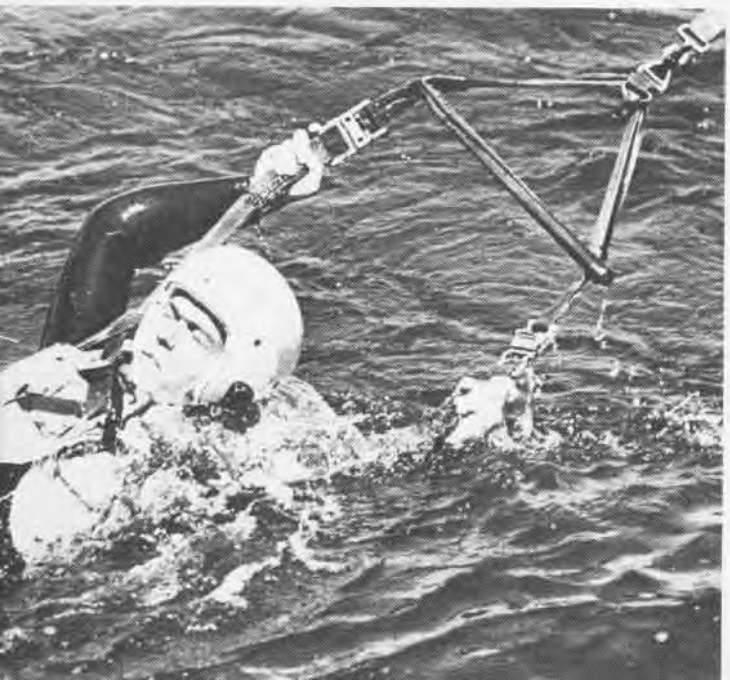
Half of the day is spent in the classroom, half in the open water off San Diego. The day begins with the screening of "Search and Rescue, Sea Phase," a movie showing a textbook punch-out and survival sequence. Then the instructors go to work, giving demonstrations and lectures on survival equipment and tips on how to use it.

"Most pilots and crewmen have had much of this before," says instructor PO1 Dave Leighton. "For them, it's refresher training."

Along with the show and tell on standing procedures for survival and rescue, the D-West instructors pass along hints on new techniques, such as the uncommon use of common kitchen foil.

In tests at NAS Fallon, Nev., CPO Rene LaMarche, a

As the rescue helicopters from NAS Imperial Beach make a pickup, the last item on D-West day, the next man watches closely. Below, as rotor wash whips the stinging salt spray into any part of your body that is exposed, you grab the rescue collar, slip it on, and begin the 40-foot ride up.



senior instructor, wrapped a 18"x6' piece of foil around his body and determined that it could be detected on radar by an aircraft at 5,000 feet, 19 miles away.

Instructor Leighton passes the information along, telling his students that the foil can be folded in a 2"x4" package and stuffed into the survival vest.

The second half of the day goes like this:

"Eyes on the horizon. Feet together. Release the chute while you're on your back." As those instructions, calmly issued in the morning, fight for time in your thoughts, there's a click, you drop 15 feet at a rate of 22 feet per second, and before you realize it, you're up to your ears in the salty Pacific.

Quickly you surface and follow the procedures illustrated in the accompanying photographs.

What do the pilots and crewmen, dripping and tired, think of D-West? A young lieutenant sums it up very well, "I'm going to WestPac pretty soon. If I never have to use today's lessons it will be too soon. But, if I do, I know I'm prepared."

After splashdown, you surface quickly, aided by the medium landing craft that pulls you along at six knots, giving you an idea of what it's like to be dragged by a chute full of wind. Four easy motions, three with your hands, the fourth a body roll right, and you are free, left. There's still a life raft to crawl into, above. Pop your flares, remember the bumpy red end is for night use and the other end for day. (The flares tell the rescue helo your location and wind direction.) At right, you're nearly home.

NANEWS INDEX JAN. TO DEC. INCLUSIVE 1972

Letters

F3D

As coauthor of the American Aviation Historical Society's Project 7210, "The Douglas F3D Sky Knight," I am seeking information concerning Navy units which flew the F3D (F-10). Any data that your readers might have pertinent to this subject would be most welcome.

Frank J. Amody
22 Burling Lane
New Rochelle, N.Y. 10801

Pin Ups

The Academic Training Department of NAS Saufley Field is currently using the aircraft centerfolds of *Naval Aviation News* as helpful training aids. Mounted and framed, they make very nice visual aids.

At the present time we have mounted seven of your prints, but we are in need of the T-34, the basic Navy prep trainer used here. A centerfold print of the Beechcraft T-34 would greatly enhance our effort in Academic Training.

Steven W. Edholm, Ens., USNR
Academic Training
NAS Saufley Field, Bldg. 845
Pensacola, Fla. 32510

Watch the January issue.

Oft-repeated

I hate to be picky about your fine magazine, but I think it's time to bring attention to one of the most oft-repeated photo printing goofs of all time.

I refer to the profile article on the SBD *Dauntless* in the August 1972 issue, the upper left picture in particular. I have seen this picture any number of times and it's always printed the same way—backwards! Note the radio mast on the right side of the fuselage, in direct opposition to the other photos and the three-view drawing.

I wonder who originally flopped the negative and why it hasn't been caught before this?

Since the picture has been around for so long, I can't fault you or your staff for the only error I found in an otherwise outstanding publication. Keep up the good work, and how about doing a profile on the F6F *Hellcat* sometime in the near future.

John D. Egbert, JO1, USNR-R
Public Affairs Office
NARU Washington, D.C.

It's sharp eyes like yours which keep us on our toes.

P2V-4

I would appreciate any help your readers can give in finding the bureau number, patrol squadron and home base of this early P2V-4. It was photographed at Bethpage, L.I., N.Y. in 1949. The tail markings are HD with side number one on nose and it is equipped with racks for JATO.

Ron Picciani
434 Arbutus Avenue
Horsham, Pa. 19044

In 1949 the HD identification letters were used by VP-8 based at NAS Quonset Point. The plane in the photo is probably a P2V-2 or -3 rather than a P2V-4 since it lacks the underwing tip tanks found on that model.

Lighter-than-Air

Among some 50 historical photographs that I have collected of the airship ZR-1, USS *Shenandoah*, are several aerial shots of the unfortunate crash site at Ava, Ohio, which were copied from the files of the late Major General Orvil A. Anderson, USAF (Ret.).

The aerial photos bear notations in ink, made by Gen. Anderson. I have been told, in the middle 1960s when he was executive director of the Air Force Historical Foundation at Maxwell AFB.

The published transcript of the inquiry gives thanks and approval to the then 1st Lt. Anderson's testimony, which was recognized as being in the form of an opinion or opinions, for which the court was grateful, but which did not shed noteworthy information.

To clear up this area of research, I would greatly appreciate hearing from any retired officers, enlisted men or their friends who might corroborate what Anderson said at the inquiry. He was a leading LTA expert at that time and knowing what he said would help clarify the handwritten ink messages on the two aerial photos.

Thomas S. Hook
Ferry Farms
Annapolis, Md. 21402

A Whoops!

The article on the AV-8A *Harrier* states in closing, "The first foreign aircraft purchased by the U.S. since WW I" (*NANews*, September 1972, p. 29). The U.S. military operates the De Havilland-Canada *Beaver*, *Buffalo*, *Caribou* and *Otter*.

While not purchasing the aircraft outright, the Martin B-57 was originally license-built from Britain's English Electric Company *Canberra*.

What about the *Spitfires* flown by the USAAF during WW II, two units being the 31st Fighter Group, 309th Fighter Squadron, 9th Air Force, and the 67th Fighter Group, 107th Fighter Squadron, 8th Air Force.

Also, according to one source of information, during D-Day some *Spitfires* were flown by U.S. Navy pilots, providing gunfire direction for the warship bombardment of the French coast.

Q.N.D. Elliott
531 South Flintrock Drive
Albany, Ga.

You're right. We let that one slip by, but the D-Day *Spitfires* were on loan from the RAF to a pool of USAAF, RAF and USN pilots carrying out this mission. The Navy purchased a number of foreign aircraft. Most foreign aircraft were purchased in small numbers, usually only one or two, just after WW I and in the early 20's. However, various others, as you mention, more recently. To those, add: two Blackburn *Swifts*, 1921; two Bristol *Bulldogs*, 1929-30; two Caspar U-1s, 1922; one Dornier C II, 1920; three Fokker FT-1s, early 1920's; three *Macchi* M.16s, 1922; three Noorduyn *Norseman* JA-1s, 1946, and numerous others.

CV-2 Reunion

The 20th national reunion of former members of the crew, squadron personnel and Marines who served in *Lexington* (CV-2) from 1927 to May 8, 1942, when she was sunk in the Battle of Coral Sea, will be held in Seattle, Wash., at the Olympic Hotel, June 20-23, 1973. Persons interested may write to Walter D. Reed, 5410 Broadway, Oakland, Calif. 94618.

NASU US-2Bs at Kimpo International Airport, Seoul, Korea.

Navy Air Support Unit, Iwakuni, commissioned November 1, 1967, is a unique outfit. The only NASU, it is headed by OinC Commander D. F. Kirchner. NASU planes transiting through airfields in Japan and Korea are often objects of interest to the local people and NASU aircrews have frequent opportunities to serve as U.S. ambassadors of good will. Grasping tools, missiles and an avionics thunderbolt, the NASU dragon charges off to attack aviation maintenance problems from his Iwakuni lair.

Ex-Navy pilots can still fly Navy planes in the NAVAL AIR RESERVE

NAVAL AVIATION NEWS

for further information write:
NAVAL AIR RESERVE
NAVAL RECRUITING COMMAND
BLDG. 157, WASHINGTON NAVY YARD
WASHINGTON, D.C. 20390