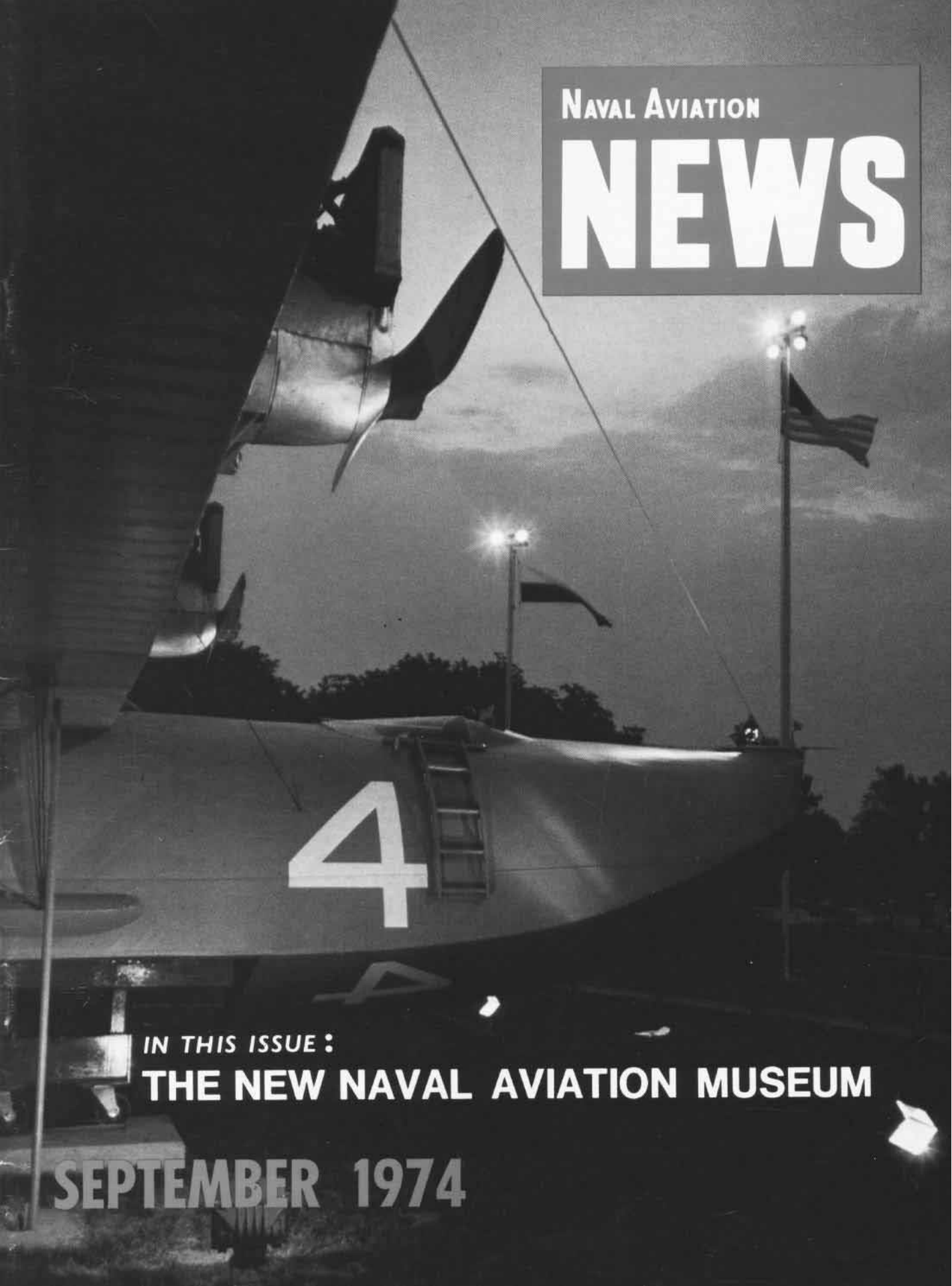

IN THIS ISSUE:

THE NEW NAVAL AVIATION MUSEUM

SEPTEMBER 1974

COVERS — *Cover photo of the NC-4, the first aircraft flown across the Atlantic, was taken by JOCS James Johnston when the restored aircraft was displayed on the Mall in Washington, D.C. The NC-4 will soon be moved to the Naval Aviation Museum in Pensacola. Above is an artist's rendition of the museum, which will open its doors in December. On the back cover, Vice Admiral Robert B. Pirie, Chairman of the Museum Association, was photographed by R. C. Blaikie, Jr., staff member, as VAdm. Pirie reminisced about the F4B.*

THE STAFF

NAVAL AVIATION NEWS

FIFTY-SIXTH YEAR OF PUBLICATION

Vice Admiral William D. Houser
Deputy Chief of Naval Operations (Air Warfare)

Vice Admiral Kent L. Lee
Commander, Naval Air Systems Command

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WHY A MUSEUM

I think that history is great inspiration to everyone. It certainly is inspirational to young candidates for flight training. It's part of the making of a Naval Aviator and that's why we worked so hard to raise the funds to build an adequate museum, to have the inspirational value of it for the young students going through training at Pensacola.

Vice Admiral Robert B. Pirie, USN (Ret.)

This museum preserves the past, is a part of our heritage and a forerunner of our future. We have seen the developments of the past and we know that from them will spring the progress of the future. I have met many Naval Aviators, past and present. One of them, who is now a successful physician, told me that the proudest moments of his life were those he spent as a Naval Aviator. He said that never since that period, which was during World War II, has he been associated with a finer group of men whom he admired more. This same feeling is conveyed to me by others. This museum will preserve the great deeds of the past and serve as an inspiration for those who would follow this wonderful career.

Vice Admiral William Houser, USN

This museum is going to serve as a great source of pride to those of us who have participated in Naval Aviation and, more importantly, will serve as a great source of inspiration to the young people coming after us. This certainly is physical proof of the growth of Naval Aviation and considerable proof of the contribution of a group of dedicated men. It shows how things are going to change. They will change as time goes on, and the young people should be prepared for this. They should be prepared to make the same kind of contribution today that others made many years ago. In two or three decades, the museum will have more and more to show. I think Naval Aviation is as much an art as it is a science, a special type of activity that is, in my view, unequalled in the military area. I consider my participation in Naval Aviation to be a real highlight of my military career.

Admiral Thomas Moorer, USN (Ret.)

In my visits with young, aspiring aviators around Pensacola, I could not help but be impressed by their mental and physical vitality and inquisitiveness about their future. Being well informed, they fully appreciate that our Navy and Naval Aviation are continually improving in terms of hardware and tactics. These young students will soon be launching from the catapults aboard *Nimitz* and *Eisenhower* in F-14s and S-3s, developing the offenses and defenses that will sustain our country's strength well into the future. I can only hope that the museum architects have planned for plenty of growth and expansion.

Commander James Flatley III, USN

People have kept records of past events primarily to learn from past deeds, to get an insight into where we are today and where we will go in the future. Records, like those kept in the Naval Aviation Museum, have also been used to document things for the future, our heritage. This is a particular branch of history and we use history to learn better ways to do things and better ways to go. I look at the Naval Aviation Museum as a very necessary element for the preservation of the history of this country. If you compare our space program with the exploration of the Poles done by Admiral Richard Byrd, you realize that Adm. Byrd was truly pressing into the unknown. He did it with very few people, who organized it, planned it and then executed the whole mission. Moon exploration was the culmination of efforts by hundreds of thousands of Americans. I think I went to the moon in relative comfort as compared to the Byrd expeditions. I am sure that, in the future, when people look back at *Skylab*, somebody else will be saying, "Gee, Capt. Conrad and his crew sure did it on a shoestring." Well, I am sure Adm. Byrd felt he didn't do it on a shoestring and I don't feel our operation was that way either. But the spacecraft of the future, I'm sure, will make the *Skylab* module and lab look quite antiquated, a rather shaky operation by comparison.

Captain Charles "Pete" Conrad, USN (Ret.)

With the future of Naval Aviation apparently ensured by modernization and through the continued monitoring of the needs of our training program, it seems especially appropriate that on the site of this training for the future we have chosen to honor the past. History is a source of lessons for man and is also a source and object of his interest. The aircraft enshrined in the museum are representative not only of great pages in the history of Naval Aviation but also of the history of this nation. The Naval Aviators and flyers who have worn the Congressional Medal of Honor are certainly outstanding personal examples of that glory. I have to believe that the casual visitor to the museum would be inspired by what he sees. I hope that youngsters, young men who have not yet chosen their profession, might be motivated toward Naval Aviation.

Rear Admiral Jeremiah Denton, USN

Naval Aviation has a long and proud history. The hallmarks of accomplishment etched forever into the hardy fabric of this heritage deserve to be remembered and studied.

The strong and vital air arm of today's Navy owes a heavy debt to those who built, flew and fought in the flying machines of our past. The Naval Aviation Museum at Pensacola commemorates both these men and their machines, helping to preserve this important American and Naval Heritage.

Admiral James L. Holloway III, CNO

World Record

On July 5, two Marine Aviators, John H. Pierson and his copilot, Maj. David Shore, flew an OV-10A *Bronco* 4,480 kilometers from NAS Whidbey Island, Wash., to Homestead AFB, Fla., to set a new world record. The National Aeronautics Association sanctioned the feat. The record for distance in a straight line was set in Class C-1.f, Group II (turboprop). The old record in the same class was held by Colonel R. W. Lewis, USMC — 4,087.39 kilometers.

The record was a sort of fringe benefit as the flight was planned in order to verify theoretical improved performance through better fuel consumption at higher altitudes in a cruise-climb profile. The improved performance will allow the OV-10 to cross the Atlantic in a practical, economic, efficient manner. The new capability is made possible through a turbine inlet temperature system and associated flight line tester which enables maintenance personnel to more precisely rig and time the *Bronco*.

Tiger Tails

Two F-11 *Tigers* that once bore the markings of the *Blue Angels* are at the Naval Air Test Center, Patuxent River, Md., in support of a seven-month program to evaluate the tactical use of an inflight thrust reverser.

The No. 1 airplane is equipped with a thrust reverser that can turn 100 percent forward thrust into 50 percent thrust in the opposite direction in 1.5 seconds. The "braking device" has a number of tactical applications which the Test Center will evaluate.

Lt. Dave Palmer, project officer, says the inflight thrust control could affect an aircraft's tactical maneuvering, dive angles for ordnance release, glide-slope control and infrared suppression capability.

The thrust reverser was manufactured by Rohr Industries under a NavAirSysCom program. Grumman configured the *Tiger* for the test work and flew the initial hops to establish a basic envelope within which the Navy pilots would work.

The only visible difference between the two F-11s is a 33-inch extension of the tail section on No. 1. The No. 2 aircraft, a chase plane, appears much as it did when it was an *Angel* aircraft.

did you know?

Apollo-Soyuz

The *Apollo-Soyuz* Test Project is a joint endeavor of the United States and the Soviet Union, a part of the agreement on cooperation in space which President Nixon and Chairman Kosygin signed in Moscow in May 1972.

Both countries are developing compatible rendezvous and docking systems which will provide a basis for docking and rescue on future spacecraft missions of both nations. They are preparing to rendezvous and dock a manned *Apollo* with a manned *Soyuz* in mid-1975 in order to test the docking systems in orbit.

The major new U.S. program element is the development of rendezvous and docking systems compatible with USSR-developed *Soyuz* hardware.

The *Apollo* command and service module will be launched on a *Saturn 1B* with the docking module and system stowed in the launch vehicle adapter and extracted by the command and service module while in Earth orbit — in a manner similar to that used by the lunar module and *Apollo* on the lunar missions.

The test project will include testing of rendezvous and docking systems in orbit, verifying techniques for transfer of astronauts and cosmonauts, conducting experiments while docked and undocked and developing experience for future flights and for emergency situations.

Joint U.S./U.S.S.R. working groups meet on a scheduled basis to review technical and operational aspects of the project.

Corsair II²

LTV Aerospace Corporation recently received a $4.8 million Navy contract to begin converting 81 single-seat A-7B and A-7C *Corsair IIs* into two-seat trainer versions for the Navy. The remanufactured aircraft, to be designated the TA-7C, will be used in carrier replacement air wings.

The first aircraft selected for the modification are expected to be inducted into the program early next year. The redesign is slated to be completed in mid-1979.

The TA-7C, although basically planned as a trainer, can also be configured

for combat and special missions. It will operate equally well from shore-based runways and carrier decks and, with its parabrake, will be capable of short field operations. It will feature the same avionics as the other *Corsair II* models.

In the photograph, the YA-7H, the prototype aircraft, takes off on one of the more than 360 demonstration flights it has made during the last two years.

Barricaded

The camera recorded another first when an F-14 *Tomcat* successfully arrested into a barricade at the Naval Air Test Facility, Lakehurst, N.J., during operational testing. The F-14, now being introduced to the fleet, is Navy's newest fighter.

GRAMPAW PETTIBONE

The Big Show — Rerun

Two Naval Aviators flew an uneventful first portion of a cross-country flight. The T-28 *Trojan* performed well in all respects and, upon landing at NAS Midcoast, the two pilots informed operations personnel that they would be remaining for the weekend (two nights). They spent the two days at a nearby resort area.

The two returned to the base about mid-afternoon for a late afternoon departure to home plate. They planned on filing VFR; however, upon checking with the weather office, they filed for a VFR departure to pick up an IFR clearance approximately 30 miles away. The pilots filed their flight plan, preflighted the *Trojan* and, following an uneventful start, taxied to the duty runway.

Departure was without incident and a few minutes later, according to witnesses, a T-28 was observed in the nearby resort area. The aircraft appeared to be in a slight descent and had started a slow-roll maneuver. It continued in another roll. These rolls were apparently a mix between aileron rolls and barrel rolls. After one of the rolls, the left wing continued to go down. The aircraft went inverted, extremely nose down, and then disappeared behind the trees.

Another witness reported that he was at the roadside trailer park when he noticed an aircraft overhead. To him, the aircraft appeared low and doing a barrel roll. The aircraft passed out of sight behind the trees. The last time anyone saw it, it was in a steep dive. The witness heard the engine go to high power and, a moment later, heard a boom and felt the ground shake.

Investigation revealed the aircraft impacted the ground in a near vertical dive. The crash was fatal to both pilots.

Grampaw Pettibone says:

Sufferin' sailfish! Will we *ever* see the last of this foolishness? Again two young aviators bit the dust 'cause they wanted someone to see how "hot" they were.

What is even more amazin' is the number of misinformed personnel that attempt to shield a driver that has been caught (and survived) flathatting with comments like "Yes, but he is my best pilot," or "He is very aggressive," etc. Bull hockey! Since it's obvious that a certain small percentage can't be trusted . . . when caught, there is only one way to be sure of preventing this type of future performance — the long green table!

Fuel Starvation???

A Naval Aviator was scheduled to ferry an A-7B *Corsair* from one field to a naval air station approximately 20 miles away. The *Corsair* had been defueled aboard an aircraft carrier two days before in preparation for offloading at the adjacent airfield.

The preflight of the A-7 was normal and, on entering the cockpit, the pilot noted that the aircraft had 1,000 pounds in the main tanks and 3,800 pounds in the wing tank. During the start cycle, the pilot observed the fuel low level light was on which confirmed the fuel in the main tank. The fuel low level caution light remained on throughout the start, taxi, takeoff and airborne portion of the flight.

After takeoff, the *Corsair* climbed, made a turn over the field and proceeded outbound. At this point the fuel was fluctuating between 800 and 1,000 pounds in the main tank. At level-off, with the aircraft at 4,000 feet, the fuel boost caution light came on and the pilot felt several distinct engine surges.

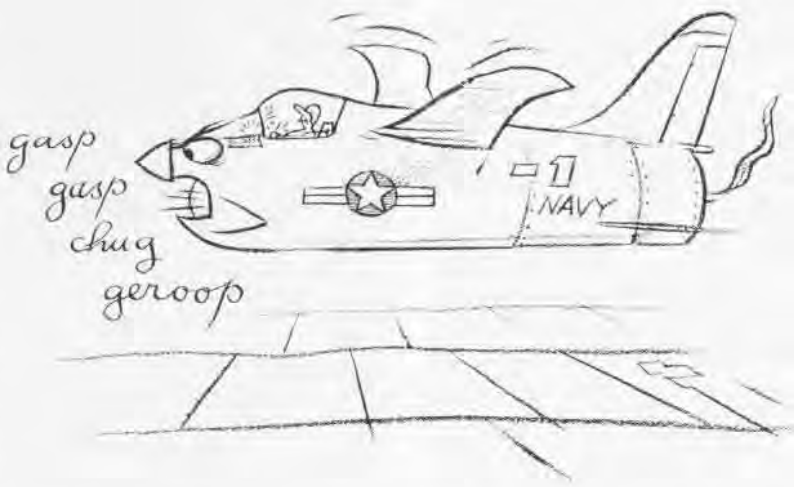
He immediately requested clearance

ILLUSTRATED BY Osborn

back to his takeoff field and commenced a turn to that heading. He noted a fuel flow of 2,000 pph, but his rpm indication of 40-50 percent was low and the *Corsair* did not seem to respond to throttle movement. Selecting manual fuel control and extending the EPP, the pilot attempted an air restart by retarding the throttle to the igniter position. He then noted zero fuel flow and approximately 20 percent rpm.

The aircraft was passing approximately 1,500 feet at that point, so the pilot pulled up to optimum angle of attack and ejected. The ejection sequence was normal in all respects. The pilot was rescued by helo shortly after water entry. From takeoff roll to ejection was approximately five minutes.

The investigation revealed that the engine failure was due to fuel starvation; no malfunction of the fuel system was detected.



Grampaw Pettibone says:

Jumpin' Jupiter! I just can't imagine anyone departin' a field with the low level fuel light on! This gent was no nugget — although I believe a nugget would have done a better job. A low fuel warning light means exactly that, WARNING — dern it!

In addition to the pilot screwing this whole thing up, he had lotsa help — the personnel doing the refueling did not ensure proper fuel distribution. In other words, there was plenty of fuel, it just wasn't where the pilot thought it was!

Amazing how, in most cases, a chain of events is set up for a crash. Yet, along the way, there are opportunities to stop this "chain of events" — but nobody does!?!

Nostalgia

Shortly after takeoff on a group ferry flight in the Western Pacific, an SB2C-4 pilot attempted to switch to his droppable wing tanks. No matter how hard he concentrated, however, he couldn't remember where that particular valve was, nor could he locate it.

Not one to be easily discouraged, this young pilot did a bit of rapid calculation and figured out he had sufficient fuel to reach his destination. It might be a close shave and, unfortunately, there weren't any alternate atolls en route, but it was a good chance to practice operating at maximum fuel economy. And think of the ribbing he would get if he turned back! Besides, he would have plenty of time on the way to find that drop tank gas valve. So-o-o-o, he continued with the formation.

Two hours later, they approached a weather front and climbed to 11,000 feet to clear it. They all climbed, that is, except this pilot who was nursing his gas. He lagged behind and below, attempting to circle the front. A short while later, he notified the flight he had lost contact. Upon receipt of this message, the leader directed the next senior pilot to take charge while he turned back to find our hero.

Radio communications were excellent, but visibility conditions prevented the two planes from rendezvousing, even by radar. The lost pilot finally found a light spot in the front and flew through at 200 feet altitude.

Soon thereafter he made radio contact with the island for which he was heading. When he explained that he was lost, he was instructed to turn on his emergency IFF. In his excitement, however, he *detonated* it instead. He then was told to transmit on a medium high frequency. The tower took a bearing on his transmission and gave him his heading to the island. The dark clouds all disappeared and everything seemed rosy again when he sighted the island about 20 miles away.

Five miles later, his engine sputtered and stopped. He still didn't know how to shift to his drop tanks. (The report never cleared up why he hadn't requested radio advice on this point.) He evidently didn't know how to prepare for ditching either. Even though he was at 7,500 feet when his engine quit, his shoulder straps still were loose when he landed. The fractured jaw he received, plus other contusions and abrasions, left him too dazed to assist his radioman get the life raft out of the plane before it sank.

They still had their life jackets, however, and were floating pretty, 15 minutes later, when a PBY, sent out by the island air-sea rescue service, dropped a life raft close aboard. They didn't even have to paddle ashore; a minesweeper picked them up.

Grampaw Pettibone says:

Not a few casualties have resulted because pilots were unfamiliar with some seldom used switch, lever or piece of special equipment not essential to a checkout flight. The accident board made a potent recommendation regarding this: "each activity prepare a standard checkout procedure, peculiar to its own needs, placing special emphasis on these seldom used accessories."

Whether you follow the recommendations of this board or not depends on your attitude. If you want to string this war out as long as possible and lose a lot of your friends, you'll be satisfied merely to show your pilots which way to bend the throttle for take-off (Some of them are bound to get through!). But if you want to get this damn thing over with as soon as possible, you won't be satisfied to turn 'em loose until you're sure they know how to operate every switch, knob, lever, button and gadget in the cockpit. (July 1945)

Preserving Naval Aviation

HOME of a PROUD LEGACY

Sometime late this year, the new Naval Aviation Museum is scheduled to open its doors to the public in its tree-lined location at the Naval Air Station, Pensacola, Fla.

The first stage of construction will have 68,000 square feet of space, eight times that of the temporary museum, and will have cost $1.5 million in non-appropriated funds.

Situated close to historic Forts San Carlos and Barrancas, the museum is anticipating a rosy future as a man-made attraction along the Gulf of Mexico. In fact, the museum is being billed as "second only to Walt Disney World" as a Florida tourist attraction.

Furthermore, the location at Pensacola is advertised as "one day's drive" from Disney World and Orlando. Adding to the attractiveness, the two air station forts are now part of the Gulf Islands National Seashore, one of the newest units of the national park system. It is estimated that three million visitors per year will be coming to the Seashore area within five years, unless the energy crisis worsens.

The first of four increments that make up a 260,000-square-foot, $4 million-plus museum package will be handed over to the Navy Department by the Naval Aviation Museum Association, Inc., a non-profit organization of Naval Aviation enthusiasts who have labored since 1965 to finance and create the first part of the museum.

Even as the first part of the museum is placed into operation, the association's members and active duty counterparts will be cooperating in a drive to begin adding the second segment to the basic unit.

Admiral Arthur W. Radford, former Chairman of the Joint Chiefs of Staff, who took the helm of the association in 1966, participated in the groundbreaking for the first increment in late 1972. Since Adm. Radford's death last year, Vice Admiral Robert B. Pirie, USN (Ret.), has been the spear carrier for the association.

On the active duty side, Vice Admiral Malcolm W. Cagle, Chief of Naval Education and Training, who retires this month, has been the driving force as the museum approached the first increment's total funding point. Since arriving in Pensacola in July 1971, VAdm. Cagle has been the

Museum entryway nears completion.

senior naval officer present and is credited with pushing for early construction and resultant savings in construction costs.

Earlier this year, the people of Pensacola, working through a civilian fund drive, contributed more than $220,000 to the museum fund.

The museum's opening will be a tribute to many of Naval Aviation's illustrious practitioners. It will mark the end of almost 20 years of work by officers interested in making the museum a reality.

Captain Bernard M. Strean, commanding officer of the Navy's School of Pre-Flight in 1955, signed the first official letter, dated September 2, which asked the Chief of Naval Operations for permission to establish a Naval Aviation Museum.

"It is anticipated that this museum will be placed, at the outset, in a temporary location with little or no funds required. Here, where flight students begin their careers in Naval Aviation, this exhibit will serve as a permanent memorial to the men of yesterday who built and maintained the air Navy for the last 40 years and will be a unique method of increasing morale and pride in Naval Aviation."

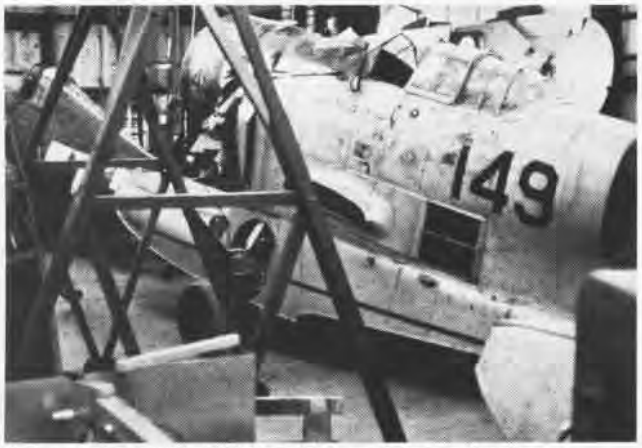
That letter was passed along to the Chief of Naval Operations with endorsements from the Chief of Naval Air Basic Training (CNABaTra) and the Chief of Naval Air Training (CNATra). The CNABaTra chief of staff at that time was Captain Magruder Tuttle, who asked that the Pre-Flight School be designated as the coordinator for the museum. "A commemoration of those stalwart men and early planes of Naval Aviation at the location of the first naval air station will be a constant reminder to those fledglings who enter here of a well done by those who have preceded them," his endorsement stated.

Vice Admiral Austin K. "Artie" Doyle, then CNATra, added his "strongly concur" approval of the concept and added, "It is felt that much benefit may be derived in the field of public relations through opening this museum to inspection by civilian visitors to the naval air station, offering them an insight into the historical presentation of Naval Air accomplishments that might not otherwise be possible."

The 1955 letter and endorsements lay unanswered for almost two years, prompting another C.O. of the Pre-Flight School, Captain H. S. Jackson, to write a follow-up letter. "It is re-

First increment of museum, not unlike an operational hangar, measures 68,000 sq. ft.

Old museum.



Grumman Duck with NAS New York markings on fuselage.

Bird's-eye view of museum.

quested that this command be notified of any action taken or anticipated concerning . . . the new museum," Capt. Jackson said.

Vice Admiral William V. Davis, then Deputy Chief of Operations (Air), wrote back his concurrence in the project, adding a personal comment that the museum was considered "a highly commendable project."

"However," wrote VAdm. Davis, "the Chief, Bureau of Aeronautics is not in a position to support such an undertaking with funds and manpower when military necessity programs are being retarded due to the lack of these supporting elements. Therefore, the Chief of Naval Operations approves the request for establishment of a Naval Aviation Museum at Pensacola only if its establishment and maintenance can be accomplished without funds or additional manpower now or in the future, unless budgetary limitations change considerably."

In those days the Navy had its double linearity system. The Chief of Naval Operations operated or "used" the equipment. The Chief, BuAer, was the "producer" of equipment, the man who paid Naval Aviation's bills.

Although the "no funds" reply seemed the end of the line for the museum, a certain amount of momentum already had been generated in Pensacola. An initial fund had been started and pieces of equipment and offers of historic papers and artifacts had started to come in.

Magruder Tuttle, who had returned to Pensacola as a rear admiral and as CNABaTra, found volunteer support from retired Admiral J. W. Reeves, an aviation admiral who had retired to Pensacola in 1950.

"Blackjack" Reeves had become a Naval Aviator in 1936 at the age of 48. He was an enthusiast in his work for the museum locally, and nationally with the Navy League.

Naval Aviation celebrated its Fiftieth Anniversary in 1961. As part of the national observance, the *Golden Eagles*, pioneer Naval Aviators, held their annual outing at Pensacola, adding support for the museum.

In mid-1962, Astronaut Scott Carpenter presented his Navy Wings of Gold to Vice Admiral Fitzhugh Lee, CNATra. Carpenter had worn them on his orbital flight with the *Mercury* program. VAdm. Lee gave them to RAdm. Tuttle who said, "The Naval Aviation Museum is hereby established."

That gesture by Carpenter is credited by some with being the final push that got the museum on its official feet. In December of that year, the

Exhibit specialist Bob Blaikie of Naval Aviation Museum staff, labors at restoration.

Secretary of the Navy announced the establishment of the museum. He set as its mission: "To select, collect, preserve and display appropriate memorabilia representative of the development, growth and historic heritage of Naval Aviation."

The Chief of Naval Operations followed up with instruction further detailing the museum's role in the Navy establishment. In letters from Vice Admiral William Schoech, Deputy Chief of Naval Operations (Air), Pensacola was informed that CNABaTra was authorized to accept gifts of property up to $1,000 in value while the Bureau of Naval Weapons (successor to the Bureau of Aeronautics) was authorized to accept gifts of money up to $1,000.

In 1963 a fund drive among personnel attached to the air training command at Pensacola brought in sufficient funds to refurbish a wooden building as the temporary home of the museum.

In June 1963, the museum was dedicated. VAdm. Schoech was the speaker and Adm. Reeves cut the ribbon opening the doors. There was a daylong celebration, capped with an air show by the *Blue Angels* Flight Demonstration Team.

The temporary building was only a beginning, for it obviously could not handle many full-sized airplanes. Its 8,500 square feet of space were soon filled. Dozens of airplanes were waiting to be displayed, some badly deteriorated because of outdoor storage.

CNABaTra, acting as the military commander for the museum, appointed an Advisory Board, with Adm. Reeves as its senior member. Others on the board were retired Admirals M. B. Gardner, A. K. Doyle and E. M. Eller, then Navy Historian; Paul Garber, Curator of the National Air Museum, Washington, D.C., Braden Ball, publisher of the Pensacola *News-Journal*, and Mr. Joseph Martin, Chemstrand Corporation executive.

The board met early in 1963 for the first time. In March of that year, CNO established further guidance on the museum, appointing CNATra as its president, establishing a board of trustees and making CNABaTra executive agent.

A revised list of members of the board of trustees came out a year later when the Chief of Naval Operations appointed incumbents in a number of aviation-museum-curator and information billets to serve during their terms in those offices. A five-man executive committee from the Pensacola area, all non-active duty, was formed with CNABaTra as chairman.

On January 20, 1965, the executive committee met and discussed the need for a civilian organization to help raise funds for the new museum building and to promote the museum. A proposed set of bylaws for the Naval Aviation Museum Association, Inc. was drawn up. The executive committee met three times during 1965 and, in July a year later, with Adm. Radford, who agreed to accept the chairmanship of the museum association. The executive committee dissolved after that meeting and the association took over.

The association was incorporated as a non-profit corporation under the laws of Florida in December 1966. Mr. Thomas Moore was named president and retired Admirals Robert Barnum, John J. Bergen and Robert Pirie were named vice presidents. Since that time, two men have served as secretary of the association, Captains James McCurtain and Grover Walker, both of whom have functioned as officers in charge or as director of the museum.

Adm. Radford served as chairman of the board of the association until his death last year. In December 1966, the officers of the association held their first meeting to discuss funding requirements and retention of an architect.

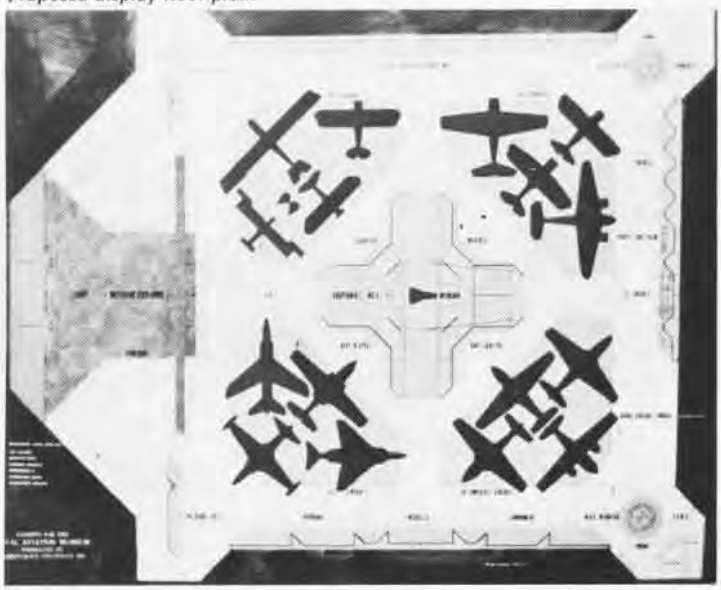
The first meeting of the board of trustees of the association was held in April 1967. Paul Chen, a New York architect, gave a briefing on plans for the new building and articles of incorporation were amended as part of the agenda. Methods for raising funds were also discussed.

By May 1970, after a series of meetings involving the trustees, the executive committee and the fund-raising steering committee, the association reported it had $400,000 in hand and "prospects" for another $600,000.

Later that same year, the executive committee agreed to go forward with an incremental construction program, using pre-engineered steel components. The first increment was set at 68,000 square feet at an estimated cost of $1.5 million.

It was coincidental that B. M. "Smoke" Strean, the man who had

Proposed display floor plan.



A-1 Skyraider awaiting restoration.

Large model of USS Shangri La and embarked aircraft

written the first letter asking for establishment of the museum, was on duty as CNATra at Pensacola when the decision was made by the association's executive committee to proceed with the incremental method of construction.

In 1971, VAdm. Strean passed the museum project to VAdm. Cagle, who occupied the CNATra billet only two weeks before he became the Chief of Naval Education and Training when that command was established.

As senior active-duty Naval Aviator in Pensacola, VAdm. Cagle took the final steps which led to ground breaking. The huge facility is now nearing completion in the pine forest near Forrest Sherman Field.

Even as old aircraft are being readied for display and museum officials prepare for a 1975 spring dedication ceremony, the job of financing the project goes on.

There are still Naval Aviators, active and retired, who have not donated to the museum fund. Adm. Tuttle, now retired, is still active in the museum program. The association, too, is still actively seeking donations.

For $100, individuals may become life members of the museum, or families may donate that sum "In Memoriam" to honor a deceased Naval Aviator. For $1,000, individuals are honored with plaques in the museum and designated charter members.

Corporations may donate larger sums and join the list of organization members inscribed in tablets at the museum.

The three additional increments still to be built will cost $2.5 million or more, depending upon inflation and building costs. The additional increments will need funds at the rate of $500,000 yearly.

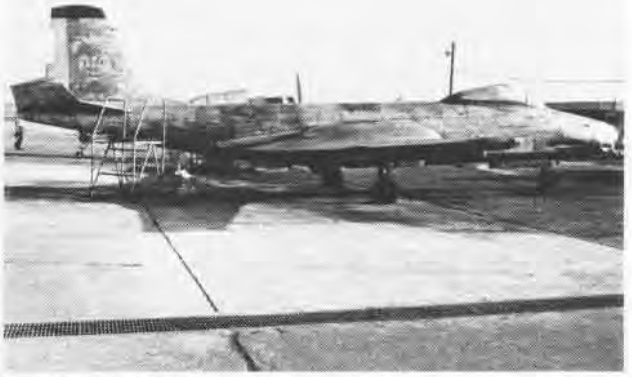
Tax deductible contributions to support the museum may be sent to the Naval Aviation Museum Association, Pensacola, Fla. 32508.

Astronaut Conrad ponders the Ford Tri-Motor.

Flying suit and aviator's equipment exhibit.

BANSHEE REFURBISHED

The spirit of Training Squadron Two manifested itself in a project completed by members of the maintenance crew. With the guidance of LCdr. Ed Graham, squadron maintenance officer, the unit refurbished an F2H *Banshee*. The *Banshee* was the first aircraft LCdr. Graham worked on as a plane captain when he enlisted in the Navy. Supporting this effort were AMS3 Turner, AMS2 Ward, ADRAN Tallman, AMH3 Cottrill and AE1 Lienhart (left in photo, front to back) and AME3 Bailey, AMS1 Clogston, ATAN Morris and ATAA Cochran (right in photo, front to back).



Banshee as it looked before being restored.

Training Squadron Two troops pose by the Banshee they restored.

Like new, F2H wears a fresh coat of paint.

HOW MANY OF THESE MODELS CAN YOU NAME?

One of the many exhibits at the Naval Aviation Museum is an extensive collection of naval aircraft models. Shown here are only a few of them. If you can identify all of them, give yourself 4.0 in aircraft recognition. Correct identification for your scoring appears on page 40.

MEN and MACHINES

LCdr. Ron Knutson is a former POW (seven years and seven months) who makes frequent public appearances, talking about his imprisonment. Invariably he is given a standing ovation. He is a speaker who "tells it like it was" and is careful to separate fact from personal opinion.

At one point in his remarks, Knutson, who was a Naval Flight Officer when he was captured, but is now taking pilot training, tells his audience that material possessions, "things," have no meaning for him now.

"I came away from prison with the belief that the most important thing we have is memories," he says.

Locked up for more than seven months in solitary confinement during more than 2,700 days as a POW, Knutson tells how he exercised his mind to fill the time, searching for memories of his school days, his friendships, the times he enjoyed, the times he despised.

"Without memories it would have been impossible to keep going."

Just down the road from VT-4's flight line, where LCdr. Knutson is a student, the new Naval Aviation Museum is nearing completion. It is a repository for memories, too, a storehouse that will be available free to all who visit Pensacola in the future.

It will contain the memories of the generations of men who were associated with Naval Aviation from its birth in 1911, through the two World Wars, the Korean Conflict and Vietnam. The new 68,000-square-foot showplace will accommodate two dozen airplanes at a time and reflect, at a single glance, the 60-year-plus evolution of aircraft used by the U.S. Navy.

Memories will be evoked in the millions of visitors expected to visit the museum. Former Naval Aviators will remember how it was in WW II in the Grumman *Hellcat*, the one with Captain David McCampbell's Minsi III insignia. Others will relate to the PBY *Catalina*, similar to the one in which recently retired Admiral Thomas Moorer, Chairman of the Joint Chiefs, was shot down early in the same war.

Others will see themselves in the first jets, the old *Banshees*, the *Panthers*, the *Furies* of the Korean era. There will be some, contemporaries of another POW, Rear Admiral Jeremiah Denton, who will be reflective when they see a model of an airship, the A-1 *Skyraider* or the A-6 *Intruder*, all of which were RAdm. Denton's machines.

Korean era pilots will recall the torque power of old "hose nose," the all-purpose F4U *Corsair* that helped bridge Naval Aviation from World War II to Korea. Among those is the current Deputy Chief of Naval Operations (Air Warfare), Vice Admiral William Houser.

There are the older memories of the old F4B which was flown by retired Vice Admiral Robert Pirie, a former DCNO(Air).

And there are the contrasting memories stirred by the *Skylab I* module flown by former Navy Captain Pete Conrad, fighter pilot, test pilot and astronaut.

During the filming of *Flight from Yesterday* and its longer version, *Wings of Eagles — Wings of Gold*, interviews with a succession of well-known Naval Aviators were made. They ranged from admirals to lieutenants junior grade, from aces to air tacticians, from POWs to test pilots flying aboard carriers without tail hooks.

Gleaned from the interviews are personal views about the machines and the missions they flew, about Naval Aviation and the Naval Aviation Museum.

During filming of "Flight from Yesterday," TA-4 training jet passes an F4U Corsair.

ADMIRAL JOHN S. THACH

The Man: Admiral John S. "Jimmy" Thach, retired from the Navy after serving as Deputy Chief of Naval Operations (Air) and as Commander, Naval Forces Europe. His name is linked forever with the "Thach Weave," a fighter tactic that helped win WW II.

The Machine: F4F

His Story: Before WW II, we received an intelligence report out of China which said, "The Japanese have an airplane that can fly rings around anything in the sky. It has a rate of climb of 5,000 feet per minute, a very tight turning radius and more speed than any of our fighters." I talked it over with my squadron. Some thought it just couldn't be that good, but I said, "Well, let's say it is exaggerated. Suppose it's only half that good. It's still better than the performance we have. We have only 1,000 feet per minute in climb when we are loaded with ammo and some of our fighters don't have a very tight turning circle and not as much speed as we should have."

It was obvious that if we did get into a war in the Pacific we would be one of the first squadrons involved, since there were only seven fighter squadrons in the whole Navy and we were based aboard *Saratoga* on the West Coast.

So, every night in a little rented house in Coronado, I remember getting out big kitchen matches and using each one as an airplane, trying to work out a system to reduce the advantages of better climb rates, tight turns and speed.

Every time I started fiddling with these matches, I would lose track of time and invariably at 11:55 p.m. my wife would come in and say, "Jimmy, you are going to fly tomorrow. Don't you think you'd better get some sleep?"

So I put the matches away until the next night. I did this night after night because I felt I had to figure out something basic with the matches before we tried it in the air.

We used to fly around in formations that had three-plane sections. As a fighter pilot and as a wingman, I never did think this was a very good fighting formation. You would have to have three eyes if you were going to attack something. One eye on your section leader, another eye to shoot with, and the third eye to keep from running into the opposite wingman in case the leader made a sharp turn.

I knew we were going to do some fast maneuvering if we were to trick these people,

so I threw away that third airplane and just had a two-plane section.

I felt that if I met an opponent with a superior performance, he would have an altitude advantage and probably come in after us. He would bring his point of aim to one of the aircraft in formation and, if we took two pairs of aircraft and split them apart, the other section would have a chance to shoot him when he was preoccupied with the first section. This was the basic change I made.

If we spaced two sections far enough apart, they would be meeting in a half circle if they turned toward each other. Now, if an opponent attacked one section, that pilot could also take a head-on shot and his partners, in the other section, would have a free shot at the preoccupied enemy.

I went out to the squadron and decided that we would have to try this in the air. I told Butch O'Hare to take four planes and use full power any time he needed it. I would take four planes and only use half throttle. We had to simulate the difference in performance and I thought this would probably do it. So we went in the air and tried it. It seemed to work better than I had hoped. I came down and Butch came running over to my plane and said "Skipper, it really works. Every time I start to make a beam attack on one of your half-throttle planes, another one would be around pointing his nose at me."

Under the lookout doctrine we had, pilots on the right guarded the tails of the pilots on

the left, and vice versa. We would wait until an opponent was almost within lethal firing range and then make a quick turn toward the other section. This was a signal that somebody was on his tail (since he couldn't see directly astern), and he would make a quick turn. This would do two things: it would throw the opponent's aim off if he tried to follow one of our sections and, before he could get proper aiming point again, he would be in a position to be shot by our second section.

Jimmy Flatley tried this and liked it in the Coral Sea battle. He sent two messages after that fight was over — one to the Navy Department telling them it was the only way to survive against enemy fighters of such superior performance, and one to me, personally, saying that he was calling the maneuver the Thach Weave.

(In the Battle of Midway, Adm. Thach got a chance to try the formation tactic against a formation of 20 or more attacking fighters.)

The first thing that happened was that one of my wingmen got shot down and I thought, "Well, this weave isn't working." But I discovered they were coming in a stream, and the second or third one I caught just on the outside of the turn at exactly the right time. Later it began to work better. I saw a *Zero* come sliding in and I waited until just before he got within lethal range. I was about to turn, when the other section leader on the right turned just a split second before I did. I was a little irked at him because I thought that he wasn't doing the thing correctly, that he must have been looking back at his own tail, not mine. Anyway, he did come around and another *Zero* did try to follow him. I got a good low side shot at him and managed to catch the *Zero* on fire. Then, when I weaved and turned back, my other section leader had shot one off my tail, so I forgave him. At the time there were so many *Zeros* that I became convinced that we weren't coming home, none of us. But the weave began to work a little better and we didn't lose any more airplanes.

(After landing aboard *Yorktown*, Adm. Thach recalls that Japanese dive bombers made runs at the ship. One went straight down the stack, putting the ship out of commission until the engineers rigged temporary steam lines and got the ship up to 16 knots. After getting as far back as possible on the flight deck, the ship's aircraft started taking off into the battle which was raging around *Yorktown*. Torpedo planes were still making runs at *Yorktown* as he boarded his aircraft.)

I remember the antiaircraft fire opening up just as I was rolling down the deck and I looked out to the right and saw these planes coming in with some of our combat air patrol still working on them. Right in the middle of our AA fire, I turned and, as soon as I cleared the deck, I started cranking those wheels up. You had to do it by hand, 30 or more turns. I managed to get them up as I made a turn around and dropped my sights on a torpedo plane and caught him on fire. You know, that plane, low on the water as it was, stayed in the air — I could see right through the ribs — the wing was on fire. I don't know how he stayed in the air. But he did, long enough to drop that torpedo and I was sure that torpedo hit *Yorktown*. An airplane that was two or three behind me off the deck didn't even get his wheels up when he turned into one of the torpedo planes, shot at him and was in turn shot down by a *Zero*. He was in the air less than 60 seconds — I guess that's a record for successful aerial combat as far as fighters are concerned — 60 seconds. The pilot was not injured but was picked up by a destroyer later.

Rusted veterans, waiting restoration at Pensacola, form a ghost squadron. Restored, they'll be displayed in the museum.

COMMANDER JAMES FLATLEY III

The Man: Commander James Flatley III, son of the WW II fighter pilot (later admiral) who named the Thach Weave, was a test pilot in 1963 when an unusual project was proposed.

The Machine: C-130 *Hercules*

His Story: The Navy is constantly trying to find a better carrier-onboard-delivery (COD) aircraft. In 1963, while waiting for the C-2 to come along, it was decided that a carrier feasibility study be made on the C-130. The airplane was a logical choice, but because of its size, its four engines and wing span, everybody worried about its use.

They came to us at the Carrier Suitability Branch at the Naval Air Test Center, Patuxent River, Md., to see if we would be willing to undertake this project. After some thought, we said, "Sure."

We began two weeks of shore-based testing to determine how quickly we could stop this beast and get it off again. After a matter of 85 hours in the airplane, with many, many shore-based maximum stop landings and maximum effort takeoffs, we determined we could safely go out to the ship and give it a try.

One of the interesting decisions we had to make at the inception of the program was who was actually to pilot this airplane aboard the carrier. Those of us in carrier suitability were primarily fighter or attack carrier aviators, pilots of aircraft like the F-8 and the A-4. None of us had much multi-engine experience. We came to the conclusion that we would get on with the program faster if we used pilots who had experience flying off carriers. So two of us fighter pilots, Commander Smokey Stillwell and I, started the work and we sent out our engineers to set up their instruments and to mark off the field to the specifications of the flight deck. Surprisingly, we two fighter pilots adapted very quickly to that fine airplane, the C-130. It has very beautiful handling characteristics.

We flew out to *Forrestal*, operating off the coast of Jacksonville, in November 1963 and began our series of landings with the C-130. The first day's operations involved a series of 42 touch-and-go landings on both the angled and axial deck. After that we were ready for full stops and takeoffs.

We proceeded back to *Forrestal* and commenced a series of 21 full-stop landings and takeoffs. We initiated these trials with a very low gross landing weight of about 85,000 pounds. We culminated the tests at a gross weight of 121,000 pounds, which was 3,000 pounds over maximum gross weight for the airplane. All of the landings were made on the axial deck, down the revised center line of the carrier. In point of fact, we had to paint a new center line to help us keep our alignment and to ensure that we had at least 15 feet of clearance between ourselves and the ship's island structure.

We were completely dependent upon the C-130's reverse thrust and hydraulic braking, plus a generous amount of deck, to stop the plane. We commenced our first approach and ended up stopping the plane in something less than 265 feet, roughly 100 feet or so less than our jets use today. We continued the series of landings and increased the aircraft's weight by adding more and more fuel. The final landings, at 121,000 pounds maximum gross weight, took 600 feet to stop. You can equate that stopping distance with the angled decks of today's large carriers, most of which have angled decks of 700 feet or more.

We maneuvered ourselves around on deck by reversing our aircraft props. We could just back up and get into positon for takeoff.

The Test Center's reports reflected that the C-130 study proved the aircraft to be entirely carrier suitable and an excellent COD aircraft, if the decision was made to use it. Of course everybody remained apprehensive about what to do with an aircraft of that size if it went "down" on deck for one reason or another. We left that decision up to the folks in the big building in Washington.

CAPTAIN DAVID McCAMPBELL

The Man: Captain David McCampbell, USN (Ret.), was a fighter pilot and the leading Navy Ace during WW II. In two days, October 24 and 25, 1944, he won the Congressional Medal of Honor and the Navy Cross while serving as Commander of Air Group 15 in USS *Essex*.

The Machine: F6F

His Story: Because I was air group commander, the admiral had told me he didn't want me to take part in any scrambles, meaning those times when enemy planes were advancing on the task group and fighters were needed to engage them. On October 24, we had a large group of Japanese coming in on the task force and the word had gone out, "All fighter pilots man your planes." Since there were only seven planes up and available at that time, I called the air officer on the squawk box and asked him if that meant me too. And he said yes. So, I started strapping on my parachute harness and shortly thereafter the air officer called back and said, "No, you can't go on this flight." And I said, "But my plane is already up on deck. It's being gassed now." So, he said, "Wait a minute." He went to the captain of the ship and asked him. The captain said, "Yes, by all means, with only seven planes available, we've got to intercept this Japanese flight."

So that's how I got to go. I dashed up to my plane and the crew was still gassing it. The word came down over the bullhorn from the air officer to send the air group commander down below if the plane was not ready to go. So I told the gas detail to clear out, although I knew I didn't have my tanks full.

This was not the largest flight of Japanese airplanes we had out there. But we were the northernmost task group, about 130 to 150 miles off Manila across the island of Luzon, and we were receiving the brunt of all the Japanese that attacked the U.S. fleet, four task groups.

On that day, October 24, I didn't have all the gas I needed but did have all the ammunition. I shot it all up except six rounds, which were hung up in one of the guns.

(The interviewer asked Capt. McCampbell if he practiced economy of fuel and ammo, since on that day he managed to shoot down nine enemy planes and two "probables.")

The two biggest concerns of a fighter pilot in combat are whether he's going to run out of ammo or gas, or both, before he gets the job done. I conserved gas by not charging around at full speed and, as far as ammo was concerned, I had been in combat long enough to know that you fired your guns in short bursts instead of long ones.

When I got back to my carrier on that day,

Essex couldn't take me — she had a full deck of planes. So, I had to land on another ship. It was either land on that ship or land in the water. I figured that I had less than five gallons of gas, hardly enough for another pass. When I came out of the arresting gear, the engine coughed. I was so low on fuel that in a three-point attitude the engine wasn't getting enough fuel.

After I got back to my ship I had to pay the price. The admiral sent for me. I told him how I had gotten the air boss' permission for the flight. He said, "All right, McCampbell, but don't let it happen again." Naturally, having shot down nine airplanes on one flight, it never did happen again.

The 24th was a big day. But the 25th was equally as big since I was designated by Adm. Mitscher as a target coordinator to lead three task groups to attack the northern Japanese force which had been sighted earlier that morning. It turned out that the enemy force was only about 100 miles from our ships when it was sighted. We were circling out there about 50 miles when I got word of their direction and location. I just headed for them and all the other planes followed me. The force consisted of four aircraft carriers and two converted

OLD WARRIORS

Soon to be emplaced in the museum are these aircraft from earlier days. Left column, top to bottom: a TD2C-1, secured to the flight deck of USS Coronado; an F4U-5N and TBM at Chevalier Field; a model of the N3N-3 framed by others in the collection which will be moved from the old to the new museum; and the skylab capsule. To the right of these is a P5M; below it, an SNJ with an R4D and UF-1. Above a PBY.

battleships. I believe there were also four cruisers and about eight or nine destroyers.

The fight went on all day from early morning until dusk. I was in the air three-and-a-half hours on one flight alone. I don't say the planes I was acting as target coordinator for did all the damage that day, but we sank four carriers, one cruiser and two destroyers and damaged the two battleships. Having two days back to back like these is like a baseball player who hits grand slam home runs back to back. I was awarded the Congressional Medal of Honor for the action on the 24th and the Navy Cross for the action on the 25th.

The F6F, by the way, has never had the proper amount of publicity from the standpoint of its flight characteristics. It was an excellent airplane, not the fastest; not fast enough to outclimb the *Zeros*, but certainly it was rugged. It had excellent armament and self-sealing gas tanks. I would stack it up against any other plane that was in the war at that time.

In order to be a good fighter pilot, you've got to be comfortable in the air. You've got to know your plane and be happy with it. Flying becomes second nature to you. Also, you've got to be a good gunner. You've got to have enough practice at shooting a sleeve so you are confident that if you get on an enemy plane you can shoot it down. And you've got to be aggressive. I would say aggressive more than audacious. You must get on the offensive and remain on the offensive as long as you can. Stay off the defensive.

The best day Air Group 15 had was June 19 at the Marianas' Turkey Shoot. There were 36 planes in the air group's fighter squadron, and mine, 37 in all. That action went on all day long and we got 58½ planes in one day.

LIEUTENANT RANDY CUNNINGHAM

LIEUTENANT J.G. WILLIAM DRISCOLL

The Men: Lt. Randy Cunningham and Ltjg. William Driscoll are the first "dual Aces" in Naval Aviation history, having together, as pilot and Naval Flight Officer, participated in the downing of five aircraft during action in Southeast Asia. They represent the new breed of Naval Aviation officer, the pilot/NFO team which has replaced the single air ace of earlier times.

The Machine: F-4 *Phantom II*

Their Story: Driscoll: There are some things in the air combat maneuvering environment that are always the same, that don't change. There are certain attitudes and philosophies that were the same in WW I and WW II and today. There are some refinements and subtleties in the jet age that certainly did not exist back in the prop age. It is, and was, one man in a machine versus another man in a machine. We can talk to a WW I or II pilot and the things we talk about will be almost exactly the same. We have a firm belief at the Navy Fighter Weapons School that the first man to see the other man is probably going to win. And, if he doesn't win, he probably is not going to lose, be it on radar or through the eyeball.

Cunningham: Things have changed little since the time of Richthofen, Immelman, Galland and since the time of McCampbell. They had large formations flying, going against large

formations. The MiG drivers in Southeast Asia launched very few airplanes against us. We saw MiGs only three times.

Driscoll: Generally, we would be on a patrol mission where we would be on what was called a hot vector. In other words, there would be bandits or bad guys heading in a certain direction toward us. And the radar control that

we had was sometimes good, sometimes marginal, sometimes very poor. We would just be physically looking around, scanning the sky. We would start a turn, and he or I would see a bandit all of a sudden and say, "There's a MiG, left, seven o'clock, come port hard." That's how the fight would start. Within our own airplane we were able to physically "acquire" an attacking aircraft.

Cunningham: Most of the time, because of their Russian training, the MiGs were taught to intercept, shoot everything they had, and run. They would try to get lateral separation, come back around where you couldn't see them and try to make an intercept. They would shoot, make a wave-down maneuver and break away and run. The majority of the time that the drivers were tapped, it was from the rear hemisphere. They had good ground control intercept. We had GCI control but we were limited because we were fighting over their country. That's a little bit of a disadvantage. Plus, if you get hit, you're over the bad guy country and you're a prisoner of war.

I'm alive today because of the training I got. When I met my first MiG I had probably 300 to 400 air combat maneuvering hops against simulated MiG-type airplanes. It was as though I had perhaps a year of combat experience before I met my first MiG driver. Some of their training was good, but basically, they didn't have as many flight hours as we did. The little things, the attention to detail, which are taught at Pensacola, pay off and you find out that they can save your life someday.

Driscoll: The major adversary we faced was the MiG-17, the subsonic fighter. However, it had certain advantages over the newer supersonic MiG-21. Four of our kills were against the MiG-17 and one was against the MiG-21.

Cunningham: On one occasion we saw three types, the 17, 19 and 21, in the same air space.

We work at the Navy Fighter Weapons School where we teach aerial combat. Prior to the advent of this school we had just about a four-to-one kill ratio over the MiGs — which wasn't very good. The fighter school was established and the Navy had a twelve-to-one kill ratio.

I think I was better trained than my adversary. I really believe Navy pilots are the best trained pilots in the world.

Cdr. Flatley launches from Forrestal in 1963. Testing of C-130 for carrier ops was a milestone in Naval Aviation history.

REAR ADMIRAL JEREMIAH DENTON

The Man: Rear Admiral Jeremiah Denton is the former POW who, upon being released after more than seven years of prison life, told a national television audience, "God Bless America." He is associated with "blimp" flying, the *Super Constellation*, the A-1 *Spad* and the A-6 *Intruder*, in that order.

The Machine: Airships, WV-2, A-1, A-6

His Story: When I was a sophomore in high school, about three years before WW II started, I applied for the Naval Academy. All the way through the academy my prime ambition was to become a Naval Aviator. As a boy raised in Mobile, Ala., my family and I would drive to Pensacola in the summertime and watch the flight training taking place, particularly in the bay. Those were the high spots of my summers. It was a foregone conclusion that I would go into the Navy and end up flying.

When I graduated from the Academy, there was a requirement that one had to spend two years aboard ship before entering the aviation training program. I was quite impatient to get into flight training. So, after about a year aboard ship — I was a plank owner in USS *Valley Forge* — I applied for flight training at Pensacola. They would not grant a waiver of the two-year rule; however, before I had finished the two years on *Valley Forge*, an emergency request for applications for the lighter-than-air (LTA) program came through. I went ahead and put in for that program and, along with eight other ensigns from the ship, was accepted with the waiver of the two-year shipboard duty requirement.

I went to Lakehurst, N.J., and completed two years in antisubmarine work. I get a lot of kidding about it but I did enjoy blimps and, in those days, they were good in ASW.

After two years in the squadron, I went as project officer and test pilot to the Naval Airship Training and Experimental Center at Lakehurst where I was test pilot for the blimp carrier landing program. I managed to get 73 carrier landings in a blimp, a very unusual series of experiences which I enjoyed.

I then became project officer for the first big airborne radar, which is still flying with some modifications. It was a 17½-foot antenna and I became the project officer for the first radar in the air which provided air-to-air intercept data on other fighters.

I finally managed to get to Pensacola for flight training. I felt it was an advantage to have learned something about flying from my blimp training and I did quite well going through the heavier-than-air program. I was predestined to be assigned to an aircraft which constituted the heavier-than-air application of the radar which I had tested in blimps. It became the WV-2 prototype, the old *Super Connie* with the 17½-foot antenna. I am proud to know that it did a good job in Vietnam with

its associated electronics countermeasures equipment. To know that it was still operating profitably in a war almost 20 years after I was flying it, was a source of satisfaction to me. But it wasn't very glamorous work, as aviation goes.

I was the project officer for that plane and made a number of deployments to the Mediterranean, the Caribbean and the Pacific. I then went to the Sixth Fleet staff where I developed a real yen for carrier-based aviation. I went to Pensacola from the Sixth Fleet and, while there as an instructor, I managed to accumulate some carrier landings. I really enjoyed instructor duty. It was probably the most rewarding tour of my life. I feel that the relationship between an instructor and student is one which leaves you with a great sense of fulfillment when your student — who in many cases had never been in the air before — is able to take that plane up and fly it by himself after your instruction.

From Pensacola I went to Attack Squadron 42, which was the replacement air group for the AD *Spad* (later the A-1). Getting into

VA-42 was the closest I could get to being a glamorous attack pilot. I have great respect for the old *Spad*. Some of my fondest memories are of duty in USS *Independence* in the *Spad* and I'll never forget the friends I had in VA-75 where I served as operations officer, executive officer and commanding officer.

I went to the Naval War College for a year and then was lucky to be reassigned in January 1965 to VA-42, then training pilots in the new A-6 *Intruder*. Later I went into Air Wing Seven, on *Independence* again, this time flying A-6s. We went to Vietnam and I became one of the air wing's group strike leaders. Just two days before I was to relieve my good friend (now Rear Admiral) "Swoose" Snead as commanding officer of VA-75, I went on a raid against a military installation about a mile from the bridge at Bien Hua, which we had hit on numerous occasions.

At that point, I could hardly look back on a glorious career of accomplishments in Naval Aviation. However, I did feel that my training had been redeemed. I was able, on one flight into North Vietnam, to lead a group of planes on a bridge. We missed it. I was lucky enough to go back alone and drop a span with my own bombs. I hope that paid for my flight training because seven years and seven months of my Naval Aviation career were spent in jail. I also hope that those of us who were Naval Aviators in that environment carried on the great traditions of Naval Aviation. We did adhere to the chain of command and to the disciplines we had learned in the Navy and in Naval Aviation in particular.

VICE ADMIRAL WILLIAM HOUSER

The Man: Vice Admiral William Houser is Deputy Chief of Naval Operations (Air Warfare), the job held by an illustrious string of aviation admirals in the Navy Department, including John S. McCain, Arthur Radford, Marc Mitscher, Aubrey Fitch, Donald Duncan, John Dale Price, William V. Davis, Jimmy Thach, Robert Pirie, William Schoech, Paul Ramsey and others. Bill Houser was part of the transition era, when the Navy switched from props to jets, from straight deck carriers to nuclear carriers with canted decks.

The Machine: F4U *Corsair*

His Story: During the Korean conflict, the Navy began to fly jets, although props, of course, lasted right through the war and after. The *Corsairs* were with us at the start and I was in them when the war ended. The early jets were short-legged and underpowered. We had the F9F-2s which had to take off later and recover earlier than the props because of their short range. The *Banshee* came in toward the end of the Korean fighting. The F3D *Skyknight* saw some service as a special mission aircraft and as a night fighter.

The first strikes against North Korea were of the hit-and-run variety. For example, there would be a two-day operation and then we'd retire for a period of time. At the end there were four carriers on the line and we were hitting them every day with sustained operations. It was truly a transition between the tactics of WW II and those of Vietnam, in which we saw sustained operations for eight years.

In Korea, the Navy's air-to-air action was limited. It was principally a war of close air support. *Corsairs* were not principally night fighters although they did some night work. The F4Us and AD *Skyraiders* were the workhorses when it came to carrying bombs. The

only Navy Ace of the Korean fighting was Lt. Guy Bordelon, who flew an F4U night fighter from ashore, on detachment from a carrier. He was credited with shooting down five night-flying intruder aircraft which had been dropping bombs and starting fires in harassment of the South Koreans.

The helicopter came of age in Korea. It was useful principally as a rescue vehicle. This was not only for pilots afloat in the water but also for those shot down over land. Helos then were small and underpowered compared to

today's models but the courage of the pilots in Korea was just as impressive as it is today.

The *Corsair* was the first plane I flew in combat. During WW II, I was a deck officer, having graduated from the Naval Academy during the early part of the war. I was in flight training when the war ended and I subsequently had many flights in combat airplanes. Aerial combat for me commenced with the Korean War, when I had a squadron of *Corsairs*. That airplane had survived WW II and the ones we flew were improved versions of the same plane. At one time the *Corsair* was thought to be too difficult to fly aboard ship. It subsequently was improved and, at one time, *Corsairs* were the only aircraft on some of our ships. An air wing was composed of five squadrons of *Corsairs*, which shows how versatile the F4U was.

It had a long nose, a gull wing and some rather unusual characteristics. Ailerons were made of plywood which often warped. At high speeds, these ailerons would turn the airplane in directions that you did not expect. It was a rugged aircraft and fast for its time. It served as a good fighter and as a good attack bomber. That was why it could serve in so many different squadrons.

I sat in the cockpit of one not long ago and many memories came back to me — flying off the end of ships and coming back aboard. Many friends came to mind, some of whom are no longer here.

The *Corsair* will remain one of the most remarkable airplanes ever developed. It was once called the "Ensign Eliminator." It was harder to fly than some of the other airplanes. It was also known as "Bent Wing" or the "Bent Wing Monster." Because the seat was so far back, it was also known as "hose nose" and, in its last days, it received the rather inelegant nickname of "The Hog."

CAPTAIN CHARLES CONRAD

The Man: Captain Charles "Pete" Conrad, USN (Ret.), is among the few men who have walked on the moon. Part of the NASA astronaut crew, he has now retired from the space program and the Navy. His career spans aviation from wire-strutted Navy N3N, *Yellow Peril* trainers to *Skylab 1*, which he commanded.

The Machine: N3N, F-4, *Gemini*, *Apollo*, *Skylab*

His Story: I was 16 at the end of WW II and I was trying to earn enough money to learn how to fly. At that time I went to work for a man who had bought ten Navy N3Ns at a surplus sale. He was licensing them for crop dusting. I worked for him, earned my flying time and did some of my first flying in the N3N as a boy. I was born in 1930, a time when we had hardly exceeded a couple of hundred miles an hour and barely gotten above 20,000 or 30,000 feet in aircraft. By the time I got to college and took up aeronautical engineering, we had just begun to break the sound barrier. When I started flight training in 1953, we were just beginning to go twice the speed of sound. Then in 1960-61-62, we went into space. I think it's remarkable that I have traveled over 20 million miles by spacecraft, made it all the way to the moon and, in doing that, performed experiments both on the moon and in earth orbit from *Skylab*. All accomplished in relative comfort as compared to the early days of aviation. We've gone a great way.

After receiving my wings I was privileged to go to a fighter squadron that had an excel-

lent skipper. We had one of the best fighter outfits in the Atlantic Fleet. We excelled at gunnery and represented the Atlantic Fleet for two years at the Naval Air Weapons Meet at

El Centro. The second year I managed to be runner-up in gunnery to a Navy Ace from WW II, Commander Al Vraciu, who won by six hits. It made me feel very good to think that I had gotten into that kind of company as a lieutenant junior grade fighter pilot. I was still a wingman in those days.

From the day I entered the Navy, I was primarily interested in being able to go to test pilot school, which was difficult to get into. Eventually I left the squadron and went to Patuxent River to the Naval Air Test Center. It was a great experience. I was somewhat disappointed that I was selected to do test work for only one year and then transferred to the test pilot school as an instructor. However, it not only turned out to be a good deal, but a very pleasant surprise. One doesn't really learn a subject until he has to teach it. I enjoyed that — it gave me the opportunity to meet the so-called cream of the crop in the Navy. And it also gave me the opportunity, because of a far-thinking admiral in charge, to be as current as could be in what was going on in Naval Aviation testing. The admiral gave us permission, on a non-interference basis, to fly at any of the test units, on project flights. That gave me the opportunity to fly just about everything that the Navy was looking at then: planes like the *Vigilante* and *Phantom*, just coming in. So, that was a great three-year tour.

Along in the middle came Project *Mercury* and I was among those considered for selection as an astronaut. I was younger and less experienced than the original *Mercury* seven, however, and was not chosen. I went to VF-121 on the West Coast and began to learn night-fighter and all-weather tactics. At the same time I was working my way into F-4s and eventually did instructing in *Phantoms*. Then I went to VF-96.

After about a year with that squadron, just as we were getting ready to deploy to WestPac, a call was made again for volunteers for the space program. My roommate, Dick Gordon, and I both took the tests. I made it, but he didn't. I left the squadron as it departed for the Pacific.

The space program needed more people the next year and Dick Gordon came in then. He was teamed up with me on the backup crew for *Gemini 8* after I had flown *Gemini 5* with Colonel Gordon Cooper. Dick and I went on to fly *Gemini 11* together. Captain Al Bean, whom I had known in my early days in Jacksonville and who was a student of mine at the test pilot school, was also in the program and teamed up with Dick and me on *Apollo 12*. Dick then retired from the Navy and the space program while Al and I worked on *Skylab*. I flew the first one, and Al flew the second.

A lot of people have asked me what it's like to stand on the moon. They don't realize that I worked long hours, five or six days a week, for seven or eight years, knowing that some day I would have the opportunity to do that. When I stepped out onto the surface of the moon, it was the most logical place for me to be at that time. *Apollo 12* was designed to prove the accuracy of the guidance system after the initial landing by *Apollo 11*, and our other objective was to prove that man could do useful work in exploration of the moon.

I knew I was at the correct position. My very first thought in stepping out on the moon was to verify in my mind that not only had we landed in the right place but that the *Surveyor* equipment we had come to retrieve was in the crater next to our landing spot. I stepped around to the side of the LEM and looked back into the crater. I saw the *Surveyor* gear sitting in the shadow. From there it was all downhill and I was quite happy. Instead of being lonely, I felt secure. We had made a little trip for three-and-a-half or four days and we were now resting. It could just as well have been the middle of the Sahara Desert. I wished we could stay longer and also that I could return on subsequent flights because the moon is a very wonderful and mysterious place. It's certainly a great feeling to know that you've explored where no one has ever been before.

I talked to a geologist and he mentioned, very casually, that he and a group had just finished preliminary looks at the *Apollo 12* rocks and were just beginning the serious study in detail. This was four years after the landing (November 1969) and he was telling me that they'd just had a cursory look at the rocks and were only then getting serious.

I went over to *Skylab* and tried to flush lunar geology from my mind. I wanted to become a good solar observer and I spent a lot of time studying the sun and solar physics so I could properly operate a solar telescope on the flight.

All three *Skylabs* are over now and the solar physicists probably have so much data from the sun that it will take 10 to 15 years to fully assimilate it all. In 15 years they'll have completely rewritten the textbooks on solar physics from the knowledge gained on those flights. Who knows, perhaps we'll gain insight into how to make controlled-fusion reactors generate power. In a matter of years, perhaps, this work will lead to a better, cleaner, nuclear energy or a better idea of how we can harness the sun's energy directly.

In looking back over everything that I've done in the Navy and in the space program, I think that absolutely nothing matched night carrier aviation. I still think that separates the men from the boys. It's more difficult than any of the other things I did, including landing on the moon.

VICE ADMIRAL ROBERT BURNS PIRIE

The Man: Vice Admiral Robert Burns Pirie, who retired as Deputy Chief of Naval Operations (Air) in 1963, is known affectionately as "The Beard," a nickname he earned as one of the few "medically approved" wearers of facial hair. His skin needs protection from the sun, and the beard was bright red before it turned a distinguished white. The admiral assumed directorship of the Naval Aviation Museum Association following the death of his old friend, Adm. Arthur Radford.

The Machine: F3B, F4B-3, FF-1, Ford Tri-Motor, Fokker Tri-Motor

His Story: I completed flight training in August of 1929 and was ordered to Fighting Squadron Three on USS *Lexington*. *Lexington* and *Saratoga*, in commission for about one year, with *Langley*, the first carrier, were the only carriers in commission. After one or two months in the squadron, after being indoctrinated in the F3B, I carrier qualified on *Langley*. I was ordered to the Flight Test Section at Naval Air Station, Anacostia, Washington, D.C., as an assistant flight test officer after two years of squadron duty.

We had a number of interesting airplanes going through experimental work at that time. My first project was the F4B-3, a Boeing fighter which was the successor to the F3B. The F4B-3, a derivative of the F4B-1, had the first monocoque fuselage that we had in the service. It was a fine airplane, had excellent handling characteristics and was an interesting development for the Navy.

Also at that time we received the first Grumman aircraft. In my second year at Flight Test, we received the FF 1 and SF 1, which were the two-seater fighter and scouting planes from which the later single-seat Grumman fighters were developed. We also had several of the older transports, such as the Ford Tri-Motor and the Fokker Tri-Motor and the Sikorsky amphibian.

Being the junior officer in Flight Test, it was my lot, quite often on weekends, to be called on to fly VIPs in the Ford or other transports. It was also a very interesting period because of the many pioneers of early Naval Aviation who were on duty in Washington while I was there. I had contact with officers in the Bureau of Aeronautics, then headed by Admiral Moffett, and I had the privilege of flying him on several occasions. In fact, I flew him and three other officers to Lakehurst where they boarded the aircraft in which Adm. Moffett was killed.

On duty in Washington at the time was LCdr. Marc Mitscher, who later commanded Task Force 38 during the war; Admiral Kelly Turner, who was famous as the commander of the amphibious forces in the Pacific at Guadalcanal and other spots; and Admiral Radford, who was first chairman of the Naval Aviation Museum Association, Inc.

In January 1933, LCdr. Gerald Bogan (later an admiral) and I were taking an FF-1 and SF-1 to San Diego from Anacostia for their first carrier landings. We stopped in St. Louis overnight. The next morning we took off with the air temperature at about ten degrees above zero. In retracting my landing gear — it was the first retractable gear we had in any combatant aircraft — the gear shattered and left the landing mechanism just dangling.

I made a run alongside Bogan and pointed to the gear. He went back to the field, landed and explained the situation to the ground crew. They wrote in chalk on the side of his plane telling me to land in the Mississippi River next to a barge. I wrote *them* a note and dropped it on the field. I said I would rather make a wheels-up landing on the field than freeze to death in the Mississippi River in January.

I had a Chief Petty Officer Bailey with me and he got out on the wing and tried to kick the landing gear down into place. He was unable to do it because his leg wasn't long enough to move the wheel into the locking position. So after struggling with it for an hour or so, Bailey got back into the plane. I gave him a choice of parachuting or staying with the plane. He said he would rather ride it in.

After we burned the fuel down to ten gallons, we landed. The plane skidded along about 100 feet on its belly and bent the prop and a little of the cowling. We jacked it up and they flew a new prop and full gear for the retraction system out of Anacostia. We fixed the aircraft and flew to San Diego, California, for completion of the assigned mission.

As a result of this, I got a letter of commendation from the Secretary of the Navy, Claude Swanson, for salvaging the airplane rather than bailing out.

one man speaks out

There are many from the aviation community who support the Naval Aviation Museum. One officer who has become especially interested in the development of the museum was inspired by a film he saw not long ago. He was prompted to write a letter to some fellow Navy men. This letter is quoted in part and appears below.

Captain Tom P. Stewart is now serving as Executive Assistant and Naval Aide for the Assistant Secretary of the Navy (Manpower and Reserve Affairs). Prior to this assignment he was with the Plans and Policies Directorate of JCS. A combat veteran, his principal flying experience has been with heavy attack squadrons and A-3 Skywarriors. Capt. Stewart was commanding officer of VAH-8 in Air Wing 14 and VAH-123, the A-3 Rag. He was executive officer of USS Ranger.

"Please let me share with you an experience in which I believe you will be interested. During my attendance at a recent Naval Aviator/Flight Officer Luncheon, Vice Admiral Malcolm Cagle, Chief of Naval Education and Training, made a presentation on the Naval Aviation Museum including a very stirring 18-minute movie, *Flight from Yesterday*. I highly recommend it to you. During this presentation, he remarked that Admiral Radford had told him that Naval Aviators and Naval Flight Officers would probably never really support this outstanding project and that he would have to get out and drum up support elsewhere if it was to be successful.

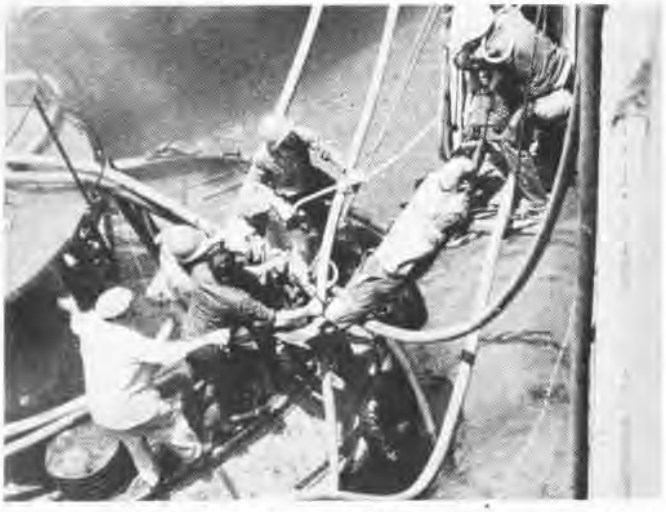
"Maybe it was the camaraderie at the luncheon, Admiral Cagle's remarks, the fine slide presentation on the aircraft renovations, that great movie, or the combination, but I came away charged up as I have seldom been — outside a night, rainy cat-shot or recovery. I sat right down and dashed off a rather smart . . . letter to VAdm. Cagle in which I said: 'Where do I sign up?' I was reminded of the many reasons why I (with no naval family background) made the decision to become a Naval Aviator. I also acknowledged that I was probably an example of what Admiral Radford had meant (having only contributed $30.00 over a three-year period). Although my resources are limited, I could and would commit more time and effort to this exciting and worthwhile project.

"Naturally VAdm. Cagle nailed this 'wise' captain right away. So, I'm writing to you and all Naval Aviators and Flight Officers on the Joint Staff and in Defense Agencies and in Unified and Specified Commands to urge you to make an effort to see that movie, get some more information on the museum and provide your support in whatever way you feel that you can. It's a fascinating history that's still being made and you and I are part of it. If you are already helping, great. Let's do all we can, individually, to help and see that the story gets told.

"What do you say? Can those of us in the 'purple suited' jobs lead the way by our 100 percent support?"

The movie "Flight from Yesterday" can be obtained on loan by contacting Commander C. W. Larson, Chief of Naval Education and Training Public Affairs Officer. An expanded version of the film, entitled *Wings of Eagles, Wings of Gold*, can be obtained for viewing by contacting the Public Affairs Officer at the major air commands.

PEOPLE PLANES AND



Less than 24 hours before President Nixon's June visit to Alexandria, Egypt, USS *Inchon* crew members were fighting a fire aboard an Egyptian cargo ship moored in **Alexandria Harbor.** The ship's rescue and assistance team, headed by CWO Lapel Miller contained the fire and HM Harold R. McHenry saved the lives of the *Al Mokattan* crewmen overcome by smoke inhalation. He gave one man mouth-to-mouth resuscitation and carried him from the flaming cargo hold. He revived two other Egyptians with oxygen.

Summer is traditionally **transition time** at Naval Aviation activities. On July 25, Commander Leonard E. Giuliani relieved Commander Joseph E. Potosnak as Commander, Attack Carrier Air Wing Nineteen, at NAS Lemoore, Calif. The guest speaker was Captain Forrest P. Anderson, C.O. of USS *Oriskany*.

Commander Riley D. Mixson assumed command of Attack Squadron 215 from Commander Douglas E. French at Lemoore on July 26.

Captain Jack F. O'Hara assumed command of **Light Attack Wing,** U.S. Pacific Fleet from Captain James A. Homyak at Lemoore on June 28. Vice Admiral Robert B. Baldwin, Commander, Naval Air Force, U.S. Pacific Fleet, was the guest speaker.

Commander Larry E. Kaufman relieved Commander Robert L. Leuschner, Jr., as commanding officer of Attack Squadron 155 on July 17, at NAS Lemoore.

Commander David N. Rogers relieved Commander Darrell D. Owens as commanding officer of Attack Squadron 192 at Lemoore on July 16. Captain Robert E. Kirksey, C.O. of USS *Kitty Hawk* was the guest speaker at the *Golden Dragon* ceremonies.

At **NAS Alameda,** Calif., Commander Raymond Blake is the new skipper of VA-304, relieving Commander Jerry Kirk. VA-304 is part of Carrier Air Wing Reserve 30. The squadron flies the A-7.

Commander George C. Greene took command of Air Antisubmarine Squadron Twenty One from Commander Richard E. Meyer on June 21, at NAS North Island, Calif.

On June 14, Fleet Composite Squadron Eight changed command as Commander Stephen B. Sloane relieved Commander Robert G. Carlson at **Roosevelt Roads,** P.R.

Commander Gerald L. Riendeau relieved Commander Edwin R. Kohn as Commander, Attack Carrier Air Wing One, at NAS Oceana, Va., on June 26. The guest speaker was Rear Admiral Dewitt L. Freeman, Commander, Carrier Group Four which consists of *John F. Kennedy, Independence* and *Saratoga*.

Commander "Loc" Lynch was relieved by Commander Ed Promersberger at VF-84's change of command on July 3, at Oceana.

On June 26, **Patrol Squadron Twenty Two** held a change-of-command ceremony at NAS Barbers Point, Hawaii, in which Commander George C. Wheeler was relieved by Commander William L. Rice. The guest speaker was Captain G. J. Schuller, Commander, Patrol Wing Two.

Rear Admiral Mason Freeman stepped down from his post as Superintendent of the Naval Postgraduate School, Monterey, Calif., on June 28, after a 43-year naval

PLACES

career. He was relieved by Rear Admiral Isham W. Linder. The principal speaker was Vice Admiral Malcolm W. Cagle, Chief of Naval Education and Training.

At NAS Whidbey Island, Wash., Commander Jackson E. Cartwright was relieved by Commander Gordon R. Nakagawa who became the 18th commanding officer of Attack Squadron 196 on July 12.

Lieutenant Colonel Harlan P. Chapman assumed command of Marine Fighter Attack Squadron 314 at **MCAS El Toro** on July 3. The first former POW to take a tactical command within the Third Marine Aircraft Wing relieved Lieutenant Colonel John A. Reese, Jr., as commanding officer of the *Black Knight* squadron of Marine Air Group 11.

On July 20, Commander Ronald F. Moreau assumed command of Attack Squadron 105, relieving Commander Peter N. Puerling in ceremonies at NAS Cecil Field, Fla.

Commander James M. Seeley relieved Commander Paul F. McCarthy, Jr., as Commander, Attack Carrier Air Wing Nine, aboard USS *Constellation* at NAS Cubi Point, R.P., on July 14.

Command of Antarctic Development Squadron Six, the special bi-polar aviation squadron, changed hands on July 18, when Commander Fred C. Holt relieved Commander Vernon W. Peters at NAS Point Mugu, Calif.

On July 13, former Vietnam POW, Commander Claude D. Clower, relieved Commander James F. Dorsey, Jr., as commanding officer of Fighter Squadron 21 onboard USS *Ranger* in port at Subic Bay, R.P.

Captain Frederick S. Gore was relieved as commanding officer of NAS Willow Grove, Pa., by Captain Jack G. McDonell on June 29. Captain Gore retired after 30 years of active naval service.

Onboard USS *Saratoga* in Mayport, Fla., on July 19, Commander John W. Holtzclaw relieved Commander Danny J. Michaels as commanding officer of Fighter Squadron 103, home-ported at NAS Oceana, Va. VF-103 flies the McDonnell Douglas F-4J.

The first commanding officer of Helicopter Antisubmarine Squadron, Light Thirty Three was relieved on July 12, at NAS Imperial Beach, Calif., when the *Snakes* said farewell to Commander M. A. Belto and saluted their new C.O., Commander L. "L" Stoker.

On June 20, the last operational VH-34 was mounted at the main gate of MCAS New River, N.C. In photo, a *Sea Horse* lifts an observation plane in the late 1950s.

Several **Marine Corps squadrons** are moving. VMA-513, with its AV-8A V/STOL, moved from Beaufort, S.C., to the 1st MAW at Iwakuni, Japan, on July 17. At about the same time, VMA-324 at Beaufort was deactivated and VMA-311 at Iwakuni was administratively transferred to Beaufort.

VS-29's Grumman S-2E **Tracker** completed its last flight with the fleet before being transferred to the Naval Air Reserve in ceremonies at NAS North Island, Calif., on June 3. VS-29 has flown the *Tracker* since 1960, but is now moving from props to S-3 *Vikings*.

ABOVE AND BEYOND

Young Brad Earnest stood before the proud gaze of his mother, Mrs. Minna Earnest, and his grandparents, Mr. and Mrs. Helms, as Rear Admiral Jack Christiansen, Assistant Chief of Naval Operations (Air Warfare), presented him with 39 posthumous awards and talked of his father.

Brad's father was one of the most highly decorated Naval Aviators of the Vietnam conflict when he was killed in the line of duty on November 28, 1972, in an aircraft accident following a catapult launch from USS *Saratoga* (CV-60). During his three deployments to the Western Pacific, Commander C. M. "Charlie" Earnest flew 371 combat missions.

Cdr. Earnest was born on October 8, 1934, in Opelika, Ala. He was graduated from Auburn University in 1955 and was commissioned in 1956 after completing a year of graduate studies in physics.

After serving a short tour as public information assistant at NAS Atlanta, Ga., he entered flight training at Pensacola, Fla., and was designated a Naval Aviator in 1958.

His first assignment was to All-Weather Attack Squadron 33, where he flew the Douglas AD-5N *Skyraider*. During this time, he made Mediterranean deployments aboard *Independence*, *Saratoga* and *Intrepid* — serving as flight officer, operations officer and officer in charge.

In 1962, Cdr. Earnest was aide and flag lieutenant to Commander, Training Command, Atlantic Fleet. Two years later, he attended postgraduate school at Monterey, Calif., and was graduated with a master's degree in operations research.

In 1966, he joined Attack Squadron 153, flying the A-4 *Skyhawk* on 221 combat missions. In 1969, he was an analyst for tactical air programs in the Office of the Secretary of Defense.

He became executive officer of Attack Squadron 75 in May 1971 and assumed command of the squadron in June 1972.

With the *Sunday Punchers*, he devised a replacement parts program for the fleet A-6 community and formulated tactics for A-6 *Intruder* night missions based on his personal experience.

On the night of August 6, 1972, Cdr. Earnest directed the inland rescue of a downed pilot in a heavily defended enemy area. As on-scene commander, he guided a helicopter to the pickup area where the pilot was rescued and returned to the task force.

On September 11, he led a 37-plane air wing strike which destroyed a North Vietnam storage area and barracks complex without damaging or losing an aircraft.

On October 13, Cdr. Earnest piloted a single aircraft on a night low-level mining mission through heavy anti-aircraft and surface-to-air missile opposition.

On April 19, 1974, Brad Earnest accepted his father's Silver Star and two gold stars in lieu of 2nd and 3rd awards, the Distinguished Flying Cross and gold stars in lieu of 2nd through 7th awards, the Bronze Star, the Air Medal with stars and numerals in lieu of 3rd through 32nd awards, the Navy Commendation Medal with gold stars in lieu of the 2nd through 4th awards and Vietnamese ribbons.

SUEZ SWEEP

Story by JOC Warren Grass and JO2 James Heltsley

On April 22, 1974, the first American RH-53 *Sea Stallion* landed in Egypt. As it settled on the Port Said quay wall at the Mediterranean end of the Suez Canal, the aircraft's giant rotor blades whipped a violent spray of sand over the ground crewmen waiting to hook their Mark 105 magnetic minesweeping sled to the helo.

Once the man-made gale subsided, the men raced to couple sled to aircraft, then scurried for cover as the Norfolk-based bird from Helicopter Mine Countermeasures Squadron 12 (HM-12) lifted majestically, taking the 105 in tow.

Operation *Nimbus Star*, mine clearance of the Suez Canal, was under way.

Ground crewmen that first day and throughout the operation were from the Charleston-based Mobile Mine Countermeasures Command (MoMCom). That command has two roles: operational control of minesweeping activities by a headquarters staff and ground maintenance of minesweeping gear, including the Mark 105 sled, up to the moment that an HM-12 helo takes that gear under tow.

A month before the initial sweep mission, the Department of Defense made a simple announcement: "At the request of the Egyptian government, the U.S. government has agreed to assist in sweeping mines in the waters of the Suez Canal. . . . The U.S. government has also agreed to provide technical advice and training to Egyptian personnel responsible for clearing unexploded ordnance in the canal and on its banks."

Since that first announcement, the 101-mile-long Suez Canal has been declared clear of mines. MoMCom and HM-12 have returned to their home bases.

The remaining portions of the clearance agreement, unexploded ordnance disposal and ship salvage, are scheduled to continue into 1975.

While the airborne mine countermeasures operation was dubbed *Nimbus Star*, the companion operations were code-named *Nimbus Moon* (land and water) and *Nimrod Spar* (sunken

ship removal). The land portion of *Nimbus Moon* involves U.S. Army engineers and EOD (explosive ordnance demolition) teams training and advising Egyptian Army teams in clearing explosive ordnance from the canal's edge and out 50 meters from the banks.

Meanwhile, U.S. Navy EOD men are training and advising Egyptian Navy counterparts in clearing explosives from the canal itself.

Nimrod Spar involves salvage (removal) of ten sunken ships lying along the canal's length. While the U.S. Navy is furnishing coordination and liaison for the effort, a U.S. civilian salvage firm is doing the actual work.

Final operation planning sessions were under way the early part of this year. In March, when the Department of Defense announced the undertaking, a 35-man advance party from the U.S. was already in Egypt firming up details with the American Embassy and Egyptian and British officials and technicians. Everyone recognized the importance of the job to be done.

Four days before the operation began, a British contingent of three minehunter ships, a command and support ship and a team of 32 divers arrived at Port Said.

The Royal Navy's first job was a preliminary search for mines in the USS *Iwo Jima* (LPH-2) anchorage area about six miles off Port Said at the northern entrance to the canal. That ship, and later USS *Inchon* (LPH-12), served as flagship for Rear Admiral Brian McCauley. As Commander, Task Force 65, the admiral had overall command of the operation until June 3, when he was relieved by Rear Admiral Kent J. Carroll.

While the mine hunters worked outside Port Said, HM-12 pilots and air and ground crewmen, under the capable eye of Commander Melvin Runzo, C.O., were off-loading their

Mark 105, towed by helicopter, simulates the magnetic field of a ship by generating electricity which actuates the firing mechanism of magnetic mines.

RH-53 *Sea Stallions* from Air Force C-5A *Galaxies* at the British RAF base at Akrotiri, Cyprus.

The giant minesweeping helos had been broken down in Norfolk for quick transport to Cyprus where they were reassembled. They were picked up there by *Iwo Jima* on her way to the anchorage at Port Said. Before the helicopter carrier let down her anchor, the squadron flew a double safety-check sweep of the anchorage area.

In Cairo, meanwhile, more than 400 Americans from RAdm. McCauleys' mine warfare force staff, the MoMCom staff, HM-12 personnel and other units from as far away as Long Beach and San Diego were off-loading from still more C-5As.

Most of the mine warfare force people would conduct their part of the operation from on board the LPHs. MoMCom staffers and their commander, Captain Felix Vecchione, were almost immediately loaded onto buses in Cairo for the two-hour ride to the canal.

Thus, the first sweep day, April 22, found Capt. Vecchione, his headquarters staff and MoMCom Unit Alpha, under Commander Jellison, at Ismailia. Ismailia, once regarded as the garden spot of the Suez Canal, lies midway between Port Said and Port Taufiq-Suez City-Adabyia on the canal's Red Sea entrance. Meanwhile, MoMCom Unit Bravo, under Commander Cyrus Christensen, was at Port Said. The two units worked at those locations until the northern half of the canal was swept.

Cdr. Christensen then moved his crew to Adabyia, while Cdr. Jellison and his unit began operations at Deversoir, about 20 miles south of Ismailia, on the northern end of the Great Bitter Lake.

From those two points, the MoMCom units ensured that HM-12 was provided with Mark 105 sleds and magnetic orange pipes (MOPs) for the final stage of the operations.

During a conversation about three weeks before the operation's conclusion, Capt. Vecchione reflected on his command's preparation for *Nimbus Star*.

He called the beginning "tough." HM-12, the only squadron equipped to work with MoMCom, converted to a newer version of the RH-53 after *End Sweep*, the Haiphong Harbor sweeping operation. That change-over

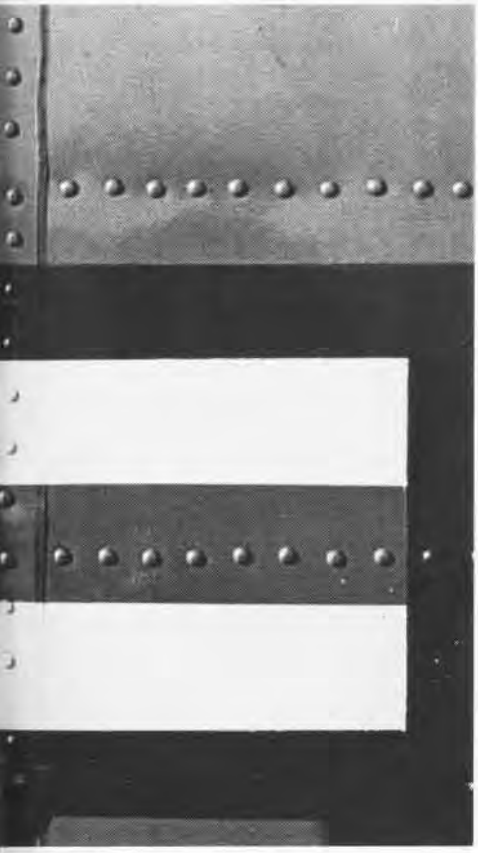
Guarded by a curious Egyptian, EN2 Claude Johnson works on a Mark 105 engine.

Cdr. Runzo, with HM-12 during End Sweep last year, is now squadron commanding officer.

allowed no time for minesweeping exercises before the operation in Egypt began. But after the first two weeks, everyone got into the rhythm of things and did a fine job. While weather and austere living conditions were negative aspects, they were more than made up for by the coordination and cooperation among all involved. Flight conditions were outstanding all the time, a major factor in the success of the operations.

"From the beginning," Capt. Vecchione said, "we met with Rear Admiral Fouad of the Egyptian Navy twice a day, getting different items ironed out. But, as the operation progressed, everything was going so smoothly that we cut our meetings down to one. It was a good experience. We've done a job in Egypt and the Egyptians have done everything they could to help us. The difficulties were few."

Cdr. Runzo compared the *Nimbus Star* and *End Sweep* operations, saying, "In *End Sweep* the minefields were generally in open water and only three to four miles from the launch ships. This allowed for short transit



An HM-12 crewman keeps an eye on the trailing sled sweeping the Great Bitter Lake.

A Mark 105, with generator off, scoots past an Egyptian merchant vessel in the Suez Canal.

Cdr. Jellison and Capt. Vecchione, above, discuss a Mark 105 problem at Deversoir. Egyptian Admiral Fouad and Capt. Vecchione before a helo flight to Iwo Jima. Sea Stallion crewmen, right, turn rotor blades on the flight deck of USS Inchon.

times to the operational area and plenty of room for turns while under tow. *Nimbus Star*, which included operations in the southern areas, required as much as a 40-minute transit flight from the ship to the stream site before towing could commence. The geography of the man-made canal required tight, precise turns and expert tow techniques."

He went on to explain that *End Sweep* was the first operational towing in a live minefield. The expertise developed there was used effectively to shorten the operation time involved in *Nimbus Star*.

When temperatures reached 125 degrees, the late afternoon tow missions were curtailed because the helos couldn't carry a full fuel load. Crew fatigue was much higher than expected. Crews had to be limited to one tow mission per day as heat exhaustion became evident at both Ismailia and Adabyia.

While *Nimbus Moon* was gathering momentum near the end of May, *Nimbus Star* was drawing to a close. Of his staff's part in the operations, RAdm. McCauley said, "We had *Inchon* and *Iwo Jima* north of Port Said and were sweeping all the way down into Suez Bay, over 100 miles from the ships. This complicated aircraft control and aircraft support in ports farther away.

"However, the Egyptians were receptive and friendly. They welcomed us. The Army, Navy and Air Force were extremely helpful. The Suez Canal Authority did everything we needed."

He went on to explain that there are always some differences when working with other nations, just as there are differences working with other units of our own people. But the British, Egyptian and U.S. military services were able to work out those differences. They organized and put together an extremely harmonious and satisfactory operation.

"I don't think there have been any major problems," he said. "There are certainly some difficult ones ahead, particularly the business of clearing the ordnance from both the canal and the banks. This will be an extremely tedious job and one which will require a great deal of patience, a great deal of work, and a not inconsiderable amount of danger. But the Egyptian

Army and Navy are doing the lion's share of this work."

All the U.S. military services participated in the Egyptian operation. The Air Force provided the airlift to Egypt and some rather sophisticated communications equipment which helped in the control of airfields, helicopters and aircraft up and down the canal.

The Army trained the Egyptian Army in the use of its equipment and acted as an advisory team while providing certain equipment that the Egyptians lacked.

The Marines, HMM-261 on board *Iwo Jima* and HMM-162 on board *Inchon*, provided logistics and search and rescue aircraft. They transported equipment back and forth, allowing minesweeping helos to stay on the job, ferried people, provided medical evacuation and other support.

Navy manned the minesweeping helicopters and supported the LPHs. It also provided some divers who are training Egyptian naval divers in the use of U.S. Navy equipment and techniques.

From the Port Said quay wall, where the first helicopter landed in a spray of sand, to the final, symbolic sweep in Lake Timsah, it was evident that there were no live sea mines remaining in the waters of the Suez Canal.

It was a successful joint operation.

Letters

Fly-In

The Third Annual Stearman Fly-In will be held in Galesburg, Ill., September 13-15. All present and past owners, pilots, students, instructors, mechanics, etc., are invited to attend.

Many events are scheduled during the fly-in, including formation and precision flying, bombing competition, spot landings, etc. A full air show with aerobatics, skydiving, clowns and Snoopy is scheduled for the last day.

Further information may be obtained by writing to Ted McCullough, 1215 Monroe Street, Galesburg, Ill. 61401.

History

The British have published a book which may be of interest to our readers. It's *A History of the Douglas Skyraider* (as employed by the Royal Navy). Fans of that venerable workhorse of the fleet, the A-1, may purchase copies by writing to K. Davies, British Aviation Research Group Publications Officer, 6 Ryde Gardens, Yateley, Nr. Camberley, Surrey, England.

Back Issues

I have been a subscriber to *Naval Aviation News* for a couple of years and like your magazine very much. I would like to obtain as many back issues as possible. Perhaps you can help me by putting my plea for help in your magazine.

I particularly would like to have years 1951, 1952, 1953 and 1954, since I am researching the Korean War period.

J. Buskens
79, Av. Des Ramiers
1950 Kraainem
Belgium

MODEL IDENTIFICATION

Top, HS-3. Right wing of NC-4 shields TBF and C-45. Left column, top to bottom: BT-1, F6F *Hellcat*, SNJ *Texan*, Grumman FF-1. Right column, top to bottom: OS2U-1 *Kingfisher*, F4U-1D *Corsair*, F8F-1 *Bearcat*, F4F *Wildcat* and JRF-1 *Duck*.

Wildcat

The Connecticut Aeronautical Historical Association's Bradley Air Museum is restoring this FM-2 *Wildcat* and wants to return it to public display in the war colors it actually wore. The only part of the tour of *Wildcat* BuNo 74120 that (so far) looks historically important was in January and February 1945 when it went to sea with VC-69 aboard *Mission Bay* (CVE-59) when that carrier served as escort for President Roosevelt's return from the Yalta Conference. Anyone who was in VC-69 or *Mission Bay* or who has a cruise book from that time might be able to tell us the markings FM-2s wore for that mission. Anyone whose log book includes FM-2 BuNo 74120 might also be of help in reconstructing its service life.

Beyond that, the association would like to hear more of the often overlooked story of the VC squadrons using *Wildcats* in the Atlantic in late '44 and early '45. The other units this plane served in were VFs 4 and 15 — probably as a squadron hack or a transition trainer, although we might be missing some interesting stories there also.

Hoping anyone who can help will contact us.

H. L. Elman
Executive Vice President
Connecticut Aeronautical Historical Association
Box 44, Hebron, Conn. 06248

Banshee

I am gathering material for an in-depth, extensively illustrated work on the McDonnell F2H *Banshee*. Being employed by McDonnell Douglas in St. Louis, I am in an excellent position to dig out a great deal of material on the design, development and production of the *Banshee* series.

But I am in great need of help when it comes to service use of the F2H. Believing that there is no better way for me to reach those present and former USN and USMC personnel who have handled and flown the *Banshee* than through the pages of *Naval Aviation News*, I'm asking that you publish a brief request on my behalf. I'm most anxious to contact anyone who can help me with photos of *Banshees* in operational markings. (Of course, any material loaned will be handled carefully and returned promptly.) I'd also appreciate information as to units that operated the F2H and would especially like to hear from some former *Banjo* drivers.

Frederick W. Roos
11311 Clayton Road
Frontenac, Mo. 63131

Cruise Book

I am trying to locate a cruise book from USS *Shangri La* (CVS-38) for the WestPac cruise from April to November 1970.

I was stationed aboard her with VA-172 and wasn't able to obtain the book because I was on a beach detachment at NAS Cubi Point when they took the orders.

I am presently a reservist stationed at NAS South Weymouth. I would appreciate any help your readers can give me.

Don A. Jacob, AMS3, USNR
25 Read Place East
Whitman, Mass. 02382

Kudo

As Chief of the Training Aids Center for the USAF Aerospace Physiological Training Program, I am seeking subscriptions to your excellent magazine.

As physiologists and pilots, we are concerned with life support equipment such as parachutes, helmets, egress seats, etc., and, of course, medical subjects — hypoxia, decompression sickness, spatial disorientation, etc. These subjects are the fuel that "fire" our training programs. Since your magazine often has articles related to life support/physiology, it is important that this information be directed to each of our training units who can pass it on to crew members throughout the Air Force.

Giles W. Hall, Col., USAF, BSC
Chief, Aerospace Physiology and Training Aids Center
USAF Hospital
Randolph AFB, Texas 78148

Editor's note: Special thanks are in order for Captain Paul Jayson, USNR(Ret.), and others of the CNET staff, including Public Affairs Officer, Commander Wes Larson, for compiling most of the text and pictures for the Naval Aviation Museum articles. Capt. Jayson is a former editor of *Naval Aviation News* and Head, Aviation Periodicals and History Office. A tip of the *NANews* hat also for Mr. R. C. Blaikie, Jr., and JOCS James Johnston for the photographs they contributed.

SQUADRON INSIGNIA

Helicopter Antisubmarine Squadron, Light 31, based at NAS Imperial Beach, Calif., flies the SH-2 Seasprite. Carrier Airborne Early Warning Training Squadron 120 flies E-2 Hawkeyes and E-1 Tracers out of Norfolk, Va., while the RA-5C Vigilante is operated by Reconnaissance Attack Squadron 11 at NAS Key West, Fla. Tactical Electronic Warfare Squadron 133 is an EA-6B Intruder squadron at Whidbey Island, Wash.

Naval Aviation
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