

NAVAL AVIATION

NEWS



**25 YEARS OF
NAVY JETS**

APRIL 1968

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FLEXIBLE STRATEGY

'Seapower today has greater meaning than ever before. The rapid growth of the USSR as a major seapower and our diminishing overseas base rights have sharpened our awareness of the growing importance of United States seapower. A balanced seapower is an essential ingredient of a flexible national strategy.'—Admiral Thomas H. Moorer, CNO

NAVAL AVIATION NEWS

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■ COVERS

Front cover shot is of Vigilantes flown by RVAH-14. Above, Phantom II's fly near the USS Franklin D. Roosevelt (CVA-42). On back cover, two Tracers and two Trackers are silhouetted against sun as they fly a mission.

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NAVAL AVIATION NEWS

Assault Helo Office Opens Four Programs under Project Head

The Naval Air Systems Command has formed the Assault Helicopter Office. It is headed by a Vietnam combat veteran, Colonel K. L. Reusser, USMC, twice decorated with the Navy Cross. Col. Reusser also holds a master's degree in management.

To take advantage of improved management techniques, the new office brings together four helicopter programs—the CH-46, CH-53, UH-1 and AH-1—and the Integrated Helicopter Avionics System (IHAS).

FAA Sets Higher Minimums Stricter VFR over 10,000-ft. Level

The Federal Aviation Administration has increased visibility and cloud

clearance requirements for visual flight rule (VFR) operations between 10,000 and 14,500 feet mean sea level (MSL) in order to give pilots utilizing this airspace more opportunity to "see and avoid" other air traffic.

As of March 16, 1968, VFR operations at or above 10,000 feet MSL (or more than 1,200 feet above ground level, if higher) are prohibited unless pilots have five miles minimum visibility and can remain at least 1,000 feet vertically (over or under) and one mile horizontally from cloud formations.

The previous minimum visibility requirements for VFR flight between 10,000 and 14,500 feet were one mile in uncontrolled airspace and three miles in controlled airspace. The clearance from clouds requirements were (for both controlled and uncontrolled

airspace) 1,000 feet above, 500 feet below and 2,000 feet horizontally.

The new FAA rule does not affect weather minimums for VFR flights below 10,000 feet. The agency already has acted to improve the "see and avoid" capability of pilots operating below this altitude by limiting their operating speed to 250 knots (288 miles per hour). This speed limit went into effect on December 15, 1967.

C-130 Claims World Record Has Flown over Two Million Miles

Flight crewmen from VX-6, stationed at Christchurch, N.Z., recently claimed a new world's record when their C-130F Hercules accumulated 10,000 hours of flight time. Based on an average of 280 mph, this means that the C-130 has flown a total of 2,800,000 miles in the eight years it has operated in the Antarctic.

Five C-130's from VX-6 form the "shuttle express" from Christchurch to McMurdo Sound, Antarctica.

Flying Classroom at Oceana Pilots and B/N's of VA-42 Train

In February, students from VA-42, commanded by Commander A. H. Barie, became the first Navy fliers to utilize the Grumman "flying classroom" at NAS Oceana (NANews, February 1967, p. 17; December 1967, p. 3).

The TC-4C is a hybrid aircraft with the nose of the A-6A Intruder and the body of another Grumman aircraft, the civilian Gulfstream.

The new trainer accommodates ten persons. The body of the Gulfstream has been fitted out with a facsimile of the A-6A cockpit in which pilots can practice procedures under the observation of an instructor. Bombardier/



THREE WINGLESS C-117's wait at Winter Quarters Bay, Antarctica, for transportation to the U.S. Affectionately known as "Gooney Birds," the three 11-year veterans of Operation Deep Freeze were the last remaining Skytrains in VX-6. They logged thousands of miles in support of research and exploration for U.S. Antarctic programs. A C-117, "Que Sera, Sera," was the first aircraft to land at the South Pole. Other C-117's were first to land at Hallett and Byrd Stations.

navigators also receive instruction in operating the highly complex instrumentation.

Grumman is producing nine of the flying classrooms: three for Oceana, three for MCAS CHERRY POINT and three for NAS WHIDBEY ISLAND.

The experimental model of the TC-4C was tested at NATC PATUXENT RIVER, Md.; the one at Oceana is the first to be put into training use.

Training Helicopter Chosen Bell 206 JetRanger is Selected

The 206A *JetRanger*, manufactured by Textron's Bell Helicopter Company, has been selected as the Navy's new primary light turbine training helicopter. A contract for 40 *JetRangers* has been signed and deliveries are to be made this year.

The new primary trainers, designated TH-57A's, will be used by the Naval Air Training Command at Pensacola, where they will replace a fleet of 36 Bell TH-1M's. The training aircraft will be in VFR configuration and carry dual controls.

Powering the *JetRanger* is a 136-pound, 317 hp Allison 250-C18 engine. The five-seat helo places two persons up front and three in the rear. It has a speed of 130 knots and a range of 400 miles.

Selecting the *JetRanger* concludes an extensive evaluation of the three commercially available light, turbine-powered helicopters: the *JetRanger*, the Fairchild-Hiller FH-1100 and the Hughes 500 (Army OH-6A). An initial flight evaluation of the three by Helicopter Training Squadron Eight at Ellyson Field was followed by flight tests using instrumented aircraft at NATC PATUXENT RIVER. The results of these tests were used by the Naval Air Systems Command in making the final selection.



COMMERCIAL VERSION OF TRAINING HELO



IN A CEREMONY at the Columbus Division of North American Rockwell Corp., the first two OV-10A *Bronco*'s were delivered to the Marine Corps and Air Force. Major General L. B. Robertshaw, USMC, and Major General Thomas C. Corbin, USAF, accepted the aircraft. The Marine version, painted dark green with white underbelly, was flown to Marine Observation Squadron Five, Camp Pendleton, Calif., by Maj. James F. Farber. Capt. Gary Sheets, USAF, delivered the gray Air Force version to the 4410th Combat Crew Training Wing at Eglin AFB, Fla. The Marine Corps will use the new twin-engine turboprop for light armed reconnaissance.

Avionics Suitability Trials Now Completed for the P-3B Orion

The P-3B service avionics and suitability trials have been completed at NATC PATUXENT RIVER, Md.

The P-3B tested differed from the P-3A's now in service in that it has more powerful T-56-14 Allison turboprop engines; "soft" landing gear which reduces the normal landing loads on the airframe; provisions for dumping fuel; and an auxiliary power unit suitable for use in the air as well as on the ground.

Numerous electronic equipment changes have also been incorporated in the P-3B to enhance its value as a submarine hunter. Forty-five flights were flown for a total of 150 flight hours.

Bloodhound Trophy Given VS-39 Crew Three Wins Award

At NAS QUONSET POINT, Rear Admiral Forsyth Massey, Commander, Fleet Air Quonset, recently presented the station's *Bloodhound Trophy* for the period July 1 to December 31, 1967, to Crew Three of VS-39.

Winners of the ASW award are

selected for operational proficiency in hunting, tracking and attacking submarines. There are 90 S-2 *Tracker* crews at Quonset Point in competition for the trophy.

Members of the winning crew are Commander Charles A. Phillips, Ltjg. Russell W. Jordon, AT2 Robert L. Mears and AX2 Robert J. Woodrow.

The trophy is a miniature torpedo mounted on a mahogany stand and is greatly coveted by competing crews.



ADMIRAL Thomas H. Moorer receives the 1968 William Mitchell Award from General R. J. Reeves, USAF, Commander in Chief, North American Defense Command. The award was bestowed by Aviator's Post 743, American Legion, for Admiral Moorer's outstanding courage and leadership in naval air strategy.



GRAMPAW PETTIBONE

Gassed

A ferry crew, assigned the mission of delivering a C-1A Trader to PAR and dropping another ferry crew off at an en route air station, assembled early at the reporting custodian's hangar and commenced preparation for the flight. The plane commander instructed his copilot to proceed to Operations and file a flight plan while he and the plane captain inspected and accepted the aircraft. The PPC would then taxi over to Operations and pick up the copilot en route to the duty runway for takeoff.

The aircraft logbooks were in order. Previous yellow sheets indicated past discrepancies had been remedied. While the plane commander accepted the aircraft, the plane captain performed the preflight inspection. Part A of the yellow sheet indicated 11 gallons of oil in each engine and 500 gallons of fuel aboard.

Completing his own preflight inspection of the aircraft, the plane commander proceeded to the cockpit. With the plane captain in the right seat, the pilot went through the pre-start check list, started the engines and called for taxi clearance. He taxied to the warm-up area, conducted an engine run-up which was normal in all respects and then taxied to Operations to pick up the copilot.

The copilot had filed an IFR flight



plan to their destination with a five-minute passenger stop at the en route field to drop off the extra ferry crew. Clearance was expected in 20 minutes.

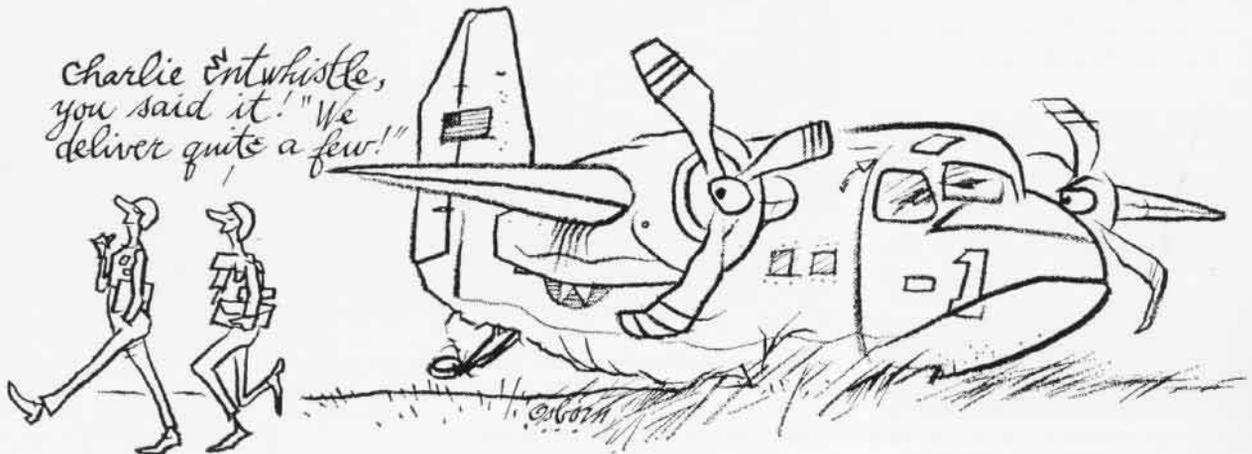
About 40 minutes later, the clearance had still not arrived. A call to the tower revealed the field to be VFR so the pilot cancelled the IFR flight plan and obtained clearance for an

immediate VFR departure. The flight to the intermediate field was uneventful and, before landing, an IFR flight plan to the destination was obtained.

After unloading the ferry crew, the C-1A departed, leveling off at 6,000 feet. A little later, the pilot received clearance to descend to 4,000 feet because of strong headwinds. This placed the C-1A below a broken cloud layer where improved visibility prevailed.

When the Trader had been en route for five hours, a momentary loss of power was sustained by the number two engine, so the pilot placed the mixture controls in the rich position and turned on the fuel boost pumps. But the engine continued to alternately lose and regain power. All engine instruments showed normal readings with fuel gauges both indicating in excess of 300 pounds. When the airspeed dropped to 130 knots, the pilot directed his copilot to secure the number two engine.

Almost immediately after number two was feathered, number one started to lose power in the same way. The pilot instructed the copilot to unfeather number two and attempt to regain power. The pilot informed the control center of his situation, cancelled his IFR flight plan, and announced he would try to reach a municipal field close by. In rapid order, number one had lost all power,



number two restarted with the cross-feed turned on and again commenced cutting out.

It became obvious to both pilots that the engines would no longer sustain the aircraft in flight and they switched the IFF to emergency. They transmitted a "Mayday" on UHF guard and selected a field to land on.

A full-flap, wheels-up landing was made on a fairly smooth dirt field. The aircraft skidded along the ground on its touchdown heading for approximately 350 feet. The number two propeller touched the ground and the aircraft swerved sharply and came to rest. The pilot secured all valves and switches and had the aircraft checked for any evidence of fire. There were no injuries and all hands left the plane through the main hatch. The plane commander then walked to a farmhouse and made the necessary calls.



Grampaw Pettibone says:

Oh, my achin' back! If this fiasco don't wilt the lily, nothin' will. The first mistake these lads made was not visually checking the gas tanks. (If they had, it would'a been plain to see they were about 50 gallons shy.) Secondly, the flight planning must'a been pretty sloppy.

Just having made the trip before ain't no guarantee that fuel consumption is gonna be the same. (Not to mention excessive delays waiting for clearances and en route stops.)

Now if these fellas had been keeping an eye on the gas gauge and checking their fuel consumption, they'd have gotten the clue early that the gauge wasn't doin' right by them. Investigation showed loud and clear that both fuel quantity gauges were installed with improperly positioned connectors on the transformers. This caused each gauge to be in error by over three hundred pounds.

I can't let "quality control" off the hook on their contribution to this needless mishap, but I have to say these fellas had better learn to be a bit more nosey on their preflights and a lot more thorough in their planning.

All but One

An SH-3A *Sea King* crew, consisting of pilot, copilot and two crewmen, was assigned a plane guard flight for the 2200 fixed-wing launch and recovery. The entire crew arrived on the flight deck at 2130 and proceeded to the assigned aircraft. Upon completion of the preflight inspection, all

hands climbed aboard and commenced preparations for the flight.

At about 2140 on signal from Pri-Fly, the number one engine was started, blades were spread and systems checked. After number two engine was started and upon signal from Pri-Fly, the helo's rotor was engaged and all final preparations for flight were meticulously performed in the cockpit. Flat pitch power was checked satisfactorily and the takeoff check list was double-checked.

The plane director gave the pre-launch signal to hold brakes, remove chocks and tie-downs and stand clear of the helo at 2156. As the copilot watched from the left seat, the plane captain released the port tie-down, pulled his chock clear of the wheel and ran in front of the aircraft to a position aft of the island structure. At this time, the pilot watched the chock and tie-down on the starboard landing gear being removed by a Blue Shirt. Each pilot then verified to the other that his tie-down and chock had been removed. But one tie-down on the port mount, tending inboard, was overlooked.

As they received the launch signal from the plane director, the pilot commenced adding power to accomplish a vertical takeoff. The *Sea King* no more than became airborne when the nose pitched down uncontrollably and simultaneously developed a rapid roll to the left. The helo skidded to the left in a left bank, the port wheel

struck the deck and continued over the deck edge.

Water entry was surprisingly gentle and barely discernible to the pilots and crewmen. The two crewmen egressed through the starboard emergency exit window without incident. The pilot elected to leave by way of his already fully open sliding window on the starboard side. The copilot, however, experienced extreme difficulty getting out of the aircraft. He actuated the emergency release handle and, with considerable difficulty, finally succeeded in opening the jettisonable window assembly and escaped.

Fortunately, all required survival equipment was worn by the crew and it functioned flawlessly. The plane guard destroyer's whale boat recovered all hands at 2217.

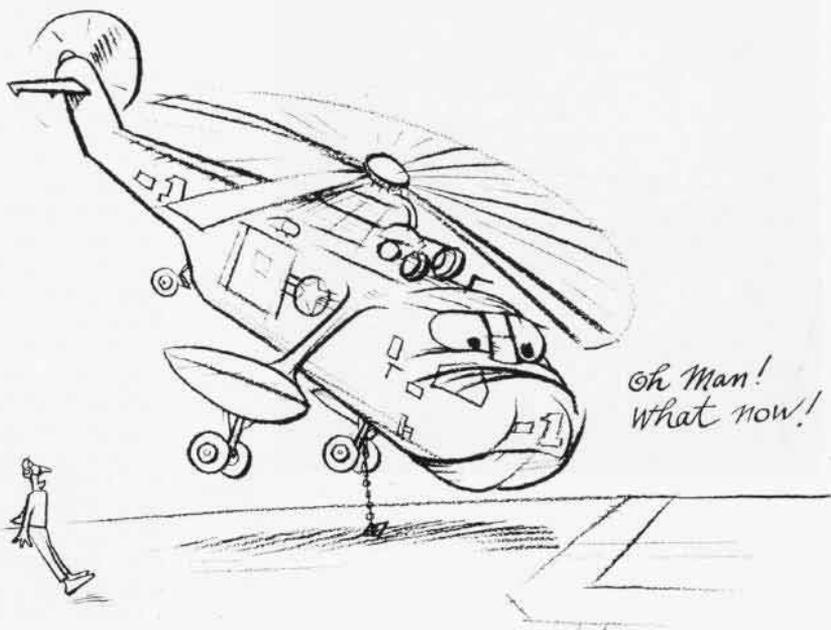


Grampaw Pettibone says:

Sufferin' succotash! Ole Gramps was mighty happy to see these lads come through this fiasco with no more than minor injuries, but I darn sure wouldn't want to write their insurance if they can't count their tie-downs any better than this.

You can count Gramp's rotary wing time on one finger, but you can bet I'd have a much better working agreement with the plane captain and directors.

A good surgeon always counts his tools before he sews up his victim. For longevity's sake and better morale for the next of kin, all helo drivers would do better to count and double-check, then check again, the chains.



JETS

IN THE NAVY

By Commander Ted Wilbur

Illustrations by *Epson*



FIRST



QUARTER CENTURY

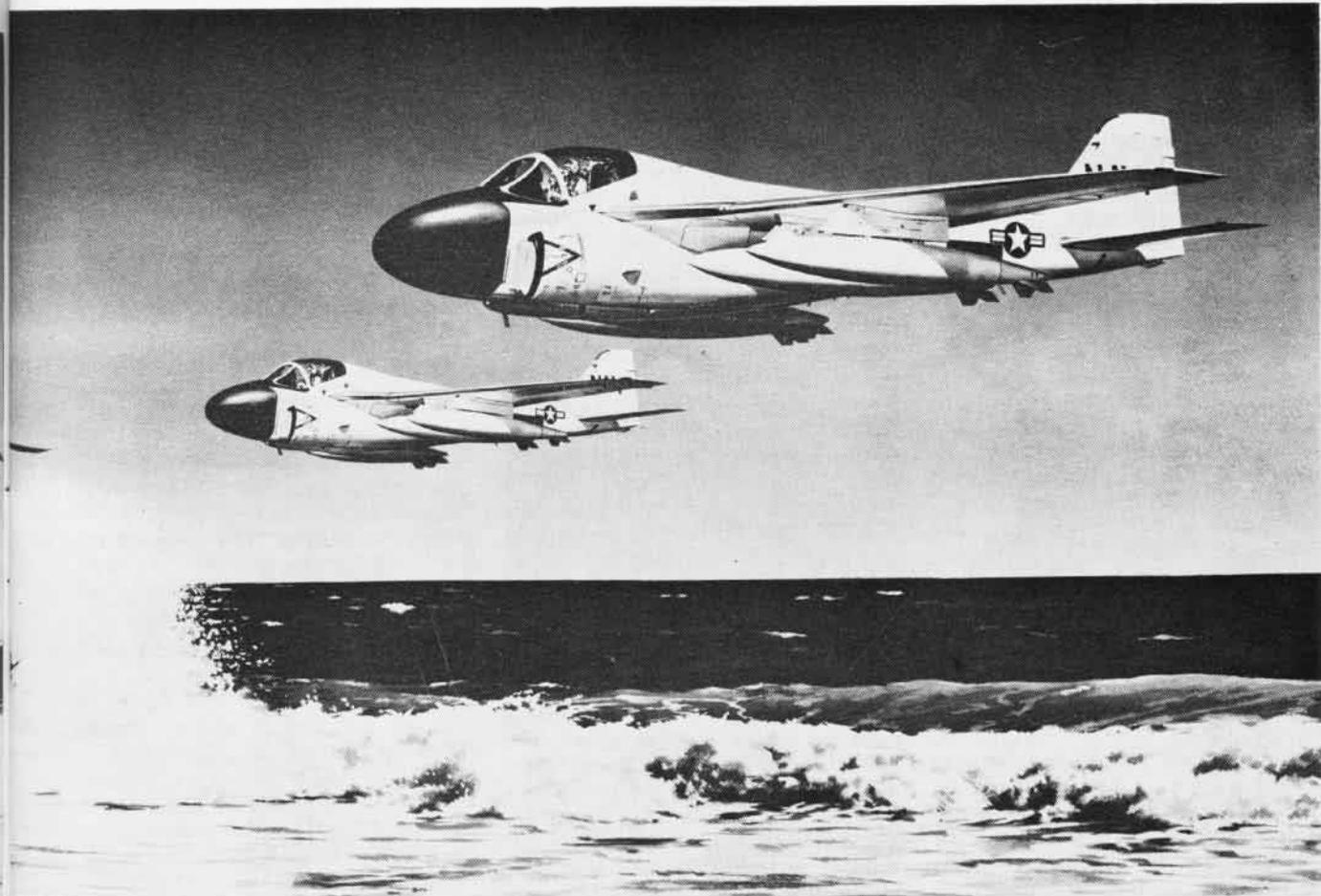
A CASUAL perusal of aviation history creates an impression characteristic of the field: everyone always seemed to be the "first" to do something-or-other.

A couple of Greeks flew around with wax wings. One had his melt on him so he became the *first Greek to get killed for flying too close to the sun with wax wings*. Da Vinci doodled designs of *man's first aeroplane*, the *first jet engine* and a good many other *first things* that no one had. Animals were first to fly in (or was it under?) a balloon and then some fellow claimed to be the first to do what the animals did.

Arguments started. The key seemed to be in the *qualifying* statement. You couldn't just be the *first to fly*. If you wanted to be *first to fly in a balloon*, O.K. But a balloon doesn't look like a *bird* and everybody knows that a bird is a *real* flyer. If you sincerely wanted to be first to fly, you had to get something *birdlike*.

After the *first man flew in a glider*, which resembles a bird more than a balloon does, somebody said it had to be *sustained*, or *powered*, flight to qualify. Professor Samuel Pierpont Langley figured he had it whipped; instead, his plane became *first to crash into the Potomac after being catapulted from a houseboat*. He hadn't been sustained long enough.

Finally, the Wright brothers put everyone at ease . . .



until the Russians admitted they had been *first all along*.

Then we really went at it! Library shelves creak with claims and counterclaims. And a new ingredient had been added to the battle to be first: the *most* (an American invention). This was quickly supplemented by the *fastest*, *slowest*, *highest*, *lowest*, *biggest*, *smallest*, *longest*, *shortest*, and the *thousandth* (a Navy invention). Imagine what happened as we moved into the Jet and Space Age. . . .

THE *first flight of a turbojet aircraft in the United States* was made on October 1, 1942, by Naval Aviator No. 4967, Robert M. Stanley. Since Mr. Stanley was by then a civilian and chief test pilot for Bell Aircraft, we won't count that. Instead, we establish as our base line the day Captain Frederick M. Trapnell made the *first jet flight for the Navy*: April 21, 1943.

A curious thing about early jets was that some still had propellers on them. In the case of the Bell XP-59A, this was merely a clever ruse to maintain secrecy: a phony prop was removed from the *Airacomet* prior to flight, making it the *first plane you took the prop off to fly*.

The Ryan Aeronautical Company produced the FR-1 *Fireball*. We really don't consider this hybrid the Navy's first jet since it was powered up front by a Wright *Cyclone* and a propeller, while the I-16 jet was in the aft

section of the fuselage. The *Fireball* was not a pure jet aircraft, but we do claim that it made the *first jet-powered landing aboard a carrier*:

On November 6, 1945, Ens. J. A. West of VF-41 was practicing carrier landings in an FR-1 when the front end quit. He at once fired up the jet and was able to complete the approach and land. A month later, on December 4, the Royal Navy claimed the *first landing aboard a carrier by an aircraft propelled by jet power alone* when a *Vampire* made four landings on HMS *Ocean*. And, as a clincher, they threw in the *first takeoff from a carrier by a jet*.

The *Fireball* was a fun machine in a day when jets were very hush-hush. In 1945, operating on your conventional *Cyclone* power, you could sidle up to some passing Army Air Force plane and provide the poor devil with a traumatic experience. The FR-1, with its air-cooled engine and prop, looked just like any other Navy fighter to an uninitiated Army pilot, so you'd cruise along side by side with him, getting acquainted, until his attention was momentarily diverted. Then you'd quickly start your jet, cut the front engine and feather the prop.

When your friend looked back, he'd do a fast double-take, his eyeballs out on stalks, as you maintained a tight wing position on him, seemingly powerless. It would have made a great bit for television's "Candid Camera."

25 YEARS OF NAVY JETS

THE FIREBALL has the distinction of being the first jet to catch the attention of Grampaw Pettibone. In July of 1947, Gramps related how a seaman, who had never been authorized to give instruction in aircraft operation, decided to check out his buddy in the starting and warm-up procedure of an F8F Bearcat.

The "instructor" had his pal, a recently retired mess cook, sit in the cockpit while he showed him how to start the machine. No one was manning a firebottle, so when the engine began to torch (due to a broken exhaust stack), the "instructor" jumped off the wing to get an extinguisher.

The ex-mess cook, knowing nothing about the controls, couldn't figure out how to stop the thing and rapidly exited the cockpit. He leaped over the side to the ground, sustaining injuries in his fall which hospitalized him for five days.

The deserted Bearcat, its engine turning up at close to full power, jumped six-inch chocks and bounded toward a group of parked planes. At this precise moment, an FR-1 was being towed down the taxi lane. The F8F cut the Fireball in two, then crashed into another aircraft before stopping due to a broken fuel line.

In that case, the FR-1 was an innocent bystander, but shortly afterward Gramps tells of a Fireball which landed long and hot behind a Hellcat which had landed short. The Fireball burnt both tires to the nub in a 1,000-foot skid down the runway in an effort to avoid the collision. The Fireball was the first production fighter in the Navy to have a tricycle landing gear arrangement, so the pilot had a good view as he over-ran the Hellcat and destroyed it all the way up to the cockpit with the FR's propeller. The F8F pilot's reaction was not recorded.

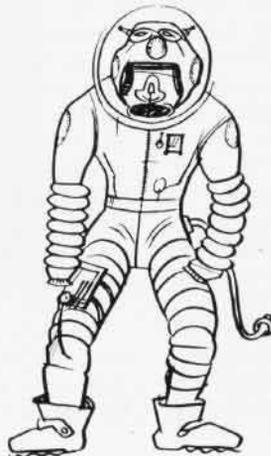
To avoid disrupting wartime production, progress on the 1943 designed McDonnell XFD-1 was intentionally slow. The twin-jet Phantom first flew in January 1945. A year and a half later, the first jet operations from a U.S. carrier were conducted, involving the Phantom (later designated FH-1) aboard the USS Franklin D. Roosevelt.

Close on the heels of the Phantom came the Vought F6V Pirate and the North American FJ Fury, claimed by

some to be the hottest, straight-wing jet ever built. VF-17A was the first operational squadron to which pure jet aircraft were assigned. The outfit carqualed aboard the USS Saipan in mid-1948. The jet age had arrived.

WITH the advent of the Blowtorch Era came some attitudes peculiar to the period. Young fellows nowadays take the hypersonic swingwing things pretty much for granted, but Back Then the sight of a jet was a pretty big dose. What really grabbed you was the absence of a propeller. Up until that time, pilots spent most of their time worrying about "losing an engine." It may seem curious that the multi-engine people always worried more about this than the single engine types but, at any rate, the appearance of one of those new scoop-and-swoosh birds was certainly a shock. It looked naked, almost as if it didn't have an engine at all! This meant pilots everywhere would have to find something new to worry about.

They did, and the popular magazines and motion pictures helped. The public and pilots alike became thoroughly conditioned to the image of a Jet Pilot as a death-defying Superman. The publicity heaped upon the small band of intrepid daredevils who took to the blue in their winged Thunderjugs—who, miraculously, somehow managed to make it back—and who (gasp) did this kind of thing day after day—was enough to bring shudders to the heart of America. Finally, the popular magazine, the Saturday Evening Post, presented a feature, emblazoned with full color photographs, concerning a Navy fighter squadron, its men, machines, wives and girl friends. It was called: "JET GUYS ARE DIFFERENT!"



In spite of a sensational public image which presented Lt. Cliff Hanger, typical Navy pilot of Suicide Squadron Seventy-Seven, with a sweptback, horizons-unlimited appearance, the



majority of the work of Naval Aviation in those days was carried out by "conventional" drivers of propeller aircraft: Corsairs, Able Dogs, F8's, F-6's, TBM's, PBM's, Four-Y-Squares, etc. In most ready rooms around the world, you could usually find the poster that stated: TURKEY* PILOTS ARE NOT DIFFERENT!



The highly-touted superior performance of jets naturally created some animosity and challenges were issued. NANews published an account of a race between a Fury and a Bearcat. There were immediate denials from VF-51, which flew the FJ jets (and also happened to be the subject of the Post article).

But the seeds were planted and, shortly afterward, five unofficial races were held between the FJ's of VF-51 and the F8F's of VF-113 and VF-53; it was a test representing the old and new type of fighters.

* For you newcomers: A Turkey was a TBM, sometimes more dramatically referred to as the Grumman TBF Avenger. Actually, Turkey pilots were different. Their right arms had muscular development twice the size of the left. Those pilots who had occasion to left the monster through a tail chase as "tail-end Charlie," or in any attitude other than straight and level (on autopilot), will back this up. Trim tabs were invented for Turkeys.



The U.S. Navy's first jet pilots checked out in the P-59 Airacomet (above, top). Hybrid Ryan FR Fireball (above) constituted cautious approach to the Jet Age. At right, VX-3's F2H Banshee, FH Phantom and afterburner-equipped F6U Pirate cruise off Atlantic City.



In the first bout, from a standing start, the *Bearcat* beat the *Fury* to 15,000 feet by better than a minute. During the second round, in a zoom from 1,000 feet to 10,000 feet, the *F8F* bettered the jet by 13 seconds. After further tests, VF-51 pointed out that the *Fury* was being tested against the best characteristics of the *F8F*, i.e., rate of climb at low altitudes. It contended the *Fury* was far superior in other respects.

The high, and low, performance of jets introduced new problems. The fact that they were fast meant that the pilot, under emergency conditions, would be unable to exit the craft safely without some kind of special help. Even if he managed to clear the cockpit, his path would be neatly intercepted by some part of the tail structure. Taking a tip from the Germans, who had equipped later models of their WW II FW-190's and the Mather *Viper* interceptors with ejection seats, the Navy began to experiment with a similar device and some ideas of its own.

The original three basic egression methods are still in use today: (1) the tunnel, found in F-10's and A-3's; (2) the capsule, utilized by the F-111's; and (3) the ejection seat.

The F3D (later called the F-10), unlike other Navy fighters, had the pilot and crewman seated side by side. It was believed that powder flash and



explosive decompression would be so severe it would kill one man if the other ejected. Hence, the *Skyknight* was designed with an escape chute slanting back from the cockpit at a 45° angle; escapees departed feet first.

The ejection seat achieved the most universal use in spite of numerous growing pains, the most notable being a series of ugly rumors: riders of the "Cannonball Express" were said to sustain various degrees of maiming.



Actually, there was no known case of feet being severed, kneecaps sheared, legs being broken or hands chopped off as the direct result of seat ejection, and, by 1949, the F9F offered the seat as standard equipment.

On the other end of the scale, the low performance of jets, in regard to their poor acceleration characteristics, was of great concern, especially to carrier pilots. For instance, the *Bearcat*, under certain conditions, could become airborne in about 100 feet. Those who trundled a twin-jet *Skyknight* down a 5,000-foot runway on a warm day, popping flaps near the end in order to stagger into the air, found the comparison disconcerting.

After experimenting with various methods of boosting jet thrust—water injection, "bleed-off" and "tailpipe-burning"—the F6U appeared. The *Pirate* was the first Navy jet fighter to be equipped with an afterburner which injected fuel into the flaming exhaust gases and thus provided a power increase for takeoff and various operating conditions.

FOR PILOTS transitioning from props to jets, there was the happy surprise of finding the new machine actually pretty simple. While a conventional engine had hundreds of gadgets to watch or get out of whack, the turbojet had relatively few. The first familiarization flight, while being a highly exhilarating experience, produced the feeling that there *must be something else to do*.

There was. You had to think faster and plan more carefully. The day of the trained ape in the cockpit was over.

25 YEARS OF NAVY JETS



A rocket and jet-powered record-breaking D-558-2 Skyrocket blasts off with JATO (above). FJ Furies (right), claimed to be the hottest straight-wing type, were the first jets operated by Reserves.



When it came to jets, airplane driving was getting Ivy. With the way the jet engine gobbled fuel, you had to beat the clock, but you couldn't lose your cool. The higher speeds required a finer touch on the controls and you found that the easiest way to get aboard ship was to fly a "Roger" all the way.

Back in the Old Days, as you came around and lined up a propeller-driven airplane, you had time to watch the LSO, respond to his signals, try a little of this and a little of that. You took his cut, which you probably got out over the catwalk someplace and found it wasn't too much of a problem to drive on over and pick your wire.



The bat-shaped F4D Skyray (above) was an early Navy delta design. Below are trio of McDonnell's Banshee, Demon and Phantom II.



An F9F-8 (above) snatches dart tow target. Like some huge monster, the whale-shaped F3D (below) hunted at night, delivering lethal sting in Korea.

Not that it was easy, but you had a lot more time than you would in a jet with its much higher approach speed. With jets, reaction time was lessened; you just didn't have the same interval between final line-up and touchdown.

Another of the new problems was the hot-air exhaust blast of turbojet engines. One solution was tried on the XFJ. It had a bending nose gear, permitting the front end to "kneel down" on a crowded carrier deck, thus directing the hot gases upward from the tail of the plane. A similar device was used on the XF2H, and facilitated tighter parking of the *Banshees*.

Of course, tilting the back end blast of a jet upward did not resolve the suction problem of the front end. Before the end of 1947, the jet engine had claimed its *first victim*, a civilian mechanic who was absorbed by an F-86. It took awhile before the solution ("Stand Clear") was universally understood:

"Lieutenant had just climbed up on the side of the *Bansbee*. A plane captain was in the cockpit making a full power turn-up to check



the fuel control system. I mentioned to the chief, who was standing next to me, that there didn't seem to be much suction since the legs of Lt. _____'s trousers showed no indication of it. He replied, 'No, there is hardly any suction.' He then walked over to within approximately two-and-a-half feet of the intake with an arm outstretched.

"The engine was accelerating and I didn't like the looks of things. I yelled for him to come back. The next instant he was pulled up against the wing, chest first, chin atop the duct, shoulder across the opening. Unable to withstand the pressure, his head slipped in, then his body . . . etc."—from a flight deck officer's statement.

Different methods of spotting planes and new techniques for flight deck personnel had to be developed. As a matter of fact, flight decks themselves were redesigned and carrier operations revamped to accommodate jet-configured aircraft. The planes' structures had to be built to withstand the extraordinarily high stresses that would exist at, and beyond, the speed of sound. Once the changes had been made, the true potential of jet power would become a realization.

The Navy's jet program gathered headway and, for the first time in 24 years, the Navy took the world's speed record as Commander Turner Caldwell piloted the Douglas D558-1 *Skystreak* at 640 mph. Shortly after that, Major Marion Carl raised it to 650. Maj. Carl was the first to be catapulted in a jet from a U.S. carrier (in a P-50 aboard the *Roosevelt*) and he became the first commanding officer of a Marine jet squadron.

By the end of 1947, the public had its first look at the Navy's D-558-2 *Skyrocket*, a rocket and jet-propelled machine featuring sweptback wings and tail, a needle-nose and aerodynamic streamlining to near-projectile shape. Actually, many of its publicized features dated back to early aviation history. The sweptback wing design was seen before WW I; the tricycle gear was tried on some of the earliest planes; the thin wing was used on all of the first ones; Handley-Page slots were old stuff and cathedral angle was turning up as early as 1911 on "new" designs. On the other hand, protection from "G" forces and the requirement for high-altitude pressurization were modern elements.



On the 13th of September, 1967, an Attack Squadron 15 pilot became the first to complete 600 A-4 Skyhawk landings aboard a single Navy carrier.

25 YEARS OF NAVY JETS

The first man in the United States to make an emergency ejection was Lt. J. L. (Pappy) Fruin of VF-171 in August of 1949. Not long after this the Naval Air Reserve got its first jets. Lts. Cornelius N. Nooy and Frank T. Donahue were the first Organized Reserves to qualify. The first night jet carrier landing was made by Commander Harvey P. Lanham in February 1950. F9F Panthers made the first Navy jet combat strikes in Korea.

The first F3D night fighter detachment to go aboard a ship was from VC-4. This Atlantic City group was night-qualified aboard the FDR just 21 days after receiving their first Skyknights. The transition from props to jets was becoming almost routine and the change in the complexion of Navy fighters was no more evident than in the sights of Grampaw Pettibone as he finally swung away from his old standby, the F4U Corsair, and began to zero in on occurrences like these:

The pilot of an F9F made a normal start, completed his ground check and proceeded to the end of the duty runway. When his pre-takeoff check of the emergency fuel system produced flame-out symptoms, the pilot's wingman informed him that the Panther was on fire and that he ought to get out. The pilot did just that but neglected to pull the emergency air brake handle or shut off the fuel switch.

After running a few feet beyond the wing tip, he looked back and noticed that the flames seemed to have died out. As he stood there gazing, he suddenly heard the F9F wind up. It weathercocked into the wind, heading down the runway.

The pilot ran to the aircraft and attempted to board it, but the access ladder was stowed and he was unable to get back into the cockpit. After he had made several attempts, the plane was moving too fast and he let go.

The \$543,000 jet fighter accelerated to approximately 150 knots. After a run of about 6,000 feet, the nose wheel struck a slight rise in the runway and the plane began a rapid climb. At 700 feet, the first pilotless Panther stalled and crashed into the bay off the end of the runway.

The first inadvertent firing of an ejection seat went like this:



An F2H Banshee, the gentleman's jet, probes hurricane near Jacksonville.

In order to gain better access to a circuit breaker in an F9F, two mechanics removed the canopy. They disassembled the pressurization and oxygen hoses. They removed the safety pin but started to work without removing the seat.

One man was kneeling on the seat facing aft, while the other was standing on the flat part of the cockpit, looking down at the seat.

With the safety pin out, it was possible to fire the seat by inadvertently grasping or leaning on the firing cable or its housing. One of them did.



The aircraft was situated on the hangar deck of a carrier when the seat went off. Eventually both men survived after a tour on the critical list and Gramps commented, "If you like your face—leave the pin in place."

The angled deck and the mirror solved a great many difficulties inherent in jet operations aboard carriers. But in the days of the straight deck, in spite of talk about underpower and poor acceleration, sometimes things went awry:

During qualification exercises aboard the Essex, an F9F made a normal approach. The pilot took the cut and pulled his nose up slightly before easing over towards the deck. The landing was slightly hard, and the plane bounced, failing to catch a wire.

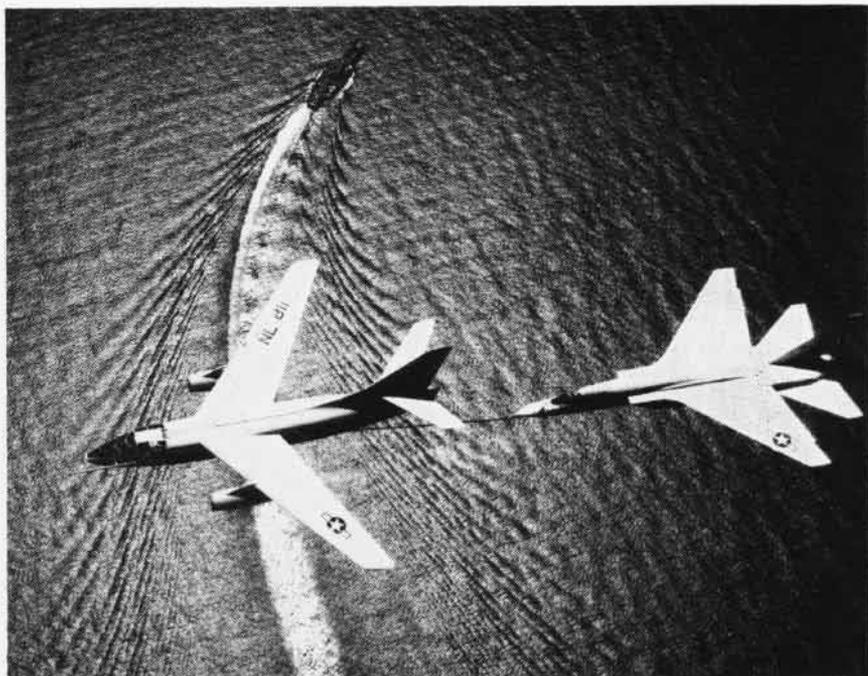
Finding himself airborne again, the pilot applied full power. The Panther was low enough, as it went up the deck, to have its hook engage the nylon tape of the Davis barrier. Part of the tape wrapped itself around the hook.

Forward of the barrier, another plane was parked. Seeing it, the pilot of our Panther pulled back on the stick. In a nose-high attitude, he settled and crashed onto the other plane. His right wing tore off the vertical stabilizer, while his starboard gear dragged through the after part of the fuselage. His port wheel hit the canopy and was sheared off by the armor plate.

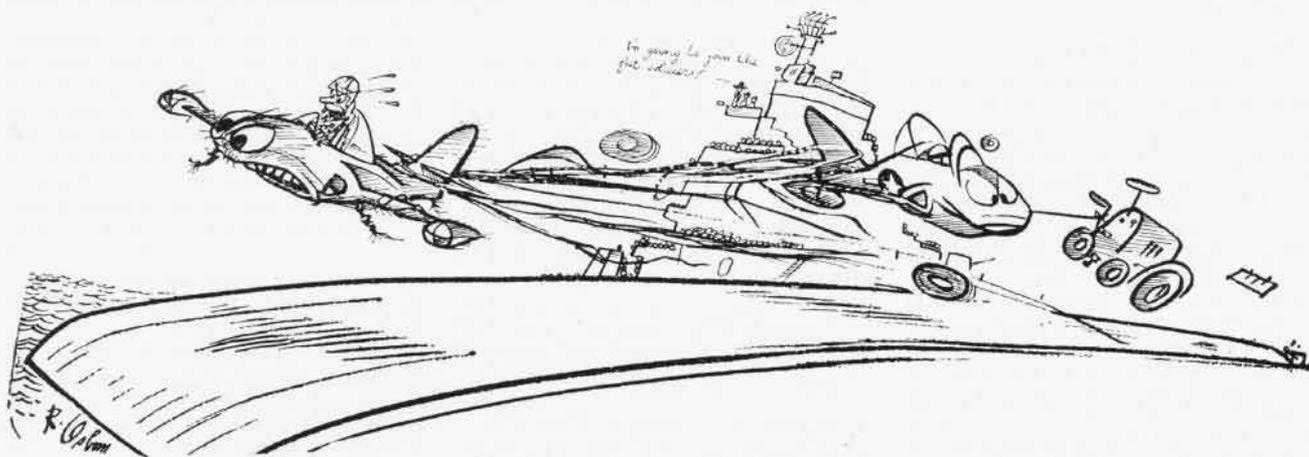
The pilot of the parked plane was uninjured since he happened to have his seat all the way down.



With afterburners installed, catapult shots on dark nights became a much brighter proposition, while the angled deck design improved a landing pilot's mental attitude. Above, an F-8 Crusader climbs off the USS Forrester.



An A-3 Skywarrior helps an A-5 Vigilante to solve jet endurance problem.



Our friend in the F9F continued on over the bow and leveled off inches above the wave tops. With the barrier tape dragging in the water and the jet blast leaving a noticeable wake, the pilot effected a recovery.

There was some question as to whether he had enough fuel to make it to the beach, especially in view of the additional drag on the Panther, what with pieces of gear, flaps and other stuff hanging from it. Consequently, he was ordered to make another pass and land on board. This time the deck was cleared of all planes; a line of mules and tractors was set across the flight deck just forward of the barriers.

ALL SET? HERE WE GO!

The pass was on the fast side because part of the flaps and the port wheel had been carried away. He took a cut and made a reasonable landing on the right wheel, nose, and left tip tank.

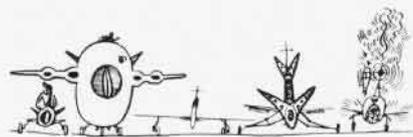
The hook did not pick up a wire nor did it drop the fouled tape. Once again the pilot pulled back on the stick, became airborne, applied full power and sailed over the barrier. The F9F settled into the line of mules, this time losing the nose wheel and starboard landing gear. The impact slowed the plane enough to make it flop to the deck on its belly.

The Panther skidded up the deck for 300 feet and then off the bow. By now the flaps were gone. The tip tanks and underside of the fuselage were

damaged, but this did not kill the airspeed and once again the pilot was able to make a recovery before hitting the water.

After calling, "This is becoming a rather rugged flight!" the pilot decided against further attacks on the ship and he eventually negotiated a successful ditching.

Maybe we shrivel a little when we consider the First Twenty-five Years of Jets, but wait till you see what's coming the next quarter century.



Outgoing SecDef on Defense Budget

APPEARING before the Senate Armed Services Committee, outgoing Secretary of Defense Robert S. McNamara presented the Fiscal Year 1969-73 Defense Program and the 1969 Defense Budget. Those portions pertaining to U.S. Naval and Marine Aviation squadrons and ships are presented here.

Attack Carrier Forces

Our concept of the optimum size and configuration of the attack carrier forces has continued to evolve over the years in the light of new analyses and additional experience. In FY 1963, for example, our plan called for a force of 15 CVA's and 15 air wings. In FY 1967, while retaining the 15 CVA's in the Fleet, we decided to reduce the number of aircraft to 12 equivalent wings, believing it was not necessary to procure aircraft wings for the number of carriers which would normally be in overhaul.

Ships—The attack carrier force at the end of the current fiscal year will comprise the nuclear-powered *Enterprise*, seven *Forrestal*, two *Midway*, and five *Hancock/Essex*-class carriers plus one carrier (*Midway*) in conversion. The newest of the conventionally powered CVA's, the *John F. Kennedy*, was launched this past year and is scheduled to enter the Fleet in early FY 1969. A second nuclear-powered carrier, the *Chester W. Nimitz*, is currently under construction and scheduled to join the Fleet in FY 1972. The *Nimitz* will be powered by a highly efficient two-reactor propulsion plant and as a result of extensive automation will require a considerably smaller crew than its predecessor, the *Enterprise*. . . .

We plan to replace all the old *Essex*-class CVA's, building to a force of four nuclear-powered ships, eight *Forrestal* and three *Midway*-class carriers. Two additional CVAN's, therefore, still remain to be built. The estimated cost of the *Nimitz* has risen 28 percent over last year's estimate (\$428 to \$544 million) and will amount to 96 percent more than the \$277 million cost of the *Kennedy*. The price for the next CVAN promises to be



USS TULARE (AKA-112) AND USS KITTY HAWK (CVA-63) DURING A FLEET FREIGHT TRANSFER

at least as high as the *Nimitz*. In order to keep the cost of the two additional CVAN's as low as possible, we are considering designing all three as identical ships, permitting a savings of about \$35 million on each of the last two ships. We are also studying whether the first two can be procured under a multi-year contract, with options for a third in FY 1971—in order to take advantage of the cost saving potential inherent in this type of procurement. . . .

Carrier Aircraft—The fighter inventory at end FY 1968 will total 652 aircraft, mostly F-4's and the rest F-8's. (The F-8's are being retained for the *Essex*-class carriers which cannot effectively operate the larger F-4's or F-111B's.) As a result of our experience in Southeast Asia, we now plan to retain the F-4 in the force throughout the program period in place of an equivalent number of attack squadrons. Thus, we will have two fighter squadrons per air wing, instead of just the one squadron as planned last year. When the F-111B is introduced into the Fleet, it will be used for long-range Fleet air defense and the F-4 for escort of attack aircraft.

Because of the continuation of the Vietnam conflict and the retention of the F-4's in the force, we now plan to keep the production lines open beyond the FY 1968 leadtime, and the procurement schedule has been adjusted accordingly. The F-111B production schedule has been adjusted as a result of cuts in our appropriation request last year. This will delay Fleet introduction somewhat but will give more time for extensive testing before the aircraft is assigned to carriers for operational use.

We expect to achieve our presently planned fighter force objective in the early 1970's and,

later, when the last of the *Essex* carriers are phased out, the F-8's will be replaced with F-4's and F-111B's.

The Navy is presently studying the next generation of fighter aircraft (VFAX) for the air superiority and escort missions. The Air Force has a project (FX) for an advanced fighter. While these requirements are somewhat different, it is already clear that both aircraft could use similar engines and similar avionics. Whether both aircraft could use substantially the same airframe is still in question. The major design configurations of the FX and VFAX (e.g., size of crew, amount and type of avionics and ordnance) are now being jointly studied by the Air Force and the Navy. Completion of concept formulation requirements is expected sometime in FY 1969 and is the prerequisite to a decision to proceed with contract definitions. . . .

The attack aircraft inventory will total 1,076 at the end of the current fiscal year, and be composed chiefly of A-4's, A-6's and A-7's. Since we have decided to retain two fighter squadrons per air wing, the number of attack squadrons previously planned has been reduced. Our ultimate goal will be achieved in the mid-1970's when the last A-4 squadron is phased out.

We have now extended the A-6 procurement—previously planned to end with the FY 1969 program—through FY 1970 in order to procure the aircraft needed to offset peacetime losses and hold the force level through the mid-1970's. . . .

We also propose to reduce the A-7 production program, reflecting the smaller number of attack squadrons in the present plan (the A-7 force level was reduced to compensate

for the increase of F-4 squadrons) and the decision to buy a much improved version of this aircraft. The new A-7E—and its Air Force counterpart, the A-7D—will have a more capable nose gun (Air Force's M-61) and improved avionics. The latter promises a significant increase in bombing accuracy and will enable the pilot to choose from a number of attack approaches not formerly available. The new model will also have more armor, an improved radar, and a self-defense ECM capability. Although more expensive than the earlier A-7B, the A-7E's greater capabilities will allow us to reduce the squadron size from 14 aircraft to 12. . . .

In the reconnaissance category, current attrition projections indicate that the problem of maintaining an adequate force level will not be as serious as it appeared last year. We now believe that no additional measures will be required beyond the presently scheduled procurement of RA-5C's in FY 1969 and FY 1970.

The major concern in the electronic countermeasures (ECM) category is again the EA-6B, an aircraft which promises significant improvements. Last year, the sharply rising cost of this aircraft led us to restrict procurement to only five test vehicles, pending redesign and the award of a new contract. Unfortunately, the cost of the EA-6B has continued to mount, while the urgency of the requirement has declined as more of our present attack aircraft are given a self-contained ECM capability. Virtually all attack aircraft now deployed in Southeast Asia have such equipment, and by the early 1970's all attack-capable aircraft will have this equipment. . . .

ASW Forces

ASW Carriers—Last year I pointed out that the present CVS force is a relatively high-cost ASW system in relationship to its effectiveness. While the present fixed-wing S-2 is able to detect the presence of enemy submarines, it is lacking in kill capability, and the SH-3 helicopter, while efficient in locating and destroying enemy submarines, has only a limited operating range. Yet the CVS force accounts for about 40 percent of all air ASW costs. As the newer ASW system—the SSN's, DE's, P-3's, etc.—enter the ASW forces in larger numbers, the relative contribution of the presently equipped CVS's will continue to decline. It is clear, therefore, that if we are to continue to operate our CVS force at all, it must be modernized.

The question of whether to retain a sea-based airborne ASW capability received intensive study during the past year, and it now appears that the advantages and flexibility inherent in such a force would marginally warrant its continuation in the '70's—provided that its effectiveness could be greatly improved. Since the effectiveness of the present CVS force is limited by the inadequacy of its fixed-wing aircraft and their sensors, it is clear that a new and much more capable aircraft must be provided. The development and production of such an aircraft will be a very expensive

undertaking, but it is the only solution available if we are determined to have an effective sea-based ASW capability in the 1970's. Accordingly, we have decided to proceed with the development of the VSX, using the funds appropriated in FY 1968. . . .

The VSX, as presently conceived, would be a four-man, fixed-wing aircraft powered by two high by-pass ratio, turbo-fan engines. It would have vastly improved speed and range compared with the present S-2, carry more torpedoes, and be able to monitor many more sonobuoys.

However, if we buy new ASW aircraft, the question of what to do about the carriers themselves immediately arises. All of the present CVS's were constructed during World War II and will be 30 years old by the time the VSX becomes available. The Secretary of the Navy has considered this matter and has concluded that the best solution would be to modernize existing carriers, at an average cost of about \$50 million each. Thus, our plan to continue a CVS force into the 1970's and proceed with the development, production and deployment of the VSX is based on the assumption that no new ASW carriers will be required. Indeed, if new ASW carriers were needed, increasing the number of land-based ASW patrol squadrons would be a much more attractive alternative than the VSX.

The future CVS air group, as seen by the Secretary of the Navy, will consist of VSX's, helicopters, and a few fighter aircraft. . . .

In light of the decision to go ahead with the VSX and in view of the vast improvement in its performance versus current ASW carrier-based aircraft, we now plan to reduce the CVS force to five carriers and four air groups when the Vietnam conflict is concluded. As additional P-3's enter the force and as the VSX replaces the S-2, the number of land-based patrol squadrons will be reduced. . . .

Patrol Aircraft—At the end of FY 1968, our authorized ASW patrol aircraft inventory will total 411.

As more of the newer P-3C's become available and the older P-2's are phased out, we will begin to reduce the size of the patrol force. The P-3C's with A-NEW will be able to process data from twice as many sonobuoy channels simultaneously as our older aircraft. By the early 1970's, seven of the planned squadrons will have P-3C aircraft, the rest being equipped with earlier P-3 models. The P-3C carrying the more capable Mk. 46 air-launched torpedo and the more effective sonobuoys now under development will provide the land-based ASW aircraft force with a significantly increased capability.

Marine Corps Forces

With regard to the Marine Corps air wings, we plan to maintain the F-4 force throughout the program period at the current level. (The last few squadrons of F-8's will phase out by the end of this fiscal year.) Because of the significant improvements in payload, accuracy and effectiveness already achieved and currently

programmed, we no longer plan to replace A-4's with A-7's. The later model A-4E/F's have the same bomb computer as the early A-7's, and with their large (nearly three-ton) payloads they can meet Marine close support needs. The A-4F's bought in FY 1967 to replace attrition, plus A-4E/F's which will be transferred from the Navy, should be sufficient to maintain the same level of Marine Corps light attack squadrons through the program period. The planned force level of A-6 aircraft will be achieved in FY 1969.

In the Reconnaissance/ECM area, the major change is the decision to procure EA-6A electronic warfare aircraft instead of EA-6B's. Since the Congress has already provided funds in the FY 1968 Budget for this purpose, we are now proceeding with the procurement of EA-6A's.

The Marines' tactical air control forces will remain at approximately the same level, although we plan to change their internal composition when the Vietnam conflict ends in order to make the best use of the aircraft available. The Air Force should have surplus O-2's available at that time for transfer to the Marine Corps to replace their present TA-4's. These TA-4's could be used by the Navy for advanced jet training instead of procuring new trainers at a cost of about \$60 million.

Last year, we planned a permanent force structure of five medium (CH-46) and one heavy (CH-53) helicopter squadrons for each of the three air wings. We now believe we should plan four medium and two heavy squadrons per wing, which will provide the same lift capability at a lower cost. The new force structure will require ten percent fewer aircraft and pilots, and, based upon preliminary estimates, would save about \$80 million in procurement costs alone. The FY 1969 procurement program for the CH-46's and CH-53's reflects this shift in emphasis.

Experience in Vietnam has shown that the Marine Corps requires improved fire support during air assault operations, especially for close-in fire suppression around landing zones. While we expect that the OV-10's now entering the force will be more effective than current fixed-wing aircraft in this role, we are also proposing procurement of AH-1G *Huey Cobra's* in the FY 1969 Budget to provide a more effective armed helicopter and to replace losses of UH-1E observation and reconnaissance helicopters now used in the armed helicopter role.

Reserve Forces

The Naval and Marine Corps Reserve fighter and attack units will have about 355 aircraft by the end of FY 1969, and they will be maintained at this level through the program period. All of the fighters and about one-third of the attack aircraft are earmarked for the Marine Corps Reserve air wing; the rest are for the Navy Reserve carrier forces. ASW carrier aircraft are also retained in the Naval Reserve for the four CVS's [which are assigned to] the Reserve Fleet.

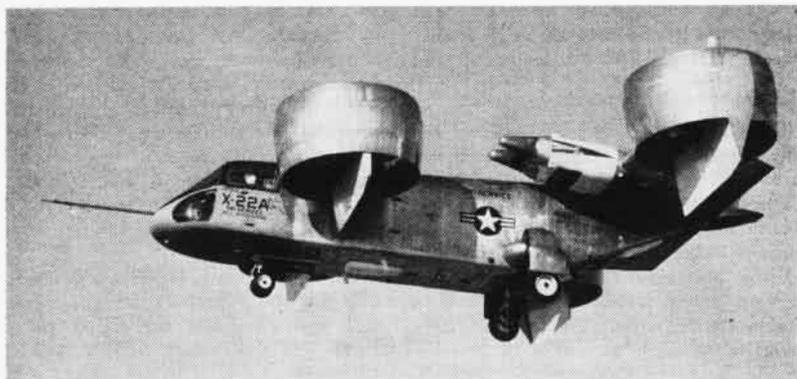
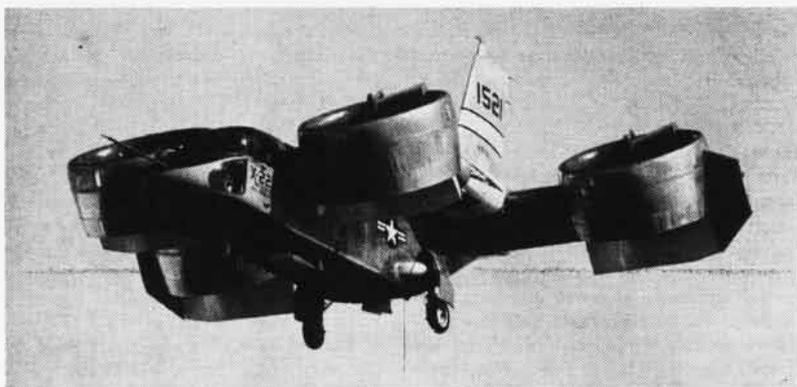
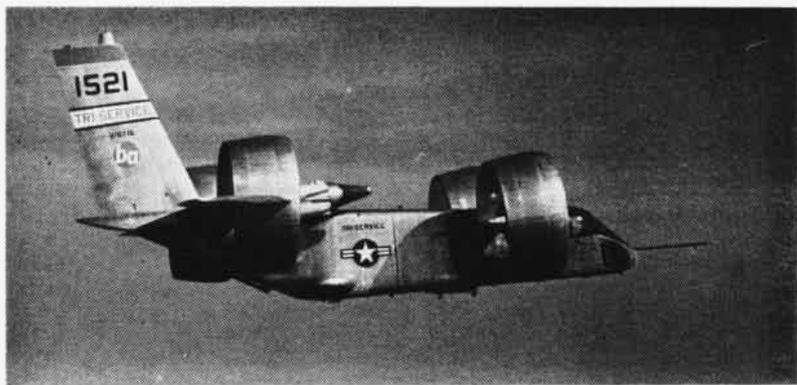
X-22A V/STOL Evaluated

A TRI-SERVICE test team, which is based at NATC PATUXENT RIVER, Md., has completed the first military preliminary evaluation of the Bell X-22A.

Under the leadership of LCdr. William Davies, the Air Force, Army and Navy pilot team members flew the tandem-tilting duct V/STOL in vertical and short takeoffs and landings, in hovering flight, through conversions and in conventional flight. The purpose of the evaluation was to examine the X-22A's flight characteristics and determine its suitability for use in a planned flight program.

Among the particular characteristics noted by the test team was the ease of pilot transition for each of the pilots, whether his flight experience had been almost solely in fixed-wing aircraft or primarily in helicopters.

The Naval Air Systems Command-managed tri-service X-22A represents the Navy's major current effort in the V/STOL aircraft field. The results of the program will play a part in establishing the future role of V/STOL aircraft and will provide basic technology for potential types.



TILTING ducted propellers are a feature of the tri-service Bell X-22A V/STOL research aircraft developed under Navy management. Just above, X-22A is seen hovering with ducts vertical, transitioning with ducts coming down, and in conventional flight with ducts down, gear up (top). NATC-based tri-service team (left) completed military preliminary evaluation in January. LCdr. Davies, fourth from left, led the team.



AUTOMATING FLIGHT TIME RECORDS AND REPORTS

By JOC John D. Burlage

Presenting: a one-act article.
Place: NANews editorial office.
Cast: two—the “good guy” (he’s the one in the white hat) and another NANews staffer.
Plot: the trials and tribulations of explaining a new method of accomplishing an old task at NAF Washington, D.C. “Good guy” speaks first:

THEY’VE AUTOMATED the Yellow Sheet at the Naval Air Facility, Washington, D.C.

They’ve what?

They’ve automated the Yellow Sheet. Well, anyway, at least part of it.

Now, why’d they go and do a thing like that?

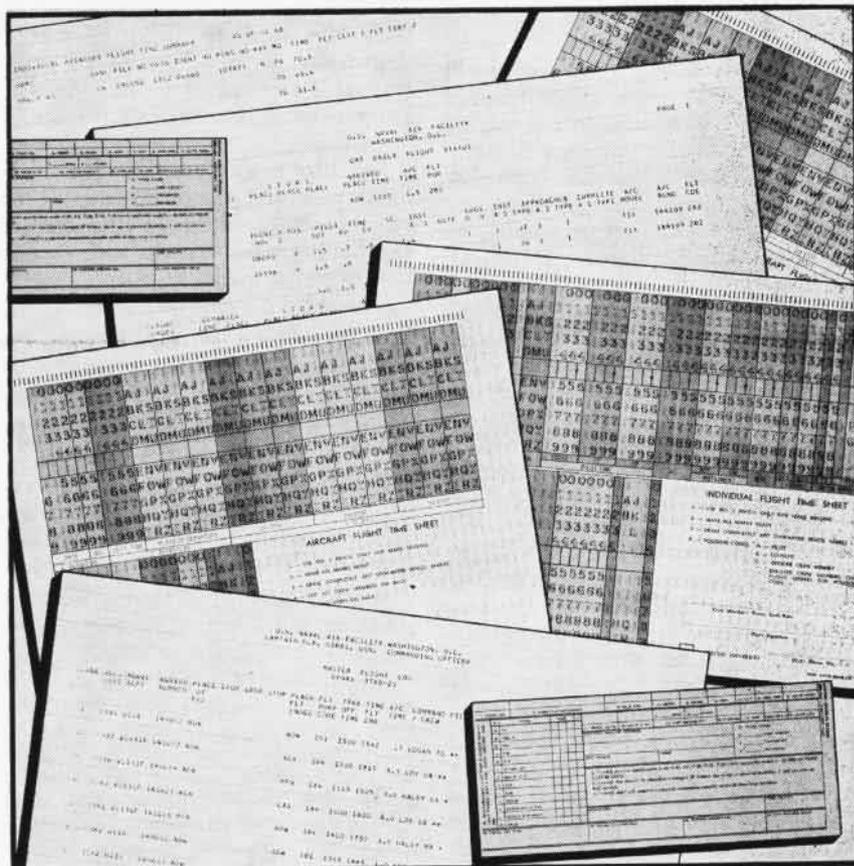
Because some sharp people discovered they could use NAF WASHINGTON’s friendly computer complex to turn out certain records and reports—required after flights by Navy aircraft—that used to be done entirely by hand, that’s why.

Oh. In other words, they got lazy.

Hardly. They simply proved they could obtain better and more accurate records and reports by computerized methods, and at the same time save themselves considerable time, trouble and several cases of writer’s cramp.

Okay, smart guy, explain how they did all these good things.

Gladly. As you undoubtedly know, the term Yellow Sheet is the popular epithet for OpNav Form 3760-2, the *Naval Aircraft Flight Record* that is the primary source of all naval flight data. It’s considered so important that it—or an acceptable alternate—must be filled out for each flight by every Navy aircraft anywhere.



MONTAGE OF FORMS AND RECORDS REPRESENTS A NEW METHOD AT NAF WASHINGTON

That must make for a whale of a lot of Yellow Sheets.

It does that. But it’s considered necessary. Yellow Sheets have all kinds of neat blank spaces where pertinent information on the aircraft and its contents—human and otherwise—must be entered.

Like, for instance, what info?

Oh, let’s see: Maintenance personnel must complete a preflight certification, included in the Yellow Sheet, that says the aircraft is ready to go. The pilot must sign an “acceptance” space before he can even climb into the cockpit. There is space on the Yellow Sheet

for listing all persons aboard the aircraft. And there is also space for the pilot to list any discrepancies he notices during a flight, and still other places where maintenance types can indicate what action they’ve taken to correct these deficiencies. Last, but by no means least, the Yellow Sheet has room for a statistical description of the flight, which is supposed to meet record and report requirements.

Lovely. The Yellow Sheet has room for everything but the kitchen sink. You still haven’t told how they’ve managed to “automate” it at the NAF.

Patience, patience. First, let’s give

you just a bit of background on the facility itself.

NAF WASHINGTON is, as many Naval Aviators know, located at Andrews AFB a few miles up the road from the nation's capital. One of its primary missions is to provide the planes, facilities and support personnel for CRT (Combat Readiness Training) flights by Navy pilots and naval flight officers (NFO's) in the Washington area.

Even with the recent changes to CRT requirements announced by the Navy, NAF WASHINGTON still maintains a busy schedule of getting pilots and NFO's, who might otherwise only be able to "fly a desk," into the air for their required proficiency flights.

NAF personnel calculate that between 800 and 900 Naval Aviators report to the facility every month to make proficiency flights. Of these, perhaps 50 will be individuals who have recently been transferred to Washington for duty; likewise, roughly an equal number who have been using NAF planes for proficiency purposes will have moved on to other duty.

Facility people also point out that, unlike many larger aviation activities, NAF WASHINGTON has the problem of having its pilots scattered all over the place. Just making sure CRT fliers get their flight pay necessitates dealing with six commands, to whom the aviators are assigned for pay purposes.

Then, there are the facility's aircraft. NAF WASHINGTON is assigned almost 60 aircraft including C-131's, C-118's, S-2's, T-1A's, T-39's, T-28's and U-1's. Moreover, the NAF is "home plate" for an A-3 VIP transport and an RC-45 photo plane operated by the Naval Photographic Center. This diversity of aircraft types only accen-

tuates the facility's reporting/recording headaches.

Awright, awready! NAF WASHINGTON has all those requirements and all those planes and all those problems. Now, would you please explain how they automated the Yellow Sheet?

Certainly. Until July 1966, the job of turning the raw data placed by flight crews at NAF WASHINGTON on the Yellow Sheets into meaningful Flight Time Records and Reports, as required by OpNav Instruction 3710-7D (the general NATOPS Manual), was done entirely by hand. More specifically, it was done by 20 hands belonging to ten Navy men who were assigned to the facility's Flight Training Office.

But that was before three senior enlisted men and an officer teamed up to provide the facility a new method of obtaining the records and reports that were required.

The three Navy men were:

- YNC John M. Oyler, who was assigned to NAF WASHINGTON in February 1965 for duty as leading petty officer of the Flight Training Office. He is still aboard.

- DPC Robert F. Cook, now serving at the Washington Naval Station, who worked in the NAF Supply Department's Data Processing Division.

- AZC Richard E. Jones, who arrived at NAF WASHINGTON from a tour as instructor at AZ School, NATTC MEMPHIS, and who was Logs and Records supervisor under Oyler until he was transferred to VP-8 at Patuxent River, Md.

As Oyler tells it today, the three men determined to find a better way

to do the Logs and Records bit after Oyler and Jones decided that having ten men do the job was too time-consuming and laborious a process—especially since the facility's Supply Department had on hand a computer complex, used primarily for the Navy Maintenance and Material Management (3-M) System (NANEWS, December 1966, p. 23), that just might handle the chore quite nicely.

They knew more than enough about data processing to realize that it might be possible to feed raw data from the Yellow Sheets into the computer and program it to turn out many of the required records and reports. And they knew that Cook had the technical background to do the programming.

With the active support and encouragement of LCdr. Ren E. Stedman, NAF's combat readiness training officer until he was recently reassigned to VF-121, the sailors worked as a team to compile a plan for automating the reporting/recording process. Their efforts resulted in the computer being cranked up, on July 1, 1966, to turn out Flight Time Records and Reports.

Using data processing methods for this function didn't mean much of a saving in time and effort at first, however. Raw data from the Yellow Sheets still had to be hand-reported on key-punch cards before it could be processed. But a major breakthrough came when NAF WASHINGTON acquired a remarkable device called an "optical scanner." Wired into the data processing complex, it has the ability to actually "read" key numbers and figures marked on the proper kind of paper, and to feed the information it obtains into the computer. Result: no hand-made, key-punch cards and infinitely faster machine accounting

Photos by Alfred E. Gabriel



The introduction of NAF Washington's computerized recording/reporting technique has affected all the persons pictured here. At left, YNC John Oyler (a YN1 when photo was taken) checks the facility's computer-produced master log; above left, Agnes M. Cochran works in CRT office verifying daily flight sheets; above right, flight crew fills out scanner sheets.

inputs into the data processing system.

The NAF WASHINGTON recording/reporting crew was ready for the optical scanner. Its members created two special "scanning sheets" to be read by the device; these are filled out by pilots and aircrewmembers in place of certain sections of the Yellow Sheet. Called *Aircraft Flight Time Sheets* and *Individual Flight Time Sheets*, they are 8½-by-11 inches in area, loaded with machine accounting letters and figures, complete with the necessary blocks to be filled in by pilots and aircrewmembers and printed in two colors. Aircraft Flight Time Sheets are filled in by pilots, Individual Flight Time Sheets by crewmen; together, they provide all information necessary on both the flight crews and the flights they make.

Nowadays, when a Naval Aviator or NFO first reports to NAF WASHINGTON for CRT purposes and completes his initial check-in card (NAF Form 3740/4), he is "tagged" with an identification number that stays with him as long as he makes CRT flights out of the NAF. Using that identification number as a key, recording/reporting personnel are able to accurately keep track of virtually every major historical and professional factor they need on an officer by retaining pertinent information on him in the facility's machine accounting complex.

That takes care of individual record requirements but, as previously indicated, the scanner sheets are not limited only to providing current data on individual pilots or aircrewmembers. From them, the facility is also able to obtain "readouts" that either serve as acceptable substitutes for certain records or reports or as administrative compilations needed for the program. Among them are:

- An *alphabetical roster* of all officers and enlisted men making flights from NAF WASHINGTON, used for "muster purposes" and for assigning the key identification numbers to the proper names so the computer can link data to the person it concerns.

- A *Master Flight Log* (usually transcribed to OpNav Form 3760-25), which is the only permanent official flight record for Navy aircraft and is maintained by virtually every command having aircraft.

- An *Aviators Flight Log Book* (OpNav Form 3760-31), which is the personal property of a Naval Aviator

and in which is found information on his background and training, flight hours, instrument time, etc.

- An *Enlisted Flight Training and Operational Log* (OpNav Form 1326-2), which is used to maintain a complete record of all enlisted personnel and the training they have received, and from which their flight pay entitlement is established.

- A *flight pay summary*, which may be unique to NAF WASHINGTON; it lists the number of flight hours compiled by a pilot during a given month so records/reports personnel can easily tell who rates "flight skins."

About the only important report that can't be pumped out of the computer now is the *Individual Flying Time Report* (OpNav Form 3760-4), which is the Navy's primary source of flying data on its Naval Aviators. Oyler explains that this particular report is extremely difficult to compute, but the effort is being made to get it on the system some time in 1968.

And there you have it.

Sounds simply wonderful. One more question: Has this new system resulted in any real savings of time and effort?

Yep. By way of example, that work which used to be done by ten individuals in the Flight Training Office is now handled by Oyler and three other persons. Overtime has been virtually eliminated. Oyler emphasizes that the new method permits better control of records and reports and, at the same time, frees Flight Training Office personnel for other duties.

It is possible, you realize, that the methods now in use at NAF WASHINGTON could also apply to some other Naval Aviation commands.

So it is—and, since the facility has laid the groundwork, (and, incidentally, already received the required approval from OpNav to continue with the system), it may pay interested commands to correspond with the NAF's C.O., Captain Harry B. Gibbs, about it. Matter of fact, OpNav has approved such direct correspondence.

That's great. NAF WASHINGTON may become so busy answering correspondence on the subject that all the time and effort that's being saved may be lost all over again.

Well, friend, that's progress. It's just possible, of course, that NAF WASHINGTON may find a way to automate its correspondence-answering methods in time to stave off the blow.



AT CECIL FIELD, Cdr. W. F. Sallada (R), C.O. of VA-174, the A-7 combat readiness training squadron, congratulates his brother, Lt. R. V. Sallada, upon completing his first familiarization flight in the Corsair II. Lt. Sallada will undergo about 20 weeks of training before going to another A-7 squadron.

Record of 2,500 Hours Set Navy Pilot Achieves Mark in Orion

Accordingly to VP-49, NAS PATUXENT RIVER, Commander Richard S. Zeisel, the squadron's C.O., chalked up a "first" while deployed to Bermuda: he became the first Navy pilot to accumulate 2,500 hours of flight time in the P-3A *Orion*. In recognition of the achievement, he received Lockheed's 2,500-hour pin from the firm's representative, Mr. Robert M. Keiser.

In 1962, Cdr. Zeisel participated in the initial Fleet transition to the P-3A to become one of the first qualified PPC's for the *Orion*.

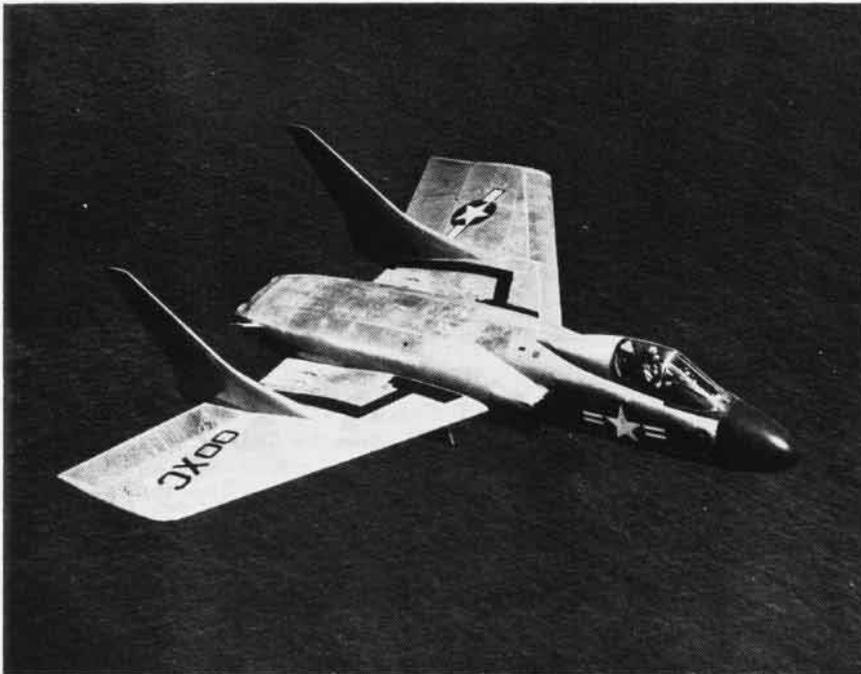
Last Combat for Cougars Skyhawks Replace MAG-13 F-9J's

Marine Aircraft Group 13 at Chu Lai claims that on January 30 three of its F-9J *Cougars* were the last of their type to be flown on a combat mission over Vietnam.

With a history dating back to the Korean conflict, the *Cougar* is being replaced at MAG-13 by the TA-4F *Skyhawk*. The *Cougar* was used in Vietnam primarily for visual recon missions. Other missions included helicopter escort, artillery spotting and flying airborne controllers for the A-4E *Skyhawks* and F-4B *Phantoms*.

Armed with 20mm cannons and two five-inch rocket pods, the Chu Lai-based *Cougars*, flew 1,295 sorties for a total of 1,829.7 hours.

During the 18 months that the F-9J *Cougar* was in service with Marine Air Group 13, it inflicted damage on enemy positions, firing a total of 1,072 rockets and 24,456 20mm rounds.

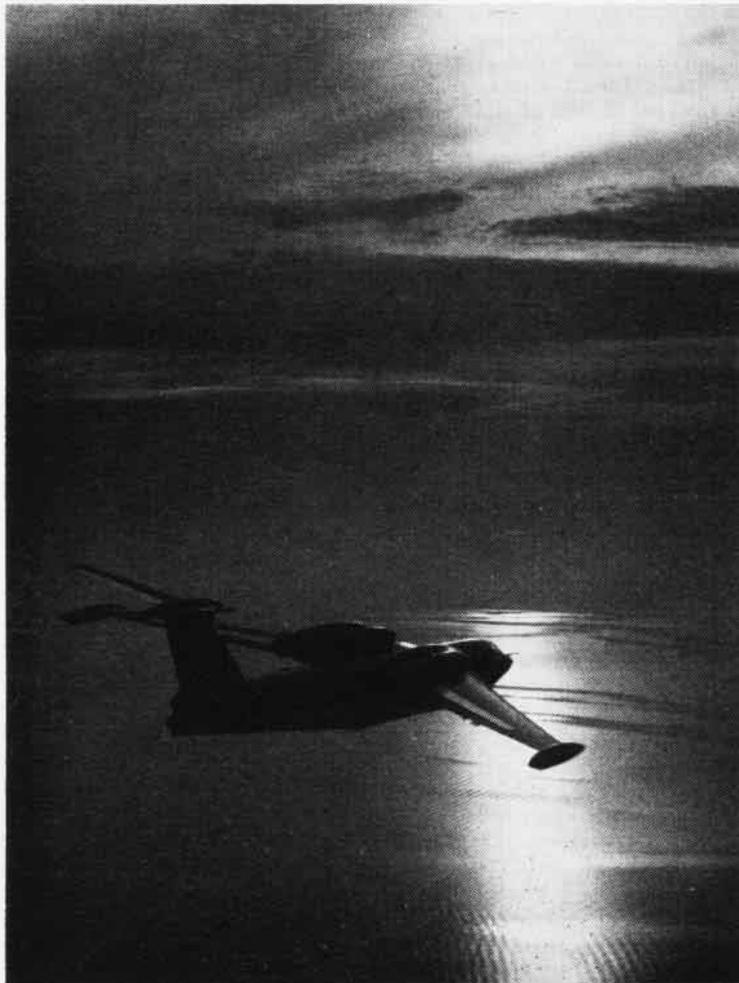


F7U Cutlass

25 YEARS OF NAVY JETS

The pilot of an F7U could experience post-stall gyration, a sweptwing maneuver replacing the spin wherein the Cutlass tumbled end over end. The Martin P6M and the Convair XF2Y were designed to exploit oceans and waterways. The Seamaster had a large load-carrying capacity while the Sea Dart was a dramatic development of a more shadowy concept. Hopefully, hordes of the twin-jet fighters might lurk in coastal swamps, pounce on aerial invaders, refuel at sea and retire to their watery hideaways.

P6M Seamaster



F-8 Crusader

With the F-8, carrier air groups moved into supersonic fighter class. Initially a day fighter, the Crusader serves in many roles. A novel feature was the need for the pilot to lower the variable incidence wing after takeoff, raise it for approach and landing.



XF2Y Sea Dart



TF-9J Cougar



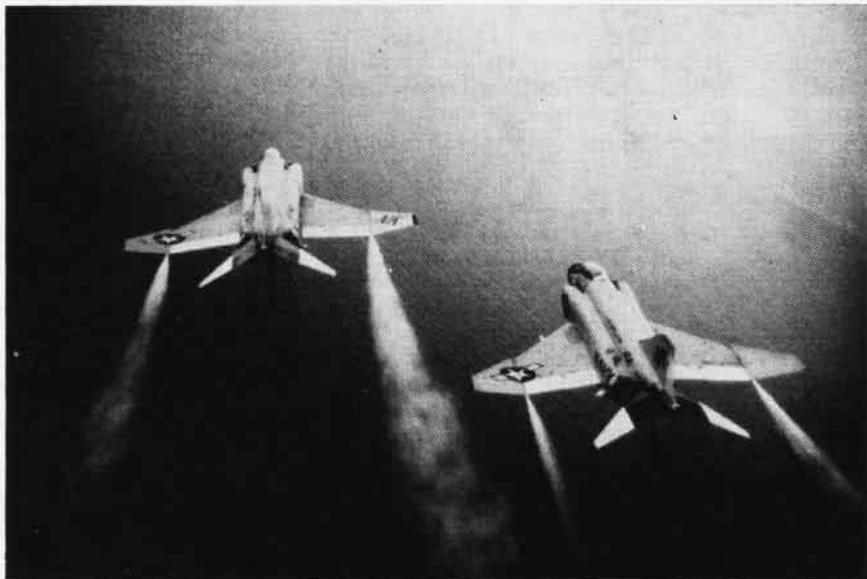
F-11 Tiger



T-33 Shooting Stars

F-4 Phantom II's

The Grumman F-11 Tiger was the first jet to use "area rule" in more efficient, high-speed fuselage design. Still in use by the Blue Angels, the supersonic Tiger was the first aircraft to shoot itself down, catching up with slowed-down 20mm's it had fired. A 1966 F-11 accident is also noteworthy: At 25,000 feet, the pilot felt an explosion. Noticing loss of the flight control hydraulic system and experiencing difficulty controlling the aircraft, he headed towards Kingsville and passed over the base at 2,500 feet, 300 knots. Upon receipt of the transmission by an unknown ground observer on tower frequency, "Eject, you don't have any wings," the pilot ejected at 1,500 feet.



AFTER ONE YEAR OF WAR

QUESTIONS of mission were discussed at high levels as plans were formulated for a Navy land-based air offensive against German U-boat support facilities. Navy and Marine Corps units destined to take part began organizing: Flight training goals were adjusted to the new requirement. Trained aerologists began their duties at air stations. American-built aircraft and engines began arriving overseas.

APRIL 1918

1—The First Aviation Squadron transferred from Gerstner Field, La., to the Marine Flying Field at Miami.

10—A training school for women apprentices began at the Naval Aircraft Factory.

15—The Marine Aeronautic Detachment and the First Aviation Squadron were merged at Miami to form the First Marine Aviation Force under command of Capt. Alfred A. Cunningham, USMC.

16—The first formally trained Navy aerologists, a detachment of nine officers and 15 enlisted men headed by LCdr. A. G. McAdie, departed for duty at naval air stations in Europe.

17—Lt. W. F. Reed, Jr., reported to NAS PENSACOLA to provide meteorological services for flight operations or for what was then called "aerographical" duty.

23—A section of planes from NAS ILE TUDY, one manned by R. H. Harrell, QM1c(A), and H. W. Studer, QM2c(A), the other by Ens. K. R. Smith and O. E. Williams, attacked a submarine stalking the convoy they were covering. The plane piloted by Ens. Smith dropped two bombs which brought bits of wreckage and sea growth to the surface and appeared so effective that the second plane did not follow-up the attack. Ens. Smith and observer Williams were officially credited by French naval

authorities with having sunk a submarine, were cited in the Order of the Day and awarded the Croix de Guerre with Palm.

23—The first shipment of *Liberty* engines to naval aviation units in France was received at the assembly and repair station, NAS PAULLIAC.

27—The airship AT-1, commanded by Lt. F. P. Culbert, and a crew made up of Ensigns M. P. Delano, A. D. Brewer and T. E. McCracken, completed a 25-hour, 43-minute flight out of Paimboeuf, France, during the course of which three convoys were escorted through a mined zone. For this flight, the longest then on record for airships of this type, the commanding officer and crew were officially commended by the French Minister of Marine.

29—The RAF kite balloon station at Castletownbere, Ireland, was turned over to the United States and commissioned an NAS with Ens. C. E. Shumway in command.

30—The Secretary of the Navy approved a plan, recommended by the General Board and developed by the U.S. Naval Forces in Europe, for air operations in the Dunkirk-Zeebrugge area against German submarine support facilities by a specially organized unit, later designated the Northern Bombing Group, and directed that bureaus and offices expedite assembly of personnel and equipment.

MAY

2—Naval Air Station, Wexford, Ireland, a seaplane station located at the southern entrance to the Irish Sea, was placed in commission.

6—The Naval Air Station Coco Solo was commissioned, Lt. R. G. Pennoyer commanding, as a base for seaplane patrol over the approaches to the Panama Canal.

15—The Bureau of Steam Engineering reported that the Marconi SE 1100 radio transmitter had demonstrated dependability in voice communication at distances up to 50 nautical miles and in code communication at up to 120 nautical miles. Initially designed for use in H-16 flying boats, this was one of the first radio sets widely used in, and the first tube set developed for, naval aircraft.

18—The Chief of Naval Operations scheduled training goals which called for 124 pilots and 62 gunners trained in night bombers by 1 July and 552 pilots and 156 engineers trained in H-16 and HS-1 patrol planes by 1 August. To meet them, it was directed that eight elementary training squadrons be formed, two at Key West, four at Miami



MAKING READY FOR THE FIRST FLIGHT OVERSEAS OF HS-1 AFTER IT WAS ASSEMBLED AT PAULLIAC



LT. HENRY BARTON CECIL

and two at Bay Shore and that six advanced training squadrons be organized at Pensacola where only advanced training would be given as soon as the elementary students on board were graduated.

22—Construction of the first N-1, an experimental seaplane, was completed at the Naval Aircraft Factory.

24—The first shipment of American-built planes, six HS-1's on board the USS *Houston* and two on board *Lake Placid*, was delivered at NAS PAULLAC, France.

JUNE

4—The first DH-4's assigned to service were delivered to Miami. A two-seat, single-engine landplane built by Dayton-Wright and obtained from the Army by the Navy, the DH-4 was used principally by the Marines.

4—Naval Air Station L'Aber Vrach, was commissioned with Lt. Henry B. Cecil in command. Located on the rocky island of Ehre in the harbor of Vrach near Brest, its seaplanes covered the western English Channel.

5—The E-1, a single-engine pusher type airship, was ordered from the Goodyear Tire & Rubber Company.

8—Naval Air Station Arcachon, southernmost of the seaplane stations in France, was commissioned. Ens. J. N. Brown was acting commanding officer until June 15.

13—The first American-built aircraft to be assembled in France, an HS-1 made its first flight at NAS PAULLAC, piloted by Lt. Charles P. Mason with Cdr. J. B. Patton and Lt. W. B. Jameson as passengers. This was also the first flight overseas of a *Liberty*-equipped plane.

16—A headquarters company and four landplane squadrons, designated A, B, C and D, were organized within the First Marine Aviation Force at Miami. Commanding officers of the new squadrons were Capts. Roy S. Geiger, William M. McIlvain, Douglas B. Roben and 1st Lt. Russell A. Presley.

19—The practice of taking regular upper air soundings began at NAS PENSACOLA to provide information on wind velocity and direction needed for navigation training flights. Recording instruments were carried aloft in a kite balloon, a technique developed by the station meteorological officer, Lt. W. F. Reed.

30—The first Navy pilots of the Night Wing, Northern Bombing Group, to take special training with British units marked the completion of their course by participating in a night bombing raid with RAF Squadron 214.



JENNIES OVER AD BUILDING AT MARINE FLYING FIELD, MIAMI



ENLISTED MEN AND CURTISS R TYPE SEAPLANE AT COCO SOLO



NAS ARCACHON, SOUTHERNMOST SEAPLANE STATION IN FRANCE



NAS L'ABER VRACH PLANES PATROLLED THE ENGLISH CHANNEL

Navy's Newest NAF

Story and Photos by
PHC William M. Powers

WHEN THE first contingent of U.S. Navy men arrived at Cam Ranh Bay, Republic of Vietnam, to establish an air facility (NANEWS, September 1967, p. 28), they found 59,000 square yards of concrete ramp—nothing else.

Those first men lived and worked in tents and other temporary shelters while they rebuilt "junked" trailers for use as temporary buildings. Today NAF CAM RANH BAY has a permanent hangar and its support facilities are still being developed.

The facility's primary mission is to support rotating patrol aircraft of Fleet squadrons. Aircraft flying Market Time patrols come and go daily.

Other operations are going full speed. The facility serves as a supply and passenger terminal for other local activities. Men working on the ramp continually hear the roar of combat and transport aircraft landing and taking off. Some of this traffic is generated by the Air Force and Army who share the runway.

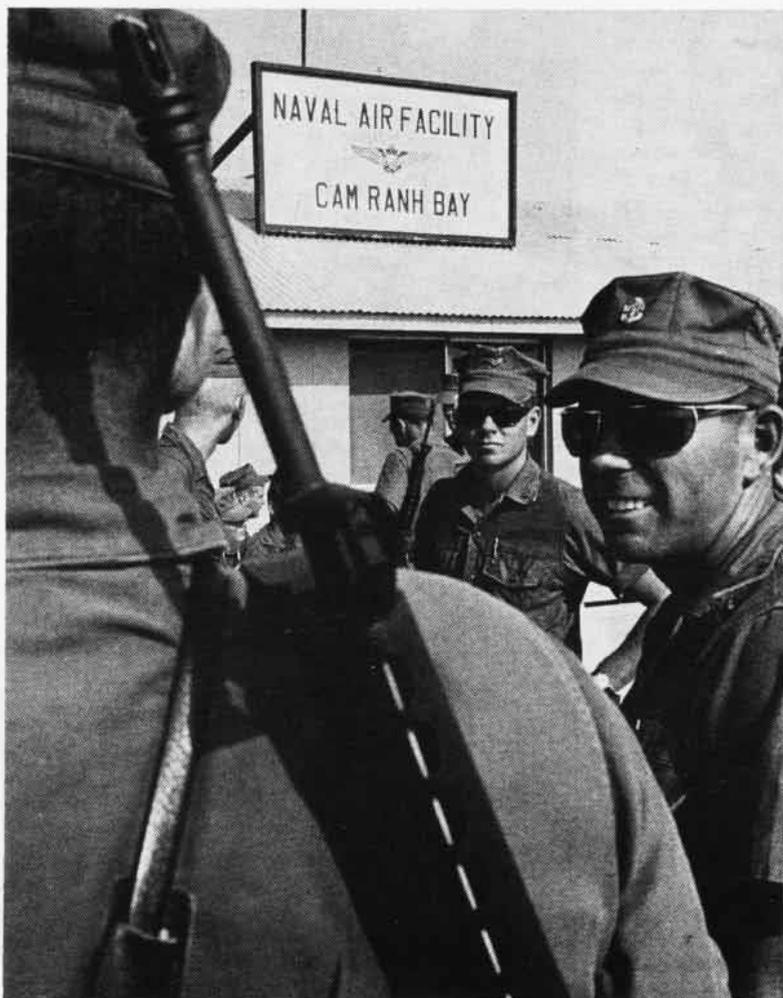
And, with all this activity, Cam Ranh Bay must maintain strict security. The whole Navy area is laced with rolled "concertina wire," a circular form of barbed wire, sand bags and bunkers. Defensive positions are scattered at strategic points around the base. At each entrance, identity cards, manifests and vehicles are strictly checked and, once on base, the movement of all civilians is supervised.

General service sailors, all of them graduates of an Air Force security training program, constitute the security force which mans guard posts and patrols the facility's perimeter.

The tempo of work continues seven days a week, but there is some recreation and the time passes quickly. Personnel can swim at authorized guarded beaches and they rotate rest and recreation at Vung Tau, Australia, Hawaii or one of several other places.



PORTRAYING the action at NAF Cam Ranh Bay, a sentry stands guard over Vietnamese contract construction personnel who are working on the steel framework of the new aircraft hangar (left, above) while a P-2 Neptune sweeps past sandbagged bunkers and concertina wire at the start of a Market Time patrol (right, above). Heavily armed Seabees (below) wait for transport to a new construction site near the demilitarized zone.



Heavier Load for CH-53 Flies at 138 Miles Per Hour in Test

A U.S. Marine Corps/Sikorsky CH-53 helicopter, powered by two GE T-64-12 turbine engines, carried 14¼ tons (28,500 pounds) of payload and fuel on a test flight at Stratford, Conn., February 17, to establish new unofficial payload and gross weight records for Free World production helicopters.

The CH-53 was flown at a total gross weight of 51,900 pounds, Sikorsky officials said. Lt. Col. Robert Guay, USMC, CH-53 project officer for the Naval Air Systems Command, and Byron Graham, Sikorsky test pilot, were at the controls for the flight.

A speed of 138 mph was attained, the pilots said. Banked turns were accomplished easily and the aircraft behaved normally. The aircraft was not stripped for the flight.

Sikorsky has delivered substantial numbers of CH-53's to the Marines and to the USAF for operation in Southeast Asia. The Marines use the aircraft for troop and cargo transport while the Air Force uses them for air rescue and recovery missions.

First U. S. Aerial Charts Prepared in 1918 for Use in WW I

Fifty years ago, the first U.S. aviation charts were developed by the old Hydrographic Office, now part of the Naval Oceanographic Office, Suitland.

The need for aerial charts became evident in 1918 when Secretary of



TO MAKE SURE that aircraft carriers assigned to ComNavAirLant have at all times and in excellent condition the support equipment they need in the right quantities and appropriate types, equipment pool sites have been established at NAS Norfolk, NAS Quonset Point and NAS Jacksonville. Norfolk, in addition to carrier support, also supports shore stations in the Atlantic area. The pool at Norfolk not only provides initial outfitting requirements of tow tractors and mobile electric power plants (above) but also serves as a primary point for coordinating and arranging all required depot maintenance and repair services of equipment used by the Fleet.

War Newton Baker announced the first shipment of American battle planes had been sent to Europe.

After the Armistice, the Hydrographic Office, the chief source for reliable aviation charts, assisted in a number of historic flights. Among these was the first trans-Atlantic flight, made by the Navy's NC-4. Later, Charles A. Lindbergh availed himself of the skill and knowledge of the Navy's aerial chart makers when he crossed the Atlantic alone in the *Spirit of St. Louis* 31 years ago.

Other famous fliers who depended on the map service included Rear Admiral Richard E. Byrd, Wiley Post, Amelia Earhart, Clarence Chamberlin.

Lighting System under Test Was Designed for Nighttime Flying

The Service Test Division at NATC PATUXENT RIVER, Md., is evaluating a new formation lighting system for fighter aircraft.

The system is comprised of six specially encapsulated electro-luminescent panels called Capsul Light. The panels, installed on the aircraft wingtips, fuselage and vertical stabilizer, provide a steady, low-level glow. These panels should permit a wingman to perceive instantly changes in attitude and spatial relationship. The evaluation will include intensive night and night instrument formation flying.



IN CEREMONIES held at NAS Corpus Christi on February 16, the Texas Society of the Daughters of the American Revolution presented their 13th annual "Armed Services Awards" to the top 1967 Navy, Marine Corps and Coast Guard graduates of the Naval Air Advanced Training Command. Mrs. Buck Woolley (above), State Regent, presented engraved gold wristwatches to (left to right) Ltjg. David G. Perkins III, USN, 1st Lt. John M. Murphy, USMC, and Ens. Walter P. Hubbs III, USCG. At right, one of the first recipients, LCDr. E. L. Rabn, USCG, chats with Mrs. Felix Irwin (left), who presented the awards in February 1956, and Mrs. Woolley.



COMMANDER C. M. Walker (right), VP-4 C.O., is a veteran of 18 years of patrol aviation. Below, squadron officers gather for a briefing in administration office. Far right shows the hunter and the hunted as an Orion swoops low over the water and flies by a U.S. Navy submarine in ASW exercise. On opposite page is shown flight line at MCAS Iwakuni.



ORION FLYIN'

ONE HUNDRED and twenty-seven knots," barked copilot Dave Hilty, and "Rotation," returned pilot Ken Johnson.

The big, gray P-3 *Orion* surged off the misty runway, skimmed over the red and white smoke stacks of industrial Iwakuni and bored into the heavy mantle of fog that hung in the early dawn over Japan's Inland Sea. Climbing out over the unseen Buddhist and Shinto shrines of Miyajima, the P-3 forged through the fog layer to break into the early morning half-light above Hiroshima. The *Skinny Dragons* of VP-4 were on their way to the "office."

For VP-4, the airborne patrol unit of the Japan Patrol Group, the "office" was two million square miles of ocean in the Philippine Sea, the Yellow Sea, the Sea of Japan and the WestPac.

For Lt. Ken Johnson, the squadron's newest patrol commander, and Lt. Dave Hilty, an air intelligence officer turned pilot, and their tactical crew,

it meant 12 hours of probing and searching, looking and listening for the sights and sounds that meant . . . Submarine!

There were also the sights and sounds of the VP Navy on patrol over an endless ocean, alternately hidden and exposed by the capricious sea fog.

A tense communications operator struggled with the broken English from a Japanese ground station. There was hot coffee and searching, warm coffee and watching, then no coffee and still looking.

A brief flash of excitement greeted a radar contact. Ken Johnson descended through fog to investigate. Anxiety faded into frustration as a hoped-for submarine became a sluggish Greek freighter.

Submarines, by design, are hard to find and patrol squadrons know it.

"Our job," said Commander C. M. Walker, commanding officer of VP-4 and a veteran of 18 years in Navy patrol aviation, "was to fly that two

million miles of ocean and know what was on it and underneath it every hour of the day. In the event of war, we had to be ready to challenge with force any possible hostile action on the part of enemy submarines."

For Walker and the rest of the officers and enlisted men, then deployed at MCAS IWAKUNI from their home base at Barber's Point, Hawaii, anti-submarine warfare meant a constant vigil. Like other VP squadrons stationed around the world from Iceland to Okinawa and from Alaska to the Azores, VP-4 worked around the clock to protect the world's sealanes.

To the *Skinny Dragons*, ASW is a mission demanding the utmost of both men and aircraft. It means an unending procession of pre-dawn wake-up calls and quickly gulped cups of coffee, box lunches for breakfast and too many cigarettes on the 12-hour patrol missions. Weather hides submarine contacts and heavy seas distort electronic sensor information. ASW

is being too far from home too long. And sometimes—just sometimes—it is an unexpected submarine contact, a successful tactical prosecution and the assurance that when submarines are there, VP can find them.

ASW is what VP-4 does best. "I like to think every man in VP-4 is a pro," Walker said. "My flight crews are elite personnel. They know ASW and they prove it every day."

The squadron's commitment in the Sea of Japan and its neighboring waters also included surface shipping surveillance and SAR operations.

"The patrol mission is expanding every day," Captain J. A. Jones, Commander, Japan Patrol Group, says. "With the constant improvement of patrol aircraft and aircraft systems, VP squadrons are able to perform more varied missions than ever before."

In addition to ASW operations, VP-4 also flies ocean surveillance air patrol (OSAP) missions, the strategic importance of which was clearly underlined when patrol aircraft discovered merchant vessels carrying Russian missiles to Cuba in 1962.

On such a patrol, faces are pressed against the windows of the low-flying P-3 during its ship "rigging" run—the VP term for aerial investigation.

"What flag was it? . . . Who got a name? . . . I'll estimate 7,000 tons and about 300 feet. . . . Anybody got a name? . . . Did we get a good picture? . . . We've got to go back for a name."

One of the advantages of being a VP squadron, according to Walker, is that it is productive in both peace and war. The same capability that enables the squadron to find submarines is effective in tracking surface shipping.

Captain Jones says, "ASW is our business. But, if other bells ring, we can answer."

The Japan Patrol Group also stands ready to support other commands. During deployment to Iwakuni, VP-4 participated in operations conducted by the Okinawa Patrol Group, based at Naha, Okinawa, and the Philippine Patrol Group, based at Sangley Point.

VP-4's participation extended as far south as the Gulf of Tonkin to help protect units of the Seventh Fleet on Yankee Station. The squadron was also involved in cooperative operations off Korea with the Republic of Korea Naval Forces and joined the Japanese Maritime Self Defense Force in ASW exercises in the Sea of Japan. In all, the *Skinny Dragons* and their versatile *Orions* averaged more than 1,200 flight

hours per month during their deployment. During one 36-hour period, the squadron, augmented by two *Orions* from Sangley Point and Naha, recorded a total of 159 flight hours.

"You expect to fly a lot when you're on deployment," says LCdr. C. E. White, VP-4's operations officer and also PPC of Crew Three. "Flying is what we came for and flying is what we do best. It's not easy to fly a 12-hour OSAP, then stand duty, then draw the ready-alert and maybe get launched . . . and fly another OSAP. But that's the name of the game."

Since there are a great number of U.S. submarines in WestPac, there are increased training opportunities. Six of VP-4's flight crews had achieved Alpha rating before the deployment ended, a rating which signifies qualification in a broad spectrum of ASW tactics and operations. Only three had been Alpha-qualified upon arrival in Japan. Commander W. P. Vosseler, VP-4 X.O., said, "We came home better prepared than when we went."

This added training makes the *Skinny Dragons* confident.

LCdr. Chuck Larzellere, PPC of Crew 11, passes out a personal calling card which reads, "If you care enough, send the very best—PatRon Four."





SELECTED



RADM. Miller (right) presents award to Capt. White as Mrs. White and Capt. John C. Doherty (left), C.O. of NAS South Weymouth, look on.



AT NAS South Weymouth, Elmer Coles, Navy Leaguer, shows special tag on his car to ADR1 Raymond Stalnakar and Miss Dolores McNamee.

Public Service Citation is Given

On behalf of Secretary of the Navy Paul R. Ignatius, Rear Admiral Henry L. Miller, Chief of Information, presented the Navy's Meritorious Public Service Citation to Captain Ronald L. White in ceremonies held in January at NAS SOUTH WEYMOUTH.

Capt. White, Naval Air Reserve Staff 91, earned the citation for his work as New England Chairman of the 1966 observance of the 50th Anniversary of the Naval Air Reserve.

The 40-year aviation enthusiast started his flying career in 1927 and has since logged more than 28,000 hours at the controls of more than 90 different types of aircraft.

Capt. White, who joined the Naval Air Reserve in 1942, was on active duty during WW II and the Berlin Airlift. Instrumental in the commissioning of VR-931, he was its first skipper. In civilian life, Capt. White is president of Plymouth Air Services, Inc., Plymouth, Mass.

Senior Enlisted Advisor

Master Chief Petty Officer Eugene Crisp, NAS GLENVIEW, has been selected as the station's first Senior Enlisted Advisor. He will serve as liaison on the staff of the station's C.O.,

Captain R. W. Labyak, to ensure that valid problems of enlisted personnel receive appropriate attention.

Ten Year Safety Record

In January, Major General Arthur H. Adams, Commanding General of the Marine Air Reserve Training Command, presented a ten-year accident-free safety award to VMA-142, NAS JACKSONVILLE, Fla. Maj. M. L. Murphy is the squadron's commanding officer.

The squadron established the safety record between January 1, 1957, and December 31, 1966, amassing a total of over 16,000 flight hours.

The *Flying Gators*, currently flying the A-4 *Skyhawk*, claim the longest accident-free safety record of any single-engine jet squadron in the entire country.

Active Duty Deployment

During a recent two-week active duty deployment to NAAS FALLON, Nev., VA-876, NAS ALAMEDA, claimed a record for other attack squadrons to shoot at. Flying A-4B *Skyhawks*, VA-876 qualified 25 pilots as 100 percent combat ready and presented E's to ten of its officer airmen.

In the 12 days, the *Golden Hawks* accumulated 945 flight hours while

the ground crews maintained a 98 percent aircraft availability.

Modern Orville Wright

Many people fly airplanes, but few build their own. Captain John A. Wilkinson, Commander of Naval Air Reserve Staff 91 at NAS SOUTH WEYMOUTH, is one of the few. The aircraft he began in November 1964 is now ready for final assembly and cover.

The "Wilkie Mk.1—Did It," was literally built from scratch in 2,300 hours of spare time. Its engine is a converted ground power unit modified for use in the aircraft and features a full electrical system and a vacuum system to service the flight instruments.

The experimental biplane, stressed for seven G's positive and five G's negative, weighs about 1,100 lbs. The engine cowling and cover panels for the fuselage are made of fiberglass and are removable to aid maintenance.

A veteran of WW II, the modern day Orville Wright flew patrol bombers for three years in the North African campaign. In civilian life, Capt. Wilkinson is an associate professor of Mechanical Engineering at Worcester Junior College, Worcester, Mass.

AIR RESERVE



AS RESERVISTS mustered, these scenes were repeated. ADJAN P. M. Buten, VA-831, New York, says goodbye to Mom (above) and, at Salt Lake City, VA-873 personnel board C-118 for flight to Alameda.



RESERVISTS ANSWER THE CALL



THEY CAME from across the street and as far away as Belgium to answer the January Presidential call-up. At NAS New York, AMH3 M. F. O'Shea was the first member of VA-831 to report (left). But they kept coming and soon after their arrival the processing began. Left to right (above) are PRAN Joseph Anselmo, AMS2 D. S. Levine, ATN3 P. T. Lautner, O'Shea and ATAN D. A. Feinsod. On the ready (above, right) are Lt. John S. Von Kleeck, Jr., and his A-4B Skyhawk.



at Sea with the Carriers

PACIFIC FLEET

Bon Homme Richard (CVA-31)

Bonnie Dick and the ASW carrier *Bennington* were among 23 ships and nine air units participating in the First Fleet exercise, *Bead Stringer*, held off the coast of southern California. Purpose of the exercise was to provide advance training in surface warfare tactics, anti-air warfare, shore bombardment, anti-PT boat operations and ASW—in short, to ready the units for WestPac deployment.

Midway (CVA-41)

Work continued on the decommissioned *Midway* at the San Francisco Bay Naval Shipyard as yard workers labored to complete a major conversion and return the CVA to the Fleet.

Hancock (CVA-19)

Hancock is another PacFlt carrier in the San Francisco shipyard for overhaul. Shipyard officials reported workers

were nearing that stage of the overhaul at which the boilers could be lighted off, catapults could be tested and the ship's galley would reopen so that the crew could resume eating aboard.

Coral Sea (CVA-43)

It was "business as usual" for *Coral Sea* pilots as their ship operated in the Gulf of Tonkin off Vietnam. Their business took them on strikes against several bridges important to the North Vietnamese resupply effort, enemy troop concentrations, bunkers, weapon positions and rocket launchers—many of them located in the I Corps area of South Vietnam.

Two medical men who worked together to save lives in Vietnam teamed up again to help save the life of a *Coral Sea* sailor whose heart stopped beating after an accident on Grande Island, a recreation area near NAS CUBI POINT, Bataan, R.P.

The medics are HM2 John L. Christian, assigned to VAH-2 aboard *Coral Sea*, and Lt. Robin L. Smit, a member

of Paramedic Team Two based at Cubi Point. The two had served together with MAG-11 in South Vietnam before being reassigned.

Christian was standing a medical watch during an R&R party for *Coral Sea* crewmen on Grande Island when a sailor fell off a retaining wall and struck his head on a pile of rocks. As the corpsman was treating him for critical facial injuries, the man suffered a cardiac arrest. "He had been talking incoherently," Christian said later. "Then he stopped and went limp. He wasn't breathing. I gave him a sharp crack on the chest—standard treatment for a cardiac arrest. His pulse started again and in a couple of minutes he came around."

Dr. Smit entered the picture when he boarded a helicopter dispatched to Grande Island to medevac the injured man. He continued the treatment where Christian left off during the three-mile flight to the Cubi Point airstrip, from where the sailor was taken to the Subic Bay Naval Hospital. He was admitted in fair condition—and probably very grateful that the two Navy medical men had teamed up once again to save a life.

Yorktown (CVS-10)

Yorktown has turned into a floating TV station. She is being touted as the first carrier to have the capability to transmit TV programs to other ships in company as well as over her own closed-circuit system. The ship's new TV installation was a gift from the southern California business community and the Beverly Hills chapter of the Navy League.

The ASW carrier, fresh from a major overhaul at the Long Beach



ABOARD *Enterprise*, a discussion of aerial tactics during combat missions in Vietnam is held by Rear Admiral Horace H. Epes, Jr., ComCarDiv One, and the squadron skippers.

Naval Shipyard, steamed to the waters off Hawaii for an ORE (operational readiness evaluation).

Yorktown's 121,000th and 122,000th arrested landings were logged by VS-23's LCdr. F. P. Knapp in an s-2 *Tracker* and Ltjg. C. W. Yeates in an E-1B *Tracer*, respectively.

Constellation (CVA-64)

President Lyndon B. Johnson extended the appreciation of "a grateful nation" to the crewmen of *Constellation* for their participation in the Vietnam conflict during a visit to the carrier as she operated off California.

Mr. Johnson arrived aboard *Connie* by helicopter and was greeted by Vice Admiral B. F. Roeder, ComFirstFlt, Rear Admiral F. H. Michaelis, ComCarDiv Nine, and Captain W. R. Flanagan, C.O. of the carrier. He spent the night aboard ship, and next morning—a Sunday—invited several crewmen to join him for breakfast, attended religious services, was briefed by senior officers on the Navy effort in Vietnam and spoke to the ship's company.

"Three times this ship has stood on Yankee Station," the President said. "I am proud to say to your captain, to all of the officers and men of *Constellation*: Well done."

Kitty Hawk (CVA-63)

What was called the first major overhaul of an aircraft carrier catapult while the ship was at sea has been completed aboard *Kitty Hawk*.

Working around the clock, members of a CVA-63 catapult crew—aided by ship repair facility personnel from the Subic Bay Naval Station and two catapult experts from ComFAirWestPac—replaced a blown gasket in the ship's number one "cat" that had caused a severe steam leak near the launching valves.

ABE1 Lew W. Simpson, forward catapult LPO, and his crew were commended for "outstanding professionalism" after they completed the repairs in three days, or four days earlier than a field engineer's estimate of the time it would take.

If there was a reason for *Kitty Hawk's* catapults to need repair, it was

WHILE flight deck crewmen stand ready, two helicopters prepare to land on *Kitty Hawk* during operations on Yankee Station in the Gulf of Tonkin off the coast of Vietnam.



During visit to *Constellation*, President Johnson is greeted by Adms. Roeder and Michaelis (below), passes through ranks of sideboys after arriving by helicopter (right) and talks with CVA crewmen MM1 Frank M. Lautner and AB3 George Hernandez. These two were among 20 sailors who ate with the President.





A-4 SKYHAWK AND F-4 PHANTOM ARE LAUNCHED ALMOST SIMULTANEOUSLY FROM CVA-63

undoubtedly the intensity of air operations being conducted while the CVA operated off Vietnam.

On strike missions off the carrier, pilots blasted an artillery site just north of the DMZ, hit a barge repair facility and supply trucks, flew through heavy monsoon rains and used the A-6 *Intruder's* radar navigational system to hit more trucks and a cave storage area, pounded railroad boxcars and also hit a rail yard and station.

The attack cargo transport *Tulare* was "commandeered" to transport a shipment of cargo from Subic Bay to *Kitty Hawk* (see picture on page 14) after a backlog grew too great to await the carrier's arrival in port, and the resulting unrep in the Tonkin Gulf was touted as being the first between an AKA and an attack carrier. More than 300 tons of freight and personnel were sent to the carrier from *Tulare*.

Returning from his 133rd combat mission, VF-114 C.O., Commander J. E. Mills, made *Kitty Hawk's* 74,000th landing in an F-4 *Phantom II*.

Oriskany (CVA-34)

The *Big O* has returned to home port, NAS ALAMEDA, Calif., from a

7½-month WestPac deployment.

On hand to welcome the ship and her crew—besides the crowd of dependents and friends that had started to gather at the pier two hours before *Oriskany* was due—were Vice Admiral Allen M. Shinn, ComNavAirPac; Rear Admiral Fred E. Bakutis, ComFAir Alameda; Rear Admiral Frederic A. Bardshar, ComCarDiv Seven; and Captain Vance Dawkins, NAS skipper.

The welcoming reception that was arranged by ComFAir Alameda, in cooperation with the Marine Committee of the San Francisco Junior Chamber of Commerce, was designed to include conveniences for both those awaiting the ship's return and *Oriskany* crewmen. There were refreshments, balloons for the kids, an information booth, restrooms, telephones and telephone girls who helped place calls, express trucks for shipping souvenirs, busses going to Bay Area air terminals for flights home and transportation to take men on local liberty.

There were also free gifts and services, donated by area merchants, to help welcome the 3,500 men of *Oriskany* home. And CVA-34 men knew they were being welcomed long before

their ship reached the pier. As the *Big O* passed under the Golden Gate, families and friends of crewmen were able to speak to the ship over the bridge public address system. A 150-foot banner, proclaiming "Welcome Home, *Oriskany*," hung from the span.

Of the 229 days *Oriskany* was deployed to WestPac, 122 were spent in the combat zone during five periods on the line. Pilots of embarked CVW-16 flew more than 9,500 combat missions and expended 7,500 tons of ordnance against enemy targets in North Vietnam. They flew more than 180 major strikes in the Hanoi-Haiphong area, said to be more in that area of North Vietnam than have been flown by any other carrier on Yankee Station.

Before she returned home, *Oriskany* crewmen logged their ship's 131,000th arrested landing. It was made by Cdr. Bill Span, VA-164, in one of the squadron's *Skyhawks*.

Valley Forge (LPH-8)

The crew of a helicopter from *Valley Forge* rescued Ltjg. George F. Schindelar, a VA-164 pilot from *Oriskany*, from stormy waters off Vietnam after he was forced to eject from his

reconnaissance aircraft. Included in the rescue crew were LCdr. John Shearin, Lt. Jack Langford and AN Daniel Martin.

"These are the kind of tourists we should have more often." That was the comment of a *Happy Valley* crewman after ten pretty American Red Cross workers toured the LPH while the ship was in Da Nang harbor. The girls, from the Red Cross recreation center in Da Nang, spent five hours aboard the ship.

AN David K. Ledford is LPH-8's most recent "Sailor of the Month."

Ranger (CVA-61)

Ranger is one of the carriers on Yankee Station operating the new Twin-Ball Firefighting Unit (NA-NEWS, October 1967, p. 12), a truck-mounted apparatus employing two of the best extinguishing agents known: Purple K Powder and "Light Water."

But there is another apparatus aboard *Ranger* which, though not as widely discussed as Purple K and "Light Water," also may have pro-

found effect in any effort to contain a flight deck fire. It's the NS-60 crash crane, a 105,000-pound monster introduced by the Navy aboard *Ranger* and already affectionately known as "Tilly." With a lifting capacity of 60,000 pounds, the crane is 26 feet long, has a 39-foot boom and comes mounted on wheels that are six feet high and three feet wide.

Despite her size, Tilly is extremely maneuverable; her turning radius is only 30 feet. One man can operate her efficiently, either from the cab or by remote control. With Tilly, *Ranger* crewmen can effectively move bomb-laden aircraft from critical areas without worrying about heat.

Combined with the Twin-Ball Firefighting Unit, Tilly gives *Ranger* men effective equipment against fire.

ATLANTIC FLEET

Forrestal (CVA-59)

Forrestal's number four elevator, severely damaged in the fire and ex-

plosions that struck the ship in the Gulf of Tonkin, has been re-installed aboard the carrier in the Norfolk Naval Shipyard. CVA-59 was moved out of dry dock to a nearby pier, where the 115-ton elevator was located. It was lifted off the ship soon after she put into the shipyard and repaired.

The move of *Forrestal* came after she had spent nearly five months in dry dock. Work on the carrier continued at pierside.

Admiral Feng Chi-Chung, commander-in-chief of the Nationalist Chinese Navy, toured *Forrestal* during a visit to the U.S. and received a briefing on the planning and coordination of the repair effort being made.

Intrepid (CVS-11)

Limited overhaul work on *Intrepid* was reported well underway at the Norfolk Naval Shipyard, where the CVS put in for an eight-week restricted availability period. *Intrepid* recently returned to home port, Norfolk, from a tour off Vietnam where she operated as a light attack carrier.



CARRIERS in action: *Oriskany* returns to home port from WestPac cruise (left); Twin-Ball Firefighting Unit is operated on *Ranger* (top); and Ltjg. G. F. Schindelar talks with rescuer Martin and Valley Forge C.O., Captain Paul E. Payne.

America (CVA-66)

America turned three years old while she was undergoing Fleet training exercises in the Caribbean. The event was marked by an appropriate ceremony on the hangar deck.

F. D. Roosevelt (CVA-42)

FDR has been playing the "courtous host" role to the hilt during her current deployment to the Med with the Sixth Fleet. Among those military VIP's visiting the ship for a variety of briefings and tours have been six high-ranking officers from the Central Treaty Organization (CENTO) Deputy Staff; Rear Admiral C. J. Van Arsdall, ComCruDesLant; six representatives of the staff of ComNavFor Southern Europe; and two former FDR skippers, Rear Admirals Gerald E. Miller and M. W. Cagle.

FDR has recorded her 100,000th steam catapult launch—made by Ltjg. Thomas S. Sumoski in an E-1B Tracer—and her crew is laying claim to a record for the new mark.

The ship's 170,000th and 171,000th arrested landings have also been made, the first by Ltjg. James N. Kraft and the second by LCDr. John P. Lamers. Both pilots are assigned to VA-72; the squadron flies the A-4.

Latest awards in the continuing inter-squadron awards competition held by Commander Max Barr, CAW-1 aboard FDR, have been made. The *Bleu Max* Award, given for outstand-

ing bombing proficiency, went to VA-72; a similar individual award was also presented to squadron pilot, Ltjg. Morris Kemple. Winning the OK-3 Award, which is presented to the squadron and individual pilot with the best landing proficiency record, were VA-172 and Lt. Richard McPherson of VA-12. The *Captain's E* Award, given by FDR C.O., Captain Gordon S. Hodgson, to the squadron demonstrating the highest degree of readiness and performance through professionalism and safety, went to Fighter Squadron 32.

Randolph (CVS-15)

One veteran ASW carrier pinch-hit for another when *Randolph* temporarily took over the duties of the Navy's only permanent flight training CV, the *Lexington*. While *Lex* underwent minor shipyard repairs, *Randolph* crewmen took on the job of carqualing Navy pilots off Florida.

Both *Randolph* and *Lexington* were built during WW II, and both saw action in the Pacific. *Lex* was finished in March 1943 and *Randolph* in October 1944, making them the fourth and fifth *Essex*-class carriers.

Nineteen-year-old AA Michael H. Laursen, a plane-handler aboard *Randolph*, had himself a close call when he was knocked over the side by a jet blast while CVS-15 was operating as carqual ship. Quick work by a rescue helicopter crew, however, had him back aboard safely within ten minutes

—glancing at a watch that was still running and lighting a smoke from a cigarette lighter that still worked. And, speaking of work, Laursen was back on the job next day.

Wasp (CVS-18)

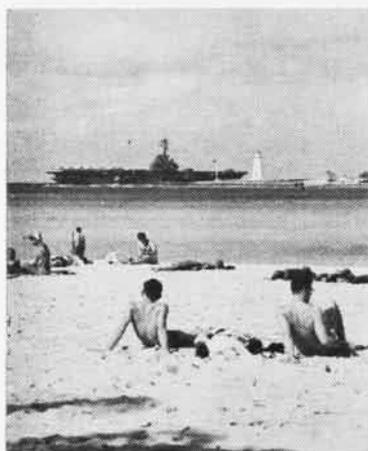
Two salty friends—*Wasp* and BMC G. A. Kutrovac—had a reunion in Boston after a 24-year separation. Chief Kutrovac was aboard the carrier for his annual two-week Naval Reserve cruise; he is a *Wasp* plank owner and flew on 50 missions from her flight deck during Pacific action in WW II. *Wasp* is now based in Boston.

Essex (CVS-9)

When *Essex* pulled out of home port, Quonset Point, R.I., for a cruise to Nassau in the Bahamas, the temperature was near zero. But when she dropped anchor off Nassau, it was a mild, balmy 75. Needless to say, there was a radical change in the uniform of the day—from blues and peacoats to tropical whites. Also needless to say, *Essex* men, who spent almost four days in Nassau, weren't complaining.

Independence (CVA-62)

Independence is another LantFlt CVA whose crew has enjoyed liberty in sunny climes. While their ship was undergoing refresher training in the Caribbean, they visited the Jamaican port of Montego Bay. *Independence* was the first ship of her class to put into Montego Bay for a port call.



TWO ATLANTIC Fleet carriers making port calls in warm climes were *Independence* and *Essex*. Photo at left shows *Essex* at anchor near one of Nassau's beaches, while in shot above, one of the carrier's sailors looks over an item in the native straw market, where many crewmen bought handwoven straw articles. Aerial view at right shows *Independence* at anchor in Montego Bay, Jamaica, with the Casa Montego Hotel in the foreground. *Independence* visited Jamaica during the ship's Caribbean deployment.



Air Surveillance in 'Market Time'

By JOCS Dick Rose

HOUR AFTER HOUR, Crew Five of VP-2 in *Neptune* 555 (right) maintains surveillance off the coast of Vietnam. In the plastic bubble in the nose, AE2 Joe Graybill (above) keeps an eye out for suspicious shipping. He uses his aerial camera at the direction of the pilot, Lt. William J. Roberts. Copilot is Ltjg. Robert K. Hallberg.

Vigilance pays off. A blip appears on the radar scope. Only a close check determines whether it is a friendly junk or an enemy target.

Three times a day, a *Neptune* takes off from Tan Son Nhut air base, Saigon, for an eight-hour patrol. Each crew flies about ten patrols for *Market Time* during an 18-day deployment in Vietnam. Between deployments, the crews return to NAS SANGLEY POINT, Republic of the Philippines, to be relieved by other crews of Patrol Squadron Two.



LT. ROBERTS, Crew Five's aircraft commander, is briefed on weather conditions by an Air Force meteorologist in the Tan Son Nhut weather office. Ltjg. Gary Stueck, navigator, plots course during coastal surveillance operation as part of Navy's Operation Market Time. At right, Ltjg. W. L. Green, tactical coordinator of the crew, checks aircraft status board for plane availability.





AFTER COMPLETING BOMBING RUN, LT. J. S. GRIFFITH TOOK THIS PHOTO FROM HIS A-6A

IT'S A HARD THING TO DO

DUST AND smoke in the target area prevented bomb damage assessment."

This is often the disappointing concluding statement in reports describing strikes against targets in North Vietnam. Such reports are difficult for many people to understand.

In an effort to demonstrate the difficulties encountered, Commander Glenn E. Kollmann, commanding officer of Attack Squadron 35, planned and led a coordinated 12-plane attack under simulated combat conditions over a bombing range target.

The pilots started their dive-bombing runs from an altitude of 12,000 feet. At 6,000 feet, they released their bombs and immediately began a 4-G pull-out. They had delivered token loads of 500-lb. bombs on the designated target, an airstrip which is plainly marked in the photograph above by the bomb pattern which follows the length of the runway. Smoke billowing at the left is from the explosions of the first bombs, dropped less than a minute before. The smoke cover was beginning to spread and the planes were clearing the target.

In a combat situation, photos such as this are difficult to obtain. The smoke and dust are greatly intensified by the larger combat loads. Fast-spreading fires in petroleum storage areas add to the thick blanket of black smoke. Furthermore, enemy defenses

discourage aircraft from remaining in a target area merely to obtain pictures.

Although the photograph illustrates the problem of immediate bomb damage assessment on most missions, it does not reflect the frustration of those who face the enemy fire, make the bomb run, and then must leave the target without knowing the full results of their effort.

Ream Field's New Status Became New NAS on January 1st

On January 1, Naval Auxiliary Air Station, Ream Field, Imperial Beach, Calif., became Naval Air Station,



AN UNUSUAL chain of events finds these brothers assigned to the same squadron, VT-9, at NAAS Meridian, Miss. Lt. Robert R. Hansen (left) and Ens. Frederick Hansen attended the same grammar and high schools and received their college education at Iowa State University, Ames, on NROTC scholarships. Ens. Hansen graduated exactly six years after his older brother, February 25, 1967. At VT-9, Lt. Hansen is a flight instructor; the younger Hansen is a flight student.

Imperial Beach. Ream Field is dropped from the address.

The station continues to provide services and material to support operations of aviation activities and units of the Operating Forces of the Navy.

Large Contract Is Awarded To Improve Gas Turbine Engines

The Navy has awarded a \$1,969,000 contract to the Allison Division of General Motors for development of gas turbine engines half the size and weight of comparable engines.

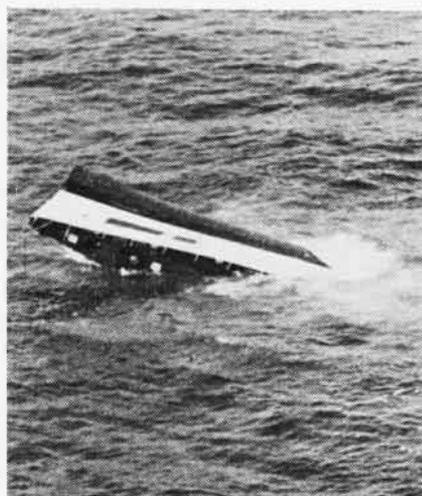
The contract covers a two-year research and development engineering program to accomplish engine tests of the complete combustion of hydrocarbon fuels and air at turbine inlet temperature of about 4,000° F.

A Book Boon for Modelers Pacific WW II Navy Unit Markings

A book entitled *U.S. Navy Markings, WW II Pacific Theatre*, by Thomas E. Doll, has recently been published. Using photographs and drawings, Mr. Doll has covered aircraft camouflage and markings of CV-CVL class carriers with CVE supplement, Pacific Theater.

The book should be of great help to airplane modelers who are interested in the accuracy and authenticity of the color and insignia of World War II Navy airplanes. Additional information may be obtained by writing the John W. Caler Corporation, 7506 Clybourn, Sun Valley, Calif., 91352.





ON A TRAINING exercise 120 miles off the Virginia coast, the target was ex-USS Coos Bay, an obsolete seaplane tender. The ship, commissioned in 1942 and decommissioned in 1966, in its final role provided a target 330 by 40 feet. RAdm. Roger W. Meble, ComFAir Norfolk, coordinated the exercise which involved 35 aircraft and two

surface vessels. The guided missile destroyer USS Claude V. Ricketts first fired a Tartar missile. Then Oceana-based A-6 Intruders dealt crippling blows, causing the bulk to list severely. The final "death blow" came when an A-7A Corsair II attack bomber scored a direct hit with a Bullpup missile. The bulk rolled over and quickly disappeared.

High Score with the A-4 Spayde Makes Mark on CVA-62

Commander Keith C. Spayde, Jr., commanding officer of Attack Squadron 64, logged his 600th *Skyhawk* landing aboard the attack carrier *Independence* early in February. A similar claim was made in September 1967 on another ship (see page 11).

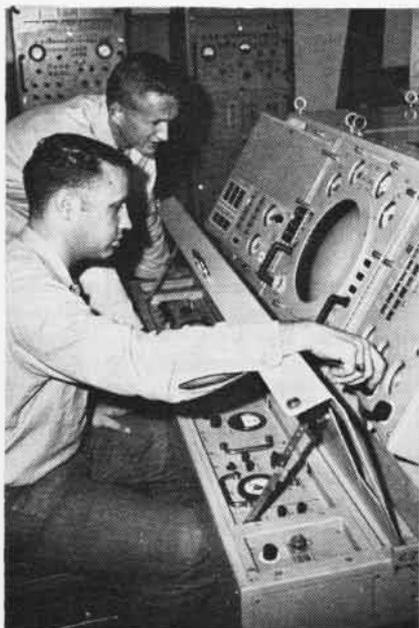
As the A-4 snatched *Independence*'s arresting cable, it marked Cdr. Spayde's 800th carrier landing since he received his wings in 1952.

Honors to VT-9 Instructor Nominated for 1967 Ingalls Award

Rear Admiral Dick H. Guinn, CNABaTra, has named Lt. Kenneth A.

MacGillivray, VT-9, NAAS MERIDIAN, Miss., as the Basic Training Command's 1967 Flight Instructor of the Year.

He won over 900 other Basic Training instructors and will represent CNABaTra in competition with instructors from the entire Naval Air Training Command for the David S. Ingalls Award. The award is presented each year by the Navy League.



GRADUATES of class 737, Carrier Air Traffic Control Center Equipment Maintenance Course (AN/SPN-10), got a chance to see at first hand the "receiving" portion of the shipboard equipment they will be working with in the Fleet when Commander Jack E. Russ, C.O. of VA-86, flew an A-7 Corsair II to NATTC Glynco, Ga., where the enlisted



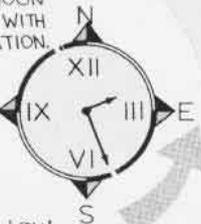
Navy men were trained. Cdr. Russ brought the A-7 from NAS Cecil Field. He discussed the use of the SPN-10 as a landing aid for carrier-based aircraft (right), then showed the students the gear installed in the A-7 for receiving data. In photo at left, ETR3 D. C. Schneider performs system trouble analysis on console as instructor looks on.

Southwest Monsoon

THE SUMMER MONTHS IN SOUTHEAST ASIA ARE CALLED THE SOUTHWEST MONSOON. DURING THIS PERIOD, THE GULF OF TONKIN AND THE SOUTH CHINA SEA ARE DOMINATED BY HOT, HUMID, SOUTHERLY WINDS.



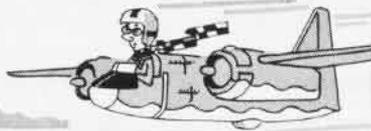
THE WORD "MONSOON" IS SYNONYMOUS WITH THE TERM CIRCULATION. AND THE SOUTHWEST MONSOON IS NO MORE WESTERLY THAN THE EASTERN HALF OF THE COUNTER-CLOCKWISE FLOW ABOUT A LARGE LOW PRESSURE SYSTEM CENTERED OVER INDIA THIS LOW FORMS EVERY SUMMER IN RESPONSE TO THE INTENSE HEATING THAT OCCURS OVER THE LAND MASS.



TEMPERATURES OF 120°F ARE COMMON IN INDIA DURING AUGUST IN CONTRAST TO TEMPERATURES NEAR 90°F IN THE GULF OF TONKIN WHERE SEA TEMPERATURES ARE A FEW DEGREES LESS THAN THE AIR TEMPERATURES.

Of America, U.S. NAUTY

SKY CONDITIONS ARE TYPICALLY PARTLY CLOUDY IN THE GULF, WITH CEILINGS BETWEEN 2,500 AND 3,000 FEET. SCATTERED SHOWERS AND THUNDER STORMS CAN BE EXPECTED DURING THE LATE AFTERNOON AND EVENING.



ONE OF THE WEATHER PROBLEMS FACING CARRIER OPERATIONS IN THE GULF IS THE LACK OF WIND. THE LIGHT SOUTHERLY WINDS OF EIGHT KNOTS OR LESS USUALLY EXTEND SO TO 70 MILES TO SEAWARD OFF THE VIETNAM COAST.



IN THE CENTRAL PORTION OF THE SOUTH CHINA SEA, HOWEVER, THE WINDS ARE USUALLY MUCH STRONGER. SOUTHWESTERLY SEAS OF SIX TO EIGHT FEET ARE NOT UNCOMMON BECAUSE OF THE UNOBSTRUCTED WIND FLOW.

New Training Device Built Platform to be Used by AB School

Not a hangar deck in an aircraft carrier but an aircraft carrier on a hangar deck, or at least a carrier's flight deck—that's what is being built in Hangar One at NAS LAKEHURST by the Naval Air Technical Training Center. The half-size flight deck, officially known as an Elevated Training Platform (ETP), will be used to teach the men of Aviation Boatswain's Mate School about carrier operations—without going to sea.

Work on the ETP began in 1966

when the school moved from Philadelphia to Lakehurst. The ETP uses only about half the available space in Hangar One which was built in 1921 for the airship *Shenandoah*.

Lt. Herbert W. Burns, project officer, says, "Everyone from seamen to air bosses and landing system officers will be trained on the platform." He estimates that more than 800 men will be trained there annually.

The deck of the platform, ten feet above the floor of the hangar, resembles the shape of a flight deck. It measures 100 feet at its widest point, the end of the canted deck.

The forward end is being reinforced so that fork lifts and other maintenance vehicles can be operated safely. Although no aircraft will be used on the platform, working catapults will be installed forward and arresting gear aft. Elevators are being painted on the platform to heighten realism and mockups of the optical landing system, with Fresnel lens, flight deck and pri-fly control are also planned.

"We're making this thing as realistic as possible," Lt. Burns said.

'Deep Freeze' Summer Ends VX-6 Completes Antarctic Season

Air Development Squadron Six, the U.S. Navy's "Antarctic Airline," recently completed its 13th consecutive year of providing aerial support to Operation *Deep Freeze* and headed home to NAS QUONSET POINT, R.I.

Each year from September to March, VX-6 deploys to the Antarctic to provide logistic support for the U.S. Antarctic Research Program scientists who conduct research and exploration there.

The squadron logged more than 6,000 hours during this year's summer season, carrying more than 3,500 tons of cargo and 2,500 passengers, and photo-mapping some 280,000 square miles of the continent.

Eight members of VX-6 are wintering-over to maintain squadron aircraft, living and working spaces during the seven-month Antarctic darkness.

Golden Eagles' Reunion

Captain Richard T. Whitney, Pilot of the Early and Pioneer Naval Aviators Association, has announced plans for the 1968 reunion. The association, better known as the Golden Eagles, will meet at MCAS CHERRY POINT, N. C., June 19-23, 1968.

Membership of the organization was limited initially to the surviving first 250 Naval Aviators but has since been extended to include the first 400, the first helicopter and jet pilots and others who have contributed to the growth and development of Naval Aviation. About 175 former Naval Aviators are now on its rolls.

Since its organization in 1956, the association has, with one or two exceptions, met annually as the guest of the Secretary of the Navy at such places as Pensacola, Norfolk, Quonset Point, Glenview and San Diego. Its members have also made brief cruises on the carriers *Forrestal*, *Antietam*, *Enterprise* and *Kitty Hawk*.

The group met last year at San Diego to celebrate the air station's 50th anniversary. This will be its first reunion at a Marine Corps establishment.

Editor's Corner

ALL-WETTER OPERATIONS. Torrential rains . . . pitch black nights . . . rough seas . . . strong winds: a curse to some, a blessing to others.

Take this weather and add a fierce measure of North Vietnamese anti-aircraft fire, SAM's and other target defenses and you conjure up the most demanding flying conditions ever encountered by Navy fliers.

From mid-December through April, the southwest monsoon dominates Vietnam's weather, pouring thundering rain into the already swollen rivers and flooded rice paddies.

These storms invariably have two characteristic features: There appears to be no limit to the amount of water they can release and there is the impression they can continue forever.

Perhaps the biblical record, 40 days and 40 nights of rainfall, cannot be challenged, but ships have spent as many as 28 days in the Gulf of Tonkin without sunshine glittering on their decks.

Gale winds churn the usually placid blue waters of the Gulf until the decks of the smaller ships of the Fleet are awash.

Shipboard meals, during some of these periods, are limited to sandwiches and coffee because kettles will not remain on the stoves in the pitching galleys.

Living conditions on ships become akin to those of an aquarium.

"Water, water, everywhere" is more fact than poetry. Once the rains begin, there isn't a dry sock in South Vietnam or a dry shirt on the backs of the destroyer sailors at sea.

The larger ships, cruisers and carriers, ride the storms much more comfortably than the smaller combatants. But they, too, have operating problems in the severe weather.

Radio communications and ship-to-ship visual signals are subject to periods of near uselessness. Shipboard radars designed for navigation guidance and control of airborne aircraft may look more like a psychologist's ink-blot examination card than an instrument for detecting and obtaining electronic

intelligence information for the Fleet.

The greatest effect is on the men. Carrier flight deck personnel are raked by heavy sheets of rain and chilled by 35-knot winds.

The 500-pound bombs, which are hand-loaded by four or five sailors onto an aircraft, are not only heavy, but very cold, wet and slippery. During a 14-hour work day, an ordnance-man may help load more than 200 bombs.

The analogy of asking four men to carry a comparable number of bath tubs up Niagara Falls is an exaggeration only because they could not be expected to find 200 tubs.

FLIGHT crews have mixed reactions to the storms that churn the seas and toss their planes. Depending upon the type of aircraft, they become extremists in their attitude toward the torrential gales.

The Navy A-4 *Skyhawk*, perhaps best described as a minijet, is little more than a jet-propelled bomb rack. One "tinker-toy" pilot, commenting on his 39-foot-long plane, said: "Strapping into the A-4 is like putting on a second suit. I can almost fly it by wiggling my shoulders."

These *Skyhawk* pilots are provided only the absolute essential navigational equipment and instruments in their cockpits. They prefer to fly in the sunshine and generally "fly by the seat of their pants," as the old saying goes.

They do not rely extensively upon electronic aids or instruments, but upon the feel of the plane, their sense of balance and visual references with the ground. These pilots dread the monsoon rain.

Other planes have been specifically designed to operate in the environment of bad weather and at night. The A-6 *Intruder* bomber, for example, has multiple sources for gathering and displaying navigational data. Inertial navigation gyros and digital computers update the aircraft's geographical position twice every second.

The radar systems furnish naviga-

tional information and attack guidance to and from the target.

The men who fly these instrumented aircraft prefer the heavy weather and the darkness of night for their missions. They explain that these conditions degrade their performance only slightly and have a great detrimental effect on the enemy gunners and their equipment. These fliers say, "The darker and wetter, the better."

Ltjg. Nick Carpenter, pilot of an all-weather *Intruder*, may have exaggerated when he returned from a mission and reported: "There was a wall of water so thick between the coastline and the target that I had to ram it four times before I could break through."

The pilots who can fly in darkness and the monsoon conditions enjoy the cover that the clouds provide and use them to hide from the visually directed flak in North Vietnam. When the weather shifts and blows away the clouds, they feel that the loss of the security blanket leaves them almost naked.

The monsoons, not to be confused with the more violent but comparatively fast-moving typhoons, are predictable. They appear and disappear each year. The Americans now in Vietnam will be happy when they have seen the last of these inevitable storms.

—by Lt. John G. Griffith,
USS Enterprise



RANGER ROMEO begins second combat cruise as VA-22, the "Fighting Redcocks," puts to sea again on CVA-61. The frequently kidnapped mascot is always returned by captors owing to his crowing.

LETTERS

Not a Cessna

SIRS: In regard to the picture of an accident at NS WASHINGTON on page 39 of *Naval Aviation News*, could I suggest some recognition training for your caption writers?

The aircraft shown is definitely not a Cessna 172, which is a *high-wing* single-engine monoplane. I can't quite identify it beyond a reasonable doubt, but I think it is a Piper PA-24 *Comanche*, or possibly a Mooney.

VIRGIL P. TOWNSEND
ATI (AC), USN
Civilian pilot



1965 CESSNA MODEL 172 IN FLIGHT

SIRS: The civilian aircraft which made a forced landing at NS WASHINGTON, formerly NAS ANACOSTIA, was not a Cessna 172 as identified on page 39 of the February issue. As the photo shows, Cessna 172 is a high-wing aircraft.

The difficulty in identifying the low-wing, retractable gear aircraft in the crash picture probably occurred because it was a *Globe Swift*. A number of them are flying today, but manufacturing of this aircraft ceased after World War II.

Please keep sending *Naval Aviation News* and we'll put away our magnifying glass because we enjoy it so much.

THOM HOOK
Associate Editor
FAA *Horizons*

SIRS: If the aircraft recognition skill demonstrated on page 39 of your February issue is typical of that for the whole U.S. Navy, all of us are liable to get shot down.

MAX KARANT
Senior Vice President
Aircraft Owners and Pilots Assn.

¶ Is that what happened to the *Swift*?

Protester?

SIRS: I am probably the only Naval Aviator who does not like Grampaw Pettibone. Although I am one of the 88.2 percent (*Naval Aviation News*, January 1968, p. 8), I wince every time I read his excellent column.

You see, as Director, Aviation Safety Programs, Naval Postgraduate School, I am in charge of all Navy and Marine safety officer training and each item in old Gramp's column indicates that I've failed in some way.

DONALD M. LAYTON, CDR., USN
U.S. Naval Postgraduate School
Monterey, Calif. 93940

Pun Relished

SIRS: *Naval Aviation News'* excellent article on Grampaw Pettibone really held my attention but was especially interesting on page 7. I quote:

"But Gramps immediately took a turn to the positive - - - and wound up with the rye comment."

This confirms a notion he might just have hoisted one for celebration on his twenty-fifth anniversary.

I received the first book of Dilbert cartoons way back when the N2S was the primary trainer (from my instructor—I always thought he was trying to tell me something) and still enjoy leafing through it when it turns up in the professional books we regard as indispensable and manage to find in the jumble of packing or unpacking every PCS. What a tremendous task he's accomplished for Naval Aviation! He deserves that rye, in my opinion.

L. W. METZGER
Captain, USN
MAAG, Spain

Information Needed

SIRS: As a squadron historian, I have enjoyed your articles on aviation history. I have been compiling everything that I can find on the history of Attack Squadron 113, formerly called VF-113, but it seems we have no record whatsoever of the period from June 1952 to June 1957. Possibly one of your readers might have some information on those years or know of some institution outside the Navy that could help me. Any assistance will be appreciated.

MICHAEL ROY MILLER
Attack Squadron 113
FPO San Francisco 96601

Correction, Please

SIRS: In the article entitled, "The 1967 Naval Aviation Review," in the February issue of *Naval Aviation News*, p. 9, an error is made.

Under the date of June 30 appears this statement: "Naval Air Transport, Pacific, the last Navy component of the Military Airlift Command, was disestablished, ending a Navy-Air Force transport partnership that began in 1948. . . ."

The fact is that Naval Air Transport Squadron Three under Naval Air Transport Wing, Atlantic, and the 438th Military Airlift Wing (MAC), McGuire Air Force Base, New Jersey, was in existence up to July 19, 1967. I was among the last of the squadron component when Captain Stanley Montunnas signed the closing diaries. . . .

Our disestablishment ceremonies were conducted on or about June 5, 1967, but the formal decommissioning took place July 19.

Incidentally, VR-3 was the *first* Navy unit of the Military Air Transport Service after the disestablishment of NATS. It served for over 25 years in the Navy-Air Force partnership, thus having the distinction of being both the *first* and the *last* Navy component of the Military Air Transport Service/Military Airlift Command.

Mention in the article was also made of Naval Air Transport Wing, Pacific, receiving the Air Force Outstanding Unit Award. VR-3 was also a recipient of this award by authority of the Department of the Air Force Special Order GB-1 of January 3, 1967, for the period July 1, 1964—June 30, 1966.

EDWIN G. MIKULSKI, YN1
USS *America* (CVA-66)

¶ Yeoman Mikulski is correct in regard to the errors noted. To give VR-3 due honor and keep the record straight, the June 30 entry should be amended by deleting the phrase, "the last Navy component of the Military Airlift Command." This honor rightfully belongs to VR-3, decommissioned July 19 and not "in June" as reported in the February issue of *Naval Aviation News*, page 10.

In the chronology, insert this sentence under June 2: "In ceremonies at McGuire AFB, General Bruce Holloway presented the Air Force Outstanding Unit Award to VR-3 for exceptionally meritorious service in the period June 1, 1964—June 30, 1966."

His remark that VR-3 was the first and last Navy unit in MARS/MAC is correct in regard to "last" but the "first" needs qualification. Four squadrons, VR's 3, 6, 7 and 9, were transferred on the same date, making VR-3 *one of the first*.

Disestablishment ceremonies "on or about 5 June 1967" actually took place on 2 June and were reported in a squadron release as a decommissioning. This may have had something to do with the errors noted.

Fund for Pensacola Memorial

SIRS: A fund to build a \$100,000, 71-rank pipe organ—largest in the Southeast—at the Naval Aviation Memorial Chapel at Pensacola has been established. A rank consists of 61 pipes, making the total number of pipes in the organ more than 4,000.

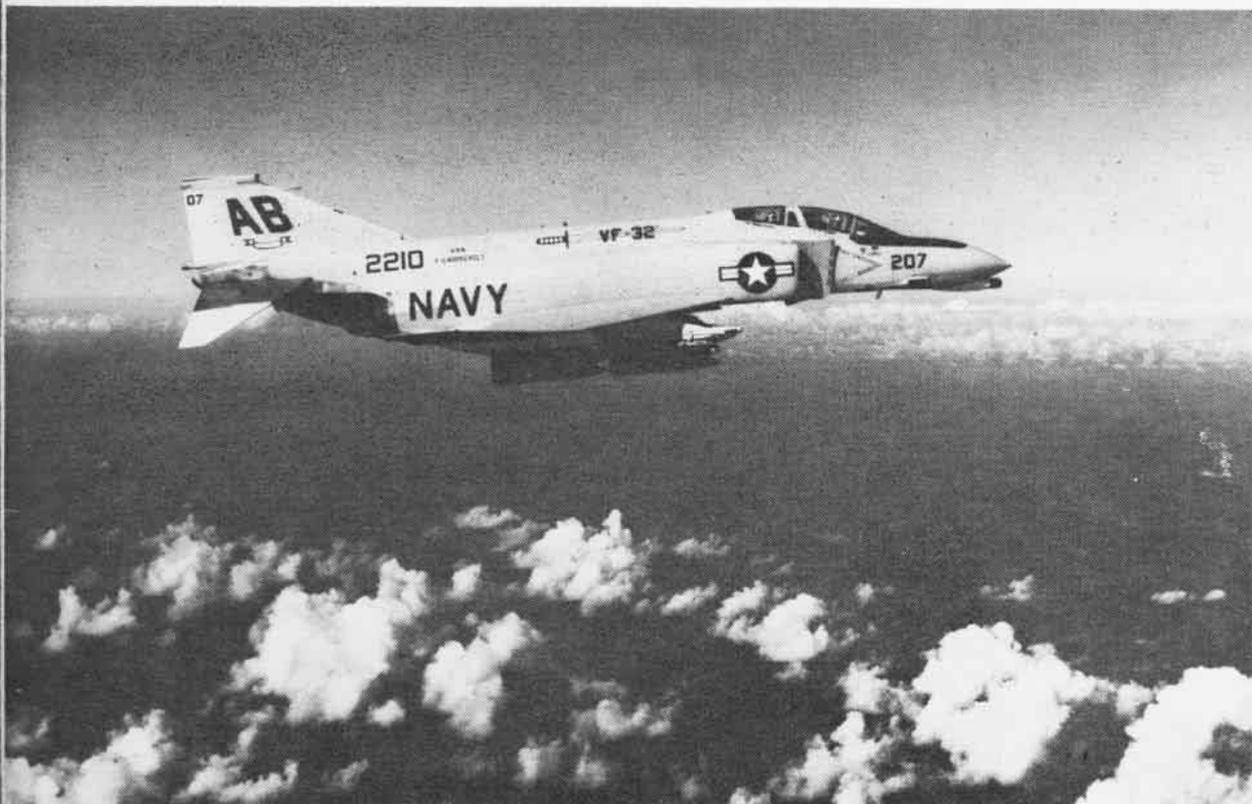
The fund will honor Naval and Marine Corps Aviators who have died in Vietnam. The organ will be available for the services of all faiths.

Commander Jack V. Crawford, CHC, NAS senior chaplain, points out that not only will the new organ enhance the services, but it will also serve as a cultural attraction for the community. "Master organists will be invited to Pensacola for concerts," the chaplain says.

Donations of \$25 or more will enable contributors to have the name of the person in whose memory the gift is made inscribed in a permanent book of remembrance. Donations should be mailed to the Naval Aviation Memorial Chapel, Memorial Fund, NAS Pensacola, Fla. 32508.

ROBERT GOLDTHWAITE
Vice Admiral, USN (Ret.)
Fund Drive Chairman

The 'Swordsmen' of Fighter Squadron 32 are currently aboard USS F. D. Roosevelt on their tenth Mediterranean cruise. Pilots and NFO's perform the squadron's mission in the F-4B Phantom. VF-32, homeported at NAS Oceana, Va., is led by Cdr. Huntington Hardisty.





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