NAVAL AVIATION NEWS

47th Year of Publication

SEPTEMBER 1966

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SHIFTING MANAGEMENT PATTERNS

'The functional organizations—the Navy's Bureaus, now Systems Commands—accumulate and preserve essential technical know-how, which in due time will be applicable to new problems and new situations. Projects come and go as warfare systems come and go. But basic fields of engineering are permanent. . . . In the shifting patterns of Navy Management, there are two things that are fixed: the functional organizations will continue as the main base of technical competence, and Project Management will be applied in a carefully controlled, well thought out, deliberate manner.'

—Rear Admiral Ralph L. Shifley, USN, Vice Chief of Naval Material

NAVAL AVIATION NEWS

FORTY-SEVENTH YEAR OF PUBLICATION SEPTEMBER 1966

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■ COVERS

On front cover, Plane Captain Bruce R. Lynch, AN, assists Ltjg. John J. Jegers, VA-93, just before a launch from USS Ranger (CVA-61) on a strike into Vietnam. . . . Above, VF-51 Crusaders fly over Subic Bay for landing at Cubi Point. Photograph of USS Shangri La (back cover) was taken by D. L. Boyd, PHI.

NAVAL AVIATION NEWS

Flatley Awards Announced
CNO Lauds Winners, Commands

Winners of the Admiral Flatley Memorial Award for their superior performance in aviation safety are USS *Franklin D. Roosevelt* (CVA-42), USS *Bennington* (CVS-20) and USS *Okinawa* (LPH-3). Other nominees were USS *Coral Sea* (CVA-43), USS *Essex* (CVS-9) and USS *Valley Forge* (LPH-8). *Saratoga, Constellation* and *Shangri La* were not eligible for the competition because of the limited number of landings these ships recorded.

Approximately 64,000 more carrier landings were accomplished in FY '66 than in FY '65. At the same time, the landing accident rate decreased 22% for the lowest carrier landing accident rate ever recorded.

In his announcement, CNO congratulated the winners and commands whose ships greatly contributed to the accident prevention program. Although operating in a "combat environment" during much of the competitive period, *Coral Sea, Ranger, Independence, Kitty Hawk* and *Intrepid* completed the year with outstanding safety records.

TWO HELICOPTERS, *four pilots and two crewmen made up the team from Helicopter Training Squadron Eight, Ellyson Field, Fla., which spent three days assisting the Ingalls Shipbuilding Corporation in calibrating radar equipment aboard USS Tripoli (LPH-10). Ingalls is readying the ship for Navy acceptance later this year. The helicopters flew in the vicinity of Tripoli as technicians tracked them with the ship's radar equipment. Tripoli was commissioned Aug. 6 at Philadelphia with Capt. Henry Suerstedt taking command.*

Navy Men in 'Game Warden'
Helicopter Operations in Vietnam

Eight Naval Aviators and eight enlisted aircrewmen have arrived in Vietnam to begin training for helicopter support missions under Operation *Game Warden*.

Air support for *Game Warden* operations is presently being provided by U.S. Army pilots flying armed Army UH-1B *Iroquois* helicopters. Their mission is to support U.S. Navy river patrol boats (PBR's) operating off the mouths of the Mekong and Bassac Rivers and in the Rung Sat Special Zone.

Based aboard Navy amphibious ships, the helicopters are used to make strikes against Viet Cong positions and craft and to lend fire support to patrol boats under attack.

The 16 Navy men are the first of four groups destined to take over the *Game Warden* operations. They will undergo a six-week training course designed to familiarize them with the Army aircraft they are to fly and their area of operations. Training will be conducted by Army pilots and crewmen of the U.S. Army 120th Aviation Co. at Saigon's Tan Son Nhut Airport.

The Navy men are all assigned to HC-1's Detachment 29 with LCdr. W. A. Rockwell as officer in charge.

'Home-grown' Helo Pilot
Completes Syllabus at Pt. Mugu

NAS POINT MUGU graduated its first "home-grown" helicopter pilot recently when Lt. R. C. Campbell, air operations department, soloed in the station's H-19 after completing a 25-hour syllabus.

His instructors were Lts. G. G. Nesbit and William Wraith and Senior Chief C. Martin, Mugu's only enlisted pilot.

Recognizing the shortage of helicopter pilots, NAS POINT MUGU submitted a proposed helicopter transition syllabus for its trainees to

the Chief of Naval Operations.

"We proposed that the NAS flight-train its own helicopter pilots locally," Commander E. J. Wagner, air ops officer, said.

Approval was granted and Lt. Campbell started his training on June 21. He had taken the ground school training at Ellyson Field, NAS PENSACOLA, in May.

Huge Test Fire at Miramar

Under Control in Two Minutes

The largest test fire ever ignited was the problem facing NAS MIRAMAR firefighters July 26.

Thousands of gallons of JP-5 fuel, spread over 22,500 square feet, were set afire south of Miramar's runways in the station's 25-acre fire test area.

Just seven firefighters brought the fire under control in less than two minutes.

This was the last test of a series of 48 test fires conducted to evaluate new firefighting agents, using existing equipment, developed by the Naval Research Laboratory in Washington, D. C. A crew of research engineers, headed by Dr. Richard L. Tuve, from NRL ran the tests. The extinguishing agent used in all tests was Light Water (NANEWS, October 1965, p. 37) which seals off the surface of fuel fires and cuts off the oxygen.

Used in all the tests was a turbine-powered MB-5 crash truck, the only one of its kind, which Miramar has been evaluating.

PMR Activity Increased

13,155 Operations in FY 1966

"We have just completed the biggest year of operations in the eight-year history of the Navy Pacific Missile Range," said Rear Admiral Raymond N. Sharp, Range Commander, referring to the 13,155 operations completed during FY 1966. This was accomplished despite a reduction in personnel.

The increased activity, according to a PMR release, was made possible by extending the range day with operations scheduled from 0600 to midnight. Another factor was the innovation of scheduling two similar operations at the same time to ensure maximum utilization of the range.

Navy PMR operations cover diverse operations: air-to-air, air-to-surface, surface-to-air, surface-to-surface missile research and development tests as well as Fleet operational tests and exercises. PMR also launches and provides orbital support to ICBM and space launches for other national ranges.

Adm. Sharp's command includes the Point Mugu complex, San Nicolas Island, Barking Sands facility, an instrumentation site at Johnston Atoll, Missile Impact Locator sites at Wake, Midway and Kaneohe, and is responsible for all broad ocean launches in the Pacific.

Long Journey for Firebee

Found after Two Years at Sea

A Ryan *Firebee* aerial target drone has been retrieved after drifting some 3,600 miles across the Pacific Ocean.

The jet-powered target had been "shot down" during exercises at Point Mugu, Calif., March 30, 1964. It was located by the USS *Talladega* 1,700 miles southwest of Hawaii a little over two years later.

The distance traveled and the time in the water were both records. Last year a similar *Firebee* was recovered off Hawaii. In the water for 13 months, it had drifted from Point Mugu to Hawaii.

The record-holding *Firebee* had been stricken from the inventory following gunnery exercises in which naval aircraft supposedly destroyed it. Ryan field technicians at Barber's Point, where the *Firebee* was returned by the *Talladega*, said the watertight compartments had preserved electronic components and after decontamination the aerial target drone would in all probability be as good as new.

NATTC *conducted carrier suitability tests on Lex for the Douglas TA-4F and North American T-2B jet trainers (only T-2B shown) in June. The two trainers were tested for service and carrier suitability, flying qualities, and armament and electronics capabilities. The Douglas TA-4F will provide a two-place trainer in a tactical aircraft. This jet is now being phased into the Navy's Combat Readiness Air Wings. North American's T-2B has two J60-P-6 engines rated at 5,810 pounds total thrust compared with its predecessor, the T-2A's single J-34-WE-48 engine, rated at 3,400 pounds thrust. Since the total weight increase in the T-2B is less than 1,000 pounds, the performance is substantially increased. The length of time for climbing to 20,000 feet is cut to about half, and the takeoff roll is decreased about one-third. The T-2B is now assigned for instrument familiarization at VT-4, Sherman Field, and VT-7 and VT-9 at NAAS Meridian.*

GRAMPAW PETTIBONE

Impoverished

The yellow sheets looked good in the line shack and on their way to the *Neptune,* the plane commander and copilot concluded the briefing. Preflight had been previously conducted by the crew members and everything appeared normal. Fuel quantity was 2,400 gallons by the dipstick and the samples were clean. The plane commander took one final look and manned the aircraft.

At 1125, with jets and recips churning, the SP-2H rose from the airfield and proceeded on the scheduled instrument training flight. Several approaches were conducted at nearby facilities with all four engines utilized for the better part of the flight. Upon completing an ADF approach to an adjacent field at 1415, a fuel check was recorded as 2,900 and 3,000 lbs. in the mains and 1,400 in the center tanks.

Heading seaward, the pilot obtained from approach control a clearance for a TACAN approach and GCA to the homefield. The plane commander was under the hood and completed the landing check list.

About three minutes after commencing the final approach and at 3,000 feet, the crewman directly aft of the pilot noticed the fuel pressure on number 2 recip rapidly dropping and immediately notified the pilot of this revolting development. The PC feathered number 2, increased power on the starboard jet to 90% and completed the engine secure check-list. Right after this evolution, the starboard jet quit, leaving the nebulous *Neptune* at 2,000 feet over the water and six miles from the field. The tower was alerted to the emergency and the crew proceeded to their ditching stations. (A fuel check was conducted at this time by the PC as 3,000 lbs. in both

mains and zero in the centers. Co-pilot read zero in the mains and 3,000 in the centers.)

The PC was attempting to hold 150 knots, intending to make a single-engine landing without jets. Approximately three minutes after losing number 2 recip, fuel pressure dropped on the port engines and, at 1,400 feet, all power failed.

With the gear up and 10 degrees flaps, the PC held 150 knots and informed the crew that ditching was imminent. He checked the fuel, mains-direct position and all boost pumps on. After getting a May Day out at 1,000 feet, he switched to the center tanks and then back to mains-direct one or more times. The engine surged, but did not restart as he headed for a nearby Coast Guard vessel.

The visibility was seven miles, sea conditions were fair with light swells and the wind was NW at 15 knots. The big bird ditched smoothly into the wind about 300 yards from the Coast Guard ship and all personnel evacuated 30 seconds after forward motion ceased. Three minutes later the doomed *Neptune* departed for the deep six, leaving a hazardous layer and strong odor of avgas.

Within 15 minutes of splash down, the Coast Guard had picked up all hands.

Grampaw Pettibone says:

Oh, my achin ulcers! Would you believe pilot error coulda sent this *Neptune* to its doom?

You can bet your last dime that if this fella was watchin' his fuel like his bank account, he'd known where every last drop of gas was and how to put it in the right place at the right time. Nuff said!

Fit to Survive

After a leisurely dinner in the wardroom, the *Skyhawk* driver proceeded to the ready room and changed into his flight gear. He donned red goggles and waited until time to man his aircraft for the final night tanker hop on the schedule. At about 2015 he arrived at his aircraft on the flight deck and had to bite his tongue as there was no cockpit ladder available. After a normal preflight he gained access to the cockpit from the hood of a start tractor and shortly thereafter noticed the plane had no lox. After this discrepancy was remedied, the start and post start check were accomplished and the tanker was launched at 2047.

The fresh tanker rendezvoused with the off-going duty tanker, checked the store and transferred the remaining fuel. He then took station and subsequently climbed to 20,000. As the final recovery phase neared completion, the tanker pilot was directed to 5,000 feet.

At 2224 he commenced his approach, a teardrop penetration from 5,000 feet at 10 miles from the ship. He descended to 2,000 feet on the outbound leg and at 20 miles made a left turn inbound. At this point he commenced dumping the store and continued the

ILLUSTRATED BY Gibson

descent to 1,000 feet. Completing the turn and inbound indicating 250 knots (supposedly at 1,000 feet), he noticed he was not right on the inbound bearing and made a slight right bank to correct. The aircraft jumped and shook violently as it impacted the water. The next thing the pilot knew, he was in the water. It was quiet. There was a strong odor of JP, and he was being tugged downward. His first reaction was to reach for the toggles of his Mk-3C but he could not locate them. His only thought now was to surface.

In hopes of freeing himself from whatever was hindering him, he quickly shed his survival vest and torso harness. (While pulling the torso harness off his left leg, he noticed the deformity of the ankle joint and realized he had sustained a fracture.) Once free of the harness, he was able to swim to the surface. For a short while he tried to tread water and float on his back, but the waves continually broke in his face. Realizing he was still wearing a "G" suit, he removed and inflated it by blowing into the hose. However, the connection fitting was torn off and he had to jam his thumb in the open end to keep it inflated.

After becoming somewhat oriented, the plagued survivor saw his flashlight floating a short distance away and found that it functioned normally. During the next hour or so he inflated the "G" suit about 50 times for whatever assistance it could afford him. Luckily he spotted an external tank floating upright and swam over and grabbed it. Assured the tank would support him, he discarded the "G" suit, laid his head against the tank, and held the flashlight alongside the white surface, periodically directing the light in all directions.

On several occasions he heard the SAR aircraft in the vicinity, but it was not until a destroyer lookout spotted his red light at 0257 that he was found and finally rescued. He had endured a harrowing four hours and 47 minutes in the sea.

Grampaw Pettibone says:

Great horned toadies! This pilot coulda got kilt.

Just goes to show ya that being in good physical shape can bend the odds way around in your favor and really pays off when the chips are down. Course, he coulda saved himself a heap of inconvenience by eye-balling the altimeter a lot closer and squawking like mad for help if he wasn't completely happy with it.

Outside of scratching this bird, my hat's off to this fella for an outstanding performance in the escape and survival phase of the accident.

S.O.S.

A flight of six SH-3A's departed the auxiliary field at 0800 for an ASW training exercise. They arrived on station, seven miles seaward at 0815.

At ten o'clock during the 12th dip hovering at 40 feet with the sonar transducer lowered in the water, the flight leader and his copilot heard a loud noise and observed the port engine torque dropping to zero and the port turbine exhaust temperature gauge pegged at 1,000°C. Speed selectors of both engines were advanced, but sufficient power was not forthcoming and a controlled water landing was made into the wind. (Emergency flotation bags were activated.)

The *Sea King* was under control, floating satisfactorily. Heading into the wind, number one engine speed selector was placed in ground idle in an attempt to regain power with manual throttle. This attempt failed to produce any increase in torque and number one was secured. Approximately 15 seconds later, number one's fire warning light came on. The copilot activated the engine fire extinguisher.

At about 1010 the crew ascertained the fire to be out and notified the nearby NAS of the mishap. The NAS dispatched a rescue boat.

A slow downwind water taxi toward the NAS was commenced at 1015. Ground swells of about five feet prevailed from the stern. Water was entering the crew compartment through the sonar tunnel and the sonar hoist enclosure. The crewmen found it difficult to seat the sonar transducer because of the sea state and motion of the aircraft but did succeed some minutes later. At 1045 the pilot turned into the wind and attempts were made to deploy the sea anchor for towing. This proved futile and it appeared likely there would be a long delay for the tow.

At 1050 they gave up the towing idea and began taxying once again. Almost immediately after turning downwind, a wave lifted the tail of the aircraft and caused the main rotor blades to strike the water. The machine rolled forward and came to rest, inverted in the water. All hands evacuated immediately and were rescued by a motor whaleboat from a nearby destroyer.

Grampaw Pettibone says:

Shades of black shoes! Looks like we gotta go back to basics. Since we ain't in the VO/VS business any more, maybe we're lackin' some of the ole horse sense we always took for granted.

No doubt these fellas found themselves between a rock and a hard place when the stator vane on the port engine gave up the ghost, but from there on just plain ole damage control and seamanship coulda saved the boat.

Seems to me it woulda been a good idea to lighten ship right then and try to get it back in the air. After that, pluggin' holes with anything available makes good sense and woulda kept the draft down to a decent level and seaworthy enough for a tug to the beach or to the carrier that passed within shoutin' distance.

ENTERPRISE CREW MEMBERS AT FLIGHT DECK PARADE AS THEIR CARRIER STEAMS UNDER THE GOLDEN GATE

ENTERPRISE HOME FROM COMBAT ZONE

By John D. Burlage, JO1, and Leon E. Rhoades, JO3

HISTORY had been made aplenty when the Navy's only nuclear-powered aircraft carrier, USS *Enterprise*, steamed into a new home port, NAS ALAMEDA, Calif., to end her first Far East cruise and her first combat tour off Vietnam.

It was quite a homecoming.

• Cheering crowds lined San Francisco's famous Golden Gate Bridge to watch the huge carrier move under the span; the top of the ship's mast cleared the bridge by only a few feet.

• VIP's, both military and civilian, were much in evidence.

• The mayors of San Francisco, Oakland and Alameda officially proclaimed an "*Enterprise* Day."

• Dependents by the hundreds, who couldn't have cared less about proclamations, VIP's or curious spectators, were on the pier to catch their first glimpses of husbands and fathers in eight months. Many of them moved to Alameda from the carrier's former home port, Norfolk, after the CVAN deployed to WestPac from the East Coast.

In a day marked by honors, *Enterprise* also earned the somewhat dubious distinction of being the first nuclear-powered warship ever to cause an automobile traffic jam. Cars were backed up for 12 miles as drivers on the Golden Gate slowed to watch the arrival.

Their actions were as understandable as they were illegal; *Enterprise* was something well worth tying up traffic to see.

CVAN-65 crew members got an inkling of the welcome that was in store for them even before their ship entered San Francisco Bay.

A fairly conventional approach was taken by the San Francisco Marine Exchange, which erected a 125-foot banner on the Golden Gate. "Welcome Home *Big E*," it declared. The use of banners was not limited to bridges; another one, which also welcomed the ship to her new home, was trailed be-

hind one of the Alameda-based aircraft that staged a flyover during the Bay transit, and there was a third on one of the brows that would be used to link *Enterprise* to the NAS ALAMEDA pier to which she would moor.

Not so conventional a welcome, but one equally as appreciated, was the effort made by the San Francisco Junior Chamber of Commerce. Its members arranged to have 5,000 fortune cookies flown to the ship to be passed out to crew members. Inside were messages marking the occasion.

Although it's a relatively short haul from the Golden Gate to Alameda (a statement with which impatient carrier crewmen may disagree), *Enterprise* picked up plenty of company along the way. A flotilla of small craft—fireboats, cabin cruisers and tugs among them—escorted the carrier from the bridge to her new home port. The *Big E*'s arrival even brought out the Army: The Sixth Army Band, embarked in a Navy tug, provided appropriate music.

Among the hundreds who watched the carrier approach the Alameda pier from the pier itself were Vice Admirals Thomas F. Connolly (Commander Naval Air Force, Pacific Fleet) and Lawson P. Ramage (Commander First Fleet); Rear Admirals John McNay Taylor (Commander Western Sea Frontier), John E. Clark (Commandant, 12th Naval District) and Thomas J. Walker III (Commander Carrier Division Three); and Captains Edgar E. Stebbins (Commander Fleet Air Alameda) and Duncan A. Campbell (Commanding Officer, NAS ALAMEDA).

Civilians present included Mayor William S. Godfrey of Alameda, Vice-Mayor Fred Maggiora of Oakland, James V. Grealish, President of the Navy League's 12th Region, and Dr. Michael May of the Lawrence Radiation Laboratory, Livermore, California.

They watched as straining tugboats got their huge charge alongside the pier. The brows were dropped in place. Pandemonium reigned for a time as dependents stormed the ship and *Enterprise* officers and enlisted men sought their families. Somewhere in the midst of it all, a short ceremony was held. Then the magic words—"Liberty Call!"—were passed over the 1MC, and crewmen headed for home and the pleasant task of getting re-acquainted with their families.

Local observers said later the enthusiasm generated by Bay Area residents for *Enterprise's* arrival rivaled that given the cruiser USS *San Francisco* in WW II.

It was quite a homecoming.

It had been quite a cruise.

THOSE WHO TAKE an interest in such things were already saying it was just a matter of time before *Enterprise* got involved in the Vietnam fighting when, on March 22, 1965, Secretary of Defense Robert McNamara announced that the *Big E* and the rest of the Navy's nuclear task force would be transferred to the Pacific Fleet.

"The first two of the four ships to be transferred will be the . . . *Enterprise* and the guided missile frigate USS *Bainbridge* (DLGN-25)," a Department of Defense news release said. "The guided missile cruiser *Long Beach* (CGN-9) and the newest nuclear powered surface ship, the guided missile frigate USS *Truxton* (DLGN-35), now being fitted out, will be transferred in 1966 on a date yet to be determined."

The announcement came not quite three years after the *Big E* joined the Second Fleet in the Atlantic June 25, 1962. That was the first regular assignment of the world's largest warship to one of the Navy's four striking fleets.

Behind *Enterprise*, however, was a variety of operations held since she was launched Sept. 24, 1960—including builder's and pre-acceptance trials in which the ship easily outran her destroyer escorts and broke all existing records for heavy combatant ships.

Ahead lay operations with the Second Fleet, several deployments to the Mediterranean, participation in the Cuban Crisis late in 1963 and Operation *Sea Orbit*. This last was the now-famous around-the-world cruise in which *Enterprise, Long*

AWAITING *Big E's arrival in Alameda are, from left, VAdm. Connolly, Dr. May, RAdm. Walker, RAdm. Taylor, and VAdm. Ramage.*

SPECTATORS, *most of them dependents of crew members, watch as tugboats berth Enterprise to Alameda pier for the first time.*

Beach and *Bainbridge* steamed 30,565 miles without refueling or replenishing.

Enterprise's crew wasted no time in winning awards for their carrier. After FY 1963 competition, the *Big E* became the first aircraft carrier commissioned only a year to win the Atlantic Fleet Battle Efficiency Pennant. Later, the Chief of Naval Operations selected CVAN-65 as the most outstanding aviation ship in the Atlantic and the carrier became the possessor of the Marjorie Sterrett Battleship Fund Award.

All of that, however, was only a preview. On Oct. 26, 1965, *Enterprise* steamed out of Norfolk, bound for the real thing.

THE FIRST combat sorties were flown off the USS *Enterprise* December 2, 1965.

For the first time, a nuclear-powered aircraft carrier was seeing combat; that, in itself, was history. History does not mean much to men putting in 14 and 16 hours a crack during at-sea periods that can, and do, last 50 days.

The work was hot, hard and unrelenting aboard *Enterprise*, but that was also not especially significant: Navy men aboard carriers steaming off Vietnam before *Enterprise* deployed were well versed in the hard work department and there are men serving aboard CVA's on the line today who are working just as hard under more adverse conditions.

As a matter of fact, *Enterprise* had a lot going for her—and the real significance lies in the fact that her crew knew it. Her Commanding Officer, rear admiral-selectee Captain James L. Holloway III, put it in words when he said, "With this ship, if we don't do better than anybody else in the Fleet, we ought to be fired."

Nobody was fired, because the men of *Enterprise* did right well.

On that first day, *Big E* pilots assigned to CVW-9 flew 118 sorties against the Viet Cong. On Dec. 3, they flew enough to break the existing record of 131, and on Dec. 11 the tally climbed to 177.

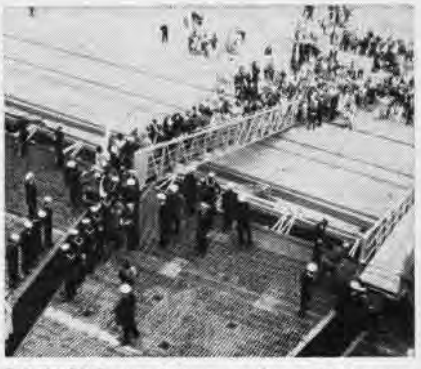
Before their carrier left the Seventh Fleet six months later, *Enterprise* pilots made 13,020 sorties against enemy targets.

It was the first strikes, however, that prompted Rear Admiral Henry L. Miller, then Commander Carrier Division Three in *Enterprise*, to send a message to the Secretary of the Navy, the Chief of Naval Operations and other officials. It said:

"I have the distinct honor and pleasure to announce to you that . . . the first nuclear-powered task group in your Pacific Fleet and the United States Navy engaged the enemy in South Vietnam. The USS *Enterprise*, with all-jet Air Wing Nine delivering the punch, struck hard against Viet Cong installations in the Third and Fourth

WITH *San Francisco in the background, Enterprise steams toward her new home port, Alameda, Calif., after an eight-month West Pacific cruise that started in Norfolk, Va.*

THE VIEW *from the carrier of the Alameda pier shows crowd awaiting ship's arrival.*



SIDEBOYS *stand by to welcome first group of dependents to come aboard Enterprise.*

Corps areas. *Enterprise* was ably supported by the nuclear destroyer USS *Bainbridge* . . . and the conventionally-powered destroyers *Barry* (DD-933) and *Roberts* (DD-823) of DesRon 24. *Enterprise's* memorable performance today testifies that she is worthy of the heritage left by her illustrious predecessor, CV-6."

The days passed, and *Enterprise* crewmen continued to assault the record books with claims of their own. The *Big E* teamed with the unrep ship USS *Sacramento* (AOE-1) on June 2, 1966, in an ammunition transfer, for instance, and the claim was made that the 241 tons transferred in 55 minutes by cargo lines and helicopter were a new record; earlier, in February, *Sacramento* had moved 654 tons to *Enterprise* in a single day.

During the six months of the cruise, *Enterprise* fliers dropped more than 8,000 tons of ordnance on targets that included military facilities, transportation networks, military storage areas and barges and junks carrying supplies to the Viet Cong.

And, would you believe it, *Enterprise* crewmen even kept a polish on the "showboat" image their ship earned — for better or for worse — during *Sea Orbit*? More than 700 official visitors toured the ship, both at sea and during rare in-port periods; they included President Ferdinand Marcos of the Republic of the Philippines and Generalissimo Chiang Kai-shek of the Republic of China.

It wasn't exactly a fun cruise.

There were light moments, however. Entertainers gave of their time to help break the tedium when they brought shows aboard. Martha Raye brought a small combo and got large laughs. Danny Kaye and Vikki Carr earned the crew's admiration and applause by performing at 8 a.m. in 90-degree heat. Pianist "Big Tiny" Little had his show aboard. Billy Casper and Archie Moore represented the world of sports. Those whose duties kept them from the live performances got the chance to see video-taped replays on the ship's TV sets.

Mostly, though, it was work, eat, and sleep—and stand by for the horn to sound "Flight Quarters!" And often, especially for the flight deck personnel, it seemed to be just work, eat and work. The strikes continued.

Then, suddenly, they stopped. *Enterprise's* baptism of fire was over. She was bound for a new home, for a short stay at the Alameda pier, and then for a few weeks at the Hunter's Point Naval Shipyard.

To men who have put in a lot of long hours, and who mostly want to get back home, messages of congratulations can be a lot of nice words to be read and forgotten. *Enterprise* received her share, but some of the words deserve to be remembered:

THE WARMTH *of this welcome of a crewman can be appreciated by everybody.*

"It is a great pleasure to extend to you my personal congratulations for a job 'well done'," said Admiral Roy L. Johnson, Commander in Chief, Pacific Fleet. *"Enterprise* represents an important link between the traditions of the past and our Navy of the future. Your accomplishments, during the first combat deployment of a nuclear-powered major warship in history, have contributed even further to the legend of the *Big E*. More important, your performance has set new precedents and new standards in which each of us in the Pacific Fleet may take great pride."

Vice Admiral John J. Hyland, Commander Seventh Fleet, had these words of praise for *Enterprise*, her air wing personnel and members of her crew:

"As you depart for home you have my complete admiration for an outstanding all-around performance. Your duty on the line was marked by [a] top-quality as well as record-setting number of sorties which helped to bring out one facet of the superiority of nuclear-powered ships.

"Your hospitality to countless visitors and the most exceptional impression you invariably made on them also contributed toward their understanding of why nuclear power is a good investment for [the] United States. . . ."

It had been quite a cruise.

SOME FACTS ABOUT THE ENTERPRISE CRUISE

Total combat sorties	13,020
Highest number of combat sorties in single day (12-11-65)	177
Highest total number of sorties in single day (12-11-65)	211
Total number of arrested landings	18,142
Total tonnage of ordnance delivered	8,966
Total number of days spent "on the line"	130
Total days at sea, 10-26-65 to 6-21-66	201
Total days in port, 10-26-65 to 6-21-66	37
Largest number of consecutive days at sea	50
Total number of helicopter rescues	6
Number of times *Enterprise* refueled destroyers	66
Number of movies shown aboard the *Big E*	2,375
Operations performed by CVAN-65 medical staff	200
Total number of APC's consumed	121,000

MAJOR FUEL STORAGE AREAS STRUCK BY NAVY PLANES

SMOKE POURS FROM FLAMING TANKS AFTER STRIKE ON HANOI FACILITY

RECON PHOTO *depicts one of the targets for Navy and Air Force combined strikes.*

SPECTACULAR air strikes against major fuel storage areas in North Vietnam — including those near Hanoi and Haiphong—were being flown by Seventh Fleet pilots as part of the U. S. effort to halt the flow of men and material into combat areas in the beleaguered south.

By mid-July, Navy and Air Force aircraft were in their third week of combat operations against petroleum installations since the initial strikes against the Hanoi-Haiphong facilities.

While the latter caused by far the most public comment, and were the prime topic of a press conference held by Secretary of Defense Robert McNamara, the attacks themselves ranged many miles away from the North Vietnamese capital city — including missions near Dien Bien Phu, more than 100 miles to the northwest.

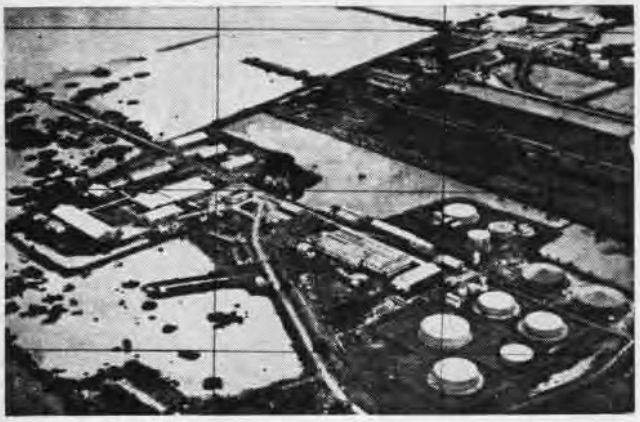
The Dien Bien Phu raid, coupled with attacks against facilities near Dong Hoi and Vinh, raised to 25 the number of fuel installations struck in a 12-day period that followed the first Hanoi-Haiphong missions, according to press reports.

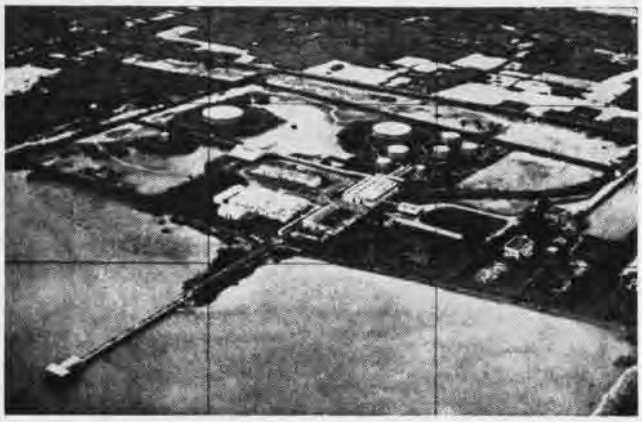
A Seventh Fleet press release that provided details of those initial operations said the Haiphong fuel storage depot was severely damaged by pilots from the USS *Ranger*, while the Bac Giang facility near Hanoi was estimated destroyed by USS *Hancock* pilots and the Do Son installation was hit by planes from the USS *Constellation*.

In his press conference, Secretary McNamara said the first strikes, which were carried out by a total of 46 Navy and Air Force aircraft, hit targets that "represented over 60 percent of North Vietnam's remaining storage capacity.

"The attacks on the three targets were achieved with the loss of one aircraft—an F-105," the Secretary said. "Pilots report that while attacking a surface-to-air missile site in the vicinity of Hanoi, MiG aircraft were encountered. One MIG-17 was probably destroyed as a result of this encounter."

Preliminary pilot reports said 80





ONE REASON *for air strikes aga st the petroleum facility near Haiphong was to cripple North Vietnam's only installation capable of offloading fuel from large, ocean-going tankers; reports said the facility received 95 percent of petroleum products.*

percent of the target near Haiphong was destroyed, Secretary McNamara announced, while pilots reported heavy damage to the target near Hanoi as well as at Do Son. "At Haiphong after the attack, heavy smoke rose to an altitude of more than five miles. . .," he pointed out, and he added that fires were "observed in all four sectors of the petroleum storage area" at Hanoi.

Commander Charles R. Smith, Commanding Officer of RVAH-6 operating off *Ranger*, assessed the damage in somewhat livelier terms after he flew his RA-5C *Vigilante* on a reconnaissance mission over the Haiphong targets. "It looked like we wiped out the entire world's supply of oil," he said. "I didn't know there was that much oil in the world. The column of oily black smoke rose to more than 20,000 feet and flames leaped to about 3,000 feet."

The pilot indicated he felt the accuracy of the raids was "the most outstanding I've ever seen."

He also said the force and accuracy of the bombing, and the intensity of the fires it caused, "must have ignited whatever storage tanks were not directly hit." He reported he could see smoke from as far as 150 miles away.

BEFORE AND AFTER *reconnaissance photographs picture the storage facility near Hanoi. Shot at left was taken this spring, while view at right was obtained after raid. Latter photo shows that 18 tanks in the complex were destroyed and 13 were damaged.*

EJECTION SEAT, *canopy and radiation shield are used to train maintenance men in operation of seat, how to open and close canopy.*

ELECTRICAL SYSTEM *unit includes mockup cockpit (left) with switches to activate miniature landing gear, lights, electrical parts.*

A-7A MAINTENANCE TRAINER READY

In July, Ling-Temco-Vought delivered the first of three 21-unit maintenance trainers to NAS Cecil Field. The other two will go to NAS Lemoore, Calif., and MCAS Beaufort, N. C.

Design of the trainers began in the summer of 1964. Because the trainers had to be completed well ahead of delivery of the first *Corsair II* to the Fleet, engineers responsible for the units literally looked over the shoulder of the A-7A designers. Training of technicians began last January.

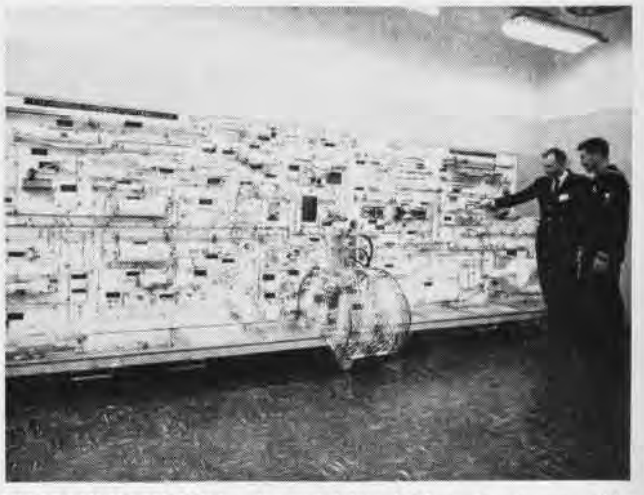
The sophisticated systems of the A-7A called for sophisticated training aids. The systems duplicated in the trainers (using actual aircraft parts where feasible) include: landing, surface controls, ejection seat and canopy, integrated hydraulics, fuel, engine, cockpit procedures, electrical, automatic pilot, standby remote attitude indicator, air data computer, electronic countermeasures, radar beacon, roller map, communications, navigation and identification, radar, radio command control, weapons delivery, fuzing and armament.

Classroom training aids to be used with the trainer include 12,000 colored viewgraphs and detailed lesson guides for technicians and O&R personnel who will be using the trainers.

Improved ease of maintenance was secured through modular construction. The many small lights illuminating the trainer's visual displays, which ordinarily burn out after repeated turning on and off, are given greater life through low "keep alive" voltage which flows through them when the machines are turned off.

Key maintenance men from Cecil Field were checked out in the units at LTV's Dallas plant prior to delivery of the *Corsair II* trainers.

POTENTIAL PILOT *gets checkout in the cockpit procedures trainer. The instructor (R) can introduce various emergencies and malfunctions.*



HYDRAULIC SYSTEM *unit, containing A-7A parts where possible, allows maintenance men to see cylinders and other parts in operation.*

COMMANDER *W. R. Fraser, OinC, Pacific Fleet Combat Camera Group, left, watches Dave Penner, PH2, and Harvey Peck, DM3, put up new insignia for what formerly was called the Mobile Photographic Unit. The group operates out of San Diego, Hawaii and Japan. Peck designed insignia which includes a map of area the group covers with a motion picture camera superimposed on surface.*

QH-50D Helo Tests End

Team Conducts Trials Aboard DD

The QH-50D, latest addition to the Navy drone antisubmarine helicopter (DASH) arsenal, has completed five months of Board of Inspection and Survey Trials.

The QH-50D is an improved version of the QH-50C. Improvements in the new model enable destroyers to deliver ordnance against nuclear-powered submarines at increased ranges and allows the destroyer to maintain the initiative.

The final phase of the trials was conducted by a team from Naval Air Test Center, Patuxent River, aboard USS *Cecil* (DD-835). The shipboard trials were a coordinated effort of the NATC team and the crew of the *Cecil*.

NATC's Service Test Division evaluated the maintenance suitability and mission potential of the weapon system. Flight Test Division personnel tested the stability and control characteristics of the drone during landing and takeoff.

Drone launches and recoveries were conducted under various combinations of relative wind heading and velocity. Radio frequency interference tests were conducted by Weapons Systems Test Division.

During the ship trials, the drone logged 27 hours flight time in three and a half days. The trials included night operations as well as day. The QH-50D has been provisionally accepted for Fleet release.

QH-50D IS SHOWN IN A TEST FLIGHT

LCDR. WM. POWELL *(L) and Cdr. Edward Bouffard (R), of HS-3, are ready to fly first Navy SH-3D from Sikorsky plant, Stratford, Conn., to Norfolk. R. L. Morris (C), Sikorsky test pilot, briefs them. The SH-3D is a version of the twin-turbine SH-3A submarine hunter with more power and highly sophisticated equipment.*

New Helo for Royal Navy

SH-3D Version of 'Sea King'

The Royal Navy recently announced that a new antisubmarine helicopter, known as the SH-3D, a more powerful version of the Sikorsky *Sea King*, will be built in Great Britain by Westland Aircraft Ltd.

The new helicopter will be powered by two Bristol-Siddeley *Gnomes* and armed with British antisubmarine equipment, including homing torpedoes, sonar, radar, tactical coordination and Doppler navigation equipment. It features all-weather flight control.

The SH-3D, scheduled for delivery in 1969, has a crew of four and is capable of carrying 20 fully-equipped troops, making it effective as a backup for the Royal Navy's Commando helos.

More Skyhook Flights On

In a U.S./Canada Joint Venture

The Navy, in cooperation with agencies of the U.S. and Canadian Governments, commenced the seventh annual program of *Skyhook* balloon flights in June in a continuing effort to obtain cosmic ray data in the area of the Geomagnetic North Pole.

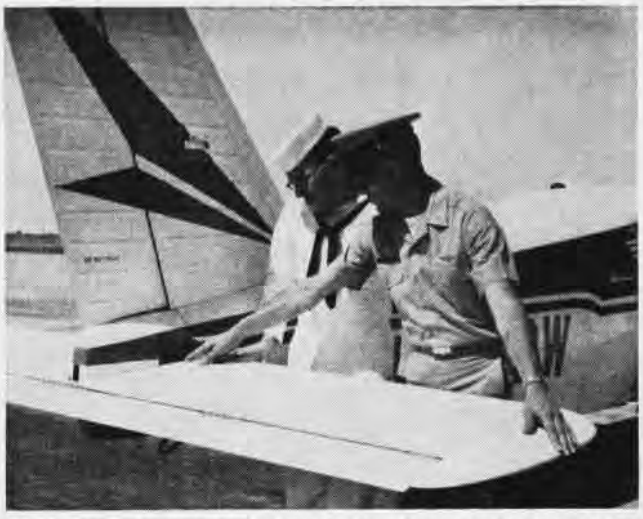
The more than 60 flights launched from Canada are sponsored for scientific groups by the Office of Naval Research, the National Science Foundation and NASA.

Data from the scientific payloads from the flights launched at Flin Flon, Manitoba, were telemetered to a receiver and tape recorder at the ground station because these flights were not recoverable. The remaining flights were conducted from Fort Churchill, Manitoba. These flights are recoverable because they are launched when the lakes are not frozen over.

The polyethylene balloons range in size from 250,000 to 11 million cubic feet and in thickness from one-half to three-quarters mil. The duration of the flights, scheduled to end this month, vary in duration from eight to 36 hours.

DEAN A. B. DROUGHT, *the Naval Academy's academic dean, recently visited CNABaTra to see Pensacola facilities and observe Academy midshipmen during summer training. He was indoctrinated on use of bail-out trainer by flight instructors, Lt. Donald Rhodes (in cockpit) and Ens. K. L. Gray.*

R. K. BOSLAUGH, ATC, PRE-FLIGHTS CLUB AIRCRAFT



STUDENT LEARNS WORKINGS OF THE PIPER CHEROKEE

THE NEW BREED OF PRIVATE FLYERS

By Steve Welch, JO1

HOPPING DOWN to the Caribbean for a few days of sun and fun is a luxury that has always seemed well beyond the means of my pocketbook. Matter of fact, even a relatively quick jaunt from Memphis, Tenn.—where I'm assigned to the Naval Air Maintenance Training Group aboard the Naval Air Station—to New Orleans for a weekend used to be out of the question.

Ah, but that was before I discovered a relatively inexpensive, but extremely enjoyable, mode of transportation. It's provided by the *Navy Memphis Flying Club*.

I'd known there was such a club since I arrived at Navy Memphis. In fact, such organizations can be found operating in and around many naval air facilities.

What I didn't know, however, was that private flying — at least that practiced by the Memphis club—is not just a sport for a select group of flying "bugs" with bulging billfolds. It's an economical and highly enjoyable hobby for just plain folks.

Once I made that discovery, the sky was almost literally the limit. Trips that once were 'way above me didn't come down to my level; I flew up to theirs.

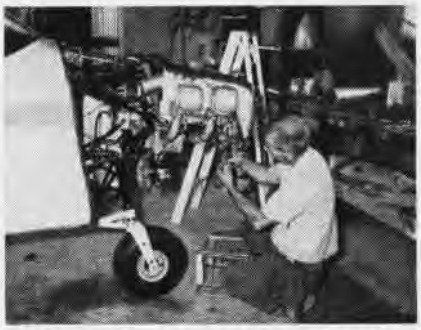
My interest in the flying club began when I struck up a conversation with Richard K. Boslaugh, ATC, an active member and an avid flying enthusiast. I was a bit reluctant at first to accept his invitation to spend a Saturday afternoon in the air. There flashed through my mind visions of fearless and foolhardy daredevil pilots peering at the world below through dusty goggles, barnstormers, carnival stunt men and bush pilots who fly without parachutes.

I soon discovered I'd been watching too many old movies. Times, and aircraft, have changed.

Accepting Chief Boslaugh's invitation, I arrived at the NAS on the designated day and found the club's operating area. Its facilities are located at the end of one of the station's runways. Only three of the organization's 11 planes were on the ground when I arrived. Little wonder; it was a beautiful day, perfect for flying.

Without a doubt, the club's runway is the busiest aboard the station on a weekend. Club aircraft are taking off and landing constantly, bound for or returning

PLANE IS GASSED AFTER FLIGHT



MEMBER PULLS 100-HOUR CHECK

BETTY OVERMAN IS A 'COPILOT'

from instruction flights or pleasure trips.

I was introduced to the club's president, B. J. Collins, AFCM, and several members. From them I learned about one of America's fastest-growing sports and about the highly successful Memphis club.

The club was founded by three Navy men in 1958. Called the *"A" Knockers*, it was located at a civilian airport. Its "fleet" then consisted of a single-engine, two-seater loan from the Navy under a program that enables Navy-recognized flying clubs to procure obsolete trainers. Equipment and aircraft purchases are financed by a bank in Millington, Tenn. A $3,000 emergency fund is maintained in the Navy Federal Credit Union aboard the station.

Aircraft rental fees and membership dues of $2 a month are barely enough to cover the costs of maintenance, insurance and operations, so the club must depend for its and understanding a few of the problems pilots must face.

Total membership varies, but it usually averages 160 persons. Approximately 80 percent are students attending Class "A" or "B" schools at NATTC. The rest are mainly station personnel, whose horsepower ranges from airman to captain, and dependents.

Some of the club's members are experienced pilots, while others are working toward various pilot ratings—you might call what they

AUTHOR USES PILOT'S COMPUTER FOR CROSS-COUNTRY

THE FLYING CLUB HAS ITS OWN ELECTRONICS SHOP

Aeronca *Champ*, for which the organization began making monthly payments.

By 1960 the *"A" Knockers* owned a pair of two-seaters and a four-seater. The following year, the club was officially dissolved so it could be reorganized under its present name and by-laws. Previously restricted to Navy and Marine Corps personnel, it was opened to dependents and civilians and was moved aboard the air station.

Today, the club is a non-profit organization that has the use of ten single-engine and one twin-engine aircraft. It employs a full-time civilian flight instructor and three full-time mechanics. Its business is conducted by a board of governors elected by members every six months.

The club owns nine of its aircraft, one is leased from a member, and one — a T-34 *Mentor* — is on livelihood on recruiting new members. They are required to pay an initial entrance fee of $40. About 30 new members join each month.

The unusually high number of new members can be attributed to the fact that Navy Memphis, a major training center for Navy and Marine aviation personnel, has a tremendously large turnover, especially among younger non-rated individuals. The club keeps them in mind.

Rental and membership fees are comparatively low, so they suit the budget of an E-2 or E-3. Then too, the club is managed by enlisted personnel, creating a "one-of-the-boys" atmosphere that's extremely appealing to new, non-rated members. Another drawing card for the club is the aviation atmosphere that surrounds its members. They often feel they are better serving the Navy by learning how to fly do "post-graduate work." Many are beginners who have yet to make their first solo flight.

The club has a complete training syllabus for all pilot ratings and can provide six FAA-rated flight instructors on demand. Facilities are open seven days a week; at least one instructor is always present to assist dependents and off-duty personnel.

The instruction fee is $4 per flight-hour. The normal student requires eight to ten hours of training before his first solo.

Once the basic fundamentals are mastered, learning to fly a plane is as easy as learning to drive a car and club members swear it's much safer.

"Recruits" begin their lessons in one of the club's five Piper *Colts* or two Piper *Cherokees*. These are relatively simple single-engine aircraft with a handling ease that

makes them ideal for student use. In them, the novice soon learns there's much more to the art of flying than taking off, staying airborne, and landing safely.

Because of this fact, formal ground school classes are conducted weekly. Although they're not actually a requirement, new club members are strongly urged to attend as many sessions as possible. It's here that students learn to properly care for a plane, the do's and don't's of aircraft safety, the important FAA rules and regulations, minor maintenance and upkeep techniques, emergency measures and many other aspects of private flying that fall in both "need-to-know" and "nice-to-know" categories.

After his first solo flight, the student pilot is entitled to fly the aircraft alone on both local and instructor-approved cross-country flights (that is, beyond a 50-mile radius of the runway). To qualify for a private pilot rating, the FAA requires 40 hours of flying time; ten of them must be cross-country.

The club maintains equipment, facilities and qualified instructors for students who wish to work toward an advanced rating after qualifying as private pilots. Ratings include multi-engine, night flight, commercial, instrument flight and instructor.

Recently, the club began a special copilot course for women. It doesn't teach the ladies to fly solo, but it does give them the basic "for emergency use only" information they need if they suddenly find themselves with an ill or incapacitated pilot husband when they go along for the ride. One lady became so enthused over these classes she continued her training and became a full-fledged aviatrix.

MEMPHIS CLUB'S BIRDS ARE REFUELED AND TIED DOWN EACH EVENING

Club members may rent planes for as long as they desire. Costs range from $6.50 per flight-hour for the Piper *Colts* to $12 for the twin-engine *Apache*. On extended cross-country flights, charges are two flight-hours per day or the actual flight time of the trip, whichever is greater. The club reimburses members 25 cents for each gallon of gas they may purchase along the way.

Once qualified, club members can take advantage of the organization's greatest benefit: They can make flights to areas that may otherwise be inaccessible.

For instance, Lt. P. C. Dowling, a Navy doctor, recently took his family on a ten-day vacation to the Bahamas in a Beechcraft *Debonair*. Richard Truesdale, AN, navigated his way to New York in a *Cherokee* just a week after he received his private pilot rating. Jerry Rineshmit, AT2, flew the *Apache* to Denver, Colo., and Rapid City, S.D. LCdr. C. B. Simmons winged his way to Norfolk, Va., for a combined business and pleasure trip. The list is almost endless.

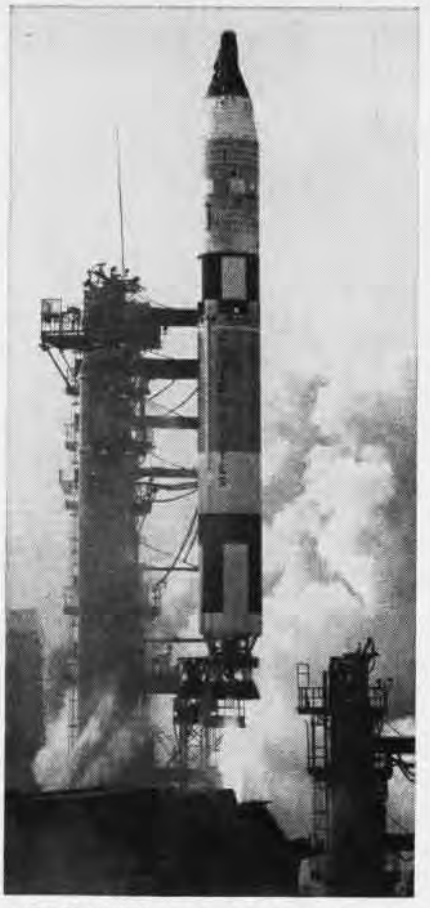
Trips like these are being made with increasing regularity by club members. The prevailing mood among them seems to be, "Until the skyways are as congested as the highways, we'll stick to the air!"

STUDENT PILOT STUDIES CHEROKEE INSTRUMENT PANEL

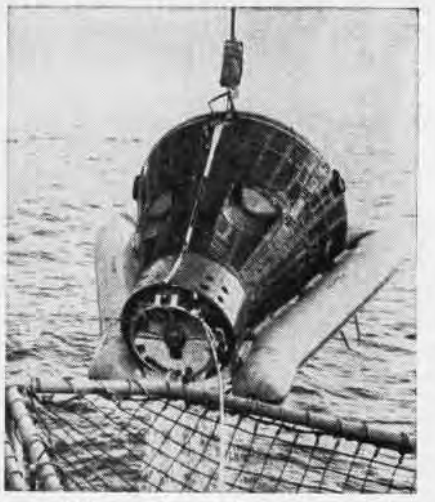
CIVILIAN MECH, 'BUZZ' McCAIN, WORKS ON A PLANE

ARTIST'S *illustration depicts rendezvous and docking maneuvers made by Gemini 10.*

WITH *John Young seated in raft, Michael Collins leaves spacecraft after landing.*



ASTRONAUTS, *in Gemini 10, were launched shortly after the Agena target vehicle.*



SPACECRAFT *is hoisted aboard Guadalcanal after successful splashdown in Atlantic.*

SENIOR *officers aboard Guadalcanal are briefed by astronauts on their mission.*

THE FLIGHT OF GEMINI 10

GEMINI 10 *astronauts John W. Young (L), command pilot, and Michael Collins, pilot, aboard USS Guadalcanal after recovery.*

STORM CLOUD *formations near the Straits of Gibraltar were photographed by Gemini 10 astronauts during the three-day flight.*

VR-21 SUPPORTS CARRIERS OFF VIETNAM

By Jack Ong, JO3, USNR

IT's 1800 at NAS CUBI POINT, Subic Bay, Philippines. A twin-engine, propeller-driven C-1A aircraft is towed to the line. Maintenance men check over the pilot's hard log of discrepancies, order needed parts, wash down exhaust trails that result from a day's flying and commence working off the log of gripes.

Thirty men take care of arriving C-1A's. On the planes and in the office, they work around the clock, then are relieved by another 30-man team the next afternoon. Together, they comprise VR-21, a tactical logistics squadron which makes priority flights to aircraft carriers on the South China Sea.

VR-21 is one of the Navy's largest single squadrons. It has operated throughout the Vietnam conflict, making COD (carrier onboard delivery) flights with parts, mail and men to carriers off Vietnam.

The nine C-1A's at Cubi Point are used for an average of five flights daily. When they return from the carriers, they are given thorough inspections on the line, repaired where necessary and nearly always used again the next morning.

Discrepancies frequently involve electrical and hydraulic parts. "These are caused by rain, humidity and heat," according to Maintenance Chief Max L. Wendorff, ADRC. "There's plenty of all three here now."

0300 — The morning's COD flights, determined by requests of the carriers, have been listed. The planes, after another going-over, are towed to the terminal.

Depending on the time they are expected to arrive at the ships, planes are loaded, usually two hours before departure. Mail delivery to the carriers, a unique service of the squadron, is one service which makes every COD plane popular with the men on the line. At Subic, ships' mail is sorted and packaged for the COD's at the Terminal Post Office, another 24-hour-workday operation.

0400—Plane crews check in. Pilots confirm their flight schedules at Operations, then preflight their

WORK BEGINS ON C-1A 'GRIPES'

PLANE TOWED TO INSPECTION LINE

respective C-1A's. Pilot, copilot and plane captain make up a team.

A cargo inspection is made on each C-1A. If there is room, passengers are manifested for the flights.

1330—After a brief fuel stop at Da Nang Air Base, the C-1A lands on the USS *Hancock*, off Vietnam. There is a line of postal representatives eager to take the mail.

"Everyone looks forward to mail," says Postal Chief Paul W. Turpin who supervises the *Hancock* mailroom. "You'd be surprised at the big boost a guy gets when he receives a package or a letter."

The *Hancock* and all other carriers handle mail for escort ships.

For the C-1A crew, there are now immediate preparations to make. Pilots meet with the *Hancock's* Air Transfer Office to see what will be returning to Subic Bay Naval Base. The cargo is loaded under the plane captain's direction. If there are passengers, they are logged. Next is a check with Operations. Will there be any side trips en route to Subic?

1415—The Subic-bound C-1A is catapulted off the *Hancock*.

"That must be how it feels to get shot from a cannon," says Plane Captain Leif Kristiansen, ADR3. In the past 24 days, he has flown approximately 140 hours. "Sure, it's a rough schedule, but I like to fly," he says.

1800—At Cubi Terminal, Subic Bay, VR-21 men wait. As each COD arrives, it is unloaded and towed to the line.

Seven days a week.

Each man, pilot as well as lineman, agrees that it's hard work. But each can look forward to a bit of relief since he is on a 30-day rotation schedule between Cubi and VR-21 Detachment headquarters in Japan. From NAS ATSUGI, it is a short train ride to Yokohama and Tokyo.

Of his men, Commander David L. Draz, VR-21 OinC, says, "For the last year, they have been operating at 127 percent of their expected capability. They're doing this on a port and starboard schedule. It's amazing the way the men work, the way they're actually meeting the requirements. I really didn't think it could be done."

But it has been done, and the squadron is still doing the job. By the end of the year, however, it is hoped that the new C-2A will begin to replace the C-1A for COD's in Southeast Asia.

The new turboprop will be able to do 1,400 miles instead of 750 miles per trip. It will carry 10,000 pounds as against the present 3,000 and deliver 30 passengers where the C-1A has space for eight.

"This will mean a quantum jump for our airlift capability and will increase our work force," Commander Draz says. "This is what the men at Cubi need. The mission goes on day and night, and those deployed to Cubi are doing their best. They're making it work."

TRIPARTITE JET V/STOL, THE HAWKER SIDDELEY P. 1127 (XV-6A), ON THE LINE AT NATC PATUXENT RIVER

JET V/STOL ABOARD TWO NAVY SHIPS

THE FIRST landing of a jet-powered V/STOL (Vertical/Short Takeoff and Landing) aircraft aboard a U. S. aircraft carrier underway was made when the British-built P.1127 *Kestrel* touched down on the flight deck of the USS *Independence* during operations in the Atlantic.

Twenty-two flights from the *Independence*, as well as 11 from the amphibious transport dock ship USS *Raleigh*, were made as the Navy's portion of tri-service concept evaluations using the P.1127. It carries the U.S. designation XV-6A, assigned by DoD.

The at-sea evaluations were being held while Ling-Temco-Vought's propeller-driven V/STOL aircraft, the XC-142A, was being given an intensive one-day carrier test aboard the USS *Bennington* in the Pacific (NANEWS, July 1966, pp. 20-21). Aside from their V/STOL capabilities, the two aircraft are widely dissimilar.

Produced by Hawker Siddeley Ltd. for tripartite testing by the U. S., the United Kingdom and West Germany, the XV-6A is a single-seat, high-subsonic strike/reconnaissance aircraft employing a modified delta platform wing. Designed to operate from unprepared surfaces, it is 42 feet long and 11 feet high. It has a 23-foot wingspan with a gross wing area of 189 square feet, weighs 10,700 pounds empty and 15,400 pounds with internal fuel. It features a pressurized cockpit equipped with a Martin-Baker rocket ejection seat.

The plane has a bicycle main landing gear with dual wheels aft, a single nose wheel and wing-tip outrigger wheels. All gear is retractable.

A *Pegasus* Mk. 5 engine powers the aircraft. It is a two-spool, axial-flow, vectored thrust, high bypass ratio turbofan engine developing 15,200 pounds of static thrust at sea level. The forward spool is an LP fan and the rear spool is an HP compressor. Each is independent in operation of the other, but they are coaxial and contra-rotate.

Four rotatable nozzles, mechanically interconnected, are located two on each side of the fuselage and can be rotated simultaneously through an arc of 100 degrees from fully aft to 10 degrees forward of vertically down to vector the engine thrust for V/STOL operations.

To provide for control during hovering and at low speed, jet reaction controls are provided by utilizing bleed air ducted to shutter valves at the wing tips, at the nose and at the tail. Normal aerodynamic controls are used for conventional flight.

Six of the aircraft, four belonging to the U. S. and two on loan from Germany, were shipped from England for the American tri-service trials. Army evaluations were conducted at Ft. Campbell, Ky., under direction of the Commanding General of the 101st Airborne Division. Air Force evaluations took place at Eglin AFB, Fla. The Navy portion was directed by the Commander of NATC PATUXENT RIVER, Md., with assistance by the Navy's Operational Test and Evaluation Force.

Purpose of the Navy trials was to demonstrate the feasibility of operating jet V/STOL aircraft from aircraft carriers and smaller ships with landing platforms. Specifically, NATC personnel were to:

- Determine and evaluate the advantages and disadvantages to ship, force and Fleet as a result of employment of V/STOL aircraft.
- Determine the feasibility of simultaneous operations between V/STOL and other aircraft.
- Establish operating characteristics aboard aircraft carriers, and on smaller ships with landing platforms, of direct-jet thrust V/STOL's under various wind-over-the-deck conditions.
- Find out if V/STOL planes are compatible with existing carrier deck-handling equipment and techniques.

The schedule called for operations at Patuxent River to acquaint pilots with the XV-6A and to familiarize them with normal carrier operating procedures before evaluations were held aboard *Independence* and *Raleigh*.

Commander James J. Tyson was OinC of the tri-service evaluation team. Project officer for NATC PATUXENT RIVER was Commander N. L. Bausch; NATC civilian engineer was Donald E. House; while Commander Donald M. Lynam served as test coordinator. Lt. Earl R. Clark was project LSO.

Commander Andrew Pullar, Jr., is the Navy member of the XV-6A Management Board.

Pictorial coverage of the at-sea XV-6A operations is displayed on the two following pages.

V/STOL CONCEPT EVALUATIONS FEATURED THE XV-6A

AWAITING LAUNCH INSTRUCTION, PILOT MANS XV-6A

JETS 'STIR UP SMOKE' DURING LANDING ON RALEIGH

CARQUALS FOR THE

RADM. F. H. MICHAELIS INSPECTS XV-6A WITH CDR. ANDREW PULLAR

CREWMAN WATCHES V/STOL HOVER

JE/STOL AIRCRAFT DURING INDEPENDENCE EVALUATIONS

COMMON VIEW OF THE XV-6A DURING CONCEPT TESTS

V/STOL IS REFUELED ON INDEPENDENCE FLIGHT DECK

TRIPARTITE V/STOL

CDR. JAMES J. TYSON (CENTER), SENIOR OFFICER OF TRI-SERVICE EVALUATION TEAM, WITH XV-6A PILOTS

WAHL, AO1, AND SQUIER, AO3, USE SHIPBOARD LOADER TO PUT SIX BOMBS SIMULTANEOUSLY ON PHANTOM II

WEAPON WIZARDRY AT NATC PATUXENT RIVER

By Lt. Neal D. Gieske, USN

A GROUND RADAR station had locked on and was tracking the lone aircraft approaching rapidly from the south. Nearby, six pairs of eyes stared intently through the viewfinders of three odd-looking turrets. Hands made small adjustments to azimuth and elevation controls and now the turrets also tracked the closing aircraft. Fingers were poised over triggers, arching slightly as if in anticipation of an easy kill.

Suddenly the air cracked with a single radio transmission, "Echo Control, this is Waterbug 818, rolling in 10 seconds."

High overhead, sharply silhouetted against the clear blue sky, the heavily laden Navy F-4B rolled inverted, as its pilot commenced his run in for a high-angle delivery. Fifteen sleek, 500-pound bombs, their appearance strangely altered by long, tubelike nose extensions, were nestled under the wings of the *Phantom* as the target, far below, appeared in the sight reticle. The altimeter unwound at a sickening rate as air speed increased rapidly in the near vertical dive. As the target grew larger and larger in the sight, the pilot's gloved thumb methodically depressed the bomb pickle. On the ground, triggers were squeezed as the radar and turrets continued their relentless tracking.

In the air, cameras whirred and clicked as the bombs spewed forth from the aircraft's bomb racks. Almost instantly a distinct, jarring thump was heard in the cockpit and the aircraft pitched violently. The pilot barely muffled a curse as he gingerly nursed his damaged fighter out of the steep dive and limped toward home.

The scene, complete with ground radar, turrets, aircraft and bombs . . . possibly Vietnam? The thump . . . an antiaircraft hit? But the cameras that whirred and clicked? . . . Ah! I've got it! A Hollywood studio with trick photography. Right? No, not right, wrong on all counts.

THE SCENE depicted above did take place recently, exactly as described. It could have been as deadly as the real thing except

that inert instead of live bombs were dropped.

The radar and turrets, in reality phototheodolites, were vital components of an instrumented weapons range located on the western shore of the Chesapeake Bay.

The thump felt by the test pilot and the damage to the aircraft were real enough! But they were not caused by an antiaircraft hit as you might have supposed. Instead, one of the released bombs had struck another and then tumbled erratically into the aircraft stabilator.

The cameras that whirred and clicked were part of an airborne photo-panel installation which provided a permanent record of all critical flight instrument readings during the release sequence.

For the flight described above was but one of the hundreds of test flights required to establish the safe release envelope of aircraft stores conducted by the Ordnance Branch of the Weapons Systems Test (WST) Division at the Naval Air Test Center, Patuxent River, Maryland.

Airborne stores, as defined by the Naval Air Systems Command (NASC), consist of all missiles, rockets, bombs, mines, torpedoes, detachable fuel and spray tanks, pods (refueling, thrust augmentation, gun, ECM, etc.), targets and all similar items intended for carriage internally or externally by aircraft, including the racks, launchers, adapters and detachable pylons used for such carriage. This definition applies whether the stores are or are not to be separated from the aircraft during a flight.

Every phase in the test and evaluation of airborne stores and their subsequent marriage to naval aircraft is of primary importance to the project officers, engineers, enlisted and civilian aviation ordnancemen and clerical personnel assigned to the WST Ordnance Branch.

Headed by Cdr. W. A. Lebert, the branch is organized into three sections, each of which is working at full capacity in response to the needs of the Fleet.

The Ordnance Weapons Projects Section, subdivided into military officer and civilian engineer teams is concurrently performing the planning, testing analysis and reporting of test results of more than 65 WepTasks assigned by Naval Air Systems Command, many of which are of maximum effort priority.

F-8 GUNS ARE TESTED IN WEAPONS FIRING TUNNEL

A-4 LOADED WITH 30 EXPERIMENTAL PYROTECHNICS

PARR, AO3, GIVES PILOT BOMB RACK CHECK SIGNAL

WING TIP CAMERAS WILL RECORD A-7A ROCKET FIRE

ORDNANCEMEN READY PARACHUTE FLARE FOR A STATIC TEST DROP

Each of these WepTasks is concerned with the testing of specific production or prototype weapons as related to particular aircraft. Many of them are primarily concerned with the physical and electrical compatibility between stores, multiple carriage racks, parent racks and the aircraft's armament control system. Others are more directly related to the establishment of safe carriage, release and jettison flight envelopes of stores not previously test-dropped from that particular aircraft and/or rack combination. The end results of these particular WepTasks are promulgated to Fleet squadrons via NASC and are to be found in the operating limitations section of all aircraft NATOPS manuals.

Testing in this area is of necessity comprehensive and thorough, for, contrary to popular belief, those sleek, deadly, aerodynamically designed weapons clustered onto combat aircraft do not always separate cleanly and fall straight away. Potentially lethal bomb-to-bomb and bomb-to-aircraft collisions, caused by unpredictable release characteristics associated with multiple-bomb-rack-configured jet aircraft, have increasingly plagued Naval Aviation.

Though they usually occur during high-speed, high dive-angle deliveries, collisions may also occur during releases performed in low-angle dives or even in level flight. To date, no method other than extensive flight testing has been found to pre-determine the actions of airborne stores in that instant following release or ejection from a bomb rack.

Considering that each individual store suspended from an aircraft creates a different airflow, which varies as changes in flight parameters are introduced, one must realize that an infinite number of conditions can exist.

Simple mathematics related to a single aircraft flying at a given airspeed, attitude and G may emphasize this point. The A-6, for example, has five external stores stations to which may be attached multiple carriage racks with six separate stations per rack for a total capacity of 30 stores. Limiting this hypothetical problem to the carriage of just three of the different weapons in an extensive inventory on any one flight, we find that Weapon A could be carried on any of the 30 stations, Weapon B on any of the remaining 29, and Weapon C on any of the remaining 28 stations for a total of 24,360 possible combinations, each presenting different airflow conditions. If we were to increase the number of weapons, vary the type of bomb rack or vary any of the flight conditions, the possible combinations would be astronomical.

In a positive effort to avoid damage to project aircraft, and in the light of the fact that it would be impossible to test each combination, all flying is conducted in accordance with a carefully formulated test plan. The number and positioning of stores, release intervals and sequencing, speeds, dive angles and G are increased or decreased in gradual increments based upon past successful results. Damage, however, does still occur on

TEST PILOT (L) AND OTHERS STUDY BOMB RACK AND ROCKET LAUNCHER

CAMERA (CIRCLE) RECORDS TA-4F'S BOMB RELEASES AND ROCKET FIRINGS

occasion, as the test pilot seeks out maximum limitations.

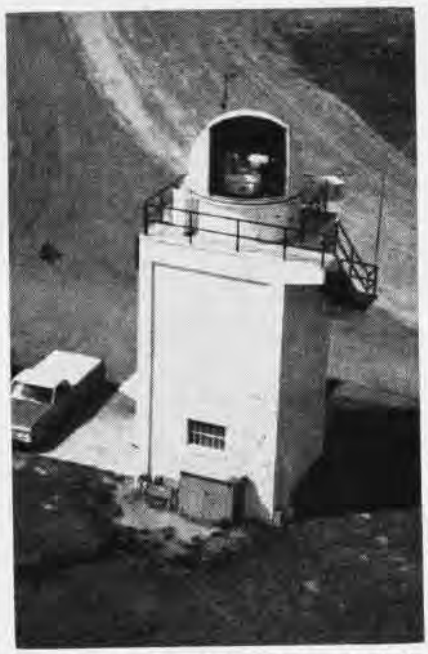
The Special Ordnance Projects Section of the branch tests and evaluates both experimental and production lot pyrotechnics; stores such as parachute flares, photoflash cartridges, smoke lights and signals, etc. Commercial manufacturers of standard items are required to submit random samples from their production lines for quality acceptance tests prior to purchase of the lot by the Navy. In addition, this section is concerned with ordnance ground handling and loading equipment. Recently several prototype shipboard and shorebased self-powered weapons loaders have been evaluated at continental air stations and aboard deployed CVA's.

The Ordnance Shops Section of the branch provides technical support to the other sections. Highly qualified ordnance technicians, working closely with the project officers and engineers, perform all necessary aircraft and equipment checks; design, fabricate and install special instrumentation and wiring; load the aircraft and otherwise accomplish the myriad number of essential tasks so necessary to a program of this magnitude.

In addition to the tasks already mentioned, each section of the branch contributes in some manner to monitoring the design and development of new aircraft, bomb racks, launchers and handling equipment. Technical assistance, as requested, is rendered to tri-service aircraft mock-up boards; contractor armament demonstrations of new aircraft, such as the A-7A *Corsair II*, OV-10 COIN and TA-4F *Skyhawk* are witnessed and reported; Navy Preliminary Evaluations and Board of Inspection and Survey Trials are conducted in cooperation with other NATC activities.

As might well be imagined, visits by branch personnel to aircraft factories, ammunition depots, military and civilian test facilities, and Fleet-operating activities are frequent and necessary. One ordnance project officer, travelling on TAD orders, spent more than 100 days away from the branch during the past year. Representing both NATC and NASC, as a member of a ComNavAirPac Ordnance Field Team for a period of ten weeks, he visited six CVA's off the coast of Vietnam, Marine Aviation units at Da Nang and Chu Lai and military installations in the Republic of the Philippines, Japan and Hawaii, in addition to stations in CONUS.

Recent accomplishments by the branch, the results of which have already added to the effectiveness of Fleet aircraft in delivering ordnance on the target, include: modification of the arming wire configuration of *Snakeye* bombs and preparation of Aviation Armament Bulletins 357 and 358, clearance envelopes for carriage and release of WW II AN-M bombs, Mk 77 fire bombs, SUU-25 flare dispensers, M1 fuze extensions and several improved rocket launchers.



THREE-CAMERA TRACKING TURRET

Present WepTasks assigned to the branch include the evaluation of the more exotic "Eye" series weapons, such as *Walleye, Gladeye, Padeye, Rockeye, Fireye, Weteye* and *Sadeye*.

All billets, though challenging and demanding, are unusually rewarding. As stated recently by Captain E. H. Doolin, Director of Weapons Systems Test, "We have the satisfaction of knowing that the results of our efforts play a vital role toward the improvement of aviation hardware and techniques in support of the Fleet."

OV-10A WITH UNUSUAL SPONSONS

HELICOPTER CAPABILITY OF USS LA SALLE WAS ONLY PART OF THE TEST

AMPHIBIOUS SHIP TESTED FOR MOL PROGRAM

A FEW WEEKS ago, an Atlantic Fleet amphibious ship became the smallest ship yet tested as a space flight recovery ship.

Operating in Lynhaven Inlet off Norfolk, the amphibious transport dock USS *LaSalle* was tested for its ability to handle helicopters, communications and recovery teams.

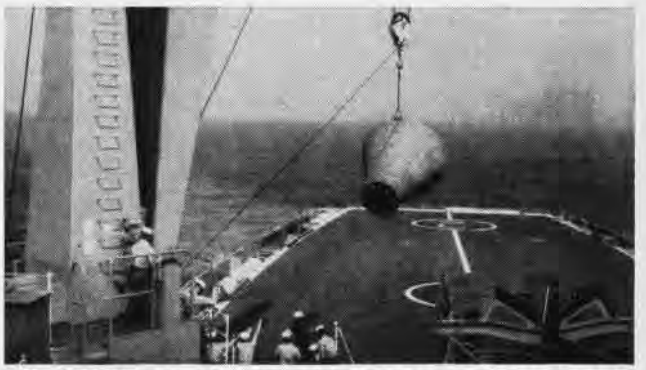
Primary recovery ships in the past have been aircraft carriers like the USS *Wasp* and amphibious assault ships like the USS *Boxer*. The *LaSalle*, which can operate six helicopters from its fantail flight deck, is one of the newest types of amphibious ships. Launched in August 1963, it is 530 feet long and can cruise at better than 20 knots. Unlike NASA's *Gemini* and *Apollo* programs which use equatorial orbits, the Manned Orbital Laboratory (MOL) program will use a more complicated polar orbit.

Where a single end-of-mission landing area is planned for a *Gemini* and *Apollo* mission, both primary Pacific and secondary Atlantic landing zones are to be used in the MOL program. They are required because of the relative movement of the earth in the case of polar orbits. The test of the *LaSalle* results from an expected need for more primary recovery ships.

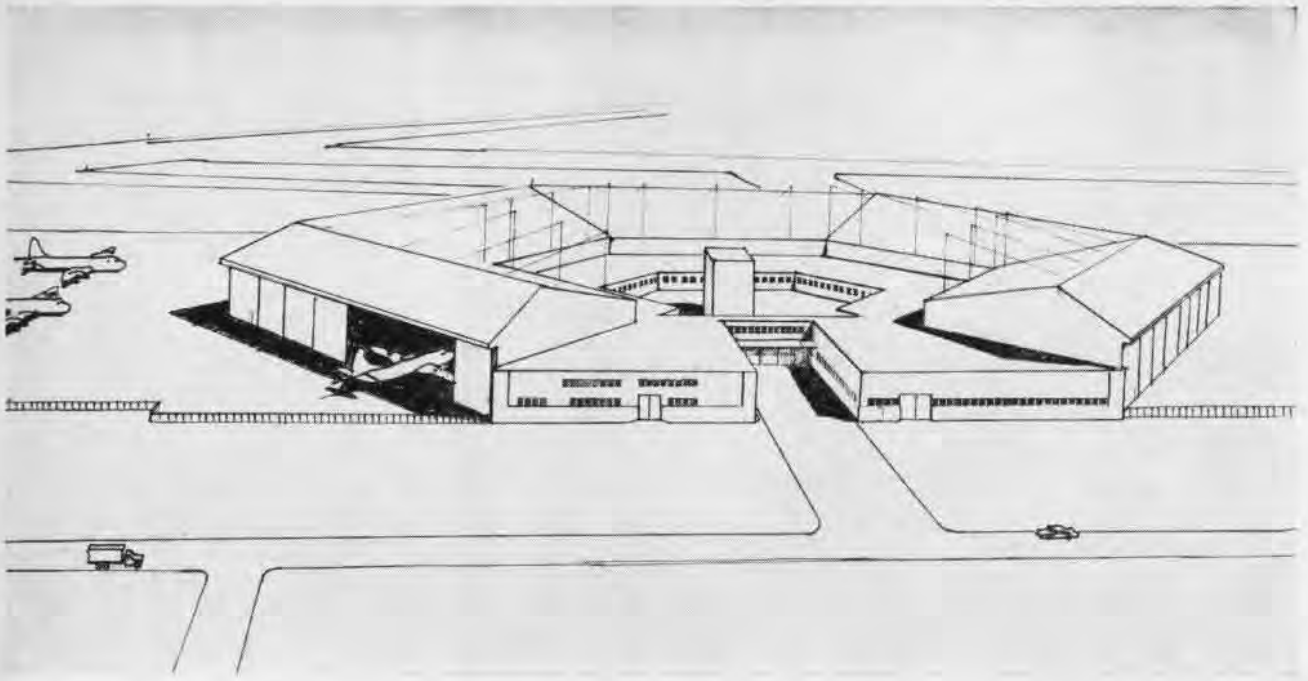
During the launch phase, MOL recovery ships will stretch south from California to below the equator. A number of these ships must be capable of launching several helicopters. With its speed, helicopter and communications capacities and extensive troop quarters which can be used for space flight personnel, an amphibious transport dock appears to meet all needs.

NASA personnel helped conduct the first test of the *LaSalle* along with personnel from the Atlantic Fleet Amphibious Force and the Manned Spacecraft Recovery Force Office at Norfolk. Rear Admiral W. C. Abhau, Commander of the space program's Task Force 140, was one of the observers of the test.

USS LA SALLE PULLS ALONGSIDE A DUMMY CAPSULE



THE CAPSULE IS SUCCESSFULLY HOISTED ABOARD SHIP



NEW LOOK IN VP SUPPORT FACILITIES

A TOTALLY NEW kind of "home" for P-3 *Orion* squadrons, which will look for all the world like a pie sliced into six pieces, is being built at NAS JACKSONVILLE, Fla.

Representing a new concept in patrol squadron support facilities, the hexagonal (six-sided) structure was designed to house and completely accommodate five *Orion* squadrons in an area expected to cover some 350,000 square feet. Ground has been broken for the first portion of the facility, representing 194,000 square feet, on an unused part of the NAS JACKSONVILLE field area.

In addition to housing the squadrons, the building will also enclose all their supporting administrative, supply and maintenance activities as well.

Basically, plans call for the building to contain in its "core" the offices, storerooms and related spaces necessary for squadron support. Five of the exterior portions of the structure's segments will be made up of the hangars that will house a squadron apiece.

The sixth wedge of the "pie" will contain additional shops to be used for heavy work—such as engine and propeller maintenance—and educational facilities that include classrooms and an auditorium.

The center of this segment has been cut away to accommodate the driveway and access doors necessary for deliveries from large rolling stock.

Within the complex, individual squadron shop and office spaces will be located for each of the five squadrons. Offices will be on the second deck of the two-story portion of the edifice. A concentric (common axis) passageway will provide ready access to all squadron spaces.

The outboard hangar bays will comfortably accommodate two *Orions* apiece for maintenance work. Three of the big planes can be housed in emergencies. In the complex will be ample parking space for assigned aircraft, while two short ready-access taxiways run to and from the field.

Funding for construction of the complex has been spread over three fiscal years: The $5,300,000 allotted in FY '66 will build the three hangar segments closest to the field, $1,600,000 for the adjacent parking apron has been approved for FY '67 and an additional $4,767,000 has been programmed in FY '68 for another hangar segment, the shops' wedge and some parking space. Funds have not been allotted for one of the hangar portions.

Progress in the creation, planning and approval of the structure has proceeded at an exceptionally fast rate, officials said. First correspondence concerning the complex was initiated only in 1963.

VF-174 Newly Redesignated
As VA is Assigned New Plane

Fighter Squadron 174 became Attack Squadron 174 in July. CNO directed the change to reflect the squadron's new role: training attack pilots.

Since F-8 training is being phased out this month, the squadron will be the first in the Navy to receive the new LTV-built A-7A *Corsair II*. The A-7A has incorporated many features of the F-8.

Commander G. L. Gray, Jr., formerly skipper of VF-174, is the first Commanding Officer of VA-174. The outfit is based at Cecil Field.

FLEET AIR WINGS ON PATROL

PATROL MAINTENANCE *trophies are presented to VAdm. Ramsey, DNCO (Air), by D. M. Wilder, Lockheed. Left is RAdm. N. C. Gillette, Op-50; right, Lockheed's D. Kenyon.*

VIETNAMESE OBSERVER, *left, and VP-1 crewman at work in Operation Market Time.*

IN JULY, two "Best Maintenance" trophies for Fleet patrol squadrons—one for each Fleet—were presented to the Navy by the Lockheed-California Company.

The trophy competition, open to both land and seaplane squadrons, was conducted for the first time this year, using data for the fiscal year that ended June 30.

Accepting the trophies for the Navy was Vice Admiral Paul H. Ramsey, DCNO (Air). Making the presentation was D. M. Wilder, Lockheed-California vice president.

Winners in each Fleet will be chosen on the basis of hours flown, PAR discrepancy reports, number of flights per aircraft and maintenance department grades earned during annual inspections.

Winning squadrons will have possession of the trophy for a year and will receive a citation scroll as a permanent reminder of maintenance excellence.

* * *

In ceremonies held at MCAS IWAKUNI, Japan, Patrol Squadron One awarded five Purple Heart Medals to men who were wounded during the April 13 mortar attack on Tan Son Nhut airfield in South Vietnam. The five men received their medals from Captain G. E. Minor, ComFAirWing Six. One squadron member was killed in the airfield action and five aircraft sustained damage. VP-1 had the aircraft back in the air within 10 hours for *Market Time* patrols.

* * *

For five months VP-49 lived in the environs of NS ADAK, Alaska, flying ASW and shipping surveillance patrols under the severe weather conditions of the Aleutians. By early June, arriving with the heat of summer in the Middle Atlantic states, VP-49 was back at NAS PATUXENT RIVER, Md. Operations at Adak were conducted with a perfect safety record. Crews visited Hawaii, Japan, Okinawa and San Francisco during the tour.

LTJG. ACKER *is given "boot PPC" wings after completion of his VP-18 check ride.*

The '49-ers were relieved by Hawaii-based VP-6 early in June. It was the first visit to the Aleutians since 1950 for the *Blue Sharks*.

* * *

Also back home after a tour in the Western Pacific was VP-28, the *Hawaiian Warriors* of Barber's Point. While still receiving Fleet plaudits for averaging more than 1,250 hours monthly over a seven-month deployment to Sangley Point and the Vietnam area, VP-28 was soon active again, sending a detachment to Midway and participating in an operational readiness exercise in the Hawaii area.

Members of VP-28 got the chance to impart knowledge of Southeast Asia operations to VP-776, a Naval Air Reserve *Neptune* squadron from NAS LOS ALAMITOS. The reservists spent their annual two-week training duty period with VP-28. In addition to flying, the reserves were given lectures in navigation, tactics and the VP role in the Western Pacific.

* * *

American submarine commanders and patrol plane pilots are engaging in "cross training" on an intensified scale, apparently.

In one "other end of the telescope" visitation, seven prospective commanding officers of submarines were guests of VP-4. The C.O.'s

were given a ride in a P-3A *Orion* to see how airborne ASW systems operate.

At Rota, Spain, the C.O. of the USS *Nathaniel Green* visited VP-11's squadron headquarters, was made an honorary aviator and presented with an orange flight suit. This invited reciprocity. The next day the VP-11 C.O., Commander Rudy Falkenstein, was presented a blue *Polaris* suit, complete with the submarine's coat of arms.

* * *

As the fiscal year came to an end, VP-18 passed its 10,000th accident-free flight hour at Roosevelt Roads. The flight hour was recorded as the squadron C.O., Commander Bob Deffenbaugh, gave Ltjg. Fred Acker his Patrol Plane Commander check ride. The accident-free year was the third straight for VP-18, bringing the squadron total to more than 24,000 hours in *Neptunes*.

* * *

VP-42 took the Whidbey Island Totem Pole Award which is given quarterly to winners of tough competitive exercises held at the Washington State base.

Top crew after eight phases of the competition was Crew #12 of VP-42. Included in the test were evaluations of ASW, loading, photography, low altitude bombing, rockets, ECM, mining and navigation.

VP-42 is commanded by Commander Robert M. Thompson.

* * *

Hawaii-based VP-22 took a reserve VP squadron under its wing for introductions to the P-3 *Orion*. VP-778, under Commander R. A. Longwell, is a Weekend Warrior unit at NAS Los Alamitos, Calif., and usually flies the SP-2H *Neptune* aircraft. During a two-week period of active duty in Hawaii, the reservists were given *Orion* training as "augmented" members of the active duty squadron. The two squadrons functioned as one unit for the active duty period under the VP-22 Commanding Officer, Commander J. D. Fuller. The reserves do not have P-3 aircraft in their inventory, but in event of a call-up could be integrated into existing *Orion* squadrons.

* * *

VP-22 and VP-46 each contributed two planes and crews to a visit to Australia and New Zealand during the Navy celebration of the Coral Sea Battle. (See NANEWS, July 1966.) The four aircraft visited Sydney, Melbourne, Canberra and Adelaide in Australia and Auckland, New Zealand. Interest in the *Orion* was high since both countries have ordered the ASW aircraft for their air forces.

VP-22 followed up its Coral Sea visitation by hosting more than 100 officers and men from the Royal Australian Air Force for joint ASW exercises out of Hawaii. The two-week visit was spent in working with surface forces, including the USS *Kearsarge* (CVS-33) and the Australian destroyer *Stuart*.

* * *

After some 1,800 man-hours of labor and a total cost of more than $500 for materials, VP-1 squadron members attended the opening of a new recreation center built for the Tsuda Children's Home, Tsuda, Japan. VP-1 contributed hard labor and the bulk of the money, with additional donations from VP-1 Enlisted Wives Club and from the MCAS Iwakuni Protestant Chapel Fund. The squadron is deployed from its NAS Whidbey Island home port.

* * *

International cooperation in anti-submarine warfare was the theme of another summer exercise. VP-31, the training squadron for Pacific air wings, hosted 21 Canadian officers and eight enlisted crewmen at North Island. The Canadians flew to California in an *Argus* patrol aircraft from Prince Edward Island, for an exchange of ASW ideas with the Americans. The visitors exchanged tours of their aircraft for visits aboard VP-31 models of P-2 visits aboard VP-31 models of Lockheed P-2 *Neptunes* and P-3 *Orions* and Martin P-5 *Marlins*.

* * *

Each year there is an exercise known as *Springboard* in the Caribbean area. Roosevelt Roads turned a new phrase this summer when several units arrived for training at the Puerto Rican base, dubbing the influx as Operation *Summerboard*. Included in the arrivals was VP-672, a Naval Air Reserve squadron which was taking its summer cruise with host squadron VP-18. Several Marine units arrived almost at the same time as VP-672 increasing the Roosev Roads population by more than four hundred persons.

VP-18 earlier had hosted 17 midshipmen from southern universities as part of the summer training program. The college students were given crew member roles in the squadron *Neptunes* to acquaint them with the ASW problem.

FIVE MEMBERS *of Patrol Squadron One receive Purple Hearts at Iwakuni, Japan. The men were injured in a mortar attack, at Saigon, which killed one crewman, damaged five aircraft.*

SELECTED AIR RESERVE

GENERAL *Wallace M. Greene, Jr., CMC, inspects stamps issued in August to commemorate 50th year of Marine Corps Reserves.*

CAPT. *Jacobs compares silver and gold wings and receives his HMM-770 cap from LCol. Dimick (left) as Maj. Miller assists.*

Standby Status

WW II Medal of Honor winner, Colonel Jefferson J. DeBlanc, recently completed his tour as Commanding Officer of MARG-18, NAS NEW ORLEANS. Affiliated with the Marine Reserves in Louisiana since 1949, Colonel DeBlanc had commanded MARG-18 since December 1963.

In 1942, Colonel DeBlanc arrived in the Pacific war zone with a total of 29 hours in the F4F *Wildcat*. He shot down his first enemy plane in November 1942; his second kill was a Japanese *Zero* over Munda in December of that same year. He earned his Medal of Honor in January 1943 over Japanese-controlled Vella Gulf. Flying protective cover for dive bombers attacking enemy shipping, he shot down five Japanese planes in 30 minutes.

He continued the fight even after his fuel became too low for return to Guadalcanal and finally abandoned his badly damaged and burning airplane over Vella Gulf.

After six hours at sea, Colonel DeBlanc made his way ashore on enemy-held Kolombangara Island. He was captured by local natives who smuggled him through enemy lines to Vella Lavella Island. There they traded him to Australian coast-watchers for two bags of rice.

"Since then," the Colonel laughs, "I've always known exactly what I am worth."

Anniversary Chairman

Commander Robert A. Ouellette, General Safety Officer at NAS BRUNSWICK, has been appointed Maine State Chairman for the 50th Anniversary of the Naval Air Reserves.

Commander Ouellette, a 24-year veteran in the Naval Air Reserves, enlisted in the Naval Aviator Procurement Program in 1942. He flew Grumman *Avengers* from the USS *Belleau Wood* and the USS *Santee* during the Iwo Jima, Philippine Islands and Okinawa campaigns.

As Maine State Chairman he will coordinate activities commemorating the Naval Air Reserve's 50 years.

Silver to Gold

It took seven years, but Capt. Robert E. Jacobs finally traded his silver Air Force Wings for the gold ones of a Naval Aviator when he became a member of HMM-770 at NAS SEATTLE.

An Air Force helicopter pilot on active duty from 1953 to 1956, Capt. Jacobs continued his Air Force Reserve affiliation, flying C-119 transports at Paine Field near Everett, Wash.

In 1959, while working for his master's degree in education, he took a summer job with a helicopter service in central Canada. Everywhere he flew he came across fellow pilots who were ex-Marines and Marine Air Reservists. Two of the pilots were Lieutenant Colonel

D. A. Dimick, Jr., now C.O. of HMM-770, and Maj. B. D. Miller, now Exec of the unit.

Early this year, Capt. Jacobs decided to join the Marine Corp Air Reserves so he could return to flying helicopters and join his old friends.

Over 14,000 Hours

Since he soloed on May 15, 1936, in a 40-hp Taylor *Cub*, LCol. F. E. Whitton, has logged more than a year and one-half of actual flying time. To be specific, this member of MARG-8, NAS ATLANTA, has 14,000 hours in more than 100 types of aircraft.

A Marine for 24 years, seven and one-half on active duty, LCol. Whitton saw action in WW II and in the Korean Conflict. He holds the Distinguished Flying Cross, seven Air Medals and the Purple Heart.

LCol. Whitton is a Lockheed test pilot in civilian life.

Doctor, Lawyer, Merchant, Chief

From every conceivable type of civilian occupation, Naval Air Reservists gathered this summer for their annual two weeks of active duty for training.

In a first for the station, NAS SEATTLE's three VP squadrons merged their training efforts. Fifty officers and 200 enlisted men from VP-891, 892 and 893 operated as one squadron, designated VP-891, for the training period.

VP-7, NAS JACKSONVILLE, hosted the Weekend Warriors of VP-911, home-based at NAS SOUTH WEYMOUTH, during their two weeks at Jax. For the deployment, VP-911, VP-912 and VP-913, all of South Weymouth, joined forces to form the "hardware squadron," VP-911.

At busy Beaufort, Marine Air Reserve Squadrons from Washington, D.C., Norfolk, Va., and Willow Grove, Pa., were guests of MCAS squadrons for their training periods.

VMF-321, 141 strong, home-based at the Naval Air Facility, Andrews AFB, were supported by MAG-32 during their Beaufort stay.

The 137 members of VMA-233, NAS NORFOLK, were aided during their training period by members of MAG-31.

The 96 officers and men of MACS-17, home-based at NAS WILLOW GROVE, were supported by MACS-9.

From California, Wisconsin, Nebraska, Illinois and Pennsylvania, members of Marine Air Base Reserve Squadron 42 assembled at MCAS EL TORO for training.

The Reserve Squadron includes the 7th Engineer Squadron, 3d Engineer Squadron, 5th Communications Battalion, 2d Maintenance Squadron, 10th Motor Transport Squadron and the MABS-42 unit.

Retention Trophy

Emphasizing the importance of retention of qualified Selected Air Reservists in the command, CNAResTra has announced the establishment of the Richard K. West Retention Trophy. It will be awarded annually to the station or unit achieving the best reenlistment/retention rate of Reservists.

The trophy was donated by the Naval Reserve Association in memory of Commander West who was killed on training duty at NAS GLENVIEW while commanding Air Wing Staff 72.

1,300 Models at Glenview

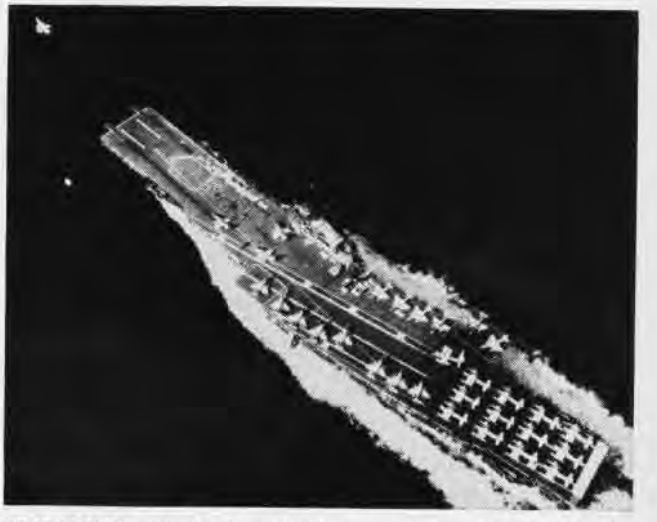
In the 35th annual National Model Airplane Championships, held at Glenview, July 25-31, there were 1,300 entries—every type from 50-cent balsa gliders to sleek, scale models with hundreds of dollars invested in them. On the last day, 500 trophies were awarded.

REAR ADMIRAL *R. L. Fowler, CNAResTra, accepts memento of NAS Seattle visit from LCdr. W. H. Taylor, Air Wing Staff 89.*

SAILOR-*of-the-Year W. R. Lawrence, AD1, NAS New York, receives Navy League award from his wife and Capt. C. G. Hathaway.*

AT SEA WITH THE CARRIERS

ABOARD RANGER, *Admiral Roy L. Johnson, CinCPacFlt, is greeted by Captain W. M. Harnish, skipper of the Seventh Fleet carrier.*



OPERATING *with the Seventh Fleet as a light attack carrier, the CVS Intrepid works up a wake as an A-4 Skyhawk is catapulted.*

PACIFIC FLEET

RANGER (CVA-61)

Ranger is scheduled to start a $16 million overhaul at the Puget Sound Naval Shipyard, Bremerton, Wash., in October, according to an announcement by the 13th Naval District. Work is expected to take six months, a shipyard spokesman said. The carrier's home port will be changed, from Alameda, Calif., to Bremerton because of the lengthy stay.

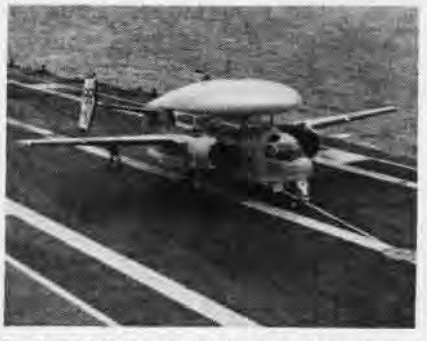
An F-4 *Phantom II* piloted by Lt. Tom Rodger, VF-143, shot down a North Vietnamese aircraft with a *Sparrow* air-to-air missile after two enemy planes were picked up by radar aboard the guided missile frigate USS *Coontz.*

Two *Phantoms* were scrambled off *Ranger* for what was thought to be the first night air-to-air encounter of the Vietnamese conflict after the sighting by *Coontz* as the ship operated in the northern Gulf of Tonkin. Flying as RIO in Lt. Rodger's F-4 during the attack was Ens. David Vermilyea.

Combat operations continued thick and fast off *Ranger,* as these reports indicate:

"The Seventh Fleet attack aircraft carriers *Ranger* and *Hancock* launched 35 missions against military targets in North Vietnam yesterday. Navy pilots flying A-1 *Skyraiders,* A-4 *Skyhawks,* F-4 *Phantoms* and F-8 *Crusaders,* attack and fighter aircraft, concentrated on military barracks, storage areas and transportation routes. . . ."

"Three surface-to-air (SAM) missiles were fired at two flights from the USS *Ranger* and USS *Hancock,* and Navy pilots also flew through some of the heaviest flak ever reported, as attacks were launched against 46 targets on 40 missions over North Vietnam yesterday. All three SAM's exploded



E-1B TRACER, *piloted by Ltjg. Frank Davis, makes Kearsarge's 104,000th arrestment.*

MARINE *Capt. R. E. Gleason made a damp landing when his helicopter's engine failed.*

ABOARD *deployed Constellation, crewman Leroy Arrington watches aircraft launch.*

without damage to the Navy aircraft. At one SAM site, *Ranger* pilots reported a large orange explosion, and estimated it to be either a missile malfunction or detonation. . . ."

The 85,000th arrested landing aboard CVA-61 was observed by the carrier's new C.O., Captain W. M. Harnish, when Ltjg. Anthony C. Moore and Lt. Robert V. Carton brought their VF-143 *Phantom* aboard. Soon after, No. 86,000 was made by LCdr. Eugene P. Lund and Lt. Eugene J. Partyka, VF-142, also in a *Phantom II*.

The skipper of VA-55 aboard *Ranger*, who landed his A-4E *Skyhawk* aboard the carrier even though he was wounded and could not use his right arm, has been awarded the Silver Star Medal. Commander Milton J. Chewning was flying his 111th combat sortie when the explosion of a single burst of antiaircraft fire hurled shrapnel into his arm.

INTREPID (CVS-11)

Intrepid's flight deck was quiet for the first time in 31 days, and her crew was taking advantage of the lull. After exactly a month of sustained combat operations off Vietnam, men who were helping to launch and recover aircraft the day before were lounging on the flight deck in swimming trunks and enjoying the hot sun.

After being outfitted for light attack duties during overhaul, *Intrepid* steamed from home port, Norfolk, Va., to the waters off Vietnam. In the ensuing weeks, her pilots flew more than 2,400 aerial sorties and dropped some 2,700 tons of bombs on the enemy.

CONSTELLATION (CVA-64)

Constellation, with CVW-15 embarked, has returned to the waters off Vietnam after an absence of more than 16 months. Commanded by Captain William D. Houser, *Connie* is flagship for Rear Admiral James R. Reedy, Commander Attack Carrier Striking Force. Before she departed home port, San Diego, the CVA completed an eight-month, $19 million overhaul at the Puget Sound Naval Shipyard.

"Nineteen North Vietnamese PT-boat crewmen were picked up after their craft were sunk by the combined rockets, cannon and bomb attacks of aircraft from the attack carriers *Constellation* and *Hancock*," reported George Marshall, JOCS, in a Seventh Fleet detachment news release.

The action started, Chief Marshall continued, when the boats were spotted "closing fast" by radar operators in two *Constellation*

CORAL SEA'S *new navigator is Cdr. Donald Wyand, former attack squadron commander.*

carrier combat patrol fighters. Word was passed by Ltjg. Gerry Goerlitz and Ltjg. Bob Robinson to the pilots, LCdr. Sven Nelson and Lt. Fred Miller, who alerted a destroyer squadron operating in the northern Gulf of Tonkin.

In turn, ComDesRon 17, Captain E. L. Fox, called for attack aircraft from *Constellation* and *Hancock*. The two carriers immediately launched ready planes and diverted A-4's, F-4B's, F-8's and A-6A

AMPHIBIOUS *ready group for Seventh Fleet includes Princeton, Pickaway and Alamo.*

COMMANDER *Harold L. Marr steps from his F-8 Crusader after shooting down MIG-17.*

Intruders from other missions. Less than an hour later, the planes had taken the three boats under attack and sunk them. Survivors were pulled from the water by destroyer sailors.

Units involved, besides the carriers, included *Coontz* and the destroyers *Rogers* and *Gurke*, VA's 65, 153 and 155 and VF's 151 and 161.

Those who keep track of such things may recall that, on August 4, 1964, *Constellation*-launched aircraft struck at Communist PT boats that were attacking two American destroyers—the *Maddox* and the *C. Turner Joy*. The next day, *Connie* aircraft participated in the first responsive strikes on PT boat bases in North Vietnam.

Connie's 43,000th arrested landing was made by LCdr. Kenneth J. Corica, VF-151, in an F-4B.

CORAL SEA (CVA-43)

"It's a demanding and challenging assignment that contrasts markedly with my past year's assignment as an attack squadron commanding officer in combat."

That's how Commander Donald McKay Wyand described his new job as *Coral Sea's* navigator. He was due to have the job of guiding the carrier across the Pacific to the South China Sea, where just 14 months before he flew his 161st

combat mission over Vietnam.

Navy officials announced recently that the first U.S. Navy ship to bear the name of an American killed in action in Vietnam will be named after a *Coral Sea* pilot. The ship, a destroyer escort, will be named after Lt. William M. Roark, who was killed April 7, 1965, during an armed reconnaissance mission.

Coral Sea and the ASW carrier USS *Bennington* were among 43 ships participating in *Belaying Pin*, the second major First Fleet exercise of 1966.

HOMEWARD *bound from seven-month deployment to the Mediterranean, Navy's newest carrier, USS America, steams for Norfolk.*

KING BAUDOUIN *of Belgium congratulates CVW-3 operations officer, LCdr. Jack Finney, for performance in Brussels Air Show.*

KITTY HAWK (CVA-63)

There were figures aplenty to mark the end of *Kitty Hawk's* eight-month deployment to WestPac.

With their ship in home port, CVA-63 sailors figured out that the carrier steamed 66,270.6 miles during 180 days at sea since she left CONUS October 19, 1965. It took, the Chief Engineer reported, 21,323,207 gallons of fuel and 49,375,568 propeller revolutions to complete those miles.

Kitty Hawk's Weapons Department was issued 10,731.04 tons of ordnance for the ship's squadrons to deliver on enemy targets in both North and South Vietnam. Carrier pilots flew 9,223 strike sorties and an additional 1,485 ground support missions.

Foremost among those strikes was one against the Uong Bi power plant that served the Hanoi-Haiphong area. Originally put out of commission in December, the plant was restored and operating in April when two *Kitty Hawk Intruders* made a surprise night attack. Their bombs sent showers of sparks and raging fires into the air and eliminated much of the North Vietnamese capital's power supply.

Also credited to *Kitty Hawk* aircraft were strikes against the Hai Duong railroad and highway bridge that linked Hanoi and Haiphong, the Vinh Son highway bridge, the Hon Gay army barracks, and emplacements in the Hu Gia and Nape passes.

HANCOCK (CVA-19)

Commander Harold L. Marr, C.O. of VF-211, destroyed the 13th Communist MIG to be downed in the Vietnam fighting when he launched a *Sidewinder* missile against the aircraft from his F-8 *Crusader*. He was also credited with damaging and possibly shooting down another MIG-17 during a dogfight some 30 miles northwest of Haiphong.

Ten days later another VF-211 pilot, Lt. J. G. Vampatella, also shot down a MIG-17 with a *Sidewinder*, despite the fact that his F-8 was damaged by ground fire.

YORKTOWN (CVS-10)

While *Yorktown* was participating in the Southeast Asia Treaty Organization's maritime exercise *Sea Imp* in the Gulf of Siam, Lt. J. M. Herring, VS-25, made the ship's 113,000th arrested landing in an S-2 *Tracker*.

TICONDEROGA (CVA-14)

Captain Martin G. O'Neill relieved Captain Robert N. Miller as *Tico's* C.O. during a change-of-command ceremony in San Diego.

PRINCETON (LPH-5)

Captain Tazewell T. Shepard, Jr., is *Princeton's* new skipper. He relieved Captain T. J. Gallagher, Jr., while the LPH was in Cam Ranh Bay, Vietnam.

Marine Capt. Richard E. Gleason, HMM-364, was hoisted aboard

a rescue helicopter from *Princeton* seconds after his own UH-34D *Seahorse* had engine failure and ditched in the South China Sea.

ATLANTIC FLEET

AMERICA (CVA-66)

America was back in home port, Norfolk, after a seven-month cruise to the Mediterranean in which the ship steamed more than 42,000 miles and pilots of embarked CVW-6 flew 15,725 hours.

In detailing the events that took place during the cruise, Mike Cleveland, JO3, told of a previously unreported event. It seems that, in Istanbul, Lt. Gayle V. Collins and Edward D. Clark, ET1, were called upon to help a German merchant ship whose radar had broken down. The ship's master, in a letter to the U.S. consul describing what happened, said, "Remembering our membership in NATO, I contacted my 'colleague,' the commanding admiral (aboard *America*), and requested assistance."

The master said he didn't really expect any help from Rear Admiral James O. Cobb, ComCarDiv Two, so the arrival on board of the two *America* crewmen was a distinct surprise. Then, in his letter, he gave a beautifully-worded description of what happened next:

"They admired our 'museum-ripe radar,' prepared for work, drank one bottle Berliner Kindl each and furied for two hours from the radar mast down to the engine, from the engine to the bridge and thence back to the radar mast. On termination of their work they showed me a tiptop and absolute clear radar picture.

"Asking how I could make good for that, they replied, 'We hope for a thanks.'"

F. D. ROOSEVELT (CVA-42)

Shipyard workers at the Boston Naval Shipyard were getting some well-deserved back-pats after they successfully drydocked *FDR*, the largest warship ever to enter the South Boston Annex docking facility. The ship, a report said, had six inches of clearance, port and starboard, at the drydock sill.

FDR left the Boston yard for home port, Mayport, Fla., after rudder repairs were completed.

Aircraft from *FDR* and USS *Independence* were among units that participated in *Beach Time*, a major Second Fleet exercise in the Atlantic and the Caribbean.

FORRESTAL (CVA-59)

Vice Admiral R. C. Needham, Navy Inspector General, flew aboard *Forrestal* while the carrier was in dry dock at the Norfolk Naval Shipyard, Portsmouth, Va. Accompanying him on the inspection tour was Vice Admiral Charles T. Booth III, ComNavAirLant. *Forrestal* was undergoing a $20 million overhaul when the admirals arrived.

A more complete rundown of the yard period is on the next page.

ESSEX (CVS-9)

Essex arrived at home port, Quonset Point, R. I., after a five-month, $6 million overhaul at the Boston Naval Shipyard. The CVS also underwent extensive modifications designed to give her a modern and sophisticated communications system.

INDEPENDENCE (CVA-62)

Independence left home port, Norfolk, for her fourth Mediterranean cruise with the Sixth Fleet, a deployment that was expected to last seven months. Aircraft of Carrier Air Wing 7 were embarked.

DEPENDENTS *say their goodbyes as Independence gets underway for Med cruise.*

LEXINGTON (CVS-16)

Lex sailors continued to make efforts to keep the record for the most arrested landings in the Navy aboard their CVS as they brought aboard Ens. Jon H. Friedman, VT-4 student pilot, in a T-2A *Buckeye* for No. 156,000.

RANDOLPH (CVS-15)

Pilots of HS-9 logged their 19,000th accident-free hour aboard *Randolph* while the carrier was undergoing around-the-clock ASW training in the Norwegian Sea.

SARATOGA (CVA-60)

It may not be a "first," as claimed by a *Saratoga* news release, but a night replenishment by helicopter between CVA-60 and the supply ship USS *Sylvania* in the Mediterranean has won great favor with the crews of both ships.

"Both *Saratoga* and *Sylvania* have recommended to higher naval authority that this system be instituted to create more time for daylight operations," the *Sara* news release said. *Sylvania's* helicopter hauled more than 92.5 tons of provisions to the carrier, and the aircraft's crew reported that the new white-lighting system (NANEWS, August 1966, p. 3) used aboard the CVA caused no problems.

Lt. C. W. Galbreath, VA-34, made *Sara's* 109,000th arrested landing in an A-4C *Skyhawk*.

WASP (CVS-18)

Senior officials from the Navy and Defense Departments boarded *Wasp* at sea to observe ASW operations in the Atlantic.

Under Secretary of the Navy Robert H. B. Baldwin arrived in a C-1A *Trader* from NAS QUONSET POINT, R.I. In his party were H. A. Beaumont, Deputy Under Secretary of the Navy for Manpower, and Dr. George Sebastyen, Deputy Director of Research and Engineering in the office of the Secretary of Defense.

Greeting the visitors were Rear Admiral Edward C. Outlaw, Atlantic Fleet HUK Force Commander, and Vice Admiral Charles E. Weakley, ComASWForLant.

OVERHAULS IN THE SHIP'S LAUNDRY

By Ltjg. David A. Rosow, USNR

FOR YEARS, Navy men have talked about a highly classified machine found in shipboard laundries.

"It's a fantastic contraption," one sailor aboard the attack carrier USS *Forrestal* was heard to comment before his ship entered the Norfolk Navy Shipyard not too long ago. "It tears the buttons off my shirts and shoots them through my socks."

Even such fantastic machines as this one fall to progress, however. It has been reliably reported aboard *Forrestal* that this piece of gear is going to be replaced by a better version.

This new machine, reports continue, will do all its predecessor could do—but it will also cause at least half of those buttons to appear later in the ship's wardrooms as an interesting addition to the Thousand Island Dressing.

Not really. The truth is, in fact, that the installation of a new laundry is only a small part of the $20 million, nine-month overhaul *Forrestal* is now undergoing at the Norfolk shipyard.

At a pier only a few hundred yards from the spot where she was commissioned 11 years ago, *Forrestal* is getting a "face-lifting."

During the 270 days the carrier will be in the shipyard, more than 330 repairs and alterations have been scheduled. The number may seem small, but it is misleading. Listed as one job, for example, is the installation of the ship's new Naval Tactical Data System (NTDS), a process that will take the entire nine months.

Almost a quarter of an entire level of the ship was torn apart and is being rebuilt to accommodate the complex NTDS equipment. A new level is being added between aircraft elevators. Multi-wire cables, radars and bulkheads have been removed and new ones are taking their place. This fall, computers and gear are to be installed.

To listen to the officers and enlisted men of *Forrestal*, NTDS is about the most exciting thing to come along since the *Langley*.

Captain John K. Beling, *Forrestal's* Commanding Officer, discussed NTDS recently. "The Naval Tactical Data System makes *Forrestal* as battle-efficient and as modern as any other carrier.

"NTDS will spot, study and track targets, ships and planes; make navigational recommendations to the bridge; and guide our interceptor aircraft. It will even land our planes without the pilots doing anything. All of these functions will be carried out simultaneously and instantaneously."

A special communications capability of NTDS will enable *Forrestal* crewmen to receive and transmit information to and from ships at sea operating with the carrier. Anything known by one ship equipped with NTDS can be known by all ships with the same gear.

Installation of complex computerized equipment—and of button-popping laundry machines—is by no means all that is involved in the *Forrestal* overhaul, however. "Work on the ship stretches from beneath the hull to 250 feet up our top mast, and in practically every one of the 2,000 interior spaces," said *Forrestal's* engineering officer, Commander Mervin Rowland. Here are some of the jobs being done to make the CVA more battle-ready:

- Two of the ship's four propellers and their shafts have been removed for alignment and bearing repair.
- Sections of the hull below the waterline are being sandblasted and repainted.
- More than 300 holes have been cut in the side of the ship for access to fuel and water tanks, which are being inspected, cleaned and painted. The holes, naturally, will be sealed when work is done.
- All four catapults have been removed for extensive repairs.
- The aircraft arresting gear has been removed; it will be replaced by a new system designed to soften the jolt of landing and reduce wear and tear on planes.
- A 120-foot extension is being added to the flight deck to give pilots more landing area. Especially built for *Forrestal*, the structure can be folded to permit the carrier to enter any dry dock big enough to accommodate a *Forrestal*-class CVA.
- On the hangar deck, six new repair centers—avionics shops—are being constructed.
- A large jet engine repair and aircraft structure shop is being built aft on the hangar deck.

Most of the installation and alteration work—more than 250,000 man-days worth—is being done by shipyard personnel. Even so, *Forrestal* crewmen are performing many of the repairs being made on the ship's present equipment. The ship's own machine shop is operating 16 hours a day, even while its equipment is being renovated.

Other *Forrestal* crewmen, those who can be spared from the ship during the lengthy yard stay, are attending schools in order to learn the operation of the new machinery being installed, and for refresher training.

Work being done isn't limited to making *Forrestal* more battle-ready. Much is being accomplished to provide crewmen with a better place in which to work and live. Besides the new laundry, modernization includes:

- Revamping of the ship's air-conditioning system.
- Renovation of the galleys, which serve meals 22 hours a day while *Forrestal* is at sea.
- Relocation and repair of equipment for the carrier's closed-circuit TV station.

All of this effort was described recently in a news release with this paragraph included: "When the 78,000-ton ship rejoins the seagoing Navy in December, she will be as modern as any aircraft carrier and will once again become a leader—serving as a model for future alteration on the other eight *Forrestal*-class carriers."

Such superlatives are understandable, perhaps, but they might tend to be dangerous. They might make the chests of *Forrestal* crewmen swell with such pride that they'd literally bust their buttons. Then that fancy new machine being installed in the laundry would be put out of work.

A-3 is Stopped in 300 Feet

Lakehurst Barricade is Effective

Would you believe that the Navy's largest jet bomber could be stopped successfully on an area the size of a football field? In tests at the Naval Air Test Facility, Lakehurst, N. J., a Navy A-3 jet bomber airframe was "stopped" in 300 feet.

The 25-ton airframe was hurled into a nylon barricade connected to a Mark 7 Mod 3 arresting gear which is undergoing tests for the new USS *John F. Kennedy*, now under construction at Newport News.

The airframe, with engines and instruments removed, was loaded with sand bags in the cockpit and engine compartments and water in the fuel tanks to simulate maximum landing weight of the Navy's *Skywarrior*. It was fastened to a shuttle at the launch end of a 7,000-foot, high-speed test track. A jet car containing four jet engines propelled the shuttle / airframe down the track at a speed of approximately 158 miles per hour.

At a predetermined place on the track, the jet car engines were cut, the brakes took hold, and the airframe was free to be hurled into the barricade, thus simulating an emergency arrestment of the aircraft aboard a carrier. The airframe was brought to a stop with no appreciable damage.

The barricade utilized for the test was identical to the ones used in the Fleet. The 105-foot span of nylon, 24 feet high, features triple vertical strands every four feet.

Designations for Models

Established for A-7B and YP-3C

NavAir Notice 13100 announces that the model designation of A-7B has been approved for a model A-7A *Corsair II* aircraft equipped with the Pratt & Whitney TF-30-P-8.

Similar action has been taken in the case of a special P-3B. The YP-3C designation has been approved for a P-3B in which certain modifications have been made. These include the A-NEW integrated avionics installation and such associated improvements as the automated search stores dispensing system and improved flight instrumentation. The YP-3C is the production prototype for the P-3C.

WORK CREW *from NAS North Island's Overhaul and Repair Department puts the finishing touches on a damaged F-4 Phantom II reworked into a trainer for use by Air Force.*

FROM 'BASKET CASE' TO TRAINER

A VERY special F-4 *Phantom II* has been processed by NAS NORTH ISLAND'S Overhaul and Repair Department for the Air Force.

Between September and December 1965, the *Phantom* was airlifted to North Island, across the bay from San Diego, Calif., in 38 different containers. Severely damaged in combat, the aircraft was created after many of its critical components were pulled for spares.

Early in January, O&R personnel began a repair/assembly operation designed to turn a "basket case" into a useful training aid. The plan was to save usable items of the weapon system and remove other reusable components so nonflyable ones could be substituted.

Guided by Ray Marcello, O&R planner and estimator, the repair team assigned the job came up with a Weapons Loading System Trainer that is part Air Force, Navy, Marine Corps and O&R NORIS.

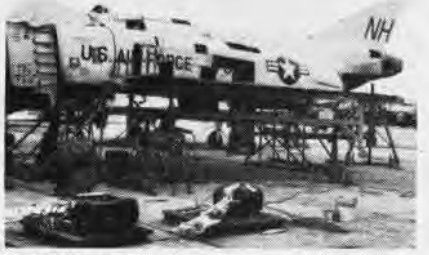
Two surveyed wing center sections were patched, spliced together and substituted for the reusable original. Outer wing panels also came from the survey pile. An obsolete tail section replaced the one that came with the plane.

Items, including seats and many major components, were judged obsolete and retained. Some components installed were dummies. The instrument panel, for instance, is actually an excellent photograph.

The finished airplane looks like a first-line fighter to the casual observer. O&R NORIS reported that Air Force representatives were enthusiastic about the finished product; part of that enthusiasm may stem from the fact that the reworked F-4 cost about ten percent of the price of a new trainer.

The F-4 was to be disassembled for over-the-highway movement to its new home at Lowry AFB, Colo., where a NORIS field service team was to put it back together, check it and turn it over to Air Force.

DUE FOR *another life as a training aid, F-4 arrived at North Island in pieces.*



BEGINNING *to look like an aircraft again, the Phantom receives obsolete components.*

Suitland's New Bulletin

Gulf Stream Data are Published

A monthly bulletin, entitled *The Gulf Stream*, is now being issued by the U.S. Naval Oceanographic Office, Suitland, Md. The new technical summary presents Gulf Stream positions at the beginning and end of each month and indicates what would be normal for the period. Associated mean sea surface temperature patterns for the western North Atlantic are also shown.

Data and analyses used in preparing the summary are based on current Oceanographic Office experimental programs conducted with the assistance of the Navy's Oceanographic Air Survey Unit based at NAS PATUXENT RIVER, Md. The aircraft, equipped with meteorological and oceanographic sensors, make regular flights to gather data.

New $14.1 Million Contract

Further Conversion of the RA-5C

The Naval Air Systems Command has awarded a $14,100,000 contract to North American Aviation's Columbus Division for further conversion of RA-5C's.

Initial funds for conversion of ten A-5A's to the RA-5C configuration were allocated late in 1965. The new contract provides $10.8 million to give those *Vigilantes* increased fuel capacity, improved flight characteristics and a wide array of intelligence-gathering devices.

The new contract also provides $3.3 million for additions to the shipboard processing centers within the Integrated Operational Intelligence System.

New SACE Facility Open

Will Maintain E-2A Hawkeyes

Rear Admiral F. E. Nuessel, Commander Fleet Air, Norfolk, formally opened the new Semi-Automatic Checkout Equipment (SACE) facility at NAS NORFOLK on July 1.

SACE enables Navy technicians to check out the E-2A *Hawkeye's* electronics by tape-controlled computer programming which automatically detects malfunctioning equipment and isolates problems.

The new multimillion dollar electronics facility, built by Grumman Aircraft Engineering Corporation, will be used for maintenance of the electronic system in the *Hawkeye*.

VAW-12, commanded by Captain J. A. Pariseau, introduced the *Hawkeye* to the Atlantic Fleet. NAS NORTH ISLAND has a similar facility for Pacific Fleet E-2A's.

ASTRONAUT'S *wings are presented to Commander Eugene A. Cernan, Gemini Nine pilot, by Admiral David L. McDonald, Chief of Naval Operations. Cernan's flight included a 130-minute "walk in space."*

Editor's Corner

ONE BUCKET. Navy Shipfitter First Class Llewellyn Smith retired in July at NATTC Memphis, ending a career that started in 1923. Smith served aboard the USS *Langley*, the U.S. Navy's first aircraft carrier. But he said his best tour was aboard the battleship USS *Idaho* from 1928 to 1930. Describing the battleship's daily routine, he said: "Every day reveille sounded at 0530. We made our bunks and had black coffee. Then, before breakfast, we washed the weather decks from stem to stern with salt water from the ship's fire hoses.

"At 0700 we had breakfast, which was usually scrambled eggs.

"During the rest of the day, except for an hour for lunch, the ship's crew conducted General Drills until 1630—mostly battle and gunnery practice. At sea, each of us was limited to one bucket of water a day. From this allowance a sailor bathed, shaved and laundered his clothes."

THE FAMED BLUE ANGELS *and Llewellyn Lyle Smith, SF1, discuss Naval Aviation the way it was aboard the Navy's first aircraft carrier, the USS Langley, in 1926. Smith, who has served in the Navy off and on for 23 years since 1923, retired July 8 in ceremonies aboard NAS Memphis where the Blue Angels performed in an air show that afternoon. Left to right are Lt. Dave Rottgering, LCdr. Jack Grougar, engineering officer for the group, Lt. Frank Mezzadri, Smith, Lt. Clarence Hubbard, Cdr. Bob Aumack, flight leader, LCdr. Dick Oliver.*

First Hand View. The following news release was cleared at the III Marine Amphibious Force information office June 27:

"The Commanding General of the First MAW waded into the war on a personal level here last week, flying a direct air support mission with VMA-311.

"Major General Louis B. Robertshaw flew the mission as wing man for Maj. Laurin DeWolf. Together they attacked a Viet Cong stronghold near Chu Lai, making a total of eight runs in their A-4E *Skyhawk* jets. Results of the raid were: ten enemy huts destroyed, two concrete bunkers destroyed, one secondary explosion."

DINNER WITH A VIEW. When MAG-36 airmen sit down to a meal these days in their new 1,500-man galley in Vietnam, they have before them what has been described as "a panoramic view of a scenic area." The mess hall's original plans called for screening of the walls above eye level. But Construction Battalion Four Seabees changed the plan, placing the screening at eye level so all diners could eat with a view of the rocky coastline and blue water of the South China Sea. (In the *Seabee Coverall*, Port Hueneme, California.)

Straight to the Point. Airplane model enthusiasts are single-minded people. The appearance of a photo of Bill Truckenmiller (NANEWS, June, page 31) presenting a model A-1 reminded Senior Chief Hugh Brainard, of NARTU JACKSONVILLE, of a story involving Bill a few years ago. Bill's father, Senior Bill Truckenmiller, had gone to Europe on a two-week cruise with the Naval Air Reserve and had promised to bring back some special airplane glue for the young modeller. Back in the U.S., Senior Bill called home to give his arrival time and Junior Bill answered the phone. According to Brainard the conversation went like this:

Senior: "Hi, is your mother there?"

Junior: "Who's this?"

Senior: "Your Dad."

Junior: "Hi, Dad, where's the glue?"

CHANGING TIMES AND TITLES. Changes in the management terminology have been made in a number of units and jobs affecting Naval Aviation. All offices formerly known as BuWeps Reps, for example, now are known as Naval Plant Representatives, or NavPlantReps. These offices are under command of the Naval Air Systems Command, formerly known as Bureau of Naval Weapons.

ComNavAirPac recently announced a descriptive change in its designation of detachments of squadrons. Under the new system Patrol Squadron 31's detachment at Moffett Field, for example, is known as VP-31, Detachment Moffett, rather than VP-31, Detachment Alpha.

Ingenuity in Reserve. Would you believe that crewmen of VP-772, a reserve squadron at NAS LOS ALAMITOS, Calif., replaced a P-2 *Neptune* trailing wire antenna weight while airborne—with a fruit juice can?

It's a fact. When the aircraft's antenna weight loosened and fouled after takeoff, the crew rigged a fruit juice can with a coat hanger wire, dropped the rig through the smoke light chute hatch and continued the flight. Not only that, the crew even reeled the rig back in at the end of the flight.

Said a release: "With a swivel, paint job and a part number, it could have become a permanent repair."

LETTERS

Footnote to History

SIRS: When I picked up the July 1966 copy of NANEWS and flipped open the cover page I met an old tried-and-true friend face to face after over a year (with more to come) of reluctant separation. LT. Jim Karr and I accepted UH-46A 150966 (UP-61), the second UH-46A destined for a life of unbelievably hard work supplying our ships in the Pacific. She was second only in bureau number because 150965, accepted by LCdr. Jim Waldron and Ltjg. Bob Pursely, and UP-61 flew the long trip together from Philadelphia International to Ream Field, San Diego, and eventually aboard the USS *Sacramento* (AOE-1) for transfer to the USS *Mars* (AFS-7) at Sasebo, Japan, in December 1964.

The respect I acquired for the hard working, capable crew of HC-1's Detachment 47 under the most capable leadership of LCdr. Jim Waldron, and the powerful, agile UH-46 has spawned many a nostalgic daydream this past year.

History may never contain legends of heroism performed by these men and aircraft, but the weary officers and men whose jobs were made a little easier by the H-46 will remember. The concept of vertical replenishment developed by a handful of far-sighted people in the Atlantic Fleet will receive much strength and backing for the success of HC-1 Detachment 47 aboard the USS *Mars* and Detachment 49 aboard the USS *Sacramento* in the South China Sea and Tonkin Gulf.

Again, my sincere thanks for the pictures and articles on the UH-46 and VertRep.

J. D. WILKERSON, CDR., USNR
NAS Grosse Ile, Michigan 48138

Enlisted Reserve Reunion

SIRS: The annual conference of the Naval Enlisted Reserve Association will be held at the Hamilton Hotel, Washington, D. C., on October 28, 29 and 30, 1966.

DUNCAN FORSYTH, JR.
National President
Box 7111, Apex Station
Washington, D. C. 20004

New Contract for OV-10A's

Marine Corps Gets One Hundred

The Naval Air Systems Command recently awarded a $4 million contract to North American Aviation for the OV-10A light armed reconnaissance aircraft program.

First production aircraft are scheduled for delivery to the military early in 1967. One hundred of the multipurpose aircraft will be delivered to the Marine Corps, which initiated the original requirement. The Air Force has ordered an initial 134.

Navy Preliminary Evaluation of the OV-10A was performed in March of this year by a special tri-service team of test pilots representing the Navy, Marine Corps and Air Force (*Naval Aviation News*, May 1966).

WERE YOU THERE?

If you were at Pearl Harbor December 7, 1941, *Naval Aviation News* would like you to write down your remembrance of that day.

In our December 1966 issue, just 25 years after the United States was plunged into World War II, we hope to present the personal accounts of Naval Aviators and other personnel on that historic occasion.

Any pictures you send should be protected by cardboard or photomailers. NANEWS will keep them carefully and return them to you as soon as practicable. Simply send your communication by October 15 to this address:

Naval Aviation News
Department of the Navy
Washington, D. C. 20360

'Rampagers' Make a Move

VA-83 Arrives at NAS Cecil Field

The attack squadron complement at NAS CECIL FIELD, Fla., has been increased by the arrival of VA-83, nicknamed the *Rampagers*, from Oceana, Va. The squadron was first commissioned in 1950 and since 1951 has been Virginia-based.

In recent years, VA-83 has added a number of commendable achievements to its record: placing second in the Atlantic Fleet Weapons Meet in September 1958; establishing an all-time high month for USS *Forrestal* A-4 operations by flying in excess of 900 hours in 16 flying days, for an average of 53 hours per pilot; and winning a second consecutive NavAirLant Battle E award in July 1962 with its pilots awarded over 70 individual E's. Commander E. S. Carver is Commanding Officer of VA-83.

Five Years are Celebrated

NAAS Meridian Notes Occasion

On July 14, 1961, NAAS MERIDIAN, Mississippi, opened to train jet pilots for the Fleet. The modern facility was built at an original cost of $45 million.

Approximately 195 officers and 1,350 enlisted men are assigned to the two training squadrons. In addition, the station employs some 200 civilians. There are usually some 300 flight students on board.

FOUR PLANE COMMAND—*Marine Composite Reconnaissance Squadron Two, MAW-2, Cherry Point, used these four jets to surpass the flight safety record for Marine reconnaissance squadrons. The unit's FY 1966 total of 7,614 accident-free flight hours was flown in these aircraft (clockwise, from top): The RF-4B Photo Phantom, EF-10B Skyknight, RF-8A Crusader and EA-6A Intruder. The Phantom will soon replace the older Crusader as the primary photo-recon aircraft for VMCJ-2. The Skyknight and Intruder are designed for active and passive electronic warfare. (Photo by 1st Lt. C. H. Armstrong, USMC.)*

Helicopter Antisubmarine Squadron Two, under the leadership of Cdr. Donald J. Hayes, won the Navy Unit Commendation for developing inflight refueling from destroyers. HS-2 used this technique for search and rescue missions over hostile areas in Vietnam, far from safe landing sites. HS-2 was flying Sea Kings from the USS Hornet. Cdr. J. E. Williams recently assumed command at HS-2's home port, Ream Field.

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