

NAVAL AVIATION

# NEWS



45th Year of Publication

SEPTEMBER 1964





## ***SHARPENING A CAT'S TOW***

Use of a catapult to launch aircraft is one of the actions which sets Naval Aviation apart from all other flying programs. (Another is the use of a tailhook for landing aboard carriers.) Technical improvements are gradually speeding up the catapult phase of operations. On page 16 the USS Saratoga (CVA-60) makes a first report of operational use of the nose-tow catapult system, how it doubles the number of 'shots' with the first nose-tow equipped aircraft, the Grumman A-6A Intruder, which is one of the Fleet's newest weapons systems.



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FORTY-FIFTH YEAR OF PUBLICATION SEPTEMBER 1964

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### ■ COVER

The striking cover shot of a steam catapult launching from the USS Franklin D. Roosevelt (CVA-42) was taken by Anthony P. Vandercreek, PH3. The men "dancing" through the steam demonstrate the urgency of speed in setting up the next shot.

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# NAVAL AVIATION NEWS

## Intrepid, FDR, Iwo Jima Win Chosen for Flatley Safety Award

Two Atlantic Fleet aircraft carriers have been selected for the 1964 Admiral Flatley Memorial Award for outstanding achievement in accident prevention during carrier operations. The USS *Intrepid*, based at Norfolk, won in the ASW category while the USS *Franklin D. Roosevelt*, home-ported in Mayport, won in the attack carrier class. The *Intrepid's* selection marked the fifth straight year in which an Atlantic Fleet ship has won for ASW CV's.

Among amphibious assault ships, USS *Iwo Jima* (LPH-2), home-ported at San Diego, won the Flatley Award winner.

Memorializing Adm. James H. Flatley, C.O. of NAS NORFOLK from 1953 to 1955, the award is presented annually by CNO to carriers which excel in furthering the aviation safety program. Runners-up this year were

the USS *Kitty Hawk* and the USS *Yorktown*, both based in the Pacific.

Adm. David L. McDonald, CNO, stated in announcing the winners that it was "gratifying to note that the number of carrier landings increased and the number of landing accidents decreased during the fiscal year 1964."

## Altitude Change Announced It Becomes Effective This Month

The Federal Aviation Agency has announced that the base altitude for the standard altimeter setting will be lowered from 24,000 to 18,000 feet, commencing at 0001 Eastern Standard Time, September 17. Aircraft operating at or above 18,000 feet will use the altimeter setting of 29.92 inches of mercury.

This change coincides with the revision of airway route structure from the present three-layer system to a simplified two-layer division. The two layers will comprise segments up to

18,000 feet and from 18,000 to 45,000 feet. Above that altitude random operations can be conducted with no established airways or routes.

The present system, established in 1961, consists of low altitude airways up to 14,500 feet; intermediate altitude airways between 14,500 feet and 24,000 feet; and high altitude jet routes above 24,000 feet.

## RA-5C Vigilantes Deployed IOIS-Equipped Jets Join Ranger

The first detachment of six Navy RA-5C *Vigilantes* equipped with a new integrated operational intelligence system (IOIS) has deployed aboard the USS *Ranger* (CVA-61) in the Pacific. The unit is from Reconnaissance Attack Squadron Five.

The IOIS is coordinated with the *Vigilante's* weapon system and provides tactical commanders with a full background of information on a target area. An exclusive feature of the IOIS is the speed with which newly gathered data can be returned to the intelligence center, processed and presented for the commander's use. The IOIS also is capable of collecting information day or night under all weather conditions.

Frame and panoramic cameras, side-looking radar and passive electronic countermeasures equipment give IOIS a wide range of collection capabilities. The system can employ various combinations of sensors as dictated by mission requirements.

The Columbus, Ohio, Division of North American Aviation worked with the Navy in developing IOIS. It was specifically designed for incorporation in the RA-5C. The *Vigilante* jet bomber flies long-range carrier or land-based missions involving high altitude, supersonic or low altitude flights with high speed penetration.



**TROOPS OF THE SEVENTH** Engineer Battalion, 1st Marine Division, Camp Pendleton, Calif., and a covey of helicopters participated at the dedication of the USS *Del Mar*, a mock helicopter carrier built by the engineers near the Del Mar area beach. The landlocked carrier, which also has a mock hangar deck for staging, has been designed to serve as a training facility for those exercises which are too small to make the presence of a real aircraft carrier feasible.



THE NAVY'S first "helicopter only" GCA unit is now in operation at NAAS Ream Field, Imperial Beach, Calif. Unit 55 (Special) is bringing in an SH-3A, belonging to HS-4. LCdr. W. M. Krause is OinC of unit.

## Marines in 'White Dove' Pacific Hop Made by VMFA-531

Trans-Pacific squadron exchanges by air are becoming so frequent as to be considered routine by units.

Fifteen Phantom F-4B's were flown by pilots from Marine Fighter-Attack Squadron 531 from the East Coast to Japan during operation *White Dove* in July. Included in the Cherry Point-based squadron's flight were two British Royal Air Force officers assigned to the unit as part of a pilot exchange program. They were Flight Lieutenants James N. Sawyer and Ian B. Hamilton, pilot and radar intercept operator respectively. They have trained with the squadron since November 1962 and will return to England this fall for reassignment.

Led by LCol. William C. McGraw, C.O., VMFA-531 became the first Marine squadron to fly from the East Coast to the Far East, a 9000-mile distance. Stops included MCAS El Toro, Kaneohe Bay and Wake Island. There were three in-flight refuelings made en route.

The squadron landed at NAS Atsugi and relieved VMA-323 which will return to Cherry Point to join the 2nd Marine Aircraft Wing there.

## DCNO(Air) Heads War Aces Association Includes All Services

VAdm. John S. Thach, DCNO (Air), will take over the presidency of the Fighter Aces Association September 18 in Washington. Association members are all Navy, Air Force and Marine pilots who registered five or more aerial combat victories in World War II and Korea.

Eric Galland, former commander

of Germany's fighter forces who scored more than 100 aerial combat victories himself, is scheduled as principal speaker for the induction luncheon.

Assuming other Aces' posts are Col. Ralph Wilson, USAF, executive vice president, Col. Robert Long, USMC, VP for programs, and Cdr. Arthur Munson, USN, secretary-treasurer. All were elected by the association at an annual meeting in Dallas last May.

## Ney Award to NAS Corpus Okinawa Places Third in its Class

When the winners were announced for the 1964 Edward Francis Ney Memorial Award, it was revealed that NAS CORPUS CHRISTI, Texas, had won in the best general mess ashore category. USS *Okinawa* (LPH-3) placed second runner-up in the large general mess afloat category. USS *Observation Island* (EAG-154) was awarded best large general mess afloat award, while USS *Tracer* (AGR-15) was judged the best small general mess afloat. Secretary of the Navy Paul Nitze extended his "most hearty congratulations."

## The Last One of its Kind Marine 'AD' Goes into Retirement

The last prop-driven attack aircraft on active duty with the regular Marine Corps, a *Skyraider*, left MCAS CHERRY POINT in July for NAS QUONSET POINT and retirement.

The *Skyraider* was initially placed on the active duty list in 1946. It was used extensively in the Korean conflict, performing close air support and bombing missions for the duration of hostilities.

Aircraft No. 132437 joined the 2nd Marine Wing on May 7, 1962. It proved itself so useful for logistics flights and training that it received two extensions in its normal service tour. It compiled a total of 1575 flying hours while with the 2nd Wing.

## Attack Wing is Renamed Squadrons Are Now Called RVAH's

Heavy Attack Wing One, based at NAS SANFORD, officially changed its designation recently after ten years at the Florida base. At the same time, however, Reconnaissance Attack Wing One was opened up with the same faces and the same location. The new title reflects the Wing's new mission: all-weather tactical reconnaissance from a shore or sea base. The Wing's previous mission of all-weather bombing still exists.

Each of the *Vigilante* squadrons will change its name from Heavy Attack to Reconnaissance Attack with the designation RVAH replacing VAH. RVAH's One, Three, Five and Nine have already taken this step.

The Wing, commissioned in Norfolk in 1951, moved to Sanford four years later. Previously it supported only Atlantic Fleet units. Now the Wing will support Pacific carriers as well.



FIRST FLIGHT was made this summer of the first production prototype of a YAT-28E, the turbo-prop version of the T-28 trainer, at North American Aviation's Columbus Division. Donald W. McCracken, a Division test pilot, was at the controls for the one-hour test hop.



# GRAMPAW PETTIBONE

## Good Head

An F-3B (F3H-2) was launched from a carrier off the East Coast during a post deployment fly-off. Immediately after launch, the pilot discovered that his nose gear would not retract. As he turned back toward the ship, the fire warning light came on. All engine instruments appeared normal and a visual check of the aircraft failed to indicate a fire. The fire warning light went out after approximately five minutes and the pilot elected to burn down external fuel before shooting an approach. While orbiting, waiting for burn-down, the pilot noted the fire warning light flickered, then came on steady. The fuel gauge went to zero and the cockpit filled with light smoke, but there was still no external indication of fire. All engine instruments appeared normal.

At this time, the pilot decided to jettison his external stores and recover immediately. As he rolled into the groove, he noted that full power would not hold the aircraft on the glide slope. He also noted that the nozzle indicator showed the nozzles were partially open and that the TOT was about 50 degrees below full military. The AC control circuit breaker

was pulled with no apparent effect.

The fire warning light continued to burn and the cockpit was filled with smoke. But rather than take it around and make a modulated afterburner pass, the pilot maintained glide slope and airspeed by selecting, then deselected, afterburner twice.

A normal landing was accomplished with an estimated 3000 pounds of

*another Real Pro!*



fuel aboard. After shutdown, an after fire resulted but was extinguished with no further damage to the aircraft. Post landing investigation revealed the most probable cause of the fire and partial power loss was an engine hydraulic system leak.



*Grampaw Pettibone says:*

Well, pop my buttons, that's really usin' the ole noggin'!

The aircraft was pretty severely damaged by fire, but this lad certainly had nothin' to do with it. He just calmly analyzed his hot problem and dealt with the hairy situation like a real professional. You just can't beat that kind of airplane drivin'.

I'm a great believer that NATOPS is the greatest thing since bubble gum, but nothin' will ever replace this kind of headwork. It's a pleasure to add another name to that "Real Pro" list.

## Hot Start

A pilot blasted off on a bright summer day in a T-1A from an East Coast air station for a short x-country to a New England AF base. He enjoyed the uneventful flight and landed at his destination as planned. Everything seemed to be going along in a routine manner until he discovered he had overlooked the fact that a T-1A starter was not available at this particular AFB.

Not to be outdone, this intrepid airman elected to attempt an air start from another jet aircraft. The starboard intake of the T-1A was positioned in the jet exhaust of an Air Force T-33 and a start was accomplished. The pilot then flew his T-1A back to home base where it was discovered the aircraft had been damaged as follows: paint blisters in vicinity of starboard intake; starboard leading edge intake burned; insulation burned from electrical wiring in plenum chamber. Approximately 20 man-hours were required to repair the aircraft and get it in an UP status.



*It's what's up front that counts!*



**Grampaw Pettibone says:**

Now doesn't somethin' like this really gull you! This guy just blasts off on his merry little way without so much as even checkin' the Enroute Supplement for the equipment and services available at his destination.

It's darn hard to believe that grown men will pull tricks like this, but I'll have to admit your ole bearded buddy ain't too surprised at anything that happens in aircraft any more.

## Two's a Crowd

A flight of three A-4C's completed approximately eight napalm runs on their assigned target and joined in a loose vee for return to home base. During the bombing runs, each pilot used his formation position number (#1, #2, and #3) for reporting his position in the pattern and joined in the same relative position at 17,000 feet for the return flight.

The flight remained in a loose vee during letdown. When approximately five miles out at an altitude of 5000 feet, the flight leader gave his right wingman (#2) the signal to cross under to form a left echelon. Although the left wingman (#3) did not get the echelon signal, he knew they were approaching the field and moved out to make room for #2. At this time, #2 began his move from the right wing position to the left and suddenly realized that he was crossing too fast. He decided to take his aircraft below and to the outside of the #3 aircraft.

When the #3 pilot saw the #2 pilot move below and to his left, he assumed that he wanted the #3 position, so he began closing in on the leader's left wing to fill the vacant slot. As #3 was moving into position on the leader's wing, he felt a burble on the left wing and figured the #2 pilot was flying a close parade position but did not look to the left as he assumed the #2 pilot had joined on his left wing. In a few seconds, he felt another left wing burble, followed by a very hard jolt. The aircraft immediately rolled to the right. The controls were ineffective and the pilot knew he had to leave the aircraft. He hesitated until the aircraft completed the roll, then ejected and his chute blossomed about 200 feet above the ground and he

landed, fortunately, in an open field.

The #2 pilot who had taken his aircraft below and to the outside of #3 started back to the #2 slot after regaining control of his closure rate. He kept the #3 aircraft in sight until passing below him, then shifted his attention to the lead aircraft and continued to move into position. At about this time, he also felt a hard jolt which threw him against the right side of the cockpit. The aircraft immediately entered a violent right roll and the pilot attempted to counter the roll with his

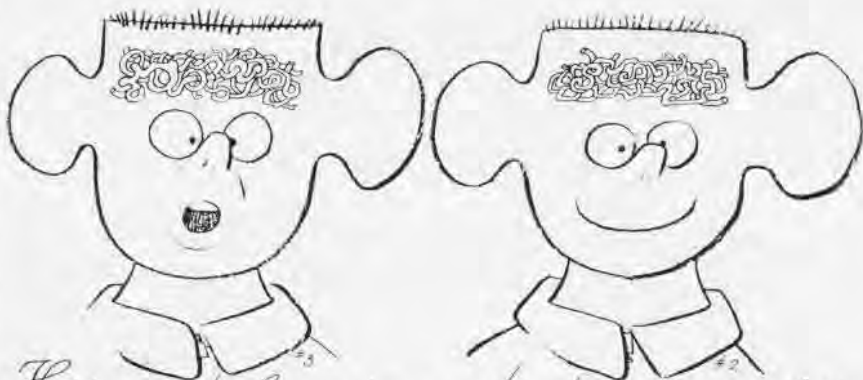
medical personnel reached the scene in a matter of minutes and rescued both pilots. The #2 pilot was seriously injured, but the #3 pilot was released from the hospital the next day.



**Grampaw Pettibone says:**

Great Land o'Goshen! How hairy can it get? It's just down right impossible for two aircraft to occupy the same airspace. These lads proved it again—the hard way.

There are a lot of pretty sharp people workin' on reducin' the mid-air potential, but more rules and



*They must be using intertwined spaghetti for BRAINS!*

left hand while reaching for the alternate handle as he was still wedged against the right side of the cockpit and canopy.

The aircraft was now in a tight spin. It was extremely difficult for the pilot to raise his right hand to the curtain. The pilot did not recall seeing any sky during the spin and, by the time he pulled the curtain, the ground looked awfully close. The first pull on the curtain only fired the canopy but he felt the seat fire on the second pull. By the time the chute blossomed, he could see his aircraft burning on the ground in front of him and, at first, thought he would land in the wreckage. Instead, he landed in a tree only 30 feet from the burning aircraft. He released his rocket fitting, disconnected his oxygen mask and collapsed to the ground. As the fire was so close, the pilot attempted to crawl away but was unable to move, owing to injuries he had sustained.

Two helicopters with rescue and

tighter controls won't prevent a thing like this. Formation procedures are just about as old as the flyin' machine itself. When a flight is briefed so everyone knows exactly what is goin' on, there is only one reason for this type of mess and that's poor head-work.

This one proves without a doubt that there is no substitute for that safety device between your ears.

## Memo from Gramps

Great goin' to the crews of the *FDR*, *Intrepid* and *Ico Jima*! That Flatley award is not easy to come by, and you guys had to be good to win with the kind of competition you had breathin' down your neck. Ol' Gramps salutes you.

Now don't crack too many arms patten' yourselves on the back, 'cause you're operatin' in really fast company. You can bet your last chip that there are several other crews bent on the idea of takin' that big, beautiful award away from you about this time next year. So, on your toes!



**SIDE VIEW** of full-scale mockup of the A-7A attack bomber Ling-Temco-Vought is building for the Navy shows the aircraft carrying a variety of bombs on two of its wing pylons and a Sidewinder missile on the fuselage. The aircraft, formerly called VAL, has 20 mm cannon.

# A NEW APPROACH TO A NEW AIRCRAFT

The first flight of the Navy's A-7A light attack aircraft is scheduled for the fall of 1965. It will more than double the range of the current light attack carrier aircraft, the A-4E Skyhawk. Or it will carry more than twice the conventional ordnance load for the same distance.

The story of how the Navy arrived at the A-7A (formerly called VAL) was told at the 1964 Aviation/Space Writers convention by the Project Manager, Captain Henry Suerstedt, Bureau of Naval Weapons.

**T**HE A-7A is the first aircraft since the WW II era that is to be developed to do best what attack aircraft are supposed to do in conventional warfare. Essentially, it could be termed a turbo-fan powered, current-state-of-the-art AD, or as it is now called, the A-1. The A-1 Skyraider is the propeller-driven attack aircraft designed at the end of WW II which the Navy and Marines used to such great advantage for strikes and close support during the Korean War. Now being sent to Vietnam in increasing quantities, it is still used on our carriers as a significant part of our light attack forces, along with the A-4E.

The A-4E Skyhawk, as you know, is currently the primary jet light attack aircraft that the Navy has in its carrier-based inventory. To compare this new attack aircraft with our existing light attack aircraft: a single A-7A is comparable in effectiveness to two A-1's, or to two A-4E's at short radii.

Now how did the Navy choose this

aircraft? This is one of the areas of the program of general and often expressed interest. Why did the Navy choose a subsonic aircraft for supplementing its attack capability? Even further, why did the Navy approve the redesign of an existing supersonic fighter aircraft as its new subsonic attack aircraft?

Prior to 1960 the Navy had recognized the need for an improvement in our conventional warfare capability. In 1960 the range of the A-4 series was extended somewhat by the incorporation of a J-52 engine. It was recognized, however, that while this was a step in the right direction, it still did not provide the radius payload improvement which the Navy desired. Therefore, an attempt was made to establish a program commonly referred to as the VAX (V-heavier than air, A-attack, X-experimental). Incidentally, VAL, as the A-7A was known for some time, was used to designate (heavier than air, attack, light). In the VAX we were looking at a specified supersonic capability on the deck

as well as a supersonic capability at high altitude.

In mid-1962 the Secretary of Defense, Mr. Robert McNamara, requested that we join together with the Air Force and the Army to determine the tri-Service possibilities of the VAX. Then on the 28th of November 1962, Mr. MacNamara stated to the Secretary of the Navy that no funds should be budgeted for the development of VAX or any other replacement for the A-4D5 (A-4E) until the Navy had completed a study of the operational requirements for a new light attack aircraft. The Secretary of Defense further stated, however, that if we should prove our requirements for a new light attack aircraft, Research and Development funds would be made available for FY 1964.

Accordingly, as a result of Mr. McNamara's request to the Navy, the Sea Based Air Strike Forces Study Group was formed to determine the requirements for the period 1965 through 1972. In the study, we



conducted an extensive investigation of some 27 different future and existing aircraft designs or systems. We looked at light attack, medium attack, heavy attack aircraft, fighter aircraft and even five separate proposals on the VAX. We also considered the various V/STOL concepts. We looked at several turboprop, reciprocating engine aircraft, some variable geometry wing designs, and evaluated the advantages and disadvantages of supersonic and subsonic aircraft. We studied limited war functions and requirements for U.S. tactical air—Navy, Marine Corps and Air Force. We looked at attack carrier force levels. In the carrier portion of the study, we concentrated primarily on sizes of flight decks required—not necessarily the method of propulsion off the flight decks. We analyzed aircraft vulnerability, that is, vulnerability to enemy action by both aircraft and surface weapons, as well as expected operational attrition.

We took into consideration current and probable future technological developments of both the Free World and Communist countries. We studied probable areas of conflict—what the enemy threat might be—and current and predicted foreign economic and political considerations. Continuing on in our limited, i.e., conventional, war study, one of the supporting studies which we developed included a cost effectiveness analysis which related the critical missions and targets normally expected in current and future combat situations and the combat radius requirements pertaining to getting tactical air over targets in any probable area of conflict. In support of this study, BUWEPs evaluated and priced out a total of 144 different aircraft programs, with varying avionics and ordnance configurations of aircraft and the probable production rates which various aircraft companies were capable of attaining.

In our limited war study, we further compared aircraft-spotting factors, i.e., the amount of space required by an aircraft on a flight deck where the cost of real estate can get fairly high and where aircraft size and operational capability trade-offs can rapidly become significant. We incorporated the results of recent weapons effectiveness studies—effectiveness of all current and foreseeable airborne tactical weapons. We also evaluated desired sortie rates versus what we

could expect from the state-of-the-art aircraft. Maintainability, reliability, turn-around times—all the factors in the sortie rate—were also extensively analyzed.

During this Sea Based Air Strike Forces Study, we coordinated our proposed measures of effectiveness with the Staff of the Secretary of Defense to ensure that we would have concurrence in our evaluation criteria and costing methodology.

One of the results of the study was the confirmation that we did in fact require a significantly increased radius payload to further enhance our conventional warfare capability. Simply explained, we found that if you were to mark off a line inland from any coast line on an unclassified Rand-McNally map, you would see that a 600 or 700-mile radius from an aircraft carrier at sea will cover somewhere close to 100 per cent of any probable area of non-nuclear or conventional war.

The salient conclusions of the Sea Based Strike Forces Study were that our existing A-4E had a reasonably acceptable cost and capability comparison. However, in light of the state-of-the-art improvements since the design of the A-4, the A-4 conventional payload and radius were unacceptable when related to capabilities desired and available during the time frame we were studying. We found that the 1963 VAX designs were an expensive solution to the light attack problem in light of today's technology, because it would take four or five years to develop an engine and build such an aircraft. We couldn't justify the relatively high cost and long time required to improve our light attack capability when it could be achieved in another way. The conclusion was that an aircraft with a type of non-afterburning turbo-fan engine, which is in existence today, placed in a modified airframe, A-4, F-1 or F-8, was the minimum cost, time and risk approach for meeting both our conventional and nuclear light attack tactical requirements and that we must procure this new aircraft as soon as feasible.

Now, as far as subsonic versus supersonic aircraft in this role is concerned, a greatly over-simplified, but perhaps comprehensive, comparison of the outcome of the Sea Based Air Strike Forces Study is this: If you

were to take two ducks—one a sort of fat little duck that flies only at subsonic speeds and the other a larger and supersonic duck—and compare the two, the supersonic duck would always have to fly higher when at supersonic speeds than the duck at subsonic speeds in order to keep from flying into the ground. Against a duck hunter in a blind having the same angle of sight in all directions, the time of exposure of the subsonic duck and the supersonic duck would be about the same. Both ducks would have about an equal chance of being shot at the same number of times by the hunter. Now, the supersonic duck is a relatively rare bird and rather costly to develop in dollars and time, thus you could buy three or more subsonic ducks for the same price. Then, when three or more subsonic ducks are subjected to the same degree of exposure as a single supersonic duck, the probability of three or more subsonic ducks flying successfully past the hunter would be far greater than the one supersonic duck getting past.

To get back to the A-7A, BUWEPs, at the conclusion of the Sea Based Air Strike Forces Study received the Specific Operational Requirement from the Chief of Naval Operations on the 17th of May 1963. We proceeded then to conduct a limited competition for a redesign or modification of an airframe currently in the Navy inventory. We published an aircraft synopsis to industry on the 24th of May and had responses from four major airframe contractors: Douglas, North American, Ling-Temco-Vought and Grumman. On June 29, we distributed the Request for Proposal to the four companies. We received the technical proposals on August 12 and the cost proposals on September 3, in the order in which they were developed by the contractors.

We completed our Bureau evaluation on November 6, and after review by the Chief of Naval Material and the Chief of Naval Operations, SecNav approved the A-7A selection on November 13. SecDef approved the program and forwarded a reprogramming request for FY 64 to the Congress on November 27. We completed our hearings on the reprogramming on February 8 of this year and announced the winner on February 11. Because we had clarified the cloudy areas in the contractors' pro-



**MAINTENANCE** technicians have easy access to numerous areas in the forward section of the A-7A. The gun bay, opened, appears at the left.



**EASE OF REMOVAL** of the jet engine without removing the plane's tail section is demonstrated in this photo of the full-scale A-7A mockup.

posals prior to the completion of our evaluation, we were able to award the contract in a minimum time on March 19 to Ling-Temco-Vought for the A-7A aircraft. In ten months, we had completed our first phase of the A-7A program in record time.

In between these major milestones I have discussed, there were some rather significant minor milestones which facilitated the rapidity with which we were able to process the program. Initially, right after we issued our Request for Proposal, we forwarded the Navy position regarding Project Definition to the Secretary of Defense Staff. We felt that the Sea Based Air Strike Forces Study had clearly defined the program which we planned to pursue, and thus we were proceeding with the second phase to determine our source for procurement. Secondly, we coordinated the Navy evaluation criteria with the SecDef's Staff to ensure agreement on our measures of effectiveness. Further, we obtained concurrence that at the conclusion of the evaluation, we would justify only our choice in the competition — the Navy selection — provided we could demonstrate a quantum improvement over our existing capability.

Accordingly, after the Navy review of the four competitors and concurrence in the BUWEPs selection, the Navy's selection for the VAL (A-7A) program was presented to the SecDef's Staff and compared against the A-4E. The relative standing of the other VAL competitors' proposals in the competition was not a major consideration in the SecDef concurrence

in the winner. Therefore, when the program went forward for reprogramming and congressional approval, there was complete Defense/Navy agreement in the A-7A aircraft program. Improvement of the A-7A over the A-4E was not difficult to establish. The A-7A can carry more than twice the conventional ordnance load for the same distance as the A-4E, or carry the same ordnance load as the A-4E well over twice the distance.

Now, regarding the planned schedule for delivery and Fleet introduction of the A-7A, the first item is the airframe mock-up (shown on June 22 of this year). We expect to get the first production engine prior to the middle of calendar 1965. The first A-7A flight will be in the fall of 1965, our first Fleet delivery in the fall of 1966, and the first squadron deployment about a year later. I say with a high degree of assurance that these deliveries will be met.

How sure are we that we will achieve the performance we want from the A-7A or that we will have this aircraft when we expect it? First, we have a firm fixed-price contract for the first R&D aircraft in FY 64, fixed-price ceiling options for the remaining R&D aircraft in FY 65 and for a number of production aircraft in both FY 65 and FY 66. I have said that in FY 65 both development and production aircraft are scheduled. Because of the low-risk technical aspects of the program and the availability of desired equipments, we feel that we can go directly from R&D to production quantities in that same year. Now

remember that this is a fixed-price contract. Further, in the contract we have significant dollar "incentives" to inspire the contractor to meet the negotiated performance and delivery. The contractor has an exposure of millions of dollars in penalties backing up his guarantees. Of primary significance in these guarantees is our Board of Inspection and Survey trials date when the aircraft must be ready to go to the Naval Air Test Center, Patuxent River, for the Navy evaluation and test. In that area, the penalties can reach as much as \$65,000 a day for failure to deliver the aircraft on time.

It is readily apparent that the contractor and the Navy are going to have to work very closely together on this program to meet the contract dates. To facilitate this effort, we have established in this program a management system called PROMPT. This is an acronym for the Project Reporting, Organization and Management Planning Technique. The contractor has a weapons system team comparable to the BUWEPs A-7A weapons system team. As Project Manager, I will receive periodic reports against the A-7A Weapons System Plan, which will be made in a routine manner.

In addition, we have established a HOT-LINE reporting system wherein any event or any action which will affect the program is reported immediately by the individual having responsibility for a specific milestone. In this manner, all aspects of the program can be monitored by individuals

having assigned responsibility. Through this system, I will get evaluation reports against time and technical performance from both the contractor and Bureau team members. The contractor and the BUWEPs teams both make up the A-7A Management Team with coordination between all levels of personnel within the contractor's and the Bureau's portions of the team.

How are we going to know if the contractor meets his maintainability guarantee and his reliability goals? About six or seven months after the first Fleet delivery to the Combat Readiness Air Wing, we will have six A-7A aircraft identified for use as demonstration aircraft in what we will call a Fleet Suitability Demonstration. We will fly some 800 hours of normal operational training syllabus flights with U.S. Navy personnel conducting only the maintenance of the aircraft. About half of the Navy personnel will be trained at the Contractor's plant under our normal factory training program, the other half will be regular graduates of the Naval Air Maintenance Training Unit. We have in the contract an 80% probability of mission success goal, plus the guarantee point of less than 20 maintenance man-hours per flight during the demonstration. By monitoring the reliability trends, we expect to have 85% probability of mission success by the time we reach the final aircraft at the end of FY 66. With our reliability program and maintenance man-hours per flight-hour guarantees (MMH/

FH), we expect a 90% probability of mission success and about ten MMH/FH in the mature A-7A system.

ONE OF the most interesting highlights of this new attack program is that what we, in the Navy and Marine Corps, used to consider a minor handicap, i.e., additional strength and weight requirements for carrier and Small Airfield for Tactical Support (SATS) operations, has materialized as a most significant asset. Our aircraft catapult hooks and tail hooks will now permit us to put into combat a heavily loaded attack aircraft which will be far lighter and less complex than any current or proposed land-based counterpart. Solely land-based aircraft on attack missions must carry along increased weight, structure and complexity for afterburners and thrust reversers in order to permit attack combat operations from most of the world's airfields. The cost differences between these two types of aircraft are most important. In aircraft, dollars mean numbers! This cost comparison becomes even more significant when one considers that in either a land-based or carrier-based system the cost of the associated aircraft is many times the cost of the base.

In summary, our Sea Based Air Strike Forces Study came up with the family of aircraft which we felt should be modified to meet our urgent requirement in the Fleet. Then we had a BUWEPs technical evaluation and a cost-effectiveness evaluation of

the contractors' proposals, the results of which came to the same conclusion. In other words, we further defined a specific member from this family as being the one we wanted. We had an evaluation by the Office of SecDef of our selection criteria and then an evaluation of our winner in the competition against the A-4E. The result of this was that the Secretary of Defense and the Navy concurred in the A-7A program without reservation.

The A-7A, as it has been contracted for, provides more light attack aircraft striking capabilities for the dollar than any other aircraft in the world whether in the inventory or on the drawing board. The design characteristics of this aircraft provide for accomplishment of this program with a minimum of technical risk and will permit early Fleet deliveries. Further, the fixed-price nature of the contract assures the execution of the program within the planned dollars.

Of major importance in today's international climate, with the introduction of the A-7A into the Fleet in 1966, is that the Navy will have a most significant attack capability in all phases of tactical warfare. With our completely night and all-weather carrier-based A-6A *Intruder* attack aircraft, supplemented by the A-7A, which will incorporate a night and day all-weather capability for proceeding en route to and from the target area, we believe we will have, without doubt, the best airborne tactical attack team in the world for many years to come.



## Five Units Star in Safety Basic Training Chief Makes Awards

Ground and air safety records were recognized July 31 as five units of the Naval Air Basic Training Command received awards. RAdm. D. F. Smith, Jr., made the presentations at his headquarters at NAS PENSACOLA.

Those receiving awards were Whiting Field, Training Squadrons Two, Six, Nine, and NAAS MERIDIAN.

Whiting Field won the Secretary of the Navy's Safety Award. VT-2 won the Naval Air Basic Training Command's quarterly Aviation Safety Award for showing the greatest improvement in safety consciousness and being accident-free the last quarter. This is the second consecutive award for the squadron.

VT-6 won the Basic Training Command's Highway Safety Award for FY 1964 for having the lowest fre-

quency and severity accident rate for the year. VT-9 won the Quarterly Highway Safety Award for the best record for the last quarter.

NAAS MERIDIAN received the annual Safety Award for having contributed the most to the Accident Prevention Program of the Air Basic Training Command.

## New Name for MLF Ship Adm. Claude V. Ricketts Honored

Ceremonies marking the change of the name of the guided missile destroyer USS *Biddle* (DDG-5) to USS *Claude V. Ricketts* were held at U.S. Naval Base, Norfolk, Va., July 28. In addition to Mrs. Ricketts and other members of the Admiral's immediate family, civilian and military officials attended the ceremony.

The *Biddle* was renamed in honor of the late Vice Chief of Naval Operations as a memorial to his efforts

in behalf of the MLF concept.

The new USS *Claude V. Ricketts* is now in Norfolk, Va., in the process of receiving crew members from the governments of the Federal Republic of Germany, Greece, Italy, The Netherlands, Turkey and the United Kingdom. The mixed-manning demonstration ship is scheduled to conduct operations during the coming year to provide information for the continuing study of the countries interested in the proposed Multilateral Force. Adm. Ricketts was the U.S. Navy advisor on the proposed force.

The guided missile destroyer was formerly named in honor of Capt. Nicholas Biddle, a hero in the Continental Navy. This name will be reassigned to a guided missile frigate (DLG-34) now under construction at the Bath Iron Works, Bath, Maine. It is tentatively scheduled for launching the early part of next year.

# MAINTENANCE WHILE IN A HOVER

CHERRY POINT Tower, my right main landing gear is broken and am unable to land, can you provide assistance?" Control tower replies, "Roger, but cannot provide needed assistance for at least 20 minutes. Please advise."

What would you do in a situation such as this? Land it there or elect to fly it back to your home station some 50 miles away? One pilot of MAG-26 had to make just such a decision not too long ago when the right main landing gear of the helicopter he was flying collapsed while landing. The landing he did make was unusual due to the fact that his aircraft had only one wheel to land on.

The pilot and copilot started the day normally enough, by checking out in the squadron's ready room and going to the flight line to pre-flight their aircraft for the hop. After takeoff, they proceeded to the Marine Corps Air Station, CHERRY POINT, where the incident occurred.

After making his approach to the heliport at Cherry Point, and

upon contact with the ground, the right main landing gear buckled under the impact of the landing. Instantaneously, the pilot brought the aircraft back into the air and into a hover to check for additional damages.

At this time, Cherry Point control tower informed the pilot that his main landing gear was broken and dangling from the aircraft, and of the measures they could provide for the safe landing of the chopper. They also advised that it would be about 20 minutes before they could be set up to receive the plane in its condition.

The pilot then elected to return to New River where maintenance personnel were more familiar with the aircraft and its characteristics. While the helo was in flight, Cherry Point tower called the air facility control tower via commercial ground lines and notified them of the impending emergency.

Receiving the call, the maintenance section swung into high gear and immediately went about the task of bringing in the crippled

bird. When the aircraft hove into sight over the landing area accompanied by "Pedro," the search and rescue helicopter from Cherry Point, the waiting maintenance crew was ready for them.

The plane made its first pass and came to a hover over the landing area. While hovering, the dangling landing gear was removed by members of the maintenance crew. With the gear disconnected, the plane made its second pass over the landing area and again came into a hover over the intended spot. This time, under the expert instruction of the ground crew, the chopper landed with the right side of the aircraft on a prepared ordnance trailer supplemented with cushions and mattresses to ease the jolt of contact and to take the place of the damaged landing gear. It worked out as planned.

After setting the helicopter down, the engine was shut down and checked for further damage. This was a prime example of the type of cooperation between pilots and ground crews of MAG-26.



USS TICONDEROGA'S CRUSADERS GAVE USS MADDOX AIR COVER CONSTITUTION AND TI MADE 64 SORTIES AUG. 5 ON PT BASES

## 'FOR THIS UNPROVOKED ATTACK'

ONE NAVAL AVIATOR was missing and one was reported captured following carrier raids on North Vietnam PT boat bases as the United States took retaliatory action for two unprovoked attacks on U.S. destroyers in the Gulf of Tonkin.

The two missing pilots—Ltjg. Everett Alvarez and Ltjg. Richard Sather—were among airmen from the USS *Constellation* who, together with USS *Ticonderoga* pilots made 64 sorties against motor torpedo boat bases "and associated facilities" during a four-hour period the 5th of August.

It was estimated by Defense Secretary Robert McNamara that approximately 25 torpedo boats were destroyed during the carrier attacks in addition to substantial destruction of oil storage tanks along the Gulf coast.

President Johnson ordered the carrier strike following two attacks against U.S. destroyers operating on routine patrol (August 2 and August 4) in the Tonkin Gulf, 30 to 60 miles from the territory of North Vietnam. Torpedo boats fired torpedoes and guns at the destroyers USS *Maddox* and the USS *Turner Joy*. No personnel casualties were sustained aboard the destroyers; at least three torpedo boats were believed sunk in the surface action.

Lts. Sather and Alvarez were reported to have been victims of anti-aircraft fire. Cloud layers were low over the target areas. Mr. McNamara said, "One of the pilots is believed to have crashed with his plane between two PT craft he had under attack." He said the other pilot ejected from his aircraft.

Lt. Alvarez was flying an A-4 *Skyhawk*. His photo later was released by the North Vietnamese, indicating he was a prisoner and alive. Sather was flying a *Skyraider*. A second A-1 from *Constellation* was hit but returned to the ship. An F-8 from *Ticonderoga* sustained flak damage but landed safely at Danang, South Vietnam.

As the result of the attacks and "bearing in mind that the best way to deter escalation is to be prepared for

it," the Defense Secretary said the President and his advisors had concluded that additional precautionary measures were required in Southeast Asia.

Among the immediate steps underway were the transfer of an attack carrier group from the Pacific Coast to the Western Pacific, movement of an ASW force into the South China Sea and the alerting of selected Army and Marine forces. Additional movements involved fighter bomber forces and interceptors to advance bases in the Pacific.



CHART USED BY SECDEF TO BRIEF PRESS



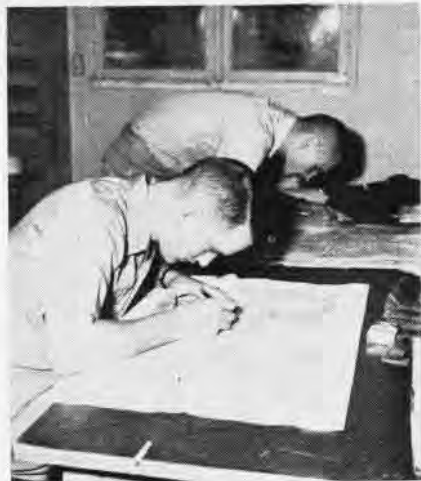
SECDEF SHOWS CONFLICT AREA IN VIETNAM



# AIR OBSERVATION: OLD IDEA, NEW METHODS



**OFFICER IN CHARGE** of the Aviation Observer School in the First Marine Division is Maj. Marc A. Moore, USMC, who outlines the day's mission and advises pilots on evaluation techniques.



**STUDENTS** Brames and Williams pinpoint target areas and work out their flight plans.

**A**ERIAL OBSERVATION probably began the day a caveman climbed a tree to see if any enemies were in the immediate area. But its first recorded use was in the Battle of Fleurus between April 13 and June 26, 1792. It was the brainstorm of Guyton de Morveau, a French magistrate. The experiment was supervised by Capt. Coutelle of the French Army. The balloon was fixed, held fast by a long rope, and called "l'Entretrentent," loosely translated as "The Enterprise."

Napoleon sent artillery observers aloft, in baskets suspended from balloons, to spot targets. By the time of the U.S. Civil War, aerial observers were becoming an accepted part of any major military campaign.

Today, air observation is one of the primary means of intelligence gathering used by unit commanders. Observers also fulfill a variety of missions during tactical operations: visual and photographic reconnaissance, direction of supporting arms fire, spotting for naval gunfire, and forward control of

**By Cpl. Jim McPhillips, USMC**

accompanying close support aircraft.

To insure that the First Marine Division has an adequate number of qualified observers, the air observation section of the division intelligence staff conducts an intensive, nine-week course for a small, carefully screened class of officers.

The school is conducted twice each calendar year, normally in the spring and fall, and quotas are assigned to

infantry and artillery units on a rotating basis.

Applicants are screened personally by Maj. Marc Moore, division air observer. "I look for the highly motivated officer," he said, "one who likes flying and wants to improve his military knowledge."

Once an officer has been selected, he receives orders to report to Headquarters Battalion for temporary duty as a student. Of the 42 applicants screened, 12 were accepted for the class which graduated last June.

When the course begins, the pace is fast and furious. "We have a tremendous amount of material to cover," Maj. Moore explained, "and we want to insure that each student is adequately prepared for the job."

During the 432 hours of training—352 hours of instruction and 80 hours of flight time—the students review basic map reading skills they learned at Basic School and learn aerial map reading, aerial photography, and countless other techniques they will be using daily in the weeks ahead.



**HEADING** for an O-1C observation aircraft, students begin an afternoon of spotting.

"Finding a target in a training square is like trying to find a needle in a haystack," Lt. Ben Williamson, instructor, said. "It is imperative that students be skillful map readers."

In addition to a map reading review, students are introduced to the aircraft which will take them target hunting. Students are briefed on the principles of fixed wing and helicopter flight and the duties of an observer as a crew member.

The next step is a checkout ride aboard the Cessna O-1C *Bird Dog* (the former OE-2) fixed wing observation plane, and the OH-43D helicopter. Prior to takeoff, students are briefed on pre-flight procedures and given emergency drills.

In the second week, the pattern for the remainder of the course is established: theory in the morning and practice in the afternoon. Along with the fast-moving pace, students spend additional hours preparing for the next day's lessons.

"We have very few actual night assignments," Maj. Moore said, "but if a student does not study on his own, he cannot keep up with the class."

On Wednesday of the second week, students get their first chance to put theory into practice. They are assigned to flight groups, given target coordinates, and briefed on flight procedures. The first day, the student has 90 minutes to locate 10 targets. Thursday, 15 targets are assigned and on Friday the student must locate 20 targets. The time factor of 90 minutes does not change.

After pinpointing his targets on the map, the student briefs his pilot. The student observer controls the flight, giving the pilot a new heading after each target is located. If there is an error in course, the student misses a target.

Upon completion of a mission, the student has 30 minutes to fill out his debriefing report. In the report, he must describe the target shape, function, approximate size and surroundings. An instructor, equipped with aerial photos of the targets, grades the student's debriefing reports.

As the weeks go by and the student becomes more proficient, the targets become more obscure and the nature of the missions becomes more varied. An observer may find himself doing hydrographic surveys or identification of vegetation and surface

materials. The next day he may be conducting an evaluation of roads to determine whether or not they will support tanks or convoys.

Another important technique the prospective air observer must master is the use of the aerial camera. Many of his actual missions will be photographic reconnaissance, and aerial photos play an important role in the evaluation of enemy positions and supply routes.

The course is divided into two phases. The first seven weeks of the course are conducted at Camp Pendleton, California, and the final weeks of instruction are held at the Naval Amphibious Schools, San Diego.

While at the Naval Amphibious Schools, students receive instruction in spotting for naval gunfire and forward air control of close support aircraft. During their stay at San Diego (Coronado), students visit a cruiser and have an opportunity to observe how information they gather is relayed to the combat information center, assimilated and reduced to fire orders for the ship's guns.

During a live-firing exercise, conducted off San Clemente Island, the students fly spotting missions for destroyers and cruisers. Aircraft from the Third Marine Air Wing also participate in the exercise and students assign targets and control the strikes of the jet planes.

Upon their return from the Naval Amphibious Schools, students can look forward to a round of examinations on all the material covered during the

past nine weeks. To insure that they have a good grasp of the practical aspects of air observation, the school conducts a two-day tactical exercise in which the class functions as the division's air observation section. The exercise covers all types of missions under every situation that an observer might meet during an actual division exercise.

At the end of the demanding course the successful students are recommended for assignment as air observers. If the student has performed duties involving flying for 100 hours or more he will be authorized to wear the coveted gold wings designating Naval Aviation Observer (Tactical).

## Hurricane Hunting Bettered New Gear Installed in Aircraft

A VW-4 aircraft, a WC-121N *Warning Star*, flew to China Lake from Roosevelt Roads for the installation of new meteorological and navigational equipment which will substantially increase its hurricane reconnaissance capabilities.

An exotic computer instrument will record and transmit up to 90 per cent of the weather data needed by the Fleet Weather Facility at Miami. This will accurately predict the course, velocity and intensity of a hurricane.

Additional equipment installed includes a rocketsonde, replacing the radiosonde previously used; an improved Doppler navigation system; a new single side band transceiver; and an infra-red sea temperature sensor.



ALL SEVEN landing signal men of amphibious assault ship *Two Tima* (LPH-2) guide an HMM-365 helicopter to 15,000th landing since the ship's commissioning in 1961. First Lt. Tom C. Byull was the pilot, 1st Lt. Richard H. Wheeler, copilot, Cpl. G.W. Bisplinghoff, crew chief.

# GLOBAL AIRLIFT UNIT FLIES C-130'S



**GLOBAL CREW** in VR-3 consists of three pilots, two navigators, a flight mechanic and loadmaster. Capt. P.A.M. Griber is shown at left.



**OFFLOADING CARGO** sometimes is an all-crew job. Some 1400 pounds of cargo are strapped to three pallets tied together and rolled off.

ON A DARK, snowy day in January 1964, at McGuire AF Base, N.J., P. A. M. Griber, Commanding Officer of Naval Air Transport Squadron Three (VR-3), and several other officers waited anxiously in the doorway of Base Operations. Finally, as they impatiently looked to the southwest, the big, shiny, new C-130E Hercules loomed into view on final approach to the runway of its new home. It was the first C-130 delivered to McGuire for use by MATS.

The arrival of this aircraft, and 15 more to follow, was significant for many reasons. It marked the end of 12 years of VR-3 operations in the Douglas C-118A aircraft. It was the culmination of many months of behind-the-scenes preparation for the C-130E. It signalled the beginning of hundreds of hours of around-the-clock transition training and qualifications for the crewmembers. And perhaps most significant of all, the arrival of the C-130E implied a new type of mission—although at that time, VR-3 personnel had very little knowledge of the real scope of this new mission.

VR-3 was commissioned in July 1942. In June 1948, when the Naval Air Transport Service (NATS) was combined with the Air Force Air Transport Command (ATC), VR-3 was one of the first Navy squadrons to be incorporated into the new service, MATS.

Since that time, VR-3 has been

By Ltjg. Alan E. Zink

involved in many U.S. airlift operations, such as the Berlin airlift of 1948, the Korean airlift, support of the Middle East airlift following the Marine landing in Lebanon in August 1958. It participated also in the Pacific airlift, following the tension on Formosa. It was a unit of *Big Slam* in March 1960, *Long Thrust* and *Long Pass* in 1961, and gave direct support of the United Nations operations in the Congo in 1962. In October 1963, VR-3 participated in *Big Lift*, flying more than 50 flights from the U.S. to Germany. It also supports Operation *Deep Freeze*.

Aside from these special operations, VR-3 flew regularly scheduled C-118A missions across the North Atlantic from 1952 to 1964. They carried troops, cargo, military dependents and civilians.

The C-118A flights were usually made from McGuire, with scheduled stops at MATS bases in Harmon AF Base, Newfoundland, and Prestwick, Scotland, before proceeding to destinations such as Rhein Main (Frankfurt), Germany; Mildenhall (London), England; Paris; Madrid; or Leopoldville, Congo. VR-3 also made regular stops at Keflavik, Iceland.

Other flights were made over southerly routes, through the Azores to Europe; or to Guantanamo Bay, Cuba; La Paz, Bolivia; Panama City,

Panama; and to Rio de Janeiro, Brazil. VR-3 pilots and crew members averaged between 75 and 100 hours a month in the C-118A. The last squadron C-118A flight departed McGuire on December 30, 1963, for the Naval Base at Keflavik, Iceland.

The transition to the C-130E began months before the first arrival. Captain Griber was the first VR-3 pilot to be trained for the C-130E, before assuming command in July 1963. The first groups of pilots and flight mechanics were sent to Sewart AF Base, Tennessee, and Charleston AF Base, S.C. for an eight-week flight training course. Loadmasters went to Sheppard AF Base, Texas.

This was by no means the end of training for the crew members. MATS regulations require that the initial cadre of pilots (key personnel, such as the commanding officer, operations officer, standardization personnel and sufficient instructors) will each acquire a minimum of 50 hours in the new model aircraft, performing duties at their appropriate aircrew position before flying an airlift position.

All pilots, other than the initial cadre, must acquire 100 hours at their crew position before being qualified for an airlift mission. Consequently, no airlift missions were scheduled for VR-3 in January, to facilitate the local flight training conducted by the squadron to qualify crewmembers returning from Sewart and Charleston.



When the first C-130E arrived, the rugged training schedule began. The aircraft were in the air continuously during the days, nights, and weekends of January and February. Scheduling these flights, coordinating maintenance time with the Air Force maintenance squadron responsible for the upkeep of C-130's, and keeping crews current in other MATS requirements constituted a gigantic project for the VR-3 training department. The entire transition was accomplished quite smoothly, interrupted only by a blizzard that hit New Jersey in January.

During this entire period of flight training, it did not seem to VR-3 crews that flying the C-130E was very significantly different from flying the C-118A. "It goes a little higher, a little further, and a little faster than the C-118, but still has four throttles," was the comment of one of the pilots.

However, as the squadron began flying its first C-130 missions, the differences in the type of operations and the added performances of the C-130E began to show.

The chief function of the C-130E in MATS is to provide both a tactical and strategic global airlift capability, delivering supplies, heavy vehicles, arms and men to the Fleet or combat areas. It is capable of landing and taking off on unimproved runways and rough fields of only 3500 feet. It can be used to make aerial delivery of paratroops and equipment.

The ability to make jet penetrations instead of en route letdowns enables the C-130 to come over a station at altitude and descend quickly through bad weather when word is given that the field is open.

Clear air turbulence and jet streams are phenomena which were not frequently, if ever, encountered at the speeds and altitudes of the C-118's.

The number of VR-3 navigators (NAO-N) was greatly increased for C-130E operations. Prior to 1963 there were about 20 NAO's in the squadron (most of the C-118A pilots were qualified navigators). Only ten per cent of all VR-3 navigators were qualified for grid navigation, because very few of the C-118A flights went to the polar regions. The complement of NAO's has now been increased to 70 for C-130 operations.

The navigation techniques primarily used in the C-118A for over-water flights included celestial, pressure pat-

tern, loran and consolan. Most flights over land were made on airways and navigators weren't required to navigate, but occasionally aided in voice reporting, etc.

With the advent of C-130 operations, pilot/navigators have been phased out. All NAO's are being grid-qualified because the tactical nature of the new mission requires all crews to be capable of flight to any region on earth.

The C-130E has a Doppler navigation system, which continuously supplies drift angle and ground speed information, contributing to the accuracy of the navigator's work in tactical operations, such as CARP (computed air release point) and ARA (airborne radar approach) systems.

CARP OPERATIONS employ a highly precise technique of determining the release point for dropping troops and equipment. ARA is a new type of approach, specially designed for ECM (electronic countermeasures) conditions, in which the navigator, with the aid of his search radar and Doppler system, acts as a GCA controller, giving the pilots the headings and distances to go to touchdown.

The navigator can set up the headings and distances for two legs of a flight on the Doppler computer, and with this system connected to the autopilot, the Doppler drives the aircraft, keeping it on the preselected course. At the end of a leg, it automatically turns the aircraft onto the new leg. This is especially helpful in navigating the North Atlantic where the pressure systems and jet streams change quite rapidly.

So, in one C-130 global mission, the VR-3 pilots may fly U.S. airways, make a landing in the Arctic, fly formation, drop troops, and land in the desert or the jungle. A VR-3 navigator may have opportunity to employ a great variety of navigation techniques, from grid, celestial and pressure pattern, to radar navigation.

In April, VR-3 crews participated in Operation *Delawar*, which was the first CINCSTRIKE exercise in the Middle East since CINCSTRIKE assumed responsibility for U.S. brush fire commitments in that area during last year.

In May and June, more VR-3 crews were used in Operation *Desert Strike*, conducted in the United States.

Among the regularly scheduled flights, VR-3 began making cargo runs from Chateauroux, France, to Turkey, Spain, Greece, and Italy, in April and May. Some of the landing fields are as short as 4400 feet in length. The high takeoff performance of the C-130 has been readily used for these small fields.

The C-130 flight mechanic, though no longer "pushing throttles," has the difficult task of managing the C-130 systems. Unlike most four-engine aircraft, such as the C-118, the pilots have complete control of the engines. The flight mechanic, with his sophisticated panels of switches, lights, and gauges, controls the fuel, electrical and intricate pneumatic systems of the C-130.

The crewmember that inherited the toughest physical job with the advent of the C-130E is the loadmaster.

In the C-118A, the flight traffic specialists (FTS) had to attend the passengers and also had limited responsibilities for the placement of cargo on the aircraft.

In the C-130, a loadmaster (usually an AB) replaces the FTS, and providing for passenger comfort is almost a thing of the past. The C-130 loadmaster is responsible for proper loading of the cargo or troops. He arrives at the aircraft five hours prior to departure at home station to supervise loading, checking cargo manifests, etc. At en route stops, he is at the aircraft again while the other crewmembers prepare for the next leg of the flight and have a meal. Often he must grab a quick sandwich, if he is able to get anything at all to eat during ground time.

Aviation Boatswain's Mate is not the only rate used for loadmasters, but the AB's in VR-3 are among the few AB's with flying duties.

For paradrops, the loadmaster is responsible for preparing cargo for release. He is the coordinator for the flight crew and the jumpmaster during paratroop drops.

VR-3 will soon begin initial training for these tactical operations. At present, most of its activity is devoted to carrying cargo to the Fleet and field units of the Army, Navy and Air Force.

With their new aircraft and missions, VR-3 crewmembers will continue to fly global routes in support of all the U.S. Armed Forces.

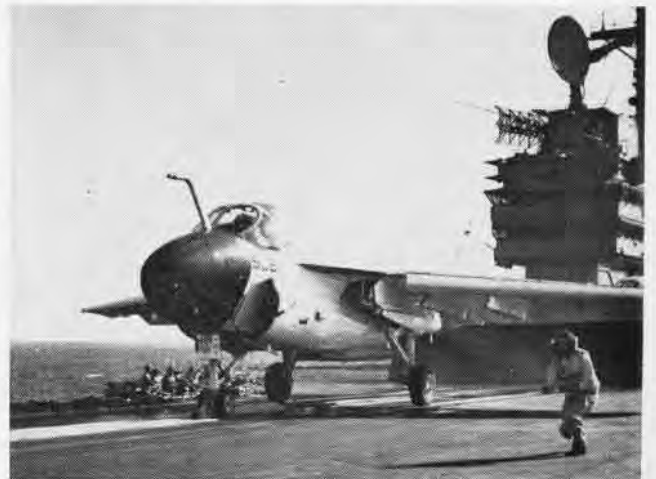
# LAUNCHING TIME IS SLICED IN HALF



A GRUMMAN A-6A INTRUDER FLOWN BY VA-75 PILOT PREPARES TO LAUNCH FROM THE SARATOGA. NOSE TOW SHUTTLE IN FOREGROUND



THE SARA'S CATAPULT OFFICER BEGINS TO SIGNAL THE A-6 PILOT



ALL IN READINESS, HE COMPLETES SIGNAL TO LAUNCH INTRUDER

A NEW JET all-weather attack aircraft and a new concept in flight deck launching equipment recently became part of the fleet aboard the Second Fleet attack carrier USS *Saratoga* (CVA-60).

The new aircraft is the Grumman A-6A *Intruder*, flown by Attack Squadron 75. The squadron completed carrier qualifications aboard this aircraft carrier before joining Air Wing Seven aboard the USS *Independence* (CVA-62).

The new concept in launch equipment is the *Intruder's* nose tow catapult equipment. The nose tow is such a revolution in the launch area of carrier operations that aircraft company representatives aboard the *Saratoga* were talking about the day when launch operations would be completely automated.

The standard launch rig now used is a bridle wire cable, which is hooked to the underside of the aircraft. The disadvantages of the bridle have been known for some time. It takes a five-man crew, working dangerously close to the aircraft, to attach the bridle. Almost every aircraft requires a different type rig, making it necessary to have a variety of cables in readiness on the flight deck. In addition, bridles are subject to wear and must be replaced frequently.

The new nose tow equipment on the *Intruder* eliminates or greatly reduces all the disadvantages of the bridle system and cuts in half the time required to attach an aircraft to the catapult. Hooking-up the bridle normally requires a *Saratoga*

## By Lance Stalker, JO2

catapult crew less than two minutes, allowing the ship to launch an aircraft every 40-45 seconds when using all four catapults. Dropping the nose tow into place and taking tension on the cat requires less than a minute.

As an example of the increase in speed obtained in launch operations when the nose tow is involved, Attack Squadron 75 set what is believed to be a record. Using only one of *Saratoga's* catapults, the squadron completed the launch/recovery cycle 57 times in one hour.

The nose tow consists of a steel "T" bar built into the forward gear of the *Intruder*. The "T" bar drops into a special fitting mounted on the standard catapult shuttle and locks there when tension is taken up on the catapult.

One of the major advantages of the "T" bar is that it will drop into its fitting without the aid of human hands, thus eliminating several men from the catapult crew. This advantage is also largely responsible for the decreased time involved in launching the *Intruder*.

According to representatives of Grumman Aircraft, the *Intruder's* builder, the idea of the nose tow has been milling around for some time. The difficulty in making the system a reality was the necessity of developing a nose wheel structure strong enough to take the tremendous force of the launch. The system on the *Intruder* uses both new high-strength metal alloys and a new engineering

design to meet this requirement.

Representatives of both Grumman and North American Aviation tied the nose tow launch system to bright verbal pictures of the flight deck's future. One North American representative, working on the assumption that the Navy will specify nose tow capabilities for all future carrier aircraft, foresaw the day when the catapults would be completely unmanned above decks.

"The pilot will taxi up to the cat," he said, "and the 'T' bar will automatically drop into place. A light in the cockpit will assure the pilot that it is properly secured. Another light will flash on when tension is taken on the cat. A third light, this one green, will signal when proper pressure is on the cat and the aircraft is cleared for launch. The pilot will then hit a button in the cockpit, launching himself."

He went on to say that there are still many technical difficulties to be worked out before the automated launch system will develop beyond the prediction stage, but, he said, "Now that we're over the bridle problem, it's just a matter of time."

The North American representative's assumptions have been firm by Navy action. Nose tow capability is now a requirement for all future aircraft normally catapulted from flight decks. BUWERS is presently procuring the equipment for all active aircraft carriers. This equipment will be installed during routine shipyard overhaul periods when both the carriers and the funds are available.



STEAM HIDES THE MECHANICAL HOOK-UP OF CATAPULT TO PLANE



THE INTRUDER STARTS ITS SHORT TRIP DOWN THE FLIGHT DECK

## Unit Flight Record is Set VP-21 Achieves 64,000 Safe Hours

Patrol Squadron 21 has logged its 64,000th accident-free flight hour and is now in its eighth successive year of safe flying. The achievement was made despite ice-covered runways, every type of weather condition aloft, and a steadily growing commitment schedule.

VP-21 is home-based at NAS BRUNSWICK, Me. Commanding Officer is Cdr. John G. Boniface.

## Pensacola Mark Recorded NABaTraCom Scores its Safest Year

The Naval Air Basic Training Command at Pensacola has recorded the safest flying year in its history.

In fiscal 1964, NABTC pilots, most of them students, logged 471,444 hours to achieve an accident rate of 0.66 per cent per 10,000 hours flown. These same pilots, while flying roughly one eighth the total time logged by the entire Navy, had an accident rate twice as good as the all-Navy average.

At the command, the Aviation safety program is based on incentive, education and inspection. Frequent lectures, regularly held critiques and constant vigilance impress safety on both ground and flying personnel.

RAdm. D. F. Smith, Jr., CNABaTra, stated that "only through the knowledge of aviation safety principles, and the minute-by-minute practice of these principles, can we, as Naval Aviators, hope to accomplish our assigned missions. The outstanding record just established proves that accidents can be prevented, and provides the answer to why we place such stress on aviation safety."

## World Circled in 25 Days Hercules Flies in Logistic Exercise

A C-130 Hercules, flying logistic support for a training exercise in the Indian Ocean area, flew 46,000 nautical miles in 25 days from Barber's Point, Hawaii.

Crew members of the world-girdling flight, which crossed the Indian Ocean and the Equator four times, included LCdrs. E. W. Harlan, Ronald F. Carlson, and Lt. Don Blair, pilots; and C. C. Bridge, T. P. Sparks and B. J. Lemm, navigators. CPO's John Walker and J. G. Ziegler served as flight engineers. All are members of VR-21, Fleet Tactical Support Command of the Pacific Fleet.

Carrying an average payload of 18,000 pounds for the entire mission, the C-130G made five crossings of the Indian Ocean. They flew westward to the Philippine Islands, then to Bang-

kok, Thailand, Madagascar, Kenya, Aden in southern Arabia, Athens and Paris. The Hercules flew back to Barber's Point via Washington, D.C., Dayton, Ohio, and Alameda, Calif.

Eighty per cent of the flight was over water. The crew flew an average of eight hours per day for a total flight time of 165 hours.

## SF Shipyard Commended Repairs on Four Aircraft Carriers

At San Francisco Naval Shipyard, the simultaneous repair of four aircraft carriers has earned a commendation from VAdm. P. D. Stroop, Commander, Naval Air Pacific. The Admiral wrote:

"It is a pleasure to commend you for the outstanding repair work recently accomplished by your organization on NavAirPac carriers. In particular, the flexibility exhibited to undertake extensive major unscheduled work on the USS *Ranger*, USS *Coral Sea* and USS *Midway*, while at the same time completing the regular overhaul on USS *Hancock*, is a tribute to your ability to provide the service the Fleet requires.

"I am certain the continuing 'can do' spirit exhibited will assure equally successful accomplishments in the future. Well done."

## 'Kiloturion' Club Formed VAH-123 Honors 1000-Hour Men

Heavy Attack Squadron 123 has organized a "Kiloturion Club," to honor members of the unit who have flown 1000 or more hours in the A-3 Skywarrior. Douglas Aircraft Company prompted the idea when it forwarded a large number of plaques to the squadron for presentation to flyers with 1000 hours.

More than 56,000 hours have been flown by 40 members of the club. Statistically, this figure breaks down to six years and five months in the air with 25 million miles covered. Most of this time was accumulated during tours on 7th Fleet carriers. During the time, 6700 CV landings were made.

Tops in the group are Lt. F. L. Gilmore, bombardier/navigator, with 2100 hours. Lt. R. W. Wilson, a pilot, was second with 2000, and high man in the crewmen/navigator ranks was W. E. Brown, AQ2, with 1750 hours. The Whidbey-based unit is skippered by Cdr. L. E. Kirkemo, himself a member of the "Kiloturions."



**COMING ABOARD** the submarine tender USS *Nerens* (AS-17) for the 200th helicopter landing is Lt. R. L. Johnson, USCG, in a San Diego-based Sikorsky, an HH-19G (HO4S-3G). The landing was made during a dependents' cruise. The Coast Guard and *Nerens* cooperate in training and qualifying pilots in regular helo operations, to the advantage of both outfits. All *Nerens*' OOD's are qualified LSO's. Lt. G. W. McMillan is LSO on this particular occasion.



**A FLEET AIR WING ELEVEN** Orion swoops low over a "target" submarine during one of many exercises conducted in the Atlantic and elsewhere. Jacksonville-based unit is composed of five squadrons: VP-45, equipped with P-3, and VP-18, VP-16, VP-7 and VP-5, flying P-2's.

## THE WING WITH EYES ON THE SEA

**I**N THE RUSH of great events that constantly surround us, small phrases recurring over and over in the reporting of these events tend to be passed over. "The space capsule of LCol. John Glenn was spotted today by naval aircraft at about . . ." were words heard many times by all Americans in 1961. In the excitement of Glenn's accomplishment, few noticed that it was a Navy plane which spotted him. Still fewer had any idea where this plane came from.

Where did it come from? And where did the aircraft involved in other similar national events come from? The answer to the former

By Cdr. John W. Vaughn, USN

question and many times to the latter, is Fleet Air Wing Eleven.

The Wing consists of a staff and five well-trained and operationally ready patrol squadrons. Its commander is in charge of the complex and versatile Southern Maritime Anti-submarine Warfare Force and is based at NAS JACKSONVILLE. Capt. L.P. Pressler was recently relieved by Capt. Arthur C. Cason.

In his office, a huge map of the world covers an entire bulkhead. This map is dotted with colored pins, each indicating the location of one of the

Wing's squadrons or squadron detachments. These pins may represent a unit operating from Rota, Spain; Roosevelt Roads, Puerto Rico; Keflavik, Iceland; Guantanamo Bay, Cuba; Argentina, Newfoundland; Sigonella, Sicily; or the continents of South America and Africa.

No matter where they may be required to operate, the Wing's squadrons are ready to move on short notice. Primarily, their job is to detect and if directed, provide a deadly counter force to the submarine menace which is a recognized threat to the sea lanes of the Free World.

Fleet Air Wing Eleven's headquarter-



**HUMAN EYES** complement those of intricate electronic gear used in air reconnaissance.

ters at Jacksonville are strategically located near one of most important political and economic areas in the world. Historically, the Caribbean Sea has been of major significance to the U.S., especially so today with the communist menace of Castro's Cuba.

The Wing is often called upon to perform close surveillance of Cuba and other troublesome areas further south in the Caribbean. Additionally, Jacksonville is near Cape Kennedy, launching site for space exploration vehicles. Activities there keep the Wing alerted for various missions associated with the launches.

Personnel are well satisfied with recreational facilities available in their Florida locale and the Jacksonville weather is exceptionally favorable for flying the year round. On deployment, a squadron may find the climate and flight conditions radically different from those enjoyed at the home station. An exercise in Rota is always anticipated with un concealed enthusiasm as is a brief trip to Roosevelt Roads in midwinter. However, deployments range from the semi-tropical climate in the Caribbean to the sunny Mediterranean and to the sub-zero cold of Newfoundland and Iceland.

Typical antisubmarine patrol flights involve 10 to 15 hours of uneventful flying over a monotonous sea. Nevertheless, Wing personnel must maintain a constant lookout. For the P-2 Neptune crews, quarters are cramped and uncomfortable. Orion crews work in a newer and larger aircraft in far greater comfort than ever before.



**A P-2 NEPTUNE**, flown by crew from VP-16, flies abeam Sicily's Mount Etna during a deployment to Sigonella made by the unit in 1961. VP-16 was a Reserve unit recalled in Korean war.



**FLEET AIR WING ELEVEN** planes played a significant role during the Cuban crisis and flew many search and tracking missions. Here VP-18 Neptune checks the Soviet cargo ship, Okhotsk.

**F**LEET AIR Wing Eleven's history has been long and eventful. It was commissioned on August 15, 1942, at Norfolk, during the German U-boat campaign. Five days later, the Wing moved to San Juan, Puerto Rico, to establish a home base with

the command area embracing the Caribbean Sea Frontier and South America. Three patrol squadrons were assigned the mission of sinking submarines and providing ASW protection to ship convoys.

In WW II, aircraft of the Wing

were credited with sinking ten U-boats and damaging 18 others. During the war, they conducted 47 attacks and lost only three planes. The Wing's patrol squadrons flew the legendary PBY *Catalina*, PBM *Mariner*, PB4Y *Privateer* and PV *Ventura*.

They operated in all kinds of weather and were the forerunners of today's complex and reliable ASW planes. At present, Wing squadrons fly the Lockheed P-2 *Neptune*, the first of which was used by the Navy in 1947, and the P-3 *Orion*. Both

perform their mission in the same manner, but the P-3 has the advantage of greater speed and endurance. Eventually, the P-3 will replace the P-2's. One squadron is already equipped with the *Orion* and another has begun the transition.

After WW II, there was a reduction in Wing activities. In December 1945, Operation *Ferry* was carried out as various types of aircraft were flown to other countries. All holidays were forgotten and *Ferry* was conducted throughout the early months of 1946 without a casualty. In the same year each squadron in the Wing was reduced from nine to six aircraft.

Participation in events of worldwide importance is no new matter for Fleet Air Wing Eleven. While based in Alaska during WW II, VP-5 flew more than 200 missions against Japanese-held territory.

In 1947, Mount Mayon, a Philippine volcano, erupted and threatened several surrounding villages. At the request of the local government, two aircraft from VP-7 patrolled the scene to observe the direction of lava flow and passed on information to authorities below. In the Korean conflict, VP-7 flew many hours over Korean waters in support of amphibious operations.

The Wing moved to NAS JACKSONVILLE in 1950. When hostilities commenced in Korea, VP-16 and VP-18, formerly Reserve squadrons, were called to active duty under control of the Wing. VP-7 moved to Jacksonville from Brunswick, Maine, dur-



**WHILE SERVING** in the Mediterranean area from September 1962 to February 1963, a VP-16 *Neptune* saluted the Rock of Gibraltar. Squadron was based at the Naval Station in Rota, Spain.



**PRACTICE MAKES** perfect, and Fleet Air Wing Eleven planes and crews conduct constant training to insure the strength of their ASW capabilities. Here a P-2 sweeps by sub after contact.



**CREWMEN** from VP-5 refuel squadron *Neptune* between flights in Caribbean and Atlantic.



PART OF WING'S mission is to check shipping lanes. In North Atlantic, menacing icebergs are located and plotted by patrol planes.



A VP-18 NEPTUNE was the first aircraft to locate *Nina II*, replica of Columbus' 15th Century ship, lost during an ocean crossing.

ing the Berlin Crisis in 1961. VP-5 has been under operational control of the Wing longer than any of her sister squadrons, having joined the unit after WW II at San Juan.

The best publicized challenge for which Wing squadrons had so long been in training was clearly outlined in President Kennedy's address to the nation on 22 October 1962. It was evident from the outset that Soviet submarine "activity" and the quarantine of offensive weapons into Cuba would require extensive surveillance in the Atlantic with the specific purpose of locating, identifying, photographing, and reporting all Soviet naval forces and merchant shipping.

VP-5 was deployed to Puerto Rico within hours after the President's message and VP-7 followed shortly thereafter. VP-5 distinguished itself by detecting and tracking the only Soviet submarine located in the South Atlantic during the crisis. Round-the-clock operations were responsible

for the early sighting of Soviet ships bound for the quarantine zone. Wing squadrons also played a significant role in the monitoring of Soviet withdrawal of offensive weapons from Cuba.

Later, in a less critical situation, VP-18 successfully located the becalmed *Nina II*, replica of Columbus' 15th Century ship attempting an ocean crossing. In February of 1963, VP-5 was credited with the first sighting of the hijacked Venezuelan freighter, *Anzoategui*. The ship was photographed and kept under surveillance for several hours by VP-5.

The first aircraft over *Friendship Seven*, the space capsule which carried LCol. John Glenn, was piloted by Cdr. L. H. Boutte, then VP-16's operations officer. Cdr. Boutte, who later skippered the unit, was a radioman in the plane which found Captain Eddie Rickenbacker at sea after he was forced down in WW II.

VP-18 participated in the recovery

of the space capsule containing the monkeys "Able" and "Baker," the first living beings ever rocketed into space and returned alive. In 1960 crews of this squadron were the first to sight America's first unmanned space capsule launched from Cape Kennedy. Also, "Ham," the space chimp, was sighted by VP-18 as well as the hijacked Portuguese *Santa Maria*.

The latest arrival to the Wing's team is VP-45 which was assigned to the unit in January 1964 after leaving BERMUDA. This squadron holds the distinction of being the last one to operate seaplanes in the Atlantic Fleet. VP-45, which has transitioned to the *Orion*, became operationally ready in the P-3 six weeks ahead of schedule.

The constant threat of enemy submarines has kept Fleet Air Wing 11's men and planes on the alert. To meet that threat the eyes of the Wing, both electronic and human, are constantly focussed on the sea.



NEW P-3 ORION arrived at Jacksonville in Jan. 1964 and was assigned to VP-45. Squadron completed transition six weeks ahead of schedule.



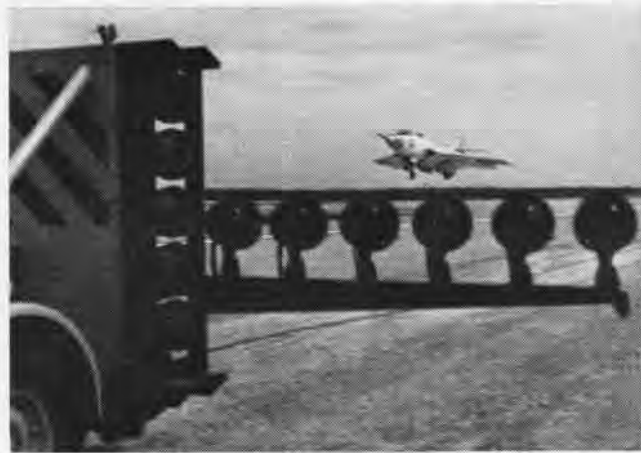
DETACHMENT THIRTEEN P-2 Neptune from VP-16 warms up for an all-weather flight in Icelandic area. Outfit was operating from Keflavik.



# MIRROR LANDINGS IN THE MESQUITE



**IN THE TOWER,** Richard J. Stevenson, AC3, fills in log as William P. Settrini, AC3, transmits. The field is 40 miles from Kingsville.



**LAMPS OF THE FIELD** Mirror Landing System frame an F-9 Cougar as a student pilot makes a touch-and-go at NALF Orange Grove, Texas.

IT DOESN'T look like much, the Naval Auxiliary Landing Field, Orange Grove, Texas.. It's carved from mesquite-covered flatlands and there are only three buildings and a control tower to break the horizon. But don't be deceived by its desolate appearance.

At this outpost of the Advanced Air Training Command, where buzzards soar and heat waves ripple off the runway, student pilots get their first look at the "meatball" of a mirror landing system.

The field is located 40 miles from its parent command, NAAS KINGSVILLE, and 30 miles from the Gulf of Mexico. It is manned by only 27 enlisted men under the direction of Officer-in-Charge, Lt. John Fowlkes.

There are no aircraft assigned to the field. Its customers are the F-9 Cougar training squadrons from Kingsville and Chase Field, Beeville.

A day's work at the field begins at 0700, just when the sun is climbing into the blue Texas sky, promising another scorcher.

The 16 men in the crash crew, the field's largest division, can be found checking their equipment. They spend most of the day on the runway's "hot spot." Their crew chief is a civilian, the only one at the facility.

Up in the 60-foot control tower, three aircontrolmen wait for the aircraft that will soon be at the field.

At the fuel farm, the supervisor, an AB, helps his one-man crew posi-

By Tommy Thompson, JO1

tion a gas truck near the pumps. By the end of the day, they will have pumped 10,000 gallons into the Cougars.

In one of the three green buildings, Garry Simon, HM3, checks his medical kit. There'll be no flying unless he is on duty.

The first planes to arrive will be either from VT-24 or VT-25 at Chase Field. It won't be until the afternoon that Kingsville aircraft arrive. Normally, a squadron sends about 15 planes. Six of them are always in the pattern, circling, swooping down, then lifting again after their tires have kicked up a puff of smoke from the runway. They will spend 11 periods working with the Field Mirror Landing System, making about six "bounces." Later, when they touch down for refueling, they will be briefed by a squadron instructor in a small trailer near the runway.

The facility has no maintenance equipment, so the squadrons have to bring their own maintenance people. They also supply their own landing signal officers.

The ends of the two 8000-foot runways are thickly coated with the burnt rubber left by the aircraft. There is an average of 4000 field mirror and full stop landings each

month. The busiest month was July 1963 when there were 5009 landings. Since commissioning in October 1956, there have been more than 200,000.

At the end of the day when the last plane is lost from sight on the horizon, the air controlmen put down their earphones, the crash crew stows its equipment and the field is turned over to the duty petty officer. Until the jets split the silence the next morning, it belongs to him and his two dutymen.

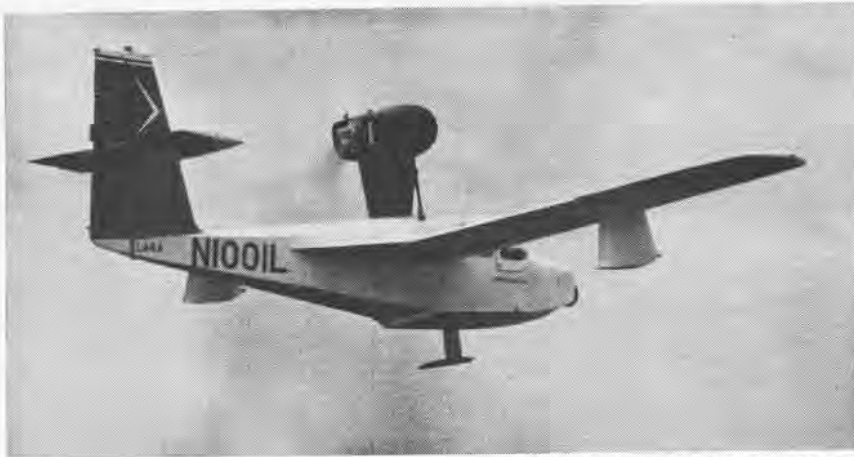
The other men can be found in the city of Alice 15 miles away. There are no barracks at the field, only a few bunks for the duty section. The men live in apartments, motels and houses throughout the community. Each receives an allowance for subsistence and quarters. Three-fourths of the men are single and enjoy the novelty of "living in town."

Recreation at the field doesn't include much more than sitting in a comfortable chair and sipping a soft drink, but surrounding towns provide diversions. The men have basketball and bowling teams in the city leagues. Fish and game are abundant and the beaches of the Gulf of Mexico are a short drive away. On weekends, Mexico can be reached in three hours by car.

The men have all volunteered for this assignment and have proved that despite the isolation, the heat, and "sameness," duty is rewarding and fruitful at NALF ORANGE GROVE.

Photos by R. W. Sharp, PH2,  
and C. R. Coan, PH3

# NAVY PUSHER-PROP FLIES AT PATUXENT



SKIMMER, 2400 LBS. GROSS WEIGHT, CRUISES AT 100-120 MPH, TAKES OFF IN 650 FEET

ONE COLD DAY last December, the orderly procession of Navy jet and multi-engine aircraft at the Naval Air Test Center, PATUXENT RIVER, Maryland, was interrupted for a moment by a tiny pusher amphibian buzzing up the river at an impressive 75 knots. It hesitantly extended a single ski below the hull, landed in the river, and, after gracefully balancing on its pogo stick, gently splashed into the water. It drifted a few feet while the pilot turned cranks, removed and inserted lock pins, turned knobs and pushed buttons. Then with its ski tucked up under the hull and wheels extended, the Navy's one and only hydro-ski seaplane rolled up the ramp and shuddered to a stop.

Spectators found that for the first time in years they could look down into a cockpit. One bemused observer asked, "The Wright Brothers, I presume?" Some were so rude as to wonder aloud about do-it-yourself kits and where one wound it up.

Let's inspect the *Skimmer*, resting between two P-3A's like a dachshund amid Great Danes. The surprisingly roomy cockpit was originally intended to carry a pilot, co-pilot and two passengers. The ski strut, recording oscillograph and related equipment have replaced the rear seats. A sturdy pylon just aft of the parlor supports a four-cylinder 185-horsepower Lycoming engine which drives the Navy's only pusher propeller. The 35-inch by 10-inch hydro-ski was developed during the continuing Navy

By Eugene H. Handler, BuWeps

research program to improve seaplane rough water capabilities and can be extended 17, 22, 27 or 32 inches. The airplane has a gross weight of 2400 pounds and cruises at 100-120 miles-per-hour with fuel consumption at 13 miles per gallon. It can fill up at the local gas station and then take off in only 650 feet.

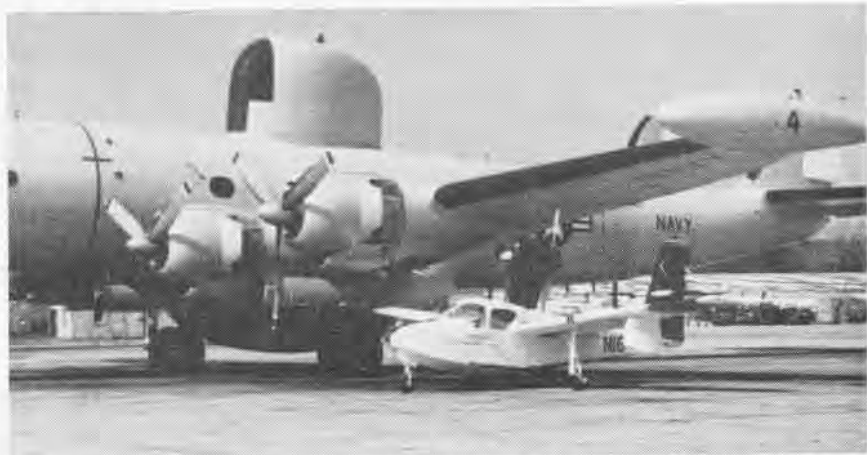
A seaplane's hydrodynamic characteristics can be approximately determined by the use of a model in a towing tank, but the results are not always substantiated by full scale operation, primarily because the real airplane has a pilot and the model doesn't. There are also discrepancies resulting from various scale effects relating to the ratios of speed and size

between the airplane and its model. These differences are generally reconciled by the judicious use of "bugger factors" based upon hydrodynamic theory, past model and full-scale experience, comparisons with other aircraft, and preliminary test data. Consequently, whenever possible an actual research seaplane is tested by contractor and Navy pilots.

After the PBM hydro-ski research seaplane was destroyed by fire, it was decided to replace it with a small amphibian which could be economically modified and operated. A Lake Aircraft Corporation *Skimmer* was converted into a hydro-ski seaplane by the Thurston Erlandsen Corporation, Sanford, Maine, for use as a test-bed for Navy's seaplane research.

The *Skimmer* was redesigned to carry a 31 per cent representation of the PBM ski so that the test program could be continued in miniature. A scale model of the plane and its proposed ski, one-sixth normal size, was built and tested for the Navy at Stevens Institute of Technology Davidson Laboratory. Tests showed that the *Skimmer* would require more power at low speed. A new propeller, giving increased thrust for takeoff, was installed while the hull was being strengthened to carry the loads imposed by the ski and strut.

Several Patuxent pilots flew the *Skimmer* during its five-month stay to familiarize themselves with its hydrodynamic qualities. Many of the flights were made by LCdr. Nick



THE AMPHIBIAN COULD PRACTICALLY FIT INTO A SUPER-CONSTELLATION'S HIP POCKET

Vagianos who alternated between the 185-horsepower *Skimmer* and a 9000-horsepower E-2A *Hawkeye*. Fighter pilots Cdr. Dick Adams and Cdr. Tom Kastner throttled back from Mach 2 to fly the *Skimmer* at a leisurely Mach 0.15. No sonic boom!

One pilot, who modestly insists upon anonymity, will long remember the day he taxied into the water with Flight Test Division Director Capt. W. D. Emerson in the right seat. It was Anymouse's (as he prefers to be known) intention to skillfully demonstrate hydro-ski seaplane takeoff techniques for an admiring senior officer. This was not to be.

As the *Skimmer* ski rose to the water surface and the airplane nose abruptly lifted, the pilot seat-stops collapsed and Anymouse coasted aft, beyond reach of the controls. This maneuver left a surprised senior officer alone to perform a skillful takeoff for a much astonished junior officer.

The *Skimmer* returned to Sanford in May for a new strut and ski. It was escorted by an A-1 *Skyraider* whose unfortunate pilot flew over 1100 miles while the little seaplane flew 500. The A-1 pilot circled, weaved, zigged, zagged, and visited prominent landmarks as the *Skimmer* droned on. The A-1 returned to Patuxent in two hours.

The new lighter strut will have a greatly reduced cross-section with substantially reduced hydrodynamic drag. The ski is being machined from a single flat plate and will have only a fraction of frontal area of the original ski. Its flat-vee cross section will allow it to be retracted snugly against the hull for reduced aerodynamic drag.

When extended, the ski will be relocated six inches aft of its present position. A second ski is also under construction. Its lower surface is longitudinally concavely cambered and resembles a thin slice of airplane wing. It was designed by Hydronautics, Inc., and calculations show marked reductions in drag and heavy spray. A new fitting on the strut will enable a mechanic to easily change the ski trim angle between flights.

This fall the *Skimmer* is scheduled to return to Patuxent River for a complete hydrodynamic evaluation of the strut and skis. The pilots anticipate improved takeoff performance, easier rough water landings and express the hope that the seat-stops hold.

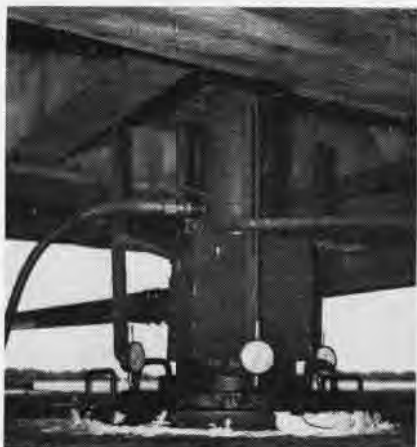
## RUNWAYS ARE TESTED AT BEAUFORT



PAVEMENT CORE drill is cooled by water and penetrates runway surface in minutes.



THIS CORE SAMPLE, drilled from a runway at Beaufort, is nine and a half inches long.



READINGS ARE TAKEN from gauges as flat-bed trailer weighing 30 tons exerts pressure.

TESTS DESIGNED to measure load reactions on runways were conducted at MCAS BEAUFORT, S.C., in June. Carried out by the Parker Laboratory, Charleston, assisted by the Southeastern Division of the Bureau of Yards and Docks, also based in Charleston, the tests were made to see if the runways are capable of withstanding the weights of new aircraft.

Normally, the Navy performs the tests with a specially designed vehicle and associated gear. The equipment, however, was being used in Key West and officials decided there would be a greater economic advantage if the job of checking the landing strips was contracted.

All tests were made in accordance with standards of the American Society for Testing Materials. The procedure usually begins by extracting a core, three-inches in diameter, from the runways. A portable, gasoline-powered, pavement core drill is used. Driven by a four-cycle engine, the drill is cooled by compressed water. It has industrial diamonds encased in a metallic matrix on the end of a thin-wall steel core valve. The drill is capable of penetrating runway depths in about five minutes.

Once the core has been pulled out, an area nine-feet square of the top layer of asphalt is chipped and cleared away. Workmen then mix and pour a base of fine sand or plaster of Paris to provide an even and solid base for instruments used in testing. Before the plaster of Paris sets up, a 20-inch circular steel plate is put in place and levelled. On top of this, an eight-inch steel plate is set. Then, several more eight-inch plates are placed on these. A hydraulic jack is finally adjusted atop the plates.

A load of approximately 30 tons is set on the jack. Measuring instruments are fixed in position and record the load reaction or rate of sink of the runway's surface. Pre-set gauges register the data within thousandths of an inch. After pressure is applied with the jack, readings are taken by the minute.

These tests are conducted periodically at all military as well as civilian airfields. They are especially important because today's weightier planes take a toll on runway surfaces.

# A-NEW ADVANCES NOTED AT PATUXENT



**TACTICAL COORDINATOR**, Lt. D. C. Johnsen, checks the display console at his station in the P-3A Orion used in A-NEW tests.



**RADAR SYSTEM** of A-NEW complex is examined by W. C. Chapman, Jr., AXI, member of evaluation team at Naval Air Test Center.

A UNIQUE evaluation team of Navy and civilian personnel are presently engaged in the flight testing portion of Project A-NEW's Mod I ASW integrated avionics system. Project A-NEW is a long range development program which has the goal of improving the effectiveness of airborne ASW systems by developing an advanced, fully integrated avionics complex for next generation aircraft (see NANews August 1963).

The A-NEW concept was originated over three years ago and has progressed from the initial study phase through simulation, dynamic mock-up and laboratory evaluation prior to flight testing. Information gained from these phases will be the basis for determining the requirements of the final production design.

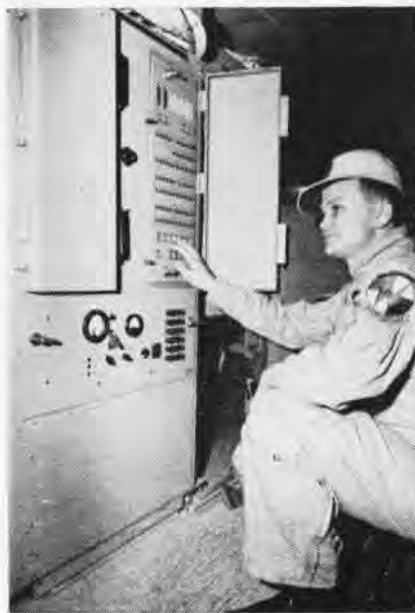
The flight test and evaluation portion is being conducted by a highly qualified team at Weapons Systems Test Division of the Naval Air Test Center, Patuxent River. Cdr. E.C. Waller, OinC of the program, is eminently equipped for the job in that he holds a Masters degree in electrical engineering, is a graduate of the Test Pilot School, a veteran of VX-1 with extensive experience in ASW work.

One of the most significant objectives of the team is to insure that the system will perform all of the functions required during the execution of ASW problems against modern, high-speed submarines. Also, the team must see that the system remains

**By Lts. John C. Rennie and Tom Kelly**

within the capability of Fleet personnel to maintain and operate under heavy workload conditions.

As an adjunct to these objectives, the team has to decide which function should be included, eliminated or modified in the final production system. One of the authors, Lt. Rennie, is Cdr. Waller's assistant and copilot. He has served as ASW officer in VS-



**MANUAL INSTRUCTIONS** are fed to digital computer by Mr. Huntley, project engineer.

35, holds a Bachelor's degree in electrical engineering and is also a graduate test pilot. Lt. Donald C. Johnsen, the third officer of the team, provides tactical coordinator (TACO) assistance. He is a designated NAO(S) and an electrical engineer with wide experience in test and evaluation work.

The team has been conducting the flight test portion of the program since December 1963. Up to and including May 1964, the team had flown 275 hours in a specially configured prototype P-3A Orion which serves as a "flying test bed" for the system. Flight data obtained in the P-3A under actual conditions allows comparison with data collected in a laboratory environment which does not have the vibration, noise levels and other distractions found in flight.

The most important feature of the A-NEW Mod I equipment is the use of a central digital computer as the heart of the system. This computer provides a greatly improved capability of accepting, processing and storing large quantities of pertinent tactical information automatically. It is controlled by a stored program with built-in flexibility to handle new and different tasks. A significant change in mission is handled by the simple expedient of feeding a new taped program to the computer prior to takeoff.

The computer improves navigation accuracy by integrating inputs from the inertial navigation system, the doppler radar, LORAN C fixing in-

formation, sea drift of sonobuoys and wind data to give aircraft latitude/longitude readouts in addition to the relative positions of sonobuoys and targets. The computer will assist the TACO in the classification, localization, tracking and attack phases of the ASW problem by integrating received information from many sensors with stored data and generating preferred tactics based on the progress of the problem. The computer will also provide classification, identification and kill probability.

It will assist in decision making for optimum sensor utilization, sonobuoy drop positions and armament selection against multiple surface and subsurface targets.

One of the members of the team is a civilian TACO, Mr. Ray Huntley, who has been a project engineer at NATC since 1954. Mr. Huntley



**L. G. HONSINGER, AO2,** loads smoke marker into retro-launcher aboard the P-3 Orion.

flies as TACO along with Lt. Johnsen and Cdr. Waller. As a matter of fact, Mr. Huntley checked Cdr. Waller out on the prototype PSM integrated ASW analog system in VX-1 back in 1958.

There are ten enlisted crew members on the team, all of whom have inflight and ground responsibilities. Their comments, suggestions and criticisms are always considered.

D. M. Neal, AXCM, who is presently working on his Masters degree in electrical engineering, has report responsibility on the reliability and maintainability of the entire A-NEW system. F. H. McLerran, ATC, the first tech on the aircraft, reports the same with emphasis on government furnished equipment. Additionally, Chief McLerran evaluates airborne



**NATC'S COMMANDER, RAdm. J. R. Lee,** poses with Waller, Johnsen, Huntley, Chapman, Kaufman, Quarton, McLerran, Neal, Gardner (standing), Rennie, Kulacz, Honsinger, Blevins

navigation and communications gear.

The navigation station in the test plane has been moved from its normal position to the forward right-hand observers' station. This was done to determine the feasibility of separating the tactical station from the navigation station and the possibility of eliminating the need for a navigator whose duties would be performed at the TACCO position.

The radar/MAD/TRAIL station is manned by W.C. Chapman, Jr., AX1. He has had experience with antisubmarine warfare in VS-27 and VX-1. S.L. Blevins, AX2, handles the ECM/Julie JASDA station and is a veteran of VS-26 and Task Group Alfa. The Jezebel/AQA-1 position is operated by D.E. Kulacz, AT1, with assistance from E. I. Kaufmann, AX1.

The technicians rotate frequently from one station to another as a double check on performance quality and to eliminate one-person opinions.

On each flight, tape recorders are carried to note failures, difficulties and personal impressions. This information is later typed out and routed to appropriate personnel for corrections.

Flight engineers for the crew are R. L. Quarton, ADR1, and V.E. Tancer, ADR1, both graduates of

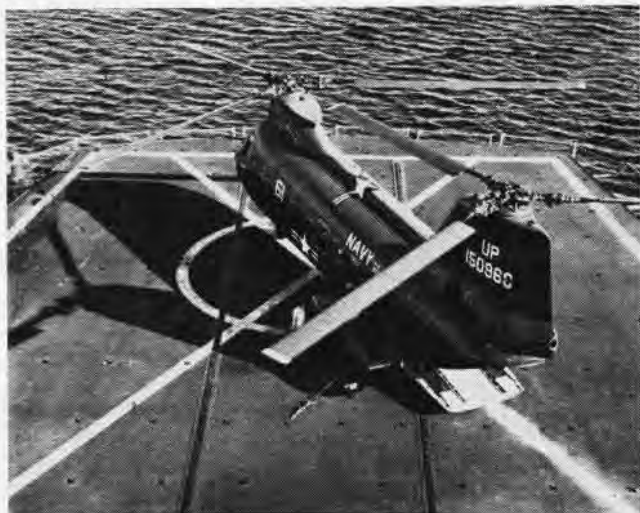
flight engineer and maintenance schools. The ordnance section, including expendable stores control, is supervised by J. L. Yocklovich, AOC, and L. C. Honsinger, AO2.

The remaining members of the A-NEW team are highly motivated and trained civilian personnel representing both government and contractors. Their invaluable assistance ranges from in-flight trouble shooting to technical report writing. Mr. J.E. Gardner is program engineer; C.G. Thomas, ECM/Julie JASDA engineer; D. L. Weigel, Jezebel, sonar systems engineer; Miss Y. Yost, computer and programming specialist; and Mr. D. Laverents, ASW navigation engineer. Companies represented include General Dynamics Electronics, Lockheed, Loral, Martin and Univac.

The requirements for Mod II are now being considered and will be tested at the Naval Air Development Center in Johnsville, Pa. Finally, Mod III system requirements will be completed and the avionics package tentatively delivered to the Fleet between 1968 and 1970.

It is expected Project A-NEW will develop an integrated weapon system capable of coping effectively with submarine threats in the 1970's.

# NEW UTILITY HELICOPTER MAKES DEBUT



NEW HELO IS SHOWN ABOARD COMBAT SUPPLY SHIP SYLVANIA



LOADED AND FUELED SEA KNIGHTS DEPART KITTY HAWK (CVA-63)

THE NAVY'S new medium utility helicopter, the UH-46A, made its debut in July at NAAS REAM FIELD, San Diego, Calif. The operational capabilities and flight characteristics of the new tandem-rotor, turbine-powered helicopter were displayed before high ranking military personnel and representatives of the aviation press.

Designed and produced by the Boeing Company's Vertol Division, the UH-46A will be a key element in the Navy's vertical Replenishment Program. The first UH-46A's have been delivered to Utility Helicopter Squadron One.



UH-46A CAN FLY 100 NAUTICAL MILES, RESCUE 20 AND RETURN

The primary mission of the new craft will be the transfer of cargo from replenishment ships to combatant ships while underway at sea. Secondary missions will include personnel transfer from ship to ship and emergency search and rescue operations for task force ships.

The new helicopters will operate from two types of combat supply ships: the combat store ship (AFS) and the multiple replenishment-at-sea ship (AOE). The first of these new types are USS *Mars* (AFS-1) and USS *Sacramento* (AOE-1). The UH-46A's will load cargo from AFS and AOE ships and deliver it to the combatant ships of the task force.

Helicopter transfer of general stores, ammunition, missiles and aviation spares increases task force mobility and operational flexibility. Ships being replenished will not have to reduce speed during tactical operations. Thus the task force formation is maintained and the possibility of collision during close-in maneuvering is eliminated.

The UH-46A, powered by two GE T58-8 turbine engines, cruises at 150 miles per hour. Other specifications include:

Gross weight .....	19,000 pounds
Fuselage length .....	44 feet, 10 inches
Maximum height .....	16 feet, 11.6 inches
Rotor diameter .....	50 feet
Top speed .....	160 miles per hour
Normal payload .....	4000 pounds
Alternate maximum payload .....	7500 pounds
Rate of climb .....	1550 feet per min.

A hook under the fuselage provides for the external support of cargo. The hook has a capacity of 10,000 pounds and is installed in the center cabin floor hatch below the center of gravity. When not in use, the hook is swung up and stowed in the hatchway.

The UH-46A's integrated cargo-handling system permits loading of cargo and personnel under the most demanding of sea conditions. Because the rear ramp can be left open in flight, the UH-46A's can accommodate stores or weapons which exceed length of the cargo compartment.



**TRACKERS** undergo PAR at North Island's O&R open-air production line. Twenty to 24 planes are being processed at all times in Area H.



**ROSE MARIE TAYLOR**, an O&R electrician, checks airplane's wiring. Of the open-air shop, she says, "I wouldn't want to work anywhere else."

## SHOP WITH THE SKY FOR A CEILING

**T**HE LARGEST open-air production line in the Navy is part of the O&R Department at NAS NORTH ISLAND. It is an outdoor work area of about one million square feet where ASW, AEW and carrier logistics support planes are processed. At all times there are from 20 to 24 S-2 Trackers, C-1 Traders and E-1B Tracers on the line for Progressive Aircraft Rework.

The shop complex has the sun and the stars for a ceiling but this doesn't decrease efficiency. Aircraft are reworked with fewer manhours and in shorter out-of-service time than the standard requires. Labor economy plus low overhead costs make for a highly profitable operation.

Foreman H.A. Seyboth, Area Supervisor, commented on the attitude of personnel in the open-air shops: "High morale is reflected in the accelerated work pace, low use of sick leave, an excellent safety record, and in strong support of management improvement programs." Aircraft electrician Rose Marie Taylor said, "I wouldn't want to work anywhere else. I've worked outside for 13 years and love it."

About 250 employees, military and civilian, perform PAR which includes: stripping, cleaning, examination/evaluation, disassembly, repair, assembly and test. The uncovered shops can operate year-round because of San Diego's stable weather. On the rare days when rain interrupts production,

By **Elretta Sudsbury**  
O&R, North Island

employees work inside the aircraft.

Called Area H, the open-air space is paved and has subsurface electrical compressed air, steam and water service at all work stations. Lighting is adequate for night work. Also, there are portable structures providing covered space for technical data, finished parts storage and other support.

Area H is bordered at one end by the historic 1918 balloon hangar which houses some repair shops supporting the outside work. At the opposite end are the paint and avionics buildings. Along one side is a service taxi strip.

Production control is highly systematized in the area. Preplanning and prepositioning of parts is efficient and work flow lines are short. Personnel from Planning, Quality Assurance and Engineering provide support.

When aircraft are received they first go to the stripping/cleaning section if painting is required. Examination/evaluation and disassembly follow. Removed parts are fanned out for overhaul concurrent with the aircraft to which they belong.

Many parts are repaired in special shops within the H area. There are on-the-spot shops for quick-engine-change build up, surface repair, rubber products repair, fabric repair, ma-

chine work, touch-up painting, and spot cleaning and stripping. This almost self-contained aspect of operations helps account for its efficiency.

After disassembly of the aircraft is completed, the fuselage is towed to an assembly dock. Here, orderly return of the accessories and components begins. With the "dock system," planes are placed in one spot for the entire assembly operation. Men and material move to the aircraft rather than vice versa. This is in contrast to an assembly line technique by which the planes are moved from shop to shop for the various stages of assembly.

When the final part is in place, the aircraft is moved to a building at the end of the outside area if painting is required. Finishing touches there include application of epoxy-polyimide and final baking of the aircraft in a curing oven. Later, if necessary, planes are put through a series of weight and balance tests. Ground check by a combined military and civilian crew follows. W.C. Brown, AEC, leading chief in this section, supervises these checks. Finally, aircraft are test flown by O&R pilots.

Jim Moore, a Production Controlman, perhaps best describes the feelings of those assigned to Area H. He says, "I like the fresh air and sunshine here. I'd feel cooped up in a closed shop. I like it this way."

# SELECTED AIR RESERVE



**A LOT OF GOLD** shone when these 12 Reserve Captains from Air Wing Staff 87, Alameda, were photographed at Point Mugu where they had completed a special Space and Astronautics course. Seated (L to R) are Capts. Raymond Hemming, Alan Hargrave, Karl Drexel, O. J. Banks, H. M. Bridgeman, T. H. Dutcher, R. S. Linari, Paul Von Kemp; (standing) D. L. Watts, Jr., H. F. Weidman, and Robert White.

## Flexible Air Support Displayed

On July 5, the Marine Corps Air Reserve displayed its ability to deploy entire squadrons of tactical jet aircraft thousands of miles within hours. Simultaneously, VMA-233 with ten A-4 *Skyhawk* aircraft from Norfolk took off for MCAS YUMA, Ariz., and VMA-123 with 12 *Skyhawks* set off from Los Alamitos, Calif., for MCAS CHERRY POINT.

Two and a half hours after takeoff, the two squadrons met at 20,000 feet above Kansas where they were refueled in flight by aerial tankers. They continued on their way across the country in opposite directions. Both flights took five hours, including aerial refueling time.

The in-flight refueling of the single-engine *Skyhawks* was accomplished by four KC-130F *Hercules* tankers of Marine Aerial Refueling/Transport Squadron 352, Third Marine Aircraft Wing, El Toro, Calif. The *Hercules* tankers operated out of McConnell Air Force Base, Wichita, Kans.

Commanding Officers of VMA-233 and VMA-123 are LCol. Russell F. Fiske and LCol. John Johnson, respectively.

The feat marked the first time in Marine Corps Reserve Aviation history that two squadrons under the same command have spanned the continent at the same time in opposite directions.

BGen. Hugh M. Elwood is com-

manding general of the Marine Air Reserves. His headquarters are at NAS GLENVIEW, Ill.

## Senator Addresses Graduates

Senator Hugh Scott of Pennsylvania delivered an address to the 70 graduates of the Naval Reserve Officers' School, Class 4-10, in summer commencement exercises at NAS WILLOW GROVE.

Senator Scott holds the rank of Captain, USNR (Retired). During WW II he saw active service in both the Atlantic and Pacific theaters.

Emphasizing the value of the worldwide presence of our naval forces, Senator Scott said, "It is a great thing for the military in this county to have a backstop of militarily trained civilians."

## Scouts Honor Reservist

Richard Wright Koogler, AD1, stationed at NAS WILLOW GROVE recently received "The Order of Merit" for his outstanding service to scouting and his community. It is the highest award presented by a District of the



F. W. KAY, BSA Commissioner, gives award to R. W. Koogler, AD1, for Boy Scout work.





THE NAVAL RESERVE Manpower Center, Naval Training Center, Bainbridge, Md., celebrated its first anniversary June 1. The pictures show: the center before May 1963; headquarters today; and (right) how the records of some 400,000 Reserves and retired personnel are stored.

Boy Scouts of America to a Scout leader.

Koogler became interested in scouting when he was twelve years old and has been a participant ever since, except for WW II. He has been a Scoutmaster in many cities and received other awards for his dedicated service.

His off-duty hours are devoted to scouting. He is the Assistant District Commissioner, Pemmapecka District, Valley Forge Council B.S.A., Pa.

#### Alligator Makes Iceland Trip

When Patrol Squadron 742, commanded by Cdr. R. L. Rodgers, left Florida on its two-week training cruise this summer, its mascot, a five-and-a-half foot alligator, went with them.

*Neptune's Angels*, based at NARTU JACKSONVILLE, also took gifts of citrus plants to the people of Iceland where they had to be put in hothouses heated by volcanic steam.

The alligator, called "Angel," had a special dispensation to make the trip, courtesy of the Florida Fish and Game Commission.

#### A-4 Pilot Scores Mark

Lt. Ron Kordik of VA-878, NAS ALAMEDA, was cited recently when he passed the 1000-hour mark in flying the A-4 *Skyhawk*. Though Lt. Kordik accumulated most of this flight time on active duty with the Fleet, he averaged 22 hours per month in a five-month period as a Reservist.

#### Manpower Center Rolling

The Naval Reserve Manpower Center, Bainbridge, Md., commissioned on June 1, 1963, to improve Navy's personnel mobilization capability has also reduced the cost of defense administration by over \$100,000. But more

important still, the Navy is able to meet the personnel needs and time deadlines of today's mobilization plans.

By the use of the Personnel Accounting Machine Installation (PAM-ICONUS), active duty naval forces can be augmented by 10% on the very first day of a declared national emergency. Within 30 days, an increase of 50% is possible. Within 90 days, active duty forces can be completely doubled.



VADM. FELIX JOHNSON Trophy will be given Naval District high in Reserve performance.

#### New Trophy Approved

The Secretary of the Navy has approved a new trophy to be awarded annually to the Naval District which achieves the greatest improvement in the U.S. Naval Reserve Program during the competitive year. The award is to be known as the Vice Admiral Felix Johnson Trophy in recognition of Adm. Johnson's untiring efforts and outstanding contributions to the Naval Reserve. He gave distinguished leadership to the three Naval Reserve

Evaluation Boards which bear his name (1954, 1956 and 1962).

The award will be presented for the first time during the annual Commandant's Conference in December of this year.

#### Twin City Reservists Abroad

More than 600,000 passenger-miles flown during a two-week period of active duty for training was one of the accomplishments of Fleet Tactical Support Squadron 811 during its recent cruise to Rota, Spain.

Taking off from NAS TWIN CITIES, Minn., under the command of Cdr. Dan W. Colburn, VR-811 flew in three C-54's. During the cruise, the squadron logged 518 pilot-hours plus 300 hours of ground and pre-flight training for pilots and 882 hours of maintenance in the field. The squadron carried 75,000 pounds of cargo while operating in support of the Sixth Fleet in the Mediterranean.



D. C. DANEK, ADR3, waits for supplies and helpers to go to work on a VR-811 C-54.

# AT SEA WITH THE CARRIERS



CADETS FROM the Air Force, Coast Guard and Army, visiting the Yorktown, listen to a briefing aboard from Capt. James P. Lynch, C.O.



MARINES in Bennington present a marching exhibition on pier at Kobe, Japan, during an open house. More than 8000 guests watched.

## PACIFIC FLEET

### BENNINGTON (CVS-20)

OFF-DUTY at sea-time in the *Bennington* "ain't boring" for the small detachment of Marines aboard. They take to the books. Capt. John P. Senik, USMC, commanding the detachment, tallied up last fiscal year's participation and came up with an impressive, typically Marine result.

Men in the detachment completed 249 Marine Corps Institute correspondence courses during the year. Subjects taken proved interesting. The Corrections course for Brig Sentries topped the diploma list with 59 successful completions. This was followed in popularity by 50 completions of the Rocket Launcher and Flame Thrower course. Map Reading accounted for 49 certificates, and 38 Marines completed Tactics of the Marine Rifle Squad. Other courses, ranging from Correspondence Practices and Spelling to Auto Mechanics and the M-60 Machine Gun, added to the record total.

There are two officers in the detachment and 62 enlisted men. This number is supplemented by five orderlies assigned to Staff, Commander

Antisubmarine Warfare Group Five aboard.

Practical factors might have presented a problem to some in studying these courses at sea. But Navy men in the *Bennington* can view with apprehension the latest educational excursion undertaken by their Marine buddies. The entire detachment is currently studying a new course, Operations against Guerrilla Forces.

### YORKTOWN (CVS-10)

Capt. Raymond S. Osterhoudt relieved Capt. James P. Lynch as Commanding Officer of *Yorktown* during change of command ceremonies.

### HORNET (CVS-12)

*Hornet*, now in dry dock at Hunter's Point, San Francisco, is undergoing a six-month overhaul period. She had steamed over 150,000 miles since her last yard period in 1960 at Bremerton, Wash. The carrier is scheduled to get the latest electronic gear and new messing and recreation facilities.

In mid-July, Capt. Mayo A. Hadden, Jr., relieved Capt. J. I. Hardy as commanding officer of CVS-12.

### BON HOMME RICHARD (CVA-31)

Latest active aircraft carrier to join the select roster of those boasting 100,000 or more arrested landings is the *Bon Homme Richard*. There are only four others: *Coral Sea*, *Essex*, *Franklin D. Roosevelt*, and *Lexington*.

The record landing was made by Cdr. D. B. Shelton, CVW-19, while the carrier steamed toward the Philippines after her successful Indian Ocean cruise as flagship for the Concord Squadron. Cdr. Shelton made the landing in an A-4C *Skyhawk*.

### CONSTELLATION (CVA-64)

Wet but uninjured, William T. Webb, HM1, returned to the flight deck of the *Constellation* after a brief, unexpected departure. He had been blown overboard by a jet's exhaust when the aircraft made a turn. Almost as soon as he reached the water, the ship's rescue helo was hovering above him, the rescue sling lowering. Said he of pilot Ltjg. Kenneth O'Gorman and his crew, "Man, they're great!"

Increasing the carrier's tailhook tally, Ltjg. Robert D. Rudolph of

VAP-63's Foxtrot Detachment upped the successful arrested landings aboard to 26,000 when he brought aboard an RF-8A *Crusader*.

## KEARSARGE (CVS-33)

In answer to a mythical request made by the make-believe government of the independent and peaceful nation of Hahwyee, after the country had been infiltrated by guerrillas, saboteurs and terrorists of Bloc Nations, *Kearsarge* took part in Exercise *Tool Box*. There were 23 other ships participating, in addition to two battalion landing teams of the First Marine Brigade's Fourth Regiment.

*Tool Box* was a two-day amphibious assault exercise conducted near MCAS KANEHOE BAY.

After the exercise, *Kearsarge* embarked screen star John Wayne for a five-day indoctrination cruise from San Diego to Honolulu, during which the actor obtained background for his forthcoming film, "In Harm's Way."

Two NAS NORTH ISLAND sister squadrons, VS-21 and VS-29, deployed with the *Kearsarge* for her West-Pac cruise. They were joined by HS-6 from Ream Field and Detachment Romeo from Carrier Airborne Early Warning Squadron 11. These units comprise CVSG-53.

At Pearl Harbor, Capt. Charles P. Muckenthaler relieved Capt. Paul N. Gray as commanding officer of the carrier. The ship then got underway for her ninth Far East cruise.

A week later, an HS-6 *Sea King*



**KEARSARGE** men get first line over in night time recovery of a downed SH-3A *Sea King*.

was forced to ditch. The pilot, copilot, and two-man crew were picked up by the destroyer escort *Hooper* in rough seas. *Kearsarge* immediately set about to recover the helicopter. About two hours later, the carrier was successful. According to sources aboard CVS-33, this recovery is believed to be the first "save" of a downed SH-3A in open seas and it "is certain to be the first night operation of its kind." The carrier received a "well done" from CNO.

## CORAL SEA (CVA-43)

VA-153 set a new squadron record on the *Coral Sea*, for flight hours in a month. The new mark was set in June when the unit logged 778 hours

for the month. Its old record was set in April 1962 at NAS ATSUGI when 762 hours were recorded for the month.

The last F-3B *Demon* carrier arrested landing in the Fleet was made aboard the *Coral Sea* by Ltjg. W. M. McGuigan of Miramar-based VF-161. Lt. Frank Gallagher was the controlling Landing Signal Officer for the final *Demon* landing.

## HANCOCK (CVA-19)

Key men in the Argentine Defense Ministry were hosted aboard the *Hancock* by Capt. Arthur J. Brassfield, commanding, and VAdm. P. D. Stroop, ComNavAirPac, when the carrier was at San Diego. The visiting party included Dr. Leopoldo Suarez, Argentine Minister of National Defense; BGen. Adolfo T. Alvarez, Chief of Argentine Delegation to the Inter-American Defense Board, LCol. Francisco Cabrera, Air Force Aide to the Minister; and Cdr. Manuel Jacinto Garcia, Naval Aide to the Minister.

First aircraft to launch from the *Hancock* in seven months, an A-4C *Skyhawk*, was piloted by Ltjg. Gene Gilverson of VA-212. The carrier had been in San Francisco Naval Shipyard for major overhaul.

On July 1, Miramar-based VF-24 was redesignated VF-214 and joined Air Wing 21 assigned to the *Hancock*. The squadron, commanded by Cdr. C. K. Price, had recently returned from Seventh Fleet deployment in the *Midway*. VF-214 is replacing VF-213 in CVW-21. VF-213 is the



**AIRCRAFT** in the *Coral Sea* are readied for a strike against a simulated aggressor during an early morning operation while at sea.



**THE CATAPULT** officer gives the "go" sign to *Skyhawk* pilot Ltjg. Gilverson in the *Hancock* during the first launch in seven months.

last of the *Demon* squadrons and has been assigned to the administrative control of Replacement Air Wing 12 while transitioning to the F-4B *Phantom II* interceptor. After transitioning, VF-213 will be assigned to CVW 11 as VF-116.

## IWO JIMA (LPH-2)

Three MAG-36 squadrons made a total of 1126 landings aboard *Iwo Jima* in four days, qualifying 142 pilots in day carrier landing and 110 in night landings. The MCAS EL TORO-based squadrons are HMM-362, HMM-363 and HMM-365.

HMM-363 led the parade, both in landings and in number of pilots qualifying, with 62 qualifying in day and 32 in night operations. The squadron made 296 day landings and 171 night, for a total of 467.

HMM-365 was a close second with 46 day quals and 44 night, on 211 day landings and 248 night, for a 459 total.

HMM-362 had the best over-all percentage, qualifying 34 pilots in both day and night landings out of 34, including Col. J. B. Winters, MAG-36 Commanding Officer. The squadron made 86 day landings and 114 night for an even total of 200.

## KITTY HAWK (CVA-63)

It was bound to happen sometime. *Kitty Hawk* decided it might as well be now and, pow! they did it. The carrier is now televising boxing smok-

ers over the ship's closed circuit TV. At the time, no other carrier could match that programming.

Ship's paper in the HMS *Victorious*, a British aircraft carrier, carried the following news item:

'Our splash target [towed bombing spar] and smoke floats were subjected to constant attack by U.S. aircraft [from the *Kitty Hawk*] throughout the day—60 sorties in all.

"The full range of weaponry was brought to bear, including rockets, bombs, guns and napalm. The latter provided the most spectacular goofing coup [show] of the day when four *Skyraiders* made the sea boil astern of us with their impressive burst of flame. Altogether a vicious weapon.

"The other aircraft to attack were *Skyhawks* and *Skywarriors* [from VAH-13], the latter being particularly accurate on their bombing runs.

"One pilot, having been congratulated by Flyco [Prisfly] for being bang on [bullseye] with his bombs, remarked laconically, 'Just average.'"

While moored at Yokosuka, *Kitty Hawk* played host to a troop of far-venturing American Sea Scouts from Washington and Oregon. The boys arrived in the Far East aboard the MSTS ship *Breckenridge*, "working" their way over by attending training lectures each morning and working with crewmembers each afternoon.

In readying for their return to the U.S. after being away for the better part of a year (more than 160 days

at sea and over 90 in foreign ports), men aboard the *Kitty Hawk* prepared a giant pennant. It measures as long as three and one-half football fields and will stream from the island structure when the carrier steams into her home port, San Diego. It is colored red, white, and blue, and measures 1069 feet. By naval tradition and instruction, any ship returning to the U.S. after nine or more months may fly such a pennant from her mainmast. The length is determined by the number of crewmembers aboard (one foot for each man), but may not exceed the length of the ship.

## MIDWAY (CVA-41)

The heroic actions of two men in the *Midway* (reported in NANews last July) have been honored by presentation of special helmet awards and certificates from the Kanagawa (Japanese) Public Safety Commission.

Lyle G. LePage, AB3, and Gerald N. Hanley, AN, received the awards from Capt. Whitney Wright, commanding the carrier, during a shipboard inspection. The two men had rescued a five-year-old girl from the icy waters of the Yokosuka water front and modestly refrained from reporting it.

The Japanese helmet replicas represent bravery and courage.

## ORISKANY (CVA-34)

*Oriskany* can probably claim the fame of being the only attack carrier in the Pacific Fleet with a crew that is manning both the ship and a Naval Landing Field.

While the carrier is in the Puget Sound Naval Shipyard, 22 men from various departments aboard *Oriskany* comprise the ground crew of the Naval Auxiliary Landing Field, Kitsap, located nine miles south of Bremerton.

The detachment's mission is to maintain the carrier's planes and any other military planes that land at the field. Aircraft from NAS WHIDBEY ISLAND with passengers for the Bremerton area, transport planes under military contract with supplies for the shipyard, and reserve aircraft from NAS SAND POINT use the field. About five flights a day go in and out of the field. *Oriskany's* plane flies two shuttle runs a week to San Diego.

LCdr. W. H. Beck, Assistant Air Operations Officer in CVA-34, is



LONG DOES SHE WAVE, the homecoming pennant of the USS *Kitty Hawk* being unfurled. Aerographers aboard help with several weather balloons. Entire pennant measures 1069 feet.



**RADM. BERNARD STREAN** (R) was on hand when Lt. Raymond Reedy (L), Ltjg. Boyer and Lt. Jones became Double Centurions on Big E.



**LCDR. N. L. JETER** (R) poses with copilot Lt. Jerry Walston (L) and crew chief J. Simone, ADR2, after Boxer's 47,000th below landing.

OinC of the detachment. The 22-man crew is comprised of a 14-man crash crew, a hospital corpsman, one aircontrolman, one cook, an aerographer, three plane captains, and leading petty officer Dick Anderson, ABH1. Richard Look, ADRC, attached to the Operations Department of NAS WHIDBEY, is custodian of the Navy facilities at the field and serves there in a permanent duty status.

### RANGER (CVA-61)

Reconnaissance Attack Squadron Five ferried six RA-5C *Vigilantes* from NAS SANFORD to NAS ALAMEDA for deployment aboard the *Ranger*. In so doing, RVAH-5 became the first East Coast unit in recent times to deploy aboard an aircraft carrier in the Pacific Fleet.

As the *Vigilantes* were setting their sights on the San Francisco Bay area, transports were launched from Sanford, carrying 270 maintenance technicians, administrative personnel, storekeepers, and support personnel.

Aircraft and personnel were loaded aboard the *Ranger* almost immediately.

### TICONDEROGA (CVA-14)

Latest hero aboard the *Ticonderoga* is a dark green frog named Fearless Freddy. The leaping amphibian leaped higher than his distant cousin did in Calaveras County, California.

The frog was discovered and caught by Airman James M. Dosch of VF-53 while refueling an F-8 *Crusader* at sea. Apparently, it had jumped into the plane's wheel well at NAS CUBI POINT, Philippines. The plane landed

aboard the carrier and was flown later by Ltjg. Richard P. Paschall who made a night time takeoff and landing. Before discovery, the frog survived  $-10^{\circ}$  to  $-20^{\circ}$  temperatures at high altitudes, flew in excess of 1000 mph, and sustained the wrenching jolts of two carrier-arrested landings. The prize for its unasked-for endurance trials is a warm box in the ship's pilots' ready room.

Before Capt. John P. Weinel turned over command of the carrier to Capt. Damon W. Cooper, Ltjg. William E. Covington, III., qualified him as a member of the Ten Thousand Trap Club. Ltjg. Covington, assigned to VA-56, making his first landing aboard the *Ti*, logged the 10,000th landing aboard since Capt. Weinel assumed command in July 1963. He made the landing in an A-4E *Skyhawk*. It was the 62,289th landing aboard.

### VALLEY FORGE (LPH-8)

After Philippine President Maca-

pagal and VAdm. Thomas H. Moorer, Commander of the Seventh Fleet, witnessed the SEATO Exercise *Ligtas* aboard, VAdm. Moorer extended a "well done" to the *Valley Forge*.

He said, "President Macapagal, his party and I were impressed not only with the smart appearance of all personnel and equipment, but also by the professional manner in which you operate. Basic to this, however, is the obvious pride and enthusiasm with which all hands tackled their jobs. It is a personal pleasure to have you in the Seventh Fleet."

## ATLANTIC FLEET

### ENTERPRISE (CVAN-65)

An item in last month's "At Sea" pages, under *Enterprise*, was prophetic. It described practice emergency rescue operations by Air Wing Six pilots. The last sentence read: "Since every sailor on board is a potential man



**SALUTING THE CITIZENS** of Quebec City, Canada, during an official visit, men aboard the *Randolph* spell out "Hi Neighbor." Some 1200 sailors participated in the flight deck greeting.

overboard, the demonstration and explanation provided valuable training for all hands."

Acting as bowhook in a liberty boat at Genoa, Italy, John F. McCarthy, SA, was swept overboard by a sudden swell. Ltjg. Gerald Jacobson dove to his aid. Both were wearing life jackets and were returned to safety.

Ltjg. Gene Merriman of VA-64 made the 36,000th landing aboard the *Big E*.

Heavy Attack Squadron Seven established a new record for *Vigilante* squadrons. *Pacemaker* pilots flew 720 hours in 17 operating days. Pilots and bombardier-navigators flew 284 sorties and completed 575 scored bombing runs during numerous simulated strike missions.

At the Navy-operated Radar Bomb Site, Naples, VAH-7 accomplished 183 scored runs. In one 12-hour operating day, the squadron flew 67 hours.

## FRANKLIN D. ROOSEVELT (CVA-42)

The *Franklin D. Roosevelt* was featured in a dramatic, one-hour television last June on NBC's "Dupont Show of the Week." Titled "Flight Deck," the film realistically portrayed *FDR* men in action during a full day's flight operations. Cameras caught crewmen and airplanes from a variety of angles and particular emphasis was focused on the catapult crews as they readied aircraft.

Background music, rhythmically in tempo to the movement on the deck, added to the impact of the film. There were also in-flight shorts of air group

planes making dive bombing runs or "plugging in" during refueling exercises. Landing sequences, both day and night, were accompanied by actual transmissions between pilots and LSO's or CCA controllers.

Narrated by NBC correspondent Frank McGee, the program was a subtle, yet impressive tribute to the men who work on today's aircraft carriers.

Capt. Malcolm W. Cagle assumed command of the *FDR*, relieving Capt. G. E. Miller in ceremonies aboard.

## LAKE CHAMPLAIN (CVS-39)

VS-22 successfully completed 7000 accident-free carrier landings aboard the *Lake Champlain* while conducting carrier qualifications and refresher landings. The squadron recently completed 25,000 accident-free flight hours and boasts of no flight accidents or serious incidents since it was commissioned in May 1960.

## SHANGRI LA (CVA-38)

HU-2 completed transition to the UH-2A *Seasprite* when Detachment 38 landed three of the new helos aboard the *Shangri La*. The transition began in December 1962.

Relieved in the Med by the *FDR*, *Shangri La* averaged 8400 miles and 1000 catapult launchings a month during her deployment. Between at-sea periods for operations, the carrier's crew visited the French and Italian Rivas, Palm de Mallorca, Messina (Sicily), Malta, Barcelona, Taranto

(Italy) and Naples. The islands of Sardina and Crete were sites for two fleet anchorages during which the carrier and other Fleet units anchored for relaxed schedules and routine repair.

## SARATOGA (CVA-60)

In the X000th landing department, LCdr. J. B. Dunn of VAH-3 scored the 87,000th in an A-5 *Vigilante*, and 1st Lt. Laurence A. Stults, USMC, of VMA-224, logged the carrier's 88,000th, in an A-4C *Skyhawk*.

The "Fighting Cock," the ship's emblem, came alive for men in the *Sara* when Capt. John E. Lacouture, C.O., accepted an 11-pound rooster from Mr. Hulan Hall of Vantress Farms, Duluth, Ga. The ship's emblem was established in the War of 1812 when one of several cocks aboard the corvette *Saratoga* spurred the men to victory over a much larger British ship.

Captain Lacouture is another mem-



THE FIGHTING COCK is held by Capt. Lacouture, donated to *Sara* as a new ship's mascot.

ber in the exclusive Ten Thousand Trap Club. In the first nine months of his command the 10,000th arrested landing was made, handily qualifying his membership.

## BOXER (LPH-4)

*Boxer* completes a three-month deployment to the Caribbean this month. She visited Guantanamo, Puerto Rico, Jamaica, the Virgin Islands and other Caribbean ports during the operational/training period.

The 47,000th helicopter landing aboard was made by LCdr. N. L. Jeter,



MAJESTICALLY PASSING New York City's famous skyline and greeted by welcoming sprays from harbor tugboat, *USS Independence* arrives for a brief holiday visit, with deck rails manned.

# 'INJUNS, BRAVES AND METALLIC VITAMINS'

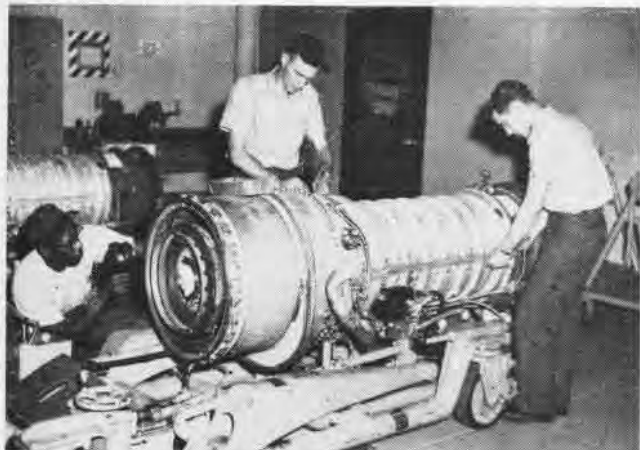


'BRAVES' N. W. Ream and J. M. Thomson, both AA's, work together in pulling a GTC 85-72 compressor unit during periodic inspection.

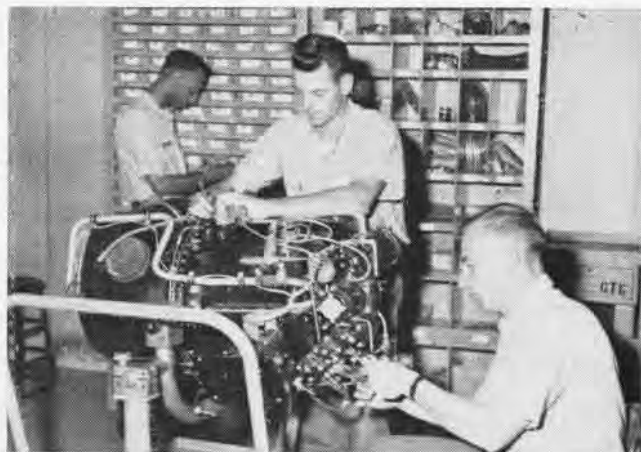
AT NAAS MERIDIAN they call it the "Injun Camp." In reality, it's the jet shop, a unit of Cdr. Ronald M. DeBaets' Aircraft Maintenance Division. The well-motivated mechs who help keep Meridian's T-2A *Buckeyes* flying like to use Indian phrases during their daily work routine. An "Injun," for example, is the J-34 engine. A "Brave" is a mechanic while a "Warrior" is a shop supervisor. The "Metallic Vitamins" define supply parts and the "Chief," of course, is the Chief.

Primarily, men in the "Injun Camp" maintain the J-34's and starting units for VT-7 and VT-9, basic training command squadrons assigned to train the Navy's future jet pilots. In 1963 alone, 480 power plants were disassembled, inspected and repaired. In the normal cycle of maintenance requirements, the shop handles about two J-34's a day.

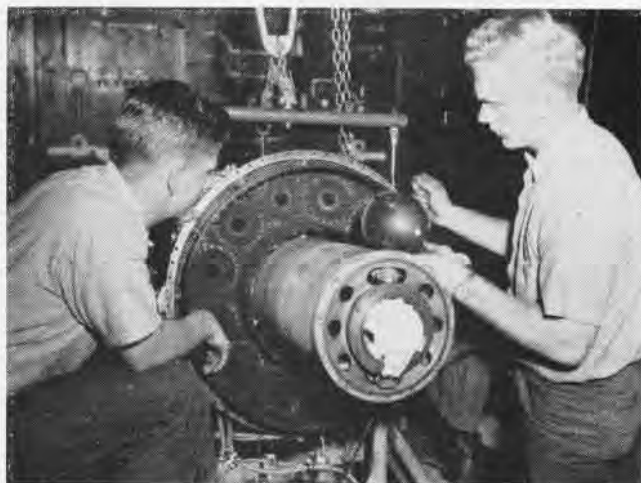
There are 34 men assigned to the unit, 11 of them coming from the squadrons. "Injun Camp," according to Cdr. DeBaets, is "the best jet shop in the Navy. . . . These men are as fine a group of mechanics as you'll find."



J-34 'INJUN' gets the treatment from S. L. Jackson, ADJ3, E. G. Bennett, AN, R. D. McLeod, ADJ3. An engine is checked each 13 weeks.



AT WORK in the "Injun Shop" are Ream (C), W. S. Clausell, ADJ2 (L) and D. R. Jackman, ADJAN. Over 380 tools are available to men.



AA'S C. L. Reese and F. L. Hosley check T-2A engine. Air-conditioned shop is equipped with monorail crane of 10,000-lb. lift capacity.



R. E. DAGEN, AA, checks gear in the shop. Supervising the 34-man group is J. L. Dunn, ADJC. One third of men are squadron personnel.

# STABILITY

Lt. N.F.O'Connor

1 MOST WEATHER PHENOMENA DEPEND ON WHETHER AN AIR MASS IS STABLE OR



UNSTABLE. STABLE AIR IS SUCH THAT IT RESISTS DISPLACEMENT FROM THE LEVEL AT WHICH IT IS FOUND.

2 INSTABILITY IS A STATE IN WHICH IF AN AIR PARTICLE IS GIVEN EITHER AN UPWARD OR DOWNWARD IMPULSE, IT WILL TEND TO MOVE AWAY WITH INCREASING SPEED FROM ITS ORIGINAL LEVEL.



3 THE PROCESS OF OVERTURNING OF UNSTABLE AIR IS CALLED CONVECTION.

THE WEATHER PHENOMENON TYPICAL OF CONVECTION IS CUMULONIMBUS, OR CUMULUS CLOUDS, AND THE PRECIPITATION IS OF THE SHOWERY TYPE.

4 IN AN UNSTABLE AIR MASS THE TEMPERATURE DECREASES AT APPROXIMATELY

1°C PER 100 METERS. IN A STABLE AIR MASS, THE TEMPERATURE CHANGE WITH HEIGHT IS LESS THAN THE UNSTABLE RATE.



5 IN AN UNSTABLE AIR MASS, THE VISIBILITY RANGES FROM GOOD TO UNLIMITED, AND DURING THE DAY, LIGHT TO MODERATE TURBULENCE EXISTS.



THE ATMOSPHERIC SHELL THAT SURROUNDS THE EARTH, IS DIVIDED INTO TWO PARTS; THE TROPOSPHERE, WHICH IS THE REGION WITHIN WHICH ALL WEATHER OCCURS & THE OUTER SPHERES WHICH ARE MARKEDLY STABLE.



## GCA Unit Commissioned Now Official at Roosevelt Roads



VW-4 CONNIE FLIES OVER GCA UNIT #58  
Roosevelt Roads, Puerto Rico, offi-

cially became a station with all-weather capabilities in May when RAdm. H.H. Caldwell, Commandant of the 10th Naval District, commissioned GCA Unit #58. The unit had been operating since September 1963, though not on an official basis. More than 1200 successful GCA approaches have been recorded.

OinC is LCdr. R.K. McDannold.

## Reunion at NAS Seattle Pilots Honor Reserve Squadrons

Seven hundred Naval Aviators and their ladies came up with plenty of plane talk when they met the end of June for the First Annual Pacific

Northwest Naval Aviation Rendezvous. It was held at the Officers' Club, NAS SEATTLE.

It was a get-together of "old-timers" and "space-agers." Though the prevailing atmosphere was one of reunion, the purpose of the Rendezvous was a tribute to the officers and enlisted personnel of Seattle's 18 selected Reserve squadrons and units. A salute was also paid to NAS PENSACOLA, the alma mater of many of those present, on the occasion of its 50th anniversary.

Honor guest was RAdm. C. F. "Dutch" Greber, USN (Ret.), who served as C.O. of NAS SEATTLE from August 1950 to June 1952. Current commanding officer of the station is Capt. Robert F. Peterson.



LT. W. R. GRAMMER receives NAO (Navigator) wings from son Gary, eight, after completing NAS Corpus Christi syllabus. He wears aviator wings earned in 1955. Grounded for poor eyesight, he's now back on flight status.

## NATO Leaders at Keflavik Aviation Might is Demonstrated

Twenty members of the NATO Parliamentary Conference visited NS KEFLAVIK in July to prepare for the annual autumn meeting in Iceland this year.

Government officials from the NATO member countries were honored at a luncheon at which they were briefed by the staffs of the Commander Iceland Defense Force and Commander Barrier Force Atlantic, RAdm. Paul D. Buie, USN.

The guests visited the hangars of the airborne early warning, patrol and fighter interceptor squadrons. They were shown through the big *Super Constellations* of VW-11 and VW-13. The visitors also watched as naval station parachute riggers demonstrated their skill.

Aircraft of the USAF's 57th Fighter Interceptor Squadron were launched to demonstrate defense alert capability.



# Editor's Corner

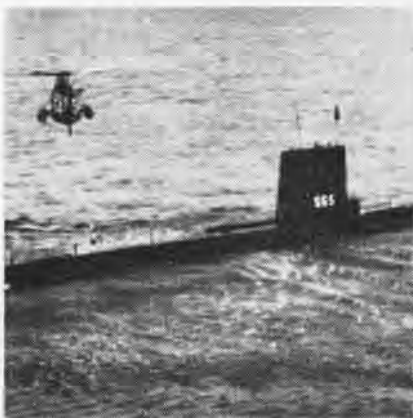
**REACTION OF A VISITOR.** HU-4's *Space Scooter* recently published a letter from a young Swiss student who had been the guest of a helicopter crew aboard the USS *Albany*. Her reaction to the tour is published (in part) here as a back-stiffener for the many personnel who provide frequent escort/guide service to visitors in other ships around the world.

"During all these hours of climbing and wandering about the *Albany*, we got more and more aware of the existence of the U. S. For a foreigner it is difficult to draw an exact picture of what I mean. If I say it makes me feel safe, it comes already pretty near. But the nearest way of expressing it would be to put it this way: It makes me feel positive—as positive as everything the late President Kennedy has left to the whole free world, including that serious will to help each other, always to try the best, never to lose faith or courage, and to stand by, no matter what. Nobody ever should forget what power this so-called 'positive feeling' can be in a world like ours.

"Each crew member is a fully trained specialist in every possible respect. You should have heard them talk about their work. To be proud of one's work is a great thing. I am listening to the tune behind the words and wish many other people in this world would have the same confidence, the same good will, the same faith in what they do. Most of the men are amazingly young, between 19 and 25. Off duty they give nearly the impression to be like everybody else at that age. I said 'nearly' for one good reason—they are (and I believe only an outsider can feel it that strong way) far more serious than the average young men of their age. Definitely there is something about their job which gives them an anticipated maturity."

**New Year's Greeting.** The supply department of HU-1, which has detachments scattered around the world sent the following greeting to squadron members in the July issue of the HU-1 *Chopper*: "Happy Fiscal New Year! Send all reports in on time."

**GOOD WILL GESTURE AT SEA.** After a period of exercises at sea



PIE IN THE SKY

involving Task Force Bravo forces, the C.O. of the USS *Lake Champlain*, Captain C. A. Blouin sent a dozen fresh apple pies to the crew of one of the "aggressor" submarines, the British submarine HMS *Alcide*, "just to assure the British all was well."

**Mailman's Nightmare.** A recent change of command within Carrier Air Wing Two put the postmaster at NAS LEMOORE, Calif., "on his toes." The commanding officers of the three light attack squadrons in CVW-2 now are all commanders named R. Smith. Cdr. R. F. Smith took command of VA-25, joining Cdr. R. S. Smith, VA-22, and Cdr. R. P. Smith, VA-23. (By their middle initials you shall know them?)

**HAVE YOU CALLED MILLIE?** To provide better supply information for Navy and Marine squadrons, the Navy Aviation Supply Office (ASO), Philadelphia, has instituted a telephone-answering system known as MILLIE. During working hours a non-automatic, "very much alive brunette" who answers to "Millie" is available to answer questions about Navy stock lists. On weekends and at night an automatic answering tape is available to callers. The alive Millie has at her disposal a complete set of stock lists as they exist in the field and also a master data file containing the most up-to-date information available. MILLIE stands for "Maximum Interchange of the Latest Logistics Information is Essential." ASO is expect-

ing that MILLIE will receive an increasing load of calls from the field. "Field personnel now have a shoulder to cry on," says ASO.

**Sign of the Times.** Advertising for a volunteer officer to fill a billet as Assistant Group Aviation Safety Officer, the MAG-26 *Safety Raiser* listed a number of "Fringe Benefits" that go with the job. Included were "inexpensive coffee mess," and "use of a public pencil sharpener."

**WHY NUCLEAR POWER?** USS *Enterprise* (CVAN-65) averaged 1153 aircraft landings every month during its first 26 months of duty. Asked how this fast pace could be maintained, RAdm. William I. Martin (then flying his flag aboard the carrier) replied:

"With our nuclear propulsion, we spend much less time alongside tankers because nuclear carriers require only aviation fuel. Our capability for higher sustained speeds means shorter transit times to and from operating areas. The greater acceleration and deceleration rates of nuclear carriers enable them to operate aircraft in confined areas where conventional carriers could not because they would have too little sea room to attain operating speeds. Consequently, we have longer periods available to do just what we were designed to do."

**Someone was Thirsty?** NAF KENTRA, Morocco, had a major plumbing mystery on its hands recently. For unaccountable reasons (all valves, overflows, etc., were checked) the water level of the facility's pool was down two feet one morning; this meant that a quarter million gallons of water had disappeared overnight. Even the drainage area was dry. "When last heard from," a press release said, "base police were looking for a person carrying a 250,000 gallon water bucket."

**THE BIG DIFFERENCE.** Reporting as plane guard for the nuclear-powered carrier, USS *Enterprise*, the destroyer USS *Massey* sent the following on-station message:

To guard your birds we now report:  
(and also get some parts support.)  
We're proud to work with what we heard

Is just about the latest word.  
Two decades old but don't be fooled,  
We're fit and spry, though fossil fueled.



**FAMILIAR?** If this picture is, you are an Old Subscriber. It was the first NANCUS cover when the name was changed from "BuAer News" in September 1943. It shows a target sleeve wound for takeoff at Corpus.

## Losers Become Winners Jax Men Ahead in Bulge Battle

Personnel at NATTC JACKSONVILLE are winning the "Battle of the Bulge." A weight clinic, supervised by Lt. J. W. Brough, senior medical officer, has improved the general health, physical condition and appearance of 386 men, 88 of them Marines. The participants in the weight reduction program have lost a total of more than 5000 pounds.

Most overweight personnel are initially detected when they check into the medical department at NATTC. Individuals are examined to determine if obesity is secondary to an under-

lying abnormality. If none is found, the individual receives proper dietary instructions, appropriate exercises within his capabilities and is checked again weekly. Once he demonstrates his ability to lose one pound per week he reports for checks on a monthly basis.

On the other hand, the man who does not make acceptable progress may be called upon to perform extra physical exercise and receive further dietary instruction on Saturday mornings.

One man has already lost 53 pounds in the battle against obesity. The average for the group is 13 pounds.

Among the total of weight-losers, 92 have lost more than 20 pounds each.



**CDR. D. B. SHELTON**, Commander Air Wing 19, referees as Cdr. Billy Philips, C. O. of VA-194 (L) and Cdr. Jack L. Snyder, VA-191 skipper (R), baste over AirPac's Battle Efficiency E Award for F-8 squadrons. In the end, the prize went to VF-191. Both squadrons are in Far East in Bonny Dick.



**CANADIAN AND U.S. S-2 Trackers** fly in formation over RCNAS Shearwater, Halifax, Nova Scotia. VS-914, based at NAS South Weymouth, joined their northern neighbor counterparts, VS-880, for 2 weeks training in which they exchanged knowledge of operational procedures.

## Chief's Article Featured Describes Duties of Navy Rates

O. D. Link, Jr., Chief Signalman attached to Helicopter Squadron 821, NAS NEW ORLEANS, has had an article he wrote on office occupations for Navy personnel featured in *Business Education World*, May 1964 issue. In six pages, Chief Link covered the duties of the administrative rates currently assigned in the Navy.

## Mark Scored by the VS-22 Unit Totals 25,000 Safe Hours

Air Antisubmarine Squadron 22 has recorded its 25,000th accident-free flying hour since it was commissioned in May, 1960. Based at NAS QUONSET POINT, the unit reached the mark at the end of fiscal 1964. The squadron operates from USS *Lake Champlain*, the Navy's only straight-deck carrier, and is commanded by Cdr. Cecil R. Vollmer.

Participants in the recovery of astronaut Alan B. Shepard after a sub-orbital flight and in the Cuban quarantine of 1962, VS-22 has also won the Naval Air Force, Atlantic, Aviation Safety Certificate three times. This award was presented to the unit twice individually and once as part of the *Champ's* air group. The squadron also helped CVSG-54 win the 1962 "Red Rooster" award for excellence in ASW operations.

The VS-22 sub-hunters share praise along with the five other Quonset-based ASW squadrons who completed a year's flying with accident-free operations: VS-32, VS-34, VS-39, VS-28, and VS-31.

## Helo Safety Mark Noted HS-3 Flies 25,000 Safe Hours

Helicopter Antisubmarine Squadron 3 marked its 25,000th accident-free flying hour in July while operating aboard the USS *Intrepid* in the Mediterranean. LCDR. A. D. Fox, the pilot, and Ltjg. N. D. Taylor, copilot, were at the controls of an SH-3A *Sea King* on the flight which put the squadron's flight hours at the historic figure. HS-3 began this achievement in 1960.

Cdr. K. L. Morse is skipper of HS-3 which won the CNO Safety Award last year, the first time for an SH-3A squadron, along with the Battle efficiency "E," the Isbell Award and the "Red Rooster" award for ASW work.



## SQUADRON INSIGNIA

# CVSG 56

Carrier Antisubmarine Air Group 56 flies by the motto noted on its insignia—*Circare, Locare, Demoliri*. Composed of four units, the sub fighters deploy aboard the USS Intrepid (CVS-11). VS-27 and VS-24 fly S-2 Trackers; HS-3 operates with SH-3A Sea King helicopters; and VAW-33's Detachment 11 flies the EA-1E Skyraider. CVSG-56 has won the 'Red Rooster Award' given by Rhode Island's Navy League and, with the Intrepid, was awarded the ASW 'E.'



VS-27

VAW-33



VS-24



HS-3





# LIGHT THE UPHILL WAY

An astute educator once said, 'SUCCESS is the top of a mountain—you can't expect to reach it without an effort. You have to DO SOMETHING, move forward a step at a time, to get to the top.' Advancement in the Navy is a step-by-step program, too, each higher level requiring more knowledge, each new crow imposing a greater responsibility. The U.S. Navy has an outstanding educational program which provides all the tools necessary for success. But individual progress 'up the hill' still depends on individual effort. Are YOU doing something? Start the next step up right now—the view from higher up the mountain is always better. Don't just sit there! . . . Move Up.

NAVAL AVIATION

**NEWS**