NAVAL AVIATION NEWS

45th Year of Publication

MAY 1964

NavWeps No. 00-75R-3

THE NAVY GOES TO THE FAIR

Men, women and children of all ages 'fly' a jet bomber to a landing aboard an attack carrier. They scramble on to the beach with a wave of Marine assault troops. And they submerge to the ocean depths aboard a Polaris submarine. How? By means of 'Cine-Globe Cruiser,' a feature attraction at the Navy-Marine Corps Exhibit in New York's 1964 World Fair (see p. 20). Above, men of the USS Forrestal pose for helicopter-borne, wide-angled camera lens. When CVA-59 was deployed in the Caribbean last winter, it helped film sequences being seen each day at the Fair.

■ COVERS

Naval Aviation News is indebted to Sikorsky Division of United Aircraft for the front cover shot of the VH-3A Sea King hovering over the Jefferson Memorial, Washington, D. C., and to NAS Seattle, Wash., for the picture used on the back cover of this issue.

NAVAL AVIATION NEWS

Selected BEST INTERNAL PERIODICAL 1963-64 by Federal Editors Assoc.

FORTY-FIFTH YEAR OF PUBLICATION MAY 1964

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■ THE STAFF

Issuance of this periodical approved in accordance with Department of the Navy Publications and Printing Regulations, NAVEXOS P-35

Published monthly by Chief of Naval Operations and Bureau of Naval Weapons to disseminate data on aircraft training and operations, space technology, missile, rocket and other aviation ordnance developments, aeronautical safety, aircraft design, power plants, aircraft recognition, technical maintenance and overhaul procedures. Send mail to Naval Aviation News, OP 05A5, Navy Department, Washington 25, D.C. Office located at 3704 Main Navy Bldg.; telephone Oxford 62252 or 61755. Annual subscription rate is $2.50 check or money order ($1.00 additional for foreign mailing) made payable and sent to Superintendent of Documents, Government Printing Office, Washington 25, D.C. Single copy costs $.25.

NAVAL AVIATION NEWS

It's a Pensacola Year

Under SecNav Urges Cooperation

Under SecNav Paul B. Fay, Jr., has declared 1964 a commemorative period for celebrating the 50th anniversary of NAS PENSACOLA.

In SecNav Notice 5060, dated Feb. 12, Mr. Fay points out that the original date of founding occurred on January 20, 1914, when "the USS *Mississippi* steamed into Pensacola Bay, with the whole of Naval Aviation embarked, to establish and conduct a Navy Flying School."

In authorizing official recognition of this event, Mr. Fay designates 1964 as the 50th anniversary of the "Home of Naval Aviation" and urges that all commands recognize and assist, whenever and wherever appropriate, NAS PENSACOLA's observance of this half century of training. Recognition of the exploits and achievements of Navy Pensacola and Naval Aviation training are to be noted in public speeches, statements, open house ceremonies and other public events which take place this year. (See anniversary story, "Pensacola Celebrates Fiftieth Year," in January 1964 issue of NANEWS.)

Naval Aviators Honored

Texas DAR Gives Engraved Watches

On March 27 at NAS CORPUS CHRISTI, the Texas Society of the Daughters of the American Revolution made awards for the ninth consecutive year to three of the four honor students of the Naval Air Advanced Training Command. The fourth received his award at his duty station.

Each of the four made the highest over-all scores for 1963 in his flight specialty. Winners were:

Ens. William M. Myers, USNR, who completed his jet fighter/attack training with VT-26, NAAS CHASE FIELD last August, is assigned to VF-142.

Ens. Clarence L. Stein, Jr., USNR, who trained with VT-27 at NAAS NEW IBERIA, La., in carrier-based ASW aircraft, completed his course of instruction in May 1963. He is now assigned to VS-23 at San Diego.

Ltjg. Robert A. Burt, USCG, who completed multi-engine patrol plane training in July 1963 with VT-29, NAS CORPUS CHRISTI, is now attached to USCG Air Station, San Diego.

Ltjg. Porter L. Pierce, who completed his training in single-engine attack aircraft with VT-30, NAS CORPUS CHRISTI, now serves with VA-25. Unable to attend the ceremonies at Corpus Christi, Lt. Pierce received his award at his duty station in California.

Mrs. John Esten Hall, State Regent of the Texas DAR, presented gold engraved watches to the three young fliers who attended the ceremonies.

FAA Proposes New APC

Two-Layer Airways Also Suggested

The Federal Aviation Agency has made two proposals regarding airways structure designed to improve today's increasing traffic flow. One is the establishment of a two-layer route structure which would eliminate the present "intermediate airways." New levels would be set generally 1000 feet above the surface to 18,000 feet. The upper layer would encompass altitudes from 18,000 to 45,000 feet for jet routes. Above 45,000 feet, operations are on a random routing basis.

The second proposal entails lowering of Area of Positive Control (APC) from 24,000 to 18,000 feet in an area which runs across the major portion of the United States from New York to California. This segment of APC covers all or parts of 31 states. The additional airspace would be controlled by 12 FAA centers responsible for traffic in the area from 18,000 to 60,000 feet.

It was originally planned to complete the lowering of the APC to 18,000 feet throughout the U.S. by January 1965. This goal has been extended to allow for further study. Public comments on both proposals are to be submitted by May 13, 1964.

Elimination of the "intermediate airways" layer would reduce pilot/controller workloads since navigation check points and radio reports are reduced.

Skywarrior in New Role

To be Used as 'Flying Laboratory'

A Navy A-3B *Skywarrior*, powered by two Pratt & Whitney J-57 engines, has been converted into a "flying laboratory" by Douglas Aircraft.

Instrumented with optical and infrared sensor devices, it will be used to observe characteristics of vehicles reentering the earth's atmosphere. A turret was installed on top of the forward fuselage to house optical sighting equipment. The aircraft interior was transformed to provide for installation of complex monitoring systems.

The aircraft will be pre-positioned 35,000 feet over the Pacific Missile Range to take advantage of the clearer atmosphere for observations.

The A-3B is part of Project *Press* (Pacific Range Electromagnetic Signature Studies), a DOD program.

Flashers Now on RA-5C

Sanford Gets Photographic Units

The Navy has received new aerial photographic flasher units which may briefly make evenings a little brighter for residents of Sanford and Orlando, Fla., and, eventually, much of the southeast U.S. The new flashers are

installed on RA-5C *Vigilantes* at NAS SANFORD.

Two electronic flasher pods are mounted under the wings of each aircraft. Used instead of flares on night photo missions to illuminate the ground, they operate for fractions of a second at a time.

Officials of Sanford's Heavy Attack Wing One say the flashes are so brief that residents may not even notice the illumination unless they happen to be looking directly at the aircraft.

Most of the training flights using the flasher units are flown at relatively low altitudes over sparsely populated areas. Flights are expected to continue periodically in the future as *Vigilante* flight crews prepare for deployments with carrier forces in the Atlantic, Mediterranean and Pacific.

THE NORTH AMERICAN'S T-2B BUCKEYE HAS 6000 POUNDS THRUST, 540 MPH TOP SPEED

T-2B Buckeyes Ordered

Contract Calls for Ten Aircraft

North American Aviation's Columbus, Ohio, Division has been awarded a Navy contract for production of ten T-2B *Buckeye* jet trainers. Two prototypes of the plane, an advanced twin-engine version of the T-2A, have been undergoing flight tests since July 1962. First flight of the high performance production T-2B is expected in the spring of 1965.

The major design change in the new *Buckeye* is the installation of two lightweight Pratt and Whitney J-60 engines which develop 6000 pounds of thrust. Together they weigh less than the T-2A's single J-34 which produces 3400 pounds of thrust. The T-2B has a service ceiling of 44,400 feet and a top speed of about 540 mph.

The increased power is expected to enable student pilots to make an easier transition into combat-type planes. Also, the twin-engine design provides a safety feature in case of single-engine malfunction.

T-2A's are now used in the Naval Air Basic Training Command at NAS PENSACOLA and NAAS MERIDIAN, Miss.

THE BELL UH-1E *became the first turbine-powered helicopter to be assigned to an operational Marine Corps unit when it was delivered to Marine Observation Squadron One at MCAF New River, N.C. The UH-1E is designed after the Army's HU-1B and has one main rotor and an anti-torque tail rotor, powered by a Lycoming T-53. With cruising speeds up to 120 knots, the UH-1E can be flown by one pilot, but has the capacity for a copilot and a crew member. The Marines will use it for observation, reconnaissance, target acquisition, command control, casualty evacuation and a wide variety of utility missions, such as wire-laying and liaison.*

Carrier Areas Hazardous

Flight, Hangar Decks Designated

A survey of foot and toe injuries on aircraft carriers indicates that the incidence of accidents is high on flight and hangar decks. Accordingly, designating these areas as hazardous is justified and appropriate safety footwear should be authorized by carrier commanders.

Since the designation of foot and toe hazardous areas is a command responsibility, CNO has notified the Commander of the U.S. Naval Aviation Safety Center that commanding officers should review work operations, work areas, and accident reports to determine if certain operations and areas should be declared hazardous and take steps to insure that personnel involved wear the protective footwear.

GRAMPAW PETTIBONE

Dangerous Duct

A squadron power plants crew, consisting of a division supervisor, plane captain, tractor driver and electrician, was assigned the task of trouble shooting a fire warning light discrepancy on the port engine of an F-4B. At approximately 2000 on a pleasant November night, the tractor driver towed a starting unit to the aircraft which was spotted at the high power turn-up spot.

The tractor driver procured sound attenuator head sets for himself and the supervisor, and the plane captain manned the aircraft for turnup. Although intake duct screens were available, the crew exerted little effort to locate them and proceeded to start the engine without a screen.

The port engine started normally but after a few minutes of operation, the plane captain misinterpreted a nonstandard "light" signal from the supervisor to be the "engine cut" signal and secured the engine. After restarting the engine, the supervisor directed the tractor driver to tow the starting pod to another high power turn-up area.

The plane captain had been operating the port engine at full power for about ten minutes when the port engine fire warning light came on. He

retarded the throttle to idle and the supervisor mounted the aircraft via the ladder in front of the idling engine and took up a position on the starboard intake duct. The electrician manned the aft cockpit and closed the canopy.

The engine was again advanced to full military power. Shortly thereafter the electrician observed the tractor return and park next to the port wing with the lights out, but neither man at the front cockpit saw the driver return to the aircraft on the tractor. A couple of minutes later, the plane captain quickly secured the engine when he heard a loud thump and felt the vibration.

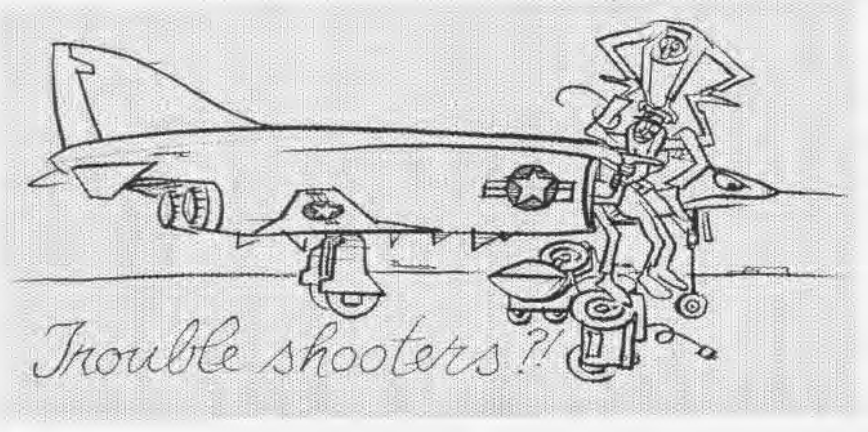
The supervisor, suspecting an afterfire, jumped down from the plane and inspected the tail pipe. He saw the tractor parked by the port wing and promptly went to the intake duct where he found the critically injured tractor driver. He immediately called for the crash crew and ambulance. The medical officer arrived in the ambulance and removed the tractor driver from the intake duct. He was taken to the dispensary for emergency treatment and transfer to the hospital.

Grampaw Pettibone says:

Great heavenly days! It's just down right sickenin' when you think of the number of instructions, directives, procedures, articles and posters that have been put out in an effort to keep this sort of thing from happening. People are briefed, rebriefed, cautioned, and cautioned again. Still we have that well known per cent who refuse to use their heads.

In attempting to conduct maintenance of this type in an unlighted area and allowing full power turn-ups without intake duct screens, the supervisor was just askin' for trouble.

This lad had been warned several times about the inherent dangers of working around jet intakes, but he just wasn't too impressed. As a result he was critically injured and could have easily bought the farm.



Poor Headwork

It was a beautiful California day as two proficiency pilots proceeded to their T-28B for a local flight. After a normal pre-flight, they taxied out and took off. The pilot in the front cockpit was current in the aircraft, but the dual pilot had not flown the T-28 for two years.

They intended to fly locally for a while, then proceed to another military field in the local area and practice landings for a while.

ILLUSTRATED BY Osborn

Takeoff was uneventful, but while climbing to altitude, they experienced radio trouble: the ICS transmissions were being transmitted over UHF. Shortly after leveling off at 6000 feet, the pilot in the front cockpit instructed his dual pilot to take over while he attempted to correct the radio difficulty. He did not receive a reply over the radio, but thought the pilot in the rear cockpit acknowledged by shaking the stick.

While the dual pilot enjoyed the scenery of the California coast line and the pilot in the front cockpit searched for the radio trouble, the little plane entered a descending right bank. As the aircraft picked up speed, the nose came up, but at this point the little bird fell off into a steep right bank, and the nose fell through. Each of the pilots thought the other was flying the aircraft until the speed and angle of bank reached proportions great enough to shock them. Suddenly they both grabbed the controls in an attempt to bring the aircraft back to straight and level flight. When the dual pilot realized the pilot had control, he released the stick.

The pilot climbed the aircraft back to 6000 feet where he checked the slow flight characteristics. During the check, both pilots noted that they had pulled over six positive G's in getting out of the unusual attitude.

Since there was no noticeable airframe damage or, at least, none that they could see from the cockpit, they decided to continue the flight as planned and proceeded to the nearby field for practice landings. After the pilot made five landings, he parked the plane to change cockpits with his dual pilot. When the pilot inspected the aircraft, he noted creases and wrinkles on the undersurface of the horizontal stabilizer. Instead of downing the aircraft for inspection by qualified personnel, the pilots cranked up and flew the little bird to their home base where they reported the damage.

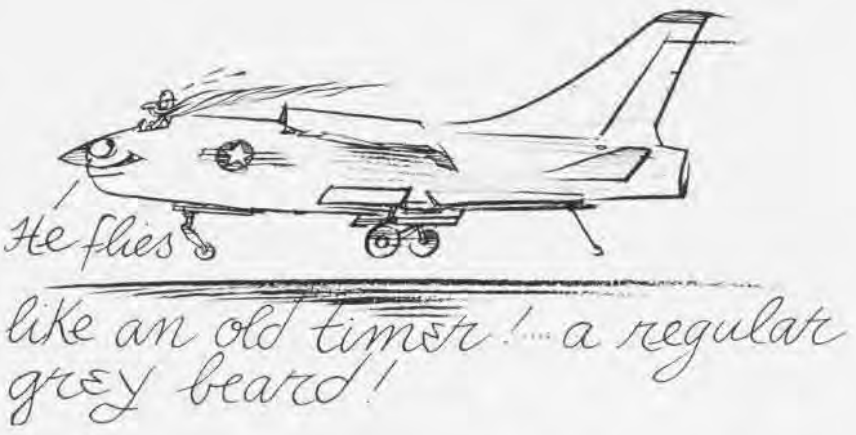
Grampaw Pettibone says:

Jumpin' Jehosophat! Fetch me another aspirin tablet, while my ulcer does a few didos and my tired blood sputters. It's pretty plain your ol' Gramps didn't get through to these lads as yours truly wrote a few choice words on two gents last November that pulled just about the same stunt.

These fellows were well aware that they exceeded the G limits during pull-out. But just because the little plane didn't shed any parts, they kept right on flying. Even after they saw the wrinkles in the stabilizer, they cranked up and flew the bird home.

Now, I don't reckon there is a law against usin' poor judgment, but there's certainly no use abusin' the privilege.

This stunt was downright childish. We can't use kid stuff in this business.



Real Sharp

Two F-8A *Crusader* pilots departed a Marine Corps air station on the West Coast for an in-type instrument check flight. Shortly after takeoff, the chase pilot declared an emergency owing to fluctuating oil pressure, and the lead pilot escorted him back to the field. After the chase plane had landed safely, the escort pilot executed a wave-off, cleaned up and headed toward the sea in a climb.

As the aircraft passed through 20,000 feet in burner at .95 indicated Mach, the canopy glass exploded. Fragments of the canopy shattered the pilot's visor, causing a laceration of his right cheek and eye with loss of vision in the right eye.

The pilot immediately observed the effects of windblast in the cockpit. He quickly realized the canopy had failed, but determined that the aircraft was functioning normally with no indication of smoke or fire. He lowered his seat to prevent accidental windblast ejection, reduced speed by coming out of burner and cutting power to idle, dropped the speed brakes and began a normal descent.

A Mayday transmission was made on guard, but the pilot was unable to receive clearly the answering station because of windblast noise. He then contacted El Toro tower, gave them his situation and requested a straight-in approach with the crash crew standing by. Approach control requested the pilot to change frequencies for radar control and approved the straight-in approach. The MOREST gear was not available on this 6300-foot runway, but the pilot was able to stop the aircraft by cutting power and applying brakes. The overrun chain gear was available but not needed.

The crash crew was waiting for the aircraft when it came to a stop and immediately warned the pilot that the face curtain was partially pulled. After the safety pin was inserted, the crash crew assisted the dazed pilot from the cockpit. The only damage to the aircraft was the broken canopy glass.

Grampaw Pettibone says:

Yipes, how hairy can it get! This lad has got what it takes! Cast-iron guts, brains, and skill are a mighty hard combination to beat. Now here is a lad with less than 600 hours total flight time and only 27 hours in model, yet he handled this emergency like a real old timer.

The board concluded that "he did an incredible job of flying and landing the aircraft on a short runway without arresting gear while beset by extreme physical stresses plus loss of vision in his right eye." Amen. Couldn't have said it better myself.

Makes ol' Gramps mighty proud to place this youngster's name near the top of the "Real Pro Roster."

Preventing Human Errors

SELECTING NAVAL AVIATORS

Second Article in a Series

MAN HAS a perceptual constancy. He is able to recognize patterns and objects despite changes in size, orientation, hue and contrast. He is sensitive to a wide variety of inputs, such as vision, hearing, touch, vibration, pressure, linear and angular accelerations. He is able to deal with low probability alternatives and unexpected events. In automatic systems, it is not feasible to anticipate and program all possible alternative situations.

Man takes advantage of time, redundancy and sequential dependencies and thus profits from his experience. He shows originality in discovering and putting to use data and intelligence gathered incidentally to the mission. He is flexible; he can improvise, re-program and even change performance tolerances. He has preservation instincts for himself, the vehicle, and the mission. He can tolerate temporary overloads without disruption. Not only can he select and filter inputs, he is also capable of inductive reasoning and of setting up and verifying generalizing hypotheses. He can find and identify signals in a wide variety of noise patterns and spectra. He is harder to jam than automatic equipment. All of this and much more is man!

Man has one other distinct characteristic which is probably a central factor in the problem of safety: he is susceptible to errors. It is largely because of this fact that the Naval School of Aviation Medicine came into existence and is working on many problems facing men in flight today.

AN AVIATION *Officer Candidate is sworn. Will he measure up to Navy's high standards?*

FOR EVERY 1000 PILOTS *who join the Fleets, 1574 candidates start the training program. Capt. Phoebus explains how computers help to save lives and money at Naval Air Station, Pensacola.*

By Capt. C. P. Phoebus, MC, USN
C.O., Naval School of Aviation Medicine

LET US CONSIDER the current selection procedures, applicant and trainee populations, selection outcome, attrition rates, and related points.

Current Primary Selection Procedures—All successful applicants for naval aviation training must pass the flight physical and the U.S. Navy and Marine Corps Aviation selection tests:

Part I: The Aviation Qualification Test (AQT) tests general intelligence or scholastic aptitude. Designed primarily as a predictor of ground school performance, it contains mathematics, vocabulary, practical judgment, direction following, and clerical matching type items, and it correlates well with various tests of academic intelligence.

At present about seven per cent of flight applicants fail to achieve the minimum passing score of 3 on the 1-to-9 stanine distribution. This minimum approximates the "bright normal" IQ of 110.

Part II: The Flight Aptitude Rating (FAR) consists of the following three tests: (*1*) The Mechanical Comprehensive Test (MCT) measures the candidates understanding of every day mechanics. This ability has been recognized as a correlate of the ability to fly since the early days of WW II aviation.

(*2*) The Spatial Apperception Test (SAT) measures the ability of the applicant to orient and manipulate rapidly objects in three-dimensional environment. This aptitude was established as a significant element in flight ability on the basis of joint Navy-Air Force research in the early 1950's. The current SAT is one of the most reliable tools for selection at the primary level.

(*3*) The Biological Inventory (BI) is, in a sense, a concession to personality testing. This questionnaire contains elements of personal history, expressions of interest and attitudes, and selected informational items. Each item was included because it revealed statistically significant data useful in discriminating between groups of success-

WHO MAY FLY? *Selection starts with interview of college man seeking flight training. Non-selection starts with mental and physical tests.*

PRIMARY SELECTION *involves tests measuring aviation qualification and flight aptitude. One third of the applicants fail flight aptitude test.*

ful cadets and failures. In general, the BI can be described as identifying the individual who achieved early maturity, enjoys risks and possesses interests and drives compatible with successful Naval Aviators.

These three tests—the MCT, SAT and BI—are combined into a flight aptitude rating expressed as a stanine score. Five is the preferred acceptable score, but naval officer applicants may be accepted with a score of three. Thirty-three per cent of all applicants are rejected by the FAR. Of the survivors of the selection tests, approximately 35% do not pass the flight physical.

In addition to meeting the above requirements, civilian and enlisted applicants must go through the regular procedures for naval officer procurement: the selection board, references, personality rating, based on an interview with a senior officer, and a national agency check. Approximately nine per cent of the applicants who qualify otherwise do not enter training because of personal choice or because of some character defect uncovered during these proceedings.

The trainee population, with respect to geographic distribution, reflects the population distribution of the United States. There is no conclusive evidence that trainees from one part of the country are superior to any other. The applicants range in age from 18 to 26. All officers under instruction and aviation officer candidates (AOC's) have college degrees while cadets are admitted with two years of college. The best men in terms of attrition rate and training grades are those recruited from NROTC units and the U.S. Naval Academy. The Navy cannot, however, confine its recruiting to these sources and still fill the quota for aviators.

Outcome of Selection Techniques—Successful performance in the aviation selection tests is by no means a guarantee that the applicant can successfully complete flight training, but the tests do represent the optimal method available for placing favorable odds on the individual's probability of success.

As 1574 men make their way through the training pipeline, they are reduced in number to 1000 Fleet-satisfactory aviators. Nearly two-thirds of attrition can be classified under two headings: flight failure and voluntary withdrawal or DOR (dropped, own request). Research has shown that anxiety, disabling tension, extreme dislike of or fear associated with flying are the most frequent causes of flight failure and DOR.

The purpose of the so-called "primary selection" process is to predict

THIRTY-FIVE *per cent of applicants fail to meet physical standards for the program.*

EYE TEST *is rigorous during flight physical examination. High standards are maintained.*

DENTAL CHECK *also is strict. All photographs on this page were posed at NARTU, Andrews.*

RECENT TESTING *at Pensacola has added "secondary selection" process which helps to find which pre-solo students may fail flying program.*

PENSACOLA PREDICTION *looks promising for future savings in money and manpower through earlier attritions. First results are due soon.*

training performance which studies have established is related to *Fleet performance*. Training performance predictors, therefore, can be useful in screening for Fleet performance.

The most dramatic example of this relationship was uncovered in the early days of "quality control" research or the investigation of the "secondary selection." It was clearly demonstrated that those students in the bottom seven per cent of the pre-solo grade distribution had an abnormally high failure rate later in training. Those who were allowed to graduate from flight training produced twice the number of pilot error accidents, three times the number of fatal accidents, and nearly five times as many unsatisfactory pilots as expected. Since the aviation selection tests have a high correlation with the pre-solo grade, as well as with other training measures, it is safe to assume that the tests screen out many potential failures, accident victims, and unsatisfactory pilots before they ever reach training.

So much for the primary selection picture, now for quality control. During the first half of calendar 1962, the Aviation Psychology Branch, U.S. Naval School of Aviation Medicine, developed a method of using the records of individual aviation students to predict their subsequent success or failure in training. Using computerized procedures, statisticians determine from the records of large samples of previous students those combinations of early scores and grades that predict later failure to complete training. Whenever a current student encounters difficulty, his records are compared with those of earlier students. The success/failure ratios of earlier students with records similar to his provide a probability statement of the student's likelihood of success if he is restored to the program. This probability statement is regarded as a major element by administrators and review boards in deciding whether failing students should be dropped or restored to training.

The method was installed for operational evaluation by the Basic Training Command in October 1962, beginning with the NavCad/AOC class 13-62 and officer class 16-62. It was adopted for regular use in student administration by Basic Training Instruction 1610.4. "Predicting the Success or Failure of Marginal Flight Students."

AUTHOR CAPT. PHOEBUS *is not only a veteran flight surgeon but also a Naval Aviator.*

Use of these probability statements, it was expected, would result in earlier, more accurate decisions concerning marginal students. In turn, this would reduce training costs, not only by curtailing expenditures on the training of potential attritions, but also by making available extra aircraft, instructors and facilities for the training of potentially successful students. Sufficient time has now elapsed to permit determination of the reduction in the cost of attrition. However, since the first members of the classes affected by the method graduated in December 1963, it will be at least July 1964 before there will be sufficient numbers of graduates to permit determination of the effect of the method on the costs of the average graduate.

Consider now the average costs per attrition before and after installation of the prediction system.* The number of attritions in both 1962 and 1963 was about 800 per year, and the overall percentages of attrition were almost identical. With current inputs and current attrition rates, the reduction of 3.7 weeks of training per attrition reduced costs by about $4,000,000 per annum. Any other savings that the Training Command is able to effect by the use of the prediction method will be reported after July 1964.

* In the preparation of this article, the author gratefully acknowledges the assistance of Mr. Robert Berkshire and Miss Rosalie Ambler, Psychological Sciences Division, Naval School of Aviation Medicine, Pensacola, Florida.

Lunar Training at Ellyson

Astronauts Complete Copter Course

Fifteen of America's astronauts have completed another phase of their training for a manned lunar landing.

At the requests of NASA, the Navy instituted at Ellyson Field a helicopter flight familiarization program. The training was given to enable the astronauts to simulate flying the Lunar Excursion Module of the Project *Apollo* spacecraft. The LEM and a helicopter have the same rate and profile of descent, but control and physical configurations of the two are different.

Helicopter Training Squadron Eight, Capt. William C. Dixon commanding, was given the job of qualifying the pilots to NASA's specifications.

The training aircraft was the Navy's basic trainer, the Bell TH-1M. The astronauts also received two hours of instruction in the Sikorsky UH-34G to familiarize them with hover, descent and landing characteristics in the dark and under dusty conditions.

The astronauts were trained by 16 different Ellyson instructors in a 38-hour program covering two weeks. They entered the program in two-man teams two weeks apart, beginning November 12, 1963. It took four months to furnish the 15 astronauts and one X-15 test pilot, Joseph A. Walker, the 18 hours of ground school and 20 hours of flight training required.

Pax Test Center Visited

Empire Test Pilots are Briefed

When the staff of the Empire Test Pilots' School visited Naval Air Test Center, Patuxent River, Md., they were welcomed by Cdr. Nicholas J. Smith, III, and Cdr. Frank M. Posch, Director and Assistant Director respectively, of the U.S. Naval Test Pilot School.

The group from England included 13 officers and two engineers who crossed the Atlantic in the school's Vickers *Viscount*. Head of the contingent was Group Capt. Raymond A. Watts, RAF, Commandant of the Empire Test Pilots' School.

During their visit, the staff was briefed on current projects by the various test divisions. The steam catapult and arresting gear were demonstrated. The visiting aviators flew many of the U.S. Naval Test Pilot School and Test Center airplanes.

POSCH AND SMITH GREET CAPT. WATTS

They were given a busy round of social activities, including a "dining-in" night, and RAdm. James R. Lee, Commander of NATC, held a reception for them on the evening they arrived.

Off to the Philippines

VP-48 Goes Out as VP-40 Returns

Patrol Squadron 48, NAS NORTH ISLAND, San Diego, commanded by Cdr. K .E. "Bull" Bailey, departed in mid-March for a six-month deployment to Sangley Point, Philippine Islands. VP-48 relieves VP-40.

Since its last deployment, VP-48 has carried out its mission of anti-submarine detection, ASW training and search and rescue. In the Philippines VP-48 is assuming a vital role as a member of the Seventh Fleet.

VP-40 returned stateside in April after a five-year stay at Sangley Point.

AT CORPUS CHRISTI, *an instructor's picture is mounted on VT-28's Safety Wheel when he completes 1200 accident-free hours. He receives a commendation. Upon detachment, his name is permanently affixed to the honor roll.*

Fifty Years of Service

Aeronautical Lab is Nation's Oldest

The David Taylor Model Basin's Aerodynamics Laboratory celebrated its 50th anniversary in March. The aeronautical laboratory is the oldest in continuous operation in the United States.

The evening of March 9, at a commemoration ceremony, Captain J. M. Ballinger, C.O. of the DTMB, Capt. D. J. O'Meara, Head, Aerodynamics Laboratory, and Mr. J. Norman Fresh, Head of the Subsonic Division, spoke. Attending were members of the Aerodynamic Testing Conference of the American Institute of Aeronautics and Astronautics, then meeting in Washington.

Two of the few pioneers in aerodynamics still living were present: Capt. Walter S. Diehl, USN (Ret.), who was in charge of the Navy's work in aerodynamics and hydrodynamics from 1918 to 1951, and Mr. J. A. McCrary, now 89, who began his career at the old Washington Navy Yard in 1899 and was Director of the Aerodynamics Laboratory from 1930 to 1942. Capt. Diehl received a citation for his outstanding contributions to the Aerodynamics Laboratory.

Three years after Naval Aviation was established in 1911, the Navy's first wind tunnel, built at the Experimental Model Basin, Washington Navy Yard (predecessor of David Taylor Model Basin), went into operation. Capt. David W. Taylor, USN, designed, constructed, and directed EMB.

When the 8 x 8-foot tunnel was completed, a velocity of 54 mph was reached in the test section. However, the normal test speed was 40 miles per hour. This first tunnel remained in operation for 30 years. (Today speeds up to ten times the speed of sound are obtained in the Hypersonic Tunnel of the Aero Lab.) The work load at the laboratory increased to such an extent that another, smaller tunnel (4 x 4-foot) was built in 1918.

Preliminary plans for new model basins and wind tunnels were made as early as 1929, but it was not until May 6, 1936 that Congress authorized the project. Although the David Taylor Model Basin went into operation at Carderock, Md., in 1940, it was 1944 before the Aero Lab was officially transferred from Washington Navy Yard.

'SPEARHEAD OF U. S. USABLE POWER'

The keynote speech at the General Aviation Training Conference at Pensacola is delivered annually by the Deputy Chief of Naval Operations (Air). It is, in a sense, a yearly status report by the Navy's aviation chief; this year's leadoff talk was given by VAdm. John S. Thach, USN. Excerpts from his talk are printed here because they are of general interest to all men in Naval Aviation.

I WANT TO OUTLINE for you what I consider to be the great strengths and opportunities of Naval Aviation now and in the future. While these comments are largely my own reflections, they have been discussed with Adm. McDonald and Secretary Nitze, and are in general agreement with their thoughts. I hope they will help stimulate your imagination.

I may talk a lot about "hardware," but remember—when we talk training, we are talking of training *men* for the Fleet. In the cockfighting arena, it is not enough to have hardy roosters "that will *die* fighting" but one must have plenty of those "that will *kill* fighting!" The fighting men of Naval Aviation must have the best hardware we can provide to be able to *kill* fighting if it ever becomes necessary.

Today we have a more modern and more powerful Naval Aviation team than ever before in peacetime history! But the real question is: can we handle the threat against us, which has also steadily increased?

The exploding technology, especially in the fields of nuclear weaponry, missiles, delivery vehicles and control systems, is providing each of the superpowers an ever-increasing capability to damage the civil population and industrial base of the other. This unpleasant reality has made the use of the seas, either for the prevention or the waging of war, more important than ever before in our history. Thermo-nuclear war, except as a last resort, has become evermore irrational. This has given the Navy, and particularly Naval Aviation, the chance to be the spearhead of United States usable power—that power which need not trigger general war. If we can exploit the full scope of our modern non-nuclear capability, we are no longer stuck with a "nuclear-or-nothing" reaction.

Now, we can justify the aircraft carrier on the basis of limited war alone—and we have done it through our sea-based strike force studies. At the same time, we still have the capability of being one of the few surviving forces in initial exchange during a nuclear war. We have the unique capability to concentrate enough tactical air power at the right place, at the right time, to deter or to win limited wars. Of course, we need enough carriers to cover the spectrum of situations. I believe we will have them. By 1970 we should have far more carrier tactical combat aircraft capability than we were able to put to sea in 1960. But is this keeping up with the threat? I think so. By 1970 we will have replaced numerous A-4 *Skyhawk* aircraft with improved light attack models—a marked increase in our striking power and range. These aircraft will be using modern "conventional" ordnance such as the "eye" weapons.

Remember the old expression, "There is no place to hide." Well, the RA-5C *Vigilante* with its sensors will make it rough on the enemy to hide. Protection through dispersal will become invalid with the RA-5C around.

The EA-6B *Intruder* will be another exotic addition—our first real electronic warfare airplane. We feel that some increase in our CVS carrier forces would be desirable in the '70's. We are also considering the desirability of a new carrier-based antisubmarine aircraft (VSX) for the same time period.

The Marine Air Wings will remain at three with the numbers of airplanes assigned at the current level. However, the increased firepower and longer legs of the new light attack airplane will give these wings an appreciable increase in combat capability. There will be an increase in LPH's—a decided lift improvement for Marine vertical assault.

I am convinced we need more VP squadrons. We would like to convince higher-ups of this, but we need statistical back-up from the Fleet to do it.

And now—the training aircraft picture. We have coming in this year's budget the first of the T-2B's to replace the T-2A in the basic training command. We also have the remainder of the T-39's to fill up Glynco requirements. Next year we will again go forward with the *Gulfstream* proposal for replacement navigation trainers. I am confident that a new advanced jet trainer and some new training helicopters will also be included in the '66 budget. I foresee a complete new family of training aircraft by 1971.

This is the age of operations analysis and cost-effectiveness. As you know from your homework, many studies have been made and are in progress in Washington.

A study of the sea-based strike forces of the future has been conducted within the office of CNO. This study established beyond doubt that the carrier will retain an important mission in the 70's, and it may be more important to the country than ever before. There are distinct advantages to its use in certain contingencies where neither tactical air, permanently based overseas, nor composite air strike force wings can be readily employed.

A follow-on, implementing study conducted by the chief of the Bureau of Naval Weapons, under the guidance of my staff, analyzed the specific requirements for a light attack aircraft —VAL—for the 70's, and estimated the feasibility of its construction. This has resulted in the A-7A to be built by Ling-Temco-Vought.

A third study, equally significant for the carrier's future, was the Navy's conventional aviation ordnance study, which is currently being up-dated. This will result in a great variety of conventional ordnance in adequate supply.

There is also a comprehensive ASW study underway in which the electronic brains of the computers are helping us find the answers.

Each of these studies typifies the strong positions of Naval Aviation. Each has added a new dimension to the capability of Naval Aviation.

Now let us look at the training picture. This traditional conference is of vital importance in developing and updating plans and procedures which will enable Navy Aviation personnel to

keep abreast of the rapidly expanding technology. The problem of training and retaining skilled personnel is perhaps the greatest single problem which confronts us today. We are losing valuable talent through retirement of large numbers of WW II career veterans and we continually lose trained young officers and men at the end of obligated service and first enlistments. The demand for new skills continually increases. In short, we must train a large number of replacements in all categories, and we must increase the technical skills of our people in direct proportion to the escalating complexity of our modern weapon systems.

The Naval Aviator was once a comparatively happy-go-lucky fellow whose prime interests were his airplane, his avocation, his girl friend, and tonight's party. Now he is a professional whose training is very expensive. He operates costly and extremely complex equipment. He must possess the highest sense of dedication to country and service. He must have faith in the decisions of his seniors, in the enlisted technicians who support him, and in the air-worthiness of his airplane. The demand for the high quality man has increased in all services—not just in the Navy. Even within the Navy there is competition for the man who can learn to operate complex weapon systems. The Navy needs a greater percentage of these people, but the outlook for getting them is austere. We will for a long time in the future have to accept the two-year college man. We can, in some measure, offset the criticality of these problems by:

1. A more specific definition of the job which must be done.

2. Early determination of individual suitability.

3. Concentration of student time and efforts to reduce pipeline time.

Our methods of selection for training, for determining a man's capacity for specialization, and the scope of the training offered the student Naval Aviator are fertile fields for imaginative study. What are the measures of training effectiveness to be applied? I don't know, but I'm wide open to suggestions. Sometimes I feel that our training programs have grown like Topsy—not through preconceived goals but rather in response to random pressures. We must give the young aviator the best of concentrated training at minimum time and expense. Then, if he has been an outstanding performer, we must be able to offer him an enticing career of service, prestige and stability.

We have considered a ten-year contract under which selected young aviators could qualify for a sizable bonus upon successful completion and discharge. This will, if approved by the Secretary of Defense and Congress, provide for stability in the Fleet and a reduced training rate. Conceivably, this contract could be extended to the Naval Aviation Officer and possibly to enlisted technicians, if we can demonstrate a justifiable need.

I want you to do all you can to eliminate outdated programs, duplications of training, and "over-training." We will be looked at continually concerning our efficiency and elimination of waste. If each man in the Navy could save us as little as ten cents per day, we would realize an annual saving of over two million dollars. This would buy a lot of gasoline and JP-5.

You now have a lot of work to do. There are more than 30 agenda items to consider. You have undoubtedly noticed that this year the format of the agenda items omits suggested solutions to the problems. This was not an oversight. I hope that fuller discussion will result in more imaginative and better solutions. I urge you to take a broad view. Consider the requirements of aviation training in relation to the actual Fleet mission requirements rather than ends in themselves. The Fleet needs a highly qualified aviator—the Fleet also needs his services over a time span sufficient to make him a contributing and useful member of the team.

WHILE VADM. THACH *was in Florida for the General Aviation Training Conference, he presented air medals to six Marine pilots who had distinguished themselves in combat as helicopter aircraft commanders in troop lift missions in Vietnam. Those receiving honors were Capt. Orlando L. Busby, Jr. (above), Maj. Dock H. Pegues, Capt. Robert V. Evans, Capt. Carl R. Chelius, Capt. D. A. Linsley, and 1st Lt. Bennett Chapple, III. All six are CNABaTra instructors.*

VA-126 Scores Record

Highest Safety Mark in AirPac

VA-126, an instrument training squadron based at NAS MIRAMAR, set a safety mark in March when pilots reached a total of 30,000 accident-free hours. According to Lt. M. D. Trout, safety officer, this is the greatest number of safe hours flown in a ComNavAirPac jet squadron.

Pacific Fleet fighter pilots receive instrument training at VA-126. Pilots transitioning from prop to jet aircraft also are instructed there.

Cdr. Patrick F. Cunningham is C.O. of the unit. VA-126 has 26 instructor pilots and flies the TF-9J *Cougar*.

AT MEETING *of local American Institute of Engineers, President Roy Kahn reads Congressman Miller's congratulatory message to Capt. Clark.*

ELMONT MITCHEL *and Byron N. Saunders look over perforated sheets and aluminum pins used to protect delicate engine parts put in storage.*

O&R Alameda Named 'Organization of the Year'

TITLE WON FOR AUTOMATED HANDLING

By Barbara Baack

THE OVERHAUL AND REPAIR Facility at NAS ALAMEDA was named "Organization-of-the-Year" by the San Francisco Bay Area chapter of the American Institute of Industrial Engineers in March. Competing with all other San Francisco Bay Area Industries, O&R ALAMEDA won the award for its pioneering effort to achieve cost reduction through improved material handling.

U.S. Congressman George P. Miller wired his congratulations expressing "pride in the new honors being extended to the O&R Department of the Naval Air Station, Alameda. There is no question but what this department and NAS ALAMEDA are the finest in our country today."

The award for "making the most significant use of industrial engineering to increase operating efficiency" was accepted by Capt. R. B. Clark, O&R Officer. RAdm. David Welsh, COMFAir/COMNABS, guest speaker for the evening spoke on "The New Look in Government."

The great significance of this special award was that it was won in competition with the largest industries on the West Coast, including Kaiser Steel, Pacific Telephone, General Motors, and others. To win such a competition reflects credit on government facilities and shows the value of a long-term plan imaginatively conceived and efficiently carried out.

Material handling may not be a very graphic term to some, but at NAS ALAMEDA, it is a field which employs the full time efforts of over 500 people. Thousands of aircraft parts must be cared for in support of Alameda's massive Navy aircraft repair work.

There are five industrial engineers in the Material Handling branch of O&R who make plans, studies, and recommendations for improvements.

There are 102 people in the transportation branch and 415 people assigned to control centers. Salaries of these people total three million dollars a year—a huge sum affording a great potential for cost reduction through better material handling.

Cost reduction is being achieved through better manually operated equipment, new automated equipment, and a newly-developed automatic storage system.

A big problem to be solved was parts damaged by handling. In the past, engine parts placed in baskets alone without separation had their surfaces

burred, dented, and gouged from the metal-to-metal contact between parts. An "egg crate" type of basket separator was used, but was found to be inflexible and not reusable. The new method involves aluminum perforated sheets. By plugging aluminum pins into the proper positions, delicate parts can be held securely to the sheet.

This protection is not as expensive as the old "egg-crate" type as sheets can be produced in volume. The pins can be moved to accommodate any change in the contents of baskets. All parts are reusable. And the best possible protection is provided for the delicate engine parts.

Additional savings have been made by the use of electric-powered portable hydraulic lifts and pallet racks. Before, parts in process often had to be stored on the floor on pallets; now, pallet racks store parts in three or four levels and it is possible to save considerable floor space. NAS ALAMEDA has found that it can pay for the racks in less than six months through the savings in floor area alone. In effect, the size of the plant is substantially increased.

Another innovation has been the use of two-way radios installed on principal transportation equipment. Better communication has meant that transportation people can spend more time moving material and less time going to the office to find out what to do. Figures show that equipment with radios has an 80 per cent increase in utilization above those without radios.

Perhaps the most dramatic new idea has been the construction of automated storage systems. One fully tested automated storage system stores aircraft engine parts which have had all processing work completed and are awaiting assembly. A second such system is now being installed for storage of electrical, electronic, and instrument parts.

These automatic stackers are completely programmed, so that one operator, using an electronic control panel can order the stacker to go through its paces and deliver any given part from any given bin. For example, storage of engine parts used to require over 15,000 square feet. Now the same number of parts is housed in the skyscraper stacker which occupies only 6300 square feet of actual floor space.

Annual savings realized by the storage system are $33,000, allowing the original cost of the system to be amortized in 3.3 years.

Funds have been set aside for purchase of an automated tractor trailer train system. Presently, five electric fork trucks and 5500 production dispatcher man-hours annually are doing the work which will be done by the automated tractor trailer train.

This train will be equipped with three automatic dispatching and receiving trailers plus 11 automatic dispatching and receiving stations.

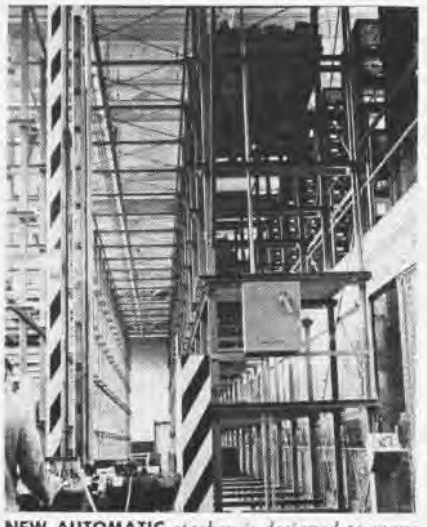
The NAS ALAMEDA installation will be the world's first known tractor trailer train system to have an automatic loading and unloading capability. The train will take approximately 12 minutes to make a complete cycle and will operate at a maximum speed of 3½ miles per hour, stopping at a station only in the event that there is something there to load or unload. It will work on its own all day, untouched by human hands.

Operating nine hours each day, the train will perform loading and unloading operations during the lunch period and for a half hour following the end of the shift. At the end of its work day, it will automatically travel to the battery charger located near the station and couple automatically to the charger. Prior to the day shift, the tractor timing device will actuate the tractor to start its work day right on time.

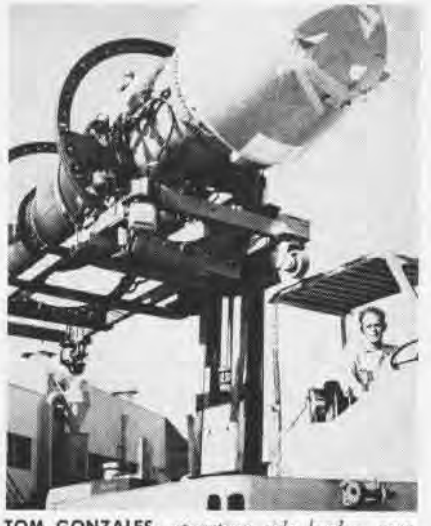
Plans have been made for another completely integrated automated tractor trailer train system which will automatically transport loads from any station in any building to any other station in any building. This proposed system, after it has completed its daily production run of picking up and delivering material, will begin the trash and scrap pickup operation in order to provide the O&R Department with the highest possible utilization of this amazing equipment.

NAS ALAMEDA has only begun to tap the surface of the tremendous savings which can be made from the use of advanced engineering techniques to improve material handling.

CHUCK YOUNGER *and Cal Farnham check out performance of storage in Avionics Building.*



NEW AUTOMATIC *stacker is designed to move to any bin and pick up a particular pallet.*



TOM GONZALES, *operating side loader, communicates with office by two-way radio.*

FLIGHT SURGEON'S DAY ON A CARRIER

By Lt. Joseph Pursch, MC, USN

Illustrated by
Lt. Neil F. O'Connor, USN

MEDICINE has once been defined as the art or science of amusing a sick man with frivolous speculations about his disorder and tampering ingeniously till nature either kills or cures him.

Since carrier medicine differs from civilian practice, I thought some of your readers might find it enlightening, or perhaps amusing, to learn how your Flight Surgeon earns his daily bread.

On a day when I don't have the flight deck duty, I try to eat breakfast at 0745. On my way to Wardroom II, I am usually stopped two or three times and consulted on insomnia, weight reducing, ingrown toenails, or some other pertinent medical problem. When this carries over into the table conversation, it usually doesn't take long before some queazy soul, staring at his jaundiced fried eggs, asks us to "kindly cut out the medical talk at the table."

Arriving in the medical department office, I scan my daily mail: medical and aviation journals; a memo from compt 03-217-O-L asking me to do something about the failing air-conditioning system because the heat is unsanitary; a letter from an irate mother in Council Bluffs, Iowa, asking why she has no news from her airdale son who is now a patient at Portsmouth Naval Hospital. (The letter is addressed to the airdale's division officer who kindly passed it on to me to be answered.)

Over in aviation medicine, I find a pilot who has a "queer sort of feeling" in his left ear and wants to know if it is an ear block, or if he should go flying. He is followed by a crew member who also has a hearing problem: three weeks ago his two-year-old daughter playfully slapped him on the ear. Now he has a slowly healing perforation of the ear drum. Next are four sailors referred to me from general sick call: one tonsilitis, two hearing disorders, and a flight deck hand with a steel splinter stuck in his eyeball. After anesthetizing his cornea, I remove the steel particle with a few gentle scrapes of the scalpel. His eye is patched and he gets a lecture on the importance of wearing safety goggles and a memo to keep him off the flight deck for two days. It is almost certain that in 48 hours the cornea will be healed and his visual acuity back to normal. Of the two hearing problems, one turns out to be caused by a transitory infection, but in the other man's case, the hearing loss probably represents more serious pathology and he is scheduled for further tests.

Next, I do the physical examinations: three pilots, two mess cooks and two college entrance physical exams for a couple of sailors who are leaving the Navy. A telephone call from a junior officer interrupts me: Can I advise him on how to phrase his letter of application to medical school and will I recommend a good one? While I am giving him an afternoon appointment, the doors burst open and a 19-year-old sailor is brought in on a stretcher. His breathing is more rapid than that of the stretcher bearers who maneuvered him down the ladders. He fears that he has a heart attack.

'I've a queer feeling. Should I fly?'

"Heart attacks do run in families, don't they, Doc?" he says between gasps. "I read about that in the *Reader's Digest*."

A thorough examination reveals everything to be normal. After a few more questions, I learn that he had received a letter from home about his Uncle Jack's heart attack. I reassure him so that he can return to work. I give him an afternoon appointment in order to learn more about his duties and the cause of his hyperventilation.

My next patient is a sailor who wants a tattoo cut off his arm. I have told the corpsmen a thousand times that "on this ship the area covered by tattoos exceeds the area covered by non-skid."

"But, Doctor," stammers one of our corpsmen, "the tattoo says, 'Love Mary' and the guy is now married to Isabelle."

Since this throws it into the realm of "preventive medicine," I schedule the tattooed lover's operation for early next week—in port.

Next, I move to the quiet room and read yesterday's X-ray films. One of them is definitely TB. I review the patient's old film and health record, then schedule X-rays and skin tests on everybody in his working and berthing spaces. The patient will be evacuated to a shorebased hospital. We will lose him for at least six months.

An aviator stands in the doorway and wants a private interview. He is worried about his failing vision. On his physical, he read the *second* line from the bottom of the eye chart, but barely stumbled through it. I show him the chart and the *ninth* line from the bottom, which is all he has to read to remain in service group one. He

'After the safety council, a lecture.'

mumbles something and walks out dazed but happier.

I make a mental note to schedule a 20-minute lecture for all ready rooms. I'll plan on taking along one of our spare eye charts and show the fliers where that 20/30 line actually is. Might be a good idea to discuss the meaning of the Schneider Test too. There might be a lot of others around whose pulse rate goes up when they just think of the annual physical because they don't know what is expected of them.

Then I walk through the non-skid jungle and "chat" with a man who is using liquid oxygen without wearing a face mask. Since there is a re-spot in progress, I stop in the yellow shirt locker which is one of my favorite hangouts. Like football players during a break on the practice field, the boys are draped and sprawled all over the cramped space. As always, somebody hands me my special cup marked "Fright Surgeon." Somehow the place always reminds me of an indoor handball court in July, but the coffee is good. Amid the friendly banter of "How are the pills rolling, Doc?" and "How many babies you deliverin' these days?" I conduct brief follow-up visits on sprained ankles, sore back muscles and broken fingers which most of these men have had from time to time. They are the hardest-working people in the Navy and usually don't find the time to go to sick call even when they should. One can say there is no psychosomatic disease on a flight deck.

A safety council meeting is followed by a lecture on decompression sickness to one of the squadrons. Then I inspect the galley and eat lunch in the first class mess since the men like to see the doctor taste their food occasionally and because the cheeseburgers in Wardroom II don't need to be inspected. A quick check of the brig and prisoners, then a social visit to one of the ready rooms where a pilot shows me a letter from his wife. According to her doctor she has Endometriosis, and we discuss this at length. Then somebody wants a rehash on current medicare regulations.

The afternoon is taken up with private interviews until a patient arrives by helo from a destroyer. He looks yellow and has hepatitis. Since the name of his ship sounds alarmingly familiar, I start asking questions.

"Yeah," the man answers, "we did pick up one of your pilots a couple of weeks ago when he ditched."

"Has anyone else on your ship looked yellow like this?"

"Yes, sir, but that was a month ago and they flew him to a hospital. But he was only a mess cook."

I telephone our pilot who was picked up by them.

"Yeah," he assures me, "they were real nice to me, gave me a warm meal and everything."

While I explain the transmission of hepatitis through food handling to our pilot, he remembers that in the last port he and his wife went on board the destroyer to thank them for saving his life and that she enjoyed a hot meal there, too. I make arrangements for gamma globulin shots for him and fire off a letter to Oceana flight surgeons to contact his wife.

Back at my office, I write a letter of recommendation to an adopting agency on behalf of a childless crew member, and then prepare a lecture on aviation physiology.

During the evening movie, another flight deck hand gets a steel splinter in his eye while walking behind an A-1H turning up.

At 2300 I am in the Wardroom II obesity clinic having a ham and cheese sandwich à la Bransfield when I am called to the telephone. A squadron skipper is on the line. His voice conveys urgency.

"I've been trying to get you all day, Doc! I want you to talk to one of my enlisted men. I think he might be crazy."

"Oh, I see. What makes you think that, Commander?"

"Well, we had him on the laundry detail, and they caught him stenciling dirty words on the Captain's shorts. Can you find out what's wrong with him?"

So I schedule another afternoon appointment, then munch on my sandwich and try to think of a good definition for "carrier medicine."

'He looks yellow and has hepatitis.'

EIGHT SONS, THREE MOTHERS

'DEAR SONS' *is the usual salutation to Mrs. Bettner's trio of Naval Aviators when she sits down to write a letter in her Tucson home.*

MOM IS USUALLY *the letter writer, and the Caldwell family is no exception. Sons are now in Florida, Rhode Island, and NS Rota, Spain.*

OCCASIONALLY, *Mrs. Ramsey has the good fortune to have her three Naval Aviators home at the same time. Then it's really Mother's Day.*

EVERY Naval Aviator has (or had) a mother; but how many mothers have sons who are Naval Aviators?

Answer to that question one day may be found through computers; for now it suffices to say that there apparently are fewer mothers of Naval Aviators than there are pilots. The multiple aviator family is becoming a tradition.

Within weeks of the annual U.S. observance of Mother's Day, *Naval Aviation News* received pictures of three mothers who have eight active duty Naval Aviator sons.

Two families contribute three sons each. Mr. and Mrs. Earl L. Caldwell, of Austin, Texas, proudly display photos of LCdr. Earl Caldwell, VAW-33; LCdr. Roland Caldwell, of VR-24, and Lt. Leland Caldwell of VA-45. Another brother, Jerry, a senior in high school is itching to follow the family pattern.

A fellow VA-45 instructor pilot of Lt. Caldwell's is Lt. John Fellowes, of Tucson, Arizona, whose mother, Mrs. Edward Bettner, has two other sons in Naval Aviation. They are Cdr. Robert Fellowes, Naval Research Facility, Johnsville, Pa., and LCdr. Frederick Fellowes, VF-11.

Not far behind as a mother with sons flying with the Navy is Mrs. Paul H. Ramsey, of Norfolk, Va. She has two sons, LCdr. William E. Ramsey who is on the staff of ComCarDiv Six, and Ltjg. James B. Ramsey, attached to VS-31. Her husband is VAdm. Paul H. Ramsey, Commander, Naval Air Force, U. S. Atlantic Fleet, logistics commander of all Atlantic Fleet squadrons and aircraft carriers. He is also a renowned Naval Aviator.

UNTIL THIS PHOTO WAS TAKEN, THIS ANTARCTIC FEATURE HAD NEVER BEEN SEEN BY MAN

Discovery in Deep Freeze

Antarctic Mountain Range Sighted

Navy personnel have discovered a new mountain range in Antarctica and have dropped an American flag on its highest peak.

RAdm. James R. Reedy, Commander, U.S. Naval Support Forces, Antarctica, was on the flight which discovered the 4000-6000-foot mountains in an uncharted area of Queen Maud Land, across the continent from the U.S. Navy's largest manned station at McMurdo Sound. The mountains are an extension of the Shackleton Range, 80-100 miles west. They were clearly visible to Adm. Reedy and the crew members of the LC-130F *Hercules* who made the flight.

While over the highest peak of the newly-discovered mountains—three large outcroppings protruding through the polar ice—the U. S. flag was dropped, as was Adm. Reedy's personal flag, attached to a specially designed steel pole, weighted to stand upright on impact. Inside the pole was a message extending "greetings to whomever may read this," and giving information about the flight.

The *Hercules* is assigned to Air Development Squadron Six and made the flight during Operation *Deep Freeze 64*. Piloting the plane were LCdr. Richard J. Dickerson and Cdr. George R. Kelly, commanding VX-6. In the crew were SSgt. Arthur L. Kring, USMC, navigator; Robert E. Keckley, ADR1, flight engineer; Leo Campbell, ATI, radioman; Delano A. Nelson, ADJ1, flight mechanic; and John E. Wood, AE2, electrician.

In Adm. Reedy's party were his chief of staff, Capt. M. W. Nicholson; his operations officer, Cdr. Robert L. Dale; Ltjg. J. R. Shackleton, a distant relative of the famed explorer; and Lewis E. Roane, PH2.

DAR-3 Ready for Test

Rocket to be Fired at Pt. Mugu

The DAR-3, a new low-cost, two-stage solid propellant sounding rocket is scheduled for tests this spring at the U.S. Naval Missile Center, Pt. Mugu. The rocket can hurl a 50-lb. payload as high as 300 nautical miles.

Lockheed Propulsion Company in conjunction with the Douglas Aircraft Company, Charlotte Division, are the contractors for the rocket which will undergo three test firings. A standard *Terrier* launcher will be used in the tests with a *Terrier* rocket itself providing the first stage.

Over-all length of the fin-stabilized DAR-3 is 367 inches from the nose of the payload to the rear of the first stage. Gross weight is about 2500 pounds. The rocket will provide an economical and reliable means of sending scientific payloads to high altitude.

Aviators Try Sub Duty

VP Pilots Exchange ASW Notes

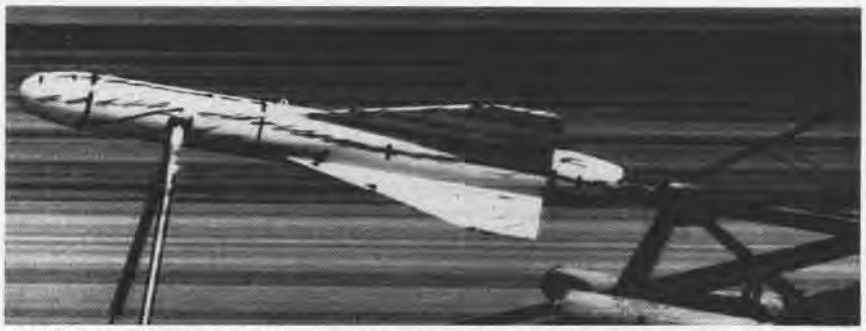
In February, three patrol squadrons under the control of ComFAirWhidbey, Commodore D. C. Gumz, conducted submarine exercises off the Washington coast. VP-1 sent two officers, Ltjg. J. E. Aisthorpe and Ens. J. L. Korb, long with three enlisted men as guests of LCdr. Bruce Meagher aboard the USS *Rasher* (AGSS-269).

Commenting on the experience, Ens. Korb said, "One of the first things we noticed is that submarines should stay submerged. When they are on the surface or snorkeling, they bounce around like rubber balls and make eating, sleeping and just plain existence pretty miserable.

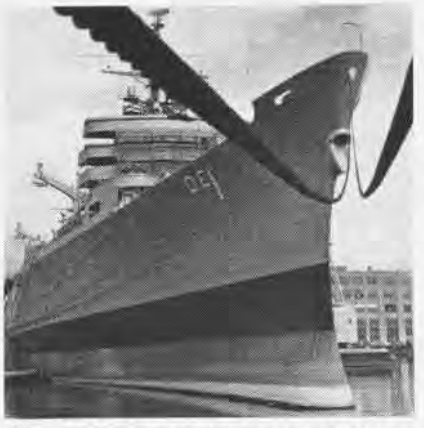
"Once the sub dives, the distinction between night and day disappears. Everything is measured in terms of watches, all of which are four hours long and they continue around the clock. All personnel, from the lowest non-rated man to the executive officer, stand one on and two off.

"Meals are not served at regular hours, but at one hour before the change in watches. Nor are there the usual three meals per day, but four—and a multitude of snacks. Breakfast is at 0700, dinner at 1115, the afternoon meal at 1500 and the evening meal at 1915. Movies are shown twice a day, in the afternoon and evening, so that all may have a chance to see them."

Ens. Korb said further, "During the week we had a frank discussion of tactics, concepts and limitations which we are sure will be of benefit both to the hunter and to the hunted."



WALLEYE, *the Navy's guided bomb, undergoes aerodynamic tests on the research test track at the Naval Ordnance Test Station, China Lake, California. The bomb, when it is introduced to the Fleet, will have a television camera which is focused through remote control by the pilot of the airplane carrying it. Once the pilot has completed focusing the camera on the target, the mechanism in the homing glide weapon takes over and heads directly for the target.*



USS SACRAMENTO MOORED AT PUGET SOUND

AOE-1 is Commissioned

Biggest West Coast-Built Ship

A new concept in naval logistics became a reality in March when the USS *Sacramento* (AOE-1), a fast combat support ship, was commissioned at Puget Sound. Under Secretary of the Navy Paul B. Fay, Jr., led the ceremonies.

Named for California's state capital and the Sacramento River, AOE-1 is the Navy's first multiple replenishment-at-sea ship, carrying both fuel and ammunition. She is also the largest ship ever built on the West Coast and the biggest auxiliary ship constructed by the Navy.

Six knots faster than any current Service Force supply ship, *Sacramento* is designed to act as a middleman between auxiliaries and combatant types, thus allowing the fighting ships to remain in forward areas. Previously, the warships had to withdraw to prearranged replenishment areas.

Sacramento carries black oil, aviation gas, conventional ammunition, guided missiles ranging up to the *Talos*, and other supplies. She has a capacity for 165,000 barrels of fuel or one and one-fifth times the amount of other Fleet oilers. In addition, there is space for dry cargo, including 250 tons of frozen food. *Sacramento* is 792 feet long and has a full-load displacement of 53,600 tons which is comparable to that of *Midway*-class carriers. The ship is also equipped with three helicopters. The ship also has fueling probes, like those used on aircraft, to expedite fuel transfer.

Capt. M. M. Gantar is C.O. of AOE-1 which is home-ported in Seattle. The ship operates under the type command of RAdm. William D. Irvin, Commander Service Force, Pacific.

THE ICELANDIC *Coast Guard has modified the afterdeck of one of its ships, the Odin, to accommodate H-34 ASR helicopters based at NS Keflavik. Landings have been made on Odin before, but with the smaller CH-19E's.*

Something New at NAS Jax

First Operational Mission in P-3A

A new phase in the Navy's capability to wage war on submarines was ushered in at NAS Jax March 12.

VP-45, which arrived from Bermuda late in 1963, launched the first operational mission ever flown from Jacksonville in the new P-3A *Orion*.

In plane-side ceremonies, RAdm. Robert Goldthwaite, ComFAirJax, officially ordered the flight on a sub-hunting patrol mission.

Polar Explorer Honored

Guided Missile Ship Named Byrd

The guided missile destroyer *Richard E. Byrd* (DDG-23) was commissioned March 7, 1964 at the Todd Shipbuilding Corporation, Seattle, Wash. Sen. Henry M. Jackson of Washington was the principal speaker. DDG-23, which was launched February 1, 1962, is named for the late RAdm. Richard E. Byrd, famed Arctic explorer. In 1926 he made his memorable flight over the North Pole, for which he was later awarded the Medal of Honor. In 1955 he headed the first expedition of Operation *Deep Freeze*.

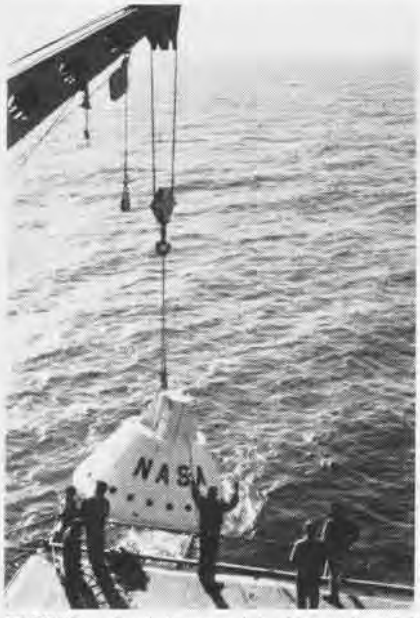
One of the *Charles F. Adams* (DDG-2) class, USS *Richard E. Byrd* is 437 feet long and displaces 4500 tons fully loaded. Her armament consists of *Tartar* surface-to-air missiles, two 5-inch/54 caliber guns, antisubmarine (*Asroc*), and antisubmarine torpedoes.

Cdr. W. G. Lessman is her first C.O.

BEFORE 3200 FIRE OFFICIALS *from 49 states and a number of foreign nations, six sailors dramatically demonstrated the effectiveness of water in fighting aircraft fires. They extinguished a blazing jet fighter during the 36th annual International Fire Department Instructors Conference in Memphis. Using ordinary fire equipment—the kind found on any small town fire truck—and water, the Navy firefighters completely doused the flames in six minutes. Lt. S. E. Rooray, fire division officer at NAS Memphis said, "Many people think you need foam to fight aircraft fires. We wanted to prove you can do it with water." The ancient Demon previously had been used to train jet mechanics at the Naval Air Technical Training Center.*

NAVY BEGINS GEMINI/APOLLO TRAINING

ONE METHOD *of retrieval was practiced as follows: After the carrier had maneuvered within yards of the floating capsule, a motor whaleboat was dispatched. Recovery personnel attached a 2½-inch nylon line, and the capsule was then pulled alongside the after portion of the ship.*



CAPSULE *is hauled upward to Intrepid's deck by use of the ship's boat and airplane crane.*

PREPARATIONS for recovery support of NASA's Project *Gemini* (two-man capsule) and *Apollo* (Moon shot) got underway the middle of March at Norfolk, Va., when several units of the Atlantic Fleet began training in the techniques to be used in retrieving spacecraft. Involved in the first week's tests were USS *Intrepid* (CVS-11), USS *Lind* (DD-703) and the Fleet oiler, USS *Elokomin* (AO-55). Embarked in the ships were frogmen attached to Underwater Demolition Team 21, based at Little Creek, Va.

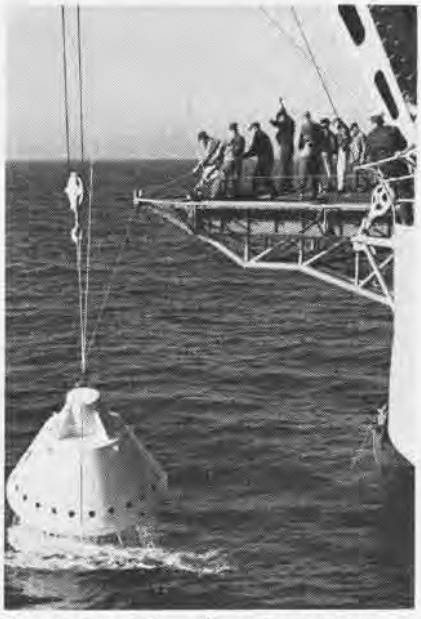
The SH-3A helicopters aboard *Intrepid* were operated by HS-3. Complete photo coverage was provided by Norfolk Mobile Photo Group.

Coordinating the force engaged in training was RAdm. Ben W. Sarver, Commander Task Force 140 and executive agent for CinCLant for manned spacecraft recovery.

The first tests conducted at sea off the Virginia Capes were for the purpose of seeing whether the *Mercury* methods of recovery apply to *Gemini* and *Apollo* spacecraft. The *Gemini* recoverable portion of the command modules weighs about 4800 pounds and the *Apollo* about 10,000 pounds with trapped water. These weights were no problem for the winches installed on the carriers and oilers of the Fleet.

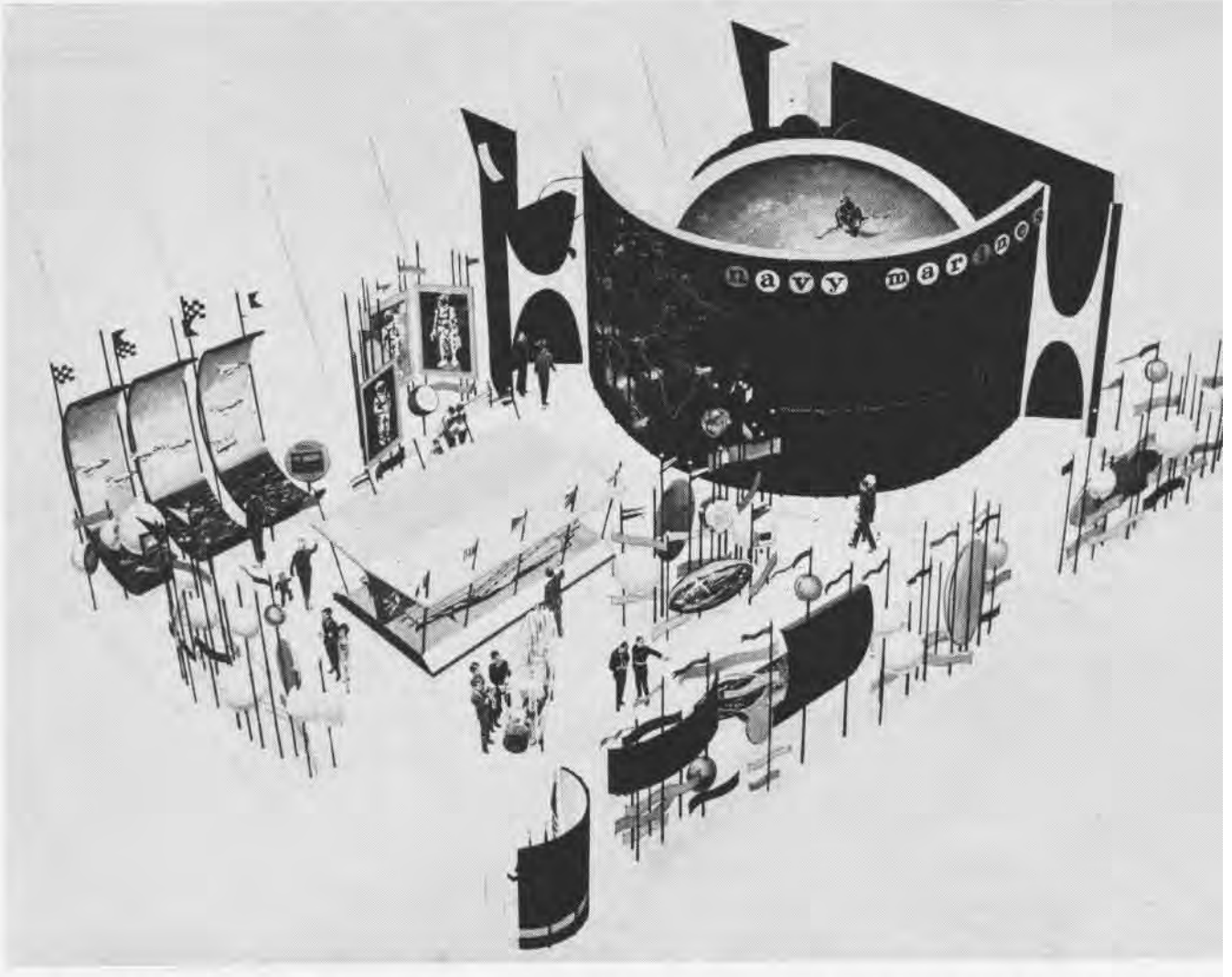
But since the lifeboat davits used in *Mercury* recovery cannot lift these weights, NASA Manned Spacecraft Center at Houston designed two cranes for possible installation on destroyers. One davit crane hoists and pivots to place the spacecraft on deck. A second wheels it inboard.

Retrieval by whaleboat (shown in pictures on this page) was practiced in March. The second method, for use in event of heavy weather, involved two UDT divers lowering from an SH-3A helicopter hovering over the capsule. Upon reaching the capsule, the swimmers attached a flotation collar to the space vehicle. A line was shot to the swimmers for retrieval. The completion of the process was the same as in the primary method.



GUNNERY CREW *on the carrier is training to retrieve the Apollo capsule from the sea.*

To increase the Navy's capabilities for safe recovery under difficult weather and sea conditions, ships of both the Atlantic and Pacific Fleets are to be trained in procedures developed during the drills now in progress. Standard operating procedures will be written, so that all ships assigned a recovery role can train men in an identical manner.



NAVY MIGHT VIEWED AT WORLD'S FAIR

The people in the audience stand. Almost unconsciously they sway in unison, gripping the waist-high handrails. Held in a state of startled awe, their eyes are trained on the huge circular screen. They are "in" an airplane, a jet bomber, and looming ahead is an aircraft carrier steaming across the Caribbean Sea.

Their aircraft makes a slight dip of a wing, lines up with the foaming, white wake of the carrier and continues in its descent. The theater is alive with the sound of whining jet engines and brilliant color. Suspense and excitement build dramatically as the flattop grows frighteningly bigger. Then, suddenly, the ocean slides completely from view and the plane roars to a brutal halt on the flight deck.

Each day at the 1964 World's Fair in New York, hundreds of visitors share a carrier pilot's experience through the magic of "Cine-Globe Cruiser." This unique photographic device takes the viewer inside of what appears to be a huge globe sliced in half. From 50 to 60 people are accommodated at each film presentation, only one sequence of which depicts a pilot's-eye glimpse of a carrier landing. There are several tracks of action-packed maneuvers and all combine to make the Cine-Globe theater a feature attraction at the Navy-Marine Corps Exhibit. Located at the Transportation and Travel Pavilion, the exhibit, entitled "The Navy-Marine Corps Team Around the World," will run through mid-October and begin again in April 1965 for another six months.

The Cine-Globe camera projects film through a special 142-degree lens onto the curved surface of a large hemispheric screen. This technique, incidentally, was first developed during World War II. At the time, the Navy used it with outstanding success as a gunnery training device.

Editors of the film selected operational tactics which would best give the audience a soldier or sailor's eye view of the action. The carrier portion of the film, for example, was recorded last winter by a 35mm camera mounted in the nose of an A-3 *Skywarrior*. Lt. Jim Flatley of the Naval Air Test Center, Patuxent River, flew the plane and operated from the USS *Forrestal* which was deployed in the Caribbean at the time.

Lt. Flatley's series of shots includes hangar and flight deck activity and a touch-and-go landing on the angled deck. Just as thrilling is a catapult shot during which the camera captures the thrusting power of an aircraft hurled down the cat track and off the bow.

A camera was also positioned on the deck of a nuclear submarine during a submerging exercise while another focused on the sub's captain and crew as they go through their paces beneath the sea. Moments later, in this sequence, a *Polaris* missile is seen as it bursts through the ocean surface after an underwater launch.

The audience is also taken on an island assault with a wave of combat-garbed Marines. Again, authentic sound of gunfire and bomb blasts accompany the troops and the viewer as the landing craft thunders toward the beach, smashes onto the sand and lowers its ramp. Thus the visitor finds himself a member of the assault force hurtling across the terrain toward the objective area.

In the lobby outside the "Cine-Globe Cruiser" are a host of exhibits which depict a cross-section of hallmarks in Naval progress. They include displays of the SSB(N)/*Polaris* weapon system; amphibious operations; unusual vehicles used in research, particularly in oceanography; first line combat aircraft; antisubmarine warfare; nuclear-powered warships; a model of the frigate, USS *Constitution*, encased in a bottle; men and women of the Navy and Marines as world travelers and good will ambassadors; oil portraits of the four Navy and Marine officers who were among the original seven astronauts; and a presentation depicting the "Four Ocean Challenge" to U.S. seapower.

LT. JIM FLATLEY *of the Naval Air Test Center poses in front of A-3 which had specially-rigged nose camera for the carrier sequence films.*

THIS DRAWING *shows the inside of "Cine-Globe Cruiser" at the World's Fair. The audience is "making approach" to USS Forrestal.*

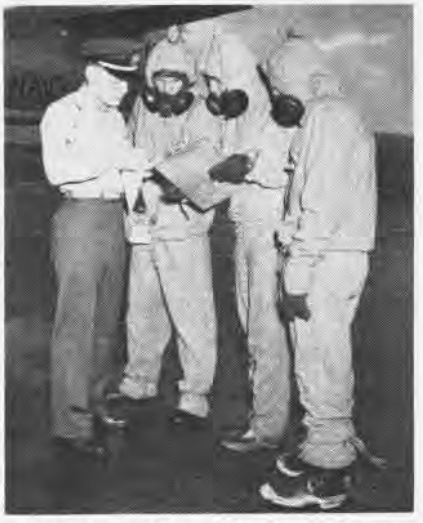
Coordinated with six of these groupings are continuously running 16mm reverse image, color motion pictures. Scale designs in each of the areas are of the highest quality and detail. Among these are models of the USS *Bainbridge*, a *Polaris* submarine, an amphibious transport dock, a 2200-ton destroyer, tracked and marginal terrain vehicles; the bathyscaph *Trieste*, the Stratolab; and the two-man, deep diving vehicle, *Alvin*. A particular stand-out in the display is a 12-foot long model of the nuclear carrier, USS *Enterprise* (CVAN-65).

In addition to all these, large murals and transparencies depict many other ships and aircraft as well as several operational scenes characteristic of the many roles the U.S. Navy plays in defense.

Throughout the exhibit, particular emphasis is placed on the men and women who wear the uniforms of the Navy and Marine Corps. At the reception booth, framed between the national colors on one side and the Navy and Marine Corps flags on the other, are these words: "This exhibit is dedicated to the 850,000 men and women of the United States Navy and Marine Corps who serve around the world in defense of freedom."

The Fair, which opened April 22nd, also features a display of rockets and missiles. The Department of Defense in coordination with the National Aeronautics and Space Administration have made available an array of the latest in space hardware. Included are a full scale "boattail" section of the *Saturn V* rocket designed to carry astronauts to the moon, a *Titan II-Gemini* launch vehicle and spacecraft, the *Apollo* spacecraft, the Lunar Excursion Module, an X-15 research plane and many other exhibits sure to be of great interest.

AIRCRAFT CARRIER DRILL: ATOMIC DEFENSE AT SEA



OBSERVER MAKES THIS PLACE 'A HOT SPOT'

RECORDER IS GIVEN ROENTGEN COUNT

By John C. Ramsey, JO1

THE TIME is 0812. Everything is normal aboard USS *Kitty Hawk* at sea with the Seventh Fleet.

Suddenly the public address system aboard the attack aircraft carrier blurts out, "This is a drill, this is a drill. General Quarters. General Quarters. All hands man your battle stations."

Before the announcement is finished the 4000 men are scurrying for their battle stations. Only four minutes are allowed for them to get to their respective stations before the ship is made watertight. They don't know it yet, but the officers and men are about to go through a simulated nuclear attack and shipboard civil defense drill.

Training is the key to the Navy's maintaining a force in readiness. Although the primary mission of *Kitty Hawk* is to launch and recover her aircraft and sustain strike operations, she must also be able to defend herself. For this reason, like any other U.S. naval ship, *Kitty Hawk* must be prepared to meet any situation—from extinguishing small fires to surviving a nuclear blast.

What would a large ship like this supercarrier do in the case of a nuclear attack by an enemy? To answer that question, let's follow the drill in progress and witness civil defense in action at sea.

The time is 0816—problem time. All water tight doors and hatches are shut; the ship is ready for battle.

An enemy aircraft, called a bogey, is 70 miles away from *Kitty Hawk*. Condition yellow is set; an attack by "the enemy" is now probable.

Time is 0819—problem time + 3. The bogey is now only 30 miles from the carrier. Warning red is set; all hands are standing by for the imminent attack.

The massive 4.1-acre flight deck, normally a scene of considerable activity, has been all but vacated. Only one flight crew is left to launch the mail plane. Throughout the rest of the ship, men are doing their jobs. For the old timers, this is just another drill. For the new men on board, it is their first such exercise. Some are heard exclaiming, "It's almost like the real thing!"

It is now 0822—problem time + 6. Silence is broken by the announcement, "Nuclear attack, nuclear attack. Surface burst 5000 yards, bearing 260 degrees relative."

A surface burst is the most dreaded type of nuclear explosion; it forms a cloud loaded with deadly radiation. The ship must now do battle with this dreaded nuclear attack.

Within five seconds, Damage Control Center (DCC) informs Capt. H. H. Epes, Jr., *Kitty Hawk's* Commanding Officer, the shock wave has passed the ship.

On the bridge, the Officer of the Deck barks an order to the helm and the ship cuts sharply to starboard. This maneuver is done to avoid as much of the radioactive fallout as possible which is expected to engulf the ship within 2 minutes when the base surge arrives.

Photos by Ray C. Harrison, PH2

In DCC, there is much to do. The time of arrival of the heavy radioactive fallout (called the base surge), the maximum peak intensity, amount of radiation received by personnel in various locations throughout the ship and when the ship will clear the base surge are all calculated.

Time is now counted as atomic time + 1, + 2, etc. The water wash-down system, which can completely engulf the ship's outer frame in a stream of salt water, is turned on in a simulated fashion.

Men designated as outside monitors begin donning their elaborate exposure suits. They must be ready to take readings of any areas where radio-activity may have accumulated to a dangerous level called "hot spots."

In the control tower, five levels above the flight deck, the flight control officer informs the crew working to launch the mail plane that they are now dead.

The time is 0824—atomic time + 2.

The ship is engulfed by the base surge. The repair parties throughout the ship inform DCC of any readings of radioactivity, measured in Roentgens, they may be getting. This is done by use of an instrument similar to a geiger counter called a radiac.

No one is moving through the ship. Time ticks away as reports on radiation levels trickle into DCC from all areas within the 1069-foot carrier.

Time is 0837—atomic time + 15.

The ship is clear of the base surge. Now comes the tedious task of finding

MONITOR TELEPHONES DAMAGE DATA TO THE CONTROL CENTER

THOROUGH SCRUBBING SERVES TO DECONTAMINATE HOT SPOT

all hot spots needing decontamination.

To make the drill more realistic, observers are assigned to each repair party. As a monitor team approaches a predesignated hot area, the observer hands them a slip of paper with the amount of radiation in Roentgens written on it. This is recorded and relayed to DCC.

The rapid internal survey begins. Monitors from each repair party begin walking around, searching for any place that may be hot. A monitor team nears a predesignated area and an observer hands them a piece of paper. The radiation is recorded and the team moves on checking for other hot areas.

Upon completion of scouting their areas, the monitors return to their repair party lockers. The information they have recorded is relayed to DCC.

Back in DCC, the information received from repair parties is used to determine an over-all picture of contamination throughout the ship. DCC then directs decontamination personnel to areas that are above the normal radiation level.

DCC also determines "stay time" (the amount of time one is allowed to stay in a contaminated area without receiving a harmful amount of radiation) for personnel working on the decontamination of the hot area.

Time is 0843—atomic time + 21.

Next comes the rapid external survey. One repair party has the responsibility of the entire external area of the 1069-foot carrier.

The men designated as outside monitors are ready. No part of their body is exposed to the deadly radiation.

Once the monitors go outside they cannot return until ready for decontamination. They begin making their rounds, armed with a radiac and clipboard and followed by an observer.

They collect their data and return to their repair locker. The recorded radiation levels, drawn on a diagram of the ship, are shown to the repair party inside through a small window. The information is then relayed to DCC. Writing and showing a message through the window and an outside telephone are the only forms of communication the monitors have with the inside.

While the rapid external survey is being concluded, DCC has evaluated reports on the internal survey. An area needs immediate attention. Word is passed, "Hot spot, hot spot. There is a hot spot in compartment oh-three-dash-88-dash-three-dash-E. Stay time 12 hours."

A decontamination team from the repair party concerned rushes to the scene. They scrub the area until brought within a safe limit of radiation. Two more hot spots are dealt with in the same manner.

Time is 0905—atomic time + 43.

The reports from the external area are received and evaluated. The speaker blurts out, "Hot spot, hot spot. There is a hot spot forward of the island structure [the part of a carrier above the flight deck]."

The outside monitors are now the decontamination team. They grab the buckets, soap and scrub brushes they brought with them when they came out to make the external survey and rush to the area. A thorough scrubbing brings the radiation within a safe limit. This accomplished, they proceed to the outside telephone to await further instructions.

It is 0912—atomic time + 50.

Word comes for the outside monitors to proceed to their decontamination stations. This comes as a welcome relief since their exposure suits are rather warm.

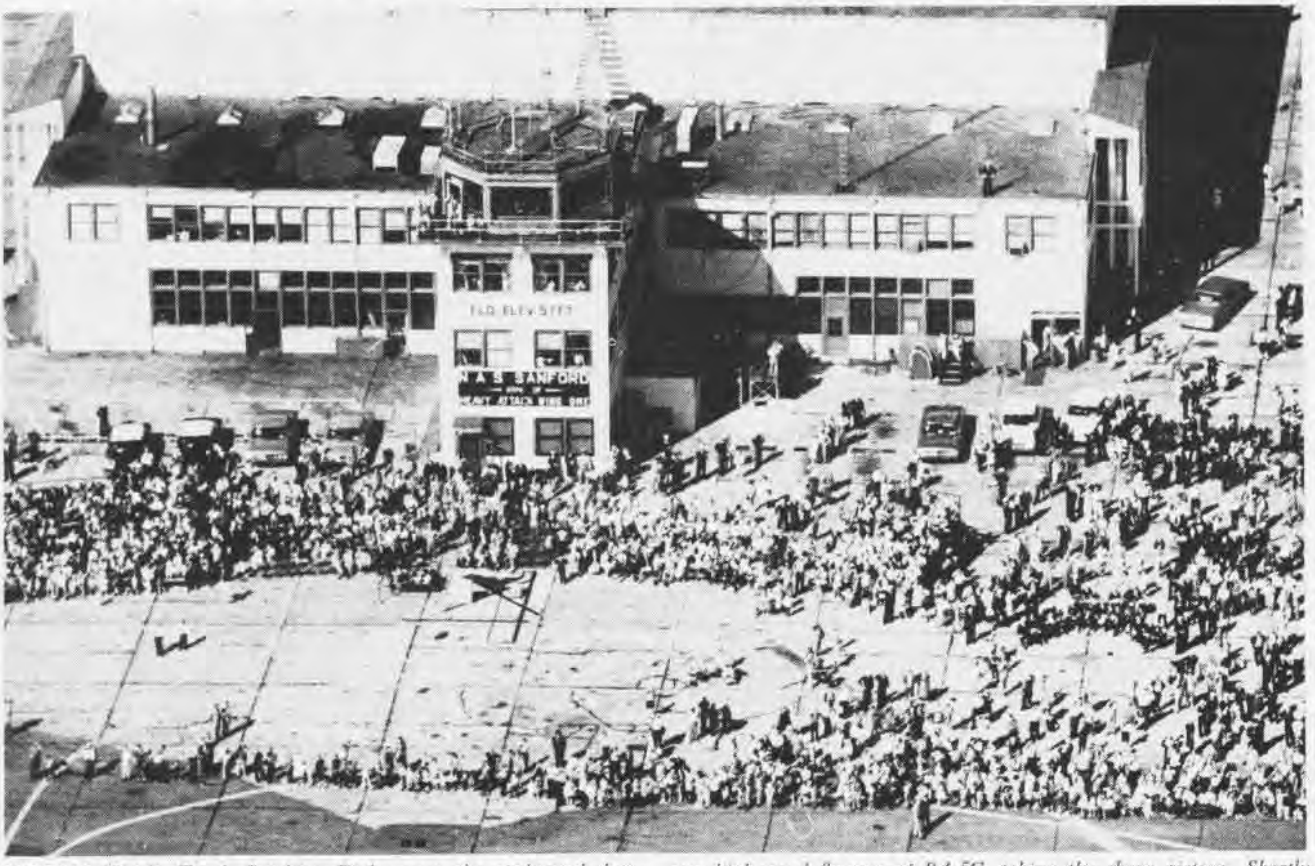
Exposure suits are shed, but the face masks remain on each person. During actual war time, each man on the ship would have a mask on and would leave it on until the radiation decreases to a safe level. This usually takes about one day. Leaving the masks on prevents anyone from breathing the contamination into his lungs.

As the monitors come down from decontamination, they are checked for radiation. They shower and are checked again. If any trace of radiation remains, they must shower until it is no longer there.

The time is now 0930. Things begin to return to normal. Hatches and doors are opened; General Quarters is secured. Each person can now relax. This time it was a drill. But what about the next time?

Being prepared for any situation is imperative and necessary for survival. This applies not only to the ships at sea, but in every major city and town where there is a Civil Defense program. Admittedly, the cost of preparedness comes high; the price of unpreparedness would come much, much higher.

VAH-11 DETACHMENT WINS BOMBING DERBY



WINDING UP *the Tenth Bombing Derby were the traditional demonstrations, open house, and awards ceremony. New feature this year was high-speed fly-over of RA-5C, taking the above picture. Shortly after the Vigilante landed, the photograph was processed and released.*

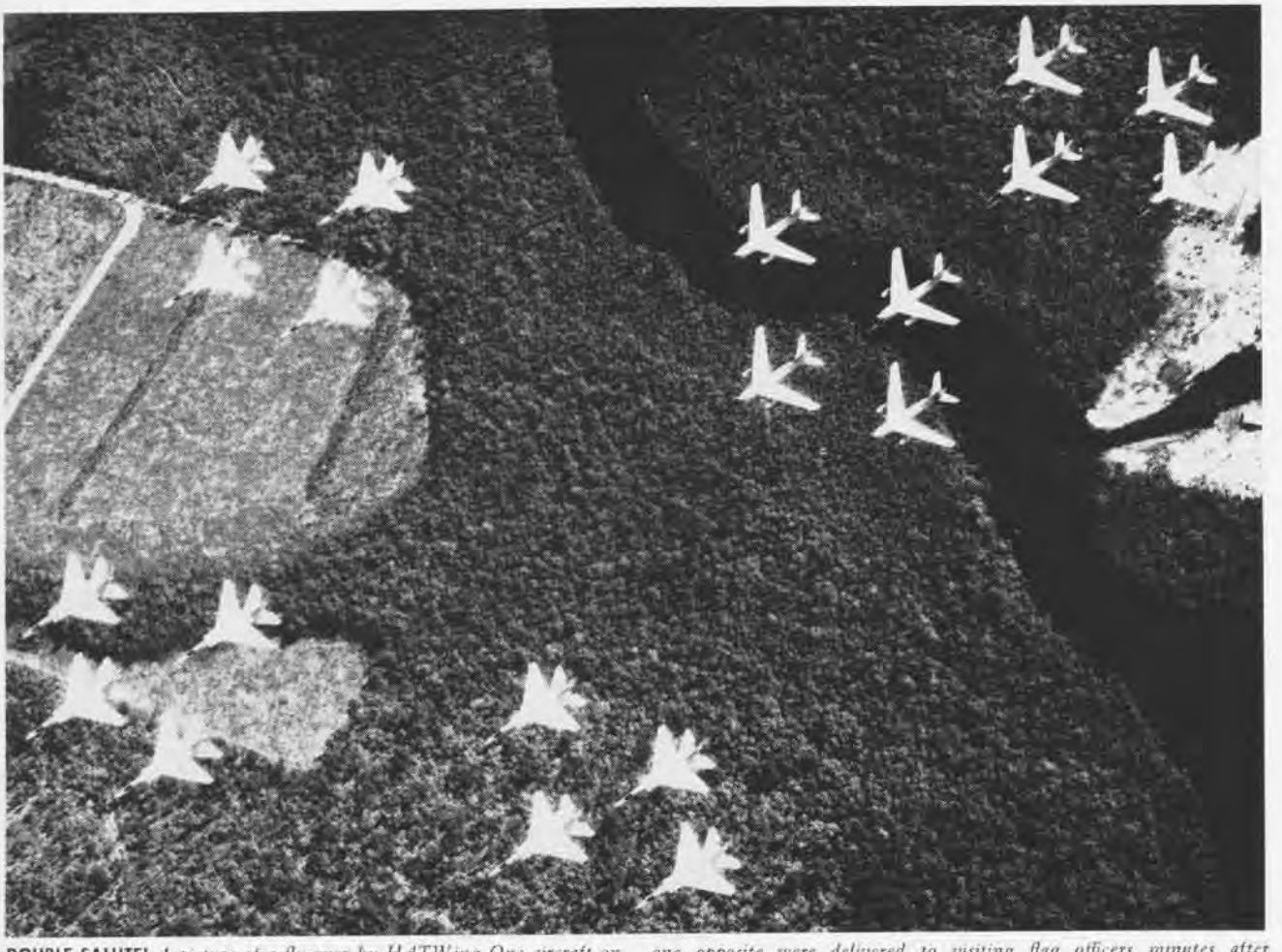
A SIX-PLANE DETACHMENT, formed only 21 months ago to fill carrier commitments of squadrons transitioning to the A-5 *Vigilante*, showed both experience and depth in winning

By Ltjg. David H. Dow, USNR

Heavy Attack Wing One's Tenth Bombing Derby, March 16-21, held as it usually is, at NAS SANFORD.

Detachment Eight of VAH-11 won two of the five graded events and placed so well in the others that it held a tidy 125-point edge over second-place VAH-9 at the finish of the rug-

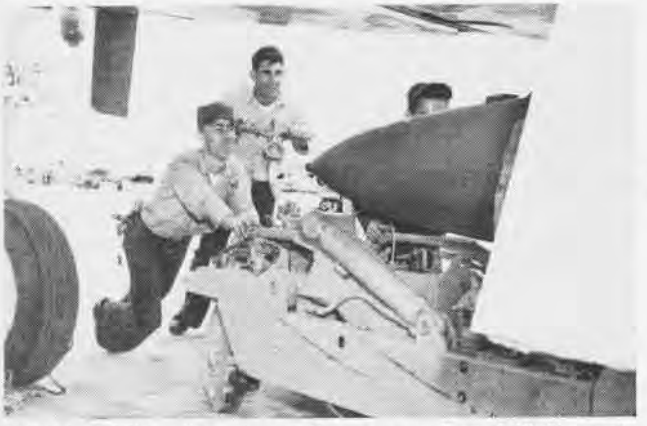
DUAL MISSION *RA-5C Vigilantes were newcomers in the Tenth HAT-Wing One Bombing Derby. Flown by VAH-5, the first Fleet unit to operate them, RA-5C's added long-range reconnaissance to Vigilante's previous bomber capability. VAH-5 will deploy in the Pacific shortly.*



DOUBLE SALUTE! *A picture of a fly-over by HATWing One aircraft on final day was photographed by an RA-5C. Prints of this photo, and the one opposite were delivered to visiting flag officers minutes after they were taken, thus highlighting RA-5C's photo-recon capability.*

ged six-day weapons exercise. Both units fly A-3B *Skywarriors.*

HATWing One's Bombing Derby has become a tradition in Naval Aviation. For all of the Wing's squadrons that are not deployed, the 15 trophies awarded provide a competitive flavor to combat readiness training and practice. Keeping up with the ever-advancing capabilities of its participants, this year's Derby included missions tailored to the dual role of the new RA-5C *Vigilantes.* Participation of the RA-5C's highlighted recent changes in HATWing One's responsibilities:



ALL THE ACTION *isn't in the air. Getting a squadron A-3B Skywarrior ready for the Derby, a VAH-9 crew guides weapon into the bomb bay.*

LOADED AND READY, *the VAH-9 A-3B leaves line for a mission. Skippered by Cdr. J. L. Shipman, VAH-9 won second place in the Derby.*

providing its dual mission capability to both the Atlantic and Pacific Fleets.

Third place in this year's Derby went to VAH-5, the Fleet's first unit to fly the RA-5C *Vigilantes* and winner of the first reconnaissance competition in the Derby's history. The Derby served as a warm-up for VAH-5's scheduled deployment to the Western Pacific aboard *Ranger* this summer.

VAH-11 finished fourth with a slim lead over VAH-3, the early leader, and

TOWER OPERATOR *watches a VAH-3 Vigilante taxi out to fly one of its Derby missions.*

VAH-1, fresh from a seven-month deployment aboard USS *Independence*, finished sixth. The only Sanford-based squadron to miss the exercise was VAH-7, now deployed with *Enterprise*.

The Tenth Derby was replete with firsts, but none so significant as the sight of the sleek, new RA-5C's taxying from the line to meet each of their varied commitments. RA-5C's flew both bombing and reconnaissance missions, coupled these capabilities during the close air support exercise and took photographs of the 10,000 spectators witnessing the March 21 air show. These photos were released, in finished form, while the audience was still watching the same air show. Viewing the demonstration were eight flag officers, including VAdm. John S. Thach, DCNO(Air).

In winning the meet, Detachment Eight earned five trips to the trophy stand during the awards ceremony which climaxed the Derby. On one of his trips, Cdr. Frederick Carment, Jr., Det. Eight's OinC, received the Bombing Derby Championship Trophy from VAdm. Paul H. Ramsey, ComNavAirLant.

Det. Eight was also represented at

CDR. FRED CARMENT, *OinC of VAH-11's Det. 8, displays part of winning unit's "hardware."*

the stand by the Derby's top flight crew: pilot LCdr. Bill Quirk; his bombardier-navigator, Lt. Al Blunden; and third crewman, Richard Markland, AT2. The Quirk-Blunden-Markland combination teamed up for victories in the radar-scored profile mission and the radar bomb scoring after posting near-winning scores in two earlier bombing events.

Each received individual trophies from Capt. Frank G. Edwards, a former Wing Commander, now serving with the Second Fleet staff. Lt. Blunden added his shiny engraved ice bucket to a large punch bowl he previously won as the Wing's top bombardier-navigator in Fiscal 1962.

Two VAH-5 flight crews led the competition for individual honors among *Vigilante* entrants with LCdr. Jim Olson and his bombardier-navigator, Lt. Vincent Monroe, edging their commanding officer, Cdr. Paul F. Werner, and B/N Lt. Neil Pruden by 10 points of a possible 600.

Other trophy presentations illuminated the ground support which backs up a winner in such extended operations as the Bombing Derby.

Detachment Eight won the Norden ASB-1 Maintenance Trophy, awarded to the A-3B squadron showing the best bombing system reliability. Its *Vigilante* counterpart, presented by the Autonetics Division of North American Aviation, went to VAH-5 for a yeoman effort by its ASB-12 bombing-navigation system technicians.

An A-5A, flown by VAH-1's LCdr. Pat O'Gara with Ltjg. Paul Haney at the bombing console, won the "Might vs. Mite" loft bombing run-off to keep the Douglas Trophy at Sanford. Both the *Vigilante* and LCdr. Quirk's *Skywarrior* made good enough shape drops at the Lake George Impact Range to resist efforts by A-4C pilot Lt. Dick Porter to take the trophy back to Cecil Field. Lt. Porter flies for VA-12.

In other events, VAH-11 won the carrier airmanship competition, and

FIRST HATWING *Reconnaissance Trophy is given to Cdr. Paul Werner by VAdm. Thach.*

VAH-3 earned an early lead in the meet by winning a weapons-loading exercise on the opening day. Lt. Dick Zeigler was loading officer of the winning VAH-3 team, composed of Donald Burt, AOC, Raymond Kantonen, GMT1, G. E. Tullis, AO1, Jerry Paul, AO2, and Gerald Davitz, AO3.

The Bombing Derby was designed to exercise the six competing squadrons in every facet of weapons handling and delivery and, for VAH-3 and VAH-5 RA-5C entries, reconnaissance.

Though primary emphasis was placed on nuclear attack, conventional warfare was far from neglected. The close air support mission was designed to simulate "brush fire war" conditions with A-5A and A-3B participants making two low-level "laydowns" and two low-angle loft deliveries apiece.

The blending of bombing and reconnaissance was an unprecedented Bombing Derby ingredient. Its application to actual wartime conditions is as old —and proven—as bombing itself. What is new is the equipment which performs the two operations within a single airframe, giving the tactical commander a flexibility he has never before enjoyed in such great measure.

THIS PROTOTYPE F-8E *Crusader is testing the new features of the F-8E's Ling-Temco-Vought is building for the French Navy. The plane, shown here taxying out for its initial hop, was flown by Test Pilot Robert Rostine. The French Crusader provides slower landing and takeoff speed to permit operation from smaller carriers. The wing has two degrees less angle of incidence in the French plane when in the "up" position. It also incorporates double-droop leading edges on the wings and boundary layer air blown over the ailerons, which will droop as far as 40 degrees, double that of U.S. versions. First deliveries to the French are scheduled to take place this coming summer.*

CNABaTra Commends VT-5

Student Flow Sharply Increased

RAdm. D. F. Smith, CNABaTra, awarded a letter of appreciation to the officers and men of Training Squadron Five based at NAAS Saufley Field. The unit was commended for increasing the flow of flight students by 50 per cent.

From October to December 1963, VT-5 graduated 427 students. This effort will assist the Navy in attaining a goal of 1700 Naval Aviators in fiscal 1964. The significance of this achievement is that it was performed without an increase in instructor or enlisted allowances.

VT-5, which conducts carrier qualification training in T-28's, totaled 35,000 practice field carrier landings during the period of stepped up activity. Over 5800 hours were flown without an accident, and 2600 actual landings were made aboard the *Lexington.*

ASW Top Crews Honored

Quonset Prizes are Announced

"Bloodhound" was added to ASW lingo when RAdm. Magruder Tuttle, ComFAir Quonset, presented a new award for the most proficient air antisubmarine flight crew in his air detachments. The "Bloodhound" award is to be presented semi-annually.

Current winning VS crew consists of LCdr. Robert F. Caulk, Ltjg. Thomas B. Hoppin, Samuel H. Golden, AXC, and Richard W. Arbor, AX2. They were in competition with 90 Quonset Point area VS flight crews.

The "Bloodhound" award is a miniature torpedo mounted on a large, highly polished wood base with metal plates.

Helicopter squadrons also have their competition for RAdm. Tuttle's "Dipper" which is given to the most proficient helicopter antisubmarine flight crew. The first winning crew was from Helicopter Squadron 11 and consisted of Lt. George T. McCullough, Ltjg. Harold J. Zapp, J. D. Huk, AMC, and P. H. Camillo, AX.

To qualify for "Bloodhound" or "Dipper," the winning flight crew must not be involved in any crew-caused accident, incident, or any flight violations during the award period. The crew must be current in all qualification exercises, and three of the four crewmen must have operated as a crew during the entire competitive period.

AT THE TIME *the President disclosed the development and operation of the A-11, he announced that "important technical developments" in the program would be made "available under appropriate safeguards to those directly engaged in the supersonic transport program." In March a briefing on the technologies associated with the A-11 was conducted by the USAF at the request of the FAA which has over-all responsibilities for the SST program. The briefing was held on a restricted-access basis for technical officials of the U.S. airlines and aviation manufacturing companies taking part in the nation's SST development program. Personnel of the Lockheed Aircraft Corporation, manufacterers of the A-11, and the Pratt & Whitney Division of United Aircraft, builders of the J-58 that powers experimental craft, took part.*

ONE MUSEUM FEATURE IS FRENCH EMPIRE 'DOLPHIN' SOFA USED ON 'OLD IRONSIDES'

Navy Has a New Museum

Display Center Opens in Capital

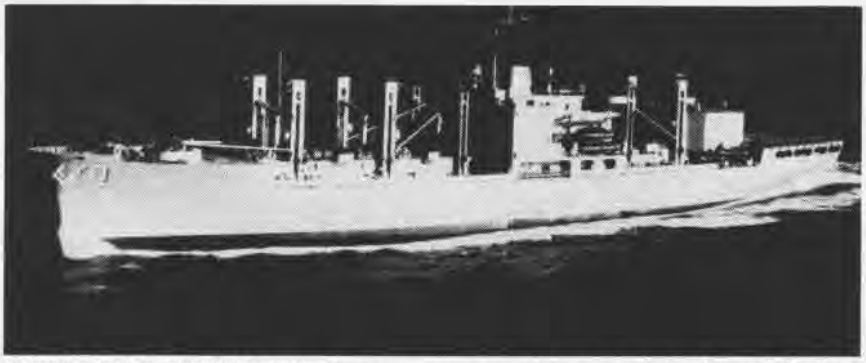
The Navy's youngest museum is the U.S. Naval Historical Display Center located on the waterfront of the Naval Weapons Plant in Washington, D. C. Since 1961, the Center has been actively engaged in collecting, restoring and displaying relics and memorabilia of the past.

The building which serves as home of the Center is steeped in history itself. The original portion of it was constructed some 33 years prior to the outset of the Civil War. At the time it was used for manufacturing ordnance for Navy ships.

Displays are arranged chronologically, beginning with an exhibit commemorating the Revolutionary War and continuing to one from the space age. Detailed dioramas of naval engagements are effectively dramatized with explanations recorded on tape.

Included in the displays are the fur boots and gloves worn by Adm. Byrd on two of his early polar explorations, the last two weapons (carbines) used against the U.S. in WW II by Japanese at Anathan Island in the Marianas, models of ships, including submarines, of all periods, and many others.

New exhibits are in the process of completion. One of them is a case containing uniforms worn by famous officers, ranging from John Paul Jones to WW II's Adm. Chester W. Nimitz.



COMBAT STORES SHIP MARS *(AFS-1), the first of a new class, was built by National Steel and Shipbuilding Co., San Diego. The ship performs cargo replenishments which previously required three ships—Store Ships (AF), General Stores Issue Ships (AKS) and Aviation Supply Ships (AVS). The Navy's first auxiliary class vessel with complete helicopter facilities, it carries two copters. Crew consists of 403 officers and men, Capt. R. C. Medley, commanding.*

Glynco Gives New Course

Introduces SPN-10 Landing Systems

The Naval Air Technical Training Center, Glynco, Ga., began training men to maintain automatic landing system equipment in January. The control and complete a carrier landing nicknamed "Hands Off," is designed to SPN-10 Automatic Landing System, of a suitably equipped aircraft under all-weather and adverse sea conditions.

One million dollars worth of electronic equipment has been installed in one of the blimp hangars at Glynco where training will be held. Only the maintenance end of the "Hands Off" system will be taught there. Operators of the system are trained at Miramar and Patuxent River. Sailors interested in this course must be graduates of the advanced electronics technician and computer schools and be a second class petty officer or higher.

"This tremendous system," explained NATTC C.O., Capt. John T. Lowe, Jr., "is expected to decrease accident rates when visibility is limited owing to heavy rain, snow, fog, or nighttime operations, even when heavy seas make ship motion extreme." Operational evaluation of the system is scheduled for this coming summer.

VAH-4 Wins at Whidbey

Takes Bomber Stream Competition

Using only one aircraft, VAH-4 won Top Crew Awards at ComFAir-Whidbey's Bomber Stream *Bravo* competition. Members of the *Skywarrior* team were Ltjgs. Dick Nielsen and Mike Brown, and George Coubrough, AT2. Three out of VAH-4's four detachments were deployed at the time so the squadron was unable to enter the minimum of two aircraft required. Even though rules eliminate winning a Bomber Stream without at least two planes, VAH-4 amassed more points per aircraft than any other unit.

Ltjg. Nielsen is the youngest aviator to have the distinction of winning a Top Crew award. Until recently he was also the youngest A-3B pilot in the Fleet at 24.

The Top Crew is part of Detachment *Lima* which returned from a WestPac cruise in December. The members are slated to deploy again this fall as a permanent crew.

GREEN PAWNS 'GRADUATE' THE PUNCHERS

PILOTS *and Bombardier/Navigators of VA-75 attend classroom instruction on the maintenance systems of their new plane, the A-6A Intruder.*

CIVILIAN REPRESENTATIVES *work along with Navy maintenance men in checking out an A-6A in VA-42's hangar space at NAS Oceana, Va.*

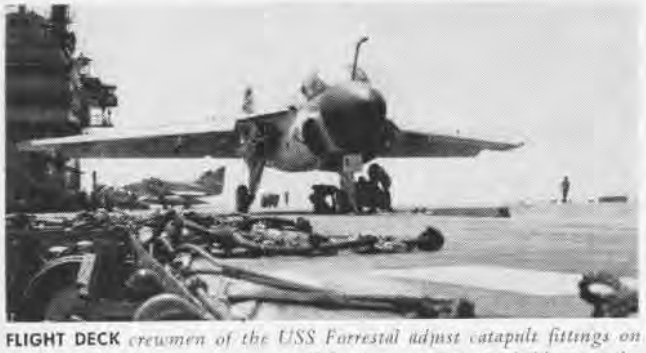
THE GREEN PAWNS of VA-42, NAS OCEANA, have "graduated" the first A-6A *Intruder* carrier-based squadron to the Fleet. VA-75's *Sunday Punchers*, also at Oceana, completed formal training in March.

Now commanded by Cdr. W. S. Nelson, VA-42 trained replacement pilots for *Skyraider* squadrons until 1963. In February of that year, the first Grumman *Intruder* arrived, and the squadron was assigned the mission of instructing pilots, bombardier/navigators and maintenance personnel.

During the extensive training period, VA-75 maintenance crews totalled 55,000 man-hours under the Fleet Replacement Aviation Maintenance Program (FRAMP). This classroom instruction, monitored by VA-42, was conducted at Oceana by personnel assigned to Naval Air Maintenance Training Detachment 1003, a component of NATTC MEMPHIS.

Pilots and bombardier/navigators from VA-75 commenced training in September 1963, accumulating 1200 hours of inflight experience from that time until last March.

Another Oceana squadron, VA-85, is slated to transition to the *Intruder* this spring. Marine unit VMA-242 is scheduled for training in mid-1964.



FLIGHT DECK *crewmen of the USS Forrestal adjust catapult fittings on an Intruder during carrier qualification operations held recently.*

CREWMEN BEGIN *to tow VA-42's Intruders at NAS Oceana. The Green Pawns monitored VA-75 personnel during 55,000 man-hours of training.*

THE SLEEK LINES *of their Grumman A-6A Intruders highlighted by the sun. VA-42 crews put the new aircraft through its paces. During the training cycle, VA-75 pilots and bombardier/navigators flew some 1200 hours with VA-42 instructors and completed the program in March.*

By Lt. W. A. Caldwell, USN

SELECTED AIR RESERVE

JOHN BERGERSON, *University of Washington junior, a midshipman in the NROTC, has enlisted in the Marine Air Reserve to begin training at NAS Seattle before being commissioned a 2nd lieutenant upon graduation.*

Captains Three

Usually there is just one captain on a ship or station, but NAS Los ALAMITOS temporarily has three: Capt. William P. Tanner, Jr., his executive officer, Capt. Roger K. Knight, and training officer, Capt. Jack D. Baird. The new captains were recently promoted. Since there is no room at the top, Capts. Knight and Baird will be reassigned. Their promotion represents a 1000 batting average for Los Al, as there were only two commanders aboard eligible for advancement.

Walking History Book

Forty-one years in the Navy, service in three wars and the Philippine Insurrection, helping fight the San Francisco fire in 1905, participation in the cruise of the famed "Great White Fleet," and lending a hand in the excavation of the Panama Canal in 1908—all this and a great deal more are included in the personal records of William N. Edberg, Chief Boatswain's Mate, USNR (Ret.), who now lives in Minneapolis.

His varied career record was revealed when the Chief was confined briefly to the NAS TWIN CITIES' dispensary with a mild heart seizure. He had retired from active service at the station in September 1954.

Born in 1886, Chief Edberg joined the Navy in 1905. It was while he was undergoing boot training that he assisted in fighting the San Francisco fire.

At Christmas time, 1908, while he was aboard USS *Pennsylvania*, the Chief visited the Panama Canal, then under construction. Three hundred Pennsylvania crewmen, in dress-white uniforms, boarded a narrow-gauge railroad train for the trip across the mountains where the digging was in prospect.

At one point, the Chief recalled, "We were all ordered from the train and handed shovels and pickaxes and told to go to work."

They were to load up railroad cars from the huge mounds of earth next to them. The 300 men went to work and in ten minutes, they had accomplished their task. One of the guides then told them, "Now you can go home and tell your folks you helped build the Panama Canal."

In WW I, Chief Edberg saw service in France and England aboard a troop transport. In WW II, he served in the Atlantic, Mediterranean and Pacific theaters, serving aboard three different ships for which he helped assemble the crews.

He was attached to NAS TWIN CITIES during the Korean War. At 77, he is still hale and hearty, little affected by the heart condition that brought him back briefly to his last station.

LOOKING AT THE HAT *in his future is William C. Biersma and his bride, former Miss Minnesota. He enlisted in the NAO Candidate program at NAS Twin Cities in February, married in March and starts his training next October.*

NAS LOS ALAMITOS *now has a chapel for divine services. Not entirely new, the chapel was relocated from Naval Weapons Station in Seal Beach. Plans call for it to accommodate 210 people.*

EASTER GIFTS *were carried to Spain when 83 Weekend Warriors from NARTU Andrews flew to Rota for two weeks of active duty training.*

THE STROUP TWINS, *Richard and Stephen, become Weekend Warriors at NARTU Norfolk. Their father, Lt. P. C. Stroup administers the oath.*

Gifts for Spain

In mid-March, Reservists of Fleet Tactical Air Support Squadron 661, NARTU Andrews AFB, Md., took off for 14 days of active duty training with Fleet units under the control of Commander Fleet Air Mediterranean.

Some 83 Reservists from the Washington, D. C., area carried with them a 3000-pound gift cargo for Spanish orphans. The gifts included chewing gum, crayons, coloring books, stick-on wallpaper, and medical supplies.

VR-661 flew to Rota, Spain, where the squadron was based, in three C-54 planes. In command was Cdr. James H. Denny.

Flying Fox Man

Lt. Gerald L. Krueger, a Weekend Warrior and jet pilot with VA-813, NAS Twin Cities, has a new pastime, fox-hunting.

He became interested in the sport to protect his property in South Dakota. Since the bounty on foxes was lowered, hunters have practically abandoned hunting them, and their number has increased to the point where they have become a serious threat to farm fowl.

Last fall Lt. Krueger purchased a Piper Cub and the necessary licenses to permit him to hunt predatory animals. Usually he flies the plane while his father or cousin do the shooting, but occasionally he grabs a few himself. The highest count they have taken in one day was 20, with their total count standing at 120. Since the best time for hunting is right after a fresh snow, Lt. Krueger has rigged skis on his plane for snow operations.

Two-Service Family

Just as BGen. D. Preston Lee, Assistant Adjutant General of the Delaware National Guard, Wilmington, Del., administered the Navy's oath of enlistment to his son, John Elwood Lee, at NAS Willow Grove, the uncle, for whom the young man was named, arrived.

RAdm. John Elwood Lee, USN (Ret.), had flown from California to witness the ceremony. Adm. Lee admits he has been a strong influence on the younger Lee's decision to "Go Navy."

The new recruit is now at NAS Pensacola in the Officer Candidate Airman Program. His training will take 12 months, after which he will be commissioned Ensign, 1355 (Naval Aviation Observer).

CDR. H. R. HIPTAS, *recruiter at NAS Olathe congratulates Patrick L. Dowd upon his making a perfect score on his Application Qualification Test. Dowd, a graduate of Oklahoma State University, has been assigned to VF-882.*

Recruiting Champs

On February 29, Allen C. Schenkel, Jr., became the 212th man to be sworn into the service during the month at NAS Los Alamitos. The station announces that this figure tops the 18 stations in the CNAResTra command.

"We also have the highest percentage of swear-ins," says Cdr. Chuck F. Means, station Procurement and Recruiting Officer. "With the tremendous increase in February, we averaged 138.8 men per month for the first eight months of this fiscal year."

Los Al has enlisted 1110 men since July 1, 1963. With normal attrition and men going on immediate active duty, this represents a gain of 464.

Still on the Navy List

To keep the name "Nauman" on the Navy list, as Ralph E. Nauman, AMMC, retired, his son, Jerrold R. Nauman, was sworn into the Naval Reserve for immediate active duty with the Fleet. Capt. Marcus L. Lowe, Commanding Officer of NAS Glenview, handed Chief Nauman his retirement orders after swearing his son into the Navy. Chief Nauman served with the Fleet from 1942 to 1945, doing antisubmarine work in the Atlantic Theater. The remaining seventeen years, he served with the Naval Reserve.

AT SEA WITH THE CARRIERS

CURRENTLY *on third Mediterranean tour, USS Enterprise (CVAN-65) leads a convoy of ships. This view shows deck spotting arrangements.*

ABOARD USS SARATOGA *(CVA-60), Commanding Officer, Capt. J. E. Lacouture, greets early aviation pioneer Charles "Casey" Jones.*

ATLANTIC FLEET

ENTERPRISE (CVAN-65)

Shortly before relieving *Independence* as flagship of Task Group 60.1 in the Med, *Enterprise* provided the setting for a documentary motion picture, "The Missile Navy." The picture, produced by Carl Ragsdale Associates of New York for the Thiokol Chemical Corporation, stars Chet Huntley of NBC News.

Opening scenes reveal Huntley in *Enterprise's* busy Combat Information Center. At this point, the carrier, commanded by Capt. F. H. Michaelis, is participating in a full-scale task force exercise, under the over-all command of RAdm. W. I. Martin, Commander Carrier Division Two, embarked.

Since the CIC is the nerve center of the task force, it served also as the pivotal point for the film, which periodically "leaves" Huntley and the *Enterprise* to show the evolution of missile systems from pre-World War II experimental days.

Although CVAN-65 does not, herself, carry missiles, Carrier Air Wing Six, which is deployed aboard the ship, does. Its aircraft are equipped with *Sidewinders, Sparrows* and *Bullpups.*

FORRESTAL (CVA-59)

There wasn't much time for channel fever to develop aboard the *Forrestal* on her return voyage from Operation *Springboard 64* in the Caribbean. In fact, in reaching home waters, they came on like gang busters. Aircraft aboard made a slashing simulated air attack on targets in the Jacksonville, Fla., area.

Forrestal was the spearhead of a U.S. Second Fleet fast carrier task group, composed of CVA-59 and a formation of high-speed missile/antisubmarine warfare escort ships, operating in the newest of tactical formations. The simulated air attack was part of the Second Fleet's ASWEX/STRIKEX 1-64, a striking and antisubmarine warfare exercise involving 18 ships.

Opposing *Forrestal* and the rest of the task group in the exercise were the nuclear submarine *Seawolf* and land-based aircraft from the Jacksonville area. CVA-59 is homeported at Norfolk.

As the carrier and her escorts carried out the strike, they utilized the new Second Fleet tactic of the "fast carrier task group." In this concept, an attack carrier is escorted by ships that are able to steam at high speeds and long distances without a frequent need for fuel, and, at the same time, can give protection against attacking submarines and hostile aircraft. Thus, the term "long legged" has come into use with the introduction of this concept and its employment in the Fleet.

In the two days following the simulated strike against Jacksonville, the carrier and her escorts moved into the Virginia Capes operating area. They were opposed by the conventional submarines *Cutlass* and *Torsk* as they again conducted simulated air strikes against targets further north. Later, the task group was joined by an antisubmarine hunter-killer group which furnished antisubmarine protection while the task group refueled.

While in the Caribbean, Lt. Robert R. Pixley of VF-103 logged the 89,000th landing aboard the *Forrestal,* in an F-8C *Crusader.*

INTREPID (CVS-11)

The 79,000th arrested landing on the *Intrepid* was made by Lt. James Bair of VS-27 in an S-2 *Tracker.* Copiloting was Lt. Robert Kreiner. A little more than a month later, Lt. Elwood N. Harper, of the same squadron, logged the carrier's 80,000th landing aboard, also in an S-2. On Lt. Harper's flight, Lt. Roderick P. Craw-

ford sat in the seat at the right.

Helicopters made the news in the *Intrepid* when Lt. William Nordeen and Ltjg. Robert Allison of HS-3 brought in an SH-3A *Sea King* for the carrier's 4000th helicopter landing.

LEXINGTON (CVS-16)

It was July 5, 1943 when *Lexington* logged her first arrested landing. LCdr. T. B. Sutherland, Commanding Air Group 16, had the honor; he made the landing in an F6F-3 *Hellcat*.

Last February, the 20th, *Lexington* logged her 100,000th landing. This time, the honors went to Lt. Thomas W. Poore of VT-25. He flew an T-9.

Lexington became a floating classroom when she cooperated with NAAS Kingsville's drive to increase its E-3 ranks. As part of a 12-week curriculum designed by the auxiliary air station, 17 seaman apprentices boarded the carrier for a week of shipboard indoctrination. Each participated in deck division daily work routine and stood underway watches on the bridge.

Airmen and constructionman apprentices attend the Kingsville school, but it was felt that seaman apprentices would profit most from the cruise and were given first consideration.

The cruise is made once a month to qualify advanced student pilots in aircraft carrier landings. The E-2's are

GOLDEN HOOK *award for best landing technique is given Cdr. Burgin, C.O. of VA-86.*

flown to Pensacola, where the ship is moored, a day early, to tour the carrier and get established in their respective berthing areas.

SARATOGA (CVA-60)

Over 300 students and faculty members of the Air Force Air War College boarded the *Saratoga* for a one-day, at-sea orientation in carrier operations and tactics. The group was headed by MGen. Robert D. Taylor, III, school commandant.

First on the group's schedule was a briefing by Capt. John E. Lacouture, commanding the carrier. Following the briefing, the group was divided into small working seminars and given an extensive tour of the ship. The afternoon was spent observing flight deck operations and a tactical demonstration of aircraft maneuvers and firepower. The demonstration was provided by *Saratoga's* Air Wing Three.

When the carrier later went to the

AN AIR *demonstration for visiting USAF Air War College is given by CVA-60 on cruise.*

Caribbean to participate in Operation *Springboard*, she was visited by early aviation pioneer Charles "Casey" Jones. Mr. Jones, holder of pilot's license No. 13, was instrumental in developing the landing gear and equipment that was used when the first plane touched down on a U.S. aircraft carrier. He was, at the time, working for the Curtiss Airplane and Motor Corp. The first landing was made by LCdr. G. deC. Chevalier in an Aeromarine on Oct. 26, 1922, while the USS *Langley* was underway off Cape Henry.

Saratoga's 81,000th landing was made by Lt. K. R. Schulze of VA-36, in an A-4C *Skyhawk* off the Virgin Islands. The 82,000th was checked off when Lt. Ron Datka of VFP-62 touched down in his RF-8A *Crusader*.

SHANGRI LA (CVA-38)

Capt. Irvin G. Peters relieved Capt. Edward L. Dashiell, Jr., as commanding officer of *Shangri La* while the carrier was anchored at Cannes.

The ranks of the growing number of Naval Aviators who log 500 landings on an aircraft carrier were increased by one more when LCdr. Joseph K. Stanley landed an A-4C *Skyhawk* on the deck of CVA-38. He is operations officer of Attack Squadron 46.

THE SCULPINE CLUB *aboard USS Randolph (CVS-15), 36 members strong, prepares to skindive in the waters off Bermuda. Club was formed two years ago by Ltjg. Hank G. Van Beever.*

USS LAKE CHAMPLAIN *(CVS-39) has its own four-part answer to Beatlemania. The Stingrays find regulation haircuts no disadvantage.*

EXCELLENT *was the rating given USS Franklin D. Roosevelt in Admin Inspection. RAdm. Goldthwaite, ComFAirJax, is inspecting the crew.*

LAKE CHAMPLAIN (CVS-39)

Watch out for the Stingrays!

Men aboard the *Lake Champlain* have been, and, for at least the last five months, have learned not only to live with them but to like them. Recently, the Stingrays invaded the Caribbean ports of St. Thomas, Roosevelt Roads, and Guantanamo, not so much to be seen as to be heard.

The Stingrays are a musical group that formed aboard CVS-39 last December, in the wake of Beatlemania that swept the country. Their motto is "to originate and imitate," according to Ron Shinkle, SN, leader of the four and second guitarist. "We play tunes that other groups have made popular and we write our own."

Record companies in New York have offered to cut their original tunes.

At liberty call in the Caribbean, the Stingrays were in the first launch. Surrounded by drums, guitars, amplifiers and other paraphernalia, they were not inconspicuous. Lead guitar is played by Carl Meashey, AN, and base guitar by Jim Walker, SN. Forrest Hanf, AA, at the drums, is the Ringo Starr of the group.

There is not much of a chance the association with the popular British group will be lasting: each has a regulation G.I. haircut.

FRANKLIN D. ROOSEVELT (CVA-42)

After six weeks of intensive operations in the Caribbean, *Franklin D. Roosevelt* returned to home port, Mayport, Fla., readied for deployment to the Med for a tour with the Sixth Fleet, and, late last month, departed.

Completing the battle problem at Guantanamo, the carrier proceeded to Puerto Rico where she conducted live missile and bombing exercises for five days, using aerial and surface target facilities.

PACIFIC FLEET

CORAL SEA (CVA-43)

On March 10th, Lt. Jim Bolwerk, USN, of VF-121, and 1st Lt. Bob Brooks, USMC, radar intercept opera-

LT. KENNETH SCHULZE *of VA-36, in khakis, shows some of the 300 visiting Air Force College officers the flight deck of the USS Saratoga.*

THE 18,000th LANDING *is made aboard amphibious assault ship USS Valley Forge (LPH-8) by H-34 Sea Horse piloted by Maj. Farnsworth.*

SWEE' PEA *cartoons are presented Katala by Art Director Maloney as Princeton's public information officer, Ens. Burt Schneider looks on.*

NEARLY FIVE TONS *of elementary and high school text books are loaded onto Bennington before departing on current tour in Far East.*

tor, completed the 126,000th landing aboard CVA-43 in an F-4B *Phantom II*. Lt. Brooks was on TAD from VMFA-542 of El Toro, California.

In ceremonies in the ship's hangar bay, Capt. Pierre N. Charbonnet relieved Capt. Charles E. Roemer as Commanding Officer of USS *Coral Sea*.

BENNINGTON (CVS-20)

When *Bennington* deployed to the Western Pacific, aboard were five tons of elementary and high school textbooks to be donated to schools and orphanages in the Philippines, Japan and Hong Kong under *Handclasp*.

MIDWAY (CVA-41)

At Beppu, Japan, *Midway's* People to People program went into high gear. During the three days the carrier was in port, more than 800 people visited the ship. Liberty boats shuttled them out to the ship for tours and refreshments. A party for the children of the Sayuni Aijen Orphanage was a huge success. *Midway's* senior chaplain and several crewmen later visited the orphanage in nearby Oita and presented a gift of food and medical supplies from the crew.

Two Naval Aviators in VA-25 have logged in their 500th carrier landings, both aboard the *Midway*. First to reach the mark was Lt. O. R. Ford. Most recent reported is the executive officer of the squadron, Cdr. R. F. Smith, who made his in an A-1J *Skyraider*. His plane captain was R. J. Boucher, AN.

ORISKANY (CVA-34)

In change of command ceremonies, Capt. William H. House relieved Capt. Herman J. Trum as Commanding Officer. Guest speaker for the occasion was VAdm. Paul D. Stroop, ComNavAirPac. Capt. Trum reports to the staff of Commander in Chief, Pacific Fleet, as Operations Officer.

PRINCETON (LPH-5)

For many years, men aboard the *Princeton* referred to their ship as the "Sweet P," referring to her initial letter. Seaman Robert A. Katala got to thinking about this and wrote cartoonist Bud Sagendorf of Popeye's "Thimble Theater." "Would Swee' Pea like to become an LPH man?" Katala asked. The answer was yes.

HEAVY SNOW *at NAS Atsugi delayed launching CAW-11 planes till CVA-63 reached port.*

Two drawings of the cartoon character were made by Sagendorf and were presented to Katala and the ship by John Maloney, head of Art Department, Los Angeles *Herald-Examiner*.

HANCOCK (CVA-19)

Into the drydock at San Francisco Naval Shipyard entered the *Hancock* for preliminary overhaul for a month and a half. The entire hull was scraped and several coats of protective paint were applied.

During the overhaul period, over 20,000 square feet of wood will be replaced on the carrier's flight deck. Some bulkheads, hatches, ventilation pipes and plumbing will be restored. More sophisticated electronics gear will be installed. Living spaces will be modernized and the air conditioning system aboard will be improved.

VALLEY FORGE (LPH-8)

Maj. Francis W. Farnsworth, USMC, and his copilot, LCdr. Lyle D. Quamme, made the 18,000th landing aboard the *Valley Forge*, in an H-34 *Sea Horse*. Crew of the helo included C. R. Stewart, ADR2, and J. H. Chesnick, ATN3.

During gunnery exercises of her refresher training at San Diego, LPH-8 made a direct hit on a drone and became a member of the "Drone Killer" Club of USS *Targeteer*. *Valley* sent a plaque to *Targeteer* to be displayed aboard the ship with plaques of the other 19 members of the exclusive club.

VR PILOTS, *LCdr. Lloyd McBeth and Marine Capt. Dick Peterson, fly practice Link hop.*

CREW MEMBERS *Frank McKinnon, ADR1, and Karl Rudkosky, RM1, go through swim tests.*

VR-872'S *LCdr. Dave Cheney, Lt. Bob Dunn and C.O., Cdr. Barbero, file flight plan.*

14,000 MILES OF FLYING IN ONE WEEK

By Phoebe Allen

EVEREADY, the trade name of a flashlight, serves as well to describe the Naval Reserves. At a moment's notice, like the Minute Men of old, they are prepared to relinquish the comforts of civilian life. As others have done so many times in the past, Reservists don a Navy uniform and become part of the active duty corps ready to defend their country.

For example, VR-872 is one of 30 squadrons and units at the Naval Air Reserve Training Unit (NARTU) ALAMEDA which trains as a part of the Weekend Warrior program. Each year it undergoes a two-week period of duty to sustain and sharpen its capabilities.

Like other units situated throughout the U.S. at 18 air stations and NARTU's, VR-872 is guided by OpNav Inst. 5452.5: "The mission of the Naval Air Reserve Training Command is to maintain Naval Air Reserve personnel in a state of training, readiness and availability for immediate employment as aviation squadrons, with aircraft, and as personnel augmentation of the active forces in the event of enemy attack on the continental United States or upon execution of general mobilization."

A THREE-TIME winner of the coveted Noel Davis Trophy, awarded to the most efficient VR squadron in CNAResTra, VR-872 recently completed a mission representative of its role in today's Navy.

Word came from CNAResTra that one of the squadron's C-54 transport planes was to fly to TACHIKAWA Air Force Base, Honshu, Japan. Two crews would be required, for relief purposes,

CARGO, *some 2½ tons worth, is loaded aboard aircraft at NAS Alameda. It was delivered to units at Tachikawa AFB.*

OXYGEN CHECK *is performed aboard the C-54 before takeoff by Vic Raible, PR2, Lt. Gerry Moulin and Albin Love, AMS2.*

C-54'S *nose gear is checked over by Dave Wirtanen, AMS2, and Appy Apodaca, ADR2.*

AT TRAVIS AFB, *VR-872 personnel were thoroughly briefed for their flight to Japan.*

LT. ROBERT DUNN *checks out relief navigator, Ltjg. Frank Van Stralen en route to Hickam.*

in the round-trip journey which would entail flying a distance of 14,000 miles.

Prelude to the trip was marked by a number of preparatory measures. Skipper of the squadron, Cdr. Gene Barbero, and LCdr. Joe Reeves, NARTU ALAMEDA VR training officer, put their heads together and outlined the steps that had to be taken.

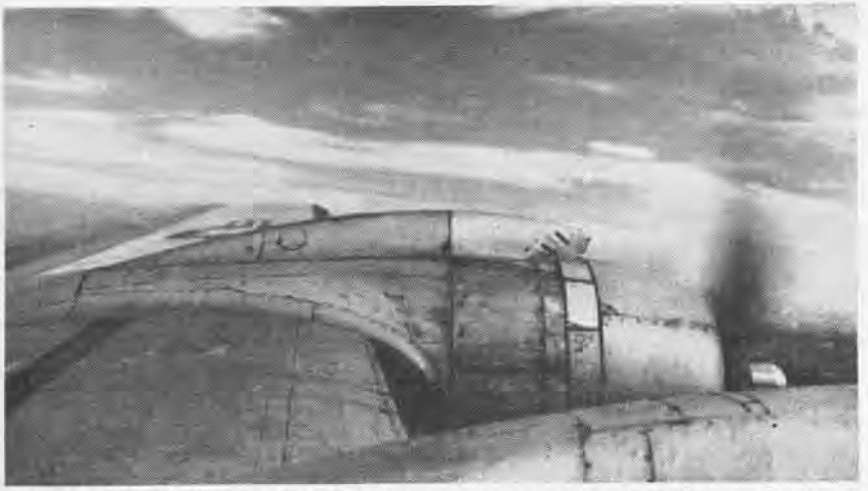
Pilots were assigned refresher periods in Link trainers. Navigators were briefed on charting the courses to Japan. All flight crew members were required to pass swimming tests and take survival courses. Further, a preliminary trip to nearby TRAVIS AFB was made where personnel received extensive briefings on weather, communications and other flight data pertinent to the Far East area. The flight was to become a part of MATS after leaving Alameda.

Finally, 5000 pounds of cargo, earmarked for delivery to Tachikawa, were loaded aboard. Cdr. Barbero and his crew took off from Alameda for the first but short leg of the journey as Navy 39118. They landed at Travis, underwent another briefing and took on a MATS check pilot who would accompany them. The C-54 took off from Travis as MATS 39118 for the next leg, a 12-hour run to HICKAM AFB, Hawaii. The crew rested there for a few hours, then launched again on a 2000-mile flight to Wake Island, final stop before reaching Japan.

After Wake Island, the VR-872 transport was flown the final ten hours to its destination, Tachikawa. Cargo was unloaded and a weary crew checked into the MATS transient hotel for a two-night RON.

Later the crew was off again on the long return trip to Alameda. One week and 14,000 miles later, they were back where they'd started, mission completed. It had been strenuous, but it was good to know they deserved the title, "Ready Reserves."

VR-872 is one of four tactical support transport squadrons at NARTU ALAMEDA. Two others, like VR-872, became the first Alameda Reservists to fly such missions to the Far East. The fourth operated from Rota, Spain, in support of the 6th Fleet throughout the Mediterranean area. These units pride themselves in fulfilling CNAResTra assignments efficiently and expeditiously.



AFTER THE LONG TREK *across the Pacific, Japanese coast came into view. Crew made stops at Hickam AFB, Hawaii and Wake Island before reaching its Far East destination, Tachikawa AFB.*

CREW, *with Capt. R. E. Hill (L), NARTU C.O. looking on, relaxes after 14,000-mile trip.*

Demonstration Ship Chosen

USS Biddle to Test MLF Concept

Under a plan approved by President Johnson, the U.S. Navy will make available a ship for use as a mixed-manning demonstration ship by Navy personnel of countries interested in the proposal for a multilateral force.

The ship designated by the Navy for the demonstration project is the guided missile destroyer USS *Biddle*.

The governments of the Federal Republic of Germany, Greece, Italy, the Netherlands, Turkey and the United Kingdom have stated their interest in participating with the United States in such a mixed-manning demonstration project.

The USS *Biddle*, armed with the *Tartar* surface-to air guided missile and the anti-submarine rocket *(Asroc)*, is attached to the Atlantic Fleet and is under the command of Cdr. Thomas E. Fortson. The technical equipment on the USS *Biddle* will not be the same as that being considered for the surface missile vessels of the multilateral force, but it will provide operational experience with a complex weapon system.

The ship will operate in the Atlantic area and in the Mediterranean. It will operate under varied circumstances—in company with other units of the U.S. Fleet, and possibly at times in company with units of Fleets of other participating countries.

Personnel selection and language training prior to training assignment to the USS *Biddle* will probably take six months. The ship has a complement of 18 officers and 316 enlisted men. Present plans are that officers and men from the countries participating will gradually replace part of the U.S. complement for the period of the exercise.

While mixed-manning aboard warships has occurred before, this will be the largest scale mixed-manning operation on a modern warship.

VA-45 Now One Year Old

Changes Mission, Moves to Cecil

Attack Squadron 45 at NAS JACKSONVILLE celebrated its first birthday on February 15 and at the same time was assigned a new basic mission and operating base. The unit has moved to NAS CECIL FIELD, home of Carrier Air Wing Four, and become an instrument training squadron for Atlantic Fleet pilots in squadrons located south of Norfolk. Previously, VA-45 trained A-1H pilots for integration into attack units. Now two-seat *Cougar* jets and T-28 aircraft will be used.

Cdr. Richard Renaldi, C.O. of VA-45, said that the move will be advantageous to the Navy "inasmuch as this will put all Jacksonville units of CAW-4 on the same base and provide for a much closer working relationship between Wing units."

CHIEF W. H. HOLCOMB, *AMHC, and R. E. Goss, AMH1, of VS-25, discuss the portable hydraulic test bench they built from discarded and salvaged parts of aircraft. The unit expedites the work of squadron maintenance men.*

Editor's Corner

Quick Promotion. When Chief Electronics Technician Al Correia transferred to the Fleet Reserve recently, he became commanding officer of his own fishing boat and a vice commodore of the Golden Isles Sport Fishing Club at Glynco, Ga. The boat also serves as his home.

WHAT'S IN A NAME? A recent check of the VR-21 roster at NAS Barber's Point, Hawaii brought out the following intelligence: there are 11 Johnsons, eight Davises, and four McIntyres in the squadron, all of which leads to confusion. To illustrate, Journalist Bob Melton reported the following imaginary telephone conversation:

"Hello, let me speak to Johnson."

"What's his rate?"

"Aviation something or other."

"Might it be Claude? David? Douglas? Gerald? Marvin? Ronnie? Thomas? Henry?

"Forget it."

"Well, maybe it's Ace or Paul?

"Could be. What's Ace's rate?

"Captain. He's our commanding officer."

"Well, it must be Paul. Lemme speak to him."

"Gee, I'm sorry. Paul's on leave."

Photo of the Month. When seagulls (not gooney birds) decided to take over Saufley Field recently, as if on strike, an alert station photographer caught the accompanying picture of a T-28 bird among the birds. The photo caption reported that the gulls were many feet away when the pilot started his takeoff "but for unexplained reasons monopolized the runway all day. . . ."

'NAVAL AVIATORS MUST BE FLEXIBLE.' In reminiscing about his recent parachute experience to a *Navy Times* reporter, Ltjg. Edward Dickson asked what may become a legendary question within the ranks of Naval Aviation. Lt. Dickson experienced loss of power in his *Skyhawk* over the mountains of California. Unable to zoom over a peak, he ejected. According to witnesses, he dropped 1000 feet into a snowbank, bounced high into the air and back down into the snow. Only after the fall did he find that his parachute had not opened; he used it as a blanket until help arrived two hours later. Recovering from a leg fracture, the intrepid airman was asked what his jump felt like. "Who knows what a chute is supposed to feel like?" he asked. "To me this was a routine reaction. I'd never bailed out before. . . ."

Nice Day All Night. After being in darkness from November to February, the sun's arrival in the northern latitudes is a welcome sight. According to NORAD News Service, a brochure put out by 4684th Air Base Group describes the changing seasons at Greenland's Sondrestrom AFB in this manner: "When the days are shorter, there are still several hours of daylight. In the summer, if it's a nice day, it's a nice day all night."

RUSHING THE SEASON. In mid-February, 20 pilots and airerewmen of HU-4 rushed to the frozen pool at the officers' club, broke the ice and jumped in. The ice-breaking was part of a test for exposure suit integrity. "Leaks were understandably easy to detect," the Public Information Officer reports.

MAINTAINING TRADITION. After NavCad Donald Stubaus flew his first solo flight at Saufley, he headed for quarantine and was unable to take part in the traditional tie-cutting ceremony reserved for solo students. So his instructor, Lt. Samuel Koffler, donned medical togs, snipped an extra-long tie (see photo) while an immune flight student, NavCad William Foley, held on. Reason for the quarantine? A delayed case of measles.

Total Integration. USS *Saratoga* has its own "unified service man" on board. He is Air Force Captain G. L. Rules. He is a 1952 graduate of the Military Academy at West Point (Army) who selected an Air Force commission. Currently he is serving as an exchange pilot with the Marines' VMF-451, flying from the deck of the Navy's CVA-60.

IT'S A FOWLED UP TAKEOFF. FOR UNEXPLAINED REASONS, SEAGULLS 'MONOPOLIZED' RUNWAYS AT NAS PENSACOLA'S SAUFLEY FIELD

LETTERS

Information Wanted

SIR: On the subject of a Navy First, I have been asked on several occasions if I conducted the first night transfer of personnel by helicopter between ships underway.

The night of February 4, 1958, while in HS-6, I did conduct what I believe to be the first night transfer of personnel by helicopter to a surface ship underway when I delivered a medical officer to the USS *Renshaw* (DD-499). Later the same night, I picked up two injured pilots from the *Renshaw*. My copilot was LCdr. Kenneth McGrath, USNR, and the hoist operator was R(?). Carter, SO3, USN.

ERNEST C. HARRIS, JR., CDR.
Asst. Inspector of Naval Material
50 Seventh Street NE
Atlanta, Georgia, 30323

¶ Anyone want to challenge this "first"?

Tailhook Reunion

SIR: In 1957, a group of Naval Aviators in the San Diego area got together and formed the Tailhook Association of Naval Aviators which would meet on a yearly basis. To qualify as a Tailhook, one must have made a takeoff and landing on a carrier. These aviators were Cdr. Bob Elder, LCdr. Boyd Muncie, Cdr. Ralph Smyle, LCdr. Marty Kinkade, and LCdr. Fritz Roth. The first meeting was held at the Rosarita Beach Hotel, 20 miles south of Tijuana, and about 100 were present. The second meeting, also held at Rosarita Beach, numbered nearly 200 aviators, and the 7th and last reunion which was held at the Thunderbird Hotel in Las Vegas, saw over 500 Tailhookers present.

This year, the eighth reunion will again take place at the Thunderbird Hotel in Las Vegas and between 500-700 Naval Aviators will be present. The Committee for the Reunion on 22-24 May has as Chairman Capt. Larry Flint, CRAW-12, NAS Miramar; Capt. George Duncan, ComNavAirPac; Capt. Dick Green, ComNavAirPac; Capt. Zeke Cormier; Cdr. Bob Shields of FAETUPac and Capt. Dick Phillips.

Tailhookers may obtain applications for the May 22-24 meeting in Las Vegas by writing to: Tailhook Treasurer, CRVW-12, NAS Miramar, San Diego, Calif.

CAPT. DICK PHILLIPS, MC, USN (RET)

Water Plant for Gitmo

Design Completed for Cuban Base

The Navy has announced that final design and engineering work is completed on a permanent water desalinization and power generating plant for the Naval Base, Guantanamo Bay.

Installation is scheduled to be completed early next year and the plant will produce 2.2 million gallons of water daily. It will also have a peak capacity of 11,500 kilowatts of electrical power. This will meet the present and foreseeable requirements of the base for both power and water and will make it entirely self-sufficient. The operation of the new plant will save the Navy over $3,000,000 annually compared to the present costs of transporting water to the base.

Also, plans are underway to dismantle and transport the first saline water conversion unit of the Guantanamo plant which is now located at Point Loma, San Diego. The Navy estimates that this unit will begin producing about 750,000 gallons of potable water daily by August.

'Hawkeye' Goes to Fleet

VAW-11 Is First to Get Aircraft

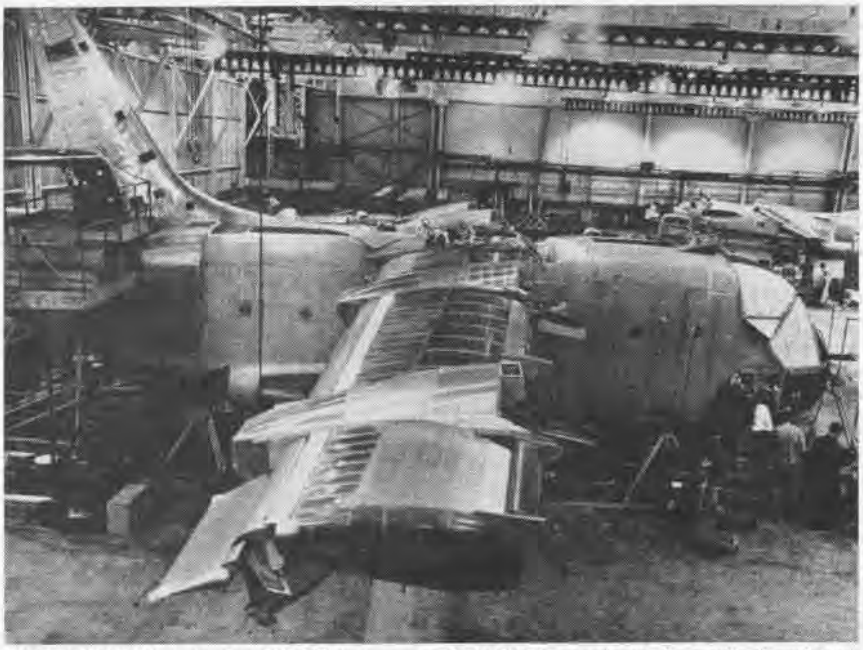
VAW-11, based at NAS NORTH ISLAND, is the first squadron to receive the E-2A *Hawkeye*, a revolutionary AEW plane built by the Grumman Company. The first aircraft was flown from Bethpage, Long Island, to the West Coast in January by Capt. Martin G. O'Neill, C.O. of the squadron.

Working with VAW-11 in evaluating the E-2A's performance are a Board of Inspection and Survey team from the Naval Air Test Center, the Deputy Commander Operational Test and Evaluation Force, Pacific, and representatives from the Grumman Company and other major contractors.

The *Hawkeye's* most dominant feature is its airborne tactical data system (ATDS) which consists of auto-detection radar, airborne computers and high speed data links. This allows the plane's five-man crew (two pilots, three controllers) to act as a Combat Information Center and direct dozens of fighter interceptor aircraft against enemy attackers. The ATDS collects, stores, collates and relays information with maximum reliability helping the E-2A perform as an umbrella of protection against enemy planes. The ATDS and other electronic equipment account for 10,000 of the aircraft's 49,000-pound weight.

The rotodome atop the plane is 24-feet in diameter and revolves in the free airstream at a rate of six revolutions per minute. It contains fixed stack antenna elements of an entirely new type radar. The dome furnishes enough lift to offset its own weight in flight.

Two Allison T56-A-8 turbojet engines give the *Hawkeye* greater speed, altitude and endurance capabilities than its predecessor, the E-1B *Tracer*.



FINAL ASSEMBLY *of the first XC-142A tri-service V/STOL (vertical and short takeoff and landing transport) is nearing completion at the Ling-Temco-Vought plant in Dallas where the wing built by Ryan Aeronautical Company is mated to the fuselage. Ryan is teamed with LTV and Hiller Aircraft in the DOD project under which five XC-142A's are being fabricated for the Air Force, Navy and Army. The XC-142A is the largest tilt-wing transport ever built in U.S.*

CARRIER ANTISUBMARINE AIR GROUP 53

Carrier Antisubmarine Air Group 53 celebrated its fourth anniversary in April. Formed in 1960, it is proud of its distinction as the Navy's oldest ASW group. Three squadrons and a detachment compose the unit's hunter-killer force. VS-21 and VS-29 fly Trackers while HS-6 operates SH-3A Sea Kings. VAW-11's Detachment R flies EA-1E Skyraiders. An A-4 Skyhawk detachment from VA-22 also has served with the group. CVSG-53 deploys with the WestPac carrier, Kearsarge.

ARMED FORCES DAY 1964

Why celebrate Armed Forces Day? Each year all armed forces activities open their gates for visits by the citizens of nearby communities. It's the one time in the year when the neighbors of each sailor, airman, soldier, marine and coast guardsman have the chance to see him at work. Each man has a stake in this annual Open House. It's People to People time in the American manner. It's Communications, community style. It's time for the annual stockholders' meeting.

POWER FOR PEACE

ARMY
NAVY
AIR FORCE
MARINE CORPS
COAST GUARD

ARMED FORCES DAY

ACTIVE AND RESERVE FORCES

THIRD WEEK IN MAY