NAVAL AVIATION

NEWS

In this issue / *NavAirSysCom*

JULY 1971

NAVAL AVIATION NEWS

FIFTY-SECOND YEAR OF PUBLICATION

FEATURES

THE STAFF

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USS Bon Homme Richard, second ship of the Fleet to bear the name, was commissioned at the Brooklyn Navy Shipyard, November 26, 1944, Captain A. O. Rule commanding. By June 1945, she was in the Pacific where she took part in the Okinawa Campaign and launched air strikes against the Japanese homeland.

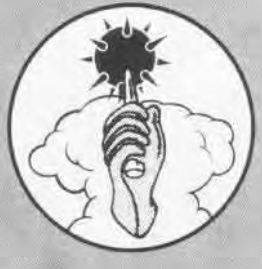
CV-31 was decommissioned in 1946 and placed in the Reserve Fleet at Seattle, Wash. When the Communists invaded South Korea in 1950, Bonnie Dick came out of retirement and was recommissioned January 15, 1951.

Redesignated a CVA in 1952, the proud carrier went about the business of insuring the peace until her 1965 cruise was interrupted by the gunboat attack on U.S. destroyers in the Gulf of Tonkin.

In November 1970, Bon Homme Richard completed her sixth and last WestPac deployment.

Four months short of her 27th birthday, she will be decommissioned at Bremerton this month.

EDITOR'S CORNER



The Deputy Chief of Naval Operations (Air), Vice Admiral Thomas F. Connolly, has issued a call to all aviation commands of the Navy for a display of their approved insignia upon the bulkheads of the OpNav passageways in the Pentagon. Other branches of the Navy are so represented in the Pentagon, as are units of the Army and Air Force.

Each squadron, air group, wing, station or other Naval Aviation activity is being asked to provide a reproduction of its insignia, in color and appropriately presented for display. In the interest of preserving a degree of uniformity, insignia should be mounted on a plaque ten to twelve inches high, of rectangular or shield shape.

While no specific instructions are offered for the desired means of reproducing the insignia, various methods are available, including the application of a decal to the plaque and sealing it thereon with a clear protective coating, use of an artistic rendition in oils, engraved and enameled metal, or the more elaborate bas-relief. Whatever the method selected, the basic idea is to bring together as complete a collection of Naval Aviation insignia as possible to be displayed at an appropriate location in the nation's capital.

Completed plaques should be sent to: Deputy Chief of Naval Operations (Air), Op-05A2, Navy Department, Washington, D.C. 20350.

NAVAL AVIATION NEWS
1911 1971

Latest in Long Line of A-4's Accepted

WASHINGTON, D.C. – The 2,500th McDonnell Douglas A-4 *Skyhawk* was delivered to Vice Admiral Thomas F. Connolly, Deputy Chief of Naval Operations (Air) who accepted it for the Navy in ceremonies at NAF Washington on April 20. Among those attending the brief ceremonies were representatives of other governments.

The *Skyhawk* delivered was the newest and most advanced in the A-4 series which was introduced to the fleet in 1956 – the A-4M, the seventh major version, developed specifically for service with the Marine Corps. Initial fleet delivery of four A-4M's was made on April 16 to VMA-324 at MCAS Beaufort, S.C. Earlier models have been in continuous production since 1953, and versions of the *Skyhawk* are also in service in the air forces of Australia, Israel, New Zealand and Argentina.

Advantages of the new aircraft include a 20 percent increase in engine thrust over its immediate predecessor, the A-4F. It is powered by a Pratt & Whitney J52-P-408A engine developing 11,200 pounds of thrust, an increase of 1,900 pounds over that of the A-4F. The added power increases takeoff performance and improves maneuverability, rate of climb and acceleration. New features also include a drag chute for short-field landings, a self-contained engine starter, a greater ammunition capacity for the two internally mounted 20mm guns, a new fixed gunsight and improved weapons delivery system. It is capable of delivering all air-to-ground weapons in the naval inventory and can carry all types of modern tactical armament. There are five external stores stations.

Immediately after the ceremony, Adm. Connolly presented the aircraft to Major General H. S. Hill, Deputy Chief of Staff (Air), HQMC, who accepted it on behalf of the Marine Corps.

In addition to the five A-4M's now on duty with the Marines, four others are presently involved in BIS trials (see *News and Views*, page 18).

Before an audience including members of foreign governments, VAdm. Connolly accepts delivery of the 2,500th Skyhawk, an A-4M, newest addition to the Marine Corps inventory.

Dependent School Named for Astronaut

NAS BERMUDA – During ceremonies in May aboard this air station, the dependent school was officially named the Roger B. Chaffee School.

LCdr. Chaffee was one of three U.S. astronauts who died in a fire during a simulated countdown of the *Apollo 1* mission.

Present at the ceremony were the parents of the deceased astronaut, Mr. and Mrs. Donald L. Chaffee, who presented the school with three books, including a biography of their son.

In keeping with the Navy's policy of naming dependent schools after naval heroes, CNO selected Chaffee's name from three submitted.

Navy and Army Pilots Share Honors

WICHITA, Kans. — Two pilots, LCdr. James E. Rylee and WO1 Mark M. Feinberg, USA, were named recipients of the Fifth Annual Avco-Aviation/Space Writers Association (AWA) Helicopter Heroism Award at the 1971 AWA convention held here in May.

LCdr. Rylee, VC-8 helo pilot, received the Avco Lycoming helicopter heroism award for a non-combat rescue. He was the pilot of an SH-3A which lifted 26 persons from the Caribbean on May 2, 1970, after a Dutch Antilles Airlines jet was forced down.

The rescues were carried out despite rain, high winds, rough seas and darkness. The 26 persons rescued represent a record for the number saved at sea on a single helicopter mission. Rylee and his copilot, Ltjg. Donald Hartman, were awarded the Distinguished Flying Cross, and ADC William Brazzell and AD Calvin Lindley, crew members, were presented Navy-Marine Corps Medals. All were members of VC-8 at the time.

The combat award winner, WO Feinberg, was recognized for bravery in a volunteer mission near Dak To, Vietnam, in February 1970 when he rescued four men trapped during a reconnaissance mission. In a UH-1H, he hovered at tree-top level in the midst of heavy surrounding fire until he spotted the purple smoke from an identifying grenade. Then he maneuvered his helicopter down through the trees to hover just high enough to lower nylon ropes to the trapped team. Then he airlifted them to safety. He was awarded the Silver Star for the action.

New Orion Scheduled

WASHINGTON, D.C. — A contract for the conversion of ten P-3A *Orion* aircraft has been issued to Lockheed Aircraft Corporation. Designated the EP-3E, the new aircraft will be configured to an electronic warfare role complete with a solid state signal intelligence suite. A forerunner of the new *Orion* is the EP-3B, two of which have been in operation with VQ-1 for the last two years.

Twelve EP-3E's are scheduled for delivery, six each to VQ-1 and VQ-2. Two of the twelve will be the operational EP-3B's reconfigured to the E model.

The new aircraft will be characterized by large canoe radar on the top and bottom of the aircraft, as well as a ventral radome on the bottom. The characteristic MAD "stinger" of the *Orion* series will be absent.

It is planned that the EP-3E will replace the EC-121 in electronic warfare.

The first delivery of the new aircraft is scheduled for July with total delivery completed by July 1972.

NRL Saves Navy Money

WASHINGTON, D.C. — Cleaning techniques developed at the Naval Research Laboratory have saved the Navy thousands of dollars by restoring to service valuable pieces of electrical and electronic equipment that have been damaged by flooding and fire.

The latest use of the NRL cleaning system was on USS *Enterprise* where electronic equipment was damaged by saltwater when a fire main broke in an electronics compartment. Mr. Paul B. Leach, a technologist in the chemistry division of NRL directed the cleaning operation which restored almost all the electronic equipment.

A variety of procedures for cleaning contaminated devices have been developed and are in use by NRL. Typically, electronic or electrical parts contaminated with salt water or oil are cleaned in an oil-displacing detergent solution with the aid of ultrasonic agitation. The decontaminated material is then rinsed ultrasonically in fresh water. Water displacing fluids, special cleaning agents, and corrosion inhibiting compounds are used when necessary.

The various methods have also been used to clean the electronic equipment of aircraft after saltwater flooding.

Chronology Published

A revised, expanded and updated edition of the chronology, originally titled *U.S. Naval Aviation 1910-1960*, has been published and is being distributed to aviation units under the title *U.S. Naval Aviation, 1910-1970*. The first edition, with its wealth of factual material on the history of Naval Aviation, proved very popular. The revised edition expands and updates the text and contains a subject index which makes it much easier to find specific topics. In addition, much material which could be tabulated — such as aviation ships, evolution of air wings, and bureau numbers of naval aircraft — has been added to the appendices.

As was the original, this revised edition was prepared by the DCNO(Air) historian, Mr. A. O. Van Wyen, and the NavAirSysCom historian, Mr. Lee M. Pearson. Mr. Van Wyen's successor, Mr. Clarke Van Vleet, participated in the detailed editorial work and co-authored the 1969-1970 material.

Additional copies for official use may be ordered through normal publication supply channels. Personal copies are available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402; price $4.00.

VW-1 Disestablished

AGANA, Guam — Airborne Early Warning Squadron One (VW-1) will be officially disestablished and absorbed in Fleet Air Reconnaissance Squadron One (VQ-1) at NAS Agana this month.

VW-1, formed in 1952 and currently under the command of Commander Norman S. Bull, has, for the past ten years, flown weather reconnaissance as its primary mission, with radar barrier operations in SEAsia a secondary task. Using the weather-configured WC-121N *Super Constellation*, the men of VW-1 earned the nickname *Typhoon Trackers*.

VQ-1 will continue to fly the weather reconnaissance missions.

Senior Satellites Aid Navigation

WASHINGTON, D.C. — Two navigation satellites launched in 1967 are the senior functioning beacons of a constellation of five polar orbit spacecraft which support the Navy's *Transit* navigation system.

Designed to operate for two years, the four-year-old satellites weigh about 110 pounds, are 18 inches in diameter — less solar blades — and are gravity gradient stabilized. *Oscar 12*, launched April 14, 1967, was the first of the *Transit* satellites to carry integrated circuits, microelectronic and

solid state components. *Oscar 13*, launched May 18, is identical to its April-launched sister.

The *Transit* satellites provide signals which permit Navy ships to find their positions at any hour, day or night, anywhere in the world by measuring the Doppler shift of the satellite signal.

With five working satellites in the system, there is no new planned launch, although other satellites are ready when needed to fill the constellation. Actually, the system could operate with only one spacecraft, but ships would have to wait longer for a navigation fix. An experimental navigation satellite, *Transit 4-A*, which is still signaling but not operational, will mark its tenth anniversary in orbit on June 29, 1971.

Invented and developed by the Johns Hopkins Applied Physics Laboratory, for the Navy, the satellite navigation system has been in operation since 1964 on Navy ships. In recent years, a civilian version has been developed. It guides the *Queen Elizabeth II*, was used by the oil tanker *Manhattan* in her voyage through the Northwest Passage and marks specific points at sea for research vessels and cable laying ships.

Suggestion Pays Off

NAS CECIL FIELD, Fla. – Rear Admiral Lawrence Heyworth, Jr., Commander, Fleet Air Jacksonville, recently presented a check for $1,254 for a beneficial suggestion to ABF3 Larry J. Linemann.

PO Linemann, now assigned to Cecil Field's fuel farms, was not satisfied with the way the contaminated fuel had to be handled while he was aboard USS *Lexington*.

He suggested a modification to the ship's replenishment station, allowing for internal flushing. Previously, contaminated fuel was dumped overboard. Now, the fuel is recycled through tanks, trapping sediment and moisture in lines.

The new method not only saves the Navy money by reclaiming fuel previously dumped overboard but also cuts down on ocean pollution.

Golden Eagles Gather at Alameda

ALAMEDA, Calif. – Sixty-four members of the Early and Pioneer Naval Aviators' Association, better known as *The Golden Eagles*, held their 15th Annual Reunion at the naval air station on May 6, 7 and 8.

Primarily Navy and Marine Corps Aviators of WW I, *The Golden Eagles* were among the first 400 qualified for wings. Limited to a total membership of 200, they now include in their ranks some of the first 30 helicopter pilots, the first 30 Navy jet aircraft pilots and a small number of other Naval Aviators who have pioneered new concepts of flying or who have made outstanding contributions to Naval Aviation. Their average age is 71 but each retains the young man's enthusiasm which motivated him in the early days.

The group was welcomed to Alameda by Captain M. Vance Dawkins, ComFAir Alameda, and Captain James Holbrook, Alameda C.O. At the annual business meeting on May 7, Vice Admiral Charles P. Mason, USN (Ret.), was elected Chief Pilot. Following the business meeting, the *Eagles* toured the Ames Research Center in Sunnyvale and that same evening attended the annual banquet.

On May 8, the 60th Anniversary of Naval Aviation, the pioneers spent the day aboard USS *Enterprise* observing carrier operations.

In 1950, Ens. J. B. Morin was photographed in his F4U Corsair aboard USS Wright (CVL-49) during a Mediterranean deployment. Nearly 6,000 hours and 900 carrier landings later, Captain J. B. Morin, as Commander, Light Attack Wing One, was flying an A-7E Corsair II at NAS Cecil Field, Florida. This month, Capt. Morin becomes Commanding Officer of LPD-3.

Corsair to Corsair II

CAPT JIM MORI

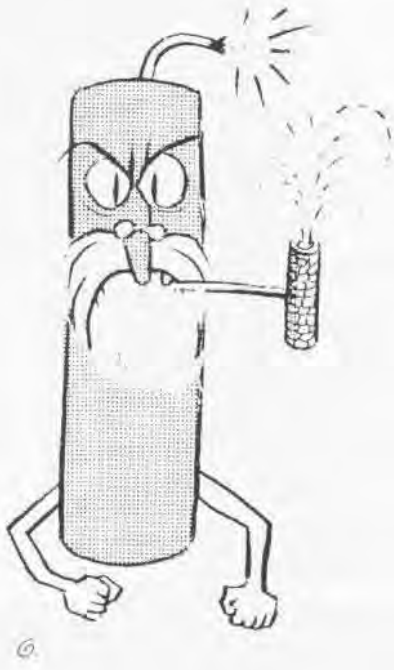
GRAMPAW PETTIBONE

Surf's Up

The first tour Marine first lieutenant was standing the squadron duty one evening when the maintenance duty officer called regarding a "taxi test" on one of the squadron's new F-4J *Phantom II's*. The SDO questioned the advisability of the duty officer taking an airplane but was assured that it would be OK since it was just a taxi test and it would be after 1800, when he would normally be secured to the BOQ. The lieutenant also advised the MDO that he had never conducted a taxi test before and, in fact, had never flown the F-4 at night. The MDO briefed him on the test and said he would accompany him on the mission.

The test was being made to check the proper functioning of the aircraft's generators and could be completed by taxying to the approach end of the runway and back, on the taxiway.

At about 1830, the first lieutenant received a call from maintenance control advising him that the aircraft was ready and that a sergeant from the electric shop was ready to go with him. Assuming that maintenance had rescheduled the sergeant to replace the MDO, he did not question the change and met the sergeant in the electric shop. The sergeant asked that the generator be checked at all power settings including afterburner. Judiciously, the first lieutenant decided that if he was to use the AB's, the test should be conducted on the runway rather than in the warm-up area on the taxiway.



Both crewmen proceeded to the aircraft. Surprised at how dark it was outside, the pilot conducted his preflight using a signal wand. Not satisfied, he sent the sergeant for a flashlight and went over the aircraft again. They found the seat pan and bucket missing from the back seat, so the sergeant returned to the shops to get assistance. Meanwhile, the lieutenant climbed into the front and prepared to start the *Phantom*. The sergeant returned shortly, without a pan or bucket, to find the lieutenant with his helmet on and the external power unit plugged in and running. A confused and misunderstood exchange of words followed and the sergeant climbed into the back.

The lieutenant performed a normal start on the aircraft, did not perform normal post-start checks but proceeded to taxi to the end of the runway. There, he performed an engine run-up and pre-takeoff checks. Cleared onto the runway, the engines were run up to full power and, as the brakes were released, the afterburners selected. The pilot then checked all the engine instruments, specifically the generator lights, and found everything normal. He de-selected the afterburners and initiated abort takeoff procedures. At one time, he saw 100 knots on the airspeed indicator and commenced braking at 80 knots. When the arresting gear sign came into view, he dropped the hook, but it did not engage. Hard braking was employed but there was no appreciable deceleration. They heard a loud noise outside the aircraft, and it began to swerve to the left. Engagement of nose gear steering brought them back toward the center line; however, continued hard braking failed to stop the *Phantom*. It continued into the overrun, across 300 feet of rocks and sand, and then down a 40-foot embankment – into the ocean surf where it stopped with nose and forward cockpit immersed in the sea.

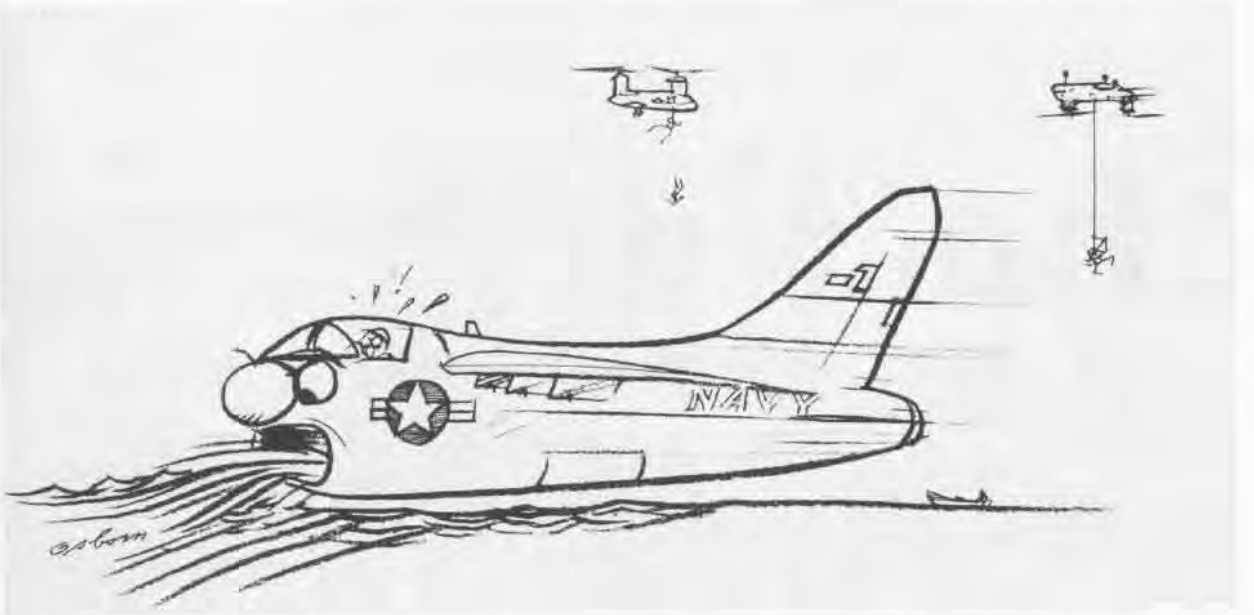
One of the engines was still running and the lights were on. The sergeant opened the rear canopy and climbed out. The lieutenant was unable to extricate himself and called to the sergeant who disentangled the pilot's broken leg and helped him out and through 25 yards of surf to the beach. The aircraft was a total loss.

What a can of worms!
And submerged.

Grampaw Pettibone says:

Zounds, lads! This poor boy might'a got himself kilt. Neither of those "passengers" was strapped into the aircraft, and there wasn't even a seat in the rear. They kind'a bit off more'n they could chew. The first lieutenant was still a fam student in the F-4 with only 28 hours of time in type and had never even taxied the bird at night. The *Phantom* rolled ⅓ of the runway length before he secured

ILLUSTRATED BY Gibbon



the afterburners. No wonder it wouldn't stop!

The briefing given by both the maintenance control officer and the maintenance duty officer specified that the taxi test include everything for a normal hop *except* taking the runway. Why the sergeant thought it necessary to check the generators in afterburner is beyond me. It's a cinch they shouldn't be lit off unless the machine is either tied down or ready to roll for takeoff.

I know that surfing's great sport, but the *Phantom* doesn't make a very good surfboard.

Not Prepared

After an evening twilight launch from one of our newest CVA's deployed overseas, an A-7B *Corsair II* pilot rendezvoused with his flight leader and proceeded on a night surface search mission. The two aircraft were separated by their controller to search independently, using their radar in conjunction with vectoring by an E-2B *Hawkeye*.

About an hour after launch, the twilight became a clear moonless night. The search was being conducted at an altitude of 1,000 feet without use of the automatic flight control system or the radar altimeter warning light. The A-7 pilot, a junior lieutenant, was focusing his attention on the fine tuning of the radarscope. Suddenly he noticed a reflection off the water, at cockpit level, through the port windscreen. He immediately went to 100 percent power and pulled up, simultaneously feeling the aircraft impact the water. The wet *Corsair* began to climb, then the engine started to unwind. The lieutenant radioed his wingman that he had hit the water and was ejecting. As the A-7 decelerated through 160 knots, still climbing slightly and with the engine unwinding through 40 percent rpm, he punched out.

Once in the water, and using his PRC-63 survival radio, he established radio communications with his flight leader who soon arrived overhead. The carrier was some 80-90 miles away; however, a supply ship with her UH-46 helicopters was much closer. A *Sea Knight* was launched for SAR and was vectored to the scene by the orbiting *Corsair II*.

The next hour and a half was spent in various attempts to rescue the downed lieutenant. Although the water and air temperatures were slightly below that required for wearing of an anti-exposure suit, he was not so equipped.

The H-46 spent some 40 minutes trying to drag the horse collar attached to the helo hoist cable close enough so the downed pilot could reach it. Failing that, a young UDT officer aboard the helo entered the water to assist. He went down on the hoist and, while swimming to the survivor, turned the horse collar around backwards for better swimming. He was not familiar with the hoist ring on the pilot's torso harness and was therefore unable to attach them both to the hoist at the same time. The two ended up holding on to each other while being lifted to the helo. At the door, the survivor got caught on the hatch and could not be brought into the helo. After several futile attempts he became so weakened that he lost his grip and fell 50 feet back into the water.

By this time there was a motor whaleboat from the ship standing by, so, tail between its legs, the UH-46 departed the area and the bedraggled lieutenant was brought aboard the boat and returned to safe surroundings.

Grampaw Pettibone says:

Holy Hannah! This sounds like the first helo rescue ever attempted. When are we going to quit biting off more'n we can chew? If the machine isn't equipped for it and the crew isn't trained for it, best leave ol' Dobbin at home in the barn. It's about time we required these people to be trained and ready.

The problem is well recognized at the head shed, and a standardized rescue training program is in the mill. All helo crewmen will receive SAR training and those crews assigned SAR missions will have a specially trained rescue crewman and wet man. It's gonna take time though; won't happen overnight, particularly unless the fleet gets behind it 4-square.

Why was that inexperienced lieutenant out there at night, 1,000 feet, head up his scope, and no autopilot or radar altimeter warning? Don't blame him 'til you make sure he knew better. Why wasn't he properly trained for this hop, and checked out in how to keep from bustin' his ol' hide on a dark night? Skippers, if you don't teach 'em right, you're gonna lose 'em, one way or another.

The Hardware

When Naval Aviation was an infant, aeronautic responsibilities were scattered about in a variety of bureaus, departments and CNO staff offices. Common sense dictated that these responsibilities would have to be brought under a single roof if there was to be an effective aviation organization.

In 1921 many of them were united when the Bureau of Aeronautics was born.

Although BuAer was disestablished 12 years ago, an evolutionary process allowed it to live on in various forms. Today the organization charged with the same basic mission is the Naval Air Systems Comand (NavAirSysCom). As a tribute to BuAer, its 50th anniversary is being celebrated this month by NavAirSysCom.

When BuAer was formed, it acquired many of the aeronautical responsibilities within the Navy, but items such as aviation radio, ordnance, ships and flight instruments remained with other bureaus. Although it acquired the responsibility for flight instruments in the mid-30's, the makeup of the bureau changed very little during the first 20 years of its existence.

When the Deputy Chief of Naval Operations (Air) was formed in 1943, four of BuAer's divisions, dealing with plans, flight, training and personnel, were transferred to the new organization. Shortly after World War II ended, BuAer gained responsibility for aviation electronics, which had been a vital interest of Naval Aviation for many years.

During this period, numerous problems involving aviation ordnance were evident. An effort was made to resolve them in the mid-50's by transferring all aviation fire control work to BuAer and rocket responsibility to the Bureau of Ordnance. This did not solve everything and, because problems involving the two bureaus encompassed the entire field of guided missiles, they were merged into the Bureau of Naval Weapons in 1959.

A further change was brought about in 1966 when the Bureaus of Naval Weapons, Ships, Supplies and Accounts, and Yards and Docks were replaced by six systems commands. These commands, under the Chief of Naval Material, are Air, Ordnance, Ships, Electronics, Facilities Engineering, and Supply. In effect, the Bureau of Weapons was divided into NavAirSysCom and the Naval Ordnance Systems Command.

This article, the first in a series, delves into the organization and function of the Naval Air System Command and its relationship to modern-day Naval Aviation —and Naval Aviation of the future.

NavAirSysCom – An Overview

By JOC Dick Benjamin

Store

An A-7 Corsair II, a complete air weapons system, demonstrates its armament-carrying capability during a test flight over Southern California.

Developing, procuring and supporting all air weapons systems for the Navy and Marine Corps is a monumental task, but a vital one.

It is a demanding task that requires perseverance and imagination. It is the task assigned to the Naval Air Systems Command.

NavAirSysCom, headed by Rear Admiral Thomas R. McClellan, is a worldwide organization encompassing 190 assorted activities. In fulfilling its task, NavAirSysCom follows the basic concept that today's air weapons are not single elements. Instead, they are packages of subsystems encompassing all interrelated items and functions which must be put together to allow the entire system — an aircraft with its complex of weapons and fire control equipment — to perform its mission.

Not all air weapons systems are comprised of the same elements, but each is an integrated whole. The F-4, for example, besides an airframe and jet engine, has an air-to-air missile system with instrument panel display, guidance and electronic systems, and many other equipment installations.

When NavAirSysCom receives an operational requirement for an aircraft, the command becomes responsible for the complete air weapons system from its inception to its phase out. NavAirSysCom first conducts feasibility tests and then puts the various building blocks together, producing a weapons system which is tested, evaluated and modified.

Test, maintenance and repair equipment must be developed, personnel trained who will work with the system, and training aids and manuals produced. The complete system must be delivered to the fleet and maintained throughout its service life. When it reaches the end of its service life, it must be

S-3A, top, in engineering phase of development, is destined to replace the S-2. Inflight research of variable stability system in an X-22A, center, begins this month. Integrated flight capsule, bottom, was one system tested for use in the A-7. NavAirSysCom 12-story headquarters' buildings are surrounded by a Pentagon cloverleaf, National Airport and the Crystal City complex, on the Potomac River, right.

broken down and disposed of.

Maintaining effective naval power is a fast moving business — as fast as tomorrow's aircraft and missiles. Needs are constantly changing and weapons are becoming more sophisticated and complex. Officials at NavAirSysCom feel that the master key to keeping ahead of the game is effective management of men, materials and money. They contend that a system of management must be maintained that is as modern as the weapons systems themselves.

The Naval Air Systems Command is structured to have the highest level of management effectiveness possible, and is constantly updating its methods. The command is proud that in comparison with similar military organizations it is able to complete its mission as effectively with considerably fewer people.

A closer look at NavAirSysCom will show how this is accomplished.

Among those assisting Adm. McClellan is the Vice Commander, Rear Admiral Daniel K. Weitzenfeld, an aeronautical engineering specialist. There are also deputy and assistant commanders for plans and programs and comptroller; research and technology; material acquisition; contracts; and logistics and fleet support. In addition there is an inspector general and director of administration.

The management team also consists of NavAirSysCom-designated project management offices and coordinated project offices, and Chief of Naval Material-designated project management offices that work closely with the command. There can be as many as 30 or more major projects under way at all times, plus many smaller projects. While each of the major projects has a manager assigned, the others are coordinated efforts.

Almost every group and division become involved with every weapons system or subsystem sometime during its life cycle. This means that specialists provide technical expertise for more than one project. Overlapping of individual responsibilities is necessary since technical expertise in any one specific area is not normally needed throughout the process of researching, developing and producing a weapons system. It may be needed for only a short period, or sporadically. Then, too, the various weapons systems are in different stages of development and an individual may work in support of one when not needed for another. In this way technical expertise is more fully utilized.

To see that all projects follow a prescribed plan is the responsibility of the Deputy Commander for Plans & Programs and Comptroller, Rear Admiral Henry Suerstedt, Jr., and his staff. The group also does much more.

In addition to coordinating the command's many projects, Adm. Suerstedt's group programs and budgets the money to pay for them. It also coordinates the command's plans for the next 20 years. Because NavAirSysCom's efforts include not only systems to meet immediate Navy Department requirements or crucial needs, this group explores the feasibility of systems concepts which may have the potential to improve air weapons systems many years from now.

Day-to-day and year-to-year planning is a major portion of the job. To plan properly, there must be effective financial management. Requirements are programmed with financial plans, budgets and allocations in mind, all expenditures are reviewed and monitored, and comprehensive five-year budgets are developed.

Throughout the life of a project, Plans & Programs is involved with planning configuration changes and modifications, and in coordinating the resolution of problems brought to light by the operating groups.

Because there are several different projects under way, the group is in a position to see how each might affect the other, how resources and facilities can best be managed to give optimum support to each project, and where the technical know-how developed on one system might be valuable to another.

NavAirSysCom, through Plans & Programs, also provides full cooperation and support to those countries that use American weapons systems in their own military establishments under the International Military Assistance Program.

Another function of the group is maintaining the management information center. Information from projects, groups and divisions is fed into the center where it can quickly be reviewed to determine the current state of all phases of NavAirSysCom's activity.

An air weapons system usually has its beginning in the form of a tentative specific operational requirement which is sent from the Chief of Naval Operations to the Naval Material Command. A proposed technical approach is returned to CNO who then puts out a specific operational requirement (SOR), which goes back to the Material Command and establishes the requirement for a system or subsystem.

An SOR is very general in nature. It doesn't spell out whether an air weapons system will be fixed wing, VSTOL, jet powered or conventional aircraft. It deals only in broad terms such as capability, range and weight.

It makes little sense to engineer a system if months or years later it proves unusable due to working restrictions or changed mission requirements.

This is where the Assistant Commander for Research and Technology and his staff enter the picture. Their task is to determine that a system can be put together and perform in the required manner. (The rear admiral's billet is presently being filled by Captain Raymond F. Schall, the group's executive director.)

Studies must first be made to determine if a system is feasible. These studies are coordinated through R&T, with the work being accomplished within NavAirSysCom headquarters, at a field activity or with the assistance of an outside consultant, such as NASA, or a combination of these. Exactly where these studies are made depends on what subsystems are to be incorporated within the aircraft.

NavAirSysCom supports major research and development laboratories around the country. Various groups study the subsystems in the light of technological progress, keeping in mind what the state of the subsystem will be in the future as related to the weapons system availability target date. At times some hardware is built to confirm a theory, and sometimes advanced models are built and tested.

The command also works closely with industry on a contractual basis, and with leading universities and colleges. Thus the command can take advantage of specially equipped science and engineering facilities whenever it appears that an outside source is better equipped to handle the problem.

R&T is also heavily involved with exploratory research on a continuing basis. Scientists and engineers investigate new aerodynamic shapes, new types of propulsion and new theories of guidance systems control. Efforts may not be directed toward a specific naval air warfare need, but favorable results might indicate a future usage. To function well in this capacity, personnel must be well acquainted with technological needs, tactical and operational trends and innovations, and the 20-year, long-range plan.

Once an idea or concept is proven feasible it must be designed, developed, produced and tested. This is the responsibility of

the Assistant Commander for Material Acquisition, Rear Admiral Albert H. Clancy.

Adm. Clancy's group takes the idea and converts it into hardware which is integrated into an air weapons system.

As pointed out earlier, NavAirSysCom is responsible for complete air weapons systems and everything it takes to support them. This means that Material Acquisition has to think in terms of air launched weapons, complex guidance systems, airborne electronics, air launched underwater sound systems, special support equipment and astronautical equipment. The group must also consider catapults, visual landing aids, arresting gear, airborne mining equipment, land-based target support for air weapons, meteorological equipment, photographic equipment, aircraft drones and target systems — everything needed for an aircraft to perform its mission.

Planning and executing the approved programs for all these various systems from design to delivery require precise management. Again, the key to success is action-

An EA-6A Intruder, one of the latest aircraft in the Navy inventory, is set for launch, opposite. A Phoenix air-to-air missile drops away from an A-3A, top. It will level off and continue toward its target on its own power. Helo gunship crewman loads ammo box for M-60 flex-guns, right.

oriented management, close cooperation with industry, and qualified, experienced engineers.

With the final design for a weapons system determined, the Navy must receive Department of Defense approval to proceed. Then a development concept paper is signed — a contract between the Navy and OSD.

The system's basis characteristics are spelled out in this paper: cost, predicted range, speed and altitude, the number to be built, the time frame to first flight, and fleet delivery date.

The contract also contains thresholds, or variance factors on the stated agreements, which recognize that everything will not be hit on the nose. If the project gets too far behind schedule, if the price increases considerably, or if the plane is found unable to do what is expected of it, the contract must be renegotiated with OSD.

NavAirSysCom procures over $4 billion annually in aircraft, missiles and related items from U.S. industry, and today's military buying requires sophisticated contracting methods and procedures as complex as the weapons systems. This is the responsibility of the Assistant Commander for Contracts, Rear Admiral Edwin E. McMorries.

Appropriate contract practices include such complex types as multiple incentives and matched funding for technical and production requirements. These contracts not only specify the obligations of contractors to the Navy, they also spell out the Navy's obligations to the contractors.

The contracts group works closely with other NavAirSysCom groups and conducts advance planning for individual procurements concurrently with development of an aircraft and its component systems. Research contracts are written for R&T, production contracts for Material Acquisition and support contracts for Logistics/Fleet Support, another important group.

We must backtrack at this point, however, to when the development concept paper is signed. In response to requests for quotation, private industries submit fairly detailed designs and plans for the system. These are evaluated carefully, with perhaps several hundred people becoming involved. The two companies with the best designs are usually selected to re-submit their proposals in minute detail. These proposals are funded by NavAirSysCom, and again contracts must be drawn up and signed. Comprehensive final plans from the two contractors are studied thoroughly to determine which company will build the air weapons system. This evaluation usually takes several months to complete, and again several hundred people are involved.

When the winning contractor is selected, a new contract must be drawn up for development and production of the aircraft. This contract specifies which subsystems will be provided by the Navy and which will be provided by the contractor. Here again, Material Acquisition is very active, maintaining close liaison with the contractor, assisting in the solution of engineering problems that arise, and insuring that designated field activities complete the subsystems to be provided by the Navy.

A flight deck crewman readies an A-5A Vigilante for flight ops, opposite. An F-8U is catapulted from USS Enterprise, top. An aircrewman works with MAD gear aboard a Tracker, left. An arresting gear aboard USS America does its job as an A-7A lands aboard, above.

Modifications and changes resulting from the test program are incorporated in subsequent units until the production configuration is achieved. When production aircraft come off the line, they are delivered to the fleet and must be supported throughout their operational life.

Responsible for this task is the Assistant Commander for Logistics/Fleet Support, Rear Admiral Edward L. Feightner.

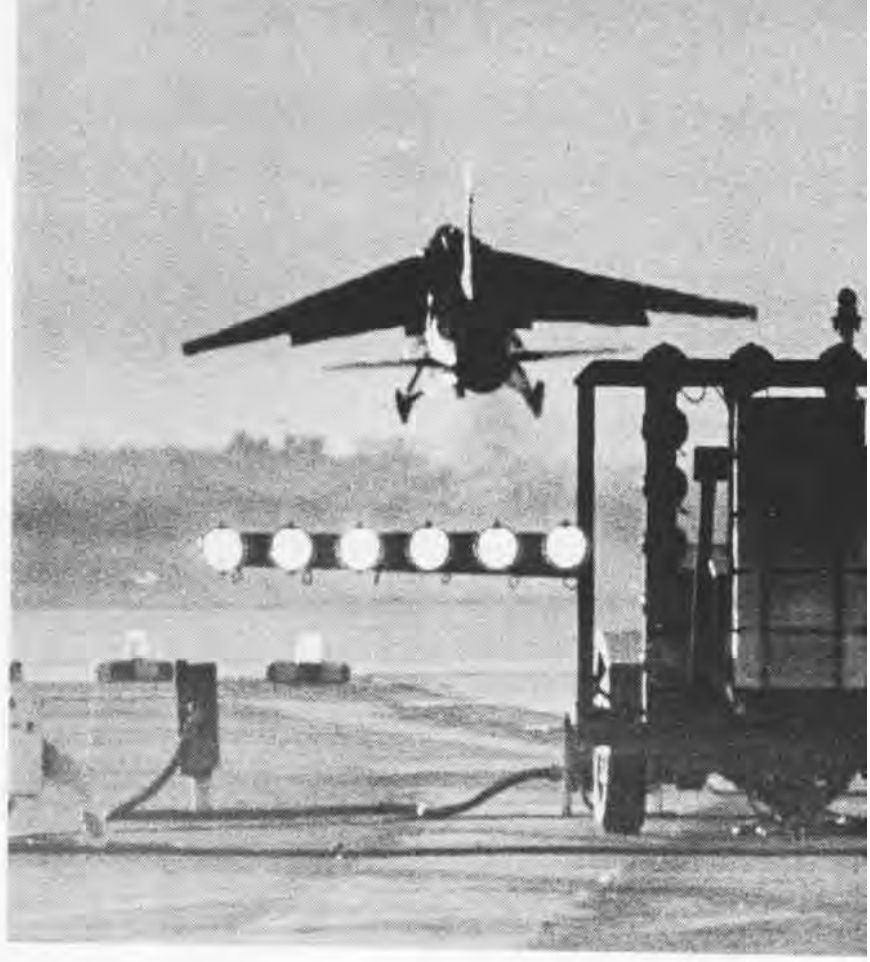
Although Logistics/Fleet Support participates in the evolution of a system from its concept, in the form of planning, budget, design and engineering inputs, its prime task is to support the system in the fleet. This includes making sure everything required for maximum usage and effectiveness, from tools to ground support equipment, is readily available. The group also supports training activities which teach the operation and maintenance of the air weapons system, and supplies to know-how to develop the training programs, teaching aids and materials.

Because aircraft operate all over the world, support must also be provided all over the world. Field activities and installations overseas and in the U.S. provide maintenance support for air weapons systems wherever they are found. The many activities that either come directly under NavAirSysCom through Adm. Feightner, or are funded by the command to support a system, are the subject of another part in this series.

An added responsibility of Logistics/Fleet Support is to dispose of a system after its useful life.

As previously noted, every major project has a manager assigned who has complete management responsibilities for a project throughout its development and production. Once a project manager is assigned, usually after the feasibility study has been completed, his job is to know the project from stem to stern and make all the decisions concerning the system.

Depending on what stage of development the project is in, a manager will have from five to 30 staff members. He will also have members from the various groups assigned as assistant managers with-



in their particular specialties.

If there are no plans to build additional models of an aircraft, the project office will normally be disestablished when the weapons system is delivered to the fleet. If other models are contemplated, such as the F-8 with its 12 models, the project office will maintain sufficient people to perform assigned tasks.

Project managers are also a story within themselves, and will be covered in detail in a subsequent article.

A final link in the NavAirSysCom organization is the command's Inspector General and Director of Administration, Captain Andrew H. Cowart.

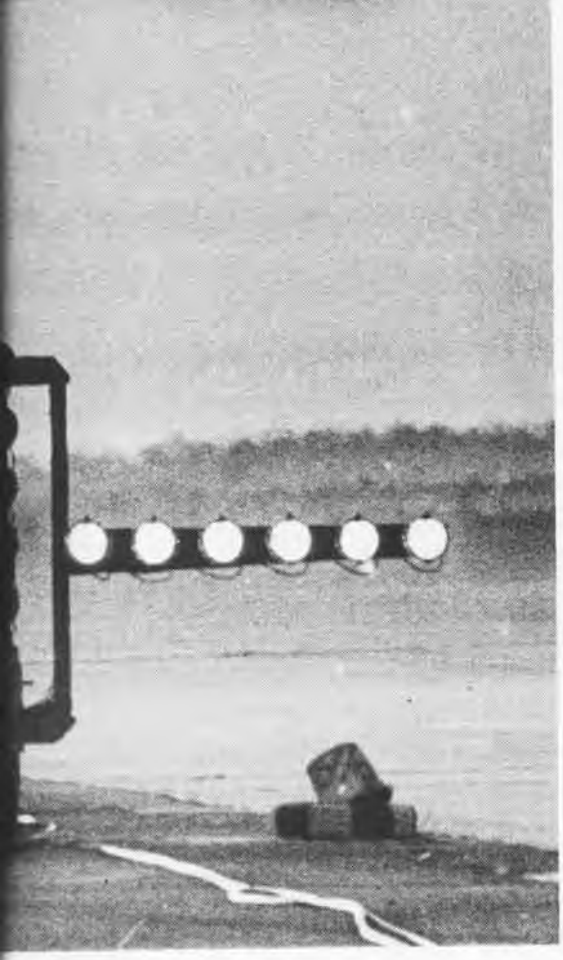
One of the prime responsibilities of Capt. Cowart's group is to conduct inspections and investigations into any matter that affects the operation or efficiency of NavAirSysCom. This not only includes the command headquarters, but all of the field activities as well.

Whenever a problem arises, a special team is put together to identify it on the spot and to recommend a solution. Periodic inspections help field organizations operate at top efficiency and forestall any potential problems.

Capt. Cowart's group is also responsible for developing improved paper work management concepts, planning and providing effective communications within the command and maintaining the technical library.

Technical publications and material are acquired from every possible source and added to the technical information developed by NavAirSysCom groups. This library service is available, throughout the command and to industrial contractors. Its availability saves considerable time because the information is always readily available.

NavAirSysCom sponsors reserve units as part of the total reserve training program. Called NavAirSysCom Reserve Units, these units are comprised of officers whose academic background and civilian experience — engineers, chemists, lawyers, bankers or administrators — qualify them for their work in NavAirSysCom. The mission of the



Field landing mirror systems for touch and go landings, left; rockets and pods for Huey gunships in Vietnam, top; and tiller bars to maneuver planes on a carrier bottom; are all items developed by NavAirSysCom.

program is to maintain these people in readiness.

Throughout the life cycle of an air weapons system, from cradle to grave, the groups within NavAirSysCom work together to insure that the aircraft can and does perform its mission.

When Research and Technology determines a system is feasible, Logistics/Fleet Support starts planning the number of personnel needed to operate and maintain the system, and determines training and maintenance requirements. At the same time, Material Acquisition begins work on test and production plans and engineering development. Research and Technology is also working with Material Acquisition for development of subsystems, a variety of contracts is initiated, written and signed, and on and on.

Everything is keyed toward effective planning and management. Without it, there is nothing. With it, the Naval Air System Command is able to develop, procure and support all air weapons systems for the Navy and Marine Corps.

Story and Photos by
JOC Dick Benjamin

Over 400 TPS graduates gather for the day's activities at Patuxent River, left. RAdm. Miller welcomes the group, below left. On the opposite page, Lt. Brown receives Student Test Pilot of 1970 Award from Adm. Zumwalt, top left. Capt. Lovell accepts commemorative plaque on behalf of Navy TPS grads in the space program, center. Adm. Zumwalt speaks to the group, right, and Astronaut Lovell takes time to pose with several young admirers who had waited patiently for him, bottom.

TEST PILOT GET-TOGETHER

More than 400 graduates of the U.S. Naval Test Pilot School gathered at NATC Patuxent River recently for the school's 23rd Annual Reunion and Symposium. The get-together coincided with the beginning of Naval Aviation's 61st year.

Guest speakers at the affair were Admiral Elmo Zumwalt, Jr., Chief of Naval Operations, Vice Admiral Thomas F. Connolly, Deputy Chief of Naval Operations (Air), and Captain James A. Lovell, Jr., one of 12 TPS grads selected for the space program. Welcoming the group was Rear Admiral Henry L. Miller, NATC Commander.

During the symposium, the 400 plus graduates were brought up to date on the latest developments in flight testing. Robert Smyth, Grumman chief test pilot, and William Miller, Grumman F-14 project test pilot, filled the group in on the *Tomcat* test program; Marine Majors Bill Scheuren and Bud Iles gave a presentation on the AV-8A *Harrier* project; and Thomas C. McMurtry, NASA Flight Research Center, explained what is being done with the supercritical wing.

Highlights of the gathering included Adm. Zumwalt's presentation of the 1970 top student awards and Capt. Lovell's acceptance of a plaque commemorating the achievements of the school graduates who have participated in space flight.

The top student test pilot award went to Lt. Emory M. Brown who graduated with class 55 in June 1970. Lt. Wayne A. Stevens was selected as the student test flight officer of 1970, and David Bischoff, the student test project engineer. Brown and Bischoff are presently with NATC's flight test division, and Stevens is assigned to the TPS staff.

The grand finale of the program came when Adm. Connolly presented the commemorative plaque to Capt. Lovell. Accepting for all the TPS grads in the space program, Lovell said the plaque will be prominently displayed at NASA in Houston. A duplicate will be placed on exhibit in the Test Pilot School Sunshine Room.

NAVAL AIRCRAFT

TR

The twin-engined S-2A (S2F-1) *Tracker,* introduced in 1954, was the first carrier-based antisubmarine aircraft specifically designed to combine the detection and attack roles in a single aircraft. The plane carries a four-man crew: pilot, copilot and two ASW equipment operators. The *Tracker* is fully equipped for its task with a wide array of electronics and sensory search devices capable of detection, localization and classification of submarine contacts. The S-2A was fitted with a wing-mounted 85-million-candlepower searchlight, retractable magnetic anomaly detector, electronics counter-measures equipment and 20 sonobuoy dispenser tubes in the rear of the engine nacelles. The S-2B's were later converted from S-2A's by adding *Jezebel* acoustic search gear and the *Julie* acoustic echo ranging system. The S-2C featured a larger weapons bay to facilitate the use of a bigger ASW torpedo. These early models have since been modified to utility versions as US-2A, 2B and 2C and removed from fleet antisubmarine squadrons. They have been replaced by the S-2D and S-2E, distinguished from their predecessors by an increased wing span and a lengthened fuselage. The small radome above the cockpit was removed and the afterbody of the engine nacelle was modified to take 16 instead of 10 sonobuoys. Greater internal fuel capacity increased the range of the later models. Available weapons selection includes nuclear depth charges, conventional depth bombs, five-inch rockets, homing torpedoes and *Zuni* missiles.

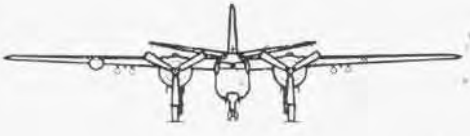
Over a thousand *Trackers* have been produced for the U.S., Argentina, Australia, Brazil, Canada, Italy, Japan, the Netherlands, Nationalist China, Thailand and Uruguay.

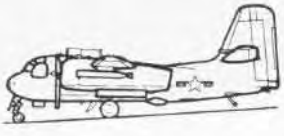
ACKER

S-2A S-2B S-2C

S-2D S-2E

Length S-2A, B, C	42'0"
S-2D, E	43'6"
Height S-2A, B, C	16'4"
S-2D, E	16'7"
Wing Span S-2A, B, C	69'8"
S-2D, E	72'7"
Engine	Wright R-1820
Horsepower at takeoff	1,525 bhp
Max. speed S.L. S-2A, B, C	229 kts.
S-2D, E	210 kts.
Cruise Speed	130 kts.
Service Ceiling S-2A, B, C	22,000'
S-2D, E	19,000'
Combat Range S-2A, B, C	841 nm.
S-2D, E	1,000 nm.
Combat endurance S-2A, B, C	6.5 hrs.
S-2D, E	7.7 hrs.





Chute the Chutes

Two 1st Reconnaissance Battalion Marines, qualifying for parachutists wings, drift toward Red Beach near Da Nang. They were dropped from HMM-362 CH-46.

SSgt. L. M. Slifer

PH2 Wendy P. Gellert

Toothache?

At NAS Imperial Beach, Calif., the ground crew performs work on an SH-3A Sea King ASW helo.

Homecoming

Captain Alan B. Shepard, Jr., is hoisted aloft in the traditional mark of acclaim the Brigade of Midshipmen at the Naval Academy reserves for its heroes. Capt. Shepard presented the midshipmen the brigade flag he carried to the moon. He had been nominated for promotion to rear admiral.

Fishbed

A Yugoslavian MiG-21 Fishbed, short-ranged delta-wing, fighter aircraft, in flight.

NAVAL AVIATION NEWS

. . . and views

Jet Away!

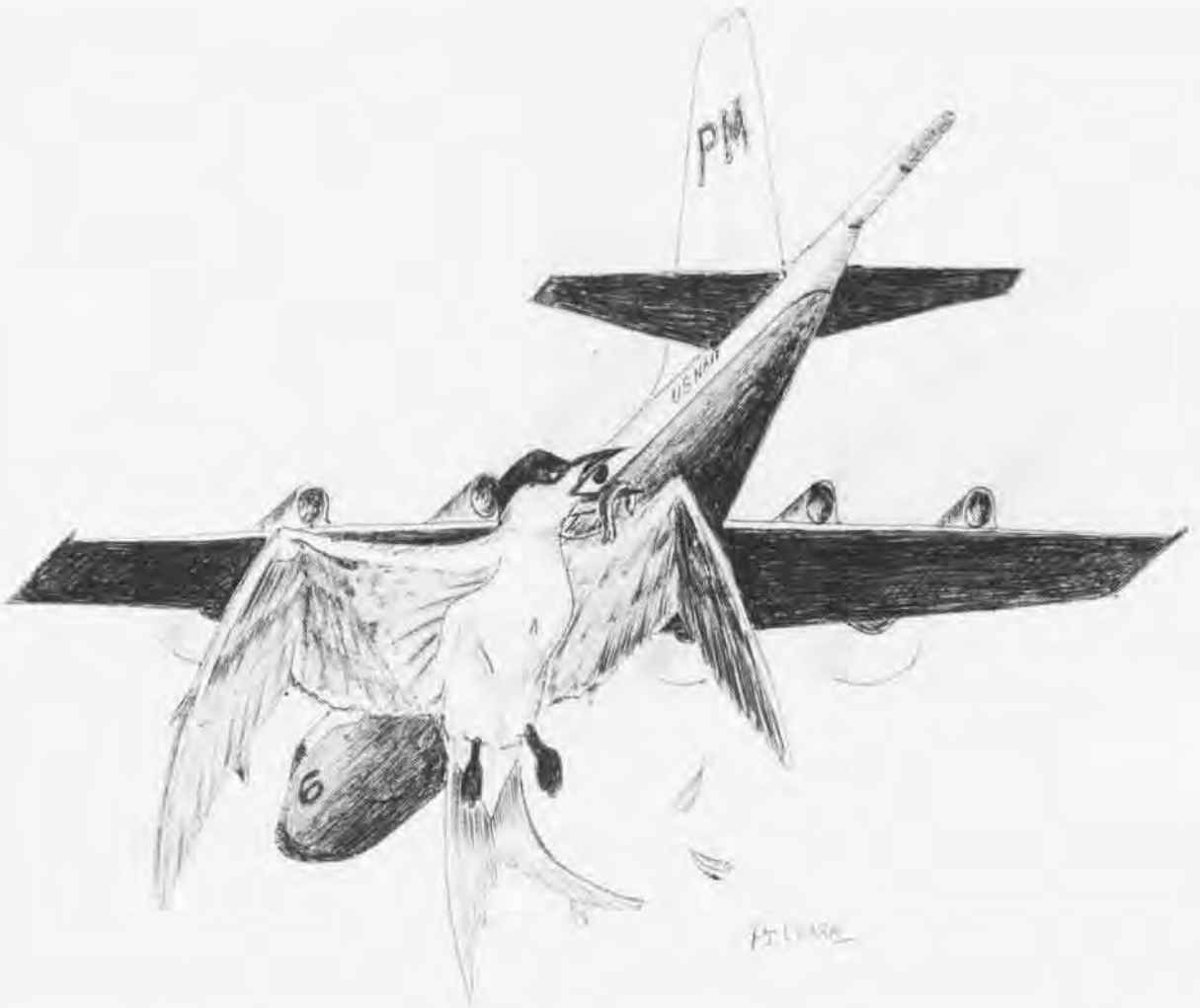
First jet launch from a carrier took place July 21, 1946, aboard FDR with LCdr. J.J. Davidson piloting an FD-1 Phantom. Jet Pioneers' Association recently observed anniversary of launch aboard Wasp at Quonset Point.

Marines' Newest

An A-4M, latest version of the Skyhawk, refuels an AV-8A Harrier during BIS trials at Patuxent River, Md. VMA-513 received initial delivery of three Harriers on April 16. VMA-324 took delivery of four A-4M's the same day.

Draken

Danish Drakens, which replaced older American aircraft in the Danish Air Force, have been given the familiar American-type designations: F-35 fighter/bomber, RF-35 reconnaissance fighter and the TF-35 trainer/fighter.



Over Water Search

By JO1 Walt Wagener
and SN Sid Green

Lower and lower the tern swooped in the late evening sun, its keen eyes watching the school of fish swim near the sea's surface. Suddenly he dived. Feathers tightened against his body, legs arched, head pointed seaward . . . down he plunged.

The fish, sensing the impending danger, began to scatter in frenzy, some diving for the safety of the ocean's depths.

Piercing the sea's skin, the tern claimed his prey and, with it firmly clasped in his strong beak, made for the surface and climbed into the sky.

Salt spray from the churning Atlantic licked the sea swallow's talons as he struggled to regain altitude, and a fish smell mingled with moist salt lingered on the water's surface. Several feathers floated on the sea where the brief battle had taken place.

Banking hard, the four-engined P-3A *Orion* flew some 200 feet above the water and passed close by the tern.

The fishing bird, blown about momentarily from the plane's propeller backwash, regained its attitude and within seconds, still holding tightly to its catch, disappeared on the horizon, its wings beating rhythmically as it flew toward the hidden shore.

An odor of fresh coffee mixed with the scent of operating electrical equipment and cigarette smoke filled the large crew compartment of the *Orion*. A touch of perspiration began to make the 15 crewmen of the aircraft aware of the flight gear they would wear for five hours. Flight boots, flight suit, survival vest and life jacket are standard apparel for training exercises; under battle conditions, helmet and fireproof gloves are added.

The occupants of the aircraft, like the tern, searched the ocean's depths. But their search, using exotic electronic equipment, was for submarines. Unlike the sea swallow, the crew of this *Orion* hunts the Atlantic only part-time.

Members of VP-68, NARTD Patuxent River, Md., under the jurisdiction of NARTU Washington, D.C., had begun their monthly training weekend at 8 a.m. Saturday. The morning was spent in classroom and simulated sub-

marine search exercises in a van that housed equipment identical to that found on the *Orion*.

An afternoon preflight briefing, anything but brief, lasted 40 minutes. Methods of search that would be employed for this exercise, altitude for search, standard operating and emergency procedures were only a small part of the information each man would know before boarding the airplane.

At 3 p.m. the first turboprop began to turn and soon the P-3 raced down the runway to climb quickly into the sky. The four 1,800-hp engines carried the plane over the Atlantic.

The pilot, Lt. Bruce A. Abel, gave commands over the intercom system as he readied the crew for the search.

"Crew from flight, set condition three."

Crewmen checked the various systems of the plane and reported their findings. All the equipment was in operating condition.

"Everything's on go," Abel told his copilot, Lt. Barclay L. Rogers. "Let's take 'er down on station."

Rogers watched the gauges and dials as they recorded the flight. The steering control moved remotely before him under the control of Lt. Abel. Aft, two large pie-plate-size radarscopes, manned throughout the flight, portrayed the area subject to radar search. Busy hands adjusted dials and knobs to increase the capability of the far-seeing electronic eyes.

"I have a contact, bearing 078." AX3 Neil H. Shankster locked his scope in on the blip that had appeared on the glass screen.

The tactical coordinator, Lt. John G. Trelease, responsible for compiling the information on the search and determining what action could be taken, charted the sighting. "Tacco to pilot, radar contact bearing 078, set condition two."

"Roger Tacco," came the reply from Lt. Abel. "We'll have a look."

The P-3, flying at 250 knots, skimmed over the water at 200 feet. Seven miles ahead, a German freighter moved slowly through the Atlantic. The P-3 crew recorded its movement.

ATC John K. Boggess watched the orange radar screen before him and the bright dot that was the freighter. "It's a big one, probably an oiler or a freighter," he said, holding the small mike close to his lips with his right hand while adjusting knobs with the other.

Lt. Trelease's voice sounded over the intercom. "Tacco to ordnance, load sonobuoy tubes one through four and stand by to drop."

"There she is," said Lt. Rogers, leaning forward from his copilot seat. "About two miles at one o'clock."

Within seconds, the P-3 zoomed over the foreign freighter, then banked hard to circle the ship.

"Get 'er side number and name and give it to the navigator to log," said Abel. "Okay, stand by for a track."

"Stand by to drop sonobuoys," Tacco instructed the ordnanceman. "Away one."

The P-3 continued its circle, straightened momentarily and then banked to circle again.

"Away two." Brief seconds later Lt. Trelease ordered, "Away with three . . . and four."

The crewmen worked the receiving equipment as it picked up the information from the sonobuoys.

Suddenly, the routine search exercise was broken off. "This is a drill. Stand by to ditch." The plane commander would check the response of the crew during the exercise. Helmets, life jackets and gloves were donned by the crew, and each strapped himself securely in his seat. Chief Bruce A. Haase, one of the active duty observers, checked the crew . . . the time taken in preparation for the emergency had been within limits.

"Set condition two," Lt. Abel announced. "We'll return to search routine."

The crew began to shed ditching apparel, some breaking into the box lunches prepared by the station's galley for the flight.

Again the routine was interrupted. "I've picked up something," exclaimed AT1 F. Tom Smith. "Could be a

Copilot, top, and tactical coordinator, left, perform key roles as Orion crewmen in an ASW exercise.

snorkle, bearing 050 at approximately ten miles."

"Set condition one," called Tacco. "Tacco to flight, we have a possible sub sighting, recommend come to heading 045."

"Roger Tacco," came the reply from Lt. Abel.

"Ordnance, load sonobuoys five through nine . . . stand by for drop," ordered Tacco.

Lt. Abel steered the *Orion* toward the contact. The drone of the big plane's engines broke the serenity of the early evening as the sun's reflections danced on the ever active Atlantic.

"I've picked up something," exclaimed AX2 Christopher J. White, manning the *Orion's* MAD gear. "Could be a sub."

"Snorkle's disappeared," said Smith, shaking his head and working feverishly to revive some response on his equipment.

Almost simultaneously, White chimed in. "No contact on MAD." He too busied his hands and mind with the task of locating the contact.

Lt. Abel checked his watch. "Let's log what we've got."

Once again over the sighting area the P-3 began to circle.

"Away sonobuoys five . . . six . . . seven," directed Tacco, checking his watch at 30-second drop intervals.

For an hour, the crew searched the depths. The search widened . . . still no contact. More sonobuoys were dropped. Nothing.

At 7:40 p.m. the pilot ordered the search ended. "All right, crew, let's take 'er home."

As quickly as the sighting had appeared, so had it disappeared. Had it been one of ours? Was it nuclear powered? Where was it going? Why? These questions lingered in the minds of the crew.

"This is a drill, we have a fire in the hydraulic system . . . smoke reported in main compartment," came the announcement over the intercom.

Everyone responded. Equipment not needed was shut down. White stood by with a fire bottle as others checked the plane's interior. Lt. Leonard A. Puchalla, another active duty Reservist, feigned being overcome by smoke and was quickly dragged to the rear of the aircraft for oxygen.

To the participants of the drill it was no game. With cool expediency each man carried out his part.

Lt. Abel eased back gently on the aircraft's controls to climb back to the return flight altitude. Banking slowly, he aimed the P-3's nose to shore.

"Did you see that gull?" asked Rogers, craning his neck to look back. "I think we knocked him out of the sky."

Smith, sitting in the rear observer's seat, announced, "He's all right, lost a few feathers though." He watched the bird disappear on the horizon, the sun's rays lighting the ocean sky.

By 8:20 p.m. the P-3 was circling the airfield at NAS Patuxent River. White runway lights beckoned the plane home.

A ground taxi-director waving white batons positioned the aircraft near the detachment's hangar and the engines were shut down. The sudden silence and stillness of the plane relaxed tensed bodies as the men climbed from their seats to remove the life jackets. Sleep would come easy tonight.

It wasn't over yet. A debrief to evaluate the exercise, flight logs, records and equipment checks still faced the weary flyers before they could start for home. And, tomorrow, Sunday, was another training day.

THE SELECTED AIR RESERVE

Naval Air Reserve Insignia

The Naval Air Reserve Force/ Naval Air Reserve Training Command has revised its insignia to reflect the recent organization change and to conform with OpNav requirements for approved shape. The new insignia appears on this page.

Crash Training

In a special safety program conducted by NAS Willow Grove, police authorities from Bucks and Montgomery Counties were instructed on how to save lives at the scene of a military aircraft accident. Seventy state, township and borough policemen from 23 local communities attended the program, the first such briefing to be held specifically for policemen by the naval air station.

Captain Robert Godman, C.O. of the station, explained that civil authorities, especially policemen, are usually the first persons to arrive on the scene of an aircraft mishap in civilian domain. "The training of Bucks/ Montgomery civil authorities in procedures to be used immediately following an accident could minimize personal injuries and loss of life."

He added that while the naval air station has compiled a record of more than 37,000 safe flight hours during the last three and one-half years, the station's safety office is not overlooking the possibility that an accident could occur and lives could be saved through an active training program.

The safety office has been sponsoring instructional sessions for fire companies for the last 16 years.

Mixmaster

NARTU North Island Weekend Warriors and satellite Reserve Force commands from the San Diego area demonstrated their Sunday punch in May in a day-long exercise off San Clemente Island.

Operation *Mixmaster* was the first of its type to be staged by a NARTU with all-Reserve personnel and equipment since the introduction of the Naval Air Reserve Force concept.

The exercise featured simulated battle conditions for enemy aircraft detection and interception, close air support and antisubmarine warfare activities.

Pilots from eight Naval Air Reserve squadrons, manning attack, fighter, carrier-type ASW, airborne early warning and tanker aircraft and helicopters, participated along with officers and men from non-tactical support units.

Aircraft and personnel from Naval Air Reserve Force squadrons and units from North Island, Miramar and Imperial Beach took part in the operation.

Captain John G. Korecki, NARTU North Island's C.O., served as officer in charge of the exercise.

Total Force — Total Effort

In April, a Denver-to-Dallas aviation officer applicant airlift marked perhaps the first big step, nationwide, toward "Total Force — Total Effort" recruiting as envisioned under the new Recruiting Command established July 1.

Commander Thomas A. Stanley, commander of the NAS North Island-based Reserve Carrier Antisubmarine Air Group 80, boosts his organization while helping to fight air pollution. In California, profits from the sale of such special license plates are used to support various anti-pollution programs.

The coordinated efforts of the NAS Dallas Aviation Officer Recruiting Office and the Denver Navy Recruiting District were realized when 29 applicants arrived at NAS Dallas for a weekend of processing, physical examinations and interviews.

These men represented one of the largest single groups to come from a given geographical area for processing. All are either students or recent graduates from one of six colleges and universities in the Colorado/ Wyoming area.

Although it was a long ride and a busy schedule, all the aviation officer aspirants felt the trip was well worth it when their stay ended with familiarization flights in a Navy trainer.

A tired crew boarded the airlift for Denver, leaving behind another tired crew, in Dallas, all very happy with this, the first try at "Total Force — Total Effort" recruiting.

Enthusiastic group of Naval Aviation applicants from six mountain states visited NAS Dallas.

AW2 Steve Paul copies ice-edge information from his radarscope, left. Below left, AO3 Sherman Morrow holds sonobuoy and waits for Tacco's call to "drop now." Below is part of the ice-floe edge off the coast of Greenland. In bottom photo, AO3 Morrow prepares to drop sonobuoy containers stuffed with mail for the residents of Jan Mayen.

THREE IN ONE

Crew 3 of VP-24, presently deployed to the NATO Base at Keflavik, Iceland, recently performed three different missions on a single flight.

The most unusual was an inflight mail drop to a small, desolate island above the Arctic Circle, Jan Mayen, where a group of Norwegian technicians runs a Loran station, furnishing navigational information to civil and military aircraft which fly over the Norwegian and Arctic Seas.

The P-3C flew in at 200 feet and dropped the mail to the settlement on the edge of an 8,000-foot ice-covered mountain.

The crew also flew an ice-edge patrol, locating and plotting ice floe edges off the coast of Greenland. The information gathered is used by the Naval Oceanographic Office in their research, by Keflavik to plan and coordinate NATO operations, and by forces supplying Thule AFB and Sonderstrom, Greenland, by sea.

On the return flight, the crew performed normal patrol operations.

Twelve crews of the Patuxent River-based squadron maintain an around-the-clock sea watch from Keflavik.

NAVAL AVIATION NEWS

Unique Sight Evaluated

PATUXENT RIVER, Md. — The Naval Air Test Center is conducting technical evaluations on a new fire control system with a helmet-mounted sight for use in later versions of the F-14.

Being tested in an F-4J, the system allows the pilot to aim the aircraft's radar antenna by sighting through a device attached to his helmet.

The concept is a direct result of air combat maneuvering problems encountered over North Vietnam.

New Drone Course

POINT MUGU, Calif. — Four Navy men reported to the Naval Missile Center (NMC) in May as the first students of a Remote Control Operators Course in the MQM-74A *Chukkar* subsonic target drone.

Taking the first two-week course were Lt. Ray Burn, VC-1, Barbers Point, Hawaii; Lt. Philip Lame, VC-3, San Diego, Calif.; Lt. Dave Lundahl, VC-6, Norfolk, Va.; and ATR2 Ron Carter, VC-5, Okinawa.

Every characteristic of the MQM-74 is programmed into a computer. Then a flight with potential problems is simulated. In a control room, the student must find solutions to the problems and prevent an aborted flight.

The training simulator was developed by Charles Kastigar and Lewis Ehrhardt of the simulation design and programming branch of NMC's systems integration division.

Two Time Win for VA-128

NAS WHIDBEY ISLAND, Wash. — Taking top honors for the second time in a row, VA-128 won this year's first "Bomber Stream" in April.

Competing against VA's 115, 165 and 196, VA-128 came out on top for the second time in a row, the second attack squadron based here to win the Bomber Stream twice; VA-145 is the other two-time winner. The squadron is presently deployed aboard USS *Ranger*.

Bomber Stream 71 Alpha, with three flight crews from each squadron participating, included low-level navigation, mining, radarscope photography, bomb scoring at Boardman, Ore., and bomb range and radar bomb scoring at Spokane, Wash. In addition, a tanker aircraft from each squadron performed refueling exercises during the flight.

At a ceremony after the competition, VA-128 was presented the Grumman Perpetual Trophy and a Bomb Championship Flag. Captain Edward J. Winter, Chief of Staff, ComFAir Whidbey, made the presentations to Commander Lester W. Berglund, C.O. of the squadron.

First place crew award, a gold trophy of the winged goddess of victory, went to VA-196's LCdr. Jim Dooley, pilot, and Ltjg. Bob Davis, bombardier-navigator.

Second place crew consisted of Lt. Phill Bloomer, pilot, and Lt. Dixon Smith, bombardier-navigator, VA-128. Third place crew, VA-165, was LCdr. Jay Grafton, pilot, and Lt. George Haggerson, bombardier-navigator.

VA-165 received a special trophy in recognition of the squadron's outstanding maintenance crew.

Marine Units Leave War Zone

WASHINGTON, D.C. — The Military Assistance Command, Vietnam, announced the stand-down of additional Marine Corps units, which will result in the redeployment of 3,510 Marines from the war zone.

Included in the move are HMM-262 and VMO-6, both moving to MCAS Kaneohe, Hawaii; VMA-311 to MCAS Iwakuni, Japan; and MASS-3 which will redeploy to MCAS El Toro, Calif.

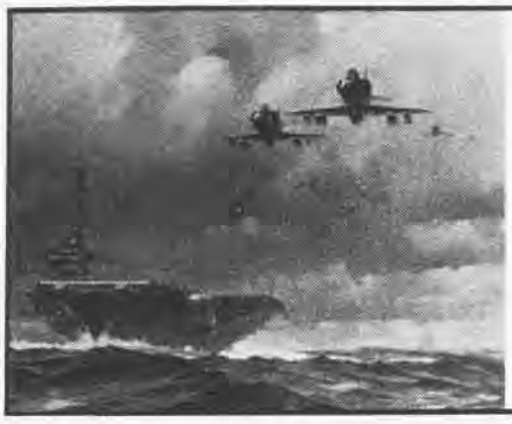
1971 NATIONAL MODEL MEET

Washington, D.C. — The Academy of Model Aeronautics has announced that the 1971 National Model Airplane Championships will be held July 26 to August 1 at NAS Glenview.

This will be the 24th annual Championships hosted by the Naval Air Reserve Training Command, and the 31st directed by the Academy.

The Championships, popularly known as the Nats, is recognized as the world's biggest model meet with over 1,000 contestants participating each year in three age categories and 40 events. Contestants come from all 50 states and several countries around the world.

Models like these will be in evidence at the 1971 Nats in Glenview. The radio-controlled SBD, in photographs at left, was shown at the 1969 meet held at NAS Willow Grove. Radio-controlled T-34, above, was one winner in 1969. All three photographs are the work of JOC James Johnston.



at Sea with the Carriers

ATLANTIC FLEET

Saratoga (CVA-60)

A deck edge elevator on *Saratoga* doubled as a huge picnic table as crew members celebrated her 15th birthday on April 14. Commanding Officer Captain Dewitt L. Freeman and Rear Admiral Robert Baldwin, ComCarDiv-6, hosted the birthday party, which also honored 12 crewmen whose birthdays coincided with *Sara's*. Capt. Freeman announced that each crewman would receive a personal birthday card from him during the coming year!

CVA-60 was at sea on her birthday, undergoing training in her new role as the Navy's prototype CV, which requires operating in a combined attack and antisubmarine role.

Intrepid (CVS-11)

Lisbon, Portugal, provided the background for the change-of-command ceremony aboard *Intrepid* as command passed from Captain Isham Linder to Captain Charles S. Williams, Jr. The latter reported to *Intrepid* from the oiler USS *Platte*. Capt. Linder, rear admiral selectee, has been assigned to SecNav.

Intrepid, home-ported at Quonset Point, is currently deployed to the Med and Eastern Atlantic.

Wasp (CVS-18)

A group of Cranston, R.I., Sea Cadets spent a week of indoctrination and practical training recently aboard *Wasp* while she was moored at Quonset Point. This is a necessary part of the curriculum that cadets must follow in order to advance in their rating. While on board, they spent the night in enlisted berthing and ate their meals with the enlisted men.

Lexington "Jr." with scale speed of over 40 knots was built by Lt. Steve Gillis of HC-2, NAS Lakehurst, N.J., using pictures as models.

When *Wasp* steamed out to sea on May 15, she was on a Family Day cruise off the Rhode Island coast – to give dependents and friends a taste of life at sea.

Guam (LPH-9)

The 25,000th landing aboard *Guam* was made by Capt. Gary L. Loomis and 1st Lt. Alan A. Schultz of Marine Medium Helicopter Squadron 162, flying a CH-46F.

Forrestal (CVA-59)

HS-3, embarked aboard *Forrestal* and flying SH-3D *Sea Kings*, took part in NATO Exercise *Dawn Patrol '71* which began April 28 in the Mediterranean.

The annual NATO exercise involved more than 60 warships and 300 aircraft from five nations simulating wartime conditions. U.S. naval units were under the command of Vice Admiral Isaac C. Kidd, Jr., Com6thFlt.

Shangri-La (CVA-38)

In April, 26-year-old *Shangri-La* left Naval Station Mayport, her home for the last ten years, on her way to retirement. The final steps in her decommissioning will be completed at the Boston Naval Shipyard by the middle of this month.

Commanding officer until then is Commander Frank Rush who relieved Captain Hoyt P. Maulden on April 23.

PACIFIC FLEET

Ticonderoga (CVS-14)

While *Ticonderoga* was en route to Singapore following an ASW exercise in the Indian Ocean, she took part in a memorial service honoring the Americans and Australians who died in the WW II battle of Sunda Strait. There, the United States cruiser *Houston* and Australian cruiser *Perth* were sunk by enemy naval forces on February 28, 1942.

Rear Admiral James C. Longino, Jr., ComASWGru-3, narrated the story of the night surface battle. The ceremonies ended with *Ticonderoga* and four other ships, *McCain*, *Schofield*, *Meyerkord* and *Bronstein*, steaming in a cross formation from the Strait into the Java Sea.

New boards aboard CVS-14 tell the crewmen what is going on in the Navy. The ship features a Z-Board which summarizes all Z-grams. It also has a People Board which is a panel of enlisted men and officers who meet to discuss problems and their solutions. Another board is the Human Relations Board where everyone has a chance to "talk out" instead of "fight out" their interracial problems. A recent

innovation, an Opportunity Board, lists the many educational and vocational opportunities available to enlisted men. On board *Tico*, no one is bored by the boards that exist solely to serve the men aboard.

Hancock (CVA-19)

Commander Richard A. Hendricks, commanding officer of the *Warhorses* of VA-55, recently marked two milestones when he brought his A-4F *Skyhawk* down for his 400th *Hancock* landing and, soon after, completed his 300th combat mission over SEAsia. Captain T. L. Johnson, commanding officer of *Hancock*, and Captain G. H. Palmer, CAW-21, presided over the festivities honoring Cdr. Hendricks.

Constellation (CVA-64)

Open house aboard *Constellation* on May 8th was the way the carrier and her men celebrated the 60th anniversary of Naval Aviation, at NAS North Island. Fresh from the yards at Bremerton, Washington, CVA-64 offered a number of displays and exhibits to demonstrate to the visitors the role of the attack aircraft carrier.

Ranger (CVA-61)

TV has its "Flying Nun"; *Ranger* has its "Flying Dentist" – Commander John F. Lessig, head of the dental department. Cdr. Lessig gives up his free time regularly to visit smaller ships escorting the carrier on its combat missions off the coast of Vietnam. He leaves *Ranger*, accompanied by a dental technician, on a helicopter that soon hovers over the fantail of the ship to be visited. Then, they are lowered on a thin harness cable. He sometimes visits two or even three ships on a Sunday in this manner, reviewing dental files and sorting out the men who need dental checking. He does minor dental work on his visits; sailors needing major emergency work are transferred to *Ranger*. Recently he examined and worked on 94 sailors in one visit. On these weekly jaunts to nearby ships, Dr. Lessig may be the busiest dentist in the world, but he feels it is worthwhile.

Enterprise (CVAN-65)

A certification team from Naval Air Test Center, Patuxent River and the Naval Electronic Systems Test and Evaluation Facility recently conducted SPN-42 Mode I (automatic control to touch-down) certification trials on board *Enterprise* using NATC instrumented CVW-14 *Phantom II's*.

The primary purpose of the trials was to verify safe and satisfactory performance of the newly installed SPN-42 automatic carrier landing system under operational conditions. A statistical sample of 40 landings, using each SPN-42 channel, was required to evaluate vertical and lateral glidepath control, longitudinal and lateral touchdown dispersion, hook-to-ramp clearance, sink speed and airplane attitude at touchdown.

Tico and four other ships steam in formation, below, during memorial rites. Cdr. Lessig makes his dental rounds by helo, above.

ON

By JO3 Stan Kuciejski

If excitement is your game, then try your hand at being a Hook Runner. Hook Runner?

"They're the men with the reflexes of a cat, the eyes of an owl, the nerve of a gambler and perception of a mystic," says AN Daryl D. Meisch.

He should know, he is one – aboard USS *Kitty Hawk* (CVA-63).

Standing just a few feet from the landing area, the hook runner watches as an aircraft touches down, at nearly 150 mph, its tail hook catching one of four arresting cables, bringing it to an abrupt stop.

"This is where our job begins," says AN Abner L. Mathis. "With another aircraft already approaching, we must visually check to be sure the cable has

THE HOOK

At far left, AN Meisch assumes duties as Fly Three, the communications link between arresting gear officer and pri-fly. Below left, AN Smith signals fouled deck. Caught, left; and clear, above. AN Hendershot, below, moves out of recovery area.

dropped from the tail hook."

When it doesn't drop free, the hook runner must force it clear and then inspect the cable for signs of weakness. (As a safety measure, the 1,800-foot length of one-and-three-eighths-inch steel cable is replaced after each 100 arrestments.)

"We are a tight team," says AN Juan A. Hernandez. "I like the action and responsibility. It's a big job we all enjoy and seldom think of as risky."

AN Tim J. Smith adds, "Alertness is the most important thing. With so much taking place all at the same time, we must be aware of everyone and everything." And AN James A. Hendershot sums it up. "At night, it *is* hard to see, and easy to miss something under the red lights. But day or night, we watch out for each other, and for the aircraft."

Ellyson Field

HELICOPTER

HAVEN

By Michael G. McDonell

North of Pensacola, driving along Davis Highway, you hear that distinctive sound – the whine and thud of helicopters. You look up and spot their orange and white in a cloudless sky, skimming towards home. And you follow. Above the main gate of the airfield, an arch announces that "The best helicopter pilots in the world are trained here." No idle boast. This is NAS Ellyson Field, Fla., the home of HT-8, the Navy's only helicopter training squadron. Ellyson wasn't always filled with fledgling chopper drivers and machines that hovered and darted.

Before the Navy acquired the land in 1940, Ellyson's site had been open farmland. The land, designated Base Field 01913 (Site 3), was purchased to serve as an outlying auxiliary landing field to Chevalier Field, with one hangar and a repair unit. But bigger things were in store for the site. When it was decided that all instrument training would be conducted at Pensacola, it became apparent that another base field, similar to Corry, would be needed for the training of fixed wing pilots. Base Field got the job and was named Ellyson Field in 1941 in honor of Commander Theodore G. Ellyson, Naval Aviator #1.

Throughout the war years, the base remained a training field for the Naval Aviation cadets who filled the air and runways with SU's, SNV's, SNJ's and OS2U's.

In 1943, Ellyson was commissioned a naval auxiliary air station but, in early 1946, with a decrease in training, the station was reduced to maintenance status and became the storage yard for aircraft being transferred to and from the training bases in the Pensacola area.

In June of 1946, Ellyson received its first permanent tenant – Organized Batallion 805 of the Naval Reserve, now known as the Naval Reserve Training Center and still located aboard the station.

Like other naval installations at the end of WW II, Ellyson felt the squeeze of post-war reductions in status and, in 1947, was inactivated. With an unusual airfield on his hands, the Chief of the Bureau of Yards and Docks granted permission to the city of Pensacola to use part of Ellyson. The field became, in turn, a training center for the Brooklyn Dodgers, the site of Ferry Pass School, a home for crippled children and the headquarters for Gun Battalion 265 of the Florida National Guard.

Ellyson Field returned to the active list as an Auxiliary Landing Field in December 1950 and began a relationship that continues today. Helicopter Training Unit One (HTU-1) was commissioned the same month and the first class of students began training in the Hiller HTE-1 one month later.

In March 1957, HTU-1 became Helicopter Training Group and three years later received its present designation, Helicopter Training Squadron Eight (HT-8).

Due to increasing student output and program expansion, in 1957 Ellyson once again became a naval auxiliary air station. Less than one year later, Ellyson Field was designated a naval air station.

Today the mission of the station is the same as it was in 1950: to support HT-8, the squadron which provides basic and advanced helicopter flight training for Navy, Marine Corps, Coast Guard and foreign student pilots. In addition, nearly all of the nation's astronauts have completed a special

The sky over Ellyson was not always filled with helicopters. In the early days, OS2U's as well as other fixed-wing types abounded.

Today, the primary trainer is the TH-57A, above. Students log 30 hours of flight time in this helicopter before flying the TH-1L.

helicopter course at Ellyson Field.

Since training began in 1951 with the HTE-1, students have been trained in a variety of helicopters: Bell's HTL-1, -2, -4 and H-13; the Sikorsky HO3S, HO4S and H-34; the Vertol/Piasecki versions of the HUP.

Things have changed since the first class formed 20 years ago. Today, training has accelerated and flight students attend 22 weeks of intensive helicopter training in the school's computerized electronic instrument and navigational simulators and in turbine-powered *Huey* and *SeaRanger* training helos — which replaced the H-34 *Seahorse* last year and the TH-13 *Sioux* in 1969, respectively.

During the first phase of training, students alternately attend ground school, take courses in aerodynamics and engineering, and fly the Bell TH-57A *SeaRanger* primary trainers.

The time period for phase one training is approximately five weeks. This includes 30 hours of flying time, six of which are solo flights with two students going up in the same helo. During this phase and throughout the rest of the program, cockpit procedures are learned by extensive use of flight simulator devices.

In the second phase of training, the student pilot flies the TH-1L or UH-1D and attends courses in engineering, instrument navigation and military indoctrination.

During this phase, the student flies 60 hours, or approximately 37 flights. The 60 hours include 11 hours of basic transition, 11 hours of operational procedures, including landing in rough terrain and night flying. The remaining 38 hours are spent on instrument qualifications.

In addition to the official mission of helicopter training, Ellyson Field and HT-8 have acquired an unofficial secondary mission: disaster relief. The unofficial mission began in 1954 when floods struck Tampico, Mexico, and HTU-1 answered the call for help, saving hundreds while flying HUP helicopters. When Hurricane *Carla* hit the Gulf Coast in September 1961, 82 Ellyson personnel and 14 helicopters went to the aid of the victims. One month later, the group boarded the carrier *Antietam* to aid in relief opera-

The old and the new at Ellyson Field: above, a TH-13 Sioux and a UH-34, right; a flight simulator trainer and a TH-1L, opposite.

tions after Hurricane *Hattie* hit Honduras.

Squadron helicopters have since flown emergency missions for the victims of Hurricane *Betsy* in Louisiana in 1965 and, more recently, answered the call for help in 1969 when *Camille* struck Mississippi with her full force.

With the steadily increasing importance and sophistication of the helicopter, the very nature of a Navy, Marine or Coast Guard helicopter pilot's work requires that he be exceptionally well trained. The outstanding examples of skill, bravery and dedication of the more than 11,000 pilots who have been rotary-wing qualified at NAS Ellyson Field demonstrate the veracity of the claim that "The best helicopter pilots in the world are trained here."

Like the word "first," the term "pioneer of Naval Aviation" is often overused and misused. But both terms are appropriate and accurate when used to describe Commander Theodore G. Ellyson, Naval Aviator Number 1.

Ellyson was born on February 27, 1885, in Richmond, Va., attended the U.S. Naval Academy and graduated with the class of 1905. Five years of consecutive sea duty followed. In December 1910, he was ordered to Los Angeles, Calif., for aviation instruction under the tutelage of Mr. Glenn Curtiss, who had offered to train a pilot for the Navy free of charge. While a student at Curtiss' flight school, he collaborated with his instructor on the design of pontoons for airplanes and became the first passenger to go aloft in a hydro-aeroplane in February 1911, with Curtiss at the controls. During the same month, Ellyson began work with Curtiss on the possibility of launching a plane from a vessel.

On September 7, 1911, piloting a plane equipped with a slotted pontoon, Ellyson was successfully launched from a wire cable attached to a dock at Hammondsport, N.Y. The cable was later abandoned in favor of a catapult launching device developed at the Naval Gun Factory in Washington, D.C. The first catapult launch was attempted, unsuccessfully, by Ellyson at Annapolis, Md., in July 1912. Four months later, using a redesigned version of the catapult which was mounted on a barge at the Washington Navy Yard, he made his first successful takeoff from the device (*NANews*, June 1971, p. 23).

From the time that he began his aviation instruction in January 1911 until April 1913, Ellyson devoted all of his time to active flying and experimental work in aviation. These activities included the establishment of two Naval Aviation camps, one at Annapolis and one at North Island in September 1911 and January 1912, respectively.

In November 1911, with the then Lieutenant John H. Towers, Naval Aviator Number 3, he flew a hydroaeroplane from Annapolis to Milford Haven, Va., a 112-mile flight which set a nonstop distance record for that type aircraft.

World War I put a halt to Commander Ellyson's aviation activities. In 1917, he was assigned to the Naval Academy and two years later reported for duty at Submarine Chaser Base, New London, Conn. During this assignment, while operating with a submarine chaser squadron at Plymouth, England, he was awarded the Navy Cross and cited "for distinguished service in . . . the development of successful submarine-chaser tactics and doctrine."

After WW I, he remained in Europe as commander of nucleus crew #14, converting the German liner *Zeppelin* to a U.S. troop carrier. Returning to the United States, Ellyson served aboard three surface ships, two of which he commanded, until January 1921, when he was ordered to NAS Hampton Roads, Va., for duty as executive officer. Nine months later, he reported to the newly established Bureau of Aeronautics for duty as head of the plans division. He remained in that assignment until December 1922, when he became the aviation member of the U.S. Naval Mission to Brazil, cooperating in the reorganization of that country's navy. He returned to BuAer in May 1925 and, two months later, assumed command of Torpedo Squadron One. From March to June 1926, he served as executive officer of USS *Wright* (AV-1).

From the *Wright*, he was ordered to duty in connection with the fitting out of the Navy's second carrier, USS *Lexington* (CV-3), and was aboard when that ship was placed in commission. On February 27, 1928, on his forty-third birthday, Commander Ellyson was killed when his airplane crashed into Chesapeake Bay while on a flight from Norfolk, Va., to Annapolis, Md.

Letters

The only thing we know . . .

In the course of reading the April 1971 issue of *NANews*, I noted with interest the caption above the overhead view of the *Moskva*-class CHG depicted on page 35. The photograph below is forwarded as a supplement to that view for possible inclusion in a future issue of the magazine.

Naval Aviation News continues to be popular with Naval Reconnaissance and Technical Support Center personnel and enjoys wide readership.

C. V. Choyce, Captain
Commanding Officer
Naval Reconnaissance and
Technical Support Center
4301 Suitland Road
Washington, D.C. 20390

Agreed

The enclosed photographs are forwarded for possible future use in your publication.

If you would give the photographer a credit line, I am quite sure that you would receive more and better photographs from field activities. We have many enthusiastic and competent young photographers (and some old ones, too!!) in the Navy who are interested in seeing their work published – but not necessarily under the cloak of anonymity.

Calvin L. Larsen, LCdr.
Photographic Officer
NS Rota

It is the editorial policy of this magazine to give photo credits whenever possible. Unfortunately, in all too many cases, we receive no information on the identity of the photographer.

SAFETY

I would like to point out ten very obvious personnel safety hazards I noted and I'm sure a few other people did too.

On pages 16 and 29 of the March 1971 issue, five young lads were putting one of the most valuable senses they have on the line, their sight. It has been about three years since I have been on a carrier, but I don't think flight deck procedures have changed in regard to the wearing of goggles during flight deck operations.

In April at NAS North Island, Calif., Captain Grant C. Donnelly, right, past president of the Tailhook Association, passes the tailhook to his successor Captain William C. Doak, Commander of CAEWW-11. The 15th Annual Tailhook Reunion will be held September 10-12 at the Sahara Hotel in Las Vegas, Nev.

Regardless of how clean a flight deck looks, there are always pad eyes that seem to collect everything from safety wire to #12 screws just waiting to be relocated by jet blast.

Perhaps you could relay the proper procedures to the individuals concerned and possibly save a very painful and senseless incident, maybe save their sight.

AS1 Robert P. Walker
AIMD
NAS Lemoore, Calif. 93245

Reunion

There will be a reunion of the 20th Seabee Battalion at Virginia Beach, Va., September 9-12, 1971. For further information contact:

Otis E. Joslyn, Chairman
6014 Signal Hill Road
Mechanicsville, Va. 23111

Naval Aviation Films

The following motion picture films are among the latest released by the Film Distribution Division, U.S. Naval Photographic Center.

MN-10504 (unclassified) *Hurricane Hunters*. The mission of VW-4 operating in Florida, Puerto Rico and over the Atlantic Ocean during the hurricane season. An actual penetration flight into the eye of a hurricane (29 minutes).

MN-10738A (unclassified) *Aircraft Air Conditioning and Pressurization – Basic Facts and Principles*. Basic principles of operation of aircraft air conditioning and pressurization system (27 minutes).

MN-10738B (unclassified) *Aircraft Air Conditioning and Pressurization – Primary Air Systems*. Operation of primary air system, particularly in the F-4 (24 minutes).

MN-10738C (unclassified) *Aircraft Air Conditioning and Pressurization – Equipment Air Auxiliary System*. Operating principles of the equipment air auxiliary system of the F-4 (10 minutes).

MG-11052 (unclassified) *Caution – Wake Turbulence*. Hazards of wake turbulence to large aircraft flying at low altitudes (17 minutes).

KN-11093 (unclassified) *Aircrewman's Life Preserver – Type LPA-1*. Construction of the LPA-1 life preserver and correct method of operation (16 minutes).

Instructions for obtaining prints of newly released films are contained in OpNav Instruction 1551.1E.

Boeing/Vertol has been selected to conduct the first phase in the development of a heavy lift helicopter (HLH) capable of lifting a 22.5-ton payload. The Army is responsible for the shore-based HLH with Navy participating in its development. DOD is authorizing a separate program to meet Navy and Marine Corps requirements for a shipboard-based helicopter with a much greater lift capability than is currently available – but less than the HLH.

SQUADRON INSIGNIA

ATKRON 85

Tracing its origins back to the Fifties when it flew the A-1H Skyraider, VA-85 continues its attack role in A-6A and KA-6D Intruders. Led by Cdr. D. W. Pimberlake and home-based at NAS Oceana, Va., the 'Black Falcons' are currently on a Mediterranean deployment.


Naval Aviation
NEWS