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NAVAL AVIATION NEWS

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COVERS – Front, McDonnell Douglas' Harry Gann filmed 'last' A-4 over California (feature, page 8). Here, HMM-264 H-46 is cloaked by Italian forest. PH2 John Coleman took the photo. Back, NC-4 painting by Captain Ted Wilbur printed courtesy of Stuart M. Speiser Collection, National Air and Space Museum.

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CARI

The Carrier Aircraft Readiness Improvement Program was initiated by the Chief of Naval Material in late 1977 and has gathered momentum ever since. Although it will be some time before results can be accurately measured, important steps have been taken to give those who operate the Navy's sea-based tactical aircraft improved support.

The AIMVAL/ACEVAL (Air Intercept Missile Evaluation/Air Combat Evaluation) joint tests with the USAF at Nellis AFB, Nev., were highly successful and the Navy F-14 *Tomcats* involved in the project enjoyed a remarkably high availability rate. Observers noted that concentrated management of all logistic elements contributed to the improved readiness rates. Interest was thus generated in applying similar steps for aircraft operating from carriers.

ChNavMat tasked the Naval Air Systems Command and the Naval Supply Systems Command to examine specific measures which could increase readiness of modern carrier aircraft wings. A Carrier Aircraft Readiness Improvement (CARI) Committee was formed to provide a coordinated systems and fleet command response and to recommend alternatives. Aircraft peculiar to the Marine Corps have subsequently been added to the original scope to ensure comprehensive coverage of all facets of Naval Aviation. The prime vehicle for total examination of the factors affecting our ability to satisfy the logistics requirements is NIP – NOR (not operationally ready) Improvement Program. NIP examines the implementation of the maintenance plan from a publications, ground support equipment, personnel skills, facilities, and source, maintenance and recoverability code, as well as spares availability, view. This coupled with increasing total-system, spare-parts stock levels and speeding up the time required to get those parts from supply sources to forward deployed units comprises CARI (including Marine Corps H-53 and A-4 assets).

In the fall of 1978, the Committee briefed ChNavMat and the Deputy Chief of Naval Operations (Air Warfare) who endorsed the program. The program is divided into three phases, the first of which was completed in January 1979. Essentially, Phase I defined the program's objectives and set into motion the action to follow. The remaining phases are structured to have as much immediate impact as resources will permit. In consonance with the Program Objective Memorandum for FY 81, most of the long term initiatives should be funded. The committee and supporting staffs are now busy producing the necessary justification papers and are engaged in the detailed process of matching available resources to readiness goals.

In an effort to have a near-term impact, logistics reviews (including studies on major cannibalized items) have been completed for the *Viking*, *Hawkeye* and *Intruder* aircraft. The *Tomcat* and *Corsair*, as well as other weapons systems reviews, will be completed in the near future. Should initiatives presently under way for complex carrier aircraft prove successful, the program may be expanded to include other selected sea and land-based planes. In a related item of importance, improved carrier-onboard-delivery capability is also undergoing review.

In summary, the Navy is trying to improve maintenance management procedures and provide the most effective supply support. Collective leadership and follow-up action on the part of headquarters planners coupled with dynamic efforts at all echelons will keep Naval Aviation's forces flying at maximum availability and readiness.

NAVAL AVIATION NEWS

did you know?

Shock!

Lt. Rick Robinson delighted the crowd at the annual *Midway* dependents' day cruise with his high speed pass. Shock waves are plainly visible on the F-4J as he and flight surgeon Lt. Chuck Fogleman fly underneath the other aircraft piloted by Ltjgs. Pete Martin and Scott Johnson. The two *Phantoms* are from VF-151.

Battle Es

The 1978 Battle Es, awarded for excellence and efficiency, have been won by the following units:

ComNavAirLant: VF-32, VAs 15 and 65, RVAH-1, VAW-124, VS-22, HS-3, VP-24, HSL-32 and USS *John F. Kennedy*.

ComNavAirPac: VFs 161 and 24, VAs 56 and 115, VAW-115, VS-38, HS-6, VP-48, HSL-33, VAQ-134, HC-3 and USS *Midway*.

Radar Guided Weapons System

The Navy has awarded Grumman Aerospace a contract for a 17-month flight demonstration of the radar-guided weapons system (RGWS), using a modified A-6 *Intruder*. The all-weather standoff weapon delivery system for land and sea targets will enable pilots to target and launch their weapons before they fly within range of enemy surface-to-air defenses. Under a previous Navy research contract, 24 flight tests showed that RGWS could give a dramatic increase in the standoff targeting and delivery of air-to-surface weapons.

With RGWS, Grumman expects at least a 1,500-fold improvement in radar image detail over conventional radars.

The need for such a system became evident during the Vietnam Conflict when sophisticated and lethal Soviet *Sams* caused unacceptable losses to strike aircraft that got within their range.

Test results of the RGWS demonstration will be used to support the initiation of full-scale development of a currently planned A-6 improvement program known as AWSACS (all weather standoff attack control system).

NAVAL AVIATION NEWS did you know?

Navy and Marine Corps Medal

Every time a SAR wetcrewman enters the water on a rescue mission, he risks his life to save another's. Usually he has only minutes to prepare to enter the water and do whatever has to be done. Because of the life and death aspect of such a mission and unforeseen dangers, HS-11 allots a significant amount of time to SAR training. HS-11 is home-based at NAS Jacksonville.

The Navy and Marine Corps Medal has been awarded to two of the squadron crewmen for their heroic action in two rescues last year.

On the night of March 18, 1978, AW2 Alan K. Hancock, disregarding his own

safety, unhesitatingly plunged twice into a cold and rough sea to rescue four of his fellow squadron members whose plane had crashed.

On March 21, AW3 Thomas J. Beltz, aware of the personal danger to himself, entered a turbulent sea at night to rescue the struggling pilot of a crashed *Tomcat*. While keeping the aviator's head above water, he cut away the parachute's shroud lines and then summoned the helicopter for pickup.

The Navy and Marine Corps Medal is awarded to U.S. Navy or Marine Corps personnel for heroism in saving or attempting to save someone at the risk of their own lives, in a situation not involving actual conflict with an enemy. AW2 Hancock's and AW3 Beltz' courage, physical strength, sound judgment and skill in the face of great personal risk saved the lives of five fellow crewmen, reflecting credit upon themselves and upholding the highest traditions of the U.S. Navy. The two men were congratulated and awarded their medals by Congressional Medal of Honor winner, LCdr. Clyde E. Lassen, also attached to HS-11. LCdr. Lassen was awarded this country's highest honor for his heroic action in a dramatic rescue during the Vietnam War.

In the photo (l. to r.): Lassen, Hancock, Beltz, and Captain L. R. Myers, C.O. of *Kennedy*, who read the citation.

Operation Bootstrap

Operation *Bootstrap* is a comprehensive program designed to improve the effectiveness of the S-3 *Viking* across a wide range of operational, maintenance/material and training issues. Initiated by ComNavAirLant in November 1978, it was highlighted by a major symposium in February at NAS Cecil Field. During the two-day gathering, an extensive exchange of information took

place with definite action items identified and deadlines established for processing them.

The 150 attendees ranged from Vice Admiral G.E.R. Kinnear, Commander, Naval Air Force, Atlantic, who gave the keynote address, to enlisted personnel at the petty officer second class level. Representatives attended from the Chief of Naval Operations, Naval Air Systems Command, Aviation Supply Office, Naval Air Test Center, Naval Air Force, Pacific, Naval Plant Representative Office, Naval Air Development Center, Naval Air Logistics Center, Commander ASW Wing, Pacific, Naval Air Rework Facilities at Alameda and Jacksonville, Atlantic fleet squadrons, air wings and ships. Nine subcommittees were formed and convened individually to discuss a broad spectrum of problem areas.

While RIP – readiness improvement program (*NANews*, December 1977 and October 1978) – is basically a headquarters level initiative, *Bootstrap* is an intercommunity development wherein the operators deal more directly with each other. In effect, it reinforces the efforts set forth in RIP.

Among the key items discussed at the symposium were VAST (versatile automatic systems test); HATS (high bred aviation test systems), which deals specifically with S-3 weapons replaceable assemblies and other related equipment; maintenance training; depot level customer service, supply support, ASW operations; and personnel and manpower.

Although another major symposium is not planned at this time, the ComNavAirLant staff is closely monitoring the progress of *Bootstrap*.

More Operation *Bootstrap* information can be obtained by contacting ComNavAirLant's Commander Herb Lotze, autovon 690-2877, or writing to Commander Naval Air Forces, Atlantic, Attention Code 524, NAS Norfolk, Va. 23511.

New Seahawk

The *Seahawk* flies again – as the new LAMPS III helicopter. *Seahawk* is a name used once before by the Navy for a combat ship operated aircraft, the Curtiss SC-1, in service from 1944 through 1949. The name was chosen for the new SH-60B because of the similarity in the missions of the latter-day ASW aircraft and the earlier plane.

Full-scale development of the *Seahawk* began in 1978 with the first flight set for late 1979.

Freedom Foundation

Captain Eugene B. McDaniel received one of the Freedom Foundation's highest awards, the American Patriots Medal, on February 22 in a ceremony held in Valley Forge, Pa. McDaniel was nominated by Lowell Thomas for the award, which cites his "extraordinary heroism and personal sacrifice as a POW in Vietnam, inspiring all with his determined resourcefulness, constancy and conviction and deep faith in God."

He was shot down over North Vietnam while flying a combat mission on May 19, 1967. He remained a prisoner of war for six years.

McDaniel was C.O. of USS *Lexington* prior to his present assignment in Washington, D.C., as director of the House of Representatives Navy liaison office. During his *Lexington* tour, first-term retention rose from 8 to 41 percent. He is shown here being congratulated by CNO Admiral Thomas B. Hayward.

grampaw pettibone

Gramp's Mailbag

Salute to VX-1 Sea King Savers

A malfunction occurred in the retrieval system of a VX-1 *Sea King's* sonobuoy data link antenna during a night mission in mid-September. A decision was made to attempt disconnect of the antenna while the helo maintained a hover.

The procedure required an extremely precise hover with detailed hovering instruction being passed to the pilots by the flight crewmen and safety observers.

Constant communication between the pilots, maintenance crew and safety observers was maintained via handheld survival radios. Efforts of the team were directed by the command duty officer while the two maintenance crewmen worked diligently underneath the hovering *Sea King* to effect disconnect of the antenna. This was accomplished in less than 20 minutes, allowing the helo to land safely.

Grampaw Pettibone says:

Hoverin' helos! The professional efforts and superb coordination of the individuals involved in this evolution prevented potentially severe damage, not to mention harm, to the crew. You won't find all the answers in the books, boys, and far too often departures from standard procedures result in disaster. However, these gents put their old noggins together, formed a well-thought-out plan, and safely executed same with the precision of a Swiss watchmaker. I firmly believe that sailors not only have more fun – they get more done! Three cheers, and a round for this crew on old Gramps!

Fox Two – Wingy!

The mission brief called for two aircraft to fly a series of F-4J air

ILLUSTRATED BY Osborn

intercepts conducted under the control of the carrier's air-intercept controllers. The first four runs were to be head-on attacks into a short range position for a simulated forward-quarter *Sparrow* (AIM-7E) shot. The final run was to be similar, except the "fighter" aircraft would, if fuel permitted, perform a re-attack for a stern quarter simulated *Sparrow* or *Sidewinder* (AIM-9) shot.

The flight leader's F-4J was loaded with one live *Sidewinder* outboard and one simulated *Sparrow* on the port fuselage station. Launch, rendezvous and tanking were normal. Combat checklists were performed as briefed following launch. After proceeding to station, four intercepts were completed with the fighter role being switched after two runs.

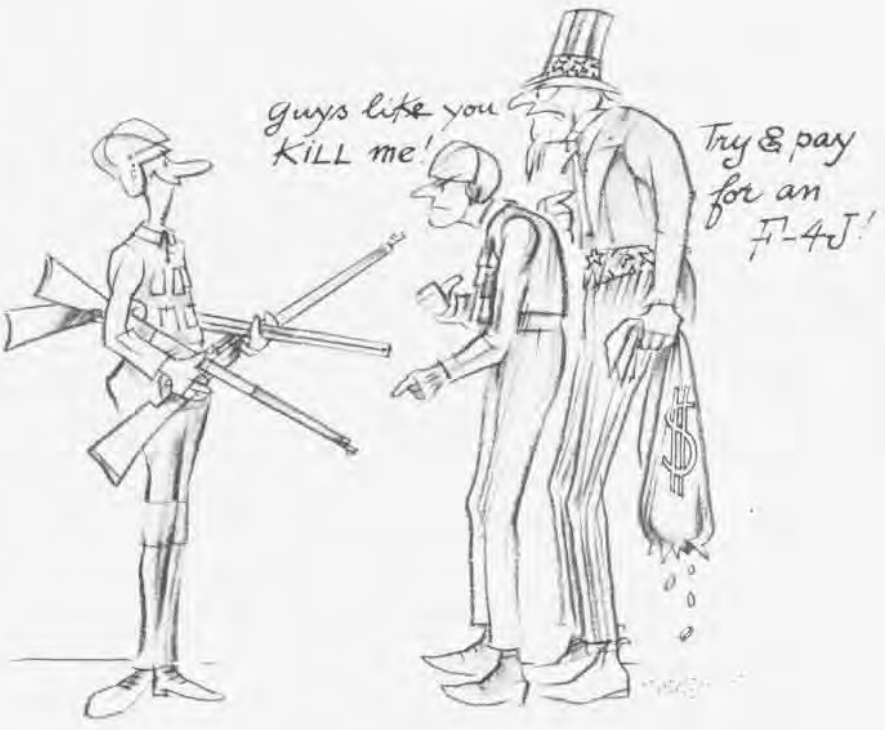
During the fifth and final run, vectors were given and a check-switches call was initiated by the lead fighter radar intercept officer (RIO) to his pilot. The pilot indicated over the intercom he had complied. With the simulated *Sparrow* selected, the pilot moved the missile arm/safe switch to arm, to check the ready light circuitry which was confirmed to be illuminated in both cockpits.

For whatever reason, the pilot did not return the arm/safe switch to safe. The ready light stayed on. The bogey aircraft was spotted at 3 to 4 miles, 40 degrees left of nose, 3 to 4 thousand feet low, and traveling in the opposite direction of the fighter aircraft. The lead pilot chose not to simulate the *Sparrow* shot because of the low probability of a successful hit. Instead, he executed a high-G barrel roll to re-attack from astern. During this maneuver the pilot de-selected the dummy *Sparrow* and selected the live *Sidewinder*.

The lead aircraft's RIO attempted to maintain visual contact with the bogey through most of the re-attack. His scan returned to the cockpit to re-acquire radar lock for range information as the pilot established nose-to-tail bearing on the bogey. Although the pilot did not verbally tell the RIO he had selected the live missile, the RIO noted the illuminated heat light. The RIO did not notice the still-illuminated ready light which is located high and to the right, outside the periphery of his scan.

Range data was passed to the pilot as he maneuvered into final position. Aural tone, indicating that the missile was properly aimed and within launch parameters, was heard by both crewmen. The pilot did not perceive the ready light near the center of his visual field as he transmitted, "Fox Two," and squeezed the trigger.

The missile fired and tracked directly toward the bogey aircraft. The startled crew transmitted, "Break starboard, break starboard!" However, the missile struck and destroyed the wingman's aircraft before the crew could respond. Both crewmen ejected safely and were recovered in approximately 45 minutes.



Grampaw Pettibone says:

Great jumpin' Jehosaphat! If this don't inflate your wingy's dingy, nothing will! The pilot who fired this missile of misfortune was described as a most energetic, knowledgeable and professional aviator who is an expert in airborne weapon and tactics. How many times has Old Gramps heard this tune? Despite one's superior knowledge and demonstrated capabilities, overzealousness and inattention-to-detail can be downright disastrous in most *any* phase of this aviation business, and particularly so in weapons delivery. Old Gramps firmly believes in "realism" and the "train like you fight" philosophy but this is a little *too* real, gang! The mixing of live and training missiles on the same aircraft has always given Gramps the willies! Arming live missiles during ACM is just plain dumb! This one leaves me cold. But not knowing the aircraft configuration until aircraft man-up doesn't coat me with warm feelings either! A wise man learns from his mistakes; an even wiser chap learns from the mistakes of others.

"You can train like you fight, and score. But I'll be staying out of your site, evermore!" quoth the ravin' wingman, swimming ashore.

Last A-4

By JOCS Bill Bearden

Left, Ed Heinemann is applauded at ceremony. Mr. John C. Bizendine, President of the Douglas Aircraft Company division of McDonnell Douglas is at podium. Also on hand were VAdm. Robert P. Coogan, ComNavAirPac, and MGen. William R. Maloney, Commanding General, 3rd MAW. Above, historical No. 2960 is assigned to VMA-331.

The fledgling rolled from its nest and perched gracefully in the glistening California sun. Strong and sleek, it was the last of a breed. Many people gathered around to see this final bird of a heroic species. Finally, after two and a half decades, the production line for the A-4 *Skyhawk* had been terminated. Many of these wonderful attack planes will continue to fly, but no more will be built.

The date was February 27, 1979. The crowd had collected outside McDonnell Douglas' Long Beach hangars for the Navy's acceptance of #2,960, the final A-4.

A living legend, the *Skyhawk* was conceived in the midst of the Korean Conflict. At the outset, Chief Engineer Ed Heinemann, of Douglas' El Segundo Division in California, said, "I believe the A4D will be for the period ahead what the AD [A-1 *Skyraider*] was for the period behind."

Advanced methods in design and manufacture made it possible for the *Skyhawk* to enter line production with the first model. The first plane was completely built in 18 months from beginning of design and flew two weeks later.

The first *Skyhawks* had a length of 38 feet, a wing span of 27 and a height of 15. The single-place, low-wing monoplane was of aluminum alloy construction and powered by a single Wright J65 turbojet engine. Since then, 21 versions

have rolled off the assembly lines.

While not designed as a record breaker, the *Skyhawk* became one. Patuxent River test pilot Lt. Gordon Gray flew the *Skyhawk* on October 15, 1955, to a world speed record at Edwards Air Force Base, Calif. The speed of 695.163 miles per hour for 500 kilometers stood for almost five years.

The bantam-weight bomber was designed to operate from all size carriers and from short landing fields. Its span was small enough that wing-folding mechanisms weren't required, yet it was maneuverable on flight and hangar decks with a minimum of trouble.

The *Skyhawk* packs a lethal punch. It is equipped to carry both nuclear and high explosive bombs, rockets, guided missiles, gun pods and other weapons needed for multi-mission work. It can deliver these with a variety of maneuvers, including lay-down, glide, loft, over-the-shoulder and ground-controlled modes.

There were many individuals in the Navy as well as in industry who made the Skyhawk a success story. Some key figures from the Douglas Aircraft El Segundo Division at the time the A-4 was conceived were on hand for the Long Beach ceremony in February. Left to right are Bob Canaday, closely affiliated with the Skyhawk program for years, who gave an address at the gathering and is still with McDonnell Douglas (McDonnell and Douglas merged in 1967); R. G. Smith, configuration engineer and one of the world's great aviation artists, who also still works for the company and was instrumental in the A-4's design; Leo Devlin, Ed Heinemann's immensely skilled assistant and later chief engineer at El Segundo; and Heinemann, who headed the design team. The Skyhawk had many informal titles – Scooter, Mighty Midget, Bantam Bomber. It was also fondly referred to as Heinemann's Hot Rod.

The development of this plane also brought about an innovation in pilot flight suits. A new snug-fitting, torso suit that included life jacket, survival equipment and parachute harness in a single unit was developed.

Designed as a successor to the reliable prop-driven *Skyraider,* the A-4 performed commendably in Southeast Asia. Pilots who flew it on attack missions praise its strength, maneuverability, load-carrying capability, quick turnaround time and survivability.

"The A-4 is great in combat," a Vietnam veteran said. "There are many reasons why I prefer this plane. It's small and fast and hard to hit. Besides, it's fun to fly."

Regarded as one of the great mainstays of the Naval Aviation arsenal, this mighty midget served aboard CVS as well as CVA carriers. Marine pilots currently use it to fly close ground support.

Production of the *Skyhawk* lasted for 23 years – with nearly as many versions. Even though production has ceased, the *Skyhawk* will continue to be around providing service where it is needed. A two-seat version is used extensively in the training command and at many other activities. The aircraft is flown by Marine Corps units, the Navy's *Blue Angels* and several foreign nations. Its familiar profile won't fade from the scene for some time.

Blue Angel A-4Fs


XA4D-1

Preliminary design of the *Skyhawk* began at McDonnell Douglas in early 1952, and the authority to start production was received on October 13, 1952. The initial Navy specification was written for a "lightweight, single-engine, single-place, high performance, carrier-based, day attack landplane capable of performing dive-bombing, interdiction and close support missions. The airplane shall be capable of delivery of conventional or special weapons, and it is intended to be capable of striking sea and land targets with or without fighter escort where control of the air has not been established. (Inherent simplicity of design, high producibility, ease of maintenance and low cost of production are prime objectives.)"

The XA4D-1, as it was initially designated, made its first flight on June 22, 1954, at Edwards Air Force Base, with McDonnell Douglas test pilot Robert O. Rahn at the controls. During the ensuing flight test program, which included 12 aircraft, an A-4 set a world speed record of 695.163 miles per hour for the 500-km closed circuit course.

After completion of the rigorous flight test program, the first factory-to-fleet delivery was made to VA-72 in November 1956. Also receiving A-4s in 1956 was VMA-224. Eventually 18 Navy and Marine squadrons operated the 165 A-4As (A4D-1s) built.

Skyhawk is prepared for cat shot, USS Kennedy, 1968

The A-4B (A4D-2) first flew on March 26, 1956. Changes from the A-4A included modification of 28 percent of the structure, including addition of inflight refueling capability, a stiffened rudder, additional ordnance and navigation equipment and added control reliability. The A-4B production run totaled 542.

Designated the A-4C (A4D-2N), the third basic model of the *Skyhawk* flew for the first time on August 21, 1958. Modifications included installation of an autopilot, low altitude bombing and all attitude indicating gyro system, a terrain clearance radar system and an angle of attack indicating system. In all, 638 A-4Cs were delivered through December 1962.

Major advances in *Skyhawk* performance were achieved with development of the A-4E (A4D-5). The Wright J65 engine was replaced with a Pratt & Whitney J52 with increased thrust, lower fuel consumption and reduced installed weight. Two additional hardpoints were added to the wing to increase the ordnance-carrying capacity. These and other

changes resulted in a 29 percent structural change. First A-4E flight was July 12, 1961; 500 were delivered.

The two-place trainer version of the *Skyhawk* was ordered into production in 1964 by revising the A-4E contract to specify that the last two aircraft were to be altered to include the features required for the trainer mission.

The changes included a 28" fuselage extension to accommodate the second seat and the necessary dual controls and instruments, plus a new McDonnell Douglas-designed Escapac IC-3 ejection seat which allowed safe egress from a disabled aircraft at ground altitude and zero forward velocity. Also added were nose wheel steering and left spoilers which improved crosswind landings.

Two trainer versions were delivered to the Navy and Marine Corps. The A-4F retained most of the armament capability of the single-place A-4. In the A-4J, designed as an advanced trainer for the training command, some of the ordnance systems were deleted. The two-place A-4 first flew on June 30, 1965; 467 were delivered.

During the Vietnam Conflict, *Skyhawks* were a prime Navy and Marine attack aircraft. The A-4F version was ordered in 1965. It was similar to the A-4E except that it incorporated nose wheel steering, lift spoilers, the Escapac ejection seat and uprated J52-P8A engine introduced in the TA-4F. First flight of the A-4F occurred on August 31, 1966. (The Navy's *Blue Angels* fly this plane.)

A further improvement to the A-4F was an upper avionic pod added later. Kits were supplied for aircraft already delivered to the fleet and those which had not been delivered were modified at the plant. The pod consisted of a compartment added to the top of the fuselage, and aft of the canopy. It housed special electronic gear dictated by the requirements of Vietnam. The pod was retrofitted on all operational A-4Es and some A-4Cs.

VMA-223 A-4Ms

With the availability of a more powerful version of the P&W engine, the J52-P-408 (with a 20 percent increase in thrust and no significant rise in fuel consumption), the Navy ordered into production the A-4M. It is an improved version of the *Skyhawk* for Marine Corps tactical operations. The added power greatly enhances short-field capability, making possible *Skyhawk* operations from 4,000-ft. runways.

Also, the 11,200 pounds of engine thrust increases the *Skyhawk's* maneuverability, rate of climb and acceleration. Speed of the A-4M is in the high subsonic range about 700 miles per hour.

Other A-4M changes include a greater ammunition capacity for internally mounted 20mm or 30mm guns, a more powerful generator, a self-contained engine starter and a larger windscreen and pilot canopy, providing greater headroom and visibility.

Weighing only 10,600 pounds empty, the A-4M can take off fully loaded at a gross weight of 25,500 pounds, including 9,100 pounds of all types of modern tactical armament. It is 40.3 feet long, 15 feet high and has a wingspan of only 27.5 feet. As with other *Skyhawks,* this wingspan dimension permits it to be housed comfortably in carriers without folding the wings.

Flight characteristics of the A-4M, particularly its high speed stability and its excellent controllability, make it an effective platform for the sophisticated weapons delivery system it carries.

The A-4M made its maiden flight on April 10, 1970, and was first delivered to the Navy on November 3, 1970. McDonnell Douglas built a total of 158.

Skyhawks serve in the air arms of six other nations. The Royal Australian Navy operates A-4Gs and TA-4Gs in conjunction with its aircraft carrier, HMAS *Melbourne.* These aircraft are essentially A-4F types with some modification for Australian requirements.

Israel operates the greatest number of export *Skyhawks.* Its A-4Hs and TA-4Hs are similar to the A-4F and TA-4F, while the Israeli A-4Ns are developments from the A-4M.

The New Zealand Air Force flies A-4Ks and TA-4Ks, also similar to the A-4F and TA-4F, with some special equipment.

The Kuwait Air Force *Skyhawks,* designated A-4KU and TA-4KU, are based on the A-4M airframe.

The Argentine Air Force and Navy and the Singapore Air Force *Skyhawks,* designated A-4Ps, A-4Qs, and A-4Ss, respectively, are remanufactured A-4Bs with some updating.

VC-1 A-4C, 1966

VA-22 A-4Cs, Mt. Fuji, 1964

This depiction of an XA4D-1, TA-4J and A-4M is by McDonnell Douglas' R. G. Smith.

That the *Skyhawk* could stay in production so long is no accident of fate or circumstance. It was conceived by the greatest pioneer of jet combat aircraft of the era. Ed Heinemann was the first to put into practice the theory of the "growth factor." For example, for every pound of equipment or anything else which is added to the airplane in the original design, the airplane has to grow 10 more pounds in order to keep the intended original performance, speed and range. Conversely, if one pound could be saved in any equipment, the weight of the whole airplane would be reduced by 10 pounds. Heinemann pursued this hypothesis across the board. He inspired, cajoled and beat on his own team and the Navy, to eliminate superfluous requirements, to simplify and consolidate electronics and equipments – and, as he put it, to "simplicate and add lightness." It was a brilliant, if bone-breaking, undertaking.

R. F. Canaday – at the ceremony for the last A-4M.

SKYHAWK DESIGNATIONS

XA4D-1		Light attack	USN (prototype)
A-4A	(A4D-1)	Light attack	USN/USMC
A-4B	(A4D-2)	Light attack	USN/USMC
A-4C	(A4D-2N)	Light attack	USN/USMC
	(A4D-3)	Light attack	Not ordered into production
	(A4D-4)	Light attack	Not ordered into production
A-4E	(A4D-5)	Light attack	USN/USMC
TA-4E		Combat trainer	USN (prototype two place)
A-4F		Light attack	USN/USMC
TA-4F		Light attack and combat trainer	USN/USMC
EA-4F		Electronic warfare	USN
OA-4F		Tactical observation	USMC
A-4G		Light attack	Royal Australian Navy
TA-4G		Light attack and combat trainer	Royal Australian Navy
A-4H		Light attack	Israeli Air Force
TA-4H		Light attack and combat trainer	Israeli Air Force
TA-4J		Advanced trainer	USN/USMC
A-4K		Light attack	Royal New Zealand Air Force
TA-4K		Light attack and combat trainer	Royal New Zealand Air Force
A-4L		Light attack	Revised A-4C for USN/USMC reserves
A-4M		Light attack	USMC
A-4N		Light attack	Israeli Air Force
A-4P		Light attack	Revised A-4B for Argentine Air Force
A-4Q		Light attack	Revised A-4B for Argentine Navy
A-4S		Light attack	Revised A-4B for Singapore Air Defense Command
TA-4S		Light attack and combat trainer	Revised A-4B for Singapore Air Defense Command
A-4KU		Light attack	Kuwait Air Force
TA-4KU		Light attack and combat trainer	Kuwait Air Force

NAVAL PLANT REPRESENTATIVE OFFICE

The Naval Plant Representative Office (NavPro) is a key link in the chain which connects a buyer of military equipment with the commercial manufacturer. A highly skilled cadre of civilian and Navy personnel man seven NavAir-administered NavPros located at various company sites in the U.S. Their principal responsibility is to ensure that the builders of entire aviation weapons systems or related subsystems such as engines or weapons delivery systems comply with the word and letter of an agreed contract.

Outwardly, it would seem that the ingredients for an uncomfortable, if not annoying, situation are present. A group of Navy people, working in the manufacturer's plant, seems to be looking over the shoulders of the company's personnel. True, there are disagreements. For the most part, though, the relationships are satisfactory, based on a mutually mature view toward keeping the fleet equipped with the proper tools to perform its missions.

NavPros report directly to Naval Air Systems Command, specifically Air-540, the NavPro Management Division, which is currently headed by Captain B. L. McClellan. An aeronautical engineering duty officer, his last assignment was that of Commanding Officer, NavPro Long Beach, and his replacement will be a recent naval plant representative. He is quick to explain, "NavPros are charged with ensuring proper execution of contracts in behalf of the entire Department of Defense at those plants which have been assigned to the Navy for contract administration by OSD."

The largest NavPro, staffed by an assigned civilian ceiling of 210 and 13 military personnel, is located at Bethpage, N.Y., home of Grumman Aerospace Corporation. Others are positioned at Lockheed Aircraft, Burbank, Calif.; Rockwell International, Columbus, Ohio; Vought Corporation, Dallas, Texas; General Electric Company, Aircraft Engine Group, Lynn, Mass.; McDonnell Douglas Corporation, Long Beach, Calif.; and Sikorsky Aircraft Division, Stratford, Conn. The manufacturer's name is not listed in the official NavPro title, only the location.

No less than 72 functional responsibilities are assigned to NavPros through defense acquisition regulations. Additional responsibilities may be added by other authorities. The paper-work portion of the job alone is formidable indeed. It is important to remember, however, that how well NavPros do their jobs directly affects the quality, cost and delivery schedule to the government's arsenal.

Each NavPro is organized alike, with minor variances. Each usually has several staff offices and five divisions. The staff offices would include a flight test unit, where appropriate, and an assistant for business administration, for example. The divisions include: contract administration, engineering, quality assurance, industrial production and administration. A NavPro is commanded by an aeronautical engineering duty officer (1510), usually a Navy captain, referred to as the naval plant representative.

The director of flight test approves

all contractor flight operating procedures for those flights for which the government has assumed the risk for damage or destruction of aircraft. He may also double as safety officer, have close ties with the NavPro's quality assurance and engineering divisions and review the overall flying program.

Production aircraft are accepted on two levels. When an aircraft comes off the contractor production line, for example, company pilots, generally graduates of the Navy or Air Force Test Pilot School, will "wring the plane out," checking each of its systems. When he is satisfied the aircraft meets all specification requirements, the company pilot turns it over to Navy test pilots who perform similar checks. In multi-piloted aircraft these company and Navy flights may be flown concurrently.

Each of the seven NavPros has at least one major hardware acquisition program for which there is a program manager (PM) within NavAir. At Stratford, for example, the Navy's LAMPS Mark III PM acts as a direct representative of the LAMPS Mark III program manager in NavAir, Rear Admiral selectee R. N. Winkel. At the same time, he manages all matters germane to the LAMPS program within the NavPro.

A principal point in a NavPro is the contracts division. Within this division, headed by a civilian contracts specialist, orders for work to be performed by the contractor are issued. As necessary, overhead rates, forward-pricing rates and contract modifications are negotiated and payment for contractor services made or authorized.

In one plant not long ago, the contract division negotiated 452 proposals valued at $14 million. It also provided pricing evaluation on 41 individual requests from procuring activities valued at $24 million.

The engineering division, headed by a highly skilled civilian engineer, evaluates the contractor's engineering skills and techniques, monitors and evaluates the contractor's progress on developing programs and reviews design changes on existing programs. Considerable dialogue between the procuring headquarters and the NavPro engineering division is necessary to ensure an adequate evaluation of the contractor's engineering approach to fulfilling his contract responsibilities.

The quality assurance division, headed by a civilian quality assurance specialist, is responsible for ensuring that the contractor has a program which will ensure production of a product which complies with all specification requirements. This entails evaluating the engineering design and production design and process and their interrelationships. An integral part of the quality assurance process is an ongoing assessment of the assembly process by specialists who must report material deficiencies if and when they occur. The NavPro then takes the necessary steps to ensure that the contractor corrects the problem and its cause.

The industrial production division, headed by a civilian production specialist, is charged with ensuring that proper materials and state-of-the-art technology are applied during production. In some weapons systems a good portion of the equipment used in manufacturing process is furnished by the government.

In some aircraft production lines, for example, nearly half of the equipment, dollar-wise, is supplied by the government. This division is responsible for ensuring that the contractor obtains and properly utilizes contractor and government-furnished equipment. It also monitors the contractor's use of other government assets. Usually, these constitute no small investment. NavPro Dallas, for example, encompasses 314 acres of government land on which are 200 buildings, not to mention three miles of internal roadway.

The administration division handles support requirements for the various units and coordinates salary payments, operating funds, travel costs, training syllabi and office supply transactions.

A Navy officer, or enlisted person interested in a NavPro assignment will find a tour invaluable to his or her career. He will gain a new understanding of the increasingly complex industrial-military relationship. It's a complicated business, to be sure. But Capt. McClellan points out, "We buy everything we get from private industry, so we must learn to deal properly and efficiently with the manufacturers. It's in the best interests of everyone concerned."

In a way, the NavPro is a functional part of a checks-and-balances system mandatory in the extensive acquisition process of today. "In the majority of cases," says Capt. McClellan, "where differences arise between the Navy and the contractor, negotiations are satisfactorily concluded. It's been my experience that most problems are really people problems. Once the people involved learn to understand each other, it's amazing how rapidly the problems dissolve."

NAVAL AVIATION NEWS

naval aircraft

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Through the Twenties and early Thirties, the name Vought and the colorful seaplanes catapulted from Navy battleships and cruisers were practically synonymous. Starting with the Vought VE-7s and VE-9s (*NANews,* December 1970) and extending through the O2U (*NANews,* November 1973) and O3U *Corsairs* (*NANews,* November 1977), the Chance Vought Corporation provided the "eyes of the fleet."

With the growing use of the VE-7s and 9s as catapult observation seaplanes, the limitations of their WW I engines became evident. The Navy placed high priority on the development of more reliable and efficient engines, both liquid and air-cooled. While initial emphasis in the 200-hp range was on the Navy-developed Aeromarine U-8 series of liquid-cooled engines, Navy interest shifted to the Lawrence J-1 air-cooled radial engine. Its lighter weight and absence of a cooling system made it attractive for use in shipboard aircraft. With the purchase of Lawrence by Wright, putting Wright's engineering and production experience behind the J-1, the new radial engine soon became the sole "winner" in its power range.

Fleet experience had also suggested other potential improvements in catapult-type seaplanes, and the UO-1 was basically the VE-7/9 design updated to incorporate these changes and a new engine, initially the U-8-D, with an early change to the radial J-1. Basic structure of the two-bay biplane design was largely unchanged; many parts were interchangeable. Along with the radial engine, the other most obvious changes were the rounded fuselage sides, faired out behind side-mounted fuel tanks alongside the forward cockpit, and a new vertical tail. Initially designed as a seaplane, the UO-1 was soon classified as "convertible," using interchangeable single main float or wheeled landing gear.

First flown in the fall of 1922, the UO-1s entered service with USS *Richmond* in 1923. As their superiority over potential competing types became evident, they became the only observation types in use on the fleet's catapult-equipped combat ships.

In 1922, the first UO, with the Aeromarine U-873 engine, was modified for air racing in which it had a brief, undistinguished career. Subsequently reconfigured as a two seater, equipped with a Wright E-3 Hisso, it was redesignated as the sole UO-2 and used for general utility purposes. With the advent of carriers, other UO-1s were equipped for carrier operations. One later became the first U.S. Navy dirigible hook-on type, operating experimentally from the *Los Angeles* in 1929.

In the mid-Twenties there was a major thrust to operate single-place, fighter-type aircraft from the catapult-equipped ships. An improved version of the UO was ordered in 1926 as an interim type until newly designed fighters could be developed. First designated UO-3, the designation was changed to FU-1 for the 20 single-seat versions of the UO series, equipped with supercharged J-5 engines, fighter armament and wings of an improved design. When two new carriers, *Lexington* and *Saratoga,* came onto the scene, the "battleship fighter" concept was dropped, and the FUs were modified to two-place trainers as FU-2s.

The Coast Guard also procured two UOs as UO-4s in 1926, among the first aircraft bought for that service. These incorporated the new wings of the FUs, and J-5 engines.

While O2U *Corsairs* were replacing the UOs in the fleet, many of the remaining UO-1/1C aircraft were modified with the improved Wright J-5 Whirlwind engine and FU-type wings as UO-5s, rounding out their service in fleet support and training duty. By 1933, the Navy UO/FUs had been retired, with the last Coast Guard UO-4 phasing out in 1935.

UO-4

O/FU

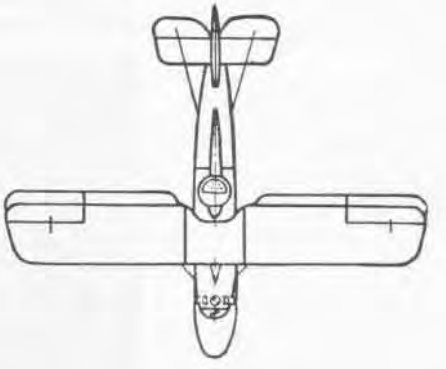
Span, all models		34'4"
Length, all models (land)		24'5"
	(sea)	28'4"
Height, all models (land)		8'11"
	(sea)	10'2"
Engine		
UO-1	Lawrence J-1 or Wright J-3	200 hp
FU-1	Wright R-790	220 hp
Maximum speed (sea)		
UO-1 and FU-1		122 mph
Service ceiling		
UO-1		14,900'
FU-1		26,500'
Range		
UO-1		418 miles
FU-1		410 miles
Crew		
UO-1		2
FU-1		1
Armament		
UO-1		None
FU-1		two .30 machine guns

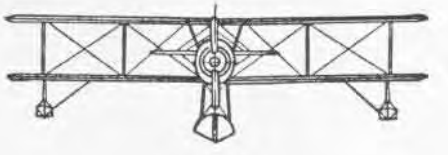

UO-1


UO-5

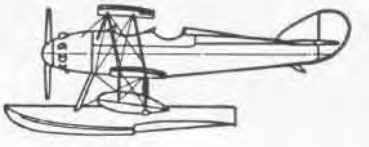

UO-2


FU-1






FU-2



PEOPLE · PLANES · PLACES

Awards

The VAW-115 *Liberty Bells* were presented *Midway's* Captain's Cup Trophy by Capt. Thomas F. Brown III, C.O. of the carrier. The trophy is awarded annually to the squadron or division which has demonstrated the greatest overall athletic excellence and is symbolic of a total effort by all personnel both in athletic competition and in the work spaces. Squadron C.O. Cdr. Art Harrison stated, "Aircraft readiness has been maintained at higher levels than in previous years. Through good management and, of course, the sacrifice of a great deal of free time, the athletes were able to compete and win. There was also tremendous support from those who had to work harder on the job to allow their shipmates time to participate in sports."

Records

LCdr. Bill Searcy, VT-27 safety officer, congratulates Ens. Rob Baker on successfully logging the squadron's 40,000th accident-free flight hour. Instructor pilot Lt. Jeff Paullin

shares in the acclaim from the back seat. The squadron recently carqualled in the T-28 *Trojan,* for the first time in five years, aboard *Lexington.* Due to the retirement of VT-28's TS-2s,the squadron carquals student aviators who will go into the VAW/VR communities.

Cdr. Dave Alexander, CAG-30, recently passed his 5,000th accident-free flight hour, in an A-7B from VA-304, Alameda. He has accumulated more than 1,000 carrier arrested landings during five operational tours and extended deployments in eight carriers.

The *Dambusters* of VA-195 have flown over 17,500 accident-free hours during four years in the A-7E. This period encompasses two cruises to WestPac in *Kitty Hawk,* work-ups in *Ranger* and *Enterprise* and several weapons deployments to El Centro, Yuma and Fallon. Led by Cdr. Bill Bowes, the squadron is currently embarked in *America* in the Med.

On February 2, the KC-130F assigned to VQ-3, Guam, performed its 2,000th landing with LCdr. Don Ahlstrand at the controls. Since its acquisition in October 1977, the aircraft has been used extensively as a pilot trainer, upgrading the squadron training program and allowing the squadron's two EC-130Qs to be used solely for mission ops. On the same flight, first engineer AMHC Joe Donahue logged his 2,000th C-130 hour.

Barbers Point's VP-22 recently celebrated 25 years of accident-free flying. The *Blue Geese* flew more than 201,000 hours while reaching the silver anniversary. Formed just prior to WW II, the squadron, originally VB-14, flew PBY *Catalinas.* VP-22 has earned many honors, including the Golden Wrench Award in 1975 for outstanding aircraft maintenance, the 1976 CNO Safety Award and the Golden Orion Award for retention in 1977.

An EP-3B assigned to VQ-1, Det Atsugi passed its 16,000th flying hour on January 4 during a routine reconnaissance flight. Aboard were LCdr. Stu Robinson, Lt. Larry Salter and Crew 31. The squadron believes this aircraft is the high-time P-3 in the Navy. Any challengers?

Cecil Field's VS-24 recently surpassed 56,000 accident-free flying hours. Skipper Cdr. Russ Gill lists safety as the squadron's number one priority. He says, "The safety of squadron personnel is paramount both in the air and on the ground. Only in the event of actual combat or defense conditions in which combat is imminent shall missions or tasks be considered operationally necessary. Each member of the squadron is personally responsible for his safety and the safety of his shipmates." VS-24 flies the *Viking.*

While on a training detachment to Roosevelt Roads, VA-35's Lt. Bill McKeever passed a personal milestone when he logged his 1,000th hour in the A-6E. Three other *Black Panthers* placed first, second and third in individual dive-bombing accuracy in the CVW-8 bombing derby. LCdr. J. Shaffar and Lts. Mark Smith and Marc Conlyn overwhelmed the other A-7E, S-3A and A-6E pilots with their impressive visual dive bombing.

LCdr. "Soup" Campbell of VFP-63, Miramar, recorded the 187,000th trap aboard *Enterprise.* He piloted his RF-8G aboard while participating in carqual exercises off the coast of southern California.

LCdr. John "Rollers" Wrynn, safety officer of RVAW-110 at Miramar, has amassed 4,000 accident-free hours. Squadron C.O., Cdr. W. H. Reed, presented Wrynn with a special cake shared by all the *Firebirds.*

The *Boomers* of VA-165 reached a milestone while operating the A-6E aboard *Constellation:* 10,000 accident-free carrier arrestments. Eight and one-half years and 37,780 flight hours were required to amass

the traps. LCdrs. Dave Newton and Jim Clancy crewed the *Intruder* for the record trap. VA-165 recently received the CNO Aviation Safety Award (medium attack, Pacific Fleet) and the ComNavAirPac Battle E.

Cdr. Wiley P. Decarli, X.O. of VA-147, accomplished his 900th carrier landing while flying an A-7E as part of CVW-9 aboard *Constellation.* Since his first trap in June 1964, Cdr. Decarli has made traps aboard *Lexington, Essex, Bon Homme Richard, Hancock, Midway, Enterprise, Nimitz* and *America.*

Six *Screwtops* from VAW-123 accomplished landing records on board *Saratoga* in the Med. New centurions are Cdr. H. E. Meese, LCdr. George Kickhofel, Ltjgs. George Buddington and Tom Parker and AT2 Dan Albrecht. Lt. Steve Mercurio made double centurion.

PEOPLE · PLANES · PLACES

When Lts. Bob Wood (left) and Russ Palsgrove paired up for a routine flight recently, they discovered it was Wood's 1,000th flight hour in the A-6 and Palsgrove's 100th

arrested landing aboard *Midway*. Both accomplishments are notable in themselves, but together it was a doubly special event. Wood is the line division officer of VA-115 and Palsgrove is a staff member of CVW-5.

Sea Cadets

Sea Cadets from the Hancock Squadron, Alameda, visited VA-304 for aviation orientation training on A-7Bs. The students were instructed on naval aviation history, use of maintenance equipment and safety procedures. Squadron personnel conducting the training included Cdr. Matthew A. McCarthy, VA-304 C.O.; LCdrs. Michael White, OinC, and Doug Bell, director of the Sea Cadet aviation program; CWO3 Harry Miller; AVCM Thomas Pettit and AD2 Terry Godchaux.

Honing the Edge

Cecil Field members of CVW-1 which returned home earlier this year after a Med cruise on board *Kennedy* are the VA-46 *Clansmen*, the VA-72 *Bluehawks* and the VS-32 *Norsemen*. Cdr. James T. Matheny's *Clansmen* accumulated over 4,600 flight hours and 2,250 carrier landings. Led by Cdr. Hugh A. Merrill, the *Bluehawks* flew over 2,100 sorties and amassed 4,100 flight hours. The *Norsemen*, commanded by Cdr. Paul E. Pedisich, flew over 3,700 hours, logging 961 traps. The wing's 10 squadrons totaled over 29,000 flight hours, flying 100 days of the 225-day cruise.

HMH-772, under the command of Maj. K. J. Kelly, completed its AcDuTra at Yuma. Five CH-53 *Sea Stallions* left the snowbound runways of Willow Grove and traveled 2,000 miles, encompassing 18 hours of inflight training. The squadron completed an extensive training program which included firing the .50 caliber machine gun from the helos. During some night missions, special goggles were used which made night ground perception easier for the pilots. HMH-772 was the first reserve squadron to undergo special mountain and desert training, giving unit personnel knowledge of combat survival in that terrain.

The *Seahawks* of HM-16 spent a month in Key West conducting Mk 103 minesweeping operations. The Mk 103, used to sweep moored mines, is transported to mine fields in the RH-53D *Sea Stallion*. Home-ported at Norfolk, the squadron is commanded by Cdr. Robert V. Goodloe, Jr.

Disestablished

In February 1979, NARDet Los Alamitos was disestablished, ending 37 years of Naval Air activities. Reservists who drilled there have been transferred to NARUs Point Mugu and North Island, while active duty personnel were reassigned in accordance with Navy needs.

Rescues

"Old Eagle Eye does it again" is an expression being used these days by HM-16 personnel to describe AMS3 Daniel Champlin. He recently spotted two people stranded on shoals after their boat capsized and, as a result, the victims were rescued by the Coast Guard. A week later, during a late afternoon training flight, Champlin noticed a group of boaters drifting in their small pleasure craft which had engine trouble. Once again, help came from the Key West Coast Guard Station to rescue the people.

The quick response of NARU North Island aided in the medevac of a seriously ill newborn infant. When a call was received requesting assistance for the premature baby who had developed serious respiratory problems requiring incubation and surgery, NARU's C-131 flew a medical team from a San Diego hospital to Calexico, Calif., via El Centro, and transported the baby back to the hospital. The NARU reacted to this emergency in less than two hours. The aircraft commander was Capt. E. Massa, NARU C.O.; copilot was Lt. Al Parkin and ADRC Frank Beckley and AD1 Carl DeLooze were flight attendants. HM1 Manuel DeLeon was also on board for medical support.

While temporarily assigned to ComMAT-Wing-1 staff from VA-42 at Oceana, AT3 David M. Polaha saved the life of a Virginia Beach youth and was recommended for the Navy and Marine Corps Medal. On February 12, 1979, Polaha was looking out his apartment window when he saw a boy fall through the ice, about 50 feet from shore, in a nearby lake. Although on a previous rescue attempt another young man had fallen through the ice, Polaha proceeded across the lake in a different route toward the victim. Crawling the last 10 feet, he extended a broken limb to the lad and pulled him out of the water. In looking back on his act, Polaha remarked, "You don't think twice about it. You do what has to be done."

Et cetera

Capt. Jack Quin, Moffett Field C.O., accepts a framed wood carving of an early aviator's dirigible wings carved by NC1 Steve Beauchamp. The replica represents insignia worn by Army Signal Corps dirigible pilots during the 1920s and 30s. Moffett Field served as an Army Air Corps base from 1935 to 1942. The carving now hangs alongside a photo of the Navy's airship *Macon* in the C.O.'s office.

PEOPLE · PLANES · PLACES

While deployed to Bermuda, VP-10 found that a safety/maintenance precautionary procedure turned into an enjoyable morning walk in the Bermuda sun (and occasional shower). All hands appreciated the comradery of the three-times-a-week FOD walkdown. All admin and hangar personnel — from the C.O. on down — turned up for the evolution. Over five months, an average of a bushel of hazardous trash a week was recovered from the ramp area and not one aircraft or individual was FOD'd. Every *Red Lancer* got a chance to "tote that bag and lift that nail."

Few people, if any, ever associate snow with the state of Hawaii, but it *does* appear every winter. PH2(AC) M. E. Cotton was able to capture this unusual sight on a recent flight of a TA-4J from VC-1, Barbers Point, as it flew over the snow-covered top of Mount Mauna Kea on the island of Hawaii.

Colors are usually passed in a change-of-command ceremony but, here, Maj. V. E. Taber (right) passes the wrench of authority to Maj. C. S. Crow, new AMO for VMFAT-101. The passing of the wrench is a tradition at the Yuma-based squadron.

The *Golden Eagles* of VP-9, Moffett Field, recently provided a brief introduction to patrol aviation to a group of NROTC students from Berkeley. Accompanying the group was NROTC instructor LCdr. Paul Hodson, a former P-3A pilot, who commented on the ROTC aviation-fam program. He said, "ROTC students get little exposure to the aviation communities due to their summer cruise requirements being primarily staff or shipboard. Annual tours to Moffett Field give participating midshipmen a feel for the flying Navy." During a two-hour orientation flight, the students were exposed to low-level photography, simulated ASW prosecution and weapons drops.

A visit to *Constellation* by 14 officers of the Japanese Maritime Self-Defense Force gave VAW-126 its second opportunity to demonstrate the E-2C *Hawkeye* to the Japanese. While the squadron was deployed to WestPac in 1977, it hosted MGen. Hiroshi Teshima and other high-ranking members of the Japanese equivalent to the USAF. During the recent visit, VAW-126 hosted Japanese naval officers, led by Cdr. Yujiro Koga, who were on board to receive an indoctrination brief by squadron ops officer, LCdr. Rick Ricci, and to view the E-2C. VAW-126 is home-based at Norfolk.

The winning entries for the "Name the T-44" contest were announced by TraWing-4, Corpus Christi. The winning name, *Pegasus,* was submitted by Lt. Dave Davis, ground electronics officer. *Pioneer* was suggested by Leonard Wilson, retired Army master sergeant and night-time fire fighter at Cabaniss Field. *Pegasus* will be submitted to NavAirSysCom for final approval. Both the winner and runner-up of the contest will be eligible to participate in a training flight in a T-44.

On December 4, 1978, at the Naval Aviation Schools Command, Pensacola, ADRAN Judith A. Azin became the first female to successfully complete the naval aircrewman candidate training curriculum. The five-week course was established in September to provide prospective enlisted aircrewmen with the same demanding survival training previously provided only to officers. Hospital corpsmen, photographer's mates and communications technicians are also eligible to take the course. Instruction in aviation physiology, survival swimming and land-and-sea-survival techniques is provided, with heavy emphasis on individual physical fitness. Azin feels the training she received was worthwhile. In her words, "People involved in aviation need to know what they can and cannot do, both physically and mentally, during times of stress. If I ever find myself in a stressful situation in the future, I now know that I have the capability to handle it a lot better than I could have before I received this training. The five weeks were hard, but they were worth it to me because I accomplished something difficult, and just doing that is reward enough!"

Reunion

A reunion of officers of VMA-214 *Black Sheep* (formerly VMF-214) will be held June 16 at Newport Beach, Calif. For further information write Major Bob Hensley, VMA-214, MCAS El Toro, Calif. 92709 or call 714-559-2739, autovon 952-2739.

A scene from NAS Glenview, winter 1978-79. Do you suppose they got it cleared in time for a spring air show?

Change of Command

CVW-9: Cdr. Melvin D. Munsinger relieved Capt. Bobby C. Lee.

HT-18: Cdr. Gary L. Kochert relieved Cdr. David D. Cameron, Jr.

VA-87: Cdr. Lewis Dunton III relieved Cdr. Donald Gerrish.

VAQ-132: Cdr. Douglas W. Cook relieved Cdr. John F. Smith.

VC-12: Cdr. O. Brooks Pollock relieved Cdr. James L. Karg.

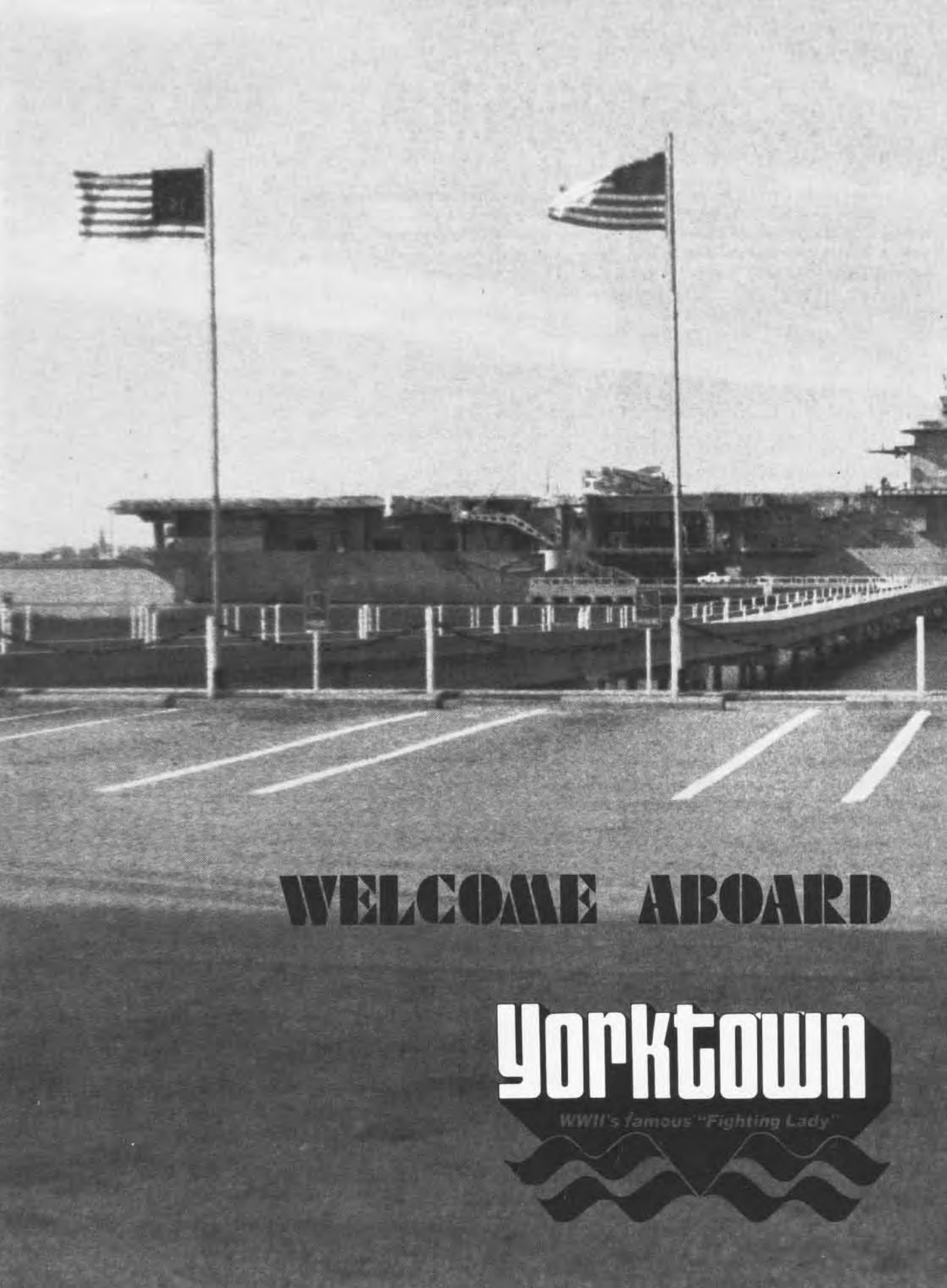
VF-2: Cdr. W. Ralph Mullins II relieved Cdr. Clifford I. Martin.

VP-8: Cdr. Thomas F. Hall relieved Cdr. Earl R. Riffle.

VP-31: Cdr. John Siembieda relieved Cdr. Harold L. Midtvedt.

VP-47: Cdr. Robert L. Testwuide, Jr., relieved Cdr. Daniel J. Denike, Jr.

VP-48: Cdr. Duval S. Woodford relieved Cdr. William T. Boyd III.


WELCOME ABOARD
Yorktown
WWII's famous "Fighting Lady"

Compiled by Clarke Van Vleet

She heard a thousand sounds and voices — the drone of ship's propellers, the clang to general quarters, the staccato of ack-ack, the scramble of pilots' feet, the shouts of sweating sailors, the creak of ordnance rolling along the deck, the roar of racing engines, the braying of the bullhorn, and the bells — bells, bells, bells — keeping time, time, time.

Today she floats silent — a lady in waiting — waiting for the visitors who amble through her gangways, catwalks, hatches, living quarters, battle stations and multiple decks. They actually see, physically touch and emotionally feel the fiber of the Fighting Lady, USS Yorktown (CV-10), who fought her way through WW II to Tokyo Bay. Let's take a tour of this gallant ship.

Charles Coone

Tour Route

1 Mine warfare display — mines used by the Navy, dating back to the Civil War.
2 Fantail or stern.

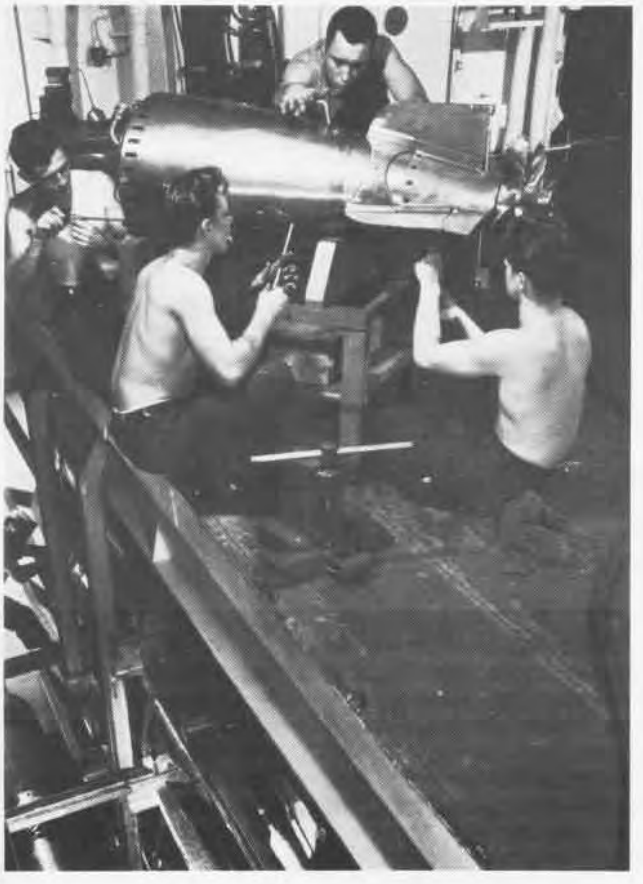
Below Deck

3 Chief petty officers' mess, lounge and galley. (Chiefs are the ship's senior enlisted men.)
4 A typical crew's berthing area.
5 A typical crew's washroom.
6 Chapel area and lounge.
7 Freedom Shrine, donated by Exchange Club of Mount Pleasant, S.C.
8 Torpedo elevator.
9 Torpedo workshop.
10 Damage control equipment display.

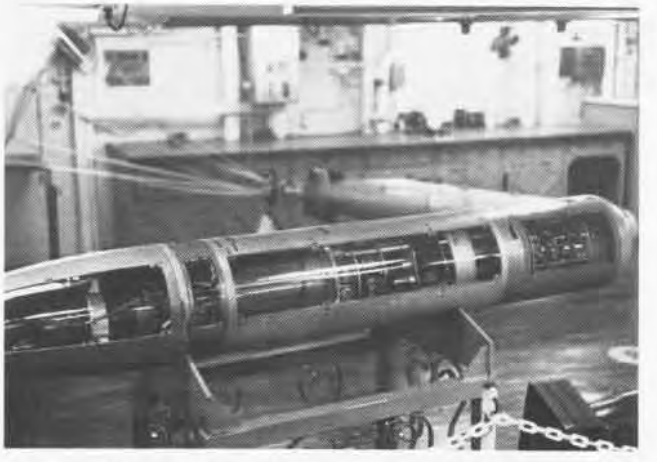
You come aboard on the hangar deck where aircraft on display range from WW II Avenger torpedo bombers and a Hellcat fighter to the Navy's 1,000-mile-per-hour F-8 Crusader jet. During fighting days, planes were prepped here for action.

Below decks tour takes in tour station 4 where row on row of neat empty bunks, below, once berthed the men of Fighting Lady.

Fantail (tour station 2) had AA guns during active days; now provides visitors with a view of Charleston.



Those who tour the flight deck first, visualize the takeoffs and landings of combat planes during WW II, above left.



Ghosts of the torpedomen linger at stops 8 and 9. Today, cutaway model shows inner works of torpedo.

11 Sick bay or hospital
12 Laundry, one of several aboard.
13 Garbage grinding room.
14 U.S. Marine Corps living compartment.
15 Typical office, one of several aboard.
16 Tailor shop, one of several on board.
17 Tailhook Association of the USA Room.
18 USS *Saratoga* (CV-3) Room.
19 First sergeant of Marine's room.
20 Electronic data processing and computers.
21 S.C. American Legion Room (open soon).
22 S.C. AmVets Room (open soon).
23 Officers' stateroom – double occupancy.
24 Air officer's stateroom. Desk and bookshelves have been removed to provide for tour.
25 The Chairman's Room – A memorial to the late L. Mendel Rivers, Chairman of the House Armed Services Committee. Artifacts provided by his family and friends.
26 Pilots' ready room, one of six on board.
27 Officers' wardroom, lounge and pantry. Mementos and displays provided by the Yorktown Association.

Third Deck

3-1 Scullery – dishwashers.
3-2 Crew's mess (or dining) area. Also used for bomb assembly.
3-3 IJNS *Yamato* model (largest battleship ever built).
3-4 Dental facilities.
3-5 Vegetable and potato preparation room.
3-6 Butcher shop.
3-7 Main ship's galley (kitchen).
3-8 Machine shop.
3-9 Cobbler shop.
3-10 Electrical shop – displays.
3-11 Emergency battle dressing station (first aid).
3-12 Cafeteria line and serving tray display.
3-13 Bakery.
3-14 Crew's dining area.

At station 26 today, ready room chairs stand mute, showing the wear and tear of combat fatigue. You can sit in one and visualize the pilots being briefed. They were among the first to hit Tokyo, in February 1945. VF-88 was in it to the end, losing Lieutenants Harrison and Sahloff and Ensigns Hobbs and Mandeberg in the very last air battle of the war. The unit's historian at the time wrote, "The end of the war brought little jubilation among the pilots. The news was accepted quietly."

Tour stop 3-2 served over 30 million meals to some 60 thousand sailors during Yorktown's 25 years of service.

Tourists who follow the arrows to topside, come out at 0-1, the flight deck which saw plenty of action and heard plenty of ack-ack. During the carrier's career as an attack and anti-submarine flattop through WW II to Vietnam, many different types of planes flew from her flight deck.

At stop 3-11, emergency scenes, such as the one at left, occurred when CV-10 took a direct enemy hit on March 18, 1945. The bomb smashed through to explode near the second deck, killing three men and ripping 12-square-foot and 19-square-foot holes in the side of the ship.

Bridge

0-3 Captain's tactical plotting rooms.
0-4 Wheelhouse – main control of ship.
0-5 Captain's sea cabin.
0-6 Conning station for bringing ship alongside pier or another ship.
0-7 Ship's bridge – normal station for captain when ship is underway.
0-8 Flag bridge – utilized by admiral.
0-9 Flag tactical plot.
0-10 Radar transmitter room.

Toward the end of the tour, you return to the hangar deck where there is a modern gift shop and, at one end, a 240-seat theater showing the documentary "Fighting Lady." It was filmed during actual combat and features pilot "Smokey" Stover who was subsequently lost, in February 1944.

0-9, flag tactical plot, as it was during active operation.

They, Too, Trod Her Decks

Gift shop

Eleanor Roosevelt christened her,
"Jocko" Clark first commanded her,
"Smokey" Stover helped immortalize her,
Marc Mitscher directed his task force from her, and
Apollo 8 Astronauts Frank Borman, William Anders and
James Lovell were retrieved by her.

Bridging the past . . . from active flattop at Golden Gate in San Francisco . . . to floating museum at Copper River in Charleston

Patriots Point

USS *Yorktown* is the only ship of her type in the world ever made accessible to the public on a regular basis as a designated museum.

As the largest ships in the Navy, aircraft carriers require a mind-boggling amount of work to preserve and make them presentable to the public. Such tasks require dedicated people to continually battle against the elements, doing almost constant chipping and painting.

The State of South Carolina has taken an unusual approach to operating the museum. The legislature established the Patriots Point Development Authority to plan, develop and operate the facility on Charleston Harbor. The Authority chose a blend of public and private enterprise sectors to build and support the museum. *Yorktown* is the first stage of this development.

Obtained from the Navy in 1975, the *Fighting Lady* arrived in Charleston on June 15 of that year. On October 13, 1975, the 200th birthday of the Navy, the ship was dedicated as the foundation of the Naval and Maritime Museum. On January 3, 1976, the first visitors of America's Bicentennial year boarded the ship. More than 700,000 people from all 50 states and more than 20 foreign countries have been aboard since.

Plans are under way for the next phase of the development. Approximately 450 acres of land adjacent to *Yorktown's* berth were obtained and plans prepared for the support facilities which will make Patriots Point an even better attraction.

Construction of a motor inn, recreational vehicle campground and marina on the site are anticipated. An 18-hole public golf course is under construction and is expected to open in 1980. The proceeds from these enterprises, those operated by the Authority and those leased to private developers, would be used to improve the museum, acquire additional artifacts and eventually make the museum self-sustaining. It is expected that the majority of this phase will get under way during 1979 and be operational in 1980.

Other ideas include adding to the collection of ships at Patriots Point. Already obtained by the museum are the ex-USS *Laffey* (DD-724), a destroyer which underwent one of the most severe kamikaze attacks of WW II, and *W. T. Coppedge III,* a civilian tugboat built in the early 1900s. Both ships are currently being stored in Charleston while pier facilities for them at Patriots Point are constructed. Plans are being finalized for acquisition of the world's first nuclear merchant ship, *Savannah.* The Authority expects to use *Savannah* as the main display area of the nation's civilian maritime heritage.

Acquisition of a submarine and other ships is in the works along with possible construction of an oceanarium, an aquatic theatre and an outdoor amphitheatre.

By Paul W. Lohnes

How to Acquire a Carrier

The Navy restricts the use of donated vessels to static display only, such as memorials or museums.

Each application shall contain the following information:

(a) Type of vessel desired:

(b) Statement of the proposed use to be made of the vessel and where it will be located:

(c) Statement describing and confirming availability of an appropriate berthing site and the facilities and personnel available for use in maintenance of the vessel:

(d) Statement that the applicant agrees to maintain the vessel, at its own expense, in a condition satisfactory to the Department of the Navy, in accordance with instructions which the Department may issue, and that no expense shall result to the United States as a consequence of transfer or as a consequence of such terms and conditions prescribed by the Department of the Navy:

(e) Statement that the applicant agrees to take delivery of the vessel "as is, where is" at its berthing site and to pay all charges incident to such delivery:

(f) Statement of financial resources currently available to the applicant to pay the costs required to be assumed by a donee in the event a vessel is donated:

(g) Statement that the applicant agrees that it will return the vessel, if and when requested to do so by the Department of the Navy, during a national emergency, and will not, without the written consent of the Department, use the vessel other than as stated in the application or destroy, transfer or otherwise dispose of the vessel:

Applications should be submitted to Mr. S. C. Yednock, Naval Sea Systems Command, SEA OODG, Washington, D. C. 20362.

(h) If the applicant asserts that it is a corporation or association whose charter or articles of agreement denies it the right to operate for profit, a properly authenticated copy of the charter, certificate of incorporation, or articles of agreement made either by the Secretary of State or other appropriate officials of the state under the laws of which the applicant is incorporated or organized or other appropriate public official having custody of such charter, certificate or articles; and a copy of the organization's by-laws; and, if the applicant is not incorporated, the citation of the law and a certified copy of the association's charter under which it is empowered to hold property and to be bound by the acts of the proposed signatories to the donation agreement:

(i) If the applicant is not a state, territory or possession of the United States, a political subdivision or municipal corporation thereof, or the District of Columbia, a photostatic copy of a determination by the Internal Revenue Service that the applicant is exempt from tax under the Internal Revenue Code:

(j) A notarized copy of the resolution or other action of its governing board or membership authorizing the person signing the application to represent the organization and to sign on its behalf for the purpose of acquiring a vessel:

(k) Assurance of compliance with Title VI of the Civil Rights Act of 1964 (Act of July 2, 1964 – Public Law 88-352). All four copies of Form NAVSO5350/1 (11-71) must be signed and returned. The Explanation of the Form should be retained for future reference:

(l) Statement that the vessel will be used as a static display only for use as a memorial or museum and that if acquired for such purposes (donee) will not activate or permit to be activated any system aboard the vessel for the purpose of navigation or movement under its own power:

(m) Statement that the galley will not be activated for the purpose of serving meals.

Upon receipt, the Navy will determine the eligibility of the applicant to receive a vessel by donation.

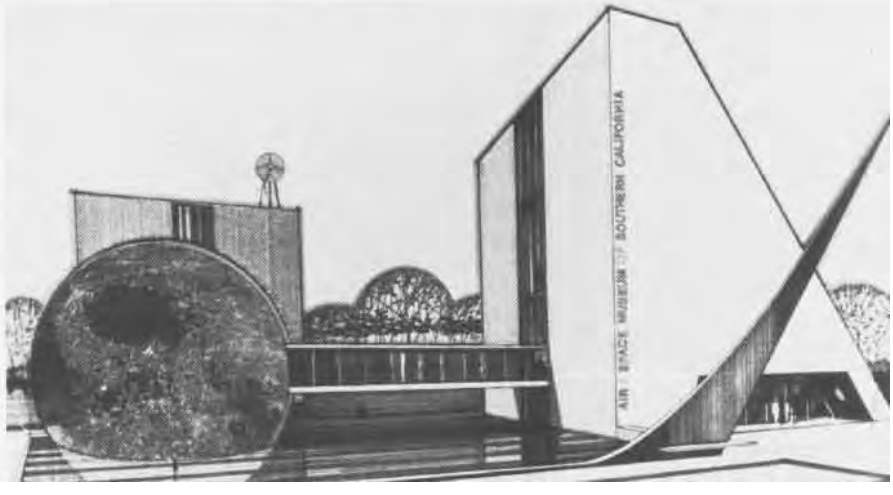
Speaking of Museums...

Drive is under way to establish USS Intrepid in New York City. Unveiling plan at Big Apple's World Trade Center are ex-Bearcat pilot James Ean, now president of Intrepid Memorial Foundation, naval historian Larry Sowinski and actress Maureen ("Wings of Eagles") O'Hara. Widow of RAF Spitfire ace Charles Blair, red-haired O'Hara now directs Antilles Air Boats operations in the Caribbean.

Intrepid

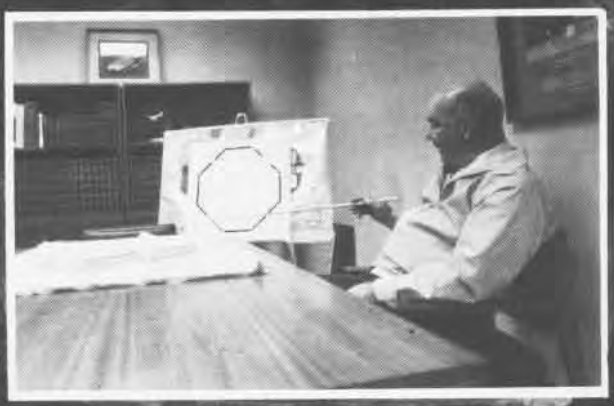
Hornet

West Coast proposal for Air and Space Museum complex in Los Angeles area may include USS Hornet. Spearheading effort is exhibits design team which produced Naval Aviation Museum in Pensacola and the Sea/Air Operations Hall in the National Air and Space Museum in Washington, D. C.



Phase Two at Pensacola

The Naval Aviation Museum at Pensacola is undergoing growing pains. The 63,000-square-foot structure is literally bulging at the seams as the port and starboard bulkheads are moved outward to gain another 37,500 square feet. Lined portions in center of photo indicate expansion areas which will accommodate more exhibits such as a Naval Aviation Hall of Fame and a jet engine display. Since the museum's opening in 1975, over 800,000 visitors have viewed this modern and informative gallery with its 72 vintage aircraft and its bulkheads embossed with the history of Naval Aviation as composed by Historian Clarke Van Vleet. Museum Director is Grover Walker (insert).



In May 1919 the Navy's NC-4 and crew were first to fly the Atlantic. NANews salutes the 60th anniversary of this epic, 20-day journey. At left is Walter Hinton, sole surviving crew member. Pictured in other view, from left, Lt. Elmer Stone, Chief Special Mechanic Eugene Rhoads, Ltjg. Hinton, Ens. Herbert Rodd, Lt. James Breese and C.O., LCdr. Albert Read.


NORTH SEA
PLYMOUTH
FRUIT
COFFEE
OCEAN ICE
BAY OF BISCAY
AZORES DUCKLING
NC4
LISBON
COLD DISH
PONTA DELGADA
LAMB
MEDITERRANEAN
AFRICA
N
W
E
S
Drawn at New York
FOR
Ye Goode Voyage
of July 10th 1919
from Commodore Wharf
Glenn H. Curtiss, Commdr

naval aviation news

May 1979, 60th Anniversary of the First Flight Across the Atlantic