

NAVAL AVIATION

NEWS

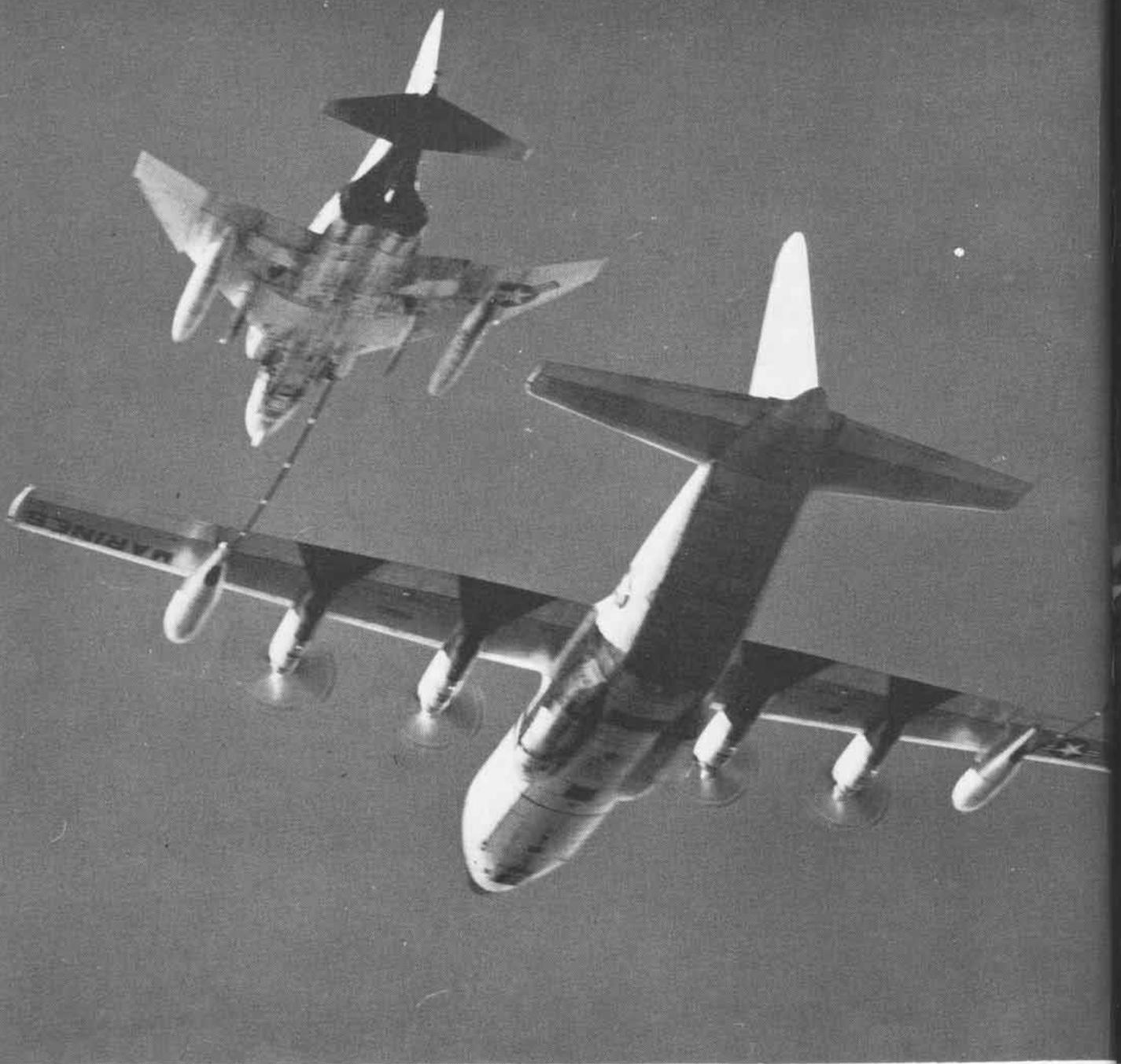


49th Year of Publication

FEBRUARY 1968

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CHOW-DOWN

The big propjet Lockheed Hercules in front of the two F-4B Phantom II's is a Marine KC-130F aerial refueler at 20,000 feet altitude near the Marine Corps Air Station, Cherry Point, N. C. It is used by the Marines and the Navy in this country and overseas, including Southeast Asia. Long-range, airborne tanker-refuelers enable Marine and Navy jet aircraft to fly the Atlantic and the Pacific to reach quickly any overseas trouble spot.

NAVAL AVIATION NEWS

Vice Admiral Thomas F. Connolly
Deputy Chief of Naval Operations (Air)

Rear Admiral David C. Richardson
Assistant Deputy Chief of Naval Operations (Air)

Captain Paul Jayson
Head, Aviation Periodicals and History Office

■ FEATURES

- Looking Back 6** *The year 1967 passes in review with the annual chronology of events during the year important to Naval Aviation.*
- What's in a Name? 12** *How the code names of aircraft in WW II came into use is recounted by a member of the Royal Observer Corps.*
- Painting the Picture 14** *Something of the scope of combat art in terms of the Naval Aviation scene is displayed.*
- A Hero's Story 17** *NANews' newest feature, "Above and Beyond," this month graphically portrays the courage (some call it "guts") of Ltjg. Dennis Earl.*
- The Eyes of the Beholder 20** *Beauty is where you find it; witness some excellent photography aboard a carrier by JO3 Jack Reeves.*
- In One Package 26** *Use of an escape module for high-speed aircraft emergencies is demonstrated.*

■ THE STAFF

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■ COVERS

'A picture with impact' is what PH1 F. L. Blair succeeded in 'shooting' as he caught USS Oriskany (CVA-34), with Air Wing 16 embarked, preparing for an air strike from Yankee Station in the Gulf of Tonkin . . . Back cover photograph of a P-2 was taken at NARTU Norfolk by PH3 J. W. Kelley.

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NAVAL AVIATION NEWS

Intruder Squadron Returns VA-196 Completes Vietnam Tour

The first A-6A Intruder squadron to deploy from NAS WHIDBEY ISLAND, VA-196, returned there recently from a seven-month tour in Vietnam.

One of five ordnance-delivering squadrons aboard USS *Constellation* (CVA-64), VA-196 expended 11,788,957 pounds of ordnance, claiming a record for Pacific Fleet squadrons that have served in Vietnam. The record was accomplished while operating with only nine planes as opposed to 10 or 12 for other squadrons of the same type.

Commander Edward C. Bauer, VA-196 C.O., said that the squadron flew 1,161 combat missions—almost 100 flights for each crew member.

The A-6A carries all-weather bombing equipment, three radars, a digital computer, system and several other major sub-systems.

New 'Fire Fly' is Tested Light Water Used on Helicopters

The Naval Air Development Center, Johnsville, Pa., together with MCAS CHERRY POINT, recently conducted the final tests of the most recent technique for fighting fires at the North Carolina station.

The new fire extinguishing unit, designed for installation on the UH-2B "Fire Fly," weighs approximately 550 pounds. The tanks and nozzle system may be mounted or removed from the aircraft's racks and shackles in less than 30 minutes. The tanks contain approximately 50 gallons of Light Water foaming agent (NANEWS, January 1967, p. 16) which is dispensed at the rate of 50 gallons per minute from a boom nozzle using



UH-2B 'FIRE FLY' PUTS OUT A FIRE SPEEDILY

a 3,000 psi nitrogen tank container. With the helo, a fire covering 1,500 square feet can be put out in a little over a minute.

Capt. William W. Crews piloted the UH-2B through the series of 25 test flights. Capt. Richard Carramano and SSgt. A. F. Atline were copilot and crew chief, respectively. All are Cherry Point Marines.

Mr. Walt Miller, engineering technician, NADC JOHNNSVILLE, is the designer of the air system and tanks.

Flight Records in the C-130 Marine Airmen Note a Milestone

Two Marines have reached C-130 Hercules flight time milestones—5,000 hours in the air or more than 1½ million miles. They are Maj. Howard Chapin, a pilot, and GySgt. R. L. Ott, a flight engineer.

Maj. Chapin of VMGR-152, MCAF FUTEMA, Okinawa, was the first Marine to reach the magic figure. He completed his 5,000th hour of pilot flight time in a KC-130F tanker aircraft en route from Futema to Cubi Point, R. P.

Maj. Chapin is now assigned to MCAS CHERRY POINT, N. C. In 1962, he became one of two pilots to fly over

the North and South Poles in the same year. Before leaving Futema, Maj. Chapin was presented with a certificate, plaque and pin in honor of his 5,000-hour achievement.

Sgt. Ott, a flight engineer with VMGR-252, Cherry Point, logged his 5,000th hour in the C-130 while flying over the Grand Canyon on a flight from Yuma, Ariz., to Cherry Point. He has served in KC-130's since the Marine Corps first phased the aircraft into the air wing. He has participated in a number of firsts: first aerial refueling for a non-stop flight of fighters across the Pacific, the first tactical night refueling in the Marine Corps and the first aerial refueling over Southeast Asia by a Marine outfit.

A veteran of both the Korean and Vietnamese conflicts, Sgt. Ott has over 2,000 hours in air support missions over Southeast Asia.

Pilot Stress Being Studied Navy and NASA Conduct Project

The Naval Aerospace Medical Institute and Training Squadron Four, NAS PENSACOLA, Fla., are cooperating with NASA in a biomedical monitoring project aimed at documenting the normal total physical reaction of the body to the physical and non-physical stresses placed upon it in flight.

The project is an extension of a NASA study in which astronauts, test pilots and pilots in combat have been studied. Pilots monitored carry the bio-data package developed by NASA and used in Vietnam by pilots of *Constellation* (NANEWS, Apr. 1967, p. 15).

It has been determined that pilots are subject to greater total physiological stresses during launch and recovery than while actually on a combat mission. NASA and several

military aeromedical organizations would like to know why. Once norms have been established, it is hoped that potential hazardous areas in certain aviators will be evident sooner and perhaps keep the aviators within the limits of their physiological endurance.

VT-4 flight students making their first carrier landings, experienced instructors making carrier landings, and landing signal officers will be monitored. Data to be gathered include electrocardiograms, respiratory rate and volume, and G loading imposed. A new spray-on electrode is applied to the body and wired into a pocket-sized seven-channel tape recorder. The pilot's voice will also be recorded and used to create a flight profile relative to the biodata events.

Dr. Charles E. Lewis, Jr., Chief of the biomedical programs at NASA's flight research center, Edwards AFB, Calif., and Commander Bill Winter of the Naval Aerospace Medical Institute head the program.

Training Squadron Award

VT-31 Wins CNAVAnTra Plaque

Rear Admiral T. A. Macpherson, Chief of Naval Air Advanced Training Command, recently presented the CNAVAnTra Award for fiscal year 1967 to Training Squadron 31, stationed at NAS CORPUS CHRISTI. VT-31's C.O. is Cdr. A. L. Moberly.

From July 1966 through June 1967, VT-31 amassed a statistical safety record of 32,584 hours, made 2,224 carrier arrested landings, 77,308 day landings and 11,049 night landings, all without accident.

A total of 215 flight students was graduated from VT-31. At the Command Inspection held March 6-10, 1967, VT-31 achieved an over-all grade of *high excellent* and the personnel inspection was *outstanding*.



PRINCIPALS AT THE AWARD CEREMONY

FEBRUARY 1968



HONOR MAN of his class, Ltjg. Alan M. Roodhouse received his certificate from the new Naval School of Aeronautical Sciences, Pensacola, from Rear Admiral Dick H. Gunn, Chief of Naval Air Basic Training, during ceremonies last December. Ltjg. Roodhouse is an Academy graduate, Class of '66.

Early Navy Pilots Listed

Volume Gives Biographical Data

A labor of love five years in the doing has been accomplished by LCdr. Reginald (Jack) Arthur, USNR (Ret.), with the publication of *Contact*, a register and directory of Naval Aviators.

The first Naval Aviators, numbering 1 to 2,000, are listed with biographical data, age, current address, rank, service, civilian employment, and, in many cases, a comment by the aviator on his Navy experience is included.

To collect the biographical material that appears for these pilots has been a terrific undertaking. Fortunately, LCdr. Arthur, Naval Aviator 1,501, undaunted by the obstacles that faced him, undertook the collection of this material from the individuals concerned and from official sources not generally available to the public. The result is information never before presented in a single volume.

In addition to the records of the first 2,000 Naval Aviators, there are data on a number of men who qualified in the same period but were never assigned a Naval Aviator number and a list of those with numbers between 2,001 and 3,000.

Pictures of Naval Aviators and outstanding exploits of Naval Air along with a chronology, 1911 to 1968, make the record an invaluable one for those interested in the story of the U.S. Navy's contribution to air/sea-power.

The 612-page volume is being published by the Naval Aviator Register, 2500 Wisconsin Ave., N.W., Washington, D.C., and is now available.

VX-6 Flies Rescue Mission

Injured British Doctor Evacuated

A VX-6 ski-equipped *Hercules*, piloted by the squadron skipper, Commander Fred Schneider, recently flew to Halley Bay Station, Antarctica, to air-evac an injured English doctor. Dr. John Brotherhood suffered a broken jaw and spinal injuries while on a field trip about five miles from the British outpost.

The 1,500-mile rescue flight, made in December, originated at McMurdo Station, spanned the Antarctic continent twice and then flew the doctor to Christchurch, N.Z. A second aircraft, flying 400 miles behind, acted as a communication link.

Personnel at Halley Bay sprinkled cocoa on the snow to mark the landing site. It was the first time in ten years that an aircraft had landed in that part of Antarctica.

Transatlantic Flight to Med

Four Pilots Fly in A-4 Skyhawks

Four pilots from VA-81 rejoined their squadron aboard the USS *Shangri La* (CVA-38) in the Med by flying across the Atlantic Ocean, the first flight of its kind for the squadron.

The pilots—LCdrs. Ken Russell and Richard McClary, Ltjgs. Robert Hope and Terry Ede—all flying A-4C's, stopped briefly at Bermuda, flew to the Azores for another refueling stop and then to Rota, Spain. An additional leg was flown to Sigonella, Sicily, before meeting *Shangri La*.

On two of the legs, Bermuda to Azores and Azores to Rota, the A-4C's were refueled in flight from C-130's. No maintenance trouble was encountered throughout the flight which averaged 14 hours per aircraft.

Upon reaching *Shangri La*, the aircraft flew carrier missions the same day.



PILOTS HOPE, RUSSELL, McCLARY, EDE



GRAMPAW PETTIBONE

Fam Folly

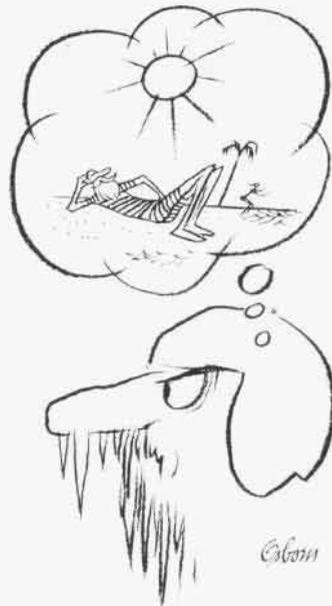
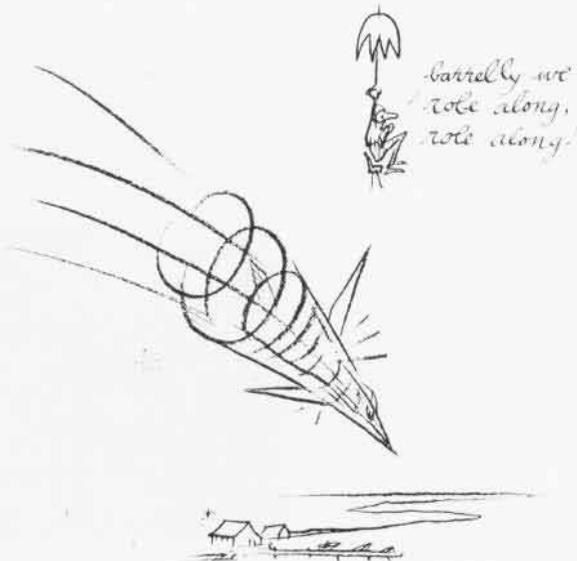
The replacement pilot (RP) was briefed at 0730 for his second fam flight in the RA-5C *Vigilante* with a scheduled 0900 launch. Takeoff was delayed, however, until 1335, owing to aircraft availability.

Once the RP was airborne, he was joined by his instructor (chase) pilot and the flight climbed to 12,000 feet where the instructor assumed the lead. When they had completed 20 minutes of formation flying, the instructor passed the lead to the RP for the acrobatic portion of the flight. Fuel on board was 14,000 pounds: and the flight was level at 14,000 feet.

After completing several wing-overs, the RP executed a few aileron rolls. Entry airspeed used for the rolls was 350 knots. The RP felt that the rate of roll was not as rapid as he expected, but, as this was only his second flight in the A-5 and his first attempt to roll the *Vigilante*, he thought this one of its characteristics.

The next maneuver, a barrel roll, was commenced at 450 knots, 14,000 feet, and power set at military. The maneuver appeared normal until the aircraft passed inverted through the horizon, wings level. The RP, sensing

that the nose was dropping too fast, attempted to increase the rate of roll to prevent scooping out. The aircraft did not respond to increased lateral stick movement and the nose continued to drop to a 60° nose-down attitude. At this point the pilot experienced uncontrollable nose oscilla-



tions and retarded power to idle and extended speed brakes. The instructor became extremely concerned and called for the RP to "pull out."

At about 6,000 feet the *Vigilante* appeared to regain controlled flight. The driver advanced the throttles, but did not observe any response in power. Thinking that the engines had flamed out, he extended the ram air turbine, checked the throttles at idle, and depressed the emergency igniters. Noting the airspeed to be in the vicinity of 200 knots and the ground awfully close, he forgot about the re-light and reached for the alternate ejection knob.

Ejection occurred at approximately 300 feet. It was routine in all respects, depositing the pilot in an inland waterway about 100 yards from a fishing camp. The fishermen plucked the uninjured downed aviator out of the water in a matter of minutes.



Grampaw Pettibone says:

Great gobs of goose grease! This fella would'a been a lot more prosperous if availability on this particular day had never gotten any better.

There ain't no use to insult the reader's intelligence with a discourse on NATOPS violations and cardinal rules of safety, but it really gets me when a seasoned aviator can't tell what his power plants are doing.

It came as a mighty big jolt to learn that this lad had no "inflight training involving acrobatics per se" in the past ten years. The only thing this mishap proves is that the *Vigilante* seat made up for this pilot's deficiency by saving him from himself.

Needlessly

The sun wasn't scheduled to appear for another hour and the morning was very dark as the F-8 passed over the shuttle on the starboard catapult. The *Crusader* jockey advanced the throttle as the tension signal was given and noted the engine turned up to 100%.

After a thorough check of his instruments and trim settings, he turned on his external lights signifying he was ready to go. Thirty seconds passed

ILLUSTRATED BY *Estom*

and he began to wonder why he had not been launched. (It usually takes about five seconds.) The perplexed driver was unable to discern any external lights on his port side. Thinking the absence of the port wing light would indicate he was not ready to go, he reached to the right console to reset the light switches. At this instant, while his left hand was off the throttle, the catapult fired.

The acceleration pinned his left hand to his chest and forced the throttle aft to the idle position. By the time he was able to reach the throttle and force it forward, the F-8 was airborne with insufficient power for flight.

The *Crusader's* wheels struck the water one-quarter mile ahead of the ship and the aircraft ditched in a wings-level, nose-up attitude. The pilot experienced a tremendous deceleration force and the plane assumed a port-wing-low, nose-down attitude.

With the stark realization that his aircraft was sinking, the pilot positioned himself in the seat and ejected by utilizing the face curtain. (The F-8 at this time was submerged.) The hapless aviator felt a moderate push and was suddenly free of the aircraft, but still underwater. The seat fell away and he inflated his Mk. 3C life vest. At this point he was inverted and being pulled down by the parachute which seemed to be still attached to the aircraft. Using both hands on each Koch fitting, he released the chute and rose to the surface.

The happy and extremely fortunate aviator was plucked from the water by the helo and returned to the flight deck within ten minutes of his mishap.



Grampaw Pettibone says:

Sufferin' succotash! Once those external lights are turned on for the eat officer, taking your hand off the throttle makes about as much sense as trying to shut the startin' gate after the horses have moved out.

Ole Gramps is first to admit that this type of interlude gets the adrenaline pumpin' at max capacity, but in deference to longevity, I'd be the first one to sit there till the tanks ran dry before taking my hand off the go-handle. It doesn't speed up operations to suspend the cat, but this fella could've saved himself a heap of inconvenience (and an F-8) by just telling Pri Fly of his predicament without relaxin' his grip on the throttle.



Tail Thumper

Two jubilant *Crusader* drivers with an approved RO2N in their pocket were airborne on the first leg of their trip at 1615 Friday evening. They reached their first destination after an uneventful flight.

The twosome arose early the next morning and proceeded to their next stop in a purely routine manner. While their aircraft were serviced, the pilots had a bite to eat. They briefed for a section takeoff on the next flight and manned their respective aircraft.

Each pilot had one wet start, then started normally. The drivers performed their own post-start checks without benefit of plane captains, completed their takeoff check lists in the chocks and taxied for takeoff.

They positioned themselves on the runway for a section takeoff, leader to port and wingman to starboard. Engine run-ups were normal and, after giving and receiving "thumbs up," the leader dropped his right arm, as briefed. They released the brakes and commenced the takeoff roll. Both aircraft went to burner on signal and shortly thereafter, the wingman, noting he was becoming acute, made a small power correction. As they accelerated, the leader pulled ahead and noting the separation called for individual takeoffs.

The wingman noted he was slightly late on nose rotation and commenced at 135 knots. He became airborne and raised the gear. At 175 knots and about 50 feet above the ground, he lowered the wing. The initial transi-

tion was normal, but then the aircraft began to settle. As he rotated the nose higher, the wingman felt that he experienced a partial power loss. The F-8 continued to settle and the aft end of the fuselage touched the runway.

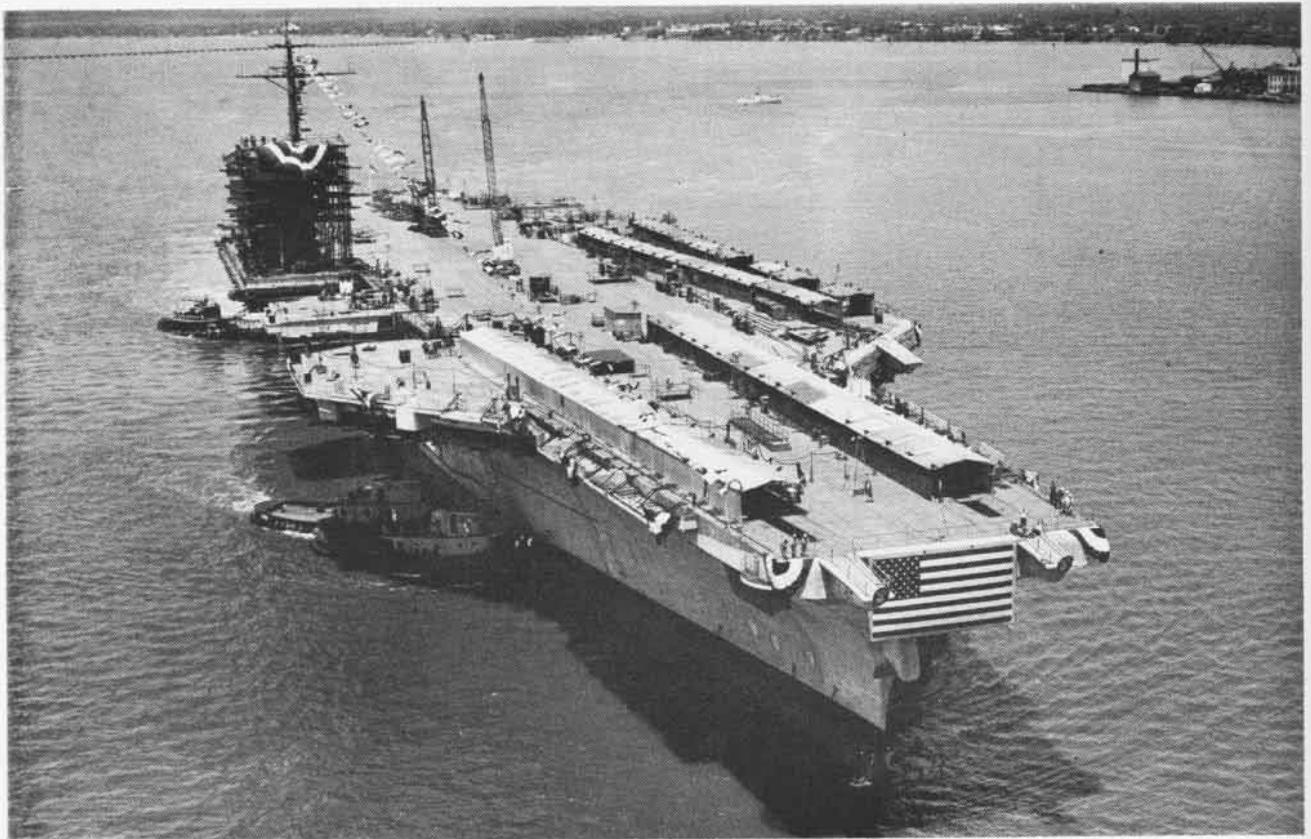
The port wing began dragging on the runway at the 6,000-foot marker and the plane began veering to port. At about this time the pilot managed to pull the throttle aft and secure the engine master switch. The F-8 continued to swerve to port, crossing the runway centerline just past the 7,000-foot marker and departed the 14,000-foot runway at about 8,000 feet. The starboard wing began dragging at 8,500 feet and caused the *Crusader* to veer back towards the runway. At 9,000 feet, the nose contacted the ground and the bird slid back onto the runway at 9,300 feet. At this point, the entire wing structure separated from the fuselage. The plane came to rest on its port side at 10,500 feet, engulfed in flames.

The cockpit was oriented 90 degrees from the vertical and in contact with the runway. The crash crew responded immediately, extinguishing the fire and extricating the slightly injured pilot.



Grampaw Pettibone says:

Egads, what a mess! This fella had done such a good job up until this time, too. Just goes to show what can happen when you omit one item on the check list like the droops. It is a well established fact that the 40 seconds you save in this world by omitting the check list may put you in the next world about 40 years too early.



USS JOHN F. KENNEDY (CVA-67) is shown afloat in the James River after launching ceremonies May 27, 1967, at the Newport News Ship-

building and Dry Dock Company, Virginia. The late President's daughter, Caroline, christened the ship before many distinguished guests.

THE 1967 NAVAL AVIATION REVIEW

By Adrian O. Van Wyen, Historian, DCNO (Air)

IN THE FIFTY-SIXTH Year of Naval Aviation, the aircraft inventory and the number of men in the aeronautical organization rose slightly but the number of pilots on active duty dropped a little. There was no change in the number of aviation ships in operation except for seaplane tenders which, as a result of the seaplane phase-out, had all been placed in retirement by the end of the year. One new attack carrier was launched; another authorized by Congress was in the planning stage. One new light attack aircraft began operating over Vietnam. New versions of two operational fighter-interceptors and one light attack plane were ready for deployment. An improved model of an existing utility helicopter was delivered to Fleet squadrons; a new heavy duty cargo helicopter began service in Vietnam. Navy support of the nation's space effort continued; an unmanned *Apollo* capsule launched by a *Saturn* rocket was recovered.

Operations in Southeast Asia continued to place heavy requirements on operating and supporting forces. During the year, 11 different attack carriers, four antisubmarine

carriers (one of which operated in the attack role), four amphibious assault ships and one seaplane tender served in various elements of Seventh Fleet. Several carriers completed third tours with Seventh Fleet since August 1964 when North Vietnam torpedo boats attacked U.S. ships. Men of the Air Reserve again flew transport planes on two-week active duty tours, carrying supplies and personnel across the continent and the Pacific Ocean.

Prospects of ending the war wavered between hope and skepticism as repeated attempts toward negotiation were either rejected or ignored. The nation's effort to help the people of South Vietnam form a government bore fruit as a new constitution was promulgated, local elections set up a democratic village leadership and a national election formed a representative government.

International tension and strife around the Mediterranean also drew world attention and placed new, yet old, demands on Sixth Fleet. Two attack carriers were maintained with Fleet forces in that area, five different carriers serving on scheduled tours during the year.

In the first quarter, four U.S. peace notes to North Vietnam were ignored, a fifth rejected. Proposals from the UN Secretary General were also rebuffed. A four-day cease fire marked the Vietnam lunar New Year. Red Guards spread violence in China and laid siege to the Soviet embassy in Peking as Sino-Soviet relations again neared the breaking point. Border skirmishes stirred trouble in the Middle East. Three astronauts died when fire exploded in their Apollo capsule during simulated flight exercises. Congressional ethics were headlined. Orbiter III was sent around the moon; the weather satellite ESSA IV was put into orbit and began operating.

JANUARY

13—The Naval Air Transport Wing, Pacific, operating under the Military Airlift Command, was presented the Air Force Outstanding Unit Award by General Bruce K. Holloway, Vice Chief of Staff, USAF.

26—The field at NAS ALAMEDA was dedicated and named "Nimitz Field" in honor of the late Fleet Admiral Chester W. Nimitz.

During January, VR-7 was decommissioned and MAG-56 was activated.

FEBRUARY

1—USS *Independence* (CVA-62) with CVW-7 on board returned to Norfolk after a tour in the Mediterranean.

22—USS *Franklin D. Roosevelt* (CVA-42), with CVW-1 on board, returned to Mayport after a combat tour with Seventh Fleet in the western Pacific.

23—USS *Coral Sea* (CVA-43), with CVW-2 embarked, returned to Alameda after a second combat tour with Seventh Fleet. On the way home they were informed that the Secretary of the Navy had approved a second Navy Unit Commendation for their outstanding performance in combat.

During February, VA-147 and VO-67 were commissioned; NAF CAM RANH BAY was established.

MARCH

16—USS *Constellation* (CVA-64) and her CVW-15 were awarded the Navy Unit Commendation in ceremonies at San Diego for outstanding performance in combat.

17—In ceremonies at NAS QUONSET POINT, the Navy Unit Commendation was presented to Air Development Squadron Six for outstanding achievement June 1964-March 1966—the second NUC awarded to the squadron for its support of the nation's research program in the Antarctic.

17—A *Phoenix* guided missile was launched from an F-111B interceptor in the Pacific Missile Range, demonstrating the successful integration of the basic elements of the F-111B/*Phoenix* weapon system.

29—The Chief of Naval Operations approved award of the Arnold Jay Isbell Trophy for excellence in anti-submarine warfare to VP-17, VP-48, VS-29 and HS-8 of the Pacific Fleet. Winners in the Atlantic Fleet, VP-21, VS-28 and HS-5, had been previously approved.

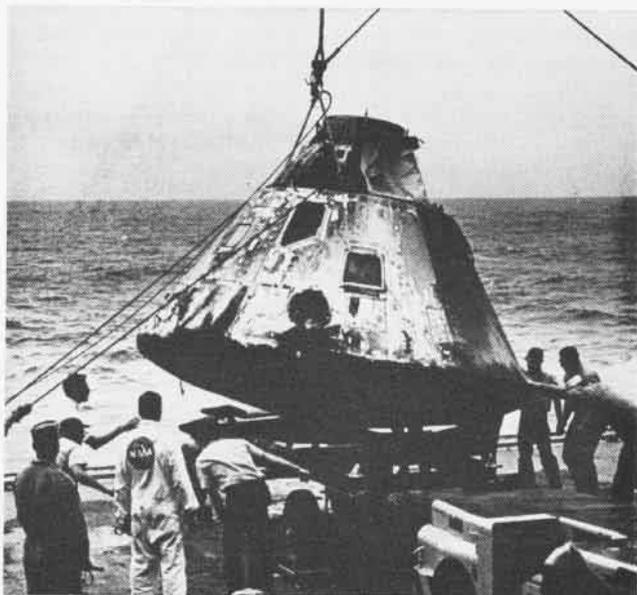
In March, VA-38 was commissioned, *Salisbury Sound* (AV-13) was decommissioned.



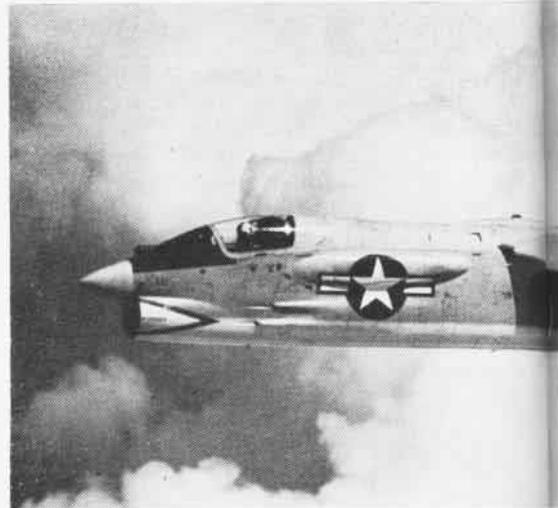
USS PRINCETON (LPH-5) won the Admiral Flatley Memorial Award for outstanding achievement in accident prevention for ships of her type.



PILOTS of USS *Bon Homme Richard* credited with one MiG each during May: Hargrave of USAF, Swartz, Speer, Wright, Shea, Lee, Wood.



APOLLO IV spacecraft is recovered by USS *Bennington* 275 miles NE of Midway Island after launch into orbit by a Saturn from Cape Kennedy.



In the second quarter, village elections were held in South Vietnam. The Middle East burst into warfare as Israel struck back at its Arab neighbors and quickly gained control over territory on its disputed borders. The army seized power in Greece; eastern Nigeria declared its independence. Hong Kong was mobbed by rioters from the mainland. At home, there were end-the-war demonstrations and other expressions of anti-war sentiment but the war went on. Mobs from the ghettos coursed the streets, looting and burning in cities across the country. Surveyor III landed on and Orbiter IV circled the moon; ESSA V went into orbit and Mariner V began the long trek toward Venus. The President conferred with Premier Kosygin in the little town of Glassboro, N.J. NATO forces completed withdrawal from France.

APRIL

1—The status of Overhaul and Repair Departments at one Marine Corps and six Navy air stations was raised to that of separate commands, each titled Naval Air Rework Facility.

8—USS *Iwo Jima* (LPH-2) with HMM-362 on board returned to San Diego after service off Vietnam.

10—Vice Admiral William I. Martin relieved Vice Admiral F. L. Ashworth as Commander Sixth Fleet and Commander Naval Striking and Support Forces, Southern Europe.

12—A wing insignie for Aviation Experimental Psychologists and Aviation Physiologists was approved. It is similar in design to Flight Surgeon Wings except that the gold oak leaf of the Medical Service Corps has replaced the leaf with acorn of the Medical Corps.

24—Seventh Fleet carrier aircraft hit the MiG base at Kep in North Vietnam for the first time and a follow-up attack at night was delivered by A-6A *Intruders* from the *Kitty Hawk*. In addition to aircraft destroyed on the ground, LCdr. Charles E. Southwick and Lt. Hugh Wisely of VF-114, flying F-4B *Phantoms*, each downed a MiG-17 in aerial combat.

In April HA(L)-3, VSF-3, AEW-11, RVAW-110, VAW's 111, 112, 113, 114, 115, 116, 121, 122, 123,

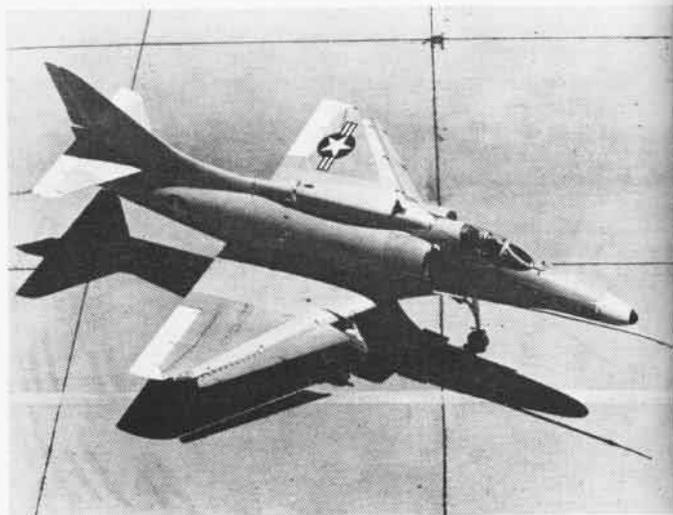
CORSAIR II, A-7A, new light attack aircraft (left, above) made complete cycle from sea trials to action over Vietnam this year. Latest Crusader, F-8H, is a rebuilt F-8D which received a new wing, landing gear, radar and other modernizations to extend service life. Sea Stallion, CH-53A, demonstrates its capacity for lifting heavy loads;

Marine Wing Support Group 37, H&MS-37 and WERS-37 were commissioned; VAW-12 was redesignated AEW-12; VAW-11, VR-22, Marine Wing Service Group-37, H&HS-37, MABS-37 and MAMS-37 were decommissioned.

MAY

1—In the second carrier air attack on Kep airfield, LCdr. M. O. Wright of VF-211, flying an F-8 *Crusader*, downed a MiG-17 with missiles and LCdr. T. R. Swartz of VA-76, flying an A-4 *Skyhawk*, downed another with rockets.

15—The Chief of Naval Operations directed that a new department titled Aircraft Intermediate Maintenance (AIMD) be established in all operating carriers except the one operating with the Naval Air Training Command. The new departments assumed the responsibilities for maintenance afloat. Formerly, these responsibilities were held





went into service with USMC units in Vietnam early this year. A-4F, newest of the Skyhawks (below), has a more powerful engine than its predecessors, steerable nose wheel and wing lift spoilers. USS Intrepid (CVS-11), which has served two tours with 7th Fleet as an attack carrier, this year won Admiral Flatley Memorial Award in that class.

by the Air Wing and Air Group commanders.

19—Two A-7A Corsair II aircraft, piloted by Commander Charles Fritz and Capt. Alec Gillespie, USMC, made a trans-Atlantic crossing from NAS PATUXENT RIVER to Evreux, France, establishing an unofficial record for long distance, non-refueled flight by light attack jet aircraft. Distance flown was 3,327 nautical miles; time of flight was seven hours and one minute.

19—While covering a carrier air attack on the thermal power plant in Hanoi, Commander P. H. Speer and Ltjg. J. M. Shea of VF-211 and LCdr. Bob C. Lee and Lt. P. R. Wood of VF-24 each shot down MiG-17's with air-to-air missiles. All pilots were flying F-8 Crusaders from USS Bon Homme Richard.

20—USS Shangri-La (CVA-38) with CVW-8 on board returned to Mayport after a tour with Sixth Fleet in the Mediterranean.



23—USS Bennington (CVS-20), with CVSG-59 on board, returned to San Diego after a combat tour with Seventh Fleet in the western Pacific. She returned home by way of Sydney, Australia, to take part in that country's annual celebration of victory in the Battle of the Coral Sea.

24—The seaplane tender USS Currituck (AV-7) returned to North Island after completing a ten-month tour in the western Pacific and the last combat tour for ships of her type.

27—USS John F. Kennedy (CVA-67) was launched at Newport News, Va.

29—USS Ticonderoga (CVA-14), with CVW-19 embarked, returned to San Diego after eight months operating in the western Pacific, completing her third combat tour with Seventh Fleet.

During May, VA-82 was commissioned.

JUNE

1—The former attack carriers USS Antietam and USS Tarawa were stricken from the Navy list.

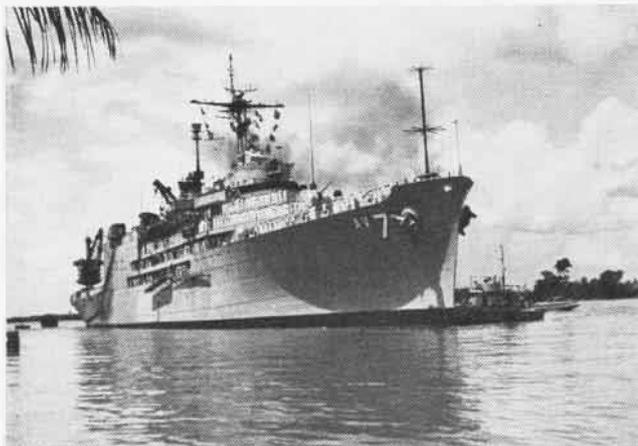
8—Aircraft, launched from Sixth Fleet carriers to aid the USS Liberty when she was attacked by Israeli aircraft and motor torpedo boats, were called back before reaching their destination when a message of regret and apology was received from Tel Aviv.

18—An LC-130F of VX-6 made a winter flight to Antarctica, delivering a five-man scientific group and a few critical items of supply, mail and fresh provisions. Although earlier winter flights have been made to Antarctica as a result of medical emergencies, this was the first planned flight scheduled to relieve the winter isolation.

19—USS Princeton (LPH-5) returned to Long Beach after operations off Vietnam during which her Marine Corps helicopter squadron and Special Landing Force had engaged in four amphibious assaults.

20—USS Kitty Hawk (CVA-63), with CVW-11 on board, returned to San Diego after almost eight months of operations with Seventh Fleet off Vietnam.

30—Naval Air Transport Wing, Pacific, the last Navy component of the Military Airlift Command, was disestablished, ending a Navy-Air Force partnership that began in 1948 when Navy and Air Force transport squadrons combined to form the Military Air Transport Service.



LAST of her line, USS Currituck, after last combat tour in Vietnam for ships of her type, was transferred to Reserve Fleet late in October.

30—Upon the retirement of Lieutenant General Richard C. Mangrum, the title of Gray Eagle passed to Vice Admiral Fitzhugh Lee.

30—The Honorable Paul H. Nitze vacated the office of Secretary of the Navy and became Deputy Secretary of Defense.

In June, VA-97 was commissioned; USS Pine Island, VR-3 and VR-8 were decommissioned.

In the third quarter, the people of South Vietnam elected a president, a vice president and a senate. There were calls for expanding the air campaign in Vietnam and as many for stopping it as a step toward negotiation. There was talk of putting war referendums on local and state ballots. Rioting left charred and smoking ruins in Newark, Detroit, and other cities as the people rebelled against authority and bared unfavorable living conditions ignored for many years. The need for federal aid to urban communities was debated. Surveyor V landed on the moon, Orbiter V filled gaps in lunar photo coverage and the Navy's navigation satellite system was released for use by merchant ships.

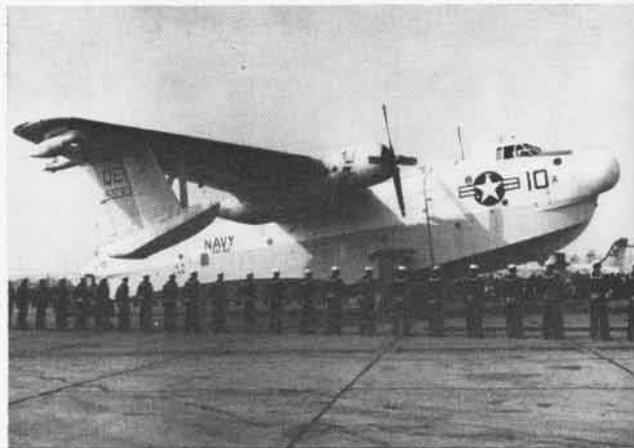
JULY

1—A reorganization of the Naval Air Engineering Center at Philadelphia disestablished the Naval Air Engineering Laboratory (SI), thus ending a progression of commands that could be traced back to the Naval Aircraft Factory established in World War I.

1—Naval Air Propulsion Test Center, Trenton, N.J., was established by merger of the Naval Air Turbine Test Station, Trenton, and the Aeronautical Engine Laboratory of NAEC PHILADELPHIA.

1—The former Turner Air Force Base was placed in commission as NAS ALBANY, Ga., with Captain R. L. Johns in command.

1—The title of the Office of the Naval Weather Service was changed to Naval Weather Service Command and its mission modified to insure fulfillment of Navy meteorological requirements and Department of Defense requirements for oceanographic analyses; and to provide technical



P-5 MARLIN of VP-40 passes through side boys at NAS North Island on way to take off for the last operational flight by a Navy seaplane.

guidance in meteorological matters. On the same date, the Naval Weather Service Division, Op-09B7, was disestablished and its functions assigned to the new command.

6—USS Enterprise (CVAN-65), with CVW-9 on board, returned to Alameda after her second combat tour with Seventh Fleet.

21—During a strike on the Ta Xa petroleum storage facility northwest of Haiphong, Commander Marion H. Isaacs, LCdr. Robert L. Kirkwood and LCdr. Roy G. Hubbard, all flying F-8 Crusaders of VF-24 from USS Bon Homme Richard, shot down three MiG-17's.

22—USS Hancock (CVA-19), with CVW-5 embarked, returned to Alameda after a seven-month tour to the western Pacific, completing her third combat tour in support of U.S. operations in Vietnam.

27—The name Nimitz was assigned to the nuclear-powered carrier CVAN-68, authorized under the 1967 program, to honor the late Fleet Admiral Chester W. Nimitz.

27—The attack carrier USS Ticonderoga and Carrier Air Wing 19 were awarded the Navy Unit Commendation for meritorious service during operations off Vietnam, October 1966-May 1967.

29—The Vice President announced that the Navy Navigation Satellite System, Transit, would be released for use by merchant ships and for commercial manufacture of shipboard receivers on an unclassified basis.

29—Fire broke out on the flight deck of USS Forrestal as aircraft were being readied for launch over Vietnam. Flames engulfed the fantail and spread below decks, touching off bombs and ammunition. Heroic efforts brought the fires under control but the damage was severe and the final casualty count was 134 dead and 62 injured.

29—USS Intrepid (CVS-11), USS Randolph (CVS-15) and USS Princeton (LPH-5) were announced winners in their respective classes of the Admiral Flatley Memorial Award for outstanding achievement in accident prevention during carrier air operations. Although Intrepid is classified as a CVS, she is currently operating as an attack carrier and won in that class.

31—Admiral Charles D. Griffin succeeded Vice Admiral Fitzhugh Lee as the Gray Eagle.

During the month of July, RVAW-120, VA-37 and VX-8 were placed in commission.

AUGUST

1—Admiral Thomas H. Moorer relieved Admiral D. L. McDonald as Chief of Naval Operations.

10—During a Carrier Air Wing 14 raid on the Phu Ly truck park, 37 miles south of Hanoi, LCdr. R. C. Davis and Lt. Guy H. Freeborn each downed a MiG-21. Both were flying F-4B *Phantoms*.

15—The Aircraft Carrier Safety Review Panel held its first meeting. Headed by Admiral James S. Russell, USN (Ret.), the panel was appointed to examine actual and potential sources of fire and explosions in aircraft carriers with the object of minimizing their occurrence and damage and to propose further improvement in the equipment used to fight fires and control damage by explosion.

25—The Naval Electronics Systems Test and Evaluation Facility was commissioned at Webster Field, Md., with LCdr. Grant F. Haggquist in command.

25—USS *Bon Homme Richard* (CVA-31), with CVW-21 on board, returned to San Diego after completing a third combat tour in the Southeast Asia area.

30—In ceremonies at the Philadelphia Naval Shipyard, the USS *Cabot* (AVT-3) was transferred to the Spanish Navy under the Military Assistance Program. The former carrier (CVL-28) was rechristened SNS *Dedalo* (PH-01).

During August, VA-215 was decommissioned.

SEPTEMBER

1—Paul R. Ignatius took office as Secretary of the Navy.

12—USS *Forrestal* (CVA-59), with CVW-17 on board, arrived at Mayport, Fla., for a brief stopover before going to Norfolk for repairs.

20—USS *America* (CVA-66), with CVW-6 on board, returned to Norfolk after her second tour with Sixth Fleet.

22—USS *Essex* (CVS-9), with CVSG-54 on board, returned to Quonset Point after a brief tour with Sixth Fleet in the Mediterranean.

During September, VA-27, VA-128, and HC's 3, 5 and 7 were commissioned.

In the last months, war protesters gathered at the Lincoln Memorial and marched on the Pentagon. There were new demands for a halt to hostilities in Vietnam and old questions regarding our policy in Southeast Asia but the prospect of peace talks seemed no closer than at the start of the year. Internal strife in Nigeria reached a climax, Israeli and Egyptian forces again exchanged shots and Turkish-Greek relations were strained by the rebirth of old enmities on the island of Cyprus. The British pound was devalued. Two spacecraft, one Russian the other American, reached the vicinity of Venus after four-month journeys. The world's most powerful rocket put an unmanned Apollo capsule into orbit and on the same day Surveyor VI settled gently on the moon.

OCTOBER

2—A flight of four aircraft of VX-6 from Christchurch, N.Z., to McMurdo Station, Antarctica, marked the opening of Deep Freeze '68.

10—Rear Admiral Albert Cushing Read, USN (Ret.), Naval Aviator No. 24, died in Miami, Fla. Well known commander of NC-4 on the first trans-Atlantic flight,

Admiral Read made many contributions during his Naval Aviation career which began in July 1915.

13—The President presented the 1966 Harmon International Trophy for Astronauts to Captain James A. Lovell, Jr., USN, and Lieutenant Colonel Edwin E. Aldrin, USAF, for their achievement in the flight of *Gemini 12*.

18—The findings and recommendations of the Aircraft Carrier Safety Panel, which began its study in August, were announced. Among its recommendations were: development of a remote control, massive fire suppressant system for the flight deck; development of more stable ordnance and improvements in ordnance handling procedures, and improvements in survival equipment and training.

20—A Coordinator of Safety Programs, Op-09E, was established in the Office of the Chief of Naval Operations.

21—The Secretary of the Navy, P. R. Ignatius, presented the CNO Readiness Through Safety Trophy to Vice Admiral A. S. Heyward for the outstanding achievement of the Naval Air Training Command in reducing its accident rate by nearly 11 percent under the previous year.

26—Ltjg. Robert Hickey, flying an F-4B from USS *Constellation*, shot down a MiG-21 in an aerial battle 15 miles south of Hanoi.

28—Maj. Vincent J. Guinee received the Alfred A. Cunningham Award signifying his selection as the Marine Aviator of the Year.

30—On combat air patrol for a Carrier Air Wing 14 strike, LCdr. Gene Lund, flying an F-4B *Phantom* of VF-142, shot down a MiG-17.

31—USS *Currituck* (AV-7), last seaplane tender in service, was decommissioned at Mare Island.

NOVEMBER

6—An SP-5B *Marlin* of VP-40 at NAS NORTH ISLAND made the last operational flight by seaplanes of the U.S. Navy. With Commanders J. P. Smolinski and G. Surovik as pilot and copilot and 15 passengers including Rear Admiral C. A. Karaberis on board, the flight ended 56 years of seaplane operations in the Navy.

6—Vice Admiral William F. Bringle relieved Vice Admiral John J. Hyland as Commander Seventh Fleet.

9—The USS *Bennington* (CVS-20) recovered an unmanned *Apollo 4* spacecraft about 275 miles northeast of Midway Island in the Pacific.

29—Fleet Air Wing 10 and Patrol Squadrons 9, 19 and 47 were presented the Navy Unit Commendation, at NAS MOFFETT FIELD, which cited them for "a significant contribution to the security of the United States" during ASW operations in the Pacific, March 19-April 1, 1967.

In November, NAAS ELLYSON FIELD and VA-105 were placed in commission.

DECEMBER

1—Admiral John J. Hyland relieved Admiral Roy L. Johnson as Commander in Chief, U.S. Pacific Fleet.

4—The USS *Constellation*, with CVW-14 on board, returned to San Diego after almost seven months service with Seventh Fleet.

5—The USS *Okinawa* (LPH-3) returned to San Diego after an eight-month tour to Southeast Asia.

30—The USS *Intrepid*, with CVW-10 on board, returned from a seven-month tour off Vietnam.

In December VMT-1 deactivated; VMT-203 activated.

CODE NAMES FOR AIRCRAFT

By M. C. Richards

Leading Observer, Royal Observer Corps

THE USE of code names in lieu of actual names for reporting aircraft may be necessary for two reasons: to give a tag to a definite type whose correct identity cannot be ascertained and to provide a colloquial name where there are language difficulties in translation, transliteration or pronunciation.

A need for a code system first arose in 1916 when the Germans introduced a new range of Halberstadt, Albatros and Pfalz aircraft to the Western front that defied classification by Allied intelligence. Pilots were encouraged to append sketches to their combat reports and, from these, Intelligence compiled diagrams, labelling types as A, B, C, etc., and subsequent sightings were reported by the appropriate letter. By 1918, when German aircraft had become more standardized, the system lapsed. The Germans did not have a comparable system and for a time reported all pusher aircraft such as FE-2b's and DH-2's as "Vickers," confusing them with the Vickers *Gunbus*.

During the Second World War, German aircraft nomenclature was fairly straightforward and direct reporting could be used. Their system was basically that of a number for each type, irrespective of manufacture, which a prefix denoted, such as Me-109, Me-110, He-111 and He-112 for Messerschmitt and Heinkel types. For intelligence purposes it was necessary to

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give an identity to new prototypes detected to collate reports on their development. The system used was a simple numerical series with the name of the establishment where it was first located, e.g., the *Arado* Ar-234 jet bomber first appeared in Allied records as the *Rechlin* 66 (Rechlin was a German aircraft test airfield and "66" its estimated wing span).

That this system was not adopted for general reporting is a tribute to Allied intelligence in general and RAF photographic reconnaissance in particular, in that the aircraft were detected and their true identity established before they arrived in service.

It was different with the Japanese. Attempts early in 1942 to identify individual Japanese types were based on the Japanese system of designation by the last two digits of the year the type entered service. This was further complicated by our year of 1940 corresponding to the year 2600 by the

Japanese calendar. Thus, the Japanese Navy fighter that entered service that year became the 00, abbreviated in this case to just 0. This was colloquially called *Zero* by the Allies, a name by which it will be remembered by many.

Several different types might enter service in the same year and thereby have the same number, so that the number had to be further qualified by the manufacturers' names; but Kawanishi, Mitsubishi, Nakajima, Yukosuka, etc., used in conjunction with the year digits, did not roll easily off the tongue. There was also a system, rather like the German, used by the Japanese Navy and a system of official type symbols, e.g., the Mitsubishi 96 fighter (i.e. introduced in 2596—our 1936) was A5M4 in Japanese naval nomenclature, but such letter/figure combinations were difficult to memorize and could not always be obtained for new types. Such were the complications that reporting lacked

NAMING SYSTEM FOR SOVIET AIRCRAFT

FIGHTERS

Propeller-driven

FANG (La-11)
FIN (La-7)
FRANK (Yak-9)
FRED (F-63A)*
FRITZ (La-9)

FACEPLATE
FAGOT (MiG-15)
FANTAIL (La-17)
FARGO (MiG-9)
FARMER (MiG-19)

Jet

FEATHER (Yak-17)
FIDDLER
FIREBAR (Yak-28)
FISHBED (MiG-21)
FISHPOT
FITTER (Su-7M)
FLASHLIGHT (Yak-25)
FLIPPER
FLORA (Yak-23)
FRESCO (MiG-17)

BOMBERS

Propeller-driven

BANK (B-25D)*
BARGE
BARK (Il-2)
BAT (Tu-2)
BEAR (Tu-95)
BEAST (Il-10)

BOB (Il-4)
BOOT
BOX (A-20A)*
BUCK (Pe-2)
BULL (Tu-4)

Jet

BACKFIN
BADGER (Tu-16)
BEAGLE (Il-28)
BISON
BLINDER
BLOWLAMP
BOUNDER
BOSUN (Tu-14)
BRAUNY
BREWER

CARGO/TRANSPORTS

Propeller-driven

CAB (Li-2)
CAMP
CART (Tu-70)
CAT (An-10)
CLAM
CLEAT (Tu-114)

CLOD (An-14)
COACH (Il-12)
COCK (An-22)
COKE (An-24)
COLT (An-2)
COOT (Il-18)

CUB (An-12)
CORK (Yak-16)
CRATE (Il-14)
CREEK (Yak-12)
CRIB (Yak-6)
CROW (Yak-14)

Jet

CAMEL (Tu-104)
CLASSIC (Il-62)
CODLING (Yak-40)
COOKER (Tu-110)
COOKPOT (Tu-124)
CRUSTY (Tu-134)

HELICOPTERS

HARE (Mi-1)
HARKE (Mi-10)
HARP

HAT (Ka-10)
HEN (Ka-15)
HIP (Mi-8)

HOG (Ka-18)
HOODLUM (Ka-26)
HOOK (Mi-6)
HOOP (Ka-22)
HOPLITE (Mi-2)
HORSE (Yak-24)

HOUND (Mi-4)

MISCELLANEOUS

Propeller-driven

MADGE (Be-6)
MAIL
MARK (Yak-7)
MAX (Yak-18)
MINK (Ut-2)
MOOSE (Yak-11)

MOLE
MOP (GST)
MOTE (MBR)
MUG (MDR-6)
MULE (Po-2)

Jet

MAESTRO
MAGNET (Yak-17UTI)
MAGNUM (Yak-30)
MALLOW (M-10)
MANDRAKE
MANGROVE
MANTIS (Yak-32)
MASCOT (Il-28UTI)
MAYA (L-29)†
MIDGET (MiG-15UTI)
MONGOL

*American designation of aircraft supplied during the war under Lend/Lease arrangements.

†Czech designation.



WORLD WAR II Japanese *Hap* was later renamed *Zeke* 32 in famed Mitsubishi Zero fighter series; captured model was evaluated in U.S.



FISHBED is the code name for MiG-21 fighters. These aircraft are mainstays of the air forces of USSR and the communist bloc countries.

precision and there was a tendency to call all the fighters *Zero's* and all twin-engined aeroplanes *Mitsubishi's*. This was the situation when the South West Pacific Area Commander, General Douglas MacArthur, handed the problem to his Director of Intelligence.

Early in 1942 Captain (later Colonel) Frank McCoy had arrived in Australia as Intelligence Officer of the 38th Bombardment Group, USAAC. In June that year he was appointed head of the Material Section of the Directorate of Intelligence, Allied Air Force, South West Pacific Area. To his department was given the task of identifying and reporting on Japanese aircraft types and shortly after receiving this assignment, McCoy presented a code name system.

Working with two aides, Sgt. F. Williams and Cpl. J. Grattan, 75 code names were initially allocated. McCoy hailed from Tennessee and this was reflected in his choice, with names such as *Rufe*, *Zeke*, *Nate* and *Jake*. They were simple names, easy to remember.

McCoy had yet to sell his idea to the authorities. The popular story is that his opportunity arose from the inclusion of the name "*Hap*" for a clipped-wing version of the *Zero* fighter, in a dispatch to Washington. This was the nickname of the Air Corps Commander, General Arnold. McCoy was "*carpeted*" by General MacArthur's Chief of Staff, but it brought about recognition and acceptance of his system. "*Hap*" was, in fact, dropped as a suitable code-name since it could be confused phonetically with "*Jap*." In December 1942, the

United States forces started using the system and the British followed suit.

McCoy's simple formula for coding was that fighters, including fighter and reconnaissance floatplanes, should have male names, and all other aircraft female names, with the proviso that those allocated for transport should all start with the letter "*T*."

Some initial confusion was experienced; owing to faulty intelligence, some names were allotted to non-existent types and some areas allotted conflicting names of their own. This position was later clarified by checking with sources in Washington, London and Delhi before allotting names for which the Technical Air Intelligence Center, NAS ANACOSTIA, became the central authority.

There were two exceptions to the pattern of allocation. These concerned the Nakajima Ki-44 fighter which was called *Tojo* in the Chinese and Burmese areas and the Kawasaki Ki-61 dubbed *Tony* because it was thought to be an Italian fighter in Japanese service. Both these names were officially retained.

Anticipating German aircraft in the Pacific area, operating from Japanese bases, code names were allotted as follows: *Irene* Junkers Ju-87, *Terry* Heinkel He-112, *Mike* Messerschmitt Me-109, *Trudy* Focke Wulf Fw-200, *Trixie* Junkers Ju-52/3m, *Janice* Junkers Ju-88, *Doc* Messerschmitt Me-110 and *Bess* Heinkel He-111. Most of these types were known to have been purchased for evaluation by the Japanese. The Focke Wulf Fw-190 was potentially the most promising and the code name *Fred* was allotted before an example had arrived in

Japan [aboard] a blockade runner.

A new range of names was allocated later in the war as the Allies closed in on the Japanese mainland, with tree names for trainers and bird names for gliders.

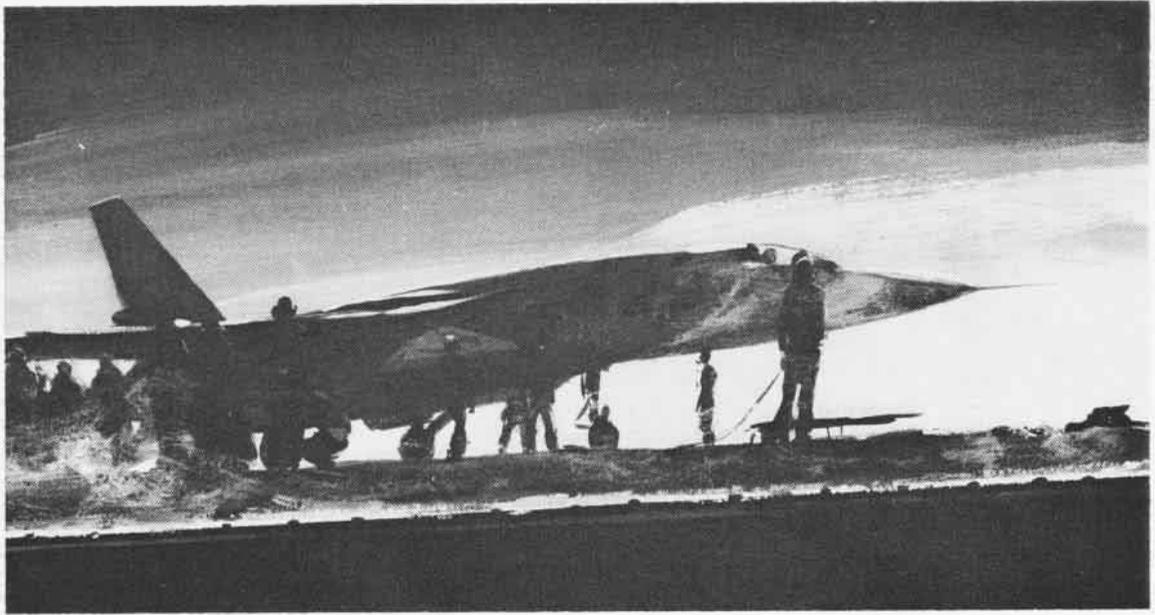
In the early postwar years, the Iron Curtain of the Communist Bloc effectively screened any information about new Russian aircraft, seen fleetingly in Soviet skies, and a precise name could not be given to these new types. Later, when new shapes were revealed, as at the Tushino Air Display, their official designations were rarely divulged.

For reporting purposes, a tag had to be given and in the early "fifties" a type number was introduced. A number was allocated to an aircraft type, roughly in order of detection, and was restricted to types not fully identified; other aircraft were given the normal Russian designation. This was a compromise between an intelligence system and a reporting system and it proved unsatisfactory.

In 1954 [the United States, United Kingdom and Canada] evolved the ideal reporting system which has become generally adopted in NATO countries.

The formula for this NATO system is simply that Bombers, Fighters, Helicopters, and Miscellaneous types each have a name starting with the initial letter significant of their role, i.e., B, F, H and M, respectively.

Propeller-driven aircraft have names of one syllable and jet-propelled aircraft have two-syllable words. Variations to the basic type are qualified by suffixes A, B, C, etc. The system has been extended to cover missiles.



The Art of Naval Aviation

ON LAND and sea and in the air, impressions of worldwide Navy and Marine Corps Aviation are being graphically portrayed by the men who are there. These artists, professional and amateur, military and civilian, contribute their time and talent to the Navy's growing art collection of over 3,300 works. These pictures indicate something of the scope.

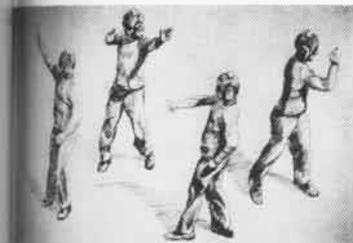


Civilian artist John Steel captures a poised Vigilante and a combat-weary airman (top two drawings). LCdr. Indiviglia depicts helicopter activity on CVS flight deck.

SINCE THE DAYS of the Civil War, when Winslow Homer, clutching pad, pencil, and paints, trudged through the mud in pursuit of military scenes to portray for posterity, combat art has provided the American public with truthful representations of service life in peace and war. But it was not until 1941 that, under the inspired guidance of the famous muralist, the late Griffith B. Coale, the Navy formally established its Combat Artist Corps.

As the first official combat artist, Coale, then a lieutenant commander, embarked upon a combat vessel heading out to the North Atlantic. His experiences in those early days prior to the United States' entry into World War II are vividly portrayed in his works on convoy patrol.

By midpoint in the war, there were Navy artists in all parts of the world, rendering faithfully the moods, struggles, glories and sadness of the battlefield with brushes, oils, watercolors, charcoal and chalk. These were closeups of war by painters who lived the moments of calm and the hours of combat with the men who fought in the skies and on the oceans and beaches. Their unique pictures



Veteran Naval Reserve artist-writer team of LCdr. Kenneth W. Allison (above, left) and Salvatore J. Indiviglia check notes during recent mission to Vietnam. From fast, on-the-spot drawings, such as these at left, which capture the action of the moment, Sal will later render large, full-color paintings. Ken Allison records details and will write commentaries for future exhibitions. The team concept is relatively new to the U.S. Navy's Combat Art Program.



A prominent aviation and marine illustrator, John Steel spent five months painting the Navy's role in Vietnam. Phantom drawing is one of the 80 comprehensive color sketches he made.

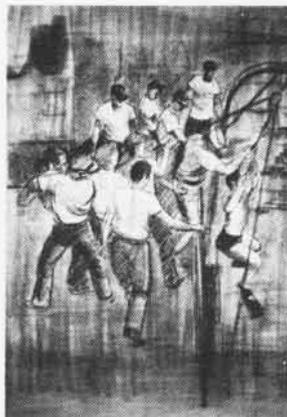


formed the nucleus of a Navy collection which now contains more than 3,300 works of art, valued at more than \$2.5 million.

Until 1950, the Navy Combat Artists continued their efforts to execute scenes they had personally witnessed. Gradually, their work was augmented by contributions from civilian painters and interested Navy personnel. Much of this was accomplished through the auspices of the Salmagundi Club of New York City, an organization of professional artists and patrons who formed the Navy Art Cooperation and Liaison Committee (NACAL). Still retained is the concept of actual participation; the artists perform either on special assignment or in connection with regular active duty.

Last summer, a veteran Reserve artist/writer team was dispatched on a combat mission to "canvas" the Navy's role in Vietnam. The team was given an unrestricted assignment to cover operations ashore and afloat in the combat zone.

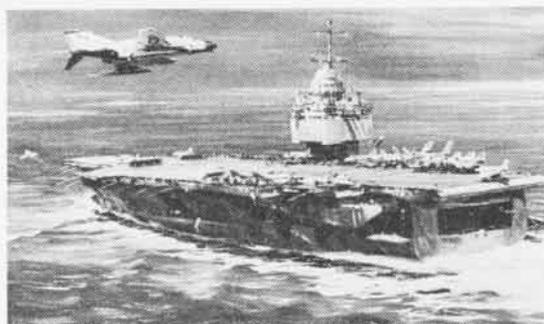
LCdr. Salvatore J. Indiviglia, artist, and LCdr. Kenneth



Navy Combat Artist Indiviglia has wide experience in military and civilian art. Above, he depicts rescue of Forrestal fire survivors and (at the right) a flight crew.

The Art of Naval Aviation

JOHN STEEL SKETCHES
THE WAR IN VIETNAM



W. Allison, writer, now having completed the first phase of their assignment, are back in New York. As inactive Reservists once again, they will spend hundreds of hours of their spare time during the forthcoming months preparing a finished presentation of paintings and commentaries for American exhibitions. Some of their initial impressions and notes appear on these pages.

In view of popular response to such fine aviation pictures as R. G. Smith's "Saratoga" in the November, 1967, centerspread, *Naval Aviation News* has arranged to pub-

lish a selection of subjects considered appropriate for our readers. Some will be in the form of the original, on-the-spot sketches. Others will be selected from comprehensive color studies and finished renderings. Represented will be contributions to Naval Art by both civilian and military artists, and, in some cases, the work of Naval Aviators.

Complete information on the Navy's Combat Art and NACAL programs may be obtained from the Navy Department, Chief of Information (OI-300), Washington, D.C. 20350. Some color lithographs are already available.

ABOVE AND BEYOND

A TWENTY-SIX-YEAR-OLD Navy pilot, tormented by an enemy bullet which ripped through both legs, defied his pain, dropped his bombs and refused to abandon his plane after a combat mission over North Vietnam.

On November 21, 1967, Ltjg. Dennis Earl of Mendon, Utah, guided his damaged VA-163 A-4 over land and water to return to the USS *Oriskany* offshore in the Gulf of Tonkin. He was in the air more than 20 minutes after a single machine gun bullet penetrated the fuselage and smashed bones in both his legs.

Earl, a former Mormon missionary and son of a retired Navy man, watched blood soak through his boots and trousers and pounded a clenched fist against the window of his cockpit as he struggled against pain and fear of unconsciousness, but he made it back to a near-perfect arrested landing on the ship, his aircraft barely nosing into the barricade erected by the alerted flight deck crew. Lifted out of the cockpit and rushed on a stretcher to the carrier's sick bay, Lt. Earl was in surgery five hours. The prognosis: Complete recovery, no limp, after six to twelve months recuperation at home.

Speaking later from his bed in *Oriskany's* sick bay, Earl gave much of the credit to his wingman, LCdr. James B. Busey, who had stayed close behind the younger pilot as they flew towards the ship, guiding and advising him by radio.

"We had just completed a flak suppression mission and were after some camouflaged barges we spotted earlier," Busey recounted. "There was nobody on the ground below us. No one was firing at us. I didn't see a thing. Then Denny called out 'I'm hit.' It was a complete surprise to me. He said the aircraft seemed O.K. but he thought he had two broken legs."

Recalled Earl: "I felt a large



DENNY BRINGS HIS A-4E INTO BARRIER

thump in the aircraft and suspected I'd been hit by a missile. I didn't know what it was, but I knew I was hit." (Inspection of the plane later revealed a single coin-sized hole in the fuselage. The bullet, removed from Earl's leg in two pieces, was a 14.7mm machine gun round.)

"I told him to jettison his bombs," Busey said. "But he didn't. Instead, he took the time to concentrate on bombing the road. He put two craters in it. Then we headed out to sea. Denny was utterly calm. By the time we reached the Gulf, search and rescue forces were ready.

"Denny said he wasn't feeling well but the plane was O.K. I told him he could eject into the water or try to fly 125 miles to the ship. It was his choice. He decided to go to the ship; he couldn't see going into the water with two bad legs.



BUSEY, DENNY AND SHELL FRAGMENT

"I kept talking so he wouldn't get drowsy. He was in such pain he wouldn't talk to me—just nodded his head and banged his fist on the inside of the cockpit, fighting off the pain. About halfway back I had him blow up his G-suit. He was losing a lot of blood and the G-suit acted as a tourniquet. He flew perfectly, without wavering. When we sighted the ship he got his gear and flaps down and made a perfect approach."

Said Lt. Earl, "I was afraid of blacking out more than anything else. I was holding my left leg above the cockpit floor with one hand and flying with the other. The ship was all set. I could see they had a barricade rigged up. I guess they thought I was flying on adrenaline and might run out of it if I missed the wire the first time and had to go around."

Oriskany doctors, corpsmen and crash crew members were climbing onto the plane the instant it stopped. They lifted him out of the cockpit and carried him to sick bay. Rear Admiral Frederick H. Michelin, Commander, Carrier Division Nine, monitored the recovery from his bridge on the *Oriskany*. "I've never seen anything quite like it. Here were two men, one in tremendous pain and the other picking him up and guiding him back with all the case in the world. Busey was Earl's eyes and ears. Mentally and spiritually he gave Earl something to hang onto."

Dennis Earl, physically weak from the surgery but in high spirits, was visited by Busey and other squadron members in sick bay. He fingered the broken bullet removed from his leg and looked at photos of his barricade landing. He looked at pictures of a blonde girl from Pensacola. He had been a commissioned officer for a year and nine months. He had completed his 72nd combat mission and brought his plane back safely.

The Origin of Navy Wings

A NAVAL AVIATOR'S device, a winged fowl anchor with the letters 'U.S.' is hereby adopted to be worn by qualified Naval Aviators. This device will be issued by the Bureau of Navigation to Officers and Men of the Navy and Marine Corps who qualify as Naval Aviators, and will be worn on the left breast." So stated Change 12 to Uniform Regulations approved by the Secretary of the Navy on September 7, 1917. A second change, approved Oct. 12, 1917, removed the letters "U.S." from the design and Navy Wings became a part of the uniform. The official act of adoption is clear; much of what led to it is not.

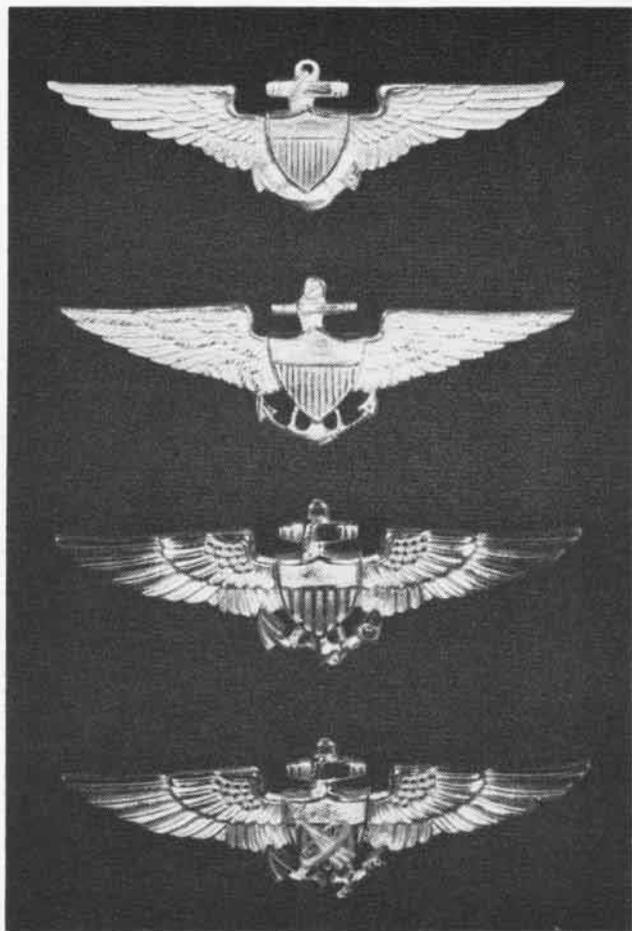
It appears likely that need for a distinguishing mark was voiced by the aviators themselves, particularly after Army aviators began wearing "badges" in 1913. But it also appears that outside influence provided some of the initial impetus. A letter, dated June 29, 1917, from the G. F. Hemsley Co., stating that the sender "takes the liberty" of forwarding a design for an aviation cap and collar ornament, may well have started official action. In forwarding it to the Bureau of Navigation, the Chief of Naval Operations rejected the ornament but went on to say that since foreign countries and the U.S. Army had adopted an aviation device, Naval Aviators also should be given "some form of mark or badge to indicate their qualification, in order that they have standing with other aviation services." The letter, which had been prepared in the Aviation Section and in which LCdr. John H. Towers had a hand, enclosed a design for wings as representative of what was wanted.

From this date the subject was kept very much alive by the exchange of correspondence with a number of firms interested in producing the wings. Bailey, Banks and Biddle of Philadelphia was one of them. By October that company seems to have taken the lead over its competitors and on the 24th submitted its first sample pin. In early November it submitted other samples and was ready to make "prompt delivery of such number of devices as you may desire."

The design passed through a number of changes. Bronze, the first metal proposed, was quickly rejected in favor of a gold and silver combination which in turn was changed to all silver and finally, in October, the decision was for all gold. Size changed from over three inches to the final of two and three-quarters. Stars on the shield were proposed and rejected as violating the laws of heraldry.

Lt. Henry Reuterdaahl, later assigned as an artist to record the NC trans-Atlantic flight, played an important part in design development. In a letter of September 28th, he recommended simplifying the wings by bolder chasing and a reduction in the number of feathers, noting that "most naval ornaments are too fine and not broad enough in character." He also recommended changes in the anchor and rope and the introduction of a slight curve to conform to the shape of the body. He summarized his remarks by saying, "My idea has been to reduce all corners so that there will be no points which might catch in the clothing."

On the final decision to place an order, the record is



CHANGES through the years (from the top) show the original design, the 1920's model, the present wings and those worn by astronauts.

obscure but it may have been a BU NAV letter to the Supply Officer dated November 21, 1917, selecting "the higher priced pin" (the price was \$1.15 each). The company was not named. That it was Bailey, Banks and Biddle, however, seems fairly certain. Its letter to BU NAV dated December 19 confirms a telegram quoted in part as "balance aviator insignia shipped tomorrow."

That the first pins were delivered in this month is also confirmed in a December 26 letter from BU NAV to Pensacola, reporting that the new pins had been received and "will be sent out as soon as they can be engraved to show the Aviator's number, his name and branch of service."

Engraving the aviator's number posed a problem, however, that was solved only by preparation of an aviators' precedence list, covering numbers 1 through 282, by the Aviation Section of CNO. Thus, wings were responsible for the first precedence list and, in addition, were a factor in the later assignment of fractional numbers to many aviators omitted from this first compilation. When forwarded to BU NAV on January 19, 1918, distribution of the first wings could begin. It seems likely that Towers, as Senior Naval Aviator in Washington at the time, was an early, if not the earliest, recipient.

After almost eight years of Naval Aviation and nine months of war, Naval Aviators had Wings—a badge of qualification that would set them apart from all men.

THOROUGH TRAINING FOR EVERYONE AT VT-29



SINCE ITS commissioning in May 1960, Training Squadron 29, NAS CORPUS CHRISTI, Texas, has amassed 100,000 flight hours without an accident. The record hours were accumulated while performing the squadron's mission of introducing navigation procedures to newly commissioned pilots and fledgling NFO's, and providing refresher training in navigation for Fleet pilots.

It is no longer an isolated instance when a unit flies 100,000 hours without an accident—two other squadrons in the training command have reached that plateau within the last year—but how does a squadron do it?

VP-29 does it by making sure everyone is "checked-out" on what to do and when to do it, so that when the occasion arises the man performs, whether he is the C.O. or a recruit.

Squadron personnel fly two types of aircraft, TC-117's and T-29's. Since the T-29's are on loan from the Air Force, all maintenance is accomplished in accordance with AF directives. For the technically minded, this means that the squadron is an intermediate maintenance activity for T-29's and an organizational maintenance activity for TC-117's.

Squadron pilots get annual NATOPS check-outs in both aircraft, similar only in that they have wings and two reciprocating engines. From there on out, there is very little resemblance.

The TC-117 is a tail-wheel aircraft and, for personnel who have never flown one, just staying on the runway for the first one or two hops is a challenge. The T-29 turns the aviator into a real believer in those performance charts in the back of the handbook. If the charts say you need 5,810 feet of runway for takeoff, you'd better believe; if they say 127 knots for single-engine climb, you'd

better believe that, too, because the aircraft won't tolerate a non-believer.

"Checked-out" is the credo at VT-29. For the enlisted man reporting on board, indoctrination is first. He learns about the squadron's mission, history and organization. He is informed about education programs, career counseling, legal assistance, basic medical facts, leadership training and safety around aircraft before he goes to work in one of the shops. A man selected for plane captain or aircrewman returns to school to learn about the aircraft he will be assigned to—going through survival training and many hours of flying under the eyes of an experienced plane captain.

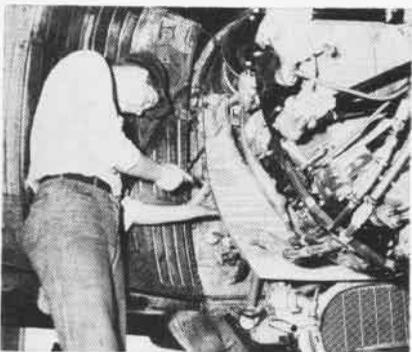
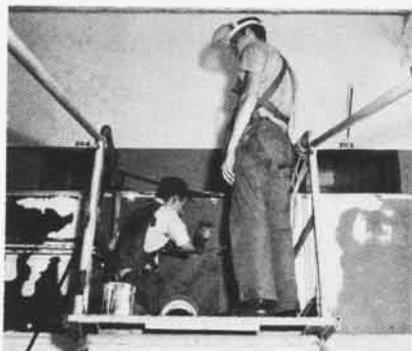
Officers reporting to VT-29 go back to navigation school (yes, all of it) and are then checked-out as inflight navigation instructors.

Pilots go to ground school in one of the two assigned aircraft, going through the entire familiarization syllabus before they can sit in the right seat with a student. Hours and hours of work learning the aircraft pay off as they become masters of any situation that may develop. "Checked-out" is a way of life at VT-29.

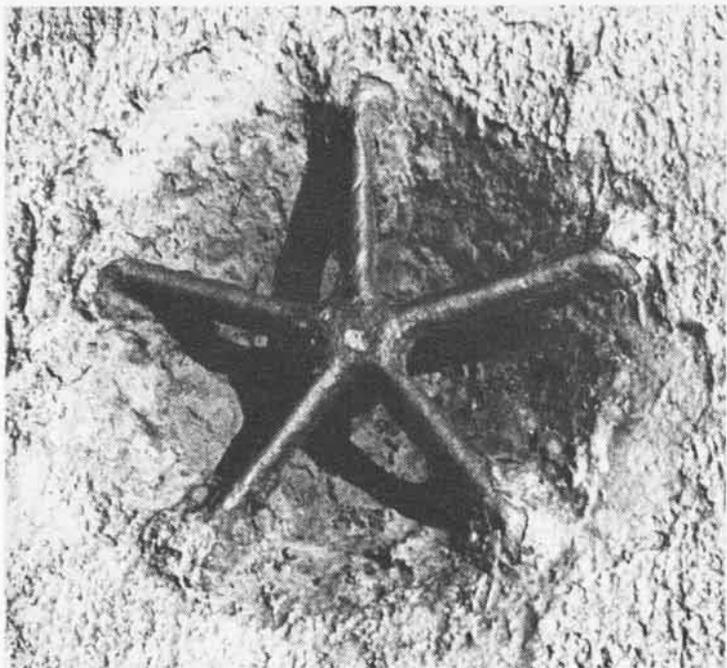
For a schedules officer it means hours of careful work to assign people to work together who will be compatible, because, let's face it, a personality conflict in the cockpit may be the difference between a good flight or a pile of junk at the end of the runway.

For Cdr. William A. Platte, C.O., it means meshing together 300 diverse personalities to get peak performance. Man is the number one item at VT-29. If he's "checked-out" he performs, the job is done, the mission is completed and the record is surpassed.

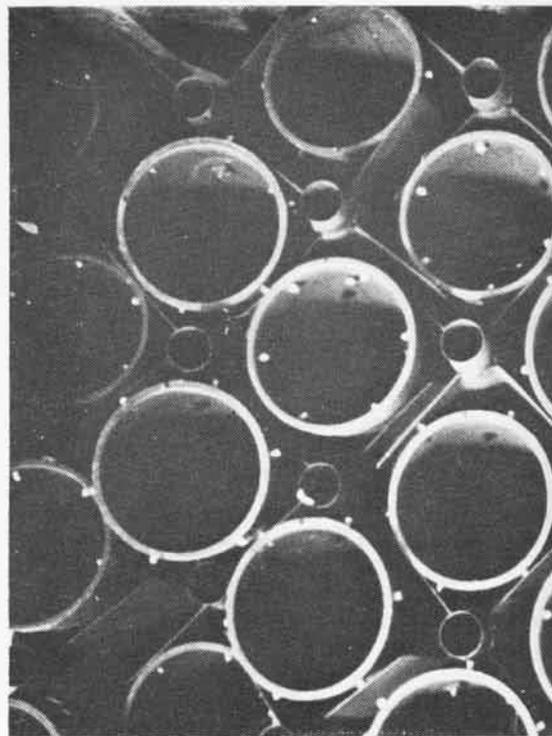
EVERYONE at VT-29 does his part in the successful completion of a mission by being "checked-out" in his job, whether it's chipping paint (below), repairing an engine (center) or discussing scheduling (bottom).



By LCdr. Charles A. Gray



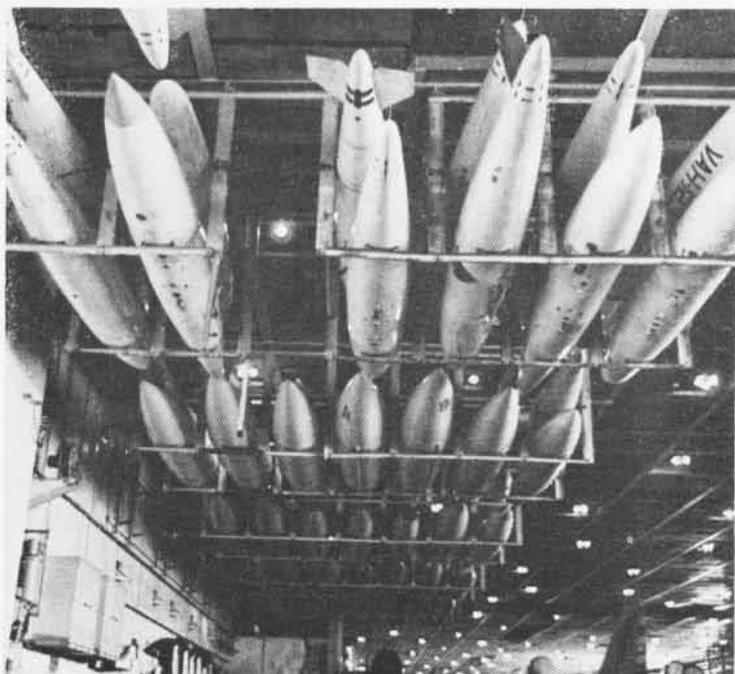
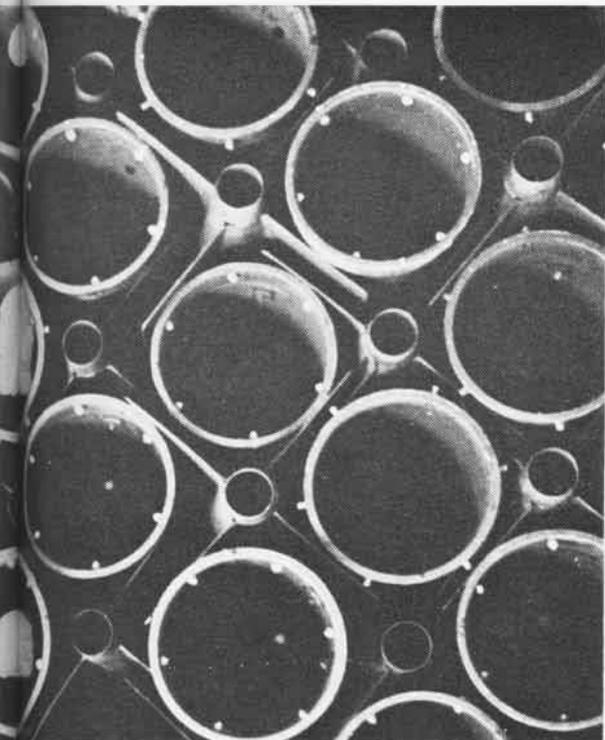
A FALLEN STAR



FORCEFUL ENDINGS

A TALE OF TAILS



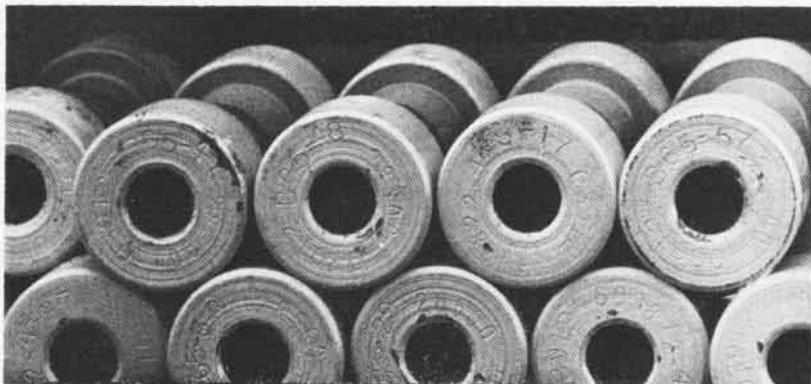


FRIENDS IN NEED

COMBAT PATTERNS

A Photo Essay
by JO3 Jack Reeves

ROLL OF LIFESAVERS



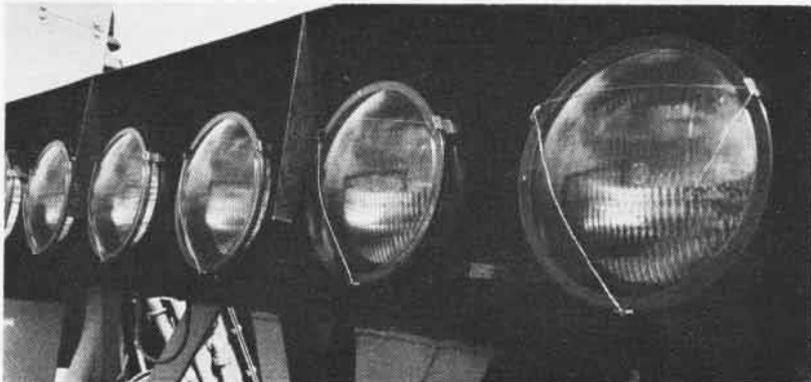
FOR THE crew members of *USS Constellation*, air strike operations against North Vietnam were an everyday pattern of existence on the "line" at Yankee Station in the Tonkin Gulf.

Men and machines were intertwined to form a smooth-running pattern of aircraft launches and recoveries—a never-ending cycle in the Navy's air war over North Vietnam.

The tools of war that were so much a part of the scene aboard *Constellation* often took on patterns of their own. These patterns tended to escape the naked eye because they were a natural and integral part of aircraft carrier combat operations.

But isolated from their environment, they became symmetrical entities, creating elements of beauty in the cold, gray reality of war.

BEACONS OF LIFE



NAVY COOK SWAPS GALLEY FOR GUNSHIP

By JO1 Tom Walton

IN THE Mekong Delta of South Vietnam is a U.S. Navy cook from Alabama who spends his time "cooking Charlie's goose" with an M-60 machine gun.

Commissaryman First Class William H. Johnson is a fully qualified combat aircrewman, door gunner and crew chief with the Seabees of Helicopter Attack (Light) Squadron Three, HA(L)-3.

Not only is Johnson serving with the only squadron of its kind in the Navy, he is probably the only cook—service wide—with these qualifications.

He is attached to Detachment Four of the squadron, which consists of two UH-1B helicopter gunships and four flight crews. They operate from an Operation Game Warden support ship stationed in the Ham Luong River.

In the air, Johnson is left door gunner. He spots targets in the patchwork of jungle, rice paddies and rivers of the Delta. Once the targets are located and permission is granted by Vietnamese authorities on the ground, the choppers strike with machine guns and rockets.

Although Johnson didn't go through gunnery training or aerial observation school before he went to Vietnam, he can spot a camouflaged sampan in a tree-lined canal and then sink it with his hand-held machine gun.

"A few weeks ago," he said, "we were pouring rounds into a loaded enemy sampan in a canal. I don't know what it was carrying, but all of a sudden the entire boat exploded. The blast was enough to jolt the chopper."



JOHNSON MANS HIS 'BATTLE STATION'



COMMISSARYMAN MAKES FLIGHT CHECK

Johnson flies between 60 and 80 hours a month. He has been a flying *Seawolf* since last August. Three months earlier, he had gone to work in the Army mess hall at Vung Tau, the HA(L)-3 headquarters.

"After two months, I requested duty with the maintenance crew so I could do a little flying," he says.

The request was turned down, but that didn't stop Johnson. The following month, he spent all his off-duty time with the line crew working on the gunships. "I had some 15 guys in different fields helping me. I learned everything I could about the Huey," he says.

At the end of the month, he took the plane captain test and made one of the best scores of anyone in the squadron. Armed with this, he again requested a transfer from the mess hall. This time it was granted.

As crew chief, Johnson is in charge of the maintenance, upkeep and paper work on his aircraft for his crew (two officers and another crewman). He is on duty from one noon to the next and then off for the same period.

Today he is the flying cook of the Mekong Delta. "I've always liked to keep busy and do different things," he says, "but I'll never change my rate. I like being a cook."

International Air Meeting Montreal is Host to 221 Delegates

The Fifth Air Navigation Conference of the International Civil Avia-

tion Organization was held in Montreal late in 1967. In attendance were 221 delegates and observers from 45 countries and four international organizations. The four-week conference was designed to improve the safety and efficiency of the approach, landing and takeoff phases of flight. The noise level at airports was also studied.

The ICAO Council decided that an air cushion vehicle (such as a *Hovercraft*) is not an aircraft. In doing so, the Council did not decide what an air cushion vehicle is, but it did amend ICAO's International Standards and Recommended Practices by adding to the existing definition of *aircraft* ("any machine that can derive support in the atmosphere from the reactions of the air"). Since air cushions derive their support from reaction of the air against the earth's surface, these vehicles are not aircraft and thus are not subject to ICAO's international standards.

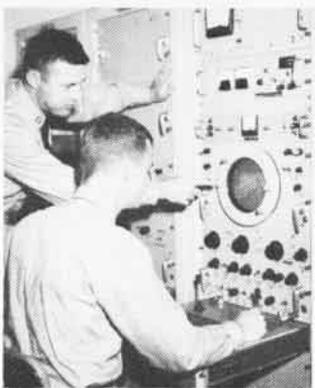
Talks on Pearl Harbor Day Student Audiences Hear Officers

On December 7, the anniversary of the attack on Pearl Harbor, two officers from NAS CORPUS CHRISTI, Texas, spoke to local high school students as part of the schools' salute to "I am Proud to be an American" Day.

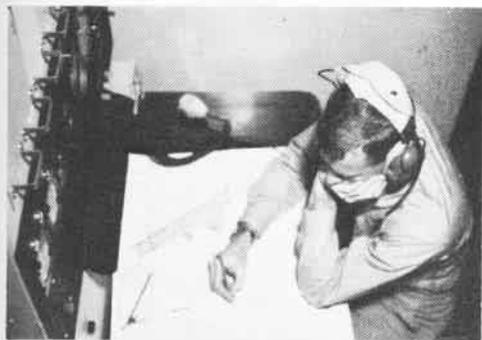
Lt. David Houghton, a veteran of two Southeast Asia deployments and a VT-31 flight instructor, spoke to the Marvin Baker Junior High School student body. At King High School, Lt. Bendal L. Janies of VT-27 addressed 1,200 students on the inherent responsibilities of free people if their freedom is to be enjoyed by future citizens.



SALT CORROSION was a big problem for VT-31 until Lt. John Willison designed an effective washing system for the squadron's aircraft. A system of pipes provides maximum water flow to spray this TS-2 as it taxis through on its way to the line. System was constructed of scrap material.



BEFORE his first class, Ens. Lockhart, at left, receives the tools of a student at the Basic NAO School at NAS Pensacola. Above, he learns the basic aircraft en route communication procedures he will later be using in the air. Directly above, the radar trainer is used to instruct the student in scope interpretation and thoroughly acquaint him with the various types of radar displays.



A Nautical Mile of Graduates

LATE LAST YEAR, the Basic Naval Aviation Officers School, NAS PENSACOLA, reached a milestone when Ens. Gary M. Lockhart graduated. He was the 6,076th graduate of the school, thus completing a line of graduates one nautical mile long (6,076 feet).

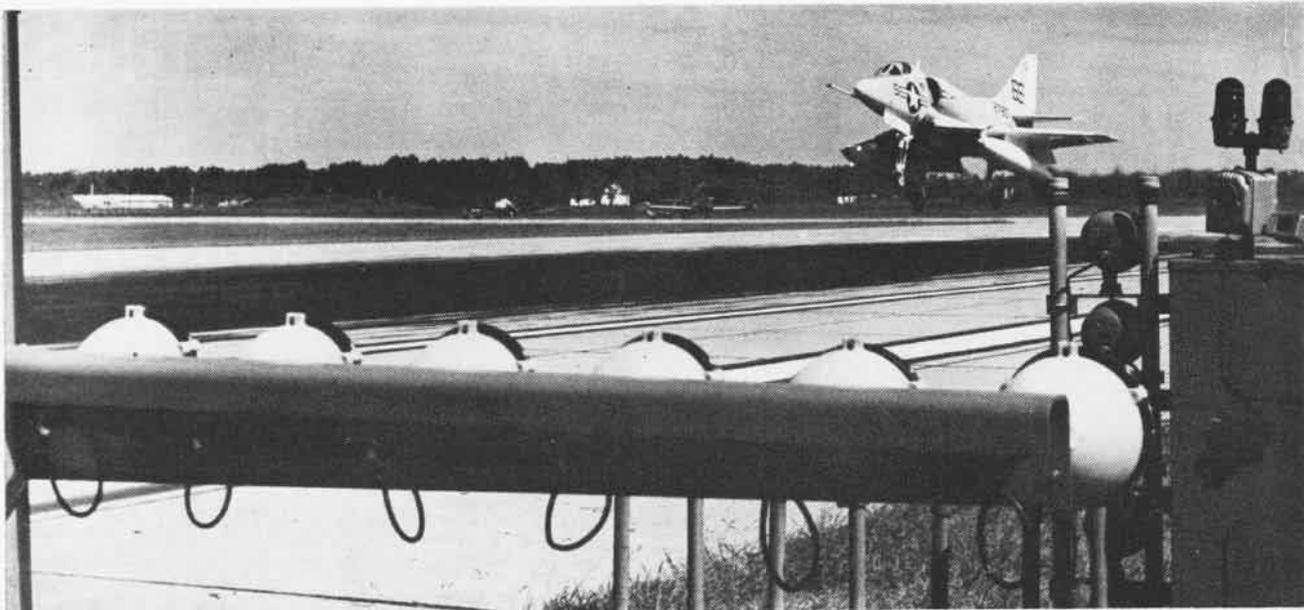
The school, established in July 1960, provides basic academic training and flight indoctrination for officer air crew members. The technical course is 16 weeks long. The pictures on this page indicate something of the scope of the course.

Ens. Lockhart, like the 6,075 graduates before him, will complete advanced training and be designated either a Naval Flight Officer (NFO) or an Air Intelligence Officer (NIO).

NFO's comprise about one third of the aviation officers in the Navy. Their responsibilities are varied: Some are bombardier/navigators in A-6 Intruders; some, RIO's in F-4 Phantoms; others, navigators in the A-5 Vigilante or airborne early warning controllers in E-2 Hawkeyes; and still others are Tacco's aboard P-3 Orions.



AT LEFT, above, Ens. Lockhart is working out a navigation problem. Directly left, in the UC-45J multi-engine trainer, Ens. Lockhart assumes all the duties of the copilot except actual control of the aircraft. Above, he takes his position (right) at the end of the mile-long line of Basic Naval Aviation Officer School graduates.



AT NAF FENTRESS FIELD, A PILOT OF AN A-4 SKYHAWK USES THE FRESNEL LENS SYSTEM AS HE PRACTICES HIS FIELD CARRIER LANDINGS

A Day at Fentress Field

By JO2 Thomas A. Duncan

LTJG. MIKE WATSON, LSO, braces himself against the wind, watching the E-2A *Hawkeye* weave its way through air currents toward the deck. The pilot keeps his eye on the Fresnel lens as long training has taught him.

"Ball," crackles a voice on the LSO's radio. In one coded word, the pilot asks how his approach looks from the deck.

"Low," answers Watson, and the pilot adds power to correct. The smell of burning rubber tires fills the air as the plane strikes the deck and then takes off for another approach.

This landing is part of the daily routine at NAF FENTRESS FIELD, an outlying activity of NAS OCEANA, Virginia Beach, Va. The one mission of this auxiliary landing field is to train pilots for carrier landings. Operations go on day and night.

According to the Chief in Charge, ABCS Art Moegenberg, nicknamed Chief "Moe" by the men at Fentress, everything at the field is designed to simulate the conditions a pilot will meet when flying aboard ship.

"Our runway is 8,000 feet long with two carrier decks painted on it. We also have the landing mirrors and Fresnel lens." Identical to that on a

carrier, this equipment is the system used by a pilot to place his aircraft at exactly the right spot on the deck of a ship moving at over 30 knots.

"We even have the lights in the deck just as a carrier has," continues Chief Moe. "A pilot practicing night landings sees exactly what he would when approaching the stern of a ship. We do have problems with crosswinds here, but it's a little hard to turn our bow into the wind."

A typical day for the 33 men assigned to Fentress—each handpicked for his ability to work independently—begins with morning quarters at 0645. Then each man goes about his own tasks.

In the watch office, the facility's 24-hour nerve center, FN Harold Burnett listens for instructions by radio from the aircraft control tower at Oceana. Later he will answer calls from aircraft entering the pattern overhead. This particular morning, Burnett watches as a group of men training to become sea-air-land demolition technicians (SEAL's) practice their free-fall parachute jumps from a Norfolk-based *Trader*. SEAL's prac-

tice at Fentress two mornings a week.

Across the hall in the electronics shop, ET3's Ralph Yount and John Floyd are adjusting the station's navigational and communications gear. Working together, the men make periodic trips out to the field's portable gear to keep it in operating order.

Prior to the arrival of the morning's flights, some of the men are working on the new recreation hall. "We started on this place several months ago," says the chief over the sound of hammers. "So far the men have bought most of the supplies themselves." The club already has a name, "Outer Limits."

The main building at Fentress serves as office, working space, barracks and mess hall. The living spaces are good-sized furnished rooms. Some of the men have their own rooms, while others share. Here, and down the hall in the field's one-room gymnasium, is where the men spend most of their off-duty hours.

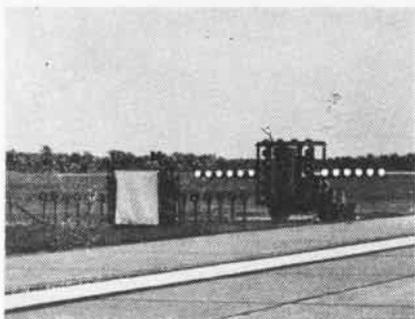
In the mess hall, there are no complaints about chow. The men brag to visitors that their base has the finest cuisine in the Navy. CS2 Lafayette Davis and another commissaryman, with the help of the mess cooks, pre-

pare meals in somewhat smaller quantities than those in most galleys. The food, according to the men, is "near perfection."

Outside, a group of men mount the hefty crane usually kept on standby in case of an accident. Today it is used to unload farm machinery brought in from Oceana. The equipment will clear land around the base's perimeter for lease to local farmers. The 80 acres now being cleared will make a total of 821.4 Fentress acres being used in this manner.

Presently, aircraft appear overhead. One detaches itself from the circling group, lands and drops Ltjg. Watson off at the LSO platform. Then the planes begin making their touch-and-go simulated carrier landings. This is the very reason for which Fentress Field exists.

Standing by the platform, next to the runway, Chief Moe instructs AN Jim Ramey in his job of assisting Watson. A man assigned to Fentress soon



AN OUTDATED mirror landing device stands covered beside the newer Fresnel lens system.

becomes an expert on how a good carrier landing should look. As a plane approaches, both men stop talking and watch it land.

"I think he caught the number seven wire on a six-wire ship that time," quips the chief.

"Looks like he needs some practice," answers Ramey. Then the instruction continues. Ramey goes over to the Fresnel lens, picks up a mirror on a

long pole and checks the accuracy of the lens. In the mirror a yellow line shines brightly between two rows of green lights. They are aligned; the system is operating properly.

"Ball," crackles a voice on the LSO's radio.

"Roger, ball," answers Ltjg. Watson, and the aircraft settles to a perfect landing.

"He's O.K.," Ramey grins and nods his head toward the plane. "I wouldn't mind riding with him."

Watson works his squadron's planes for an hour and a half and then departs for Norfolk aboard his own aircraft. At about the same time, another LSO arrives from Oceana and F-4's start bouncing. When they finish, A-6's come in. And so it goes, on into the evening.

Day in, day out, and night after night, Chief Moegenberg and his men at Fentress Field play an important part in preparing Naval Aviators for shipboard operation.



USING FENTRESS watch office radio, FN Harold Burnett keeps in touch with NAS Oceana control tower.



LT. PETE Peroni operates the landing lens and lights to notify the pilot of a C-1A aircraft from the carrier USS Forrester when he is to cut his power and land.



TRYING to catch up on some of his correspondence, ABAN Donald L. Haak begins writing a letter home during off-duty time in his room.



FENTRESS personnel "chow down" in the small station mess hall. According to the men, Fentress meals are "some of the best in the Navy."



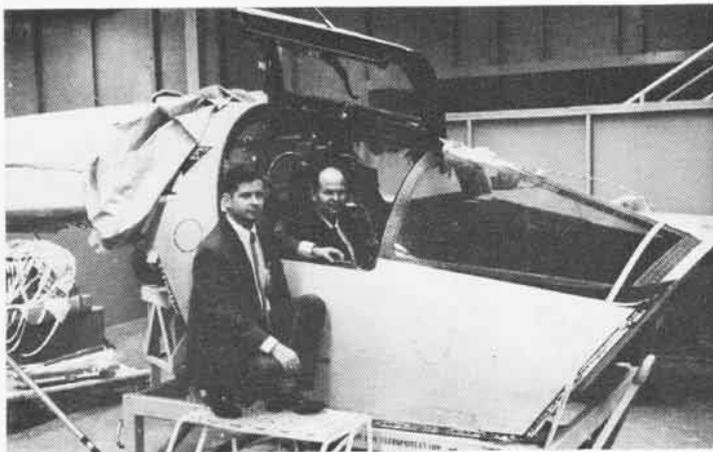
Extensive testing (left) and first emergency use of module (above after recovery) has proven survival capabilities. Automatic underwater escape is provided. If aircraft enters water, cockpit is severed, rises to surface, floats upright, insures safety from sharks.

Survival PACKAGE DEAL

By W. C. Thomas
Naval Air Systems Command

For most individuals pursuing successful escape from an inflight emergency, the opening of a parachute is considered to be an exhilarating climax to a tenuous situation. However, recovery of the Naval Aviator who ejects over water, particularly during inclement weather and especially at night, involves problems of exposure, flotation, communication, location and recovery.

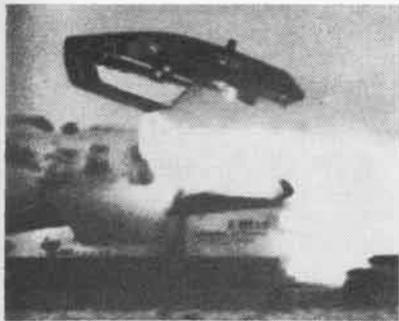
The pilot who egresses safely from a stricken aircraft by means of a conventional ejection seat may soon find himself again in jeopardy from the hazards of icy water and shroud line entanglement. Injury from wind blast, limb-flailing and exposure during both ejection and descent can greatly compound his problem.



Test pilots David Thigpen, F-111A aircraft commander, and Max Gordon, flight engineer, made aviation history in the first successful emergency use of an environmental cockpit escape module.

FOR THE first time, on October 19, 1967, the crew of a disabled, high-performance aircraft utilized a complete environmental protection system to achieve an emergency escape. Neither man wore a parachute. But General Dynamics pilots David Thigpen and Max Gordon rode the big crew-escape cockpit module of an F-111A over 27,000 feet to the ground and calmly walked away without a scratch.

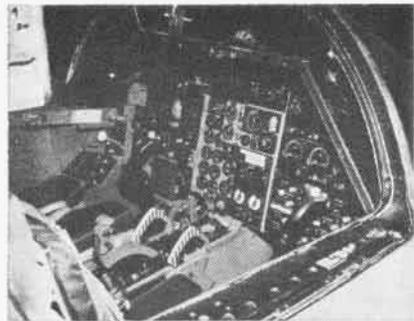
The use of the module represents a distinct technical breakthrough in aviation safety and is a source of gratification to the Navy which initiated development of the concept in 1948. A successfully tested F4D cockpit capsule was not incorporated into production owing to the weight penalty required for the structural separation. In 1957, the Navy con-



AT 800 knots, highest speed at which any escape system for operational aircraft has been tested, module separates from fuselage component on sled. During the actual escape, flight engineer Gordon pulled handle at .85 Mach with aircraft at 20 degrees nose up.



After ejection, pressurized module is stabilized by its glove section until recovery chute is deployed. Pitch flaps help achieve horizontal stability. The recovery chute controls rate of descent at 31 feet per second. F-111's chute deployed after drop to 15,000 feet.



Because of complete integrity following landing impact, recovered capsule could have provided crew with survival equipment and environmental protection. Module ejection resulted in the recovery of more than \$200,000 in undamaged equipment carried in the cockpit.

tracted for the design of a capsule for the F-8 which utilized an explosive charge to sever the cockpit from the aircraft by high speed burning of the integral structure, thereby requiring little or no weight increase. This advancement in the state-of-the-art resulted in Navy requesting the incorporation of a crew module in the multi-service F-111 in 1961.

In addition to providing a greatly improved survival and inflight escape capability, the module permits a superior crew operational environment by removal of conventional bulky and restrictive escape and survival equipment from the occupant's body. The re-design eliminates the space normally required to eject a seat through an overhead opening. A generous supply of survival equipment is stowed for use in long-term survival on land or sea.

The module also provides underwater escape in the event of a carrier flight deck accident in which the aircraft enters the water. The cockpit is severed at a maximum depth of 20 feet and floats to the surface where it is automatically rotated to an upright position by means of flotation bags. The module also provides protection against sharks.

The F-111 module in this recent accident recovered an estimated \$200,000 to \$400,000 worth of reusable cockpit equipment. It also provided the investigators with valuable information from the control positions and instruments, many of which remained in their positions at the time of ejection from the aircraft.

"We were flying supersonically at

about 40,000 feet when a malfunction occurred," Thigpen said. "I guess we had completed about 55 minutes of a routine Category I test flight.

"It was soon obvious that we'd have to leave the ship, so I told Max to go ahead and pull the ejection handle."

Gordon pulled the handle as the plane approached 27,000 feet, setting in motion the fast-moving ejection sequence.

Linear-shaped charges literally sliced the capsule away from the airplane. Microseconds later, the capsule's rocket motor blasted the capsule and its crewmen from 300 to 500 feet upward.

As the module entered the slipstream, a stabilization chute deployed. Assuming an exciting, but not uncomfortable, nose-down attitude, the module free-fell to 15,000 feet. During this phase, Thigpen gave a thumbs-up gesture to express his satisfaction, whereupon Gordon grabbed his hand and shook it. The opening of the giant main recovery chute—70 feet in diameter—and the repositioning of the module to a horizontal attitude was smooth and described as similar to a dip in a roller-coaster ride. At this point, the pilots again shook hands. Then, to clear the cockpit of residual smoke from the ballistic system, they opened both canopies.

Shortly after the big chute opened, impact attenuation bags deployed under the floor of the capsule. The air-filled bags cushioned the blow as the module fell to earth on a farm about 20 miles southwest of Bowie in west Texas. The module impacted the ground in a normal attitude in a pas-

ture and rolled over 130° due to drift on touchdown, remaining in an inverted position.

Thigpen and Gordon got out of the module and walked to a farmhouse about 500 yards away, where they notified officials of the incident.

"We were as comfortable as we could be, under the circumstances," Gordon said. "Naturally, we felt a hard, steady push of several G's when the rocket fired. And we felt a slight 'jerk' when the drogue chute opened and again when the big chute opened. We felt very little landing shock.

"During the fall, it was almost like flying in an airplane, since we were still in the cockpit. During the free-fall, we were in a fairly steep dive angle. I'll have to admit I felt some relief when the big chute opened, straightening the capsule and slowing the descent."

It was the first bailout for Gordon, a Marine Air Reservist, and the second for Thigpen who is in the Naval Air Reserve.

"I bailed out of an F-8 jet a year or so ago in a regular ejection seat," Thigpen said. "I'll guarantee you, the ride in the F-111 module was much more comfortable—and reassuring. The only injury incurred was when I pricked my finger crossing a barbed wire fence."

As Naval Aviation News went to press, word of a second successful use of the capsule arrived. Initial reports indicate the F-111A module escape system again functioned normally.



ON PATROL

with the Fleet Air Wings

Award Ceremony for a Crew

Members of VP-4's Crew Eight recently received Letters of Commendation from Admiral Roy L. Johnson, then CinCPacFlt. The awards were made for their action in detecting an ammunition-laden Viet Cong trawler while flying on Operation Market Time.

On the night of March 14, 1967, the crew of the P-3A Orion, patrolling ten miles southeast of Chu Lai, detected a surface vessel moving at high speed through the water without lights. The contact was reported to the destroyer USS *Brister* which had identified the vessel as "friendly."

But radar operator AX2 Raymond Mougey reported another contact nearby which was the "friendly" identified by *Brister*. When challenged, the vessel did not respond properly so the aircraft commander, LCdr. Kenneth Dankel, ordered it illuminated with the P-3A's powerful searchlight.

The trawler, riding low in the water,

was again reported to the destroyer which intercepted it and fired a warning shot over its bow. The gunfire was returned.

The *Skinny Dragon* crew tracked the trawler through the night. In the early morning hours, the destroyer and several *Swift* boats ran the enemy vessel aground and shelled it. A round from *Brister* found the trawler's hold. On the basis of the explosion, it is believed it was carrying a large shipment of ammunition.

Other members of Crew Eight were: Lt. S. D. Bone, copilot; Ltjg. B. R. Willey, navigator; Ltjg. F. L. Naylor, Tacco; and crew members AE2 R. E. Day, AE2 T. J. Templeton, AO2 R. E. Woods, AX2 L. M. Neward, AE3 J. W. Boehringer, AMS2 R. L. Boyer, Jr., AN J. B. Livingston and ATN2 M. D. Thompson.

All Alpha

VP-19, NAS MOFFETT FIELD, claims the highest recorded level of

readiness in the Pacific Fleet. All 12 of its flight crews are Alpha-qualified. According to a squadron release, this is the first time such a record has been achieved by a P-3 Pacific Fleet outfit.

The squadron had been working toward the record since its return from a WestPac deployment a year ago. The tremendous training effort that followed finally turned the trick.

Commander G. L. Page, C.O., said of the achievement, "Only through the coordinated efforts and professional ability of every single man in the squadron is a goal like this attained."

Moffett Squadrons Cited

At NAS MOFFETT FIELD recently, four patrol units were awarded the Navy Unit Commendation, the highest Navy award which can be presented to an entire unit.

FAirWing 10 and VP's 9, 19, and 47 received the commendation from Rear Admiral Donald Gay, Jr., Commander, Fleet Air Wings Pacific. They are the first land-based ASW patrol squadrons to receive the award since the Cuban crisis.

The commendation read, "For exceptionally meritorious service from March 19 through April 1, 1967 . . . displaying alert responsiveness, eager aggressiveness, flexibility, and unshakable tenacity, Fleet Air Wing Ten carried out a pioneer surveillance operation, dramatically demonstrating a new and heretofore unachieved capability."

Each man serving with these units during the citation period is authorized to wear the colorful green, red, yellow and blue ribbon.

Fleet Air Wing Ten and VP-47 are currently deployed to WestPac.

Liaison Visit to MOTU

During the annual exchange visit commemorating the "Battle of Britain," members of VP-30, NAS PATUXENT RIVER, were the guests of the Maritime Operational Training Unit



RECORD-MAKING TWELVE ALPHA CREWS OF PATROL SQUADRON 19 POSE BY SQUADRON P-3

(MOTU) at St. Mawgan, England.

The visit combined flight demonstrations of the P-3 with a training program oriented toward greater cooperation in the field of ASW training. VP-30 and MOTU have similar missions—the operational training of multi-engine ASW crews—and each presented lectures and films on techniques currently being used. The RAF unit is now training ASW crews in the *Shackleton*, a four-engine patrol aircraft.

VP-30 exhibited the P-3 during the Battle of Britain open house and air show held near Plymouth, England.

Germans Visit VP-30

A crew of six officers and 14 enlisted men, members of the German Federal Navy, recently landed their Breguet *Atlantique*, a UC-320, at NAS PATUXENT RIVER for a visit with VP-30. They were led by Korveten Kapitän Siegfried Herb.

This was the first operational exchange visit that has taken place between the Germans and VP-30. The two units discussed ASW tactics.

Commander L. R. Roberts is the commanding officer of VP-30.



INTERNATIONAL COOPERATION

TYPICAL of the cooperation between U.S. and Canadian ASW forces was the recent visit of a VP-8 crew, NAS Patuxent River, with RCAF 404 Squadron, Greenwood, Nova Scotia. Above right, Americans and Canadians attend a briefing. LCdr. John McCandless, leader of the Americans, discusses the working of a P-3 with a Canadian officer (center). Enlisted men display the spirit of the friendship that marked the visit, photo below.





SELECTED

Lesson in Helicopter Handling

A group of sailors who normally concern themselves with matters of the sea showed up recently at NARTU ALAMEDA to learn something about helicopters.

Led by Ens. Richard Neiman, helicopter officer of USS *Regulus* (AF-57), and BM2 McArthur Clayborne, the sea-going sailors from *Regulus* visited the NARTU's helicopter division to learn how to land an SH-34J aboard their ship.

LCdr. T. V. Carlos, NARTU helicopter program manager, lectured the group on proper signals and procedures for landing helo's aboard and then turned them loose for practical experience on the line.

Crew members got a close-up look at the SH-34J and an explanation of its combat potential and ASW capability.

Fringe Benefit

NARTU ALAMEDA has experienced little difficulty in attracting flight crews for the volunteer supply missions to Southeast Asia. Perhaps one of the reasons is that, on the 15,750-mile round trip, Reservists have an opportunity to seek out members of their families serving overseas.

On a recent trip flown by VR-874, three members of the crew located relatives at scheduled stops en route to Da Nang Air Base. At Agana, Guam, Darrel B. Trowbridge shook hands with his son, Alan, as he congratulated him on his promotion to AC2. On arrival at Da Nang, ADC Chester W. Schedlin was greeted by his grandson, Army Pfc. Terry Strickland. Then on the trip home at a rest stop in Atsugi, Japan, Commander Paul E. Traejo greeted his son, Leslie Lee, a communications technician.

Two Decades in Same Squadron

When LCdr. Alan R. Bedford, VS-872, landed his s-2D *Tracker* at NAS ALAMEDA recently, he was met by



FROM THE DECK of "Miss U.S.," Bill Muncney, hydroplane racing driver, lends support to Naval Aviation recruiting programs. Below are members of Alameda's "20-year" club.



three chief petty officers bearing glad tidings. He had qualified for membership in the exclusive "20 years in the same squadron" club.

LCdr. Bedford joined the squadron in 1947 as an apprentice seaman and qualified for flight training. In civilian life, he is a research engineer for Lockheed Missiles and Space Co., Sunnyvale, Calif.

In the picture below, the three chiefs who greeted LCdr. Bedford (right) are (from left to right): AFC Raymond H. Parodi, AOC John M. Weath and AFC Jack A. Warren.

Reserve ASW Exercise

Late last year, members of six Reserve activities participated in a Reserve ASW exercise off the coast of Virginia, near Norfolk.

Participating were personnel from NARTU MEMPHIS, NAS GLENVIEW, NARTU WASHINGTON, NAS NEW YORK, NAS WILLOW GROVE and NARTU NORFOLK, the host command in charge of the exercise.

Squadron crew members of SP-2E *Neptunes* and s-2 *Trackers* hunted two "enemy" submarines, USS *Sea Leopard* and USS *Carp*.

The exercise combined the efforts of the Air Reservists in the detection, identification and attack phases of ASW. The photograph on the back cover was taken during this exercise.

Antisubmarine warfare exercises are one of the phases of training necessary to keep the Naval Air Reserve a "Force in Readiness."

RDT&E Management Guide

WEPTU-665, NARTU WASHINGTON, D.C., recently presented a copy of the July 1967 edition of the Navy RDT&E Management Guide to the Assistant Secretary of the Navy (R&D), Dr. Robert Frosch. Commander Walter Morse, C.O. of the unit, and Lt. Richard Ireland, project coordinator, made the presentation.

AIR RESERVE

The RDT&E Management Guide is a manual for the organization and appraisal of RDT&E effort and provides guides and references concerning PPB (Programs, Planning, Budgeting). It incorporates the latest techniques of naval management as applied to the research and development effort. It also contains a review of the Navy directives system, classification systems and Navy RDT&E activities.

The updating of the manual started in 1965, but the reorganization of the Navy Department necessitated further revisions. The new edition represents a two-year coordinated effort of all members of WEPTU-665.

The new publication is available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402, or may be requisitioned by military organizations from Naval Supply Depot, Philadelphia, Pennsylvania.

Students Hold 'Wash-In'

Forty students from Fort Hunt High School, Alexandria, Va., recently held a "demonstration" at NARTU WASHINGTON, D.C.—with the approval of Navy officials. The "wash-in," as it was labeled, was the reverse of recent demonstrations.

The students were members of the school's all-boy Hi-Y and all-girl Tri-Y service clubs. Led by Presidents Ken Cook and Linda Goodwin, the youths turned to with mops and brushes to clean P-2 *Neptunes*. Ken said, "We got fed up with demonstrations against the nation such as the one at the Pentagon recently. We decided to show that we are behind our defense policy and the fighting men in Vietnam."

The idea of the wash-in was conceived by Dana Gath, daughter of CPO Robert J. Gath, a Naval Air Reservist. The task they chose is one of the less glamorous, yet necessary, maintenance jobs. All agreed that the "demonstration" was more fun than work.

For many of the teen-agers, this was their first close look at an operational military airplane.

Aviation History Buff Retires

The Naval Air Reserve Training Command lost one of the Navy's most avid aviation history buffs when the re-creator "in miniature" of the 35-year history of the *Red Rippers* and a 40-year history of Naval Reserve aviation retired in December at NAS NEW ORLEANS.

For anyone needing identification of

an aircraft replica or photograph, AT1 Clarence E. Doxstater is the man. His interest in aviation history began in 1961, but model building and his interest in art date back to childhood. He studied commercial art at the Los Angeles County Art Institute.

His *Red Ripper* replica and Naval Reserve Aviation series have been displayed at various Reserve activities and are slated for permanent display at NAS LOS ALAMITOS. Doxstater spent many hours building his Reserve aviation miniature museum. His replicas include aircraft flown by Reservists from the Curtiss N-9 to the F-8. All of the Reserve models were built after Doxstater reported to New Orleans in 1964.

AT1 Doxstater has produced art for publications throughout the U.S., the most notable being a series of drawings for two articles published in the American Aviation Historical Society *Journal*. These drawings showed the tail markings and associated designs for the F-8 *Crusader* and F-4 *Phantom*.

After serving in the Navy in WW II, Doxstater joined the Naval Air Reserves in 1947. He returned to active duty during the Korean Conflict and has served at Naval Air Stations Los Alamitos, Norfolk and New Orleans.



STUDENTS turn to and scrub a P-2 Neptune during their "wash-in" at NARTU Washington (left). AT1 Doxstater holds an N-9 and F-8 from his miniature museum (above).



John Steel

at Sea with the Carriers

PACIFIC FLEET

Constellation (CVA-64)

A seven-month combat deployment in the waters off Vietnam ended for *Constellation* and her 5,000 crew members and air wing personnel when the big carrier was moored to the quay at NAS NORTH ISLAND, across the bay from San Diego, Calif.

During the cruise, four of *Connie's* aviators were credited with MiG kills; pilots also flew more than 125 coordinated strikes against enemy targets, ten of them never hit before. Altogether, the pilots of the ship's embarked CVW-14 unloaded 15,000 tons of ordnance over Vietnam.

Connie had a new C.O. soon after she returned to the States. Captain William R. Flanagan relieved Captain John M. Thomas during a ceremony aboard the ship.

Ticonderoga (CVA-14)

Two child stars of the TV show, "Family Affair," joined more than 2,000 wives, children and guests of *Tico* crewmen for a "Family Day" cruise off Southern California. The special guests were young Johnnie Whitaker and Anissa Jones, who play "Jody" and "Buffy," respectively, in the "Family Affair" series.

When Captain Norman K. McInnis took command of *Tico* last November, the governor of his home state of Louisiana, John J. McKeithen, took special action to honor the captain, his ship and his crew.

The governor sent Capt. McInnis a Louisiana state flag; it was presented to the captain by Carl McCain, one of some 30 Louisianans who traveled to San Diego for the *Tico* change-of-command ceremony.

Gov. McKeithen also sent a personal

letter to Capt. McInnis, which read: "It is with a great deal of pride both personally and in my official capacity as Governor of the State of Louisiana that I congratulate you on taking command of the United States Ship *Ticonderoga*. Your state is proud of your record in the United States Navy and is especially proud of the fact that one of her native sons will command such a famous vessel. I wish you smooth sailing and a safe harbor."

Capt. McInnis hails from Sterlington, La.

Ltjg. Peter C. Hollub, VA-23, made *Tico's* 102,000th arrested landing in an A-4F *Skyhawk*.

Enterprise (CVA-65)

The *Big E* was designated "host ship" to the Australian carrier HMAS *Melbourne* when the ship from "down

under" pulled into San Francisco Bay for a five-day stay. *Enterprise* men did their best to make certain the Australians enjoyed their leave: They hosted the visiting sailors at parties, for instance, and took them on tours of the San Francisco area—including the Haight-Ashbury section. There, the neat, clean-shaven visitors gaped at dirty, barefoot hippies.

Hancock (CVA-19)

Hancock's new C.O. is Captain Howard E. Greer, who relieved Captain H. P. Streeper during an on-board ceremony held while CVA-19 was undergoing overhaul at Hunter's Point, San Francisco.

Kitty Hawk (CVA-63)

Kitty Hawk has been introduced to a new system of distributing aircraft parts. The Navy's Maintenance Support Package program has been introduced aboard. The concept consists of re-locating thousands of aircraft components from 25 different areas within the ship to two storerooms near the maintenance shops. Some 35,000 items, or half the repair parts aboard, were involved in the transfer.

Valley Forge (LPH-8)

Valley Forge's most recent petty officer and sailor of the month are CYN3 John A. Turner and SN Stephen H. Crumpacker, respectively.

Yorktown (CVS-10)

Yorktown men, readying their ship for a WestPac cruise, took time out to dip into their pockets to donate—to the tune of \$17,694—to the Combined Federal Campaign being held in the ship's home port, Long Beach.



TV STARS Anissa Jones and Johnnie Whitaker were aboard for *Tico's* Family Day.

Bennington (CVS-20)

After months of preparation and three weeks on standby in Hawaii, *Bennington* put to sea for a point approximately 275 miles east-northeast of Midway Island. Her crew's mission: recover the unmanned command module of the *Apollo 4*, launched on a test flight by NASA from Cape Kennedy.

The near-conclusion of the 8¾-hour test flight came for *Benn* men when they heard two sonic booms; a minute later, they spotted the spacecraft floating toward the sea underneath its three parachutes.

Swimmers jumped from helicopters to deflate the parachutes, after the module touched down, and attach a flotation collar. Then the spacecraft was hoisted aboard the carrier, and she was underway again—first to Hawaii to drop off her prize, then home to Long Beach, Calif.

Preliminary reports indicated that the *Apollo 4* and its *Saturn V* rocket booster did all they were supposed to do. A NASA official declared that all the goals of the mission "have been accomplished." *Benn* men had contributed to the U.S. space effort.

Captain Daniel J. Murphy is *Benn's* new C.O. He relieved Captain Richard Graffy during a change-of-command ceremony aboard the CVS.

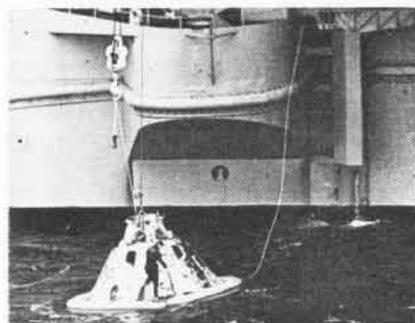


Coral Sea (CVA-43)

The crews of two helicopters from *Coral Sea* braved strong winds and high seas to rescue 37 Hong Kong Chinese sailors from the deck of a grounded Liberian freighter off the coast of mainland China.

The rescue operations came after *Coral Sea* steamed around the edge of Typhoon *Emma*, which passed approximately 150 miles south of the stricken freighter. The ship, *Loyal Fortunes*, smashed into Pratas Reef 170 miles southeast of Hong Kong early in the morning; a distress call was relayed to *Coral Sea* in the afternoon and she was diverted from her course toward Hong Kong.

Coral Sea's helicopters, piloted by LCdr. Norman L. Hancy and Ltjg.



BENNINGTON crewmen tackled the job of recovering the command module of the unmanned *Apollo 4* test launch as the U.S. resumed space operations. *Benn* crewmen recovered spacecraft 275 miles from Midway Island.

William J. Ruhe, made more than a dozen trips to the grounded freighter. Crew members of the ship were hoisted aboard and flown to *Coral Sea*. They were all in good condition.

Another *Coral Sea* helicopter pilot, Ltjg. Edwin Weigel of HC-1's Det. 43, made his 400th landing in a UH-2 *Seasprite*. At the same time, he logged CVA-43's 1,000th landing since the carrier left the San Francisco area last July 26.

For the rest of *Coral Sea's* CVW-15 pilots, the job at hand was to hit enemy targets in North Vietnam—and that's just what they did:

Taking advantage of a break in monsoon weather which had blanketed North Vietnam, they dropped a span of one bridge, heavily damaged two others and destroyed a pontoon bridge. They also obliterated two flak sites, damaged a building at the Sam Son Barracks and sank several boats.

They bombed a train running between Hanoi and Haiphong, destroying the locomotive and damaging all eight of its cars.

They struck another train just west of Cam Pha, destroying the engine and five boxcars.

They attacked the Dong Phong Thuong bridge complex 12 miles north-northeast of Thanh Hoa, and dropped the railroad span.

They bombed a truck park and sliced a road in two places 39 miles northwest of Dong Hoi.

They made a night attack against a supply area just north of the demilitarized zone that separates the two Vietnams, and they bombed a coastal defense site 19 miles northwest of Dong Hoi. They also sank three supply boats 39 miles north-northwest of Vinh, and dropped ordnance on a troop concentration two miles from the DMZ.

For *Coral Sea* pilots, the targets were widely spread and diverse and the job at hand was done with professional precision.

Along with the crews of several other Seventh Fleet ships, the men of *Coral Sea* have contributed heavily in time, labor and money toward the support of "Boys' Town," an orphanage built to house and care for wayward boys from the town of Olongapo. Olongapo is located outside the Subic Bay Naval Station, a regular "R&R" port in the Philippines for deployed ships.

Besides giving up their liberty hours to construct and improve the Boys' Town facilities, *Coral Sea* men donated \$1,000 to the orphanage.

Oriskany (CVA-34)

Steaming out of the Gulf of Tonkin aboard *Oriskany*, pilots of the ship's embarked air group had some appropriate descriptions as they looked back on the first two-thirds of their combat deployment. They found the time spent on the line "challenging," "exhilarating," "satisfying" — and "sobering."

One of them, Lt. Donovan W. Wood, had this to say: "At first it was very rough and I was a little shaky. But as we got used to going over the beach and working together, the edginess wore off and I began to understand and welcome the challenge. Of course, there's always some apprehension about the big strikes."

Lt. Wood and the rest of *Oriskany's* pilots had flown 144 major coordinated strikes over the northeast sector of North Vietnam. They had hit such targets as military facilities in Haiphong, Cam Pha, Phu Ly, Co Trai and Kien An. But the missions they mostly recalled were against the previously unhit airfield at Phuc Yen and the thermal power plant in Hanoi.

Heading for a short period of R&R, the CVW-16 pilots and the *Oriskany* crewmen who support them looked forward to the rare opportunity to unwind—but it still wasn't to be all play. LCdr. Jerry C. Breast, for instance, noted he had "a pile of paper work" to catch up on.

Arrested landings numbers 128,000 and 129,000 have been logged by *Oriskany*. The first was made by Lt. Thomas V. Lamay, VA-164, in an A-4 *Skyhawk*, the second by LCdr. Stuart E. Harrison, VF-162, in an F-8.

Two HC-1, Det. 34, helicopter pilots—Ltjgs. Dixon J. Anderson and Gerald E. Kuecker—logged *Oriskany's* 8,000th helo landing in a *Seasprite*.

Intrepid (CVS-11)

Aboard *Intrepid*, it's speed that counts. Take for instance:

During one day's operations in the Gulf of Tonkin, crewmen of the only CVS operating in a light attack capacity launched 33 aircraft of mixed types—jet and propeller-driven—for



a mission over North Vietnam. The planes carried more than 100,000 pounds of bombs, rockets and missiles. The launch was made in what *Intrepid* crewmen claim is a record time: 14 minutes, 52 seconds—or one plane each 27 seconds.

According to *Intrepid*, the launch mark bettered a record set by the ship a year earlier when 28 planes were catapulted off at the same rate. The *Fighting I's* skipper, Captain William J. McVey, said, "In all my years with Naval Aviation, I have never seen a more beautiful launch."

As if one new record claim wasn't enough, the day preceding the big launch was called "one of the most complex days of flight operations since *Intrepid's* arrival on Yankee Station in June" by the ship's air officer, Commander Robert J. Martin. He

pointed out that *Intrepid* and CVW-10 men launched and recovered more than 115 aircraft. CVW-10 pilots successfully completed three major strike missions; meanwhile, flight deck personnel recovered an EA-1F *Tracer* with one engine out, launched and recovered two C-2A *Greyhound* COD planes, conducted some 30 helicopter sorties and transferred 4,000 pounds of mail and 41 men by helo to other ships.

During this "normal" day, an F-4 *Phantom II* from another carrier made an emergency landing aboard *Intrepid* and was later launched—the first F-4 ever to fly from the *Fighting I's* flight deck.

"I've been acquainted with ten aircraft carriers in my 24 years in the Navy, but I have never seen a more flexible, beautifully operating CV," Cdr. Martin said. Then he amended the statement: "It couldn't be the ship herself. It's the men who man her and fly from her deck. They're the ones who deserve the credit." Well-deserved praise indeed for the speedy men of *Intrepid*.

The *Big I* was among the last ships to transit the Suez Canal before it was closed to traffic in the Israeli-Arab confrontation early last June. She made her first strikes on her second combat tour on June 21.

ABOARD *Oriskany*, flight operations are held off Vietnam as an F-8 *Crusader* is positioned for launch (left) before Lt. Ronald G. Roach, catapult officer, gives the "go" signal.



Just in time for New Year's Day, the big carrier returned to her home port, Norfolk, Va., the men elated to be back after the eight-month, action-packed deployment off the coast of north Vietnam.

Kearsarge (CVS-33)

"Here," "Aground" and "Help" were the words painted on the ship *Jin Yang* after she struck a reef in the South China Sea. And *Kearsarge*, just coming from a 21-day stay on the line off Vietnam, answered the ship's call for aid. Crewmen from HS-6 manned their helicopters to rescue 26 crewmen and the captain of the Korean vessel.

Tracker crews from VS-21 and VS-29 aboard *Kay* acted as the eyes and ears for Navy ships on *Sea Dragon* operations off North Vietnam. The job: gunfire spotting.

VS-21 pilot Ltjg. Ernest J. Krajsa and copilot Ltjg. Claude O. Bowling conducted spotting runs on the Xom Phong Bridge, six miles north of Dong Hoi, for the destroyer *Goldsborough*. The ship scored a direct hit on the bridge, destroying about 20 feet of the span, and blasted the southern approach with some 30 hits.

Later, the DD again called on VS-21, this time to locate waterborne craft reported north of Dong Hoi. Pilot Ltjg. Thomas O. Sprague and copilot LCDR. Bill J. Hale spotted three supply boats, which were destroyed or damaged by *Goldsborough's* guns.

Tracker aircraft assigned to VS-29, working with a Seventh Fleet cruiser, located three large groups of supply boats along the beach north of Hon Matt Island and more of the craft along a nearby river. The cruiser attacked the boats in the river, while A-1 *Skyraiders* struck the three groups on the beach.

Tripoli (LPH-10)

Tripoli suffered a mischievous sting in a rather delicate position when four members of the crew of the APA *Paul Revere* branded the LPH with the "sign of the Bunny" while both ships were at anchor off Vietnam.

Embarked in a small boat from *Paul Revere*, the four daring individuals proceeded to sneak up on *Tripoli's* fantail. They managed to paint a huge rabbit's head on the ship,

just above the waterline, before they were apprehended by *Tripoli's* security patrol. Tight-lipped despite intensive questioning by LPH-10's X.O., Captain George Prassinis, and a stay in the cooler on limited rations—ice cream—they were unceremoniously dressed in mattress covers and shipped back to *Paul Revere*. With them went this message from *Tripoli's* C.O., Captain William L. Adams:

"Have apprehended four people of questionable nationality in act of defilement. Presently awarded hotel accommodations our restraining container. Following interrogation, POW's claim affiliation *Rabette* [alias *Paul Revere*] and are characterized by soft fur, long ears and, right now, by bobbed tails. Doubt could belong to you since mission not in keeping with *Peter Rabbit* record of success. Intend return to you for admonishment. Was fun. Good trip home. Warm regards."

Ranger (CVA-61)

Ranger has rejoined the Seventh Fleet. Operations off Vietnam have begun. Aboard the ship is the first operational squadron flying the A-7 *Corsair II* in combat, VA-147.

CVA-61 is operating under a new C.O. He is Captain William H. Livingston, who relieved Captain William E. Donnelly, Jr.

Hornet (CVS-12)

Hornet was another ship whose crew contributed toward improvements to the "Boys' Town" orphanage in Olongapo. Her sailors donated \$1,663.

ATLANTIC FLEET

Shangri La (CVA-38)

Shangri La's wayward bell has come home. After serving as a museum piece for more than 12 years, the 600-pound ship's bell has been returned to its original home aboard the Mayport, Fla.-based carrier.

The bell arrived in Mayport after being airlifted from the Puget Sound Naval Shipyard in Bremerton, Wash. It had rested in the shipyard museum since 1954, after having been removed rather prematurely from *Shang* while the ship was decommissioned at Bremerton for a two-year modernization.

Shang was recommissioned in 1955

and returned to the Fleet, but the bell didn't go with her. Through an oversight, it remained at Bremerton—and *Shang* was forced to make do with a bell salvaged from a cruiser.

Then, one fine day, Ltjg. Bruce Kroger of the ship's operations department received a newspaper clipping from his grandmother, who lives in Seattle. It told the story of the museum, which had been moved to new quarters. In an accompanying photo, large as life, stood—guess what. The clipping was shown to *Shang's* C.O., Captain Robert P. Coogan, who gave the O.K. to start the action needed to get the bell back. Forthwith went a message to the commander of the shipyard requesting its return.

The shipyard was a bit reluctant to part with one of its prized museum attractions and inquired solicitously whether the addition of such a heavy object above the main deck and off the centerline of the carrier might upset the ship's stability.

Assured somewhat pointedly that an additional 600 pounds, more or less, was not likely to capsize the 43,000-ton *Shangri La*, the shipyard reluctantly gave up its prize.

Now the happy ending: The bell was flown to Mayport and was brought aboard the carrier with all appropriate ceremonies—including side boys. There may be only one party—other than the shipyard, of course—who might not have been overly delighted by the return of the bell. That's the ship's cook, CS1 Johnny A. Kimrey, who—in keeping with Navy tradition



SHANG'S wayward ship's bell is home again; CS1 J. A. Kimrey had metal polish on hand.

—drew the assignment of keeping all 600 pounds well-polished.

Essex (CVS-9)

A quarter-century on the line. That's what *Essex* sailors were saying of their ship, as they celebrated the 25th anniversary of the commissioning of the ASW carrier. The first in her class of 24 ships, *Essex* still carries on today in the tradition that caused Vice Admiral Fitzhugh Lee to comment, "In relation to her cost, her effectiveness has been superb; [she is] a fine example of mobile air power."

Essex's most recent sailor of the month is ASE3 Robert C. Dunemann.

Saratoga (CVA-60)

Saratoga returned to home port, Mayport, Fla., from a seven-month deployment with the Sixth Fleet in the Mediterranean. More than 31,000 cars, carrying an estimated 63,000 persons, passed through the Mayport Naval Station gates—en route to the

piers where *Saratoga* and the destroyers of DesRon 14 tied up. It was quite a homecoming for sailors and those who came to see them return.

Randolph (CVS-15)

Randolph's 81,000th arrested landing was made by an E-1B *Tracer* piloted by Commander Raymond A. Pettigrew, C.O. of VAW-121. Ltjg. Frank E. Putnam was copilot.

Forrestal (CVA-59)

Repairs to *Forrestal*, in the Norfolk Naval Shipyard after being damaged by fire and explosions off Vietnam, were reported about 25 percent complete by shipyard officials.

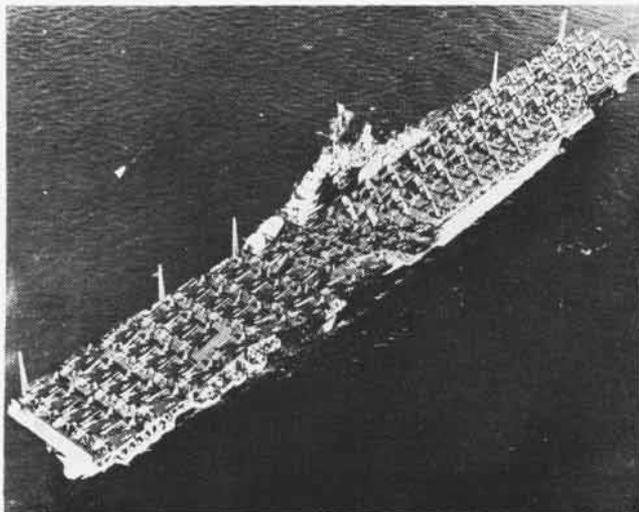
F. D. Roosevelt (CVA-42)

The Belgian national defense minister, Charles Poswick, took a ride in one of *FDR's* F-4 *Phantoms* as part of his visit to the ship while she operated in the Mediterranean.

FDR's 168,000th and 169,000th arrested landings were logged, respectively, by Ltjg. Larry Elberfeld, VA-12, in an A-4C *Skyhawk*, and by Ltjg. Sidney E. Linton, VA-172.

Another *Skyhawk* pilot, LCDR Donald D. Smith, VA-72, has logged his 500th arrested landing aboard *FDR*.

On the night of December 16, one of *FDR's* three air controllers, A. J. Byrd, completed his 1,000th CCA aboard *Roosevelt*. He came aboard *FDR* in February 1967 and completed 243 approaches before the ship's Mediterranean deployment last August.



A QUARTER-CENTURY of service by the ASW carrier *Essex* is typified by these two photos. Shot at left, taken in May 1944, shows the ship's straight flight deck crowded with aircraft and with gun mounts for-



ward and aft of the island. The photo at right, showing the CVS on station today, points up her new mission: Trackers on the deck seem poised for launch on an ASW mission. Angled deck increased capability.

Independence (CVA-62)

The Norfolk-based *Independence* dropped anchor in Hampton Roads, ending a week of sea trials and tests of the Navy's newest fire-fighting and refueling equipment.

Although the carrier was at sea primarily to determine if she was ready for Fleet operations (she recently completed a nine-month overhaul at the Norfolk Naval Shipyard), she was also used as a "test bed" for two new fire-fighting chemicals, a "double-probe" ship-to-ship refueling device and the use of her water washdown system as a fire-fighting device.

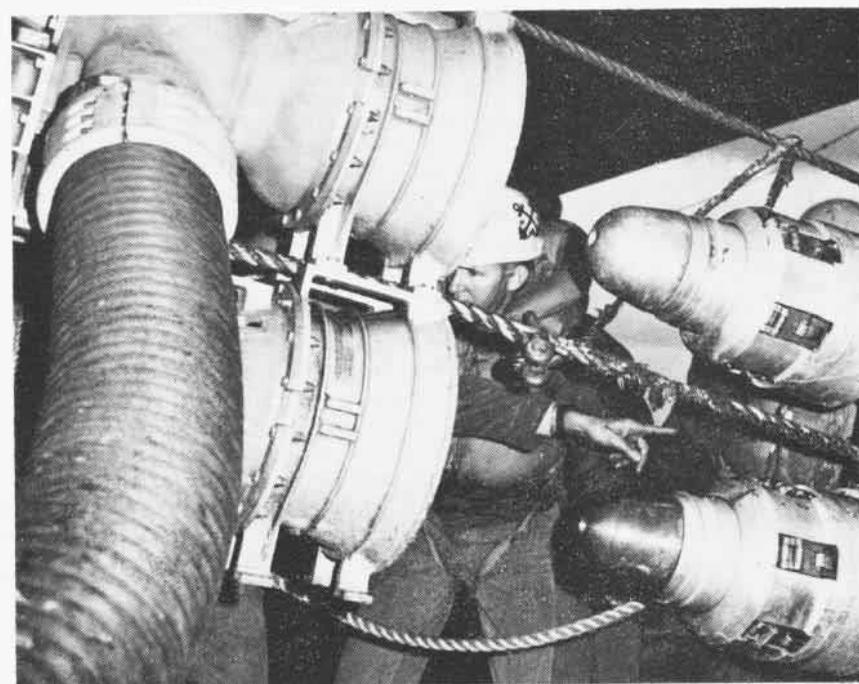
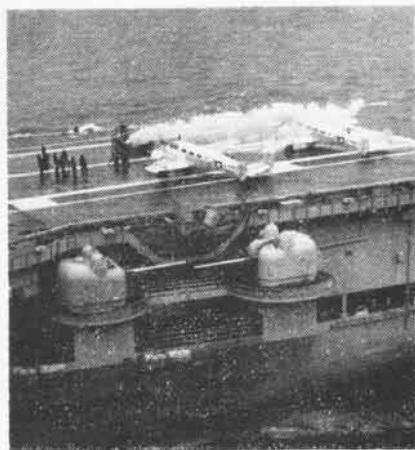
Tested aboard USS *Independence* were Purple-K-Powder and "Light Water," both developed by the Navy. The former is a dry-powder extinguishing agent, the latter a chemically-fortified liquid agent (NANews, October 1965 and January and October 1967). Purple-K puts out fires—especially fuel-fed fires—faster than any substance known; Light Water's chemicals cause the substance to float on oil or gasoline, enabling it to fight fires two ways: by smothering them and by keeping them smothered so vapors cannot re-ignite.

During some of the tests aboard CVA-62, a UH-2 *Seasprite* applied the Light Water. The rotor downwash of the HC-2 aircraft made the compound break up into a fire-smothering cloud of foam as it was dropped. Light Water came from below decks, too, as it was pumped to the flight deck through the ship's water washdown system, which was originally created to build a water curtain over and around the ship as protection against nuclear fallout.

Once perfected, spokesmen said, the mixing of Light Water and salt water—which is what is pumped through the washdown system—will permit the blanketing of either selected areas or the entire flight deck.

The "double-probe" refueling device also tested during *Independence's* at-sea period is the newest innovation of its kind. Unlike the present single probes, it uses two fuel hoses to cut down the time ships receiving fuel must remain alongside an oiler and allows almost instant breakaways without broken hoses.

"With old procedures, it took a man, a monkey wrench and too much time," according to a CVA-62 spokesman.



IN TESTS aboard *Independence*, a UH-2 *Seasprite* (top, left) sprays "Light Water" fire-fighting foam on junk aircraft; chemical agent was also used by crewmen on flight deck (top, right) and through washdown system (center). Other tests were held on a new double fuel probe.

THE M.R.N.

IN 1959 THE METEOROLOGICAL ROCKET NETWORK (MRN) WAS ESTABLISHED WITH SIX PARTICIPATING STATIONS TO PROVIDE SIMULTANEOUS PROBES OF THE STRATOSPHERE. AT PRESENT THE COMPLEX HAS BEEN EXPANDED TO INCLUDE OVER TWENTY STATIONS.



THE LAUNCH SITES EXTEND FROM THE CENTRAL PACIFIC TO SCOTLAND AND INCLUDE STATIONS IN HAWAII, ALASKA, CANADA, THE U.S., PANAMA, CARIBBEAN ISLANDS AND GREENLAND.

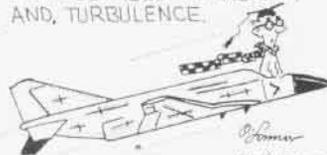


APPROXIMATELY TWO THOUSAND FIRINGS ARE MADE ANNUALLY WITH EACH SITE SCHEDULED TO FIRE AT LEAST ONE ROCKET DAILY, USUALLY AT NOON LOCAL TIME, TO ALTITUDES BETWEEN TWENTY-FIVE AND FIFTY MILES.



THE SMALL, SOLID PROPELLANT ROCKETS UTILIZED IN THE HIGH ALTITUDE METEOROLOGICAL STUDIES ARE CAPABLE OF CARRYING A TWO POUND PACKAGE OF INSTRUMENTS TO ALTITUDES IN EXCESS OF THIRTY MILES. THE PAYLOAD IS EJECTED AT APOGEE AND MEASUREMENTS ARE TAKEN DURING THE PARACHUTE DESCENT OF THE PACKAGE.

THROUGH THE USE OF ROCKET PROBES, IT HAS BECOME APPARENT THAT THE STRATOSPHERE, WHICH ORIGINALLY WAS THOUGHT TO BE MOTIONLESS AND RATHER UNINTERESTING, IS IN REALITY A REGION OF CONSIDERABLE VARIABILITY AND, TURBULENCE.



THE METEOROLOGICAL ROCKET NETWORK IS GLOBAL IN SCOPE BUT, AS YET, DOES NOT PROVIDE COMPLETE GLOBAL COVERAGE. HOWEVER, DATA FROM THE SYSTEM RIGHT NOW ALLOWS SIMULTANEOUS ANALYSIS OF THE STRATOSPHERE OVER THE WESTERN HALF OF THE NORTHERN HEMISPHERE IN SUPPORT OF LONG-RANGE FORECASTING PROGRAMS.



Marine Aircraft Wing Outstanding Achievement Trophy for the fourth consecutive year. Major General Hugh M. Elwood, CG of the wing, presented the trophy to Lieutenant Colonel P. H. Hitchcock, VMGR-252's commanding officer, during formal ceremonies held at MCAS CHERRY POINT, N.C.

The trophy was awarded for outstanding achievement and superior performance of duty during FY 1967 in Category III (transport and composite squadrons). During this time, the squadron flew more than 14,000 hours, air-lifting some 68,000 passengers and flying over 14,000 tons of cargo to points scattered across half the world.

As of August 1, 1967, '252 had logged more than 100,000 accident-free flight hours in the multimillion dollar KC-130 Hercules.



DUBUQUE WITH NEW HANGAR AMIDSHIPS

Retractable Helo Hangars Now Being Installed on LPD's

New telescopic helicopter hangars have been installed aboard USS *Cleveland* (LPD-7) and USS *Dubuque* (LPD-8), the Navy's newest amphibious transport docks. The new hangar, used for storing and servicing helos, increases the use of the aircraft on ships which otherwise are too small to provide the facilities for supporting helicopter missions.

The retractable hangar, 62 feet long when fully extended, 25 feet long when retracted, makes economical use of deck space. The heated and illuminated area increases efficiency of maintenance personnel, extends the life of sophisticated ground support equipment and protects the copter from the corrosive effects of salt water and fumes.

The new hangar will be installed on seven LPD's currently under construction and on LPD's 1-6, now in the Fleet.

FAA Sets Study Program Mid-Air Collisions are Analyzed

The Federal Aviation Administration has established a one-year study of the causes of mid-air collisions. This action is taken under the administrator's statutory mandate to promote safety in flight.

In order to encourage the report of each near mid-air collision during the year, persons involved in such cases will not find FAA taking any enforcement action, remedial or disciplinary, against them during the period of the

program. Furthermore, the administrator will, upon written request of the person making the report, withhold that report from public disclosure as well as the identity of the persons involved.

This policy applies to near mid-air collisions which occur from January 1, 1968, to December 31, 1968.

VMGR-252 is Given Trophy Marks Achievement for FY 1967

Marine Aerial Refueler/Transport Squadron 252 has received the 2d

Editor's Corner



WHILE her husband finds this aid to carrier landings useful professionally, Cecilia McTyre finds another kind of functional use. The touch-up was made during a VT-27 tour.

MIRROR, MIRROR ON THE . . .

When students' wives toured the spaces and facilities of VT-27, based at NAS Corpus Christi, pretty Cecilia McTyre discovered an entirely new use for the landing signal mirror. Cecilia, wife of Ens. H. E. McTyre, Jr., made a smooth "touch and go" of her own on the Cabaniss Field installation.

Cats Throw Shoes. Usually, shoes get thrown at cats. But on the USS *Ticonderoga* recently, the "cats" threw a pair of shoes—at 130 miles per hour.

By tradition, when a catapult officer leaves a ship, his flight deck shoes are his last launch. So the transfer of ASBMC William C. Metzler, who directed the launches of *Tico's* last strikes during Operation *Blue Lotus*, called for the ceremony. Chief Metzler, who had, so to speak, filled a commissioned officer's shoes, took them off, draped them over the shuttle of the steam catapult, and shot them off the flight deck into the Pacific Ocean. He is now assigned to Helicopter Training Squadron Eight, Ellyson Field.

GREAT RACE. To help promote contributions to the Combined Federal Campaign, VP-7's C.O., Commander J. H. Swadner, staged a race from the main gate of the Naval Air Facility, Sigonella, Sicily, to the NAF airfield, 9.3 miles away.

Commander Wenzel, the squadron's X.O., won, covering the rugged route in 84 minutes.

Special Handling. AA James Burnfin of VS-29, aboard the USS *Kearsarge*, recently received a cake with best wishes from his parents. The fragile parcel, originating in Missouri, arrived aboard the carrier in the Tonkin Gulf in good shape.

NEW FILLING. The largest "cavity" ever to be filled aboard the USS *Oriskany* required 150 pounds of dental stone and the assistance of three men. According to Commander W. J. Gorman, the carrier's dental department head, the brick-like substance is used to replace lost insulation beneath catapult cooling shields, temporarily eliminating potential fire hazards.



COMMANDER R. F. Wenzel at start and finish of VP-7's race from gate to airfield.



THAT OLD air stations never die is proved by this civilian Cessna 172 (above) which made a crash landing at NS Washington, formerly NAS Anacostia. At right, USS *Oriskany's* cavity is filled as dentist acts as advisor. At far right, AA Burnfin of VS-29 gets cake aboard USS *Kearsarge*.



LETTERS

A Letter to Lt. Wright

SIR: I just finished reading your article in the December issue of *Naval Aviation News*, pp. 6-9. Good stuff! Straightforward, personal, realistic—the same adjectives describe our meeting and decision last July in Washington. It is unfortunate that the average officer doesn't know how much attention and management goes into his detailing. I hope your visits, your article and your open telephone will bridge the gap.

Yale and I have mixed well . . . My only complaint is the lack of flight time—not for pay purposes but esthetically. One doesn't realize the "fun" of flying until it is denied.

Once again, thank you for the Yale billet and congratulations on a fine article.

PAUL P. DALEY

NROTC Unit
Yale University
New Haven, Conn., 06520

Fire-fighting Chemicals Rate High

SIRS: In regard to the article in *Naval Aviation News*, October 1967, pp. 12, 13, describing the combination of Purple-K-Powder (PKP) and "Light Water," I would like to point out that half the unit, the 400-pound air lift dry chemical, has been used in aircraft crash-rescue crews throughout the Navy since 1959-60 as a "first response, quick knock-down unit to protect personnel and aircraft and effect rescue."

Although PKP does need a blanketing agent if it does not completely extinguish the fire prior to emptying the unit, quick knock-down is what we wanted and quick knock-down is what we had. The first thing you learn in the fire service is: "What you do in the first 45 seconds is what counts."

The quick knock-down is accomplished by floating a cloud of PKP over a fire area. The size of this cloud depends upon the operator and the size of the unit. It can be kept small or made large, and the wind will carry it over the fire and knock down the flame and heat.

This flame and heat are what burns pilots and crewmen and explodes bomb and fuel tanks, thereby enlarging the fire.

For years now, we in the Fire Service have praised the quick knock-down effect of Purple-K-Powder and in the past year have gratefully thanked the few believers that developed and pushed "Light Water" through to its present state.

I have two important questions: Why must fire safety equipment be purchased under a "blood priority"? The Fire Service is like an orphan operating under a "Don't bother me until I need you" attitude! And—How much money will the operating Navy provide for training fire fighters in the efficient use of the new "Light Water" and "PKP" agents? Don't forget that the "flat open" operating of a shipboard Twin Ball Fire Fighting Unit costs about \$108 per minute during the extinguishment of a "live" fire drill. We must find this money without selling the lives of our shipmates.

Fire-fighting schools need increased quotas. Fire fighters need more than reading and lecturing. They must be properly trained in live fire drills or they will be only half trained.

V. J. REPACI, ABHC

V-3 Hangar Deck
USS *Boxer* (LPH-4)

†*Naval Aviation News* has consistently supported the PKP/Light Water development, running special articles in the October 1965 and January 1967 issues in addition to the article on shipboard use in October 1967.

Auxiliary Field Logs Record Guides 200,000th Safe Landing

The U.S. Naval Auxiliary Landing Field, Charlestown, R.I., reached a milestone in December when the 200,000th accident-free landing was made on the airfield by a Quonset Point-based aircraft.

Ltjg. Alden G. Haskins, pilot, and LCdr. Gerald A. Sappenfield, copilot of VS-34, made the landing in an S-2E.



AOC BENNIE A. Juell and the "Juel Loader" for which he has received an \$800 award. The loader is primarily used to arm F-4B's with Sparrow III's (NANews, May 1967, p. 37). The loader has saved the Navy approximately \$50,000 in its first year of operation. Juell designed loader while serving in VF-33.



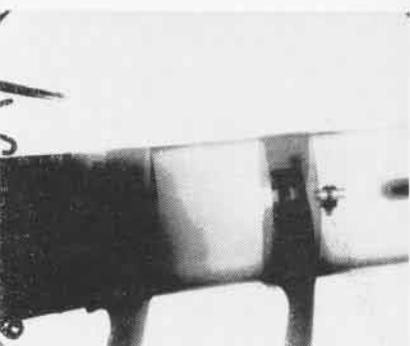
A GREAT WELCOME was given two squadrons returning from Vietnam action to Whidbey Island late in 1967. At left, Cdr. Thomas P. Stewart, C. O. of Heavy Attack Squadron Eight, and Cdr. Edward C. Bauer, VA-196, stride up the red carpet. VA-196 is the first A-6A squadron to deploy from Whidbey. VAH-8 flies the A-3 Skywarrior tankers.



AT NAS ALAMEDA'S Aircraft Maintenance Department, the "bones" of aging Beechcrafts are examined and X-rayed for structural damage. AMI's C. T. Packer and H. V. Parks, specially-trained X-ray technicians, are the only personnel allowed to operate the equipment. They rope off a 100-foot X-ray area and position the camera over the wing



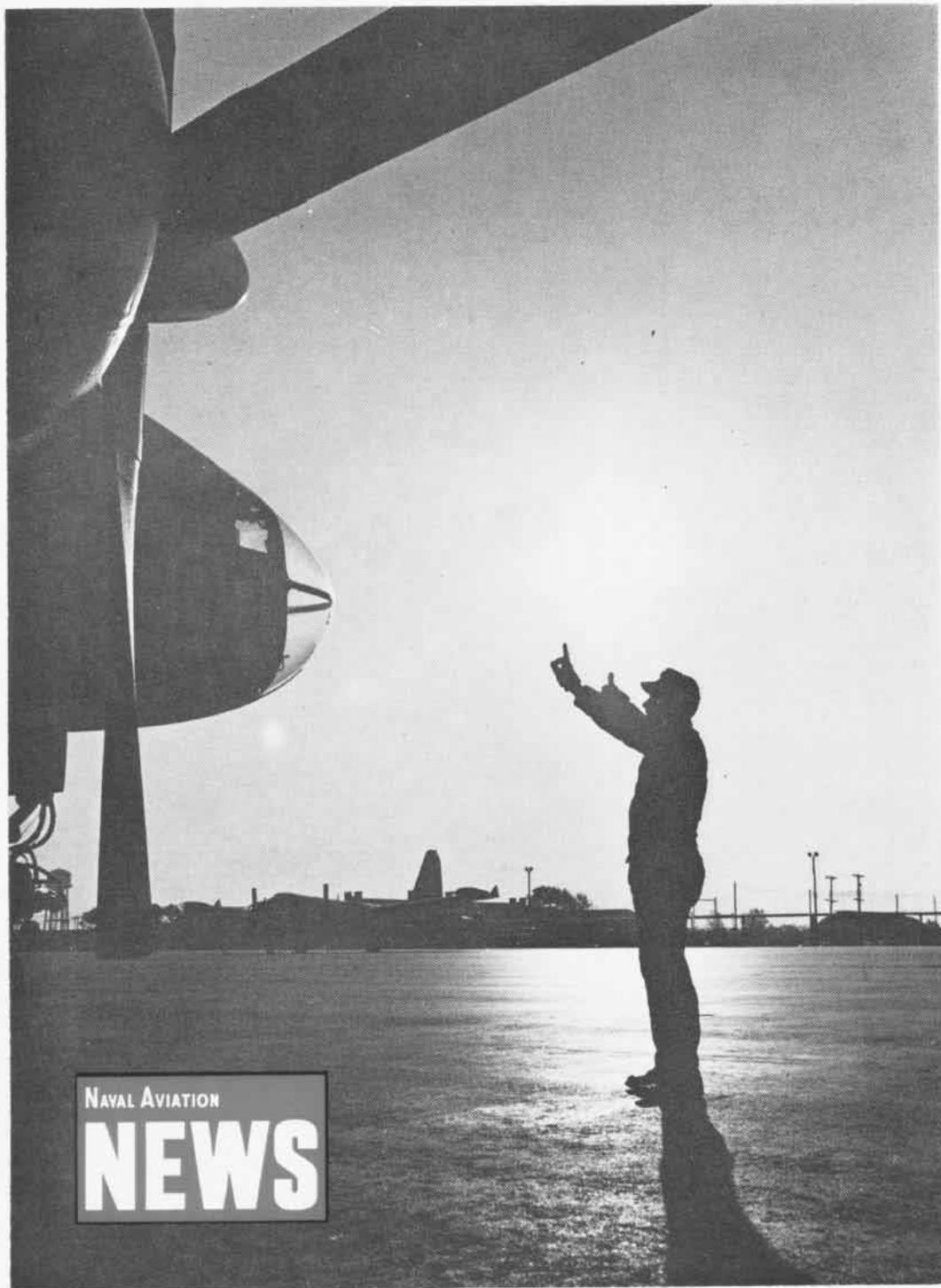
with a fork lift. At left, Packer checks camera placement. Then the film is taped to the bottom of the wing. The area is safety-checked with a Geiger counter and the camera is activated from behind the ropes. Center photo shows Parks reading a negative. The film (right) of the inside of a Beechcraft's main spar indicates there are no defects.





Weapons Systems Test Division, NATC Patuxent River, Md., commanded by Captain L. J. Reinhart, evaluates all aircraft weapon systems to determine their capability, reliability and acceptability for service use.

ALERT AND CONFIDENT



This shadowed quiet warrior of the Naval Air Reserve symbolizes the powerful add-on component available to the Fleet. In readiness are 30,000 trained Selected Air Reservists. All of these civilians, month after month, give the nation their time, skills and loyalty.