

NAVAL AVIATION

NEWS

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NAVAL AVIATION NEWS

FIFTY-FIFTH YEAR OF PUBLICATION

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COVERS — This month's front and back covers are the work of JOC Dick Benjamin. The front cover of former POW LCdr. Edward Davis and his dog, Ma Co, was taken during an interview at Bethesda Naval Hospital (page 2). The photo of ATN2 E. Richard, radio operator aboard a P-3, on the back cover, was made en route from Bermuda to Patuxent River (Bermuda Weekend, page 8). This ready-to-go Phantom is part of the Enterprise story (page 32).

EDITOR'S CORNER



We sat waiting for them in a darkened theater, one old enough to have an asbestos curtain rolled up and hanging above its flood-lit stage.

Center stage, three tables were arranged with clusters of microphones, their cables draped over the side and running under the theater seats to the movie cameras assembled midway in the center row. On one gray wall of the theater hung a large set of chimes of the type which once preceded the dimming of the house lights, the raising of the curtain and the beginning of the feature. It seemed appropriate that this relic from another era should dominate that wall; perhaps they would see it as they entered and it would strike a familiar comfortable note.

But chances are they didn't see it when they first entered. Preceded by a whispered "Here they come," they stepped out of the dark in the back of the theater and into the brilliant glare of attention. Eyes front, the three naval officers filed down the aisle, mounted the stage and took their seats behind the tables. As a voice introduced Captain Wendell B. Rivers, LCdr. Wendell R. Alcorn and LCdr. Edward A. Davis, we studied the faces of the three former prisoners of war for some trace of the eight-year ordeal that each had undergone. They were part of the first group of returned POWs and were giving their first press conference at the Naval Hospital, Bethesda, Md.

As one officer smoked nervously and the other sat stock still, the gray-headed captain laid the ground rules for the press. Good friends and shipmates still remained "back there"; so, for obvious reasons, no

questions, please, concerning the details of capture or captivity. We understood. Our initial questions were pro forma: How does it feel to be back? How do you account for your excellent mental health and physical condition? Where did you get that dog, Mr. Davis? What are your future plans?

Their responses were in turn, enthusiastic, thoughtful, simple and predictable: Great!; we stayed active; he just wandered into camp one day; each plans to remain on active duty, the two younger men hoping to regain flight status.

But after that, what do you ask men who have been cut off from their native land for eight years? What questions do you have for returning men who left their country during what many claim were more innocent times? We sought answers to questions about our country and ourselves, how we have changed, what we have become and why.

They answered as best they could, the three men from eight years ago, themselves trying to reconcile and cope with their memories and realities, old dreams and new facts. And as the questions and answers continued, it occurred to us that perhaps it should be us answering their questions.

"I am not sure what really happened in this country," one officer finally reflected. "We have a lot of catching up to do." And so it seems, do we. Until we have all had a period to balance our realities with our dreams, we can only echo the words spontaneously uttered by one reporter, "We hope you all know that we are so damned glad to have you back again!"



Fleets Announce Battle E Winners

WASHINGTON, D.C. — The Commanders Naval Air Force, Pacific and Atlantic Fleets have announced the carriers and squadrons which have won Battle Es for the latest competitive cycle.

Judged the best Pacific Fleet attack carrier was *Enterprise* (CVAN-65) which also captured departmental awards in engineering and supply. *Ticonderoga* (CVS-14) was also awarded a Battle E, and captured departmental awards in all categories. Other ship departmental awards went to *Constellation* (CVA-64) for CIC and air, and *Kitty Hawk* (CVA-63) for communications and weapons.

Pacific Fleet squadron winners are: VFs 24 and 96, NAS Miramar; VAs 27 and 164, NAS Lemoore; VA-52 and VAQ-131, NAS Whidbey Island; VP-22, NAS Barbers Point; VS-35 and VAW-116, NAS North Island; and HS-4 and HC-1, NAS Imperial Beach.

The Atlantic Fleet Battle E for attack carriers is being shared by *J. F. Kennedy* (CVA-67) and *Saratoga* (CV-60). *JFK* also won departmental awards in engineering, weapons and medical, while *Sara* won the awards for communications and aircraft intermediate maintenance. *Forrestal* (CVA-59) captured the departmental award for operations; *America* (CVA-66) the award for air, and *F. D. Roosevelt* (CVA-42) the award for supply. *Intrepid* (CVS-11) won departmental awards in air and supply in the CVS category.

Atlantic Fleet squadron winners include: VF-31 and VA-35, NAS Oce-

ana; VA-37, NAS Cecil Field; RVAH-7, NAS Albany; VAW-123, NAS Norfolk; VS-27 and HS-7, NAS Quonset Point; VP-16, NAS Jacksonville.

Bronze Hammer Awards

WASHINGTON, D.C. — The Chief of Naval Operations, Admiral Elmo R. Zumwalt, Jr., recently announced the winners of the Navy's first Self-Help Bronze Hammer Awards. Adm. Zumwalt established this program to recognize those activities which have done the most to improve personnel habitability ashore, using their own resources and the assistance of Navy Seabees wherever possible.

The awards are based on the size, type, complexity and variety of projects and the spread of benefits to the activity.

Aviation winners are: NAS Miramar, Calif., and NAS Fallon, Nev. Special awards went to NARU Lakehurst, N.J., and Fighter Squadron Eleven, NAS Oceana, Va.

Rear Admiral Walter M. Enger, Chief of Navy Civil Engineers, administers the Self-Help Program.

Ship Handling Competition

NORFOLK, Va. — Commander, Naval Air Forces, U.S. Atlantic Fleet, has announced the winners in the annual Ship Handling Competition for Atlantic Fleet carriers. The winners competed with other officers on their respective ships.

The purpose of the competition, established by ComNavAirLant in 1972, is to cite outstanding officers for their ability to handle the ship in a variety of real and simulated conditions, including navigation and piloting, anchoring, getting underway, tactical maneuvering, flight operations, positioning for replenishment and during an emergency.

Winners are judged by the commanding officer, navigator, and a senior officer of the deck who is not entered in the competition. Each competitor is evaluated on his preparation, judgment, accuracy and skill in controlling the ship.

This year's winners are LCdr. Ronald Baker, *America*; LCdr. Lee Eyer, *J. F. Kennedy*; Lt. Tom Colyer, *Saratoga*; Lt. Charles Batson, *F. D. Roosevelt*; Ltjg. John Maher, *Intrepid*; and CWO James Wiggins, *Lexington*. *Forrestal* and *Independence* were not entered in the competition.

VT-28 Safety Record

CORPUS CHRISTI, Tex. — Training Squadron 28 has completed over four years of accident-free flying, amassing more than 105,000 flight hours during that time. Rear Admiral James Ferris, Chief of Naval Air Training, recently presented VT-28 the CNATra Accident-Free Year Award in recognition of the squadron's latest in a growing string of accident-free years.

The squadron has accumulated a number of awards during the four years, including three Chief of Naval Operations Aviation Safety Awards. VT-28 is commanded by Commander Darrel E. Westbrook, Jr.

Brewer Field Dedicated at NAS Agana

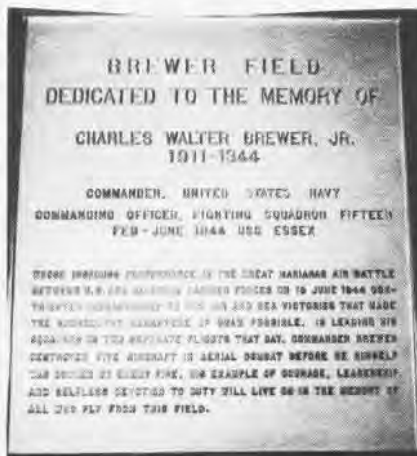
AGANA, Guam — In a dedication ceremony on February 15, the airfield at the naval air station was named in honor of Commander Charles Walter Brewer, the Naval Aviator who distinguished himself in the great carrier air battle that took place near Guam prior to the island's recapture from the Japanese.

In command of Fighting Squadron 15, Cdr. Brewer led two separate flights that day, June 19, 1944, destroying five aircraft before he was downed near Guam by enemy fire.

June 1944 was an eventful month. The invasion of Saipan by American forces began on June 15 and triggered a strong reaction by the Japanese carrier striking fleet, as Saipan was then the Japanese administrative equivalent of Pearl Harbor. A major naval battle followed June 19 and 20. Certain factors favored the Japanese — the greater range of the Japanese aircraft, the direction of the prevailing wind and the fact that the Japanese could increase the effectiveness of any given number of aircraft by shuttling them from their carriers to Guam, which they then held. The fate of the battle rested ultimately on the skill and courage of Navy carrier pilots. Of those who participated in the battle and helped ensure its success, none distinguished himself more than Cdr. Brewer, C.O. of VF-15, aboard *Essex*.

It was Cdr. Brewer who intercepted the first large raid from the Japanese carriers, 16 *Zero* fighters, 45 *Zeros* carrying bombs and eight *Jill* torpedo planes. In this initial engagement, Cdr. Brewer downed four planes. Late in the afternoon, Cdr. Brewer and his flight of seven aircraft were patrolling when they were jumped by about four times as many *Zeros*. They managed to cut down the odds but in doing so Cdr. Brewer and two others were shot down. By the time darkness fell, the skies over Guam were clear of enemy planes and victory was so complete that the Japanese did not again engage on such a scale.

Captain W. W. Bowers, commanding officer of NAS Agana, said of the naming of Brewer Field, "Of the more than 400 American fighter pilots who participated in this battle none was more effective than Commander Charles Walter Brewer in thwarting



the Japanese attack. It is thus entirely fitting that this naval air station should bear his name in honor of his ultimate sacrifice in making its recapture possible."

The speaker at the dedication ceremony was Cdr. Brewer's former wingman, Rear Admiral R. E. Fowler, who expressed his belief that "We can best do him honor by renewing our own appreciation and our own dedication to those principles of patriotism, courage and unselfish service which he so perfectly represented."

The airfield was first commissioned Naval Air Base Agana on October 20, 1944, having been captured from the Japanese on July 30, 1944. It was redesignated Naval Air Station, Agana on January 1, 1946. Since 1951 it has served as the Search and Rescue Coordination Center for the Marianas area and, during the Vietnam conflict, it also provided logistic support for Navy, Marine, Air Force and Coast Guard units.

NRL Uses Radon 222

WASHINGTON, D.C. — Scientists at the Naval Research Laboratory's Ocean Sciences Division have developed a technique using an atmospheric gas, Radon 222, to determine the source of areas of air masses.

NRL investigators say fundamental knowledge of cloud and fog formation is necessary for improving the accuracy of weather forecasting and developing means for cloud and fog control.

Since the sources of Radon 222 are

primarily from diffusion of this rare gas from land areas of the earth's surface, measurements of abnormally high Radon 222 help to identify air masses which have recently traversed land areas. The NRL technique has been used to determine the types of air masses as related to marine fog characteristics.

More Vikings Ordered

BURBANK, Calif. — The Navy has announced the purchase of 35 more Lockheed S-3As in a follow-on buy to the first 13 production *Vikings* ordered in April 1972.

This purchase brings to 56 the total number of the carrier-based, twin-engine subhunters ordered by the Navy, including eight research and development aircraft currently being used in the S-3A flight test program. The eight test aircraft have accumulated more than 1,000 flight hours in approximately 600 flights.

Delivery of the 13 aircraft ordered last year is scheduled to be completed in March 1974. The first two *Vikings* ordered in the current buy will be delivered the following month. The rate will then be increased to three a month during May, June and July 1974 and to four a month thereafter until deliveries of this order are completed in January 1975.

The *Viking* passed the most difficult of five scheduled technical milestones in January when Navy test pilots and engineering personnel flew four of the aircraft for more than 100 hours during the third Navy Preliminary Evaluation (NPE III). NPE III was considered the most difficult because the aircraft's performance as a total weapons system, including its sophisticated antisubmarine avionics systems, was evaluated for the first time in an operational environment.

The S-3A completed a series of flutter tests in March which cleared it to fly at its maximum speed carrying any of the external stores designed for it, opening the total flight envelope for other *Viking* test aircraft.

Other recent flight test activity includes air-to-air refuelings and ordnance drops, carrier suitability tests and ASW exercises with submarines off the California coast.

The next formal Navy evaluation of the S-3A is scheduled for this month.

and will extend the flying qualities evaluations conducted in previous NPEs. The last NPE, scheduled in August, will include a thorough evaluation of all aspects of the ASW systems. It will determine the readiness of the *Viking* for its Board of Inspection and Survey trials, the formal Navy acceptance tests required prior to the S-3A's introduction into the fleet.

Vanguard I Counts 15

WASHINGTON, D.C. — Earth's oldest man-made satellite marked its 15th anniversary in space on March 17. Designed and developed at the Naval Research Laboratory, the three-pound, grapefruit-sized *Vanguard I* was launched on St. Patrick's Day, 1958, and has orbited the earth more than 58,000 times since then. Space experts estimate it may remain in orbit until about 2250 A.D.

Russia's *Sputniks I and II* and our own *Explorer I*, launched prior to *Vanguard*, dropped out of orbit and disintegrated long ago.

Vanguard I was initially powered by solar energy and provided a wealth of information on the size and slight pear shape of the earth, air density, temperature ranges and micrometeorite impact. Because of its stable orbit, cartographers have redrawn more accurate maps of some islands in the Pacific Ocean.

Although its solar energy is now exhausted, *Vanguard I* continues to provide data concerning the effects of the sun, moon and atmosphere on satellite orbits.

The successes of NRL's space grapefruit set the pattern for many other space ventures, including cosmic ray and solar phenomenon studies and support for NASA's forthcoming *Skylab*.

HML-167 Sets Record

MCAS NEW RIVER, N.C. — Lt. Dave L. Bureau's morning flight in a UH-1N on February 23 advanced HML-167's aviation safety record by putting the squadron over the 20,000 accident-free flight hour mark. HML-167's previous achievements in aviation safety brought it the 1972 Fleet Marine Force Atlantic Aviation Safety Award and Chief of Naval Operations Aviation Safety Award.

Aviation Pioneer Visits Pensacola

NAS PENSACOLA, Fla. — In an age of supersonic jets and footprints on the moon, William L. Coleman, Sr., can remember the Navy's first attempts to conquer the skies.

Coleman, 85, enlisted in the Navy in 1911. When he left, nine years later, he was a chief machinist's mate, an expert in lighter-than-air (LTA) balloon programs and a designated student aviator. And somewhere in his short but full career, he found time for experimental work with Thomas A. Edison.

Coleman's experience with balloons and aeroplanes began when he reported in 1916 to the Naval Aeronautic Station Pensacola (later renamed naval air station in 1917). As an aviation machinist's mate, one of his duties was making hydrogen for the balloons based there. "Any little spark, even static electricity, could set that gas off," Coleman remarks. "They used to have a sign in one of the balloon hangars that read, 'Don't clap your hands, you might explode.'"

The vintage aviator's contact with flying machines wasn't limited to balloons. He also worked with the first working plane catapult and with early planes such as the AB-2 flying boat and the AH-3 hydro-aeroplane.

In the early 1900's, NAS Pensacola was literally the "Cradle of Naval Aviation." Young pilots such as Whiting,

Bronson and Chevalier were making names for themselves in aviation history. Coleman remembers: "I knew them all and they were fine men. They were always kind to me." He especially remembers Chevalier, the "Happy Frenchman."

Perhaps the most exciting experience of Coleman's Pensacola tour was a cross-country flight in a 35,000-cu. ft. hydrogen balloon.

The day before Coleman's party was scheduled to depart Pensacola, another five-man balloon team began its free-flight journey. The men in that balloon were never seen nor heard from again.

Still, Coleman and his four fellow balloonists made their ascent. "In ballooning, you can't pick your destination," Coleman says. "You just go wherever the wind blows you." The next day the five men landed safely in a cornfield in Murdock, Ill.

Coleman spent many hours in LTA ground school and dirigible school. His training included dirigible flights and landings, instruction in kite balloons and even a course in carrier pigeons.

Finally, in 1919 he was designated a student Naval Aviator by the commanding officer, Naval Air Station, Key West, Fla. It was there, as the station engineering officer, that he had the privilege of working with Thomas Edison.

"We were trying to develop a process to temper copper," reminisces Coleman. "Mr. Edison was sure that at some time in history man had known the secret and lost it. In a way, we were trying to rediscover a lost art."

In 1921 Coleman left the Navy, a decision he now regrets. "I wish I had stayed in with my old flying buddies. Yes, sir, I sure wish I would have stayed."

Recently, Coleman was recognized as a Naval Aviation Pioneer by Captain William S. Jett III, commanding officer, NAS Pensacola. In an informal ceremony, Capt. Jett presented Coleman with a plaque that read in part, "... Mr. Coleman's efforts have established his place in history as one of the foundations upon which the mighty air arm of the United States Navy is built." A tribute to one of the few remaining men involved in our country's first steps towards the stars.



Capt. Jett and Coleman look at old photos.



GRAMPAW PETTIBONE

ILLUSTRATED BY *Osborn*

To the Rescue

After receiving a call from the operations duty officer, the UH-1N *Huey* returned to base to refuel and launch on a SAR mission. During refueling, the pilot and crew were briefed on the proposed rescue — to recover a woman suffering from shock and exposure at the 13,000-foot level of a nearby mountain. The crew was to stop en route and embark a Park Ranger to assist in locating the victim.

Due to the altitude of the proposed site, the helicopter was stripped of all unnecessary equipment. As the precise physical condition of the victim was unknown, it was decided to include a medical officer in the crew, which is not normal in a routine rescue mission. Because of this added weight, the pilot's ability and experience, and the demonstrated capability of the aircraft, it was decided not to use a copilot.

The helicopter was turned up and all conditions for flight were normal. The helo launched at 1051. Upon arrival at the first pickup point, two crewmen were disembarked to decrease weight and the Ranger was taken aboard. He was placed in the left front seat in order to direct the pilot to the rescue site. Upon arrival at the rescue site (elevation approximately 13,800 feet MSL), two passes were made to check terrain clearance, power available and wind. It was determined that the terrain at the rescue site required a 75 to 100-foot hoist operation to effect the rescue.

The pilot elected to land elsewhere first and let off one more crewman to

further reduce weight. He selected a meadow near a lake about two miles from the rescue site.

He made several passes at the meadow to again check for wind and power available. It should be noted here that the meadow was in a valley running east and west, with higher terrain to the east. These trial passes were made from west to east. The pilot then attempted to land using the same route of approach as he had previously. Transition to hover was without difficulty with all instruments normal.

At this point, the first crewman



Osborn

reported miscellaneous camping equipment from a nearby camp being blown about by the rotor wash. The pilot made a slight right turn (less than 45°) in an attempt to observe the hazard. Failing to locate it, he elected not to land. He commenced transition to forward flight, turned back to the original heading, east, and proceeded along the edge of the lake. After 50 to 100 yards of forward movement, the low RPM warning light and audio tone came on. The pilot noted 92 percent rotor RPM at this time. He immediately selected max beep (maximum available rotor rpm), lowered the nose and noted the airspeed at 45 knots.

Somewhere in this time frame, the pilot reported to the crew that they were in trouble. The RPM appeared to hang at 93 percent for a moment and then continued to decay. The helo momentarily maintained constant altitude above the ground. It was now apparent that it was going to hit the ground. The pilot raised the nose and pulled in full collective. Meanwhile, the Park Ranger, sensing danger, broadcast a Mayday.

Touchdown was at ten knots or less on a rocky slope with the nose pointing up slope.

After touchdown, the helicopter turned about 90° to the right, at which time, the rotor blades contacted the rocks and fractured. Following impact, witnesses reported puffs of smoke coming from the aircraft but saw no fire. The pilot and crew expeditiously exited the aircraft.

Two minor injuries were incurred in the clamber over rocks during the rapid egress from the scene. The air-

craft was a total loss.

A second UH-1N was dispatched from home base. It completed the original SAR mission and recovered the crew.



Grampaw Pettibone says:

This lad made so many errors, I needed an addin' machine to keep track! His choice of landing zone was poor. He didn't perform a power check or compute his power availability. And then he proceeded to compound his predicament by reacting to low RPM by moving his cyclic forward, further aggravating his rotor RPM decay. I kinda figger this lad never "engaged his brain" before this flight

started. It's a very humanitarian thing to "run off to the rescue" but extremely unpopular to crash while in the process!

Super FOD

The ground crew had finished installing a drop tank on the right wing of an F-4J *Phantom* and was preparing to turn up and inspect the functioning of the connections on the new tank. A sergeant conducted the preflight and, since there were no intake screens on hand, sent a corporal to get the screens.

Meanwhile, the ground power unit was connected and after the preflight

checklist was completed, an attempt was made to start the right engine. When the right engine would not start, the left engine was started. At this point, the corporal returned but, since the screens could no longer be installed, he joined two other members of the ground crew in the area of the right drop tank.

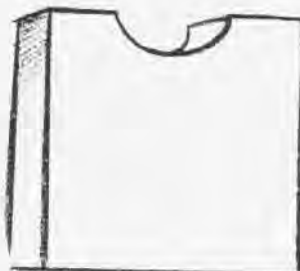
The pilot, a captain type who planned to fly the *Phantom* the next day, had joined the group and was standing on the left wing above the intake. The corporal, who was operating the power unit, thinking that both engines were started and not realizing that the left engine was operating at 80 percent, moved toward the cockpit to inquire why there was no signal to disconnect the ground power sources. As he climbed in front of the left intake, he was sucked in. The captain motioned to the sergeant to cut power.

The sergeant cut the power seconds after the corporal went in. The corporal was found to be conscious at the very rear of the intake channel with his right arm wedged into the circular rim in front of the engine blades. It was from this position that he was extricated and transferred to the hospital by the crash crew. His injuries were multiple abrasions and contusions of both knees, right hip and back.



Grampaw Pettibone says:

Sonofagun! I figured this lad was a goner. I can't believe so-called "experienced" personnel, like the sergeant and the captain, just stood around and watched this whole mess. No one ordered — that's right, I said ordered — the engine stopped and the screens installed. The senior man who stands around and watches a dangerous practice is more guilty than the man who does it! Put that in your pipe and smoke it! Reason and judgment are the practices of a leader. There were no leaders near this accident.





The runway during takeoff as it looks from the driver's seat. Lt. R. W. Cooper plots a course at the navigator's station, right.

Friday. TGIF. For most stateside military and civilian personnel it means the end of the working week; the beginning of a two-day respite from the daily grind, a chance to do what one enjoys most. Two days off from making a living; two days to really live. How these days are spent is a personal choice.

For a college student driving through the barren, winter countryside of Maryland; for an engineer leaving his Vienna, Va., home; for a Brunswick, Maine, native flying down the eastern seaboard; and for many other "Weekend Warriors" on their way to NARTD Patuxent River, Md., and VP-68, the

choice was made a long time ago. This is drill weekend, two days owed Uncle Sugar every month. It is also a chance to leave bad weather behind and deploy on a two-plane cruise to Bermuda.

Mark Benke wheels his sports car into the parking lot across from VP-68's hangars. It is 4:30 p.m. He reaches into the back, grabs his flight suit, puts it on and, with Mickey Mouse ear protectors and flight bag in tow, walks toward a P-3A parked on the ramp. It is now 1631 and, as ADJ2 Mark Benke, he has less than 90 minutes to get the bird gassed and ready for an 1800 brief and subsequent takeoff.

A college textbook is in his flight

bag; there might be time to get in some studying for an exam on Monday, but later for that — now he has to find the man with the gas.

As the minutes pass, the crews begin to assemble: airline pilots, systems engineers, body and fender men, computer technicians, salesmen, teachers and college students.

At 1800 each crew is briefed on the flight to be made to NAS Bermuda. The crewmen begin to prepare their aircraft for the 2½-hour transit to the island. In their Nomex flight suits and Mae Wests, the Selected Air Reservists put the civilian world behind them as they confront the portion of the air-



Reservists at Work

Bermuda Weekend

Story By Michael McDonell

Photos by JOC Dick Benjamin

craft's equipment that each will be responsible for during the weekend deployment.

Seated between the patrol plane commander (PPC), Lt. Max Magee, and copilot, Lt. W. Smithdeal, Petty Officer Mark Benke goes through the checklist with the two officers as the P-3 taxis through the darkness, down the flight line and up the runway to the turnaround point.

Bathed in red light, the cockpit is enveloped in a rising roar as the PPC calls for maximum power and the *Orion's* four 1,800-hp turboprops hurtle the aircraft down the runway at 110 knots. Airborne. "Landing gear up.

Flaps up." The P-3 climbs, leaving the lights of CONUS behind, and heads for the black sky over the Atlantic.

Sitting before his radarscope, AW2 Bob Powell smokes his pipe contentedly as he adjusts the set's fine tuning. A government computer programmer in civilian life, he is in his tenth year in the Reserves. He likes to fly, he is fond of the P-3, and the extra money is nice, too. Bermuda? Pretty standard for the crew every three or four months. "We should be picking it up in about an hour," he says, tapping the radarscope with his pipestem.

In the aircraft's galley, Lt. Charlie Pyles sips coffee with nothing to do

until the flight reaches Bermuda. He is OpCon, a watch stander, briefing and debriefing flights. It is a change from his active duty years when he flew *Seasprites* as a plane guard on *Coral Sea*. He has been a Selected Air Reservist since 1970 and recently made the switch of drill locations from NAS Willow Grove, Pa., to Pax River. An MBA candidate at the University of Maryland, the extra money each month helps out and no, he has never been to Bermuda before and does not know how much time he will have to see the island this trip as he imagines that he will be pretty busy getting checked out on his duties the next day.

Jerking his thumb in the direction of a sleeping figure at the weapons station, he indicates AO1 Bill Eaton and smiles. A body and fender shop owner from Glendale Heights, Md., Eaton has been a SAR since 1951 and has been around long enough to know that on a short, non-operational flight like this one, there is little need for an ordnanceman—and sleep is where you find it. And so he slumbers on as AWCM Ed Stanfield checks through a manual, LCdr. K. L. Busch shoots the stars with a sextant, Lt. Bob Cooper, the TACCO, helps the navigator plot the course, and a discussion ensues between TAR observer AW1 Dick Wandersee and SAR AW2 V. C. Kraft, a Jersey stockbroker, on the finer points of the SAR/TAR relationship.

"Pilot to crew — set condition five."

The voice of the PPC changes the routine as the crewmen take their stations. Bermuda is just a few miles out. Minutes later the lights of St. Georges sparkle below them as the P-3 descends for the final approach. With a hurried rush, buildings flash by, the tires squeal and NAS Bermuda has been reached.

Waiting beside the aircraft for the bus to take them to the BOQ or the transient barracks, the crews get the word for the next day's operational patrol: Briefing at 0600 for an 0800 takeoff. And then it was off to sample some of the 22 square miles of Bermuda before it closed down for the night.

For some, a quick bus ride into St. George or a taxi to Hamilton for a sample of the night life. For others, an 0600 muster came too early and bed looked better.

It did come early. Dark clouds have replaced the star-studded sky and a slight breeze meets the crew members as they walk across the ramp to their aircraft. The brief covers in detail the day's operational patrol. It will be a search and qualification exercise, a chance to put the hours of classwork to the test. At 0800, both *Orions* are launched and head out over the whitecaps toward the exercise area.

As they approach the area, each crewman checks his equipment and waits for the PPC's voice. "Pilot to crew, set condition three." Each man reports his portion of the aircraft's system check and the aircraft descends to the on-station altitude; all systems are operational.

The green eye of the radarscope sweeps the area of the search for some sign that warrants investigation. Noth-



ing. The aircraft drones on. "This is a drill: stand by to ditch," the voice of the PPC orders, breaking the watchful silence. Helmets are donned and seat straps secured. The TAR observer clocks it within acceptable limits and reports it to the PPC.

"Set condition two," the PPC orders. "We'll try our luck again."

This time the sweeping arm of the radar responds. "Contact, bearing 054." TACCO confirms the radar operator's finding and reports the contact to the PPC.

"Let's go down and check it out," the pilot orders. Breaking through the overcast that hangs over the choppy Atlantic, the P-3 flies 300 feet above the surface at 250 knots, closing on the contact. Watching the screen, the radar operator adjusts the knobs and muses aloud: "My guess is a trawler. She's



LCdr. K. L. Busch checks the P-3's position with his sextant while en route to Bermuda, far left, while Jezebel operator AWCM E. G. Stanfield goes over his equipment and manual, left. Box lunches are staple items on any flight, above. AO1 W. B. Eaton takes a nap while his services aren't needed, right.



Flight engineer ADJ1 N. A. Hilscher attaches a fuel line to the Orion to gas it up before the return trip to NAS Patuxent River, above. ATN2

E. Richard replaces a defective TACAN antenna on the aircraft, right. P-3 Orions are parked on the flight line at NAS Bermuda, opposite top. Copilot Lt. D. Fleagle and Hilscher are ready to go over the preflight checklist, opposite center, after Fleagle and TACCO LCdr. G. Clow file the flight plan and check the weather with AG1 J. Chambers, opposite bottom.

not big enough for anything else."

The TACCO nods. "She's about 450 nautical miles east of Cape Hatteras, so I'd call that a reasonably well educated guess."

"That's the one, right there at twelve o'clock," the copilot announces, unaware of the conversation aft, "Two miles and she looks like a trawler." Five seconds delay. "Yes, she is *Andrea Lee*, Portsmouth." The aircraft banks hard to port, circling the ship as it makes its way steadily toward its homeport. The navigator logs the information as the PPC calls out, "Let's try for a track."

The TACCO turns toward the ordnanceman and points to him: "You're on! Stand by to drop sonobuoys." The P-3 pulls out of the circle and straightens its flight path. "Away one — away

two — away three and four."

As the sonobuoys hit the water, the aircraft returns to its circling bank and the men at the console begin to receive information on activities below the Atlantic's surface.

"Hey, I've got something here," the *Jezebel* operator announces. TACCO confirms the contact, "Could be a submarine periscope at 060. Recommend a heading of 055." The pilot Rogers and sets condition one. Sonobuoys five through nine are launched and almost immediately the MAD gear picks up something else.

"Contact on MAD; we've got a sub." "Roger, TACCO. Radio, contact Bermuda and tell them what we've got." Within a few minutes Bermuda replies, "Continue the patrol."

"Must be one of ours," the TAR



muses. "Not bad work."

It is now afternoon and in spite of the air conditioning aboard the aircraft, the Nomex flight suits are wet with the exertion of the wearers who struggled to make their equipment respond, and succeeded. Bodies tense with concentration and effort begin to relax.

"This is a drill," the PPC's voice informs them. "Fire in the main compartment." The men respond, shutting down all unessential equipment and preparing to extinguish the blaze. "You done good. Let's get back to Bermuda."

It is 1600 and in 30 minutes Bermuda tower will be calling them in. Two touch and go's and the plane rolls in, taxis to the ramp and shuts down. It had been a long, profitable day on station. The end of the droning engines





and a chance to walk on solid ground are reward enough for many, but a few daylight hours to tour and shop the island are an extra benefit. Night life could be more extensive tonight, thanks to a benevolent 1000 takeoff time. But first a beer, a shower and maybe a nap, or some hooking for the students in the crews.

The following morning, the pastel houses, turquoise waters, 20-mph speed limits and good Bermuda times behind them, the Reservists head for home.

Pax River reported being socked in; condition five expected. At 140 miles from home the turbulence and dark clouds begin. "Everyone hold on tight. I don't think that we'll have to divert."

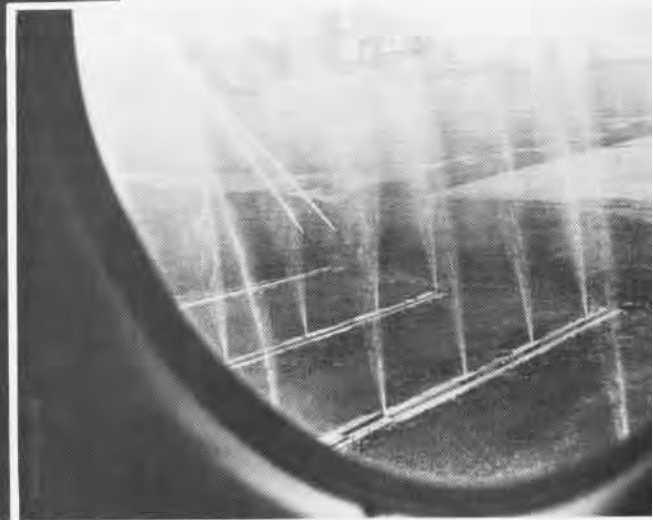
Customs forms are filled out, the aircraft is vacuumed and fumigated at 30 minutes out. At last, over the intercom, Pax control calls as the P-3 drops out of the overcast and the forests and brown fields of southern Maryland appear below. "Two miles from touchdown. On glide path." At last the wheels make contact—a GCA with only 200 feet visibility.

The taxi-in is as uneventful as the ride home. Another drill weekend completed; a matter of choice, not chance.





It's goodbye to Bermuda as the P-3 gains altitude, far left, with a steady humming of the turboprop engines during the return flight, left. A plane wash gets off all the salt and dirt acquired on the trip, below. The Orion is guided to its resting place on the parking ramp, bottom, and the Bermuda weekend is over.





Phantom FOD

All hands get into the act checking out this VMFA-122 Phantom, including a gent in the intake.



Homecoming

A WW II Hellcat looks at home aboard Coral Sea as it hitches a ride from Alameda to San Diego.



Aussie Relief

Native New Guineans help unload an RAAF Huey delivering supplies during a recent famine.

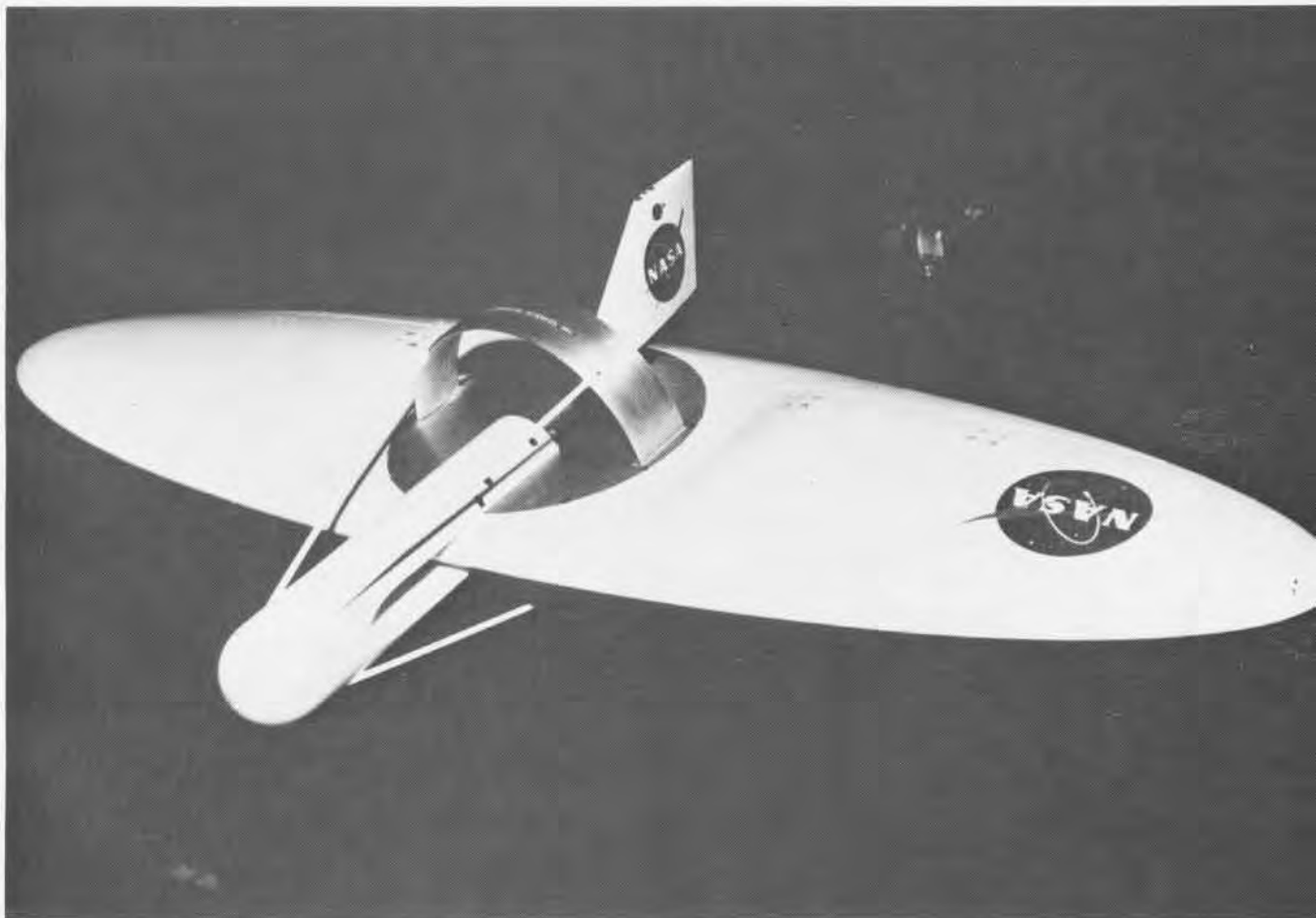


Rub-a-Dub-Dub

New lightweight, inflatable, nontippable radar reflective life raft originally developed for NASA astronauts is now being used by the Coast Guard and marketed commercially.

All Wing

Wind tunnel model of RPB designed by Ames Research Center features an all-wing configuration. Five-hundred-pound vehicle will have a 22-foot wingspan and a 90-hp engine. It will cruise at 130 knots.



SPELLING COUNTS

By Commander Neil F. O'Connor

The January 1973 issue of *NA News* traced its history over the past 55 years. During that time, the magazine, originally known as the CNO (Aviation) Weekly Bulletin, has had at least six different titles.

During the same period of time, Navy men have traveled from the splintered flight deck of *Langley* to the stark landscape of the moon. Obviously, if *NA News* is to remain relevant, it has to make innovations to reflect these changes. Transformations have occurred in many other areas dedicated but peripheral to aviation. Some aspects, however, have not been altered significantly, even though they are basic to flight. Take flight planning for example. About the biggest innovation the flight plan (DD-175) has seen is the ballpoint pen, although over the years revisions have occurred.

For those unfamiliar with the DD-175 for one reason or another, it is the standard required document that contains most of all the little nuances that make up the particulars of a proposed flight. Such details as type of aircraft, destination, alternate, estimated time en route, route of flight, names of crewmen and weather are dutifully noted and inscribed on the form. By its very nature, DD-175 is probably the least exciting yet, perhaps, one of the most important prerequisites to getting airborne, at least from a stateside field.

It has been suggested that since the plane commander doesn't necessarily fill out DD-175, some changes should be made to make the task a truly vicarious experience. One thought is that an outside consultant, maybe one ex-

perienced in resolving "packaging problems" should be contracted, an individual that could bring the best of Madison Avenue to the DD-175.

Even if they took the account, Madison Avenue would not find it an easy task. Others have tried over the years to amend and refine, only to go aground on the rocky shoals of fact. As Browning wrote: "Earth changes, but the soul and God stand sure." Simply, there just aren't too many ways to improvise on that which is!

DD-175 allows only for the insertion of certain variables that, in most instances, are common to all flights, such as crew member names. Little can be done to improve on those titles provided by our progenitors unless nicknames are employed. However, legality and propriety militate against the idea. Even if Roman numerals were used to designate airways, the results would still be the same.

Of all the information contained in DD-175, only the weather section appears as an open door for freedom of expression, but then that door is only ever so slightly ajar. Within the framework of the weather brief are found discussions, in less than esoteric terms, which describe the state of the environment. Occasionally, or in a burst of emotional commitment, the weather guesser might tender a modicum of turbulence for a proposed flight.

It is a possibility that the weatherman could be accused of not accepting the wordsmanship challenge, by his continued use of honest and time-worn terms that make up his bag of forecasts. Certainly a terminal forecast calling for a 200-foot ceiling, a quarter

of a mile visibility with freezing rain along with gusty crosswinds could be couched in terms that would activate any aviator's autonomic nervous system. Perhaps the words selected should ensure that the visceral functions of the greyest of Grey Eagles would be rattled.

Let's take a simple, yet authentic, example of what a weatherman might do if he were to dig into his lexicon of scientific terminology to describe a basic meteorological condition. During



Madison Avenue might have a few ideas.

the hot dry months over the southwestern U.S., dust storms are common events. In itself, the expression "dust storm" hardly titillates. But just suppose that on the DD-175 the weatherman had penned in that the destination was "under the influence of a raging American haboob"! If the term haboob wouldn't charge the metabolism rate of a waiting flight crew, at least it might raise a question on the spelling of the word!

As a matter of fact, haboob could legally be used, for it is a bona fide, recognized, meteorological phenomenon which occurs principally in Arizona (as far as the U.S. is concerned). Of Arabic origin, "habb" means wind. It is common in the northern and central portions of Sudan. About 24 haboobs occur each year in the vicinity of Khartoum.

The haboob is described as an awesome display of blowing dust and sand which has an average duration of about three hours. Gusts up to 60 knots are frequently reported. The blowing dust and sand form what appears to be an impenetrable whirling wall that has been reported as high as 8,000 feet. Fortunately, dust storms in the U.S. are less frequent than in Sudan — two or three a year are reported at Phoenix. (Most of the Arizona storms are the result of downdrafts created by the thunderstorms which develop over a nearby mountain range.)

Although the true haboobs are indigenous to Sudan, the domestic U.S. variety is often characterized by as much ferocity as those found in the environs of Khartoum. For example, a dust storm displaying all the classic manifestations of the Sudanese haboob struck Tucson during July 1971. During this storm, wind speeds prior to the start of the onslaught averaged five miles per hour. During the height of the storm, a peak gust of 81 miles was recorded at the Tucson International Airport. Winds of 81 miles per hour in a populated area become a concern of everyone.

It has also been suggested that the



Does a forecast of a ceiling of 200 feet bother you?

weather portion of DD-175 could be more explicit through the use of more forceful, albeit foreign, terms to depict terminal weather. A forecast of a wind of 360 degrees/20 knots for NAS New England in the middle of winter doesn't really tell the Florida-based jock what to pack in his flight bag. There is a way to solve this problem.

Over in Iberlant (Spain and Portugal), they have an expression which very explicitly tells it like it is. If there is a sharp, bitterly cold northerly wind, it is called a "Gallego." Madison Avenue assures us that a forecast of Gallego 20 on the DD-175 would attract attention, probably followed by the rapid packing of thermals. Technically, the only problem with the term is that it is a little loose. Northerly winds can range over a 90-degree spectrum, from northwest to northeast, which could make a difference when landing. Again, another case where spelling counts.

A quick scan of the workshop of the local air station weather guesser will show that he, along with his shipboard

brother, has a mini-library with all the weather terms that define the mainstream of meteorological phenomenon and nomenclature. With such an arsenal of knowledge at his disposal, he could entertain and delight indefinitely and perhaps even boggle a few of the lesser minds. Even without the exhortations from Madison Avenue, though, the Naval Weather Service's professional weathermen, ship and shore alike, are the first to want to brighten up their daily line of forecast products. However, and in all seriousness, when dealing with the safety and security of some mother's well trained son and his multi-dollared flying machine, words just can't be minced, even on DD-175.



Say — how do you spell that again?

The Marine Corps, in a search for a new heavy lift helicopter, placed its initial order for the CH-53A *Sea Stallion* in August 1962. At that time, it was the largest helicopter design available in the U.S. Navy BIS trials were completed in October 1966 and included 132 day and night LPH carrier landings. HMH-463, MCAF Santa Ana, completed its fleet indoctrination program with the *Sea Stallion* two weeks later.

The CH-53's primary mission is to move cargo and equipment. It has a secondary role of transferring troops ashore in an amphibious assault. CH-53Ds, with improved engines and increased power, are also used to recover downed aircraft, sweep mined areas and, if necessary, tow distressed ships.

The *Sea Stallion's* cargo/troop compartment measures 30 feet long by 7½ feet wide and 6½ feet high and has a rear door and loading ramp. To facilitate cargo handling, a remotely controlled winch is located at the forward end of the compartment. There is space for a jeep with trailer, a 105mm howitzer or a *Hawk* missile system. If passengers are carried, 38 combat-equipped troops or 24 litter patients can be accommodated.

Twin-turbine engines turn a single, six-bladed main rotor which has an automatic blade-folding system. Engine air separators have been incorporated on many models to reduce power loss in a sand/dust environment. An automatic flight control system lessens pilot fatigue on long missions.

The CH-53 is capable of emergency water landing and takeoff.



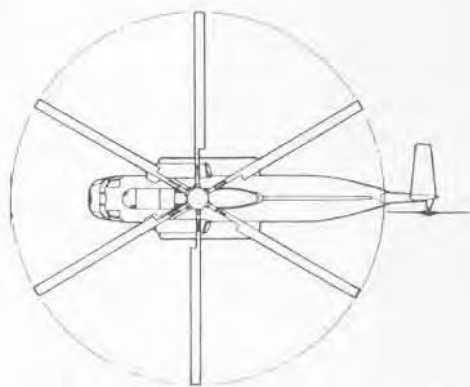
STALLION



CH-53A

CH-53D

Length (blades stowed)	56'6"
Height	
CH-53A	17'2"
CH-53D	17'2"
Rotor diameter	
CH-53A	72'3"
CH-53D	72'3"
Power plant	
CH-53A	two T64-GE-6
CH-53D	two T64-GE-413
Maximum power	
CH-53A	3,050 shp
CH-53D	3,925 shp
Maximum speed	
CH-53A	164 kts s.l.
CH-53D	164 kts s.l.
Cruise speed	
CH-53A	140 kts
CH-53D	140 kts
Service ceiling	
CH-53A	15,700'
CH-53D	19,000'
Hover ceiling	
CH-53A	6,500'
CH-53D	9,600'
Maximum takeoff weight	42,000 lbs.
Maximum cargo weight (full fuel)	12,742 lbs.
Combat radius	100 nm.
Crew	3





An HC-3 delivery bird returns to its home nest for another bundle during a grocery run in the Tonkin Gulf, above. *Mars* resupplies the carrier *Midway* during a combination vertical and conventional underway replenishment, below. (Photographs by PH3 Paul Huls)

AERIAL RESUPPLY

Aircraft carriers are among the many customers who use the services of and are dependent upon two Seventh Fleet sea supermarkets.

USS *Mars* (AFS-1), a combination store and cargo ship, carries everything from lettuce to lumber, all destined to reach a fleet scattered throughout the Pacific. Averaging \$961,700 worth of deliveries each month, the ship uses the services of HC-3, Det 103, NAS Imperial Beach, Calif. By combining the services of the *Sea Knight* detachment with STREAM (standard tensioned replenishment alongside method), a new cargo transfer system, package and pallet conveyors, elevators and a large fleet of electric trucks, *Mars* is able to resupply a large task force in a single operation.

When a request from a customer ship is received, data on the items is fed into the ship's computer to check availability. The return data is then passed to the requesting ship and the two set a rendezvous date and location. Then there are long hours of activity by all hands, preparing for, carrying out and completing the resupply.

Aboard USS *Santa Barbara* (AE-28) are the stores which give the fleet its fire power. Named after a California

city, appropriately enough the patron saint of ordnancemen and gunners, *Santa Barbara* is an ammunition ship carrying everything from gun powder for the cruisers to bombs for the aircraft. Included in her arsenal are missiles, torpedoes, bombs and a variety of expendable ordnance.

Nearly twice the length of a football field, the ship carries a detachment from HC-6, NAS Norfolk, Va., which carries out vertrep duties. Like *Mars*, *Santa Barbara* also uses STREAM. During a recent five-month period, using a combination of conventional alongside underway replenishment and vertrep performed by the CH-46s, *Santa Barbara* delivered over 14,000 tons of ammunition, nearly 300 passengers and 11,500 pounds of mail to Seventh Fleet ships.

Santa Barbara's skipper, Captain Ian J. Johnson, a Naval Aviator, described the men of his command as "one of the finest crews I have ever had the pleasure to be associated with. They give 100 percent all the time."

That also sums up the work of the men on *Mars* and the other helicopter detachments and crews of other supply ships which support the fleet.

Without them and their precious cargoes, fleet operations would come to a halt. — JOC Glenn E. McDonald





A Man-Sized Job

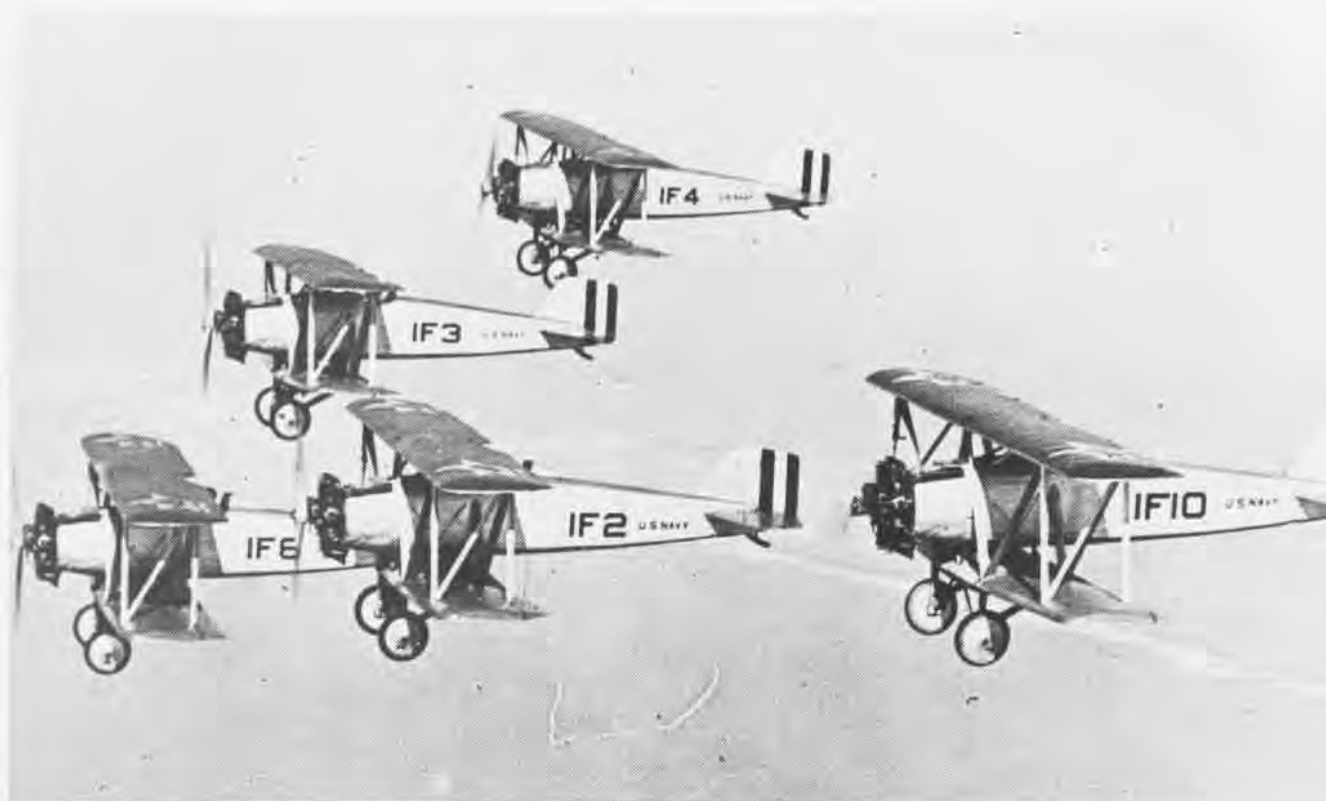
A Chris Ballard is a Navy woman doing a man-sized job at NS Roosevelt Roads, P.R. After graduating from high school, Chris enlisted in the Navy and completed her basic training at the Recruit Training Command (Women), Bainbridge, Md.

Arriving at Roosevelt Roads, Chris was first assigned to a desk job but on her own request was transferred to the aviation maintenance branch where she began training as an aircrewman. Now she performs maintenance work on the HU-16D *Albatross*, assisting in preflight, refueling and communications systems checks.



Chris poses by an HU-16D, top. Above, she discusses her job with fellow workers and, below, she checks fuel supply in an Albatross. With SA Kathleen S. Peterson, the airman apprentice tours El Morro Castle.





Fighter Pilots- Man Your Planes

By Rear Admiral J. R. Tate, USN (Ret.)

In 1922, after WW I, Naval Aviation had reached a low point. There were only 314 pilots and 1,612 enlisted aviation personnel. Naval Aviators were trained as seaplane pilots and on completion of training were designated and given their wings.

In July 1922, it was realized that they should also be trained as landplane pilots. Class XVI at Pensacola inaugurated landplane operations for fighter pilots at Squadron Five.

Prior to this, when it was necessary to train in landplanes, Langley pilots were sent to Carlstrom Field near Fort Myers, Fla., to train with the Army. In March 1921, when the Pacific Fleet

staff expressed the need for landplane-trained pilots, the commanding officer of NAS San Diego was authorized to establish a school to train Naval Aviators in the use of landplanes.

Thus, at San Diego in 1922, pilots so trained were organized into two fighter squadrons, VF-1 flying 12 TS-2 Curtiss airplanes equipped with the air-cooled Lawrence J1 radial engine and VF-2 operating 12 VE-7SF Voughts which had 180-hp Hispano Suiza water-cooled engines. Both planes were equipped with two fixed Marlin guns mounted above the engine cowling and synchronized to fire through the prop. VS-1 and 2 were

also organized at this time and equipped with DH-4s having 400-hp Liberty's.

Assignment to one of the two fighter squadrons was much sought after. The competition between the two squadrons was terrific in every phase from flying to softball. When VF-2 chipped in and raised \$20 to buy an old Ford and convert it into a squadron truck, VF-1 raised \$30 and bought a Reo! When BuOrd wrote into the Order for Gunnery Exercises annual target practices to be fired by these squadrons, the competition became keener.

Each squadron was later assigned a

two-seat utility plane to give flight time to the 14 flight order men. There were 12 officers and about 60 enlisted men assigned to a squadron, each led by a lieutenant commander.

In November 1924, USS *Langley* reported to the Battle Fleet and two months later VF-2 was designated as the first carrier squadron and assigned to her. VF-1 was to provide seaplane fighters to the battleships. Both squadrons participated in Fleet Problem V held that year off Baja California. As a result of that exercise, it was decided that fighters were not adaptable to battleship use and that the *Lexington* and *Saratoga* conversion should be speeded up.

In December 1925, the Lampert Committee recommended that the Navy Department be authorized to spend \$10 million for new aircraft. Out of this sum, the fighter squadrons were equipped with the most modern fighters, including Boeing FBs and Curtis F6Cs.

With the arrival of the new planes, the fighter squadrons had 18 planes. LCdr. Frank Wead of VF-2 conceived the idea of dive bombing and developed this type of attack so well that the squadron was redesignated as a dive or light bombing squadron. A new VF-2 was commissioned as an enlisted fighter outfit with LCdr. James Shoemaker the first commanding officer. LCdr. Frank Wagner and his light dive-bombing fighters demonstrated the efficiency of this type of attack by putting 19 of 45 bombs in a 45'x100' target.

Squadrons and ships had been using unofficial insignia up to this time: VF-1, a striking eagle in full flight; VF-2, a shield with a broken stripe; and *Langley*, the old Lafayette cockade. Now the Navy authorized insignia and required that designs be submitted for approval. VF-2 as the AP (aviation pilot) squadron adopted an insignia featuring the CAP rating badge. Its Vought FU-1s were equipped with Rootes-type superchargers. At high speed, these superchargers gave out an unearthly sound and the squadron was nicknamed the *Howlers*.

In 1927, *Lexington* and *Saratoga* were placed in commission and additional fighter squadrons were required. VFs 3, 4 and 5 were commissioned. The squadrons flying VF-type aircraft but designated VBs were increasingly called fighter bomber squadrons. Actually *all* fighters were also dive bomb-



VF-1 float-configured TS-1s fly over San Diego Bay, top. The attacking eagle insignia appears on the fuselage between the wings of these planes. A VE-7 of VF-2 is waved aboard USS *Langley* (CV-1) during carrier qualifications, above. NAS San Diego, as the North Island base was then named, is shown below as it looked in 1923. A practice carrier landing area in the shape of *Langley's* flight deck appears just left of center.



BM-1 draws a sizable audience as it takes off from stern of Lexington (CV-2) in 1934, right. Eight 8-inch guns supplemented Lex's aerial punch. Below, F6C-1 warms up on Langley's flight deck while the ship is in San Diego Bay. Hooks on axle engaged fore and aft cables on flight deck to aid in directional control.



Browning .50 caliber machine gun, above, is mounted on a VE-7. The synchronizing mechanism leading from Hispano Suiza engine is visible below the barrel. A DH-4B, left, with its powerful 400-hp Liberty engine, was post-WW I workhorse.

ers but, with the advent of the BM-1, not all dive bombers were fighters.

Most of the VF squadron commanders of this period were later to become the admirals who fought WW II — names like A. W. Radford, Frank Wagner, John D. Price, Ziggy and Tommy Sprague and Ralph Oistie.

With six fighter squadrons at North Island, it was necessary to install paved warm-up platforms and also pave a landing and takeoff area. A control tower was also installed. The congestion soon became acute, in the air, on the air station and in the operating areas. Marine VF squadrons were also

operating from across the field.

In 1929, VF-1 went to the National Air Races at Cleveland and nine *High Hats* (the squadron's insignia) put on a show of precision acrobatics. The squadron was led onto the field at Cleveland by Assistant Secretary of the Navy for Air Dave Ingalls. On another occasion, Slim Lindbergh flew the lead plane of the *High Hat* acrobatic team.

In 1930, Navy fighters went to the air races at Chicago and put on a similar demonstration. The policy of the Navy at this time was to buy limited numbers of each new fighter

type produced. Therefore, for quite a few years, the VF squadrons had different type planes. There were Boeing, Vought, Curtiss and, later Grumman fighters, and there was great competition among the squadrons.

In 1929, the fore and aft wires were removed from the carriers and the planes no longer needed axle hooks, thus simplifying undercarriage design.

It was also a period of development of squadron fighter tactics and each squadron had to train all its replacement pilots.

A fighter squadron, even in those simpler times, was a busy place.



An FB-5, left, assigned to VF-3, flies near the Southern California coastline. This was first in a series of popular Boeing fighter planes. Aerial view of North Island, below, shows air station as it appeared in the mid-1930s. Ships at lower left are the seaplane tender Wright and Navy's first carrier, Langley.



Selected Naval Air Reserve

The Marine Corps cold weather training exercise at Camp Drum, N.Y., was everything its name implies — cold — with high winds, 18 inches of snow and temperatures below zero.

Marine Air Reservists from HMM-774, Norfolk, Va., participated in *Alpine Warrior* with Regular air and ground Marine units from MCAS New River, N.C.

A huge hangar at Wheeler Sack Army Airfield was made available to house the CH-46s of HMMs 774 and 261 and the UH-1Ns of HML-167. In freezing weather, helos have to be stored in hangars to prevent ice accumulation on the blades. Then the rubber hydraulic and oil seals, which

contract in cold and expand in warmth, tend to leak after awhile. Radio contacts also deteriorate when adjusting from warm to cold.

Although refueling takes longer because filter separators freeze and nozzles become hard to turn, the CH-46s can lift and carry a heavy load easier and faster because of the density of the air in cold temperatures, an important factor in actual combat conditions.

The helicopter pilots tested their cold weather skills, performing routine search and rescue missions daily and practicing the techniques required by the weather and terrain of upper New York State.

Story and Photos by LCpl. Dave Treadway

ALPINE



During training, cold weather clothing and skis are necessary items for snow-slogging Marines, above. Sea Knights of HMM-774 are refueled at Camp Drum, right.





Heavy clothes, above, and cold, stiff fingers, left, are all part of the exercise. Above right, HMM-774 personnel board a squadron CH-46 for the trip home.

WARRIOR





at Sea with the Carriers

Enterprise (CVAN-65)

In ceremonies aboard *Enterprise* on February 27, Rear Admiral William R. McClendon relieved Vice Admiral Damon W. Cooper as Commander, Attack Carrier Striking Force 7thFlt (Task Force 77)/Commander, Carrier Division Five. The carrier, which was in port at Subic Bay, R.P., at the time, serves as flagship for the task force commander, RAdm. McClendon reported from duty as Assistant Deputy Chief of Naval Operations (Air Warfare) in Washington, D.C. VAdm.

Cooper is now the first Chief of Naval Reserve, a new command established at New Orleans, La., with additional duty as Director Naval Reserve, Office of the Chief of Naval Operations, Washington, D.C.

When two new men checked in for duty aboard the *Big E*, the personnelman had to look twice because the two were exactly alike. Phillip Parker and his younger brother, Stephen — 15 minutes younger, that is — are identical twins. Seaman Phillip is assigned to the OE division, working with electronics, and Stephen works in the GM

division of the weapons department.

Statistics are a common means of measuring success, failure or trend — and in their competition to “beat the other guy” Naval Aviators are justly proud of their statistics. Two *Royal Maces* of VA-27, Commander Bud Edney, skipper, and LCdr. John Park, operations officer, started their competition as squadron mates aboard *Oriskany* and then, after a number of different billets, met up again in the *Maces*. Cdr. Edney has now completed 800 carrier arrested landings, 335 combat missions and 5,000 flight



hours. Not to be outdone but still chasing, LCdr. Park has compiled 758 carrier arrested landings, 308 combat



missions in Southeast Asia, with over

Hand signals are the order of the day when an air wing conducts carrier operations.



The air department of *Enterprise* is where the efforts of all hands aboard come to a focal point. The fruition of the sweat, blood and efforts of the 500 men assigned to the air department is embodied in the roar of the mighty jet engines of the air wing aircraft, in the winds across the deck that often exceed 30 miles per hour, in temperatures of over 100 degrees, in the blast as aircraft move toward catapults and, far from least, in the noise level that approaches 140 decibels. Mix this with men in various colored jerseys — yellow, red, blue,

Enterprise's



green, purple — darting in, out, around and under the aircraft and you get an idea of the “thing” being done in the air department — where it is all put together, culminating in the launch and recovery of CVW-14 aircraft.

Each individual plays a vital role in the air department organization, performing his assignments with pride and professionalism. Pride that makes the *Enterprise-CVW-14* team professionals.

An ordinary day for an extraordinary team begins at any hour, but no matter what the time, V-1 can be relied on to accomplish the difficult task of operat-

ing and maintaining the world's largest and most modern carrier flight deck. This is an enormous task, but the true professionalism shown by the team makes each evolution seem almost routine. Each maneuver is completed expeditiously and safely.

Long before most *Enterprise* sailors are rudely awakened by the blaring tune “Boots-n-Saddles” and the harsh voice of the Boatswain's Mate of the Watch as he calls out “Flight Quarters, Flight Quarters, now man all assigned Flight Quarter Stations,” the blue shirts, yellow shirts and red shirts of

the flight deck crew are already at their stations. They have walked the deck to ensure that each aircraft is in its proper position and that all are securely chocked and chained. They have inspected each piece of fire-fighting equipment and are certain that each is ready for instant use. All ground support equipment has been checked and made ready.

By the time every piece of equipment has been checked and rechecked, it is almost time to walk the four-and-one-half-acre deck once again. Then the silence of the early morning dark-

Air Department



ness is broken by the barking voice from the flight deck speaker, "Now all hands to the bow for an FOD walk-down." Each man, hurrying from his respective area, realizes the importance of the task he is about to undertake. Every foot of the flight deck must be inspected. Small pieces of wire, nuts, bolts and screws or any other debris that could be ingested into the powerful jet engines must be removed. With this inspection complete and all debris properly disposed of, launch time is fast approaching.

Minutes later the stern but familiar voice of the Air Boss calls out from primary flight control, "Pilots and crews are manning their aircraft for launch. Time for complete flight deck uniform — helmets on, goggles down and chin straps buckled."

As the men scurry hastily to don their protective clothing, the yellow-shirted plane directors assemble in flight deck control for the final launch brief. The briefing only takes minutes, but it has taken hours to plan the launch sequence.

Each director must thoroughly un-

derstand which aircraft are to be launched and which are only "stand-bys," ready to be launched in place of a scheduled aircraft. He must also know the exact order in which each aircraft will be taxied from its parking area and sent to its assigned catapult to wait its launch turn. Then the director must brief his assigned blue shirts so they will know what to expect and in what sequence they must ready each aircraft for taxi.

Launch time is now only minutes away and again they hear the familiar voice from primary, "Check wheel chocks, tie-downs, fire bottles and all loose gear about the deck. Check propeller clearances, stand clear of jet intakes and exhausts, stand by to start the E-2s and A-6s."

Seconds later the same voice directs, "Start the E-2s and A-6s; start the remaining orange tails, the blue tails, and the green tails; start all go aircraft and spares."

Within a few short minutes, the entire flight deck is filled with the deafening, thundering roar of aircraft. The parching hot exhaust burns at exposed

skin and the smell of burning jet fuel fills the air.

As *Enterprise* slowly turns toward the wind, the Boss calls out the time remaining to launch, "Four minutes." The yellow shirt flashes a quick, closed fist signal to the pilot to hold his brakes, then smooth yet very distinctive signals tell the blue shirts to remove tie-downs and chocks and the aircraft is directed from its spot. With the first planes well on their way to the cats, other aircraft are made ready to taxi. With the ship headed into the wind, the plane guard helicopter is launched to stand by if needed.

Suddenly, green beacons flash forward and amidship, signaling launch start.

Soon, dozens of aircraft are airborne, on their way to their assigned missions. As the last aircraft clears the deck, the Boss calls out, "Launch complete" and all hands breathe a sigh of relief.

But it has only begun, for within the next hour more aircraft must be positioned for the next launch. Elevator warning horns blast as aircraft



Everybody in the air department gets a part of the action when a carrier conducts launch and recovery exercises. An A-6 Intruder gets the "go" signal from the catapult officer. This scene, left, will be repeated over 100 times in a normal day. Throughout the day, all flight operations are monitored by the pilot landing aid television system, above. The men of V-1 man primary flight control on the 011 level, seven stories above the flight deck, right, and a deck edge elevator operator, far right, signals his readiness, and a landing signal enlisted man guides a plane guard helo to a landing, below.



are shuffled to and from flight and hangar decks. The time passes quickly as man and machine race the clock against what seem like overwhelming odds.

Just as the last aircraft is positioned, the stern voice of the Air Officer reminds the crew that pilots and crews are again manning their aircraft for the next launch. The cycle is repeated. Planes are started and moved into launch position. The green beacons begin to whirl again and more aircraft are hurled skyward. The last aircraft clears the bow, but this time that little sigh of relief is not heard. All hands are aware that there is a recovery to follow. The aircraft that were sent aloft on the first launch must be recovered. All eyes turn aft to catch a glimpse of the approaching planes.

Fire fighters and rescue men, blue shirts and directors quickly man their recovery stations as the first aircraft comes screaming toward the deck. Now a new style vigilance is required. Each incoming aircraft makes a smooth arrestment and is quickly signaled to raise its tail hook, fold wings and taxi clear of the landing area. Within 30 to 40 seconds, the next aircraft hits the deck. The recovery is soon completed.

But the pace continues for the flight deck crew, since there is always another launch and recovery for which to plan and prepare.

The day has been long and hot and by the time the last evolution is over, thoughts have dulled, senses numbed and sleeping compartments left 16 hours ago seem far away. But this is not always the end; there may still be an underway replenishment with ammunition, bread, butter and eggs to load. Oh well, chin up, press on, tomorrow will only be an instant replay.

When the *Big E* turns into the wind for the first launch of the day, the men of V-2 have been at work for over three hours ensuring the readiness of her four steam catapults, five arresting gear engines and visual landing aids equipment.

For the next 12 hours, the 123 men and five officers of V-2 will be involved in the launch and recovery of over 120 aircraft. An hour after the final

launch, the machinery has been inspected, the daily maintenance has begun and part of the crew turns in for a well earned rest.

Alertness and perfection are the bywords of V-2. Each man knows the lives of his shipmates and aircrewmen and, ultimately, the combat readiness of *Enterprise* are dependent on his ability to safely perform his job even under the most adverse conditions.

Each of the catapult units — bow and waist — operates and maintains two steam catapults which are capable of accelerating a 70,000-pound aircraft to over 150 miles per hour in less than two seconds, in a distance of only 250 feet. The environment surrounding these huge machines on the flight deck is hot, noisy and potentially as dangerous as the hell of Dante's *Inferno*.

Of the 15 men in each cat crew, some are below decks in "steam-conditioned" spaces where the temperature seldom drops below 100 degrees. These men constantly monitor the performance of their cat. They feed it with steam and grease for each launch and are careful to soothe any indigestion which may upset its powerful system.

Every aircraft launched must be safely recovered aboard *Big E*; the maintenance and operation of the system that make these carrier landings possible is the job of the arresting gear unit of V-2.

These 30 men maintain and operate four arresting gear engines capable of stopping a 50,000-pound aircraft traveling at more than 120 miles per hour, in less than 300 feet. Also kept in a constant state of readiness is the "last chance," or barricade, a big nylon net-like affair which is raised on the flight deck to save an aircraft which may be damaged and not able to make a normal arrested landing. The arresting gear crew takes great pride in its ability to rig this emergency equipment in less than two minutes.

The team also has men stationed on the flight deck. They constantly check the cross-deck pendants for signs of excessive wear or damage. If necessary, they can remove and replace one of the 110-foot, 400-pound cables in less than two minutes.

In primary flight control, two members of the arresting gear crew super-

vised the correct setting of weights on the arresting gear engines and the proper setting of the Fresnel lens.

The operation of the Fresnel lens and pilot landing aid television system is also the responsibility of the arresting gear unit. The eight men of this team record on video tape every launch and landing. The tapes are used for pilot debriefing and safety investigations. With five cameras, two tape recorders, stop action and instant replay, they are as visible as CBS Sports and twice as busy.

The most important light bulbs on the ship are in the center of the Fresnel lens. They make up the beam of light known as the meatball, which, if kept centered, will ensure the pilot a safe touchdown — right on the #3 wire. No errors are permissible in this system and lens technicians spend many hours each day ensuring that it is operating at full capability.





V-2 men work below decks in spaces where temperatures rise to over 100°, left. Their link topside is sound-powered phones, below. Hook runner stands by as F-4 is arrested, bottom.





On the hangar deck, limited space requires well rehearsed teamwork, above. Visual display of aircraft location, right, is constantly updated.



The V-3 Division could easily be called everybody's "garage keeper." The hangar deck provides maintenance space for "sick" aircraft while they are repaired, stowage space for a multiplicity of yellow gear, maintenance equipment, aircraft fuel tanks, and a wide assortment of other items. The hangar deck also doubles as a staging area for stores and ammunition during underway replenishments and, on other occasions, as a huge open market for sales by the ship's stores or as a place of relaxation.

The primary job of V-3, however, is to accept down aircraft from the flight deck via the huge 110,000-pound aircraft elevators, position the aircraft for maintenance work and return them to the flight deck when they are again in an up status. The limited space, tight spotting quarters and short reaction time available require a well rehearsed team of directors and blue shirts to complete this evolution quickly and safely.

This "up-and-down" cycle is the secret of a successful flight deck operation. If the maintenance personnel and the hangar deck crew can't provide up aircraft to the flight deck in a timely manner, the entire cyclic schedule slowly grinds to a halt as aircraft return from missions in need of maintenance. Close coordination between the aircraft handling officers ensures a constant flow of ready aircraft to the flight deck.

Underway replenishments are a particularly trying time for the hangar deck crew. For these events, the aircraft must be re-spotted to provide room for the receipt and movement to storage spaces of tons of fresh and frozen provisions as well as ammunition. A smoothly coordinated hangar deck operation is the key to a successful underway replenishment.

The men of V-3 are all highly trained fire fighters, manning the four conflagration stations in the hangar bays, ever vigilant against fire.

The best in the Pacific Fleet" and "the standard for aircraft carriers of the United States Navy" are the terms used by the Inspector General's teams to describe the V-4 Division of *Enterprise*. V-4 is like an iceberg — largely invisible. Only the purple shirts of the aircraft fueling crews are seen above decks, while the huge tanks and complex transfer systems remain out of sight, reaching from bow to stern, port to starboard and as far down as the ship's double bottom.

The watchword of V-4 is "quality surveillance," as the men maintain never ending vigilance necessary to prevent degradation of quality of the ship's fuel supply.

Enterprise's aviation fuels division can boast of some impressive accomplishments. If figures fascinate you, try this: since her 1970 shipyard overhaul, *Big E's* V-4 division has pumped almost 34,000,000 gallons of fuel to fixed and rotary wing aircraft and to destroyers in company. Daily usage

"on the line" averages 180,000 gallons.

In order to have the fuel to dispense, V-4 uses some rather large filling stations. Regularly scheduled refueling keeps the 145 storage and 16 service tanks of the JP-5 system full to their 2,500,000-gallon capacity.

Although often unheralded, the service provided by V-4 is critical and necessary for it permits the air wing pilots to fly without being concerned about the quantity and quality of the fuel they are using.

So there you have it, a closer view of the air department and the "airport" as presented by the men of the divisions who man them. Pride, professionalism and a dogged determination make them tick. Physical punishment, mind-taxing decisions which must often be made instantaneously, and manual labor performed under the most arduous conditions in all kinds of weather are their environment. Sandwiches, coffee and cokes are often the only meal they see for hours on end.

If you think all this may not be completely candid, try standing on a wet, slippery deck under an F-4 Phantom jet at maximum power, holding a 300-pound bridle on the aircraft catapult tow hooks in a driving rain — this may not make a man, but it is bound to make a believer.

This feature was "lifted" from "The Big E," Enterprise's ship's paper. LCdr. Donald L. Dill, LCdr. Richard D. Watson, Lt. David P. Fairbank, and Ltjg. James S. Turner, Jr., contributed the V-1, 2, 3 and 4 portions, respectively. Commander Conrad J. Ward, assistant air officer, compiled the material, and the final product is the work of Commander John E. Hoch, then air officer.

Photos were provided by PH2 Gordon R. Przybala and ADJ2 Gary B. Kynard.



V-4 has several aircraft refueling stations located on the flight deck, above. Fuel samples are taken regularly to ensure quality of avgas, below.



Letters

Navy Occasion at Washington Church

On Sunday, July 1, Rear Admiral Francis I. Garrett, USN, Chief of Chaplains, will preach at the 11:00 a.m. service of the National Baptist Memorial Church, 16th and Columbia Road N.W., Washington, D.C. The occasion is the dedication of the sea flag of USS *Shangri La* (CVA-38) which is to be installed as part of the permanent display of articles and symbols of civil and religious liberty at the church. The Navy's *Sea Chanters* will also participate in the ceremony.

The sea flag was given to the church by Chaplain Perry L. Mitchell, chaplain aboard *Shangri La* the last day of WW II. He asked for the sea flag and sent it to the church as "a standard of victory and an ensign of peace." In his letter of presentation, he wrote, "I am depositing it in your custody that it might be placed among the memorials of other great days. May this service-stained flag ever remind us of the price of victory, both National and Spiritual."

Navy personnel, past or present, are cordially invited to attend. Their presence will enhance the significance of the dedication.

Dennis C. Evans, Cdr., USNR(Ret.)

Intrepid

In the December issue of *Naval Aviation News*, you referenced the recent NATO exercise, *Strong Express*, in an article entitled "Busy Days." This is the second article I have read in a naval publication that has omitted mention of USS *Intrepid* (CVS-11) as one of the ships participating in the exercise. During *Strong Express*, she remained at flight quarters for 363 consecutive hours — over two weeks. In addition, she is the oldest fleet operational carrier and was the oldest carrier participating. As a member of the air group embarked aboard at the time, I was very proud of her and our accomplishment. It seems only right that this achievement be acknowledged in her twilight years.

James E. Tozier, AW1
HS-11 Operations
FPO New York 09501

Once again — we are only as good as our sources. In this case, we received no releases on *Intrepid's* participation.

Wanted

Any and all information (news clippings, references to articles, etc.) on Soviet MiG-23 *Foxbat* Mach 3 aircraft. I am attempting comparison with Lockheed YF-12/SR-71 Mach 3 aircraft.

Kurt Miska
749 Preston Road
East Meadow, N.Y. 11554

Mr. Tom Doll and myself are engaged in preparing a manuscript for *Profiles on United States Navy Squadrons*. Publication date is early 1974.

The squadrons that we are interested in are the *Flying Chiefs* (VF-2), *Red Rippers* (VF-11), *Felix the Cat* (VF-33) and *Fist of the Fleet* (VA-25). We would appreciate any information from past or present members of these squadrons in the way of personal stories and photographs. All material will be handled with care and returned within 30 days.

B. R. Jackson
17560 Blythe
Northridge, Calif. 91324

Twenty Years?

I wish good luck to LCdr. Wayne A. Smith in his announced ambitious goal of 20 years in the Navy (*NA News*, January 1973, "One Navy Pilot at Work").

I sure hope he makes it in Naval Aviation as an active pilot after past, present and future aviator's breakfasts, wolfed-down hasty lunches and 17-hour workdays.

His flight surgeon would hope so, too. I'm sure, as well as his crew members, shipmates, unsuspecting passengers and, of course, those who are assigned to aircraft accident report boards.

J. D. Lauerman, CWO3
USNTC
Box 8, FPO New York 09544

Insignia

I just finished reading the December issue on historic naval aircraft. They are hard to find, by the way. I strongly suspect that most December issues are

now stored for safekeeping among the other good things that Sailormen like to keep and look back upon.

I do have a question about the *Red Rippers'* FF-1 on page 10. Have they turned the boar's head and shield around in recent years, or do they have the decal on backwards?

AFCM M. C. Jones
VA-81
FPO New York 09501

The *Red Rippers'* insignia displayed on the Naval Aviation Museum's FF-1 is correct as shown by photos of FF-1s flown by the squadron, OpNavInstruction 5030.4 of May 6, 1952. (the earliest we could find) states that insignia should "face the enemy" when on an aircraft, and should face left otherwise. Available photos in our files for the 1928-36 time period show the Boar's Head always complies with "the face the enemy" concept, looking forward, whether on the left or right side. However, the direction of the lightning flash is not as consistent. Early photos (VB-1 F6C-3s), where the direction of the lightning flash can be determined, have it pointing forward. VF-5 F4B photos show the lightning pointing aft. Later photos (VF-5 FF-1s, as previously noted, and VF-4 F3F-1s) show it pointing aft on both sides (as on the museum aircraft).

Armed Robots

Reference your article, "Armed Robots," in the January 1973 issue of *Naval Aviation News*. Apparently there



is some dispute, and 20 years difference, in the claim to the first guided missile. Who's on first, Kettering or the N2C-2?

Jerry Barnette
4 Jefferson Street
Fredericksburg, Va. 22401

Neither. Pilotless, armed drones were called a variety of things, including "guided missiles." The Sperry "aerial torpedo" was the first pilotless, armed drone and, therefore, could be considered the first "guided missile."



Commissioned in 1951, Patrol Squadron 40 took an active part in the Korean conflict. Now based at Moffett Field, Calif., and led by Commander Oakley E. Osborn, VP-40 flies P-3B Orions in support of Pacific Fleet ASW operations.



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