

NAVAL AVIATION

NEWS



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'JOCK' JOHNSTON'S JURY RIG

Is it imagination or was fate really frowning on *Apollo 13*? The first clue came when we weren't allowed to bring the suitcase loaded with cameras and lenses into the cabin of the Houston "Whisper Jet." Upon arrival at our destination, a disturbed baggage man informed us that the bag had broken open, and we had visions of all that gear strewn through the bilges! After the salvage operation, we resolved to hand carry the stuff, regardless.

So, by the time we eventually got over to the Cape, we had been toting the big 500mm lens for so long we thought it was a cannon. Finally hefted onto a borrowed tripod, its European threads would not accept the American screws. Into the breach went 20 yards of masking tape, probably better applied had the photographer wrapped his head with it. JOC (which means *Chief Journalist*, not "Jock" as some correspondents think) Johnston exposed his defoliated pate to the burning sun for three hours as he pattered with the rickety rig. He got his pictures — and changed his name to "Red."

Did you know that after it was over and *Apollo 13* was safely back, Grumman (builders of the LM, *Aquarius*) presented a tongue-in-cheek bill to North American Rockwell (builders of the service and command modules) for towing the crippled spaceship? The charge was \$300,000 — about a dollar a mile. North American then pointed out they had not yet received payment for ferrying the Grumman lunar modules to the moon on previous missions.

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

Rear Admiral G. E. Miller
Assistant Deputy Chief of Naval Operations (Air)

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NAVAL AVIATION NEWS



VADM. ELMO R. ZUMWALT, JR.

Adm. Zumwalt Named New CNO JCS Chairmanship to Adm. Moorer

Admiral Elmo R. Zumwalt, Jr., will relieve Admiral Thomas H. Moorer as Chief of Naval Operations in a ceremony at the Naval Academy July 1. Adm. Moorer will assume duty as Chairman of the Joint Chiefs of Staff on July 2.

Adm. Moorer, who was appointed CNO in August 1967, is the first CNO to become JCS Chairman since Admiral Arthur Radford held the post from 1953 to 1957.

Adm. Zumwalt was serving as Commander, Naval Forces Vietnam/Chief of the Naval Advisory Group, U.S. Military Assistance Command, Vietnam, when President Nixon nominated him to be Chief of Naval Operations.

From December 1963 to June 1965, Captain Zumwalt was executive assistant and senior aide to Secretary

of the Navy Paul H. Nitze. He was selected for Rear Admiral in July 1965 and assumed command of Cruiser-Destroyer Flotilla Seven. His next assignment was in Washington where he established the Systems Analysis Division of CNO.

After his selection for Vice Admiral, he assumed his Vietnam command in September 1968. He is the youngest man ever chosen to be the Chief of Naval Operations.

Contract Awarded for KA-6D Navy Will Receive Latest Intruder

Grumman Aerospace Corporation has been awarded a contract for modifying the A-6A to a KA-6D tanker.

The contract provides for a potential order of 48 KA-6D's to be delivered through December of 1971. Grumman successfully concluded the first flight of the new KA-6D *Intruder* tanker on April 16.

The KA-6D can transfer over 20,000 pounds of fuel at a high rate of transfer, allowing it to support attack and other aircraft on long-range missions. This tanker will extend carrier-based aircraft combat radius and provide long-range ferry operations to distant geographical locations.

The KA-6D is the sixth version of the A-6A.

Engine Selected for the F-14B Pratt & Whitney Awarded Contract

Secretary of the Navy John H. Chafee and Secretary of the Air Force Robert C. Seamans, Jr., have announced that the Pratt & Whitney Aircraft Corporation of West Palm Beach, Fla., has been selected to develop and produce engines for the Navy F-14B and the Air Force F-15.

Both engines will be high performance, afterburning turbofans, based on the technology level demonstrated by the lift/cruise, advanced turbine engine gas generator, and B-1 engine development programs. They will be in the 20,000 to 30,000-pound thrust class



THIS UNUSUAL display of aircraft includes most of those currently used in training Navy, Marine, Air Force and civilian test pilots at the Naval Test Pilot School, Patuxent River, Md. In an eight-month course, the prospective test pilots use these aircraft to obtain every type of flying characteristic as they learn all the facets of aircraft testing and evaluation.

and have a common gas generator; but they will differ in the size of the fans, afterburners and thrust levels.

The first buy of 90 engines will be to support initial test aircraft for both the Navy and Air Force.

Training Command Bosses Meet 'Brass Hat Huddle' at Pensacola

In April, the four admirals who head the Basic, Advanced, Technical and Reserve Commands of the Naval Air Training Command met with Vice Admiral Bernard M. Strean, Chief of Naval Air Training, in Pensacola.

Attending the annual "Brass Hat Huddle" were: Rear Admiral E. E. Christensen, Chief of Naval Air Technical Training; Rear Admiral F. C. Turner, Chief of Naval Air Advanced Training; Rear Admiral H. E. Greer, Chief of Naval Air Reserve Training; and Rear Admiral H. S. Matthews, Chief of Naval Air Basic Training.

The training command chiefs discussed methods of streamlining training operations in the face of reduced budgets, the problems of retention and recruiting future aviation officers, flight officer training programs to meet increased technical requirements of modern fleet aircraft and carrier qualifications for Selected Air Reserve pilots.

Adm. Strean stated that safety will continue to be a prime consideration of the command. CNATra won the Chief of Naval Operations' Readiness Through Safety Award in 1969.

Texas DAR Honors Students Annual Awards to Top Naval Aviators

The most outstanding student Naval Aviators to graduate from the Naval Air Advanced Training Command, Corpus Christi, over the past year were presented Achievement Awards by the Texas Society, Daughters of the American Revolution, in a formal ceremony at NAS Corpus Christi. The DAR annually honors the top student from the Navy, Marine Corps and Coast Guard.

Ltjg. John D. Taylor, Marine 1st Lt. David E. Wilbur and Coast Guard Ens.



TWO NEW DC-130A launch and control platforms for target drones will be delivered to NAS North Island's VC-3 in August. As depicted in the drawing above, the converted C-130's will carry and operate four drones in support of training exercises. Drone launching aircraft, currently in the Navy inventory, accommodate only two target drones per flight.

John T. Okon received engraved gold wristwatches and certificates from Mrs. Buck Woolley, Texas State Regent of the DAR. Vice Admiral Bernard M. Strean, Chief of Naval Air Training, presented wings to a graduating class of Naval Aviators and NFO's at the same ceremony.

Ltjg. Taylor, an August 1969 graduate from VT-28, is serving with VP-6 at NAS Barber's Point, Hawaii. Lt. Wilbur, a graduate from VT-26 at NAS Chase Field, is assigned to VMF-531 at MCAS El Toro, Calif. Ens. Okon is assigned to the Coast Guard Air Station, Elizabeth City, N.C. He graduated from VT-28 in April 1969.

Honor Student of Year Named

Ltjg. Heath Receives DAC Award

Ltjg. Lawrence K. Heath, Jr., has been selected as the "Outstanding Naval Aviation Student of 1969" by the Daughters of the American Colonists. In formal ceremonies during the DAC annual convention in Washington, D.C., Heath was awarded an inscribed wristwatch.

Captain Joseph W. Sobien, commanding officer of NARTU Washing-

ton, also presented him with a plaque from the Chief of Naval Air Training, Vice Admiral Bernard M. Strean.

Ltjg. Heath entered the Navy in August 1968 at NAS Los Alamitos, Calif. He is currently taking anti-submarine training in the P-3 Orion at NAS Moffett Field.

First Flight of A-6E Prototype Scheduled for Delivery in '71

Grumman Aerospace Corporation has announced that the first flight of the A-6E prototype was made late in February.

The A-6E is an improved version of the A-6A low altitude, twin engine, long-range attack aircraft. Improvements include a new microminutized digital computer, a solid state weapons release system and a solid state radar that will perform the functions of present track and search radars. The new equipment will result in increased reliability, decreased maintenance requirements and operating costs while maintaining the existing A-6A attack/navigation accuracy.

Present plans are for delivery of aircraft to the fleet in late 1971.



GRAMPAW PETTIBONE

Decision Point

The all-weather attack squadron was in the process of deploying to a desert base for weapons qualification. The planes and crews departed from home base individually in order to obtain high and low altitude navigation training en route.

Late in the afternoon after completing refueling at a mid-continent naval air station, the A-6A *Intruder* and its crew of two lined up on the 7,300-foot runway for takeoff. With the checklist complete, the pilot rolled out into position and ran up the engines. He read off the instrument readings to the bombardier/navigator (BN) and noted that the power trim was right on the mark. Everything looked perfect.

With 5,000 feet remaining on takeoff roll, instrument readings were still normal, angle of attack working, air-speed good, accelerating through 115 knots. Shortly, at about the 4,000-foot marker, there was a sharp explosion, and the aircraft swerved left just as it was becoming airborne.

The pilot immediately checked for fire warning and noted nothing. The BN then asked, "Is it going to fly?" Replying "No," the lieutenant closed the throttle and dropped the hook.

Maybe the airplane bounced or maybe the brakes were on. Whatever happened, the A-6 missed the chain arresting gear cable and continued toward the end of the runway at 100-plus knots. The BN blew the canopy off, but the pilot judged they were too slow for a successful ejection and decided not to eject.

As the intrepid *Intruder* left the end of the runway, the pilot thought he should get the landing gear up, but the overrun looked solid, so he decided to leave it down. One thousand feet of prepared overrun didn't slow the bird very much; it continued right on into the grass which was very soft from recent rains.



Sinking deeply into the mud and spraying it all around like a fountain, the doomed craft's nose dug in. The aircraft then pivoted about the nose and the right wing onto its back, pinning both crew members into the lower part of the cockpit.

Fuel from the ruptured starboard wing cell immediately ignited and the scene was engulfed in fire and smoke.

The ever-ready crash crew began responding as soon as they heard the loud noise from the engine and chased the plane as it careened off the end of the runway. As the first truck reached a point about 30 feet from the burning wreckage, it mired in the mud and could proceed no further. The turret equipment functioned properly, however, and the fire was suppressed with foam while the firemen began frantically digging for the pilot and BN.

Initially, there were only about six inches of open space between the cockpit ledge and the ground. The pilot's head was bent forward and pinned against his chest so hard that he couldn't talk and could hardly breathe. The fire fighters, using their hands and shovels to dig, freed the crewmen in about 17 minutes. The BN, who was severely burned by the continually reflashing fire, was freed

first. The pilot was finally cut loose and assisted in crawling out from under. Fire damaged the airplane beyond repair.



Grampaw Pettibone says:

Great horned toadies! Decisions! Decisions! And, oh my, what can happen if you make a wrong one! Seems the A-6 ingested a prairie chicken into the left engine just at liftoff. The craft would've easily flown away on one engine.

Why didn't he retract the landing gear as he went off the end of the runway? Why didn't they eject as soon as the arresting gear was missed? More decisions.

I don't want a second-guess the pilot. When it's decision time in the cockpit, there's no time for consensus. You figure it your way and I'll figure it mine. What we're all agreed on, however, is that those guys owe their lives to the outstanding, on-the-ball crash crew which responded so quickly and to the men who worked so hard under that burning airplane to free them from what most certainly would have been a fiery doom.

Back Seat Driver

The helicopter mission was to evaluate a new type of hand-held movie camera for film vibration. The flight schedules duty officer advised the pilot that he was to pick out a car and fly formation on it as they paralleled a long, low bridge. The photographer would take pictures of the car in relation to the stationary bridge. When the Ltjg. asked how close he should fly, he was advised to check with the photographers.

After preflighting his RH-3A *Sea King*, the pilot talked with the two photographer's mates who were setting up their equipment on the port side of the aft compartment. They stated that on previous missions they were out about 200 feet and no lower than the bridge guard rail.

With the photographers and crew strapped in or wearing gunner's belts, the RH-3A lifted off and headed for the bridge. Hovering over the beach, they completed all checks, picked out

a moving car and headed across the bay.

Five-hundred yards out, the pilot turned the *Sea King* over to his copilot on the left side. Several times during the five-mile transit, the photographer called, on the interphone, for the helo to move in closer as they weren't doing much good at that distance. The copilot was quite reluctant to do so as it seemed they were already close enough for safety.

As they reached the shore, the pilot took control again and spotted a semitrailer truck moving the other way. He immediately moved in parallel, and they headed back. The photographer again requested them to move in closer, then called back that it looked good. Five to ten seconds later the rotor hit a light pole along the bridge roadway.

The *Sea King* immediately began vibrating severely, and the pilot decided to make an emergency landing. He set the helo down on the water about 100 yards north of the bridge.

The engines were secured and the flotation bags deployed without incident; however, the helicopter began to drift under the bridge. The sea anchor was then deployed and, a few minutes later, two fishing boats came alongside. The fishermen agreed

to tow the H-3 1½ miles to shore where it was pulled aground by a police jeep. The *Sea King* suffered only minimum damage.



Grampaw Pettibone says:

Great horned toadies! Fetch me another aspirin tablet. Who in tarnation was in charge and flyin' that twirlie, the man in the right seat or the GIB (guy in back) takin' pictures? Was it really necessary to follow his direction to complete the mission? I sure hope not! It's a good thing they didn't crash on the bridge 'n clobber a few cars or trucks.

Ain't there somethin' in OpNav regs about flying in such a manner that no person on the ground could reasonably think that he or his property is endangered. *Flight Violation?* What's that?

Neglected Plea

The Marine captain instructor was making his final plans to be married and was to begin his leave late in the day. He had been up packing most of the previous night and, early in the morning, made a request through his department head that he not be required to fly that day. The training officer denied the request because of the student load; however, he said the captain would only have to fly one hop – instead of the usual two or three.

The groom-to-be was scheduled for



basic air work with an ensign in a T-28B *Trojan*. The flight proceeded without incident with the craft arriving back over the field right on schedule. The instructor in front had the stick and was cleared for a left-hand break. The tower advised him to watch for an H-53 helicopter which was making a GCA final.

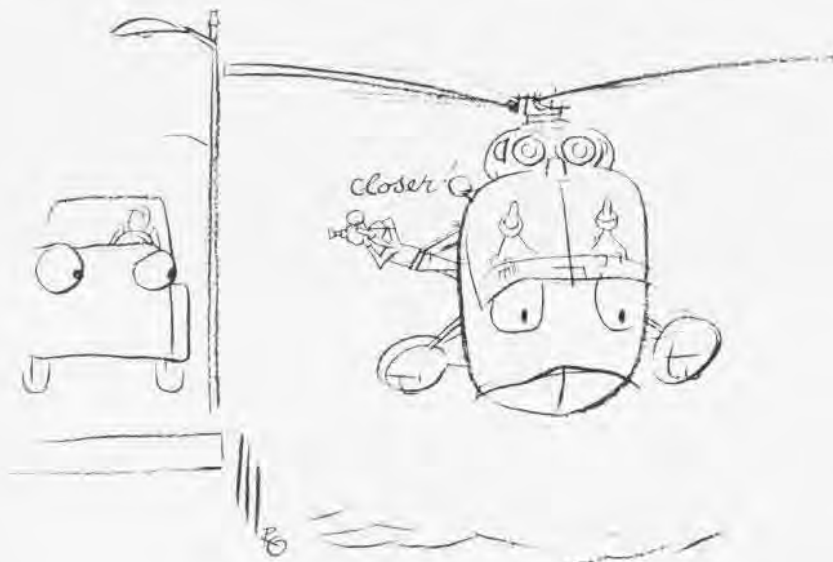
They broke tight over the numbers, making a descending turn. At the 180 position when the captain called his gear down, he was again reminded of the H-53 – which was not yet in sight – but continued the descending turn to final. Then the student in the back spotted the H-53 under the right wing. The captain acknowledged his call and suddenly realized that they were over-banked and low. He quickly ducked down in the cockpit as the plane shuddered and rolled, inverted. The pilot added power just as the aircraft struck the ground.

The uninjured student crawled out of the wreckage – which luckily did not catch fire. The front cockpit was completely destroyed and the captain received fatal injuries.



Grampaw Pettibone says:

Who is going to carry the burden of *this* tragic mishap? The captain was so preoccupied he didn't even sign the yellow sheet before the flight. Preoccupation, get-home-itis and fatigue combined here to cause an accident that could easily have been prevented. A professional pilot should know better, but so should those in supervisory positions. The pilot involved is usually the last to admit that he shouldn't go.







By COMMANDER TED WILBUR

With special photographs by

CHIEF JOURNALIST JAMES JOHNSTON

By noon on Saturday, April 11, the *NA*News cameras were set up on a grassy bank of Merritt Island on Florida's Banana River. Adjacent was the Kennedy Space Center's immense Vehicle Assembly Building (VAB), its vast concrete flanks scored in the bright sunlight by long slanting shadows of the great black birds which soared about the windowless walls. Positioned in the gentle southerly breeze, we were bracketed on one side by a photo team from an encyclopedia (its members busily taking pictures of each other) and on the other side by a prism-manipulating, cool, competent type from a photography magazine. Gazing out toward Pad 39A, three and a half miles away on the coast, we could see the white stalk of the *Saturn V* launch vehicle shimmering in the haze and, through our long lens, we could clearly mark the lazy plume of vented oxygen as it wafted around the rocket amidships.

Grumman's John Vandergrift came by, and we asked him where Bob Special was going to be. He said Bob hadn't planned to cover this shot. Special was an old friend best described as a typical "ace" photographer. He had helped us on *Polaris* and before that, *Vanguard*. Bob had done some nice work on Alan Shepard and the early days of *Mercury* — you can find his pictures in some of those old National Geographic Magazines stashed away in the attic. He had covered just about everything that had gone on, up or down, at the Cape, from missiles to monkeys to moon trips. Once, he almost lost his life making final adjustments to cameras around a *Titan* pad when the missile ignited prematurely and blew up. Occasionally, he would go off to cover something else, like a sports car race, but he would always be back when the Big Birds flew.

Bob Special wasn't here on this one.

We looked around the site. It was about the size of a football field, sprawling out in front of the covered grandstand where writers and reporters — contingents of the Press — were situated. Usually, at launch time, the entire field would be filled with cameramen, photographers and their equipment. Knowing this, we had come down early, staking claim to the best vantage point. A non-essential move, it turned out, for no more than 100 fluvial feet were needed to accommodate the cameras of the fourth estate recording the departure of Moon Surface Exploration Three. At 13 minutes after 2 p.m., *Apollo 13* took off in a cloud of apathy.

Actually, if one wishes to review the subsequent adventure from a viewpoint of gloom and superstition, it can be noted that at one time consideration was given to a Friday-the-13th launch in March. The black cat emblem had been kicked around, too, but was judiciously abandoned. A 1313 (Houston time) launch of April 11 was finally established — just a *gentle* tweak to the twisted whiskers of fate.

The day before the launch, LCdr. Ken Mattingly was replaced as command module pilot because he was susceptible to German measles (*East* German measles, according to visiting West German Chancellor, Willy Brandt). Mattingly never did get sick.

Then on April 13 and, some said, at 13 minutes before

Apollo 13

10 p.m. (EST)* an explosion occurred in the *Apollo 13* service module resulting in a damage area reported to be 13 feet long. Jinx? Pushy conjecture.

The most significant thing about the launch and initial journey into space was that a lot of people didn't care. After the apparent insouciance of *Apollo 12* (*NANews*, January 1970) and the string of successes leading up to the first landing on the moon, there was a feeling of: "So what?" Boredom had set in and, more than that, criticism of the \$400 million excursion was being expressed in print, even as *Apollo 13* cleared the pad. There were voices raised claiming the money could be put to more practical use, applied

in more beneficial directions. There was a growing feeling that possibly the tremendous funding for the lunar landing and exploration program had been misspent. There were even undercurrents of skepticism regarding *manned* space flight and, indeed, doubts about the necessity for pilots as astronauts. Couple these attitudes with the recent budget cut and a *real* specter emerges. The Space Program was dying.

Standing on the edge of the barge-turning basin next to the VAB, we watched *Apollo 13* pierce a high, thin layer of clouds and crackle out of sight. During the 20 seconds of the blast-off, our cameras had gotten more than 50 pictures (a motor drive helps). That part of the job was done.

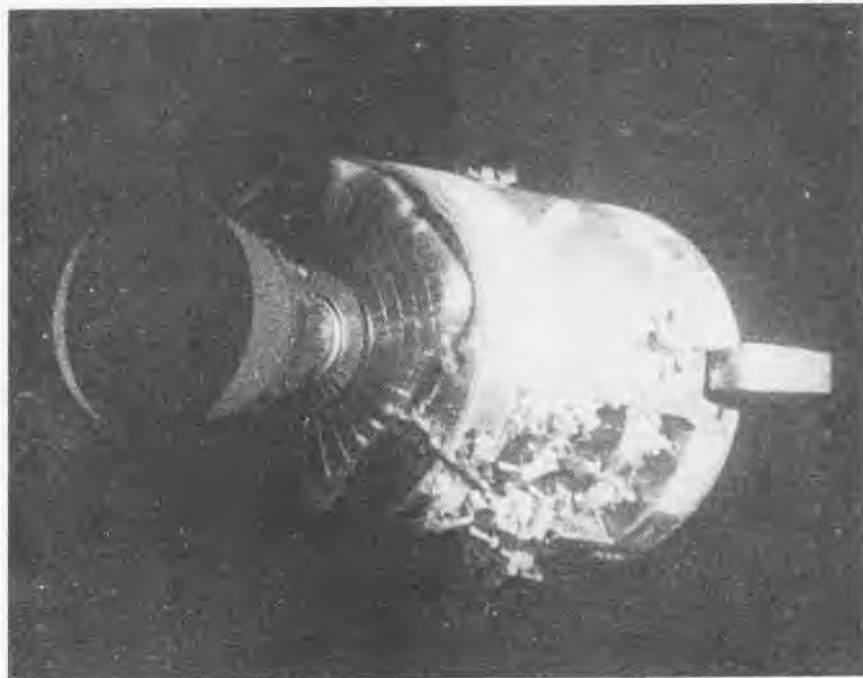
Curiously, within minutes, the sky became overcast and grey. As we packed up our gear, we tried to remember if we had heard the usual cheering and shouts of "Go-Go-Go!" Maybe it *was* there, but we couldn't recall. The idea of then going over to get some shots of Ken Mattingly's disappointment had little appeal to us (we knew it certainly wouldn't appeal to *him*), so we eased out of KSC and decided to head home. On the plane back to Washington, we planned the *NANews* article and concluded that another textbook lunar flight rated no more than general news treatment. . .

The 36-story *Apollo 13* rocket was 26,000 pounds heavier than its predecessors. Extra fuel had been loaded aboard the *Saturn's* three stages as

'We Have a Pr

At 55 hours and 54 minutes into the flight, oxygen pressure in the service module's No. 2 tank began to rise. The crew was just finishing a television transmission, and Lovell was in the tunnel between the command module and the lunar module "wrestling with the TV wires and a camera." LM pilot and former Naval Aviator Fred Haise, Jr., was in *Aquarius* (the LM), and Jack Swigert was in the command module, *Odyssey*. Suddenly, all three heard "a rather large bang" and CM pilot Swigert called, "Hey, we've got a problem here."

Initial concern over the probability of aborting the lunar landing soon gave way to anxious speculation about a safe return. Within an hour, the crew had manned the two-place *Aquarius* — now their only reliable source of oxygen, water and electrical energy — and were shutting down the command module to conserve its



Damage occurred in Section 4 of the Apollo 13 service module, above. Dark area in the center is the normal location of No. 2 oxygen tank. At right, Apollo 14 crewmen discuss recovery operation. Pictured from left to right are Astronauts Roosa, Mitchell and Shepard.

*Exact time was 10:07.

part of a performance evaluation for future liftoff trajectories. For that reason, clearing the pad seemed more tantalizing than usual. The first stage fired perfectly, cut off at 45 miles, and dropped away as stage two's five engines came on. Inexplicably, the center one shut down two full minutes ahead of schedule; the four outboards assumed the load, burning 30 seconds longer. High-amplitude vibration had been detected in the vicinity of the No.5 J-2 engine causing reduced fuel flow and automatic cutoff. By 2:30 p.m., the craft was in orbit, moving towards the coast of West Africa, in darkness. Not long afterwards, Jim Lovell, the commander of *Apollo 13*, radioed, "We're beginning to see a beautiful sunrise."

Captain James A. Lovell, Jr., a Naval Aviator from Cleveland, Ohio, is the world's most experienced spaceman. Graduating from the Naval Academy in 1952, he earned his wings at Pensacola and served in various aviation assignments until 1958 when he became a test pilot at Patuxent River. His tour at the Naval Air Test Center included service as program manager for the F4H (F-4) Weapon System Evaluation. After graduating from the Aviation Safety School of the University of Southern California in 1961, he joined Fighter Squadron 101 at NAS Oceana, Va., and became an astronaut the following year. Captain Lovell was pilot of the 1965 *Gemini 7* mission, the longest manned space flight (330 hours), during which the

first rendezvous of two manned maneuverable spacecraft was achieved. After completing *Gemini 12* and the trailblazing *Apollo 8* flight around the moon at Christmas a year and a half ago, he had logged 572 hours in space. Accomplishment of the *Apollo 13* mission would have increased the total to 813 hours.

Lovell, whose interests include a variety of sports (he was special consultant to the President's Council on Physical Fitness for three years), is a member of the Toastmasters Club, and he is a former Eagle Scout. Nicknamed "Shaky" by the other astronauts (due to his constant activity), he had stated that *Apollo 13* would be his last space flight; he would move aside to make more room for the others.

oblem. Here...'

NASA



remaining power. Two of the three oxygen tanks in the service module were known to be gone and they could see gas venting from the side of the vehicle.

At the Mission Control Center in Houston, flight controllers, engineers and astronauts set about devising ways to keep the three men alive.

Captain Alan Shepard, America's first man in space, and Commander Ed Mitchell climbed into the lunar module simulator in Building 5 of the Manned Spacecraft Center. The two Naval Aviators, scheduled to land on the moon in October during the *Apollo 14* mission, began testing ways to fire the craft's rockets. In the next room, Commander Ron Evans, Major Stuart Roosa and Astronaut Vance Brand worked out re-entry procedures in the command module simulator. Commander Eugene Cernan and Colonel David Scott examined emergency procedures while, over at Cape Kennedy, Captain Dick Gordon did the same. Ground controllers began to rewrite the book on operations. They had an entirely new mission — to save and bring back three men.

The prospects for safe return were not good. Oxygen supply in *Aquarius* was limited. Batteries were the only source of electrical power. The service module was dead and there was no way to make water to cool the electronic package which makes up the guidance and navigation system. The lack of lithium hydroxide canisters to cleanse the air of carbon dioxide was the most serious problem.

Cautious statements issued to the Press engendered a feeling of uneasiness around the world. While the men of NASA groped for a disaster antidote, the public became intimately concerned with the fate of the three spacemen. The expensive program which so many had come to take for granted, misunderstand, view with antipathy and lately criticize, suddenly moved into a new perspective. Many Americans took a thoughtful look at the space effort.



Commander Ron Evans, above, backup command module pilot for Apollo 14 mission, checks atmosphere re-entry procedures in the command module simulator at Houston. Evans, other astronauts and a team of NASA engineers and technicians practiced long hours, checking and double-checking, to ensure *Odyssey's* safe return.

Captain Alan Shepard and Commander Ed Mitchell, Apollo 14 commander and his lunar module pilot, are shown in multi-million dollar LM 'sim.' With the help of engineers the spacemen rehearsed moves to be made in Aquarius, 200,000 miles from home. No moves were ordered until proven out in the trainer.





NASA

NASA



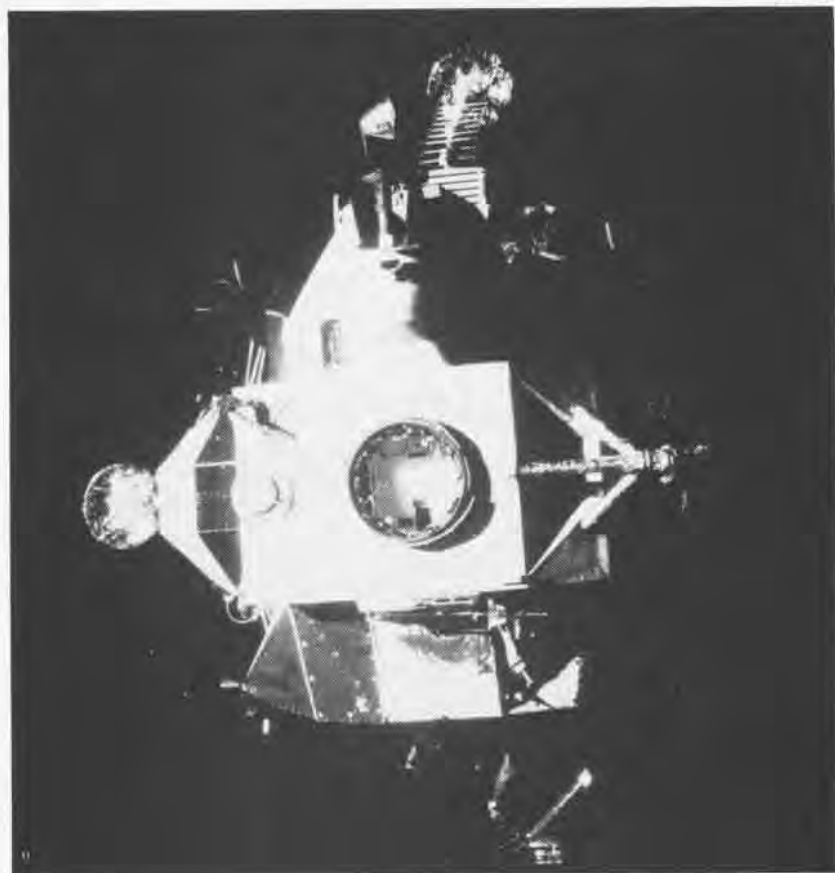
A water-level view, at top, shows astronaut Swigert leaving the spacecraft while, above, Dr. Thomas Paine, NASA Administrator, is surrounded by NASA officials applauding successful splashdown.



LCdr. Ken Mattingly, bumped from the original crew at the last minute, finally smiles as he watches televised recovery operations.

Apollo 13 survived. While the original scientific mission, centered around lunar exploration in the hills of Fra Mauro, was a failure, success was achieved in a different form — a revived understanding that victory is seldom achieved through easy means. The men on the ground tested ideas, weighed risks and made decisions. Astronauts Lovell, Haise and Swigert made innovations and kept their “cool.” Five different plans were evaluated for a safe return; the one chosen worked flawlessly. Careful conservation of consumables (cooling water, electrical energy and oxygen) paid off. A jury rig took care of the carbon dioxide problem. In spite of the lack of adequate heat and rest, confidence grew during the journey home, and the splashdown near USS *Iwo Jima* was “by the book.”

The new technology — and the accompanying wealth of knowledge that is being applied to make life better on his terrestrial home — has yet to be fully appreciated by the man in the street. But for a few crucial days, he watched as the marvelous *Aquarius* pushed the stricken *Odyssey* around the dark side of an antediluvian moon and then back to the distant blue jewel of progenitive Earth. And he realized there is yet much to be done. *Apollo 13* ventured across obscure horizons. A machine failed but man’s ingenuity triumphed. Out of the pride of that strenuous achievement came a restored awareness of our capacity to surmount awesome problems — and with it, a subtle recognition of the significance of spatial aspirations.



NASA



NASA

*‘Farewell, Aquarius,
and many thanks.
She was a good ship.’*

Capt. James A. Lovell, Jr., USN

By JO2 Jim Missett
and PH2 Gary Mann

The 61 Navy men who man it call it the "iceberg." So does everyone else at the Naval Air Test Center, Patuxent River, Md.

The iceberg is the TC-7 catapult site on the southeast side of the test center. Lt. Mark Welford is in charge of the TC-7, a part of the Carrier Suitability Branch of the Flight Test Center.

The name, iceberg, is derived from the fact that only a small portion of the men and their equipment can be seen from the road. During a launch,

PATUXENT RIVER'S ICEBERG



there may be 50 men working below the site and not more than ten on the surface.

The \$6 million catapult site was completed in 1954 and was put to immediate use testing aircraft and associated systems. Its purpose is to make sure the plane, any modifications or any new systems will withstand the strain of a catapult launch from a carrier.

C-7 catapults are used on all attack carriers through USS *Independence* (CVA-62). Modeled from a smaller British steam catapult, the C-7 is capable of launching aircraft weighing 85,000 pounds. But, for a better idea of how powerful the machine is: it can accelerate a 57,000-pound dead weight to 125 knots in the 255-foot length of the catapult — with no power other than that generated by the catapult.

In the depths of the cat site, men of four different rates — aviation boatswain's mate, boilerman, electrician's mate, interior communications electrician — work. The only oddity is the BT rate. There are 16 boilermen working with shipboard type boilers. (The two boilers used to generate steam are similar to those on a destroyer.)

The electrician's mates take care of the catapult's electronic gear, while the aviation boatswain's mates are responsible for operation of the catapult.



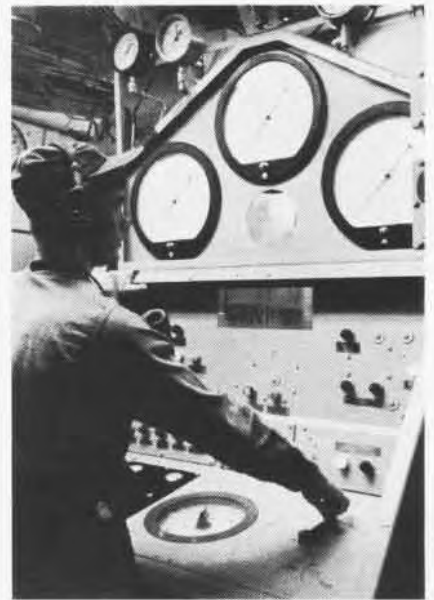
A Phantom moves onto the C-7 catapult site at NATC Patuxent River, opposite page. The boiler system for generating steam is under the catapult. BT2 Richard McMillan, left, prepares to light-off one of the destroyer-type boilers and bring it on the line. ABE3 Harold Maxwell, below, stands in a deck edge well with two fingers up, signifying the status of the launch is standby. After final clearance at this stage, launch is next.

Although not rare around catapults, the interior communications men at TC-7 perform a unique task. They record on video tape every launch and arrested landing. The tapes are later used by engineers to observe segments of the operation. If there is an accident, the tapes are valuable in the ensuing investigation.

Carrier suitability is not the only branch that uses the catapult. It is open to any division on base, or any other installation, that may need to use the facility. During the good weather months of late spring and summer, the catapult may record up to 60 launches per month.

Although the only apparent evidence that a catapult site exists is the billowing cloud of steam and the men hurrying around the catapult area, many hours of preparation and planning go into each launch. The men below the surface may not be seen, but the end result of their work is heard when aircraft thunder from the catapult on test runs.





Preparing for launch, a flight deck crewman holds bridle until slack is taken out while, below deck, ABE3 Michael Toco checks the steam pressure, top.



PATUXENT RIVER'S ICEBERG



Meanwhile, ABEAN Leroy Wagner mans his shuttle retractor post, top left, and IC(SS)2 John McMahan monitors a launch on PLAT TV. The senior flight deck crewman makes a final check of the bridle. The efforts of the TC-7 crew are aimed toward perfect launches and, when the cat officer gives the signal, the F-4 roars off.



Young Professionals With



It's a short jump from the left seat to the right seat of a TS-2A *Tracker* but, for a young selected retained graduate (SerGrad) who makes the jump, the accompanying responsibilities are great.

With neither an overabundant amount of flight time nor the wealth of experience common to his more seasoned compatriots, the newly-winged aviator finds himself facing the demanding task of training student Naval Aviators in the Advanced Training Command.

Although the SerGrad program is



WITH SUBDUED camaraderie, SerGrad, Ltjg. G. A. Lee, and his student complete a training flight, left. SerGrad instructors, above, discuss training during break.

A Purpose

The author, a June 1969 SerGrad of VT-31 at NAS Corpus Christi, has the collateral duty of assistant personnel officer in the squadron.

relatively new, the concept of the program has been around for several years. Originally called "plowbacks," the recently designated Naval Aviators return to training squadrons as instructors. After more ground school courses and several hops as an instructor-under-training, the fledgling Naval Aviator is assigned his first students.

From the beginning, the student-SerGrad relationship is one of subdued camaraderie. Knowing very well the anxieties bound up in his students, the new instructor is capable of coping with any problems which may arise

By Ltjg. R. K. Gray

Photographs by PH3 Murray Judson

during the course. The zeal and dedication he brings to his assignment could be likened to the motto, "We try harder."

Not unlike his students, the SerGrad spends a great deal of his free time in study; he must thoroughly prepare for the many questions he knows his students will pose. It is one thing to understand something well enough to perform it yourself but

something far more difficult to transmit this knowledge to someone else.

In addition to his instructing responsibilities, he is assigned a ground billet in one of the squadron departments. Within the framework of the squadron billet, he gains invaluable insight into a squadron's organization, as well as administrative experience — preparation for future assignments in the fleet and ashore.

It is not an easy task facing the selected retained graduate, but it is certainly a challenging one.



SERGRAD, Ltjg. S. L. Frasik, explains the workings of an S-2A brake to students, center, while at left, VT-31 navigation officers, Ltjgs. R. L. Nobel and R. G. Hill, work out a problem. Students are taught the proper preflight methods by a SerGrad. The selected retained graduates in the training command have an immediate feel for students' problems.

MAN - The Essential Ingredient





A Photographic Essay
by AN Mark Meyer





They work hard, those men on the flight deck; sometimes 14-18 hours a day. Sometimes the wind is bitterly cold and so strong it's difficult just to stay on your feet. Between the launch and recovery cycles there is time for a few minutes' rest, but it's always too short. And the responsibility! The average age on the flight deck is 19. These are young men with a great burden in Naval Aviation. They must do their job right the first time - every time.





THE SELECTED AIR RESERVE

Naval Air Reserve Reorganized

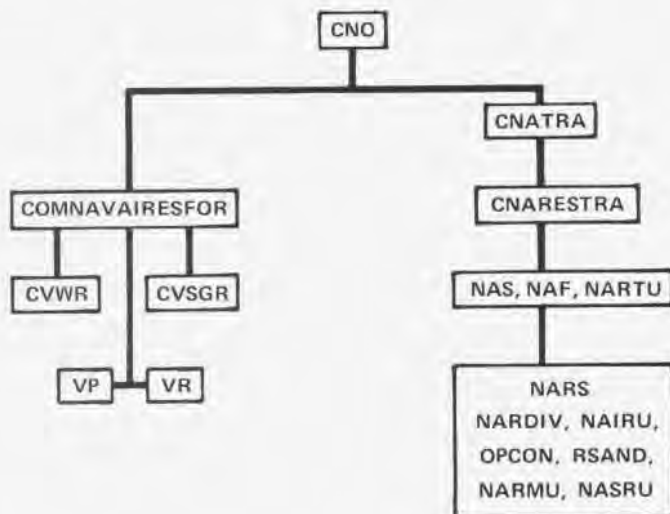
With the recent establishment of two Reserve carrier air wings (CVWR-20 and 30), two Reserve ASW air groups (CVSGR-70 and 80) and the realignment of the Naval Air Reserve Force command structure, the planned reorganization of the Naval Air Reserve has taken definite form.

Individual commanding officers of carrier-type squadrons will assume custody of and the responsibility for their squadron's aircraft and report directly to their group/wing commander. Air group and air wing commanders in turn report to Rear Admiral H. E. Greer, Commander Naval Air Reserve Force, who is responsible to the Chief of Naval Operations. This structure brings the organization of combat units of the Reserve into conformity with that of the fleet.

Regular Navy group/wing commanders have been assigned to administer carrier-type squadrons in the restructured organization. Patrol and transport squadron commanding officers will report directly to ComNavAIResFor.

Augmenting squadron Reservists at weekend drills, during active duty training periods and during mobilization, a sizable group of TAR officer and enlisted personnel will provide an important component of a squadron's overall strength. Approximately 40 percent of station TAR's have been assigned to Reserve squadrons, serving in a variety of capacities from aircrew to maintenance and training.

CNAREsTra, under the revised organization, will be responsible for training individual Reservists prior to their assignments to units of the Naval Air Reserve Force. The Naval Air



NAVAL AIR RESERVE FORCE

CVSGR-70

Cdr. Frank Toy, USN

VS-71 NARTU Lakehurst
 VS-72 NARTU Norfolk
 VS-73 NARTU Lakehurst
 HS-74 NARTD Quonset
 HS-75 NARTU Lakehurst
 VSF-76 NAS New Orleans
 VAW-78 NARTU Norfolk

CVSGR-80

Cdr. Emidio Massa, USN

VS-81 NAS Los Alamitos
 VS-82 NARTU Alameda
 VS-83 NARTU Whidbey
 HS-84 NAS Los Alamitos
 HS-85 NARTU Alameda
 VSF-86 NAS New Orleans
 VAW-88 NARTD North Island

CVWR-20

Cdr. Robert Holt, USN

VA-203 NARTU Jacksonville
 VA-204 NARTU Memphis
 VA-205 NAS Glenview
 VA-209 NAF Detroit
 VA-210 NAS South Weymouth
 VFP-206 NARTU Washington
 VAW-207 NARTU Norfolk
 VAQ-208 NARTU Alameda

CVWR-30

Cdr. Allstair Falconer, USN

VF-301 NAS Dallas
 VF-302 NAS Dallas
 VA-303 NARTU Alameda
 VA-304 NARTU Alameda
 VA-305 NAS Los Alamitos
 VFP-306 NARTU Washington
 VAW-307 NARTD North Island
 VAQ-308 NARTU Alameda

Reserve Training Command will also continue to train and administer those non-hardware units which will not be transferred to the Naval Air Reserve Force.

CNAResTra C.O. Conference

Commanding officers from Naval Air Reserve stations, training units and NARS, together with senior officers of CNAResTra's flag support component, met with Rear Admiral H. E. Greer at NAS Glenview for a two-day conference to discuss transition to the "new" Naval Air Reserve. The officers were formed into 14 ad hoc committees to examine and make recommendations on some of the "grey areas" associated with the restructured organization.

RAAdm. Greer opened the meeting by saying that "the name of the game is readiness." He told the conference that every Reserve unit or squadron must be fully ready to perform its assigned mission when called upon. He said, "We are going to reorganize to duplicate the fleet; the Reserve squadron is going to be identical with the fleet squadron. Our squadrons are going to be the same in manpower, in numbers of aircraft assigned, in maintenance procedures, in reporting procedures, and in funding."



REAR ADMIRAL H. E. Greer briefs senior Naval Air Reserve officers at NAS Glenview.



AS PART of CVSGR-70, this newly assigned E-1B Tracker of VAW-78 prepares for a training flight from NARTU Norfolk. Three other Reserve VAW squadrons will be similarly equipped.

The admiral stressed that he wanted Naval Air Reserve squadrons in such a high state of readiness that, if recalled, the only change would be that one day it would be a Reserve squadron and the next, a fleet squadron. He brought attention to the increased deck time being made available to Reserves, pointing out that prior to recent carrier qualifications, the last carquals were performed in July 1967 (see pp. 26 and 27). Adm. Greer added that Reserve squadrons would receive a higher priority in the use of fleet targets as well.

The term "2-2-12-3" was called the key to the future of the Naval Air Reserve. It refers to 2 Reserve carrier air groups, 2 Reserve carrier air wings, 12 patrol squadrons and 3 transport squadrons - the planned strength of the Naval Air Reserve Force. He also outlined six objectives for this force:

- Duplicate the organization and manning levels of fleet squadrons.
- Increase Selected Air Reserve participation of both aircrew and maintenance personnel.
- Increase carrier-based and weapon delivery training.
- Attain and maintain a minimum of C-3 readiness in all squadrons.
- Improve supportability of training programs by reducing the number of support sites for each type of aircraft.
- Position squadrons for maximum utilization of fleet facilities.

Corsair Qualified

Commander L. R. Smith of VF-124D1 (now VF-301) from NAS Dallas, Texas, spent his two weeks of active duty going back to school. He attended Corsair College at VA-122, NAS Lemoore, Calif., and then was the guest of VA-25 where he flew his first A-7E, the fleet's newest attack aircraft.

Cdr. Smith, who flies the F-8 Crusader in VF-124D1, is no stranger to the Corsair II. When not piloting an F-8 through Texas skies, he is program director in charge of the A-7A/B at LTV Aerospace Corporation.



CDR. L. R. SMITH of VF-124D1 prepares to fly the Navy's newest light attack plane.

NAVAIRESFOR:

Qualification at Sea



Naval Air Reservists demonstrated the state of their readiness recently when pilots and ground crew personnel operated aboard three aircraft carriers.

USS *Intrepid* (CVS-11) operating off Pensacola, Fla., was host to VSF-76, VSF-86 and HS-80X1 – all NAS New Orleans-based squadrons – and HS-66R1 from NAS New York. Eighteen VSF pilots made ten carrier landings each while SH-3A *Sea Kings* of HS-80X1 and HS-66R1 provided plane guard service. On hand to observe these activities were the air group commanders of the newly formed CVSGR-70 and CVSGR-80, Commander Frank Toy, USN, and Commander Emidio Massa, USN.

Meanwhile, the deck of USS *Lexington* (CVT-16), at sea near Guantanamo Bay, Cuba, was the site of 279 arrested landings made by a composite group of Naval Air Reserve A-4 pilots from NAS New York, NAS Los Alamitos, NARTU Alameda and NARTU Jacksonville.

USS *Guam* (LPH-9), in the Atlantic at that time, provided helicopter crews from NARTU Lakehurst and NARTD Quonset Point an opportunity for at-sea training. HS-74 and HS-75 of CVSGR-70 earned their carrier qualifications while attaining higher combat-ready status.



A-4 SKYHAWK from NAS New Orleans is catapulted from *Intrepid* in Gulf of Mexico.



LCDR. A. F. CIANCITTO discusses flight with fellow pilot in *Intrepid* ready room.



LCDR. J. L. ROBL, member of a composite group from four Reserve air stations, taxis his A-4 toward the starboard catapult aboard *Lexington* in the Caribbean near Guantanamo.



COMMANDER MASSA, left, CVSGR-80, discusses progress of Reserve carrier qualifications with Commander Toy, CVSGR-70.



LEXINGTON'S flight deck crew prepares an A-4 for one of nearly 300 launches during carrier qualification flights.



SH-3A SEA KING of HS-80X1, above, stands by as plane guard for aircraft flown from *Intrepid*. New Orleans-based A-4, right, catches #1 wire.





ON PATROL

with the Fleet Air Wings

VP-4 Busy at Adak

The *Skinny Dragons* of VP-4, led by Commander John R. Emerson, are presently deployed to Naval Station, Adak, Alaska, from their home base at NAS Barber's Point, Hawaii. Recently, they were called upon to evacuate a young boy from Adak to Elmendorf AFB Hospital.

Seven-year-old Kevin M. Sloan of Adak suffered injuries to his right eye while playing with a group of children in a field near his home. According to Mrs. Sloan, the children had constructed a makeshift bow and arrow, using pieces of wood and string. One of them unintentionally shot the crudely fashioned arrow at the Sloan boy. It struck him in his right eye, damaging muscle tissue.

Kevin was first taken to the base dispensary on Adak where it was decided that he should be evacuated to Elmendorf.

VP-4 was contacted and immediately mobilized the ready alert crew, commanded by Lt. Kirk J. Ditzler. Within minutes a P-3 *Orion* was airborne and bound for Elmendorf. The injured child and his father, Kenneth M. Sloan, serving with the Coast Guard Loran Station at Adak, were accompanied by Hospitalman Jerry P. Thelen from the naval station dispensary.

The aircraft touched down at Elmendorf, was met by an ambulance which took the boy to the hospital, refueled and returned to Adak the same night. Kevin's father remained at Elmendorf.

It was determined that surgery was not required and Kevin was treated and released. When news of his recovery reached the squadron, AD1 Clyde H. McCaleb, a crewmember on the flight, said, "It's rewarding to know he's OK."

High school students from Adak now have a better understanding of

patrol squadron antisubmarine warfare operations. The *Skinny Dragons* gave the students a tour through the squadron's hangar spaces and one of their *Orions*.

LCdr. Richard J. Pagnillo, the squadron's training officer, conducted the tour. He had visited the high school earlier and discussed the many facets of oceanography with the class.

On board the P-3A, LCdr. Pagnillo, assisted by ADJ2 Gene Kelly, AW1 Calvin Harris and ADJAN Jesse Sanchez, explained the use of various flight controls in the cockpit, described the operation of the ASW equipment and answered endless queries from the curious students.

After the tour, the students watched maintenance technicians working on aircraft while squadron personnel explained what they were doing and the importance of keeping the aircraft in good condition.

Coastal Command Trophy

The members of VP-9 at NAS Moffett Field were recently recognized for their outstanding performance in antisubmarine warfare when Commander, Fleet Air Wings Pacific, Rear Admiral C. S. Minter, representing ComNavAirPac, awarded VP-9's commanding officer, Commander Larry Phillips, Jr., the Coastal Command Trophy, marking the second successive time that the award has been made to the *Golden Eagles*.

The trophy was originated in April 1968 by the Royal Air Force Coastal Command to mark the 50th anniversary of the founding of that organization. It emphasizes the close ties that exist between the maritime patrol plane forces of the U.S. Navy and those of the Royal Air Force.

The award is given to the U.S. Pacific Fleet patrol squadron which, in the judgment of the Commander,

Fleet Air Wings Pacific has displayed the highest airborne antisubmarine warfare proficiency during competition for the Battle E. Consideration is given to performance in operational readiness inspections, fleet exercises and operational missions.

VP-46 Alpha Crews

When VP-46, led by its new commanding officer, Commander R. E. Howey, completed its deployment to NS Sangley Point, R.P., and detachment to Cam Ranh Bay, RVN, it returned to NAS Moffett Field sporting four new Alpha crews. Alpha status for a particular flight crew is the ultimate in crew teamwork and ASW training and readiness.

LCdr. Roland Hassel is the PPC of Crew 11 Alpha and Lt. Bill Gwinn is TACCO. Crew 8 also earned Alpha Status and is led by LCdr. Dan Denike, PPC; Ltjg. Paul Kuntz is its TACCO. Commander Joe Lapham and Lt. Wayne Hicks of Crew 2, LCdr. Jack Roberts and Ltjg. Charles Noel of Crew 3 are the PPC and TACCO, respectively, of those two Alpha crews. During its deployment, the mission of VP-46 was one of ocean surveillance in the South China Sea and the Gulf of Tonkin in addition to aerial support of 7th Fleet surface units on Yankee Station.

Safety Record

Commander E. A. Tansey, executive officer of VP-49 at Patuxent River, Md., and his crew recently winged their aircraft to the squadron's 65,000th accident-free hour. Following touchdown, the P-3C crew was greeted by LCdr. H. H. Brodersen, squadron safety officer, who cut a large cake with the squadron sword.

VP-49 has recently transitioned to the P-3C.



1942 RCAF photo of Ens. Mac J. Roebuck and his wrecked OS2U



The same OS2U at the LTV plant in Dallas where it is being restored

WW II KINGFISHER RETURNS

In a corner of a hangar at LTV Aerospace Corporation's plant lie the wrecked remains of an OS2U *Kingfisher*. It is one of three known remaining planes of 1,225 built by Vought in WW II for Navy scout and observation work. Members of the company's "Quarter Century Club," many of whom worked on *Kingfisher* production, are spearheading restoration of the plane to display condition for the USS North Carolina Battleship Commission.

The North Carolina Commission procured the plane from the Canadians in 1969. They wanted to dis-

play it on the ship's fantail because the battlewagon had carried *Kingfishers* through WW II. *North Carolina* is now moored to a quay in the Cape Fear River in Wilmington.

The next to last step in the *Kingfisher's* long history came in February when it was delivered to LTV, battered and twisted.

Of the other *Kingfishers* known to exist today, one, belonging to the National Air and Space Museum, is displayed on the fantail of the battleship *Massachusetts*. The other has been reconstructed into a float plane by the Battleship *Alabama* Commission and is exhibited

on the *Alabama* which is moored in the Mobile harbor.

Until production stopped in 1943, Vought built three versions of the OS2U for the Navy: -1, -2 and -3. The Naval Aircraft Factory, Philadelphia, also built 300 of a fourth version: the OS2N-1.

Several noteworthy rescues were made by *Kingfishers*. In one, seven pilots were picked up by a *Kingfisher* in the Truk area. Two men clung to each wing and three to the fuselage as it taxied for six hours on the water until the submarine *Tang* rescued them and sank the battered little float plane.

The plane had crashed on snow-covered Calvert Island, 300 miles north of Vancouver, British Columbia, in 1942.

Nothing else was known about its history until an article on the rebuilding project appeared in LTV's employee newspaper. It rang a bell with Ray G. Thorpe, supervisor of base support operations at the Navy's Barking Sands, Kauai, Facility. He was leading a formation of three *Kingfishers* to Alaska in 1942 when one of them, piloted by Ens. Mac J. Roebuck, smashed into the side of a mountain on Calvert Island during a dense fog.

Thorpe located Roebuck, now a civilian employee at NAS Moffett Field, Calif., and the mystery of the wrecked plane and its passengers was cleared up. Flying in the back seat at the time of the crash was Mechanic

Stan Goddard; both he and Roebuck survived the crash without a scratch.

Roebuck remembers that off the coast of Calvert Island they were caught in a dense fog, and he veered away from the others to avoid a collision. "I was just flying along and all of a sudden the *Kingfisher* stopped. I couldn't see a thing and for a few

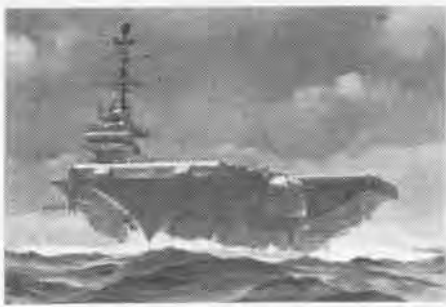


An OS2U at Norfolk in December 1943

seconds I kept right on 'flying'."

Lt. Thorpe landed his aircraft on the water and contacted the Canadian authorities at Bella Coola for aid. Roebuck remained near the crash site and with the help of his mechanic and six Royal Canadian Air Force men removed the guns, instrument panels, radios and engine from the OS2U.

The engine was loaded onto the right wing (torn off on impact), and the "sled" pulled down the mountain-side for salvage. The rest of the plane lay on the mountain from 1942 until 1964 when the Royal Canadian Air Force airlifted it out for the Air Museum of Canada. Although souvenir hunters stripped parts from it during the 20 years it spent on the island, it was sufficiently intact for the Air Museum to become interested. Its parts were surprisingly uncorroded.



at Sea with the Carriers

PACIFIC FLEET

Hancock (CVA-19)

It resembled a graduation exercise, but instead of moving in flowing robes to "Pomp and Circumstance," participants marched militarily in Navy blue uniforms to the music of a Navy band. Moreover, the ceremony took place at sea, on the hangar deck of *Hancock*, making her way from Sasebo, Japan, to the South China Sea for a final month of air operations before ending an eight-month cruise in Western Pacific waters.

The occasion was the presentation of course completion certificates to sailors involved in the Program for Afloat College Education (PACE), a Navy-wide program offered in conjunction with San Diego State College. PACE was started on the *Hancock* before she left Alameda. Later, when *Hancock* reached Hawaii on her way across the Pacific, five professors from San Diego State came aboard to get the program underway

for the first semester. For 15 days, the professors organized classes, gave course assignments, interviewed and chose proctors to fill in for them after they left the ship in the Philippines. The proctors assist the students in their weekly assignments and guide classroom discussions.

Classes in English, math, physics, psychology and economics are included in the curriculum. By going to classes aboard ship and keeping up with course assignments, sailors are able to work for their college credits. All papers and exams are sent to the stateside professors to be marked and sent back to the student aboard the *Hancock*.

Forty-three completed the first semester course work and were presented certificates by their commanding officer, Captain N. P. Foss, a firm believer in the program, which has been so successful that a second semester was started in January. Because of a strong interest in the philosophy of existentialism, a class in the subject was added to the curriculum of the second semester.

Ranger (CVA-61)

A crisis aboard *Ranger* was recently resolved with the help of a compassionate radio announcer, a concerned newspaper editor, a generous Philadelphia candy manufacturer and a sympathetic Navy Aviation Supply Office (ASO) employee in Philadelphia. The seriousness of the problem was exposed "the day the malted milk balls ran out."

There's a large group aboard CVA-61 that "pop" malted milk balls. With the usually dependable sources of supply unresponsive and bleak days ahead without their chocolate coated goodies, one desperate crew member decided to try a contact in the states. He wrote a letter to his hometown radio station in Lawrence, Mass., with a request to broadcast a plea for help. The station was happy to comply.

The broadcast was picked up by a news service and the plight of the men found its way into the *Philadelphia Evening Bulletin*. The article was read by Ann Rich of the Aviation Supply Office's data processing division.



'STRAIGHT PUSHER' Bob Lillienthal, a Washington State Penitentiary trustee, talks with crewman. Shipping over underneath the *Kitty Hawk*, in drydock at Bremerton, is AO1 T.R. Kelsey and, for the first time in four years, *Midway* steams out of San Francisco Bay on her way to the open sea.

Asking around the office for people interested in starting a "candy kitty" for the men, Ann found that the sister of another employee, Frances Jacoby, worked at the S. Ward Candy Company. Frances knew the Ward Company made the malted milk balls and suggested that Ann call to ask if they would sell the candy at a wholesale price. They did a lot better — they'd donate 24 cartons of the milk balls, if Ann would find a way to deliver them.

Before long a candy caravan led by Ann Rich and Frances Jacoby was on the way back from Ward's with 576 boxes of malted milk balls. At last report, the candy was headed for Southeast Asia where *Ranger* is operating.

Five officers of CVW-2 embarked on the *Ranger* have been selected for the Naval Test Pilot School at Patuxent River, Md. The officers are: LCdr. John W. Davis and Lt. John O. Creighton of VF-154; LCdr. David N. Rogers of VA-93; and Lieutenants John M. Luecke and Daniel C. Brandenstein of Attack Squadron 196.

Kitty Hawk (CVA-63)

At Bremerton, Wash., 200 *Kitty Hawk* crew members recently discussed drugs, alcohol and prison life with four prisoners from Washington State Penitentiary. Known as the "Straight Pushers," the prison trustees each talked informally with a handful of men during sessions at the Puget Sound Naval Shipyard Reserve Center.

The four trustees, three drug users and one alcoholic, told of their lives in and out of prison and answered questions concerning all aspects of prison life and what it feels like to be high on heroin. Following the group discussions, each convict gave a formal speech to a general session.

The appearance of the Straight Pushers is part of the Navy's educational program on illegal drugs.

Oriskany (CVA-34)

The nation's second highest medal for valor was among the awards presented to an *Oriskany* crewman

during shipboard ceremonies at NAS Alameda.

Rear Admiral Roy M. Isaman, Com-CarDiv-7, awarded the Navy Cross to GM3 David R. Larsen for his heroic actions while serving with a river patrol squadron in Vietnam. Larsen was cited for single-handedly turning back a Viet Cong attack with his machine gun, saving the lives of three fellow servicemen and protecting wounded comrades. Larsen also received the Bronze Star for his participation in 166 combat patrols and 22 enemy engagements.

The 150,000th aircraft landing aboard *Oriskany* was celebrated on the hangar deck recently — but the guest of honor was absent.

Presiding at the traditional cake-cutting ceremony, Captain John Gillerist, *Oriskany* C.O., expressed mock regret that Maj. Ronald L. Markey, USAF, of VX-4 had outmaneuvered several pilots from CVW-19 to steal the honor.

The record landing was only the second carrier landing of the major's



career, and he was aboard just long enough to have the landing logged before flying back to his home base, Point Mugu, Calif.

The fact that *Oriskany* was honoring an Air Force pilot failed to dampen the crew's enthusiasm for the 600-pound cake prepared in the ship's bakery.

ATLANTIC FLEET

Forrestal (CVA-59)

Forrestal recently completed a one-week visit to the northern Italian port city of Trieste. Commanded by Captain Charles F. Demmler, the ship was welcomed warmly by the city, and the captain and crew extended their hospitality in return.

CVA-59 proved to be a popular attraction, drawing almost 6,200 visitors in the three days she was open to the general public. This number was a record that easily topped last year's total of 4,700.

Trieste and the surrounding area provided a great many attractive sights for *Forrestal* personnel. In addition to the normal liberty ashore, sightseeing tours were offered to such places as Munich, Venice and Rome and ski trips to Cortina.

Commander Thomas H. Replogle relieved Captain Charles A. L. Swanson as commander of CVW-17, presently composed of VF's 74 and 11; RVAH-13, VAH-10; VA's 216, 36 and 66; VAW-126; and HS-11.

Saratoga (CVA-60)

Three successful days of sea trials ended for the Mayport-based *Saratoga* and capped a two-and-a-half-month restricted availability period.

Highlight of the three days at sea was the 140,000th landing. Ltjg. M. L. Tronbetta of VA-105 piloted an A-7 *Corsair II* for the record landing.

ORISKANYMAN keeps Damage Control Central informed during fire drills.



A NEW statue in St. Mark's Square, Venice? No — a *Forrestal* sailor on liberty.

America (CVA-66)

The Catherine T. McDonald Award, the highest recognition a Navy man aboard *America* can receive from his shipmates, was presented to two crewmen during ceremonies held on board the ship while she was tied up at Mayport, Fla.

Ltjg. William Cartwright and BM1 Roger Law received the award for their contributions to the morale, operating efficiency and material readiness of *America* during the past year.

Rear Admiral and Mrs. Lawrence Heyworth, Jr., presided at the ceremony. Mrs. Heyworth presented the Catherine T. McDonald Certificate to Cartwright and Law. RAdm. Heyworth presented 50 crew members with medals and letters of commendation for meritorious service during the same period.

The award is presented each year on the anniversary of *America's*

christening. In 1964, the wife of the then Chief of Naval Operations, David L. McDonald, christened *America* at the Newport News Naval Shipyard. At that time, the award was established by the sponsor.

Commanded by Captain Thomas G. Hayward, *America* is home-ported at Norfolk, Va.

Intrepid (CVS-11)

Captain Isham Linder relieved Captain Horace N. Moore, Jr., as commanding officer of CVS-11 when the carrier was at NAS Quonset Point, R.I. Rear Admiral J. Lloyd Abbot, ComCarDiv-16, was guest speaker at the ceremony aboard his flagship.

Capt. Moore reported as chief of staff to Commander Naval Air Basic Training at NAS Pensacola, Fla. Capt. Linder reported to *Intrepid* from *Cleveland* (LPD-7).

Lexington (CVT-16)

After her successful completion of fleet underway training at Guantanamo Bay, Cuba, *Lexington* returned to Pensacola, Fla. The Navy's only official training carrier, she has resumed normal operation — qualifying pilots for the fleet — for the first time since June 1969 when she entered the Boston Naval Shipyard for a seven-month yard period.

Upon completion of her extensive overhaul, *Lexington* steamed to NAS Pensacola for a brief stopover before getting underway for Guantanamo.

While en route to Gitmo, the crewmen aboard *Lex* conducted a series of fire drills, general quarters and man overboard drills to ensure the complete operational readiness of the ship. They continued these drills at Gitmo under the supervision of the Fleet Training Group.

For the first time in five years, *Lexington* replenished at sea. She took on fuel and then refueled destroyers from her own tanks.

Lexington is commanded by Captain Cyrus F. Fitton who recently became the ship's 19th commanding officer when he relieved Captain Wayne E. Hammett.



Letters

The Phantom

I am writing a book on the F-4 *Phantom* and would appreciate material on its developmental phase and operational activity from your readers. Any information from pilots and crewmen, past and present, including anecdotal stories, would be greatly appreciated.

Robert Goralski
Pentagon Correspondent
NBC News
4001 Nebraska Avenue, N.W.
Washington, D.C. 20016

For the Future

Your article "Where Do All the Old Airplanes Go?" prompted me to write this letter. It would seem that your writers are unaware of the situation from a preservation viewpoint.

The *Turtle* is displayed in the elements, and it doesn't look polished and shined to me. I'm sure it isn't in as good shape as it could have been if it had been kept under cover.

At Norfolk, the *Emily*, *Catalina*, *Sea Dart* and *Sea Knight* are partially cocooned. An aircraft on display should be where a person can observe it without everything being covered up and with some information given about that particular airplane.

It is shameful that the military forces of the mightiest country in the world don't maintain at least one of each type, or historic type, in flying condition. The Royal Air Force maintains on the roles of active aircraft three *Spitfires*, one *Hurricane* and a *Lancaster* in flying condition, and they fly them at air shows.

The Royal Navy maintains a *Swordfish* biplane torpedo bomber of the type that helped sink the *Bismarck*, in flying condition. Where in our Navy will you find a flying *Hellcat*, *Wildcat*, *Bearcat* or even an SNJ.

I'm pretty certain that some of the planes that are burned for crash crew practice are flyable just before they are executed.

One wonders how many planes at Davis-Monthan are being melted and destroyed. This is the question:

In the future, why don't we have more examples of aircraft for people to look at?

Q. N. D. Elliott, ADR2
VRF-31
NAS Norfolk, Va. 23511

From Down Under

I am preparing a book, *Log of the Liberators*, which will tell the full combat story of the B-24 and the Navy's PB4Y-1 and -2 *Privateer* squadrons, but the Navy is proving difficult to cover.

The PB4Y-2 squadrons moved around from base to base, so location is not necessarily an indication of the squadron. The *Privateers* bore interesting markings which seem to be based on a prefix letter followed by the last three digits of the aircraft's bureau number. Examples are X505 *Redwing*, X525 *Our Baby*, R582 *Miss Sea-ducer*, R755 *Peace Feeler*, Y406, and Z460 *Els-natcho*. To further confuse, *Flying Tail*,

a VPB-118 *Privateer* at Yontan, had 379 on the nose, but no letter. There must be a key to this alphabet soup, and any assistance, even on one squadron, would be appreciated. Photos of PB4Y-1's and -2's will be gratefully received and returned in original condition. I am particularly anxious to contact anyone connected with *Bat* operations or VPB-108 *Privateers* which carried 20mm cannon.

Steve Birdsall
5/53 Wycombe Road
Neutral Bay 2089
Sydney, Australia

Reunion

The personnel of Naval Air Reserve Training Unit Anacostia/Andrews are planning a reunion August 29, 1970, at Morningside, Md. We still need names and addresses of former personnel. Anyone interested should contact:

Mary Bowden
NARTU Reunion Committee
3607 Melrose Avenue
Forestville, Md. 20028

Collections

I have a favor to ask.

There is a 12-year-old boy living in our area who was seriously injured a few months ago in a fall from a diving board. The activities he can participate in are limited and in order to keep his spirits up his family started him collecting military items. He collects *anything* from all branches of the services: uniforms, insignias, pictures, books, rating badges — really anything of the military.

He would especially like an *Apollo 11* patch and pictures, and patches and pictures of the *Blue Angels*. We lend him our copies of *NANews*, and he would like to get squadron patches and histories. I might add that he gets great pleasure from your fine magazine.

The young man lends his collections to schools and veterans' groups and other interested parties. This Memorial Day he is going to display them for the whole community. He is also interested in hearing from other collectors who may want to swap items.

Donations may be sent directly to David Lee Ranker, Box 94, Bloomville, Ohio 44818, or to us here at the U.S. Navy Recruiting Branch Station. We will see that they get to David.

Thank you very much for any help you can give us. David will appreciate anything you can contribute.

Ronald E. Banks, MMC (SS)
Recruiter in Charge
Post Office Building, Room 6
Sandusky, Ohio 44870

Naval War College Correspondence Courses

In an effort to extend the educational facilities of the Naval War College to officers who are unable to attend the resident courses in Newport, R.I., correspondence courses are offered. The subjective type graduate level courses are designed to assist officers in preparation for positions of greater authority and responsibility.

The basic offering consists of five courses which approximate a command-and-staff level education: National and International Security Organization, Military Planning, Command Logistics, Naval Operations and Military Management.

An advanced package is also available. It approximates the School of Naval Warfare and includes satisfactory completion of the basic curriculum plus courses in Counterinsurgency, Strategic Planning, International Relations and International Law.

The courses are revised at appropriate intervals to reflect the latest changes in organization, weapons systems and international affairs. Additionally, and perhaps of most interest to officers in the fleet, courses are designed to fit the needs of the busy active duty officer.

The correspondence courses described above are available to all officers of the U.S. Armed Services of the grade of Navy lieutenant (or equivalent) and above, active or inactive. Selected government employees, GS-10 (or equivalent) and above, may also enroll. A waiver of rank or grade may be granted for qualified individuals in lower grades.

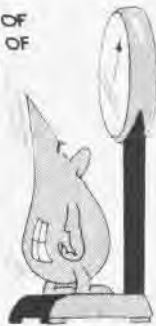
For further information, write to the Director, Correspondence School, Naval War College, Newport, R.I.

RAIN



THE INFLUENCE OF RAIN ON MAN IS EXTENSIVE. BESIDES DICTATING WHAT HE WILL WEAR, IT MAY ALSO REQUIRE THE FILING OF AN IFR FLIGHT PLAN OR EVEN CANCELLING AN EVENT—SUCH AS AIRING BEDDING.

THE MAGNITUDE OF THE PRODUCTION OF RAIN IS SELDOM APPRECIATED. IT HAS BEEN COMPUTED THAT ONE INCH OF RAIN WEIGHS 113 TONS PER ACRE OR 72,300 TONS PER SQ. MILE.



THROUGHOUT THE WORLD, INCLUDING OUR OCEANS, THE AVERAGE ESTIMATED ANNUAL RAINFALL IS ABOUT 40 INCHES PER YEAR WITH THE GREATER AMOUNTS FALLING AT LOWER LATITUDES RATHER THAN IN THE POLAR REGIONS.



AT CHERRAPUNJI, ASSAM, ON THE INDIA-PAKISTAN BORDER, 450-500 INCHES OF RAIN FALL PER YEAR. SINGAPORE RECEIVES 95 INCHES A YEAR WHILE NEW YORK AVERAGES 43 INCHES.

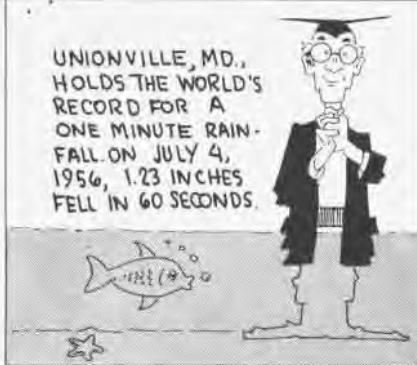


THE OFFICIAL U.S. RECORD 24-HOUR RAINFALL IS 23.22 INCHES, WHICH WAS RECORDED AT SMYRNA, FLA., IN OCT. 1924.

THE WORLD RECORD FOR 24 HOURS IS 73.62 INCHES, REPORTED ON THE ISLAND OF LAREUNION IN THE INDIAN OCEAN.

Chamson

UNIONVILLE, MD., HOLDS THE WORLD'S RECORD FOR A ONE MINUTE RAINFALL ON JULY 4, 1956, 1.23 INCHES FELL IN 60 SECONDS.



VW-1 Claims Penetration Record Low Level Night Flights in Typhoon

According to an Airborne Early Warning Squadron One release, the *Typhoon Trackers* made more low level, nighttime penetrations into Typhoon Nancy, while the storm's winds were in excess of 100 knots, than have ever been made into any other typhoon. In four days, VW-1 aircraft penetrated the eye five times, in darkness and below 1,500 feet, while the winds blew from 110 to 130 knots.

Squadron aircraft also "fixed" the storm at low levels four times while

the winds were below typhoon intensity (65 knots) and made several penetrations at 10,000 feet throughout the life of the storm.

A message to VW-1 from the Fleet Weather Central/Joint Typhoon Warning Center, Guam, stated, "During the life cycle of Typhoon Nancy in February 1970, crews of VW-1 successfully completed five consecutive low level penetrations while sustained wind speeds were in excess of 110 knots, an accomplishment which is unique in squadron history. Request that squadron personnel involved be commended for these unique achievements which are the most recent examples of

sustained superior performance in support of the Fleet Weather Central/Joint Typhoon Warning Center."

Most of the VW-1 typhoon reconnaissance flights involve a low level penetration (below 1,500 feet), circumnavigation of the storm for six hours and a second penetration made at 10,000 feet. All of the penetrations are made at darkness.

VW-1 works directly in coordination with the Joint Typhoon Warning Center and Fleet Weather Central on Guam. All weather information, including the position, size, intensity and other meteorological information, is passed by radio from the aircraft to Guam as soon as it is available. Appropriate storm warnings are then issued throughout the Pacific.

The Navy squadron shares its typhoon reconnaissance duties with the Air Force's 54th Weather Reconnaissance Squadron, who make daytime fixes at 10,000 and 18,000 feet.

Metal Strip Saves Millions Largest Single Saving at NATC

The use of a six-inch-long piece of metal — developed to secure practice bombs on the Navy's multiple and triple ejector racks — and the resultant Navy-wide use of the adapter kits saved \$6,353,000 in FY 70. This is the largest single saving ever recorded at NATC Patuxent River, Md., and one of the largest validated by the Navy.

The cost-cutting idea, developed by Walter K. Sterling, an engineering technician attached to the ordnance branch of the Weapons Systems Test Division, eliminates the need for procurement and maintenance of additional practice, multiple-bomb racks in the fleet.

Before development of the adapter kits, fleet activities were required to carry inventories of the racks for use in training flights with the MK-76 and MK-106 practice bombs.

The kit eliminates the need for practice racks in all tactical aircraft units. Additionally, pilots and aviation ordnancemen receive increased training in the use of the operational, multiple-ejector racks they will use under combat conditions.

EDITOR'S CORNER

NAVY MEN of VT-25 saw one of their own in a different role recently, when 20 students of Chief Joe Gerstner's Bee County College electronics class toured NAS Chase Field.

The VT-25 men, seeing the familiar face of "Chief Joe," were somewhat confused by their visitors' references to Professor Gerstner. The chief, a 28-year Navy veteran, is the squadron avionics CPO and teaches at the nearby college in his spare time.

Captain Fod, arch enemy of *Phantom Fodder*, visited MAG-11 at Da Nang, Vietnam, recently to present its commanding officer, Colonel Grover S. Stewart, a trophy composed of foreign objects found in the vicinity of the flight line. The trophy was given to MAG-11 for winning the 1st Marine Aircraft Wing Ground Safety Award for 1969.

It is suspected that Captain Fod, who has for some time been visiting various squadron flight lines of the air group to check on FOD, is really Lance Corporal Terry Willert in disguise.



BEE COUNTY COLLEGE STUDENTS INSPECT F-9 DURING TOUR OF VT-25.



HM1 E. F. LEMONS ships over at 30,000 feet. Lt. D. M. Herron, administering oath, and Lemons are attached to aerospace physiology training branch of USNH Lemoore.

QUITE A FEW Navy men have shipped over at high altitudes but HM1 Edward F. Lemons managed to do so while keeping both feet planted firmly on the old terra firma.

Lemons, whose primary duty involves instructing aircrew personnel in the use of oxygen, has logged over 100 hours in the high altitude chamber at NAS Lemoore, Calif., and found no problem in getting to 30,000 feet to take the re-enlistment oath.

What did he say? used to be a common question asked by crew members about Commander William R. Hodge. It's not that he didn't speak clearly; it was his accent that seemed strange. But eventually the officers and men of No. 11 Squadron, Royal Australian Air Force, became accustomed to their "Yank."

Cdr. Hodge, the only U.S. Naval Aviator on exchange duty with the RAAF, presently commands a detachment of No. 11 that has been participating in SEATO Exercise *Sea Rover* in Southeast Asian waters. His American accent still raises eyebrows now and then, but it has not hindered him

from becoming a "qualified flight instructor" in the squadron: a recognition of pilot proficiency not previously awarded a U.S. Naval Aviator.



CDR. W. R. HODGE checks maintenance report with Squadron Leader Ian Grant and Sgt. Colin Preece during SEATO exercise.

To operate a weapon proficiently, a man must know it, respect it, and still have command of it. Fear of a weapon can be a man's worst enemy.

Helicopter Combat Squadron Five, NAS Imperial Beach, Calif., has a one-day class on combat pistol training. It is designed to teach helicopter pilots and aircrewmembers how to use hand weapons and not to fear them.

When a man has completed the course, he can fire an M-16 from the hip or hit a silhouette target with a .38 caliber revolver from 120 yards.

The course begins with a familiarization of basic hand weapons: the .38 and .45 caliber pistols, and the M-16 and M-1 rifles.

Once the student becomes confi-

dent and understands the weapon, he is taught how to use it in the field from other than the standard positions. Firing the M-16 or the carbine from the hip can have a definite advantage when quick action is necessary.

Pistols, which are designed for close range, can be just as deadly at long ranges — if the men firing them know what they are doing.

After the student has fired a couple of hundred rounds in the normal position and free style, he runs through an obstacle course carrying a .38 caliber pistol and 50 rounds of ammunition.

Starting from a prone position, he fires six rounds, stands and runs to the next position, ejecting the empty cartridges as he goes. Dropping to a kneel-

ing position he reloads, fires six more rounds, reloads again and continues through the rest of the course, firing, reloading, firing, using both his left and right hands.

The average student runs the course in eight minutes and hits the target 50 percent of the time.

As the West Coast H-2 crew replacement squadron, HC-5 provides combat and flight training to pilots and crewmen in the A, B and C models of the *Seasprite*.

All enlisted aircrewmembers scheduled for duty with HAL-3 in Vietnam undergo extensive training with HC-5, and West Coast HC pilots (except those in HC-3, who fly UH-46 *Sea Knights*) are trained by the squadron.

COMBAT PISTOL TRAINING

By PH2 Gehri Weeks



AFTER FIRING out in the open, a student reloads behind a mock-up plywood rock, above. An HC-5 instructor, right, coaches a student as he fires left-handed from behind a mock window. At top left, an instructor demonstrates how to quickly eject spent cartridges from a .38 caliber pistol without jamming the weapon.





THE PROPER WAY to hold a pistol is taught by HC-5 instructors. With the pistol held firmly in the right hand, a student cocks it with his left and squeezes off a shot, top. Using a mock-up tree for support, a student fires from a sitting position. HC-5 students, above, learn to fire M-16 rifles from the hip in a rapid-fire sequence.



SUPPORT

For The



Helicopter Combat Support Squadron Seven is one of the most versatile helicopter units in the Navy. Commissioned September 1, 1967, HC-7 is in its third year of operations in support of the Seventh Fleet. With four different types of helicopters, the squadron is performing a variety of functions which it believes have never before been accomplished by a single squadron. While the squadron operates as many as 16 separate detachments simultaneously, its major flight tasks for the fleet are:

- Vertical replenishment
- Mine countermeasures
- Search and rescue
- Personnel and VIP transfers
- Oceanographic survey support
- Logistic/SAR support for Naval Air

Stations Atsugi, Japan, and Cubi Point, R.P.

Based at Atsugi, Commander D.G. Gregory's squadron has more than 100 officers and 500 enlisted personnel working in support of U.S. Navy operations in the Western Pacific. These men, on a normal rotation basis, spend almost 70 percent of their tour of duty deployed aboard attack carriers and non-aviation ships of the Seventh Fleet.

With a majority of the squadron's commitments in Southeast Asia, HC-7's Detachment Cubi Point was created on a permanent basis to provide maintenance support to other deployed squadron detachments. In addition, it provides station SAR/logistic support and an environmental training base which uses the latest combat proven rescue techniques to

train combat crews deploying to Southeast Asia.

Through specialized training, HC-7 rescue aircrewmembers — all graduates of the Navy's West Coast Survival, Escape, Resistance and Evasion School — have become some of the most proficient in the Navy. After they earn their aircrew wings and take a familiarization course in the aircraft in which they will fly, they move into plane captain training and learn the aircraft's systems and shipboard operational procedures for it. Air Force ParaMedic Team One provides a specialized course that includes physical conditioning and swimming instruction for rescue aircrewmembers. Navigating in the water at night, jumping from moving helicopters to aid injured aircrews and untangling a survivor from any type of parachute are all part of this training.

Fleet



Nomadic SH-3A's of Det. 110, left, prepare to depart for another CVA. Unit, constantly at sea for over two years, moves every 10 to 14 days. Above left, rescue crew trains near Atsugi, Japan, and UH-2, above right, completes medevac mission to USNH Yokosuka.



Sixty crewmen and maintenance personnel of HC-7's Det. 110 move their personal gear and 18,000 pounds of support equipment each time they change to a new host aircraft carrier. Below, armored Seasprite takes on fuel from the deck of a DLG in the South China Sea.

They fly simulated rescue missions in land and sea conditions, actually entering the water in day and night exercises to untangle a ParaMedic Team One instructor from a parachute. They learn to operate all helicopter rescue systems and are instructed in enough first aid to care for most injuries suffered by pilots and crewmembers of downed aircraft. With the ParaMedic course completed, jungle environmental training is next — making actual pickups in jungle terrain using the forest penetrator.

One of the squadron's more vital roles is vertical replenishment. Two vertrep detachments, 102 and 112, have been established, with one detachment at sea at all times. Operating from USS *Mars* (AFS-1) and USS *Niagara Falls* (AFS-3), these detachments have delivered tons of





UH-46 from Niagara Falls approaches hook-up pole which is connected to cargo pallets.

ordnance and material to units of the Seventh Fleet. During a normal six-week deployment, a detachment delivers an average of nearly 12,000 tons of material to ships in their area of operation. Additionally, UH-46 crews have performed medical evacuation flights, personnel transfer and salvage operations in both South Vietnam and Japan. They have rescued personnel in SEAsia and conducted VIP airlifts in Japan for Commander, Fleet Air Western Pacific.

HC-7 recently received several specially configured RH-3A *Sea Kings* to perform aerial mine countermeasures — the Navy's newest concept utilizing the helicopter's versatility. Specialized training is given the pilots and crews. The result is a precision team: RH-3A's and coastal and ocean-going minesweepers. Recent maneuvers and exercises indicate that mined harbors and sea lanes can be cleared in record time by the *Sea Kings*. With

mine-sweeping time cut to a minimum, future fleet operations in support of ground fighting forces may be conducted with increased speed and efficiency.

The squadron's VIP airlift is performed primarily by Detachment 101 operating from the Seventh Fleet flagships, *Oklahoma City* (CLG-5) and *Providence* (CLG-6). Two pilots and eight crewmen have flown the single assigned UH-2 *Seasprite* on over 500 missions without a maintenance problem. Naval Aviators and maintenance crews familiar with the problems of salt air corrosion when operating from the deck of a cruiser can well appreciate this accomplishment. Because detachment personnel must be familiar with helicopter landing areas throughout the Western Pacific, a staggered rotation of pilots and aircrewmembers is carried out to maintain that familiarity.

One of the few reciprocating engine helicopters in the fleet today is assigned to HC-7. A UH-34 *Sea Horse* used for aerial survey was recently added to the squadron's aircraft inventory and has brought a touch of nostalgia to HC-7 pilots. The younger aviators received, for the most part, their advanced training in the *Sea Horse* while a majority of the more senior officers remember the days when they flew it in the fleet as an ASW helo. The aircraft is used in support of oceanographic survey operations and for Marine Corps training near Mount Fuji, Japan.

The squadron has established an enviable record of combat and non-combat rescues. Seventy-two rescues have been made by crews of HC-7 since September 1967. Combat aircrews have rescued both Navy and Air Force airmen downed in Southeast Asia: five were picked up in North Vietnam under intense opposition from enemy antiaircraft batteries and ground forces — three were night rescues.

Detachment 110, which operates from "host" attack carriers in the South China Sea, is the largest of the squadron's operational detachments. Usually flying four logistic and three

armored SH-3A's, Det. 110 provides Task Force 77 with logistic support and combat rescue. The logistic helicopters deliver an average of nearly 41,000 pounds of mail, 69,000 pounds of cargo and more than 800 passengers each month. Its SAR crews sometimes fly plane guard missions for the carriers but are primarily responsible for combat rescue. One SAR helicopter may be on a 15-minute alert on a carrier and another may be flying to an advanced combat station — on a guided missile frigate stationed closer to the coastline. One particular mission to rescue a Navy *Skyhawk* pilot downed in North Vietnam took the SAR crew on a 70-mile penetration into enemy territory.

Along with rescue helicopters manned by Detachment 110, HC-7 keeps two detachments of armored *Seasprites* embarked in DLG's off the Vietnam coast. Operating on a 24-hour alert status, these crews have a spirit of aggressiveness and high morale. With two pilots and eight aircrewmembers, including maintenance personnel, these crews remain on continuous alert at sea up to 40 days at a time. Lt. Clyde Lassen, the only Navy pilot to receive the Medal of Honor thus far in the Vietnam conflict, received his award for a daring night rescue in North Vietnam on June 19, 1968, while OinC of one of the SAR detachments.

The Naval Aviators of this multi-mission squadron have a wide range of experience. Most come from the training command, are aviators with previous ASW experience in helicopters, or are squadron members who flew SAR or vertrep missions with Helicopter Combat Support Squadron One prior to the organization of HC-7. Many of those who came to the squadron from the training command were flight instructors in helicopters or the T-28. Other members came from a tour in South Vietnam where they flew *Huey* gunships, and one or two came from duty at naval air stations.

Cerberus, the three-headed dog who guarded the gates of Hades, is a fitting squadron insignia. The three-headed guardian signifies the multi-mission concept of this can-do squadron.



Ground crew manually spreads rotor blades of a Seasprite which is being readied for a flight from DLG operating near the Vietnam coast.



Sea Knight of vertical replenishment detachment aboard supply ship has new rotor blade installed during routine maintenance. Below, SH-3A approaches DLG landing platform at the end of a mission.



UH-46, right, transfers supplies from USS Mars to USS Ranger while operating in the South China Sea. HC-7's replenishment activities assure that U.S. fighting ships remain logistically prepared to stay at sea long periods, in a combat-ready condition.



NAVAL AVIATION

NEWS



If you are going to be something,
why not be **SOMETHING SPECIAL?**