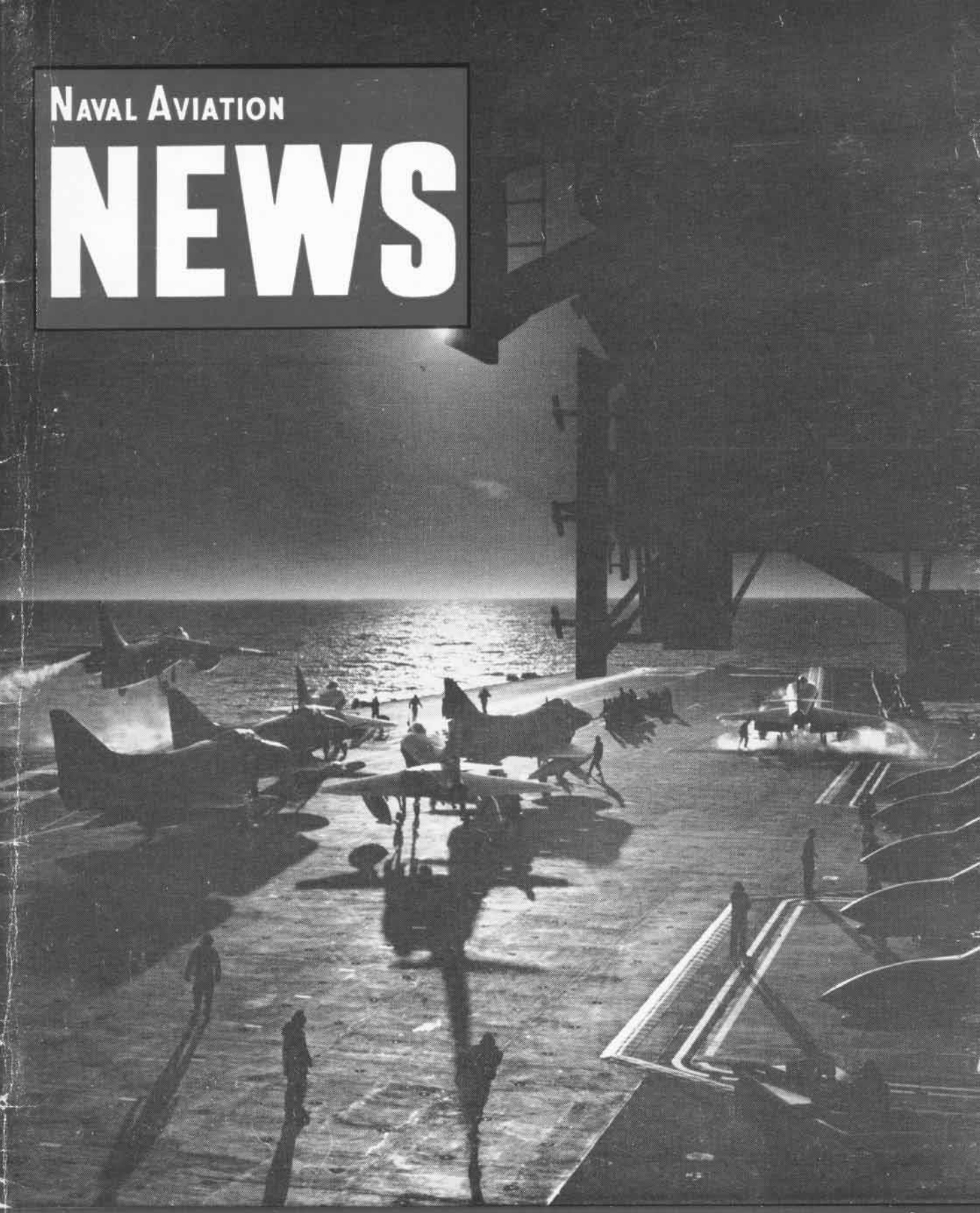
NAVAL AVIATION NEWS



44th Year of Publication

DECEMBER 1962

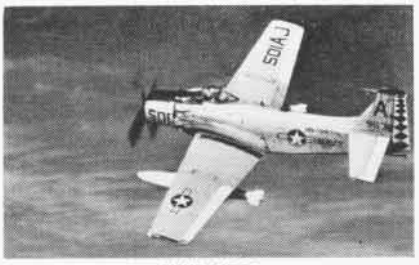
NavWeps No. 00-75R-3

NAVAL AVIATION NEWS

NEW DESIGNATIONS

ATTACK

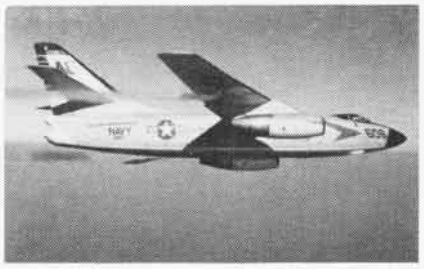
A-1 (AD)



SKYRAIDER

A-1E . . . (AD-5)
EA-1E . . . (AD-5W)
EA-1F . . . (AD-5Q)
A-1G . . . (AD-5N)
A-1H . . . (AD-6)
A-1J . . . (AD-7)

A-3 (A3D)



SKYWARRIOR

A-3A . . . (A3D-1)
EA-3A . . . (A3D-1Q)
A-3B . . . (A3D-2)
EA-3B . . . (A3D-2Q)
RA-3B . . . (A3D-2P)
TA-3B . . . (A3D-2T)

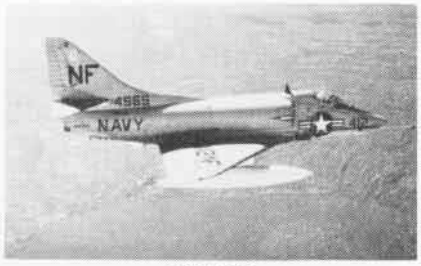
OTHER ATTACK

A-2 (AJ)

B-26 (JD)

UB-26J . . . (JD-1)
DB-26J . . . (JD-1D)

A-4 (A4D)



SKYHAWK

A-4A . . . (A4D-1)
A-4B . . . (A4D-2)
A-4C . . . (A4D-2N)
A-4E . . . (A4D-5)

A-5 (A3J)

VIGILANTE

A-5A . . . (A3J-1)
A-5B . . . (A3J-2)
A-5C . . . (A3J-3)

A-6 (A2F)

INTRUDER

A-6A . . . (A2F-1)
EA-6A . . . (A2F-1H)

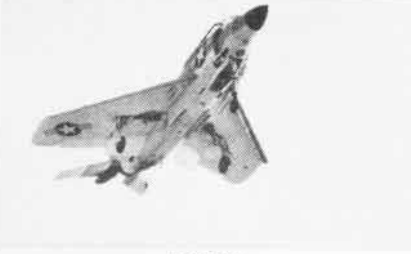
FIGHTERS

F-1 (FJ)

FURY

F-1C . . . (FJ-3)
DF-1C . . . (FJ-3D)
MF-1C . . . (FJ-3M)
DF-1D . . . (FJ-3D2)
F-1E . . . (FJ-4)
AF-1E . . . (FJ-4B)

F-3 (F3H)



DEMON

F-3B . . . (F3H-2)
MF-3B . . . (F3H-2M)
F-3C . . . (F3H-2N)

F-111B (TFX)

Note: The AF version of the tri-service fighter (TFX) will be known as the F-111A. Future fighters will start with the designation, F-12A. Future attack aircraft will continue with the A-7A numbers, A-8, etc.

NOTES ON NEW DESIGNATIONS

By a joint regulation affecting the Navy, Army and Air Force, all aircraft now have tri-service designations. Because many Navy designations have been changed, Naval Aviation News this month is utilizing four pages (inside front and back covers and pages 20 and 21) to familiarize Navy men with the principal new designations. The pages were selected, so that squadrons/units may post them handily on the bulletin board.

Many designations may be associated with the old ones; i.e., the A3D is the A-3; the A4D, the A-4.

In transports, many of the Air Force designations are well known. For example, C-47 and C-54 are familiar oldtimers. Not all changed designators could be compressed into the space available. For complete lists, see BuWeps Instruction 13100.7 of September 18, 1962.

Basic Mission and Type Symbols

A	Attack
B	Bomber
C	Cargo/Transport
E	Special Electronic
F	Fighter
K	Tanker
O	Observation
P	Patrol
S	Antisubmarine
T	Trainer
U	Utility
X	Research

Modified Mission Symbols (Prefix Letters)

A	Attack
C	Cargo/Transport
D	Director
E	Special Electronic Installation
H	Search/Rescue
K	Tanker
L	Cold Weather
M	Missile Carrier
Q	Drone
R	Reconnaissance
S	Antisubmarine
T	Trainer
U	Utility
V	Staff
W	Weather

NAVAL AVIATION NEWS

FORTY-FOURTH YEAR OF PUBLICATION DECEMBER 1962

■ IN THIS ISSUE

Highest Tribute	**6**	*Brief descriptions are given of the heroic actions that earned for men associated with Naval Aviation the Nation's highest tribute, the Medal of Honor.*
The Big E	**12**	*How it was at Christmas on the Enterprise is reprinted from a book by Cdr. Edward P. Stafford.*
Evolution of Carriers	**15**	*With Presidential prompting, a new type carrier is introduced to the Fleet.*
Facts of Balance	**24**	*Deaf men aid the Naval School of Aviation Medicine study man's sense of balance, for space age information.*
Hydrofoil	**28**	*The Navy's search for a successful hydro-ski plane is told by BuWeps Eugene Handler.*
Bombing Derby	**31**	*Results are given of the Commander Fleet Air-sponsored annual bombing derby at NAS Whidbey Island.*
Index	**38**	*Feature articles of 1962 are indexed for readers' convenience.*
Covers		*Front cover scene aboard USS Kitty Hawk was captured by Richard Smith, PHC, during flight operations in the Pacific. Walter Tolle, PH1, took the back cover shot at NARTU, Andrews AF Base.*

■ THE STAFF

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NAVAL AVIATION NEWS

Flight Surgeon is Honored

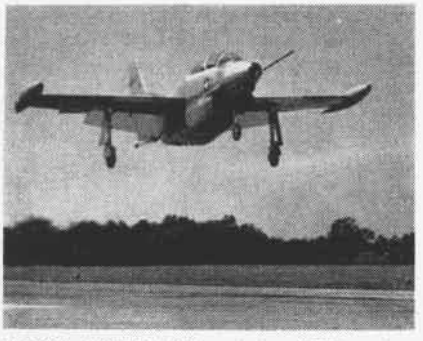
Plaque Dedicated to Dr. Prather

A plaque honoring LCdr. Victor A. Prather, MC, USN, flight surgeon, was dedicated at the Naval Medical Research Institute, Bethesda, Md., on October 19, 1962.

Dr. Prather was a member of the Biophysics Division of the Institute when he lost his life in a rescue accident following the world record-setting Strato-Lab High V balloon flight May 4, 1961 (NANEWS, August 1961, pp. 28-30).

The plaque ceremonies followed by one day President Kennedy's presentation of the Harmon Trophy (aeronaut) to the team of Cdr. Malcolm D. Ross and LCdr. Prather. The presentation was accepted by Dr. Prather's widow.

Dedication of the plaque was held in connection with ceremonies commemorating the twentieth anniversary of the Naval Medical Research Institute. The Institute conducts extensive research in biomedical problems involved in keeping naval personnel ready to perform the Navy's missions.



NORTH AMERICAN'S *twin-jet T-2B trainer takes off on initial test flight. Two of this model are being evaluated under a BuWeps contract. The T-2B is powered by two P&W J-60 engines, each having 3000-lbs. thrust.*

TWO G.E. TURBINES POWER THE CH-46A

Marines' New Helo Flies

CH-46A Launched at Philadelphia

The first official flight of the Marine Corps' CH-46A *Sea Knight* (HRB-1) medium assault transport helicopter was made at the Philadelphia International Airport in mid-October. On hand to attend the flight demonstration and briefing, conducted by the Vertol Division of the Boeing Company, were some 50 Navy and Marine Corps officers.

The new Marine helicopter is the military version of Vertol's 107-II. The CH-46A is powered by two General Electric T-58-8 turbine engines and is designed to carry a 4000-pound payload—combat troops, litter patients, or cargo—over a radius of 100 nautical miles at a cruising speed of 130 knots.

The *Sea Knight* can operate from the LPH-2 and LPH-4 class aircraft carriers. Other design features include a rear loading ramp, self-sealing fuel tanks, single-point pressure refueling, as well as an emergency water landing and takeoff capability.

German Navy to Use SATS

MarCorps Designs 'Instant Airfield'

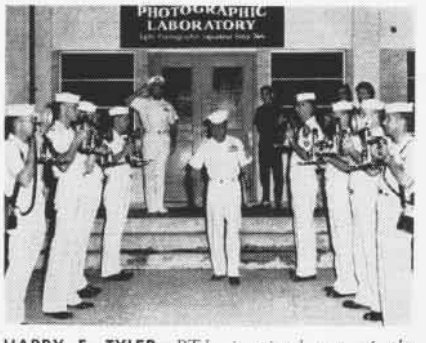
The West German Navy has installed and is operating its first "instant airfield." Designed by the U.S. Marine Corps, the midget jet field can be built in a matter of hours.

Called SATS (Short Airfield for Tactical Support), it is less than one-third the size of a conventional field. Jets are launched "slingshot" fashion by a catapult which uses a turboshaft engine and reels of nylon tape. They are landed into arresting equipment, similar to that used on aircraft carriers.

The German Navy became interested in the Marines' expeditionary airfield about 20 months ago. Major components, including the mobile arresting gear, aircraft catapult, aluminum matting, and landing signal mirrors were purchased subsequently.

Eleven German technicians—three officers and eight enlisted men—were trained at Naval Air Test Facility, Lakehurst, N.J., by the Marine Corps, to install and operate the SATS. A German *Seahawk* jet fighter-bomber was also tested at Lakehurst to determine its compatibility with SATS equipment.

The short field system provides air support for Marine amphibious assault. It is the tactical air companion of the vertical assault concept.



HARRY F. TYLER, *PT1, is piped out of the Navy after 23 years service with an eight-flash-gun salute. Behind the cameras are photographers with whom Tyler served the past year at the Photo Lab, NAS Jacksonville.*

AT WHITING FIELD, *Fla., RAdm. Magruder H. Tuttle, CNaBaTra, presented a plaque to Cdr. H. H. Osborn, C.O., in recognition of VT-3's 125,896 accident-free hours from 1 March 1961 to 31 May 1962.*

Martin Gets New Contract

Bullpups for Four More Navy Planes

The Navy has awarded Martin Company's Orlando (Fla.) Division three contracts for equipment which will make the *Bullpup* air-to-surface missile quickly adaptable to more aircraft.

Bullpup capabilities are to be added to four aircraft: the F-4 *Phantom II* (F4H), F-8E *Crusader* (F8U-2NE), A-5 *Vigilante* (A3J) and A-6 *Intruder* (A2F). This missile now is operational on the A-4 *Skyhawk* (A4D) and AF-1E *Fury* (FJ-4B).

A repackaged transmitter for the *Bullpup* guidance system is under one contract. The other two contracts are for the design, development and production of the new Martin-developed Type S launcher. The Type S launcher enables *Bullpup* to be fitted quickly to any aircraft capable of carrying standard military bomb racks. It eliminates the need of additional pylons or adapters now used to install *Bullpup* under the wings of the aircraft.

Navy Trains USAF Men

Phantom II Maintenance Covered

The first contingent of U.S. Air Force personnel completed in early fall their maintenance training at NAMTraGru Detachment 1014 *(Phantom II)* at NAS OCEANA. This is the initial cadre of instructors from Air Force Mobile Training Detachment 783A. It is now ready to assume full instructional duty on the maintenance of the McDonnell aircraft.

The USAF instructors received training on the various aspects of *Phantom* maintenance, including courses on the power plant, the hydraulic and structural systems, the electronic and electrical, and fire control systems.

Additional Air Force personnel are to be trained at Oceana, using Air Force instructors and Navy training equipment until the necessary facilities and training equipment become available to the Air Force.

In the west, the AF personnel are being trained by NAMTraGru Detachment 1013 at Naval Air Station, Miramar, California.

VP-50 Logs 20,000th Hour

Participates in ASW Operations

VP-50, commanded by Cdr. William H. Locklin, logged its 20,000th accident-free flying hour during a three-day operation with the USS *Salisbury Sound* in September. The hours were amassed during the 27 months that VP-50 was home-ported at MCAS IWAKUNI.

Lt. Walter E. White, plane commander, and his crew, flew the 20,000th hour while participating in one of the 50 ASW flights conducted in the Sasebo harbor area.

The USS *Salisbury Sound* supplied complete support facilities for the squadron, including fuel, maintenance, messing, quarters and the establishment of a temporary seadrome.

Reunion of Navy Test Pilots

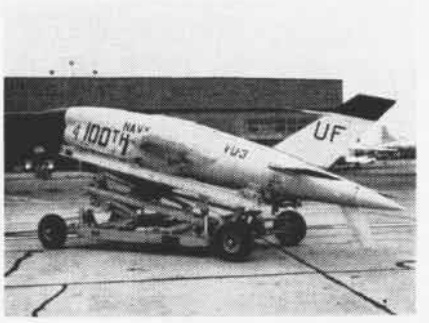
Gathering is Held at Patuxent, Md.

Nearly 500 former Navy test pilots converged on the Cedar Point Officers' Club in October to meet old classmates at the 14th annual Naval Test Pilot School reunion, Patuxent River, Md.

Cdr. Douglas Birdsall, director of the school, and his staff were hosts. Those attending included members of every class from "Class 0" in 1948 to Class XXXII which graduated October 19.

Honored guests were Lt. Lew Chatham and Lt. George Neal of the *Blue Angels,* Cdr. Forrest S. Petersen, former pilot of the X-15, and Lt. Charles N. Conrad, a newly selected astronaut. Both Cdr. Petersen and Lt. Conrad were formerly members of the Test Pilot School staff.

The school has graduated more than 700 students, including Astronauts Cdr. Alan B. Shepard, LCol. John H. Glenn, Jr., USMC, LCdr. Malcolm Carpenter, and Cdr. W. M. Schirra, Jr.



UTILITY SQUADRON 3 *air-launched the 100th Q-2C target drone in the Pacific Missile Range from a Neptune. Radar-controlled from San Nicolas Island, it is considered the most sophisticated target in daily use by the Navy.*

Navy Launches First Q-2C

Jet Target on Pacific Missile Range

The Naval Missile Center, Pt. Mugu, staged the first successful ground launch of a Navy Q-2C *Firebee* jet target September 21. This new launching technique is expected to increase the operational availability of the target. Previously the *Firebee* had been air-launched by P-2 mother planes.

Remotely controlled from San Nicolas Island, off the California coast, the *Firebee* reached an altitude of 45,000 feet and flew 44 minutes before recovery.

Designed and built by the Ryan Aeronautical Company, San Diego, Calif., the *Firebee* target is used for the Navy's most modern surface-to-air and air-to-air missiles.

VA-36 Institutes Program

Reducing Foreign Object Damage

The problem of foreign object damage (F.O.D.) is an ever-present one in the operation of jet aircraft. The *Roadrunners* of VA-36 have instituted a control program which is showing marked results.

At irregular intervals an item with foreign object damage potential is intentionally placed in the line area where the squadron's A-4C *Skyhawk* (A4D-2N) aircraft are parked. The man who discovers this hazard before flight operations begin is rewarded with a 24-hour special liberty pass. Policing the flight line has become an interesting task and a sizeable quantity of F.O.D. is collected every day by men hoping to find the magic item.

The first eagle-eyed lineman to receive award was Robert Nutt, AMH3.

GRAMPAW PETTIBONE

All Fired Up

A Reserve pilot transitioning to the F-6A (F4D) *Skyray* took off late one exceptionally fine afternoon on his second hop in the aircraft. An instructor flew the wingman position, the usual routine in the fam stage. It always helps to have an old hand along on those first few knee-knocker hops.

Their section takeoff was normal, both using afterburner, and they climbed right on out, heading for the deep blue. As they passed through 3000 feet the new man came out of burner as briefed. Almost instantly the fire warning light glared brightly.

He began an immediate turn back toward the base and broadcast his fire warning condition on tower frequency to his chase pilot. The instructor slid his plane in close and immediately advised the pilot to eject! There was an intense fire raging in the afterburner area and he could go up in smoke any time!

The pilot zoomed to 4000 feet and at 180 knots reached up and pulled the curtain! Nothing happened! He pulled again and again. Nothing. Reaching down and positioning himself, he pulled the "D" ring, the secondary firing handle. Nothing! After he radioed word of his predicament to his chase pilot he was advised to land it at the air station. The tower was also advised of the problem (they'd heard it all anyway) and crash equipment was racing for position as he swung into his approach, trailing smoke all the way.

The gear handle was put in the down position on final but only the nose wheel came down, and the tower called for a wave-off! The pilot took it!

On the go-around he had a partial power loss but managed to stagger it all the way around, actuated the landing gear emergency system and got all three wheels, but an "unsafe" indication. His chase pilot, who had stuck with him all the way, reported that the gear looked good, so the pilot took it right on in for a normal landing and arrestment, shutting down the engine on the touchdown. The tail section was still burning brightly so as soon as the FORD came to a stop he leaped out and ran clear while the crash crew efficiently put out the blaze. It had been a bad fire—overhaul damage.

Grampaw Pettibone says:

Great balls of fire! Talk about a cat on a hot tin roof. This lad musta been insulated from that fire with a whole bale of four-leaf clovers!

Imagine giving a man on fire a wave-off! I'm gonna have to go out there and blister that tower right down to the ground, then save 'em a place on old Gramps' Roster which is especially reserved for such balloon-heads.

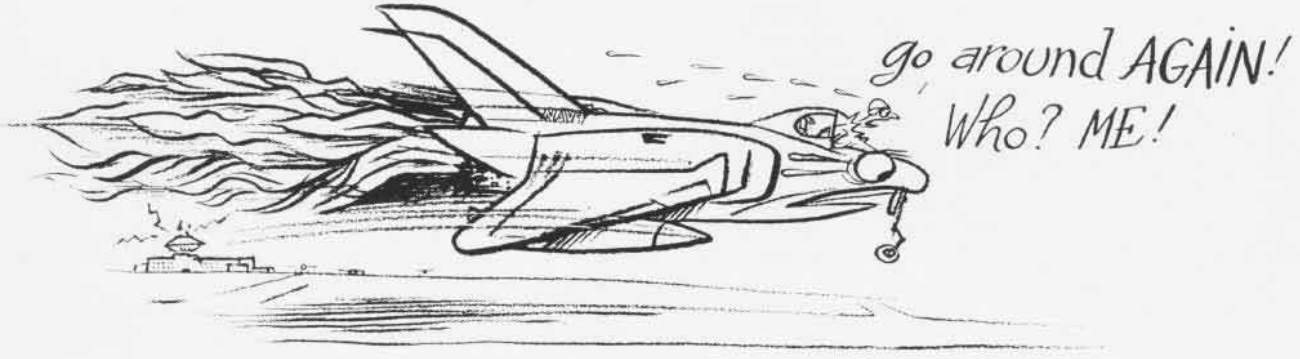
His trouble sure uncovered a mess of no-good ejection initiators. The AAR board did a nice job of following up on this one. No one else should find himself in this fix again.

Big Bust

A TH-13N (HTL-7) helo assigned to an icebreaker was launched to retrieve parachute air-drops of much needed material after they were dropped by a P-2 *Neptune* into the sea in the immediate vicinity of the ship.

Recovery of the first drop was successful, a hook and line being used to snag the cargo chute. The helo maneuvered into position ahead of the ship, draped the parachute shroud lines over the icebreaker's bow and released the hoist line. He then proceeded directly to the helo flight deck and landed, intending to remain only long enough to retrieve the hook and line for the next drop recovery.

Immediately after the helo touched down, the flight deck crewmen securely fastened tie-downs to each skid and the flagman gave the pilot a red flag and the signal for engine shutdown.



The pilot replied with a negative shake of his head and applying power, commenced to lift off! The tie-downs stretched under the strain as the pilot added power and the port side tie-down parted.

The helo, momentarily free, pitched its nose up and pivoting around the securely fastened right skid, rolled over on its right side, a total wreck. Miraculously, no one was seriously injured.

Grampaw Pettibone says:

Sufferin' catfish! Signals and SOP's mean *nothin'* to this guy! We got a pretty fine set of helo signals for just such occasions as this one, for radio contact between the helo and ship was garbled, if existent at all. When the flagman gives a red flag, it's a foul deck and no ifs, ands, or buts about it. This character would be a real joy to have on a CVS! *Like heck!*

Can Do

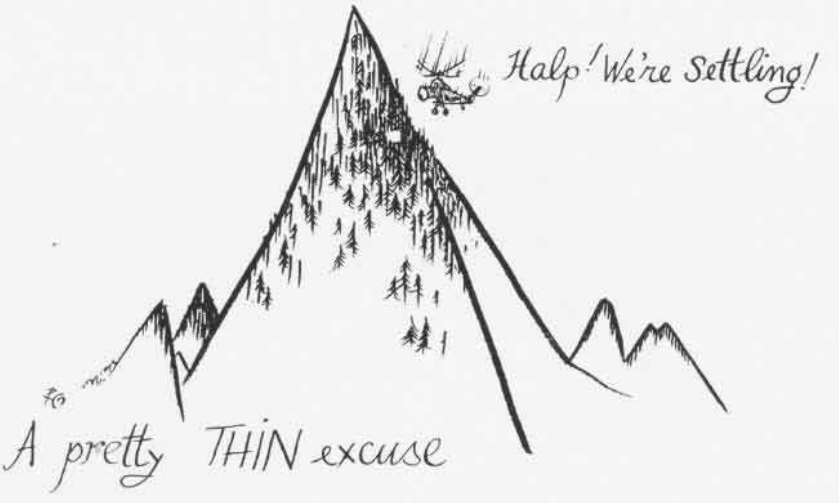
A California county sheriff requested helicopter assistance from a West Coast naval air station late one autumn evening. A deer hunter was reported to be seriously wounded but was located in extremely mountainous terrain far in the interior of a national forest area. It was impossible to reach the man with vehicles and forest rangers and deputies had not yet reached him. An air search was needed to augment the intensive ground effort.

A helo crew was alerted and a UH-34E (HUS-1A) readied for the mission. All unnecessary equipment was removed to lighten the aircraft. At 0700 they lifted off on an instrument departure and headed inland for a mountain-top ranger fire station. Checking in with the forest rangers they were briefed thoroughly, given charts of the area and then proceeded further into the mountains to an emergency heliport being used by the sheriff's posse as search headquarters.

Here the pilot found there was a complete lack of ground/air signalling equipment but suggested that ground parties remove and carry the mirrors from their pickup trucks for this purpose. Pretty cagey, this lad.

Coordination problems settled, he lifted the helo off again and searched the immediate area until fuel began to run low and a return to the home station for fuel had to be made.

Quickly refueled he took off again and resumed the search. Finally, at an



indicated altitude of 7500 feet MSL and while searching a box canyon completely surrounded by towering peaks, a mirror flash from the ground called him over to a steep slope nearby. It was the ground search party and they had located the wounded man.

As he circled about 1000 feet overhead, he could see that they were chopping out a clearing for the helo to land. It looked as if it would be postage stamp size at best with 40-45 degree slopes on all sides, so he flew several miles in all directions looking for a better spot. The nearest spot was over two miles away, down the canyon and almost impossible to reach on foot. He flew back to take a closer look at the other spot, check the wind, just plain "drag the field!" Approaching at 200 feet above the trees and about 35 knots forward speed, he suddenly noticed the RPM was dropping rapidly and applied throttle but with no effect! Airspeed and altitude were dropping off rapidly and he had no alternative but to attempt a landing on the cleared area.

While the copilot and crewmen yelled and waved to the rangers and deputies below and as the men scattered in all directions, the pilot managed to set the HUS main landing gear on the edge of the clearing with the tail hanging down the slope at a 45 degree angle.

Severe ground resonance immediately shook the helo and although he held the brakes and cut the mixture control, the HUS virtually "walked" backwards off the clearing and slid down the slope tail first.

Fighting it all the way, the pilot applied the rotor brake and finally a combination of wheel brakes and heavy brush stopped their bucking bird a mere 6 feet short of "one hell of a long drop." Gingerly climbing out of their precariously balanced bird, the helo crew joined the completely flabbergasted ground party. There was now no alternative but to pack the injured man out on a stretcher on foot.

A little time was spent tying the stricken helo to nearby trees to hold it on the steep incline for possible salvage later and then the entire group hiked out, the helo crew taking their turns at carrying the stretcher, the rangers chopping out a trail as they went. Nine hours later they reached a road, rendezvoused with an ambulance and sent the wounded man on his way. Several days later the tail rotor and main rotor blade tips were replaced and the HUS safely flown out.

Grampaw Pettibone says:

Holy smokes! As they say in the helo outfits, this could be classed as a *very* complicated rescue. 'Tain't often the helo crew ends up carrying a man out on foot. This pilot and his crew left nothing to chance in their preparations for the search and rescue. What nailed them was power settling due to the 8900 foot density altitude. The temperature near the ground in that box canyon was 8 degrees higher than at his previous cruise altitude. Maneuvering room was limited, so forward speed was low. Gross weight was high in spite of removing excess gear beforehand. One reason for it was that he was carrying a copilot and *two* crewmen.

Mountain helo flying takes a lot of savvy but mostly you gotta watch that rotor RPM "like a hawk" and you'll make out all right in the long run.

A HUNDRED YEARS OF HEROISM

MEDAL OF HONOR FOR U.S. NAVY HEROES

PRESIDENT FRANKLIN D. ROOSEVELT PRESENTS MEDAL TO MAJ. ROBERT E. GALER, USMC

FOR CONSPICUOUS GALLANTRY and intrepidity in the line of his profession at the risk of his life above and beyond the call of duty. . . ." These words, echoing down the long hall of courage for the past hundred years, signify that a deed of valor has been recognized by the Congress of the United States and that a Medal of Honor has been awarded.

The U.S. Navy was the first service to be authorized to bestow the Medal of Honor. This occurred on December 21, 1861, the result of a bill sponsored by Senator James W. Grimes of Iowa. President Lincoln described it as an "Act to further promote the efficiency of the Navy." Then, on July 12, 1862, the result of a bill sponsored by Senator Henry W. Wilson of Massachusetts, a similar medal was authorized for Army personnel. Both the Navy and Army medals were to be awarded only to enlisted men. Later the legislation was written to include officers among those eligible for consideration and award.

The first presentation of the Medal of Honor was made to Cpl. John F. Mackie, USMC, on July 10, 1862. He was accredited to New York. His citation reads: "On board the USS *Galena* in the attack on Fort Darling at Drewry's Bluff, James River, on 15 May 1862. As enemy shellfire raked the deck of his ship, Cpl. Mackie fearlessly maintained his musket fire against the rifle pits along the shore and, when ordered to fill vacancies at guns caused by men wounded and killed in action, manned the weapon with skill and courage."

The number of Naval Aviators awarded the country's highest honor is comparatively small, owing to the youthfulness of the air age. In the pages that follow are included those men who were, or are, associated with Naval Aviation, either before or after the acts which led to their citations. Some were ship's company, some attached to aviation units or stations, and one earned his wings following ground action in Korea.

A Naval Aviator and a Naval Observer (both so designated after the action for which they were cited) received the Medal of Honor for engagements in April 1914 during the Mexican Campaign at Vera Cruz. Five Medals of Honor were given Naval Aviators and aircrewmen during World War I, and one more was awarded in 1929 for the Second Nicaraguan Campaign. Most of the men honored in these pages earned their awards during World War II (23). The remainder received the award for actions in Korea (three) and in peacetime (three). Nine of the 38 honored received their tributes posthumously.

In the House of Representatives recently, Representative Tom Steed of Oklahoma defined the purpose of the medal: "The Congress has carefully cultivated the public recognition of the medal as the symbol of national expression of honor and respect for the individuals who, without reservation, in a private moment of truth, rise to the highest level of self-sacrifice. It is fitting that this citation should be awarded by the elected representatives of the people."

Naval Aviation News pays tribute to these men who reacted bravely when their "moment of truth" arrived.

RAdm. Richard Nott Antrim, USN

Naval Aviator #6750, accredited to Indiana.

In April 1942, RAdm. (then Lt.) Antrim intervened to placate an angry Japanese guard who was beating another U. S. Naval officer at the POW center at Makassar, Celebes, Netherlands East Indies. When the helpless prisoner became unconscious after 15 blows of a hawser, Lt. Antrim offered to take the rest of the beating. This so completely threw the Japanese off balance that they abandoned the punishment. This heroic action not only saved the officer's life, but

it also "brought about a new respect for American officers and men and a great improvement in camp living conditions" for the 2700 Allied prisoners held there.

LCol. Harold William Bauer, USMC
Naval Aviator #4189, appointed from Nebraska.
Medal awarded posthumously.

LCol. Bauer was commander of VMF-212 in the South Pacific during the period May 10 to November 14, 1942. Piloting a fighter in defense of our positions on Guadalcanal, he participated in air battles against enemy bombers and fighters outnumbering our forces more than two-to-one, boldly engaged the enemy and destroyed one Japanese bomber in the engagement of September 28th. He shot down four enemy fighter planes in flames on October 3rd and left a fifth smoking badly. After successfully leading 26 pilots on an over-water ferry flight of more than 600 miles on October 16, Col. Bauer, while circling to land, sighted a squadron of enemy planes attacking the USS *McFarland*. Undaunted by the formidable opposition, he engaged the entire squadron and, although he was alone and his fuel supply was nearly exhausted, he maneuvered his plane so brilliantly that four of the Japanese planes were destroyed before he was forced down by lack of fuel.

Chief Warrant Officer Floyd Bennett, USN
Naval Aviation Pilot #9, accredited to New York.

At the risk of his life as a member of the Byrd Arctic Expedition, CWO Bennett (a machinist) contributed largely to the success of the first heavier-than-air flight to the North Pole on May 9, 1926. He was the pilot of RAdm. Richard E. Byrd's airplane, and it is in his honor that Floyd Bennett Field is named.

Col. Gregory Boyington, USMCR (Ret.)
Naval Aviator #5160, accredited to Washington.

As Commanding Officer of VMF-214 in action against enemy Japanese forces in the Central Solomons area from September 12, 1943 to January 3, 1944, Col. (then Maj.) Boyington struck at the enemy with daring and courageous persistence. Resolute in his efforts to inflict crippling damage to the enemy, Maj. Boyington led a formation of 26 fighters over Kahili on October 17 and, steadily circling the airdrome where 60 hostile aircraft were grounded, boldly challenged the Japanese to send up planes. Under his brilliant command, our fighters shot down 20 enemy craft in the ensuing action. In WW II, Maj. Boyington was personally credited with destroying 28.

RAdm. Richard E. Byrd, Jr., USN
Naval Aviator #608, appointed from Virginia.

RAdm. (then Cdr.) Byrd first demonstrated that it is possible for aircraft to travel in continuous flight from an inhabited portion of the earth over the North Pole and return. This flight was made with Floyd Bennett May 9, 1926.

Maj. Henry A. Commiskey, USMC
Naval Aviator, accredited to Mississippi.

Directed to attack hostile forces well dug in on a hill near Yongdungp'o, Korea, on Sept. 20, 1950, Maj. (then 2nd Lt.) Commiskey spearheaded the assault, charging up the steep slopes on the run. Coolly disregarding the heavy enemy machine-gun and small-arms fire, he plunged on well forward of the rest of his platoon and was the first man to reach the crest of the objective. Armed with only a pistol, he jumped into a hostile machine-gun emplacement occupied by five enemy troops and killed them. Continuing his assault, he moved to the next emplacement, killed two more of the enemy and then led his platoon toward the rear nose of the hill to rout the remainder of the hostile troops and destroy them as they fled from their positions. After a period of hospitalization, he became a student Naval Aviator at NAS PENSACOLA and received his wings at Corpus Christi in June 1953.

LCdr. William M. Corry, USN
Naval Aviator #23, accredited to Florida.
Medal was awarded posthumously.

On October 2, 1920, an airplane in which LCdr. Corry was a passenger crashed and burst into flames. Thrown clear of the plane, he rushed back, though injured, to the burning aircraft and endeavored to release the pilot. Cdr. Corry sustained serious burns from which he died four days later. (Corry Field was named in his honor.)

LCol. J. J. DeBlanc, USMCR
Naval Aviator #12504, appointed from Louisiana.

As leader of a section of six fighter planes in VMF-112, during aerial operations against enemy Japanese forces off Kolombangara Island in the Solomons Group, January 31, 1943, LCol. (then 1st Lt.) DeBlanc took off as escort for a strike force of dive bombers and torpedo planes ordered to attack Japanese surface vessels. Reaching the target area at 14,000 feet, our strike force met a large number of Japanese *Zeros* protecting the enemy's surface craft. With the other fighters, 1st Lt. DeBlanc instantly engaged the hostile planes and aggressively countered their repeated attempts to drive off our bombers. Picking up a call for assistance from the dive bombers under attack by enemy float planes at 1000 feet, he plunged into the float plane formation and disrupted the savage attack, enabling our dive bombers and torpedo planes to complete their runs on the Japanese surface craft. First Lt. DeBlanc courageously remained on the scene despite a rapidly diminishing fuel supply. Fighting a valiant battle against terrific odds and seizing the tactical advantage, he destroyed three of the hostile aircraft and dispersed the remainder. On taking his damaged plane back to base, he discovered two *Zeros* closing in behind. He blasted both *Zeros* from the sky. At this point, the damage to his own plane forced him to bail out over enemy-held Kolombangara.

MGen. Merritt Austin Edson, USMC
Naval Aviator #3026, appointed from Vermont.

Col. Edson was Commanding Officer of the First Marine Battalion, with Parachute Battalion attached, during action against enemy Japanese forces on Guadalcanal on the night of September 13-14, 1942. After the airfield had been seized from the enemy on August 8, Col. Edson, with a force of 800 men, was assigned to occupy and defend a ridge dominating the jungle on either side of the airport. Facing a formidable Japanese attack which had crashed through our front lines, Col. Edson successfully withdrew his forward units to a reserve line. When the enemy, in a subsequent series of assaults, engaged our force in hand-to-hand combat with bayonets, rifles, pistols, grenades, and knives, Col. Edson although continuously exposed to hostile fire throughout the night, personally directed defense of the reserve position against a foe of superior numbers. He enabled his men, despite severe losses, to maintain their position on the ridge, thereby retaining control not only of the Guadalcanal airfield, but also the First Division's entire offensive installations.

Capt. Henry Talmage Elrod, USMC
Naval Aviator #4093, appointed from Georgia.
Medal was awarded posthumously.

Capt. Elrod was attached to VMF-211 during action against Japanese land, surface and aerial units at Wake Island, December 8-23, 1941. Engaging vastly superior forces of enemy bombers and warships on December 9 and 12, Capt. Elrod shot down two of a flight of 22 hostile planes and, executing repeated bombing and strafing runs at extremely low altitude and close range, succeeded in inflicting deadly damage upon a large Japanese vessel, "thereby sinking the first major warship to be destroyed by small-caliber bombs delivered from a fighter-

type aircraft." When his plane was disabled by hostile fire and no others were operative, Capt. Elrod assumed command of one flank of the line set up in defiance of the enemy landing. Conducting a brilliant defense, he enabled his men to hold their positions and provided covering fire for unarmed ammunition carriers. Capturing an automatic weapon during one enemy rush in force, he gave his own firearm to one of his men and fought vigorously. Responsible in a large measure for the strength of his sector's gallant resistance, on December 23, Capt. Elrod led his men until he fell, mortally wounded.

Lt. John William Finn, USN

Attached to NAS Kaneohe Bay, accredited to California.

During the first attack by Japanese airplanes on Kaneohe Bay on December 7, 1941, Lt. Finn promptly secured and manned a 50-caliber machine gun on an instruction stand in a completely exposed section of the parking ramp which was under heavy enemy strafing fire. Although painfully wounded many times, he continued to man this gun and returned the enemy's fire with telling effect. Only upon specific orders was he persuaded to leave his post for medical attention. Following first-aid treatment, although suffering much pain and moving with great difficulty, he returned to the squadron area and actively supervised the rearming of returning planes.

SECNAV KNOX CONGRATULATES MARINE ACE, MAJ. JOE J. FOSS

Capt. Richard E. Fleming, USMCR

Naval Aviator #6889, appointed from Minnesota. Medal was awarded posthumously.

During the Battle of Midway on June 4, 1942, Capt. Fleming, Flight Officer for Marine Scout Bombing Squadron 241, led the remainder of his division when his squadron commander was shot down in the initial attack against Japanese forces. He dived his plane to 400 feet before releasing his bomb. Although his aircraft was riddled by 179 hits, he pulled out with only two minor wounds. . . . The next day, he coordinated a glide-bombing and dive-bombing assault on a Japanese cruiser. Undeterred by a fateful approach glide, during which his ship was struck and set afire, he pressed home his attack to an altitude of 500 feet, released his bomb and crashed on the *Mikuma* turret.

Maj. Joseph J. Foss, USMCR

Naval Aviator #7290, appointed from South Dakota.

As executive officer of VMF-121, First Marine Aircraft Wing at Guadalcanal, Maj. (then Capt.) Foss engaged in almost daily combat with the enemy from October 9 to November 19, 1942. He personally shot down 23 Japanese planes and damaged others severely. In addition, he successfully led a large number of escort missions, skillfully covering reconnaissance, bombing and photographic planes as well as surface craft. On January 15, 1943, he added three more enemy planes for a record of aerial combat achievement unsurpassed up to that time. Ten days later, he led eight F4F Marine planes and four Army P-38's into action and, undaunted by superior numbers, intercepted and struck with such force that four Japanese fighters were shot down and the bombers were turned back without releasing a single bomb. (Maj. Foss later resigned his Marine Corps commission to accept an appointment as Brigadier General in the South Dakota Air National Guard.)

BGen. Robert E. Galer, USMCR (Ret.)

Naval Aviator #5197, accredited to Washington.

As leader of a Marine Fighter Squadron in aerial combat with enemy Japanese forces in the Solomon Islands Area, BGen. (then Maj.) Galer led his squadron repeatedly in daring and aggressive raids against Japanese aerial forces, vastly superior in numbers. He individually shot down 11 enemy bomber and fighter aircraft over a period of 29 days. The squadron under his leadership shot down a total of 27 Japanese planes.

Cdr. Donald Arthur Gary, USN

Ship's Company, USS Franklin (CV-13), accredited to Mississippi.

Cdr. (then Ltjg.) Gary was engineering officer attached to the USS *Franklin* when that vessel was attacked during operations against the Japanese home island near Kobe, Japan, March 19, 1945. Stationed on the third deck when the ship was rocked by a series of violent explosions which set off her own ready bombs, rockets and ammunition, he unhesitatingly risked his life to assist several hundred men trapped in a messing compartment filled with smoke, and with no apparent egress. He confidently reassured the men who were becoming increasingly panicked and found a means of leading them through the debris-filled corridors. He struggled back to the messing compartment three times despite menacing flames, flooding water and the ominous threat of sudden additional explosions. He rallied others about him, repeatedly organized and led fire-fighting parties into the blazing inferno on the flight deck, and, when firerooms 1 and 2 were found inoperable, entered the No. 3 fireroom and directed the raising of steam in one boiler in the face of extreme difficulty and hazard.

LCdr. Nathan G. Gordon, USNR

Naval Aviator #11421, accredited to Arkansas.

As commander of a Catalina patrol plane, LCdr. (then Ltjg.) Gordon rescued personnel of the U.S. Army Fifth Air Force shot down in combat over Kavieng Harbor in the Bismarck Sea, February 15, 1944. On air alert in the vicinity of Vitu Islands, he responded to a report of the crash and flew boldly into the harbor, defying close-range fire from enemy shore guns to make three separate landings in full view of the Japanese, and picked up nine men, several of them injured. With his flying boat dangerously overloaded, he made a brilliant takeoff despite heavy swells and set course for base, only to receive the report of another group in a rubber life raft 600 yards from the enemy shore. Promptly turning back, he again set his plane down under direct fire of the heaviest defenses of Kavieng and took aboard six more survivors, coolly making his fourth takeoff with 15 rescued officers and men.

Ltjg. William E. Hall, USNR

Naval Aviator #6072, accredited to Utah.

As pilot of a scouting plane in action against Japanese forces in the Coral Sea May 7, 1942, Ltjg. Hall dove his plane at an enemy aircraft carrier, contributing materially to the destruction of that vessel. On May 8, facing heavy fighter opposition, he again displayed extraordinary skill as an airman and effectively executed counterattacks against a superior number of planes in which three enemy aircraft were destroyed. Though seriously wounded, he landed safely.

Ens. Charles H. Hammann, USNRF
Naval Aviator #1494, appointed from Maryland.

In World War I, piloting a seaplane on August 21, 1918, Ens. Hammann with three other planes took part in a patrol and attacked a superior force of enemy land planes. In the course of the engagement, the plane of Ens. George M. Ludlow was shot down and fell in the water five miles off Pola, [Austria]. Ens. Hammann immediately landed on the water alongside the disabled machine, where he took Ludlow on board. Although his machine was not designed for the double load and was leaking with bullet holes and although there was danger of attack by Austrian planes, he made his way to Porto Corsini. This was the first Navy air combat action for which the Medal of Honor was given.

1st Lt. Robert Murray Hanson, USMCR
Naval Aviator #5218, accredited to Massachusetts. Medal was awarded posthumously.

As a fighter pilot attached to VMF-215 in action against enemy Japanese forces at Bougainville Island, November 1, 1943, and New Britain Island, Jauanary 24, 1944, Lt. Hanson fought the Japanese with daring aggressiveness against overwhelming odds. On November 1, while flying cover for our landing operations at Empress Augusta Bay, he attacked six enemy torpedo bombers, forcing them to jettison their bombs, and destroyed one Japanese plane during the action. Cut off from his division while deep in enemy territory during a cover flight over Simpson Harbor on January 24, he waged a lone and gallant battle against hostile interceptors as they were orbiting to attack our bombers and brought down four *Zeros* and probably a fifth. He was a master of individual air combat, downing 25 Japanese aircraft.

LCdr. Thomas J. Hudner, USN
Naval Aviator, appointed from Massachusetts.

While attached to VF-32, LCdr. (then Ltjg.) Hudner on December 4, 1950 circled over a downed squadron mate behind enemy lines in North Korea, landed his plane to protect the pilot from fire and called for a helicopter. He remained on the spot in spite of danger and helped the helicopter crew in further rescue attempts.

Ltjg. John K. Koelsch, USN
Naval Aviator, accredited to California. Medal was awarded posthumously.

While attached to Helicopter Squadron Two in Korea on July 3, 1951, Ltjg. Koelsch voluntarily flew his helicopter to a position where a downed airman was supposed to be. The flight was made during heavy overcast under intense enemy fire. Ltjg. Koelsch found the downed pilot who was suffering from serious burns and while the injured man was being hoisted, a burst of hostile fire struck the helicopter and it crashed. Lt. Koelsch led his crewmen from the wreckage and rendered medical assistance during a nine-day escape attempt. Captured by the enemy, he died while a prisoner.

Capt. David McCampbell, USN
Naval Aviator #5612, appointed from Florida.

On June 19, 1944, Capt. (then Cdr.) McCampbell led his fighter planes against a force of 80 Japanese carrier-based planes bearing down on our Fleet in the Battle of the Philippine Sea. He personally destroyed seven enemy aircraft in this engagement. In another major fleet engagement on October 24 that year, Cdr. McCampbell, assisted by only one aircraft, intercepted 60 land-based craft approaching our forces. Fighting desperately, but with superb skill, he shot down nine planes and, completely disorganizing the enemy group, forced the remainder to abandon the attack before a single plane could reach the U. S. Fleet. Capt. McCampbell is credited with shooting down 34 enemy planes in WW II, the highest score of any U. S. Navy pilot.

Ens. Edward O. McDonnell, USN
Naval Aviator #18, accredited to Maryland.

During the battle of Vera Cruz, Mexico, April 21 and 22, 1914 Ens. McDonnell established a signal station on the roof of a local hotel, maintaining communication between troops and ships. At this exposed post, he was continually under fire. One man was killed and three were wounded at his side during the two days' fighting. Largely through his devotion to duty, all signals got through.

Patrick McGunigal, Ship Fitter First Class
Attached to USS Huntington, accredited to Ohio.

On the morning of September 17, 1917, while the USS *Huntington* was passing through the war zone, a kite balloon was sent up with a Naval Observer aboard. When the balloon reached an altitude of 400 feet, the temperature suddenly dropped, causing the balloon to descend rapidly to 200 feet where it was struck by a squall. The balloon was hauled to the ship's side, but the basket trailed in the water, submerging the pilot. McGunigal, with great daring, climbed down the side of the ship, jumped to the ropes leading to the basket, and cleared the tangle sufficiently to safely evacuate the pilot. McGunigal then put a bowline around him, enabling the pilot to be hauled aboard.

PRES. TRUMAN AND LCOL. BOYINGTON, USMC, AT PRESENTATION

RAdm. William A. Moffett, USN
First Naval Aviation Observer.

Cdr. Moffett (who later, as Rear Admiral, was to become the first Chief of the Bureau of Aeronautics) was awarded the Medal of Honor for distinguished conduct in engagements at Vera Cruz, Mexico, April 21 and 22, 1914. He brought his ship, USS *Chester*, into the inner harbor during the night and was in a position on the morning of the 22nd to use his guns at a critical time with telling effect. He placed her nearest the enemy and did most of the firing and received most of the hits.

Cdr. Joseph T. O'Callahan (ChC), USNR
Ship's Company, USS Franklin (CV-13), accredited to Massachusetts.

When the aircraft carrier USS *Franklin* was fiercely attacked near Kobe, Japan, on March 19, 1945, LCdr. O'Callahan groped his way through smoke-filled corridors to the open flight deck and strode into the midst of exploding bombs, shells, rockets, and other armament. With debris and fragments raining down, he ministered to the wounded and dying, organized and led firefighting crews, directed the jettisoning of live ammunition and the flooding of magazines. He manned a hose to cool hot, armed bombs rolling on the listing deck. He continued his efforts despite searing, suffocating smoke which forced men to fall back gasping and imperiled others who replaced them. His citation reads:

"LCdr. O'Callahan inspired the gallant officers and men of the *Franklin* to fight heroically and with profound faith in the face of almost certain death and to return their stricken ship to port."

Lt. Edward H. O'Hare, USN

Naval Aviator #6405, appointed from Missouri.

While section leader and pilot of VF-3, on February 20, 1942, Lt. O'Hare, having lost the assistance of his teammates, interposed his plane between his ship and an advancing enemy formation of nine attacking twin-engine heavy bombers. Without hesitation, alone and unaided, he repeatedly attacked this enemy formation at close range in the face of intense combined machine-gun and cannon fire. Despite this concentrated opposition, Lt. O'Hare shot down five enemy bombers and severely damaged a sixth before they reached the bomb release point. His action undoubtedly saved his carrier from serious damage.

Francis Edward Ormsbee, Jr., Chief Machinist's Mate, USN

Enlisted crewman, accredited to Florida.

While attached to NAS PENSACOLA, Fla., on September 25, 1918, Chief Ormsbee, while flying with Ens. J. A. Jova, saw a plane go into a tailspin and crash about three-quarters of a mile away. Landing nearby, the Chief dove overboard and swam to the wreck, which was under water except the two wing tips. He succeeded in partially extricating the gunner, so that his head was out of water. He held him in this position until assistance arrived. Ormsbee then made a number of desperate attempts to rescue the pilot, diving into the wreckage although cut about the hands, but was too late to save the pilot's life.

Lt. John J. Powers, USN

Naval Aviator #6880, accredited to New York. Medal was awarded posthumously.

While pilot of an aircraft of Bombing Squadron Five, Lt. Powers participated in five missions against Japanese forces in the Coral Sea area and adjacent waters May 4-8, 1942. Three attacks were made on enemy objectives at or near Tulagi on May 4. In these attacks, he scored a direct hit which instantly demolished a large enemy gunboat or destroyer and was credited with two close misses. He strafed a gunboat, firing all his ammunition into it amid intense anti-aircraft fire. On May 7 an attack was launched against an enemy airplane carrier and other units of the enemy's invasion force. Lt. Powers led his attack section of three *Dauntless* dive bombers against the carrier. On this occasion he dove in the face of heavy anti-aircraft fire, to an altitude well below the safety altitude, at the risk of his life and almost certain damage to his own plane, in order to obtain a hit in a vital part of the ship and assure her complete destruction. This bomb hit and the ship sank soon after. The next morning, May 8, he led his section of dive bombers down to the target from an altitude of 18,000 feet, through a wall of bursting anti-aircraft shells and into the face of enemy fighter planes. Again, completely disregarding the safety altitude, Lt. Powers pressed home his attack, almost to the very deck of an enemy carrier and did not release his bomb until he was sure of a direct hit. He was last seen attempting recovery from his dive at the extremely low altitude of 200 feet, amid a terrific barrage of shell and bomb fragments, smoke, flame and debris from the stricken vessel.

Lt. Milton E. Ricketts, USN

Ship's Company, USS Yorktown (CV-10), appointed from Maryland. Medal was awarded posthumously.

Lt. Ricketts was officer-in-charge of the engineering repair party in the aircraft carrier USS *Yorktown* during the Battle of the Coral Sea, May 8, 1942. An aerial bomb dropped by enemy forces exploded directly beneath the compartment in which Lt. Ricketts' battle station was located, killing, wounding or stunning all of his men, and mortally wounding him. Despite ebbing strength, he promptly opened the valve of a nearby fireplug, partially let out the fire hose, and directed a heavy stream of water into the fire before dropping dead beside the hose. He successfully prevented the rapid spread of fire.

PRES. COOLIDGE AND LT. C. F. SCHILT, 1929

FLOYD BENNETT, BYRD'S ARCTIC PLANE PILOT

BYRD WEARS MEDAL FOR FLIGHT OVER POLE

First Lt. Robert G. Robinson, USMCR (Ret.)

Naval Observer, accredited to Illinois.

First Lt. (then GySgt.) Robinson was cited for actions while a member of the First Marine Aviation Force at the front in France in WW I. In company with RAF planes on October 8, 1918, his plane was attacked by nine enemy scouts. In the following fight, he shot down one of the enemy planes. In a later air raid over Pittham, Belgium, on October 14, his plane and one other became separated from formation because of motor trouble. They were attacked by 12 enemy scouts. GySgt. Robinson, after shooting down one of the enemy planes, was struck by a bullet which carried away most of his elbow. At the same time, his gun jammed. While the pilot maneuvered for position, Robinson cleared the jam with one hand and returned to the fight. Although his left arm was useless, he fought off the enemy scouts until he collapsed after receiving two more bullet wounds.

Gen. Christian F. Schilt, USMC (Ret.)

Naval Aviator #2741, accredited to Illinois.

During the progress of an insurrection at Quilali, Nicaragua, January 6-8, 1928, Gen. (then Lt.) Schilt, a member of a Marine Expedition which had suffered severe losses in killed and wounded, volunteered under almost impossible conditions to evacuate the wounded by air, and transport a relief commanding officer to assume charge of a very

serious situation. Lt. Schilt bravely undertook this dangerous task and, by taking off a total of 10 times in the rough, rolling street of a partially burning village, under hostile infantry fire on each occasion, succeeded in accomplishing his mission. He evacuated 18 officers and men in ten trips and brought supplies and aid to others in need.

Col. John L. Smith, USMC
Naval Aviator #5978, accredited to Oklahoma.

Col. (then Maj.) Smith was commanding officer of VMF-223, in operations against enemy forces in the Solomon Islands area, August-September 1942. He led his squadron against a determined force, greatly superior in numbers, personally shooting down 16 Japanese planes between August 21 and September 15, 1942. His bold tactics and the valiant and zealous fortitude of the men of his command, not only rendered the enemy's attacks ineffective and costly, but also contributed to the security of our advance base.

LCol. James E. Swett, USMCR
Naval Aviator #11893, accredited to California.

While division leader of VMF-221 with MAG-12, LCol. (then 1st Lt.) Swett fought against enemy aerial forces in the Solomon Islands area

O'HARE SAVED CARRIER FROM BAD DAMAGE

D. McCAMPBELL, NAVY'S LEADING WW II ACE

IN 4 WEEKS, MAJ. SMITH DOWNED 16 PLANES

April 7, 1943. In a daring flight to intercept a wave of 150 Japanese planes, he unhesitatingly hurled his four-plane division into action against a formation of 15 enemy bombers and personally exploded three hostile planes in midair with accurate fire during his dive. Although separated from his division while clearing the heavy concentration of AA fire, he attacked six enemy bombers, engaged the first four in turn and, unaided, shot down all in flames. Exhausting his ammunition as he closed in on the fifth bomber, he relentlessly drove his attack against opposition, which partially disabled his engine, shattered the windscreen and slashed his face. In spite of this, he brought his battered plane down with precision in the water off Tulagi without further injury.

Second Lt. Ralph Talbot, USMC
Naval Aviator #802, appointed from Connecticut.

While attached to Squadron C, First Marine Aviation Force in France in WW I, 2nd Lt. Talbot participated in numerous air raids into enemy territory. On October 8, 1918, while on such a raid, he was attacked by nine enemy scouts, and, in the fight that followed, shot down an enemy plane. Six days later, while on a raid over Pittham, Belgium, Lt. Talbot and another plane became detached from the formation because of motor trouble and were attacked by 12 enemy scouts. During the fight that followed, his plane shot down one of the enemy scouts. His observer was shot through the elbow and his gun jammed. Lt. Talbot maneuvered to gain time for his observer to clear the jam with one hand and then returned to the fight. When his observer collapsed, Lt. Talbot attacked the nearest enemy scout with his front guns and shot him down. With his observer unconscious and his motor failing, he dove to escape the enemy and crossed the German trenches at an altitude of 50 feet, landing at the nearest hospital to leave his observer, and then returned to his aerodrome.

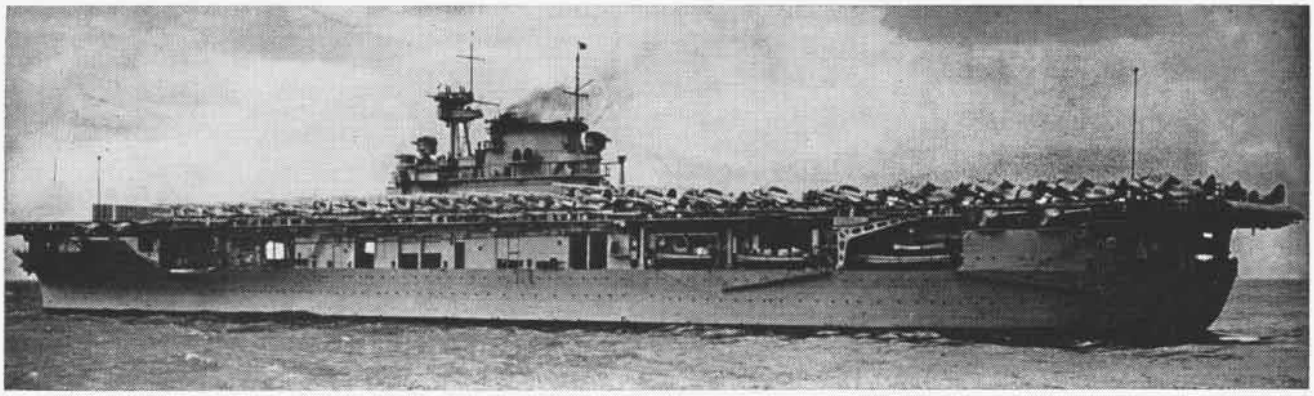
LCdr. Bruce A. Van Voorhis, USN
Naval Aviator #3859, appointed from Nevada.
Medal was awarded posthumously.

While Commanding Officer of Bombing Squadron 102 and plane commander of a PB4Y-1 patrol bomber, LCdr. Van Voorhis operated against the enemy on a Japanese-held island during the battle of the Solomon Islands, July 6, 1943. Fully aware of the limited chance of surviving an urgent mission, he voluntarily undertook to prevent a surprise Japanese attack against our forces. He launched in total darkness on a perilous 700-mile flight without escort or support. Successful in reaching his objective despite varying winds, low visibility and difficult terrain, he fought a lone battle under fierce AA fire and overwhelming aerial opposition. Forced lower and lower by pursuing planes, he coolly persisted in his mission. Abandoning all chance of a safe return, he executed six bold, ground-level attacks to demolish the enemy's vital radio station, installations, AA guns and crews with bombs and machine-gun fire, and to destroy one fighter plane in the air and three on the water. Caught in his own bomb blast, LCdr. Van Voorhis crashed into the lagoon off the beach.

LCol. Kenneth A. Walsh, USMC
Naval Aviator, accredited to New York.

Determined to thwart the enemy's attempt to bomb Allied ground forces and shipping at Vella Lavella, Solomon Islands, on August 15, 1943, LCol. (then 1st Lt.) Walsh, a pilot with VMF-124, repeatedly dove his plane into an enemy formation outnumbering his own division six to one. Although his plane was hit numerous times, he shot down two Japanese dive bombers and one fighter. After developing engine trouble on August 30 during an escort mission, he landed his disabled plane at Munda, replaced it with another, and proceeded to rejoin his flight over Kahili. Separated from his escort group, he encountered approximately 50 Japanese *Zeros*. He unhesitatingly attacked, striking with relentless fury in his lone battle against a powerful force. He destroyed four hostile fighters before cannon shell-fire forced him to make a dead-stick landing off Vella Lavella where he was picked up. "His valiant leadership and his daring skill as a flier served as a source of confidence and inspiration to his fellow pilots and reflect the highest credit upon the U. S. Naval Service."

THE BIG E AT CHRISTMAS, 1943



ENTERPRISE, REVERED AS ONE OF THE GREAT CARRIERS OF WORLD WAR II, HAS ITS EXCITING BIOGRAPHY PUT DOWN 'FOR THE RECORD'

Reprinted by special permission from "The Big E," the story of the USS Enterprise, by Cdr. Edward P. Stafford, USN, published by Random House, Inc., 457 Madison Avenue, New York 22, N.Y. The following is excerpted from Chapter 17, "First Steps West" and shows how the Fleet started carrying the war to the enemy with a growing number of ships (see November NANews, "Evolution of Aircraft Carriers"). This portion was selected because it describes an important era of World War II carrier operations, now 19 years deep in history; it is also a story of "cautious optimism" that began at Christmas . . . .

By Cdr. Edward P. Stafford, USN

As CHRISTMAS of 1943 approached, many of the Big E's men grew glum and homesick with thoughts of the miles of sea and land that separated them from wives and families. But the old hands felt a cautious optimism. Christmas in Pearl Harbor was certainly not the way they would have arranged things, but it was better than Christmas at Espiritu or the one before that, patrolling north of Midway while the Japanese, with the momentum of the Pearl strike, overran the Pacific world. The "man on the deck" of *Enterprise*, judging only from what he had seen of the war, could tell it was going well, that there would not be very many more Christmases like this one. He had been only a few hours away when *Lexington* was sunk and he had seen *Yorktown* and *Hornet* receive their mortal wounds. Now the new *Lexington*, the new *Yorktown*, the new *Hornet* and half a dozen other big carriers sailed the hostile seas with *Enterprise*. Clearly with this kind of progress there could not be many more lonely Christmases.

On the morning of the twelfth [January, 1944] air group pilots and key ship's officers, in a secret briefing ashore, were given the details of the coming operation. *Enterprise* was going back to the Marshalls, but this time it was no strike but occupation, and she would have plenty of help.

Task Force 58—Fast Carrier Force —had been born in those first days of 1944 and this would be its first action. RAdm. Marc Mitscher, as task force commander, had six big carriers—*Enterprise*, *Yorktown*, *Essex*, *Intrepid*, *Saratoga* and *Bunker Hill;* six light carriers, *Belleau Wood*, *Cabot*, *Monterey*, *Cowpens*, *Princeton* and *Langley*, eight fast battleships, six cruisers and 36 destroyers.

On the morning of Saturday, January 22, TG 58.1 angled down across the equator. And even on the way into battle, it was necessary for the hundreds of "pollywogs" aboard, for whom this was the first crossing, to be initiated in the "solemn mysteries of the Ancient Order of the Deep."

At 5:17 a.m. [January 29] Cdr. Roscoe Newman, the air group commander, was catapulted into the blackness in a TBF to act as a reference plane and with his radar assist the fighters in joining up and homing to the target. It was as though his takeoff broke a dam in the sky. Rain lashed at the parked *Hellcats* and their props picked it up and blasted it back over cockpits and deck. Nevertheless, five of the fighters were catapulted in quick succession and with streaming windshields, the soaked pilots groped their way to the rendezvous point. As the weather worsened, 13 more F6F's splashed down the deck and climbed into the darkness.

When 18 fighters were in the air, there no longer was any ceiling or visibility over the deck and further takeoffs were delayed nearly an hour.

Ltjg. Rod Devine with Ens. Jimmy Kay on his wing, broke out of the clouds over Taroa at 8,000 feet right on top of four shining green *Zeros* coming in the opposite direction at 7,000. The *Zeros* pulled up firing and Devine and Kay, in a violent wingover, swept over and behind the enemy fighters, got on the tail of one, and with the third close range burst, Devine set him afire and watched him slant into the sea, while his mates ran for clouds. Flash Gordon, a veteran of Guadalcanal days with the old VF-10, had just begun his strafing dive from 8,000 feet when he saw seven *Zekes* directly below. Flash and his wingman dove in for the enemy leader. Gordon gave him a long five or six seconds of his six .50 calibers before he flipped suddenly and dove into the lagoon.

With enemy fighters shot down or chased away, Killer Kane's *Hellcats* went down to strafe. Taroa was little more than an airfield surrounded by water, with two runways crossing the island from shore to shore and intersecting in the middle. When the fighters had done their work, the bombers and torpedo planes arrived. When they pulled away to the southeast to rejoin for the flight home, the whole north side of the island, which

had been their target area, was burning and exploding in a very satisfactory manner.

The next day, Mitscher concentrated on Kwajalein. While *Enterprise* and Task Group 58.1 had been working over Taroa, 58.4 had been hitting Wotje and 58.2 and 58.3 had been attacking the islets of the Kwajalein Atoll itself. Now, with enemy air power in the Marshalls so crippled that not a single Japanese airplane remained flyable east of Eniwetok, the fast carriers concentrated on softening up the main objectives.

For five days the fighters flew CAP over the carriers and the island, strafed at the end of each flight and escorted strikes and photo flights; the bombers delivered their loads where and when requested by the landing forces; the torpedo planes bombed, flew antisub patrols and delivered unused depth bombs and machine gun bullets ashore at the end of each flight, maintained an air coordinator and an air liaison flight over the island during the hours of daylight, and all three squadrons took photographs for intelligence purposes as the action ashore progressed.

For five days the Big E steamed back and forth southwest of Kwajalein, close enough to give her pilots short flights and yet well out of sight of enemy eyes.

Adm. Koga, at Truk with three battleships and eleven cruisers, had lost the air groups of his eight carriers in the Solomons and "could not commit the fleet without carriers." So the garrison on Kwajalein Atoll was left to defend itself against the pounding of the U.S. battleships, U.S. carrier planes and the amphibious assault forces of the U.S. Army and Marine Corps, which went ashore on the islets flanking Kwaj and Roi-Namur on the 31st of January and on the main islands on the following day.

While the land campaign went on, the Big E's air group and squadron commanders alternated as air coordinator over the target. They directed strike aircraft, directed rescues of downed air crews, reported results and made recommendations to the commander. Support aircraft, when their watches were over, went down to strafe and lay their bombs on whatever targets they considered worthwhile.

By full daylight on the fourth of February only a few yards of shattered coral remained in the hands of the surviving Japanese garrison on Kwajalein, and when General Quarters was secured, the ship's loudspeakers announced that *Enterprise* and her task group were leaving to refuel and resupply in the spacious lagoon anchorage of Majuro, 200 miles southeast.

The occupation of Kwajalein, as far as *Enterprise* was concerned, was over. For the first time, prewar Japanese territory had been forcibly taken. And so overpowering and successful were the fast carriers of TF 58 that in the week's action, in the midst of enemy held islands 2,000 miles west of Pearl, not a single United States ship had even come under attack by hostile aircraft.

By Monday noon *Enterprise* knew her next target. The ship buzzed with talk and it was not all happy talk. Mitscher's carriers were going to raid the reputedly impregnable and mysterious heart of Japanese power in the central Pacific—dreaded Truk itself. The mission was to destroy enemy air and naval power and installations at Truk, and in so doing, prevent any interference with troop landings at Eniwetok, the westernmost atoll in the Marshalls.

When men thought of Truk they pictured a "Gibraltar of the Pacific" bristling with guns, defended by hundreds of fighters and superbattleships and other heavy units of the Combined Fleet.

Despite the restful days at anchor, it was apparent that the tempo of war was picking up. Things were beginning to happen fast—Kwajalein late in January, Eniwetok and Truk in mid-February and already rumors were around of other, equally serious operations to follow. And it made sense. The men had seen with their own eyes, at sea and in the Marshall lagoons, the big powerful U.S. task forces now operating in the Pacific. The sooner and the faster this growing power was used, the sooner the enemy would be rolled back to Japan and the endless war ended.

On the evening of the fourteenth [of February], the three task groups of the Truk raiding force joined up. Officers and men in *Enterprise* gaped at the naval power ploughing along to the westward in geometric dispositions that stretched to the horizon in all directions. This was the U.S. Navy's first team, the best and strongest that it could field. VAdm. R. A. Spruance flew his three stars at the truck of the *New Jersey* as commander of TF 50 (Truk Striking Force). Close by, in *Yorktown*, Mitscher commanded TF 58 (Fast Carrier Force). And under these two capable gentlemen were nine carriers, six new battleships and ten cruisers plus screening destroyers.

Mitscher's first blow at Truk was a fighter sweep to clear fields and the skies over the target of enemy planes, so that bombers and torpedo planes could do their work without interference. When the *Hellcats* swung in over Truk in the morning twilight of February 16, theirs were the first nonnative, non-Japanese eyes (with the exception of those belonging to the crew of an enterprising Marine recon *Liberator* 12 days before) to see it since Japan had taken it from Germany in World War I. As the square-wing-tipped blue fighters came in over the reef in three groups of 24, about 50 of the enemy were just airborne and climbing desperately to meet them. For perhaps 20 minutes, no 30-second period went by when there was not at least one burning plane torching down across the sky.

In an hour and a half the *Hellcats* of TF 58 owned the skies over dreaded Truk. More than 30 enemy planes had been shot out of the air and another 40 burned on the ground. Four F6F's were missing. It was still only 9:30 a.m. Now the bombers and torpedo planes went to work. Every two hours beginning at 7 a.m., *Enterprise* launched a strike which averaged out at seven *Avengers*, 11 *Dauntlesses* and an escort of 12 *Hellcats*.

February 17 was mop-up day. The dawn fighter sweep did not find a single plane in the air and went down to strafe the wreck-covered fields and the shipping.

When the last strike returned to *Enterprise*, she was already steaming eastward away from Truk. Mitscher and Spruance, with a couple of surface actions and some 30 strikes, each stronger than either of the two Japanese raids that hit Pearl Harbor, had destroyed Truk as a major naval base, and as a bonus, destroyed or damaged 250 to 275 aircraft, sank or damaged beyond repair two light cruisers, four destroyers, two sub tenders, and 27 merchant ships and other small craft.

VIGILANTES LOG FIRST MED CRUISE

NEEDLE-NOSED *VAH-7 Vigilantes slip past their floating base, nuclear-powered Enterprise, on maiden Med cruise for both planes and ship.*

'PEACEMAKERS *of the Fleet' flight crew teams—pilots standing behind bombardier-navigators—pose with A-5A(A3J) on the Enterprise deck.*

VIGILANTE-EQUIPPED VAH-7, the *Peacemakers of the Fleet*, returned to Sanford, Fla., October 11 from the first Mediterranean deployment of the A-5A (A3J). The cruise proved to be a real honeymoon affair—ten interesting weeks aboard atomic-powered *Enterprise* (CVAN-65) on her maiden Med cruise—for squadron and ship.

By all customary standards, the cruise was a success. The *Peacemakers* kept their three-year accident-free record intact; made liberty in Cannes; met all commitments; and exceeded their September flight hour "quota" by more than 50%, thus establishing what is believed to be a record for first cruise flight time with a new aircraft.

Enterprise departed Norfolk with other fleet units August 3, and rendezvoused with British and French forces for NATO Exercise *Riptide III*. Our allies saw the A-5A *Vigilante* weapons system in action for the first time, launching simulated atomic strikes.

The versatility of the sleek Mach 2 attack plane was amply demonstrated during the remainder of the short deployment. *Vigilantes* flew adex's, strikex's, high and low altitude navigation flights, air refueling, CCA and bombing missions. Of the several hundred carrier landings logged, approximately 20% were night recoveries. During the 16 operating days of September, the *Peacemakers* flew a monthly high of 535 hours in 208 sorties.

The high state of readiness achieved on *Vigilante's* first cruise is *not* attributed to the simplicity of the machine. Hard work by competent people, sound planning and preparation (see "Getting to Know the A3J," NANEWS, November 1961, pp. 19-22) and the excellence of the VAH-7 maintenance team and the A-5A maintenance system (see "Card Sharp Maintenance Yields Bonus," July 1962, pp. 33-35) were the contributing factors.

General aircraft and engine performance and availability were judged to be "outstanding" for the first deployment of a new aircraft. Several engines were changed, but all owing to foreign object damage. One over-night engine change earned a meritorious mast for John L. Burns, ADJ1, leader of Power Plants night check team.

Late in the cruise, *Enterprise* went through a two-day heavy rain. The squadron expected a deluge of downed avionics systems as a result of the soaking and high humidity. But the next two days operation proved to be the most trouble-free.

On returning to Sanford, VAH-7 C.O., Cdr. Louie B. Hoop, Jr., told the assembled families and dignitaries, "You can be proud of the squadron's accomplishments. We worked as a team to do a hard job. We did it well."

VAH-7 MAINTENANCE CHIEF CZECHY *with "hand" of maintenance cards (left) is re-run from July 1962 feature. Right, at end of cruise, C.O., Cdr. Louis "B" Hoop presents symbolic winnings.*

TOP A-5 *flight crew for September: pilot LCdr. G. E. Jessen and B/N Lt. W. T. Blakemore.*

ESCORT CARRIERS *file in formation during World War II. Viewed from the Manila Bay (CVE-61) are sister Casablanca class carriers Coral Sea (CVE-57), later renamed USS Anzio, Corregidor (CVE-58), and Natoma Bay (CVE-62), followed by Bogue class carrier Nassau (CVE-16).*

Evolution of Aircraft Carriers

EMERGENCE OF THE ESCORT CARRIERS

'The story of the escort aircraft carriers is like a story with a surprise ending. When the United States began to build them, there was a definite purpose in view—fighting off submarines and escorting convoys. But as the war progressed, the small carrier demonstrated surprising versatility. It became a great deal more than its name implies. From a purely defensive measure, the escort carrier emerged as an offensive weapon.'—FAdm. Chester W. Nimitz, USN, CinCPacFlt/CinCPOA, 1945

By Scot MacDonald

TOWARD THE END of World War I, Great Britain experimented in converting light cruisers to airplane carriers—notably in HMS *Cavendish* of 32 knots and about 10,000 tons displacement. But with the signing of the Armistice, the project was abandoned. Despite this, it was a subject of interest in the following years.

In 1925, the General Board seriously considered the conversion of cruiser hulls to aircraft carriers. Although treaty limitations restricted the building up of carrier strength, there was sufficient uncommitted construction tonnage to permit the building of more carriers than the U.S. Fleet had. Could this uncommitted tonnage be best employed in building small carriers? The Board's answer can best be summed up in this excerpt from its report:

"Incomplete studies of the subject by the Bureau of Construction and Repair and the meagre information available concerning the performance of airplanes from carriers of approximately 10,000 tons displacement does not justify building them at this time."

But the subject of "light" carriers was of recurrent interest to the U.S. Fleet. In May 1927, LCdr. Bruce G. Leighton prepared a paper in which he analyzed the problem. He titled it, "Light Aircraft Carriers, A Study of their Possible Uses in So-Called 'Cruiser Operations,' Comparison with Light Cruisers as Fleet Units." Though the title may have been cumbersome, the document was impressive. He forecast every fundamental combat requirement of the later-day CVL's and CVE's, including the bombing of capital ships, support of fleet operations, anti-submarine work, scouting and reconnaissance, and the reduction of enemy shore bases. He concluded that "all things considered, it might well be considered as a worthy substitute for the light cruiser, or even distinctly preferable to the cruiser."

For the next dozen years, the subject interjected itself spasmodically and unsuccessfully into Navy thinking. But in March 1939, Capt. John S. McCain, Sr., then commanding the *Ranger,* wrote to the Secretary of the Navy advocating the building of at least eight "pocket-size" carriers of cruiser speed. These were not meant to replace the CV's, but to supplement them, giving force commanders much more flexibility in the use of ship-based aircraft at sea, without jeopardizing the much more costly heavy carriers. RAdm. Ernest J. King, in his endorsement to the letter, was not at all enthusiastic about this scheme. He suggested that existing aircraft carriers carry the maximum number of planes permissible as a better solution than the construction of smaller carriers.

The matter was not entirely dropped, however, for the Bureau of Construction and Repair was considering, and even drawing plans for the conversion of 20- or 21-knot passenger ships, creating experimental carriers with short flight decks. By November 1940, the Chief of Naval Operations brought these considerations to an abrupt halt, basing his decision on a letter from SecNav to the Chairman of the U.S. Maritime Commission. SecNav wrote:

"The characteristics of aircraft have changed, placing more exacting de-

mands upon the carrier. These demands are such that a converted merchant vessel will no longer make as satisfactory an aircraft carrier as was the case when the plans for those vessels were being drawn."

In commenting on the beginning of escort carriers, historian Lt. William G. Land, USNR *(Functional Development of the Small Carrier* [*CVE*]) says, "The escort carrier was forced upon the Navy by the President."

Indeed, President Franklin D. Roosevelt did actively enter the "light" carrier controversy. Great Britain had been at war with Germany since September 1939. Since that time and before the U.S. entered the war, large numbers of U.S.-built military aircraft were sold to the British. The U.S. had need for an aircraft-carrying ship to speed delivery. By mid-February 1941, RAdm. W. F. Halsey (later Fleet Admiral) had written to Commander-in-Chief, U.S. Fleet:

"A previously stated expectation, that the Navy would be called upon to provide transport for Army aircraft, has now materialized in the current diversion of *Enterprise* and *Lexington* to transport 80 pursuit planes from the West Coast to Hawaii. To continue with primary reliance on aircraft carriers for such work, as is our present necessity, seriously endangers the availability of air-offensive power in the Fleet."

Adm. Husband E. Kimmel, in endorsing this letter from his Commander Aircraft Battle Force to the Chief of Naval Operations, fully concurred and pointed out that on five separate occasions in the past he had himself urged such action.

Earlier, on October 21, 1940, CNO had received a memorandum from the President's Naval Aide advising him that President Roosevelt proposed the Navy acquire a merchant ship and convert it to an aircraft carrier, accommodating 8 to 12 helicopters (not yet operated by the Navy) or airplanes capable of landing or taking off in a small space. The purpose of this type carrier was to "provide quick conversions for carrying small planes which could hover ahead of convoys, detect submarines and drop smoke bombs to indicate their locations to an attacking surface escort craft."

CNO decided on the last day of 1940 that the Chairman of the Maritime Commission would be consulted to determine the availability of ships for this purpose. On January 2nd, it was found that two Danish ships might permit conversion, but later investigation proved this would not be possible. The results of this January 2 conference determined that the ships (two—one was to be sold to Great Britain) selected "should be of the same or very similar design in order that the plans made for one could be applicable to both; that the airplanes should be further investigated to determine the type and availability; that an armament of four AA pom-poms and one 5" surface gun should be such as to insure stability at all stages of loading." These converted merchant ships were to fill the need later expressed by Adm. Halsey, the transport of aircraft, as well as to provide protection to Allied convoys.

On January 6, 1941, Adm. Harold R. Stark, CNO, convened a conference in his Washington office to discuss merchant-conversion. The autogiro type aircraft was considered of dubious usefulness because of its inability to carry any load other than smoke bombs; an aircraft, to meet the purpose designed, must have some offensive characteristics. An abbreviated deck was ruled out. The converted ship should be diesel-driven in order to eliminate smokestacks. The decision was made to obtain from the Maritime Commission, if possible, C-3 cargo ships.

On the following day, CNO was informed that two diesel-driven C-3 type ships, the *Mormacmail* and the *Mormacland*, would be suitable for conversion and were available. He was told by President Roosevelt that any plan which would take more than about three months to complete conversion would be unacceptable. This, in effect, placed pressure on the project. The idea of substituting "blimps" for autogiros or heavier-than-air craft was flirted with but, by January 15, was "out of the picture."

The *Mormacmail* was acquired on March 6, 1941. On June 2—just within the three-month limitation set by the President—she emerged from conversion and was placed in commission as the aircraft escort vessel USS *Long Island* (AVG-1), commanded by Cdr. Donald B. Duncan who, on December 31, 1942, was to be the first commanding officer of USS *Essex*.

Early plans for the conversion called for the installation of a 305-foot flight deck on the *Mormacmail*, but the Bureau of Aeronautics required at least 350 feet to safely land soc *Sea Gulls* aboard. Upon commissioning, *Long Island* had a deck length of 362 feet. She had one elevator, handled 16 planes, had a trial run speed of 17.6 knots, and berthed 190 officers and 780 men.

The *Mormacland*, acquired at the same time, was similarly converted and was turned over to the British as HMS *Archer* (BAVG-1) when it was completed the following November. Experience with the BAVG and the two British conversions led the British to believe that the diesel-driven ships were too slow for their purpose as special escort vessels—although they were no slower than the later *Bogue* carriers.

Long Island was used primarily as a training ship during the remaining peacetime months of 1941. She was subjected to tests and experiments—much the way USS *Langley* had been in her early days—to obtain data needed for the construction of later escort carriers. As a result of the Navy's experiences with this ship, other CVE's were outfitted with two elevators instead of one, the flight decks were lengthened, and the anti-aircraft power was increased.

On December 26, 1941, SecNav approved the conversion of 24 merchant hulls for the 1942 shipbuilding program and, in March, ordered the conversion of cruiser hulls which became the CVL's. Cdr. Leighton's 1927 paper was proving its farsightedness.

Naval Aviation historian, Dr. Henry Dater, traced the next developments in a paper published in *Military Affairs:*

"There were only 20 C-3 hulls available for conversion, ten of which were earmarked for the Royal Navy and ten for the United States. The new ships were improved by the substitution of a steam turbine power plant for the diesel engines employed in the *Long Island* and *Charger* [the latter was redesignated CVE-30 and replaced CVE-1 as a training ship when the *Long Island* was pressed into service, ferrying planes and pilots at the outbreak of war], and by the addition of a slightly larger flight deck (436 by 79 feet), a small island, and a considerably larger hangar space.

"They were referred to either as the CVE-6 class, from the numerical designation of HMS *Battler*, or as the *Bogue* class, from the first ship to operate with the U.S. Navy.

"The remaining four CVE's authorized for the 1942 program were converted from *Cimarron* class fast fleet oilers and were known as the *Sangamon* (CVE-26) class. These were considerably larger, having a flight deck of 503 feet by 85 feet, and were able to accommodate two small squadrons of aircraft. Because of their size, work was rushed on them during the summer of 1942 so that they would be available for the North African invasion in the autumn."

Before the U.S. entered the war, German U-boats hovered near British coastal ports and picked off merchant ships with ease. Land-based RAF planes drove the German submarines further out to sea. To make matters more difficult for the enemy, convoys sailed closer together, opening up larger areas of the North Atlantic for the German subs to search. The Germans solved this problem by developing the "wolf pack" technique of operating in groups, then concentrating for the kill when convoys were sighted.

"It was this technique which created the British desire for aircraft escort vessels in late 1940 and 1941," wrote Dr. Dater. "With the entry of the United States into the conflict the Germans found easy picking off the American coast, but it was only a matter of time until land-based air on this side of the Atlantic drove them out to sea once more. There in mid-ocean was a vast area in which the convoys did not have the assistance of aircraft. By early 1943 it became evident that the decisive campaign was to be fought in that area."

The air officer of the *Bogue* described escort procedures during March and April 1943:

"The ship was stationed inside the convoy for this work. The convoys were in columns of five ships each with about 700 yards between columns. They left a double space in the middle in the center of which they placed the *Bogue*. The other escorts were placed around the convoy in a half circle. The idea was, if possible, to use our catapults and to stay in our center position when launching our planes so there wouldn't be any wide separation. As it happened, we had westerly winds on the East-bound convoy so we had to turn around to launch planes and to take them aboard. Consequently, the separation was fairly large due to the fact that it was what is called a high speed convoy, 'nine knots!' "

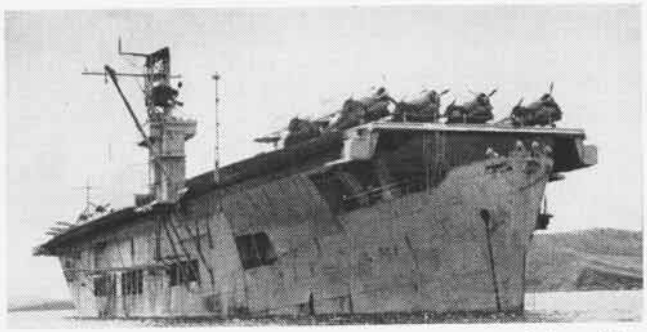
Though this tactic met with considerable success at first, it was primarily defensive. A new technique was found more effective. A small task group took up a position where it could throw its support to either of two convoys in a general area. Escort carrier-based aircraft scouted ahead, searching out German U-boats before the submarines could make contact. This permitted the carriers to be released from the difficult maneuver necessary in the central slot of the convoy. Out of this technique emerged the successful hunter-killer tactic that eventually freed Allied shipping in the North Atlantic.

The *Sangamon* class escort carriers, built as fleet oilers under the Merchant Marine Act of 1936, were completed in 1939, but in the 1942 shipbuilding program were slated for reconfiguration to aircraft carrier characteristics. Only four hulls were on hand. "Had more oiler hulls been available," wrote Lt. Land, "they would have become the prototype of the small carrier for the ensuing year's program. But the overwhelming need for fleet oilers—to make possible our logistic advance—prevented this type of hull from being again used for carriers, until 1944."

The *Sangamons* had an over-all length of 553 feet, a speed of 18.3 knots, a trial displacement of 23,235 tons, and carried 120 officers and 960 men. They were armed with two five-inch, 38 calibre guns, two quad and ten twin 40mm AA mounts. They were equipped with two hydraulic catapults forward.

"With the CV's, except *Ranger*, being employed in the Pacific," wrote historian Land, "planning for the North African landings depended on the completion of the AO conversions of *Suwannee*, *Sangamon*, *Chenango*, and *Santee*. For this reason, *Suwannee* had to cut down on its pre-commissioning period, fitting out, and shakedown in order to be substituted in the final plans for the much smaller *Charger*, the ex-BAVG which had been doing regular duty as qualification carrier in Chesapeake Bay. *Santee*, likewise, was barely completed in its essentials and had had hardly any exercise with its air group before its first combat operation was to begin."

BOGUE CLASS *escort carriers were products of the 1942 shipbuilding program. They were converted from Maritime Commission C-3 hulls.*

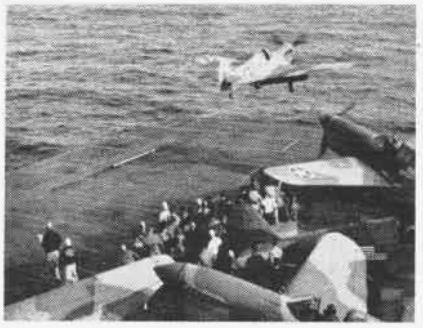


USS SUWANEE *was one of four escort carriers converted from Cimaron class fleet oilers. They were rushed to completion for battle duty.*

Capt. William D. Sample, commanding *Santee*, wrote of the hectic early days aboard:

"*Santee* left Norfolk Navy Yard 13 September 1942 with Yard workmen still on board and her decks piled high with stores. During that first month, the *Santee* returned to the yard twice and was never free of the Yard workmen. The completion of the ship continued while the fitting out and shakedown were proceeding together. At the end of the month, the air group had operated aboard only a day and a half and guns had been fired only for structural tests . . . .

"The Navy Yard had done an almost impossible task in getting the ship out in time for the pending operations but, in so doing, only the essentials had been completed, and it was then necessary for the ship to install, adjust, calibrate and repair until the ship could



ARMY P-40 *Warhawk fighter catapults from the deck of a Sangamon class to North Africa.*

CASABLANCA *(CVE-55) was first of 50 escort carriers mass-produced by Kaiser shipyard.*

COMMENCEMENT BAY *class was conceived to provide trans-ocean convoys with air cover.*

use her battery and equipment . . . . The service experience necessary to test many of the questionable features of the ship's design was soon obtained in a wintry gale encountered en route to Bermuda. The two forward boats were carried away, the new upper decks proved to be sieves and the repair work of the ship's force got underway in earnest."

The carrier *Chenango* was used, in the North African operation that followed, as a ferry carrier for Army P-40's on the outward trip, as a fuel supply ship while moored at Casablanca, and as a fleet escort—with a borrowed air group furnishing air cover—on the return trip.

Her sister ships, however, launched TBF-1 *Avengers,* SBD-3 *Dauntless* and F4F-4 *Wildcat* aircraft in support of landing operations for the capture of Casablanca and Port Lyautey. They were units of Task Force 34. As part of the Northern Attack Group, *Sangamon* and *Chenango* assisted troops landing at Mehedia, not far from Port Lyautey. *Ranger* and *Suwanee* provided air cover for the Center Attack Group at Fedhala, northeast of Casablanca. *Santee* was the only carrier assigned to the Southern Attack Group, providing combat air patrol and anti-submarine patrol for the landing force at Safi—the only port in Morocco, other than Casablanca, that would permit the landing of 28-ton General Sherman tanks. It was for the capture of Casablanca that these tanks were needed.

Between November 8-11, 1942, *Suwanee* launched 255 combat sorties; *Santee,* 144, and *Sangamon,* 183.

During *Sangamon's* participation in the Northern Attack Group operation, her planes were called upon to neutralize a Kasba or citadel, which guarded the Port Lyautey airdrome. Several SBD's delivered bombs on target. "The garrison then," wrote Samuel Eliot Morison, "came out with their hands up, and our infantry walked in." By November 15, *Sangamon's* part in the invasion of North Africa was completed and she sailed for Hampton Roads.

Planes in the *Suwanee* joined those based in the *Ranger* in bombing missions during the Battle of Casablanca. The *Suwanee,* like the *Santee* at Safi, encountered light winds. Many landings were made aboard with only 22-knot winds across the deck.

Despite the greenness of the crews in the *Sangamons,* generally, they gave a good account of themselves. Commented CinCLant: "The CVE's proved to be a valuable addition to the Fleet. They can handle a potent air group and, while their speed is insufficient, they can operate under most weather conditions and are very useful ships."

Their missions in the invasion of North Africa completed, *Sangamon, Chenango,* and *Suwanee* were dispatched to the Pacific. By the end of 1942, U.S. carrier strength in the Pacific had been reduced to the *Enterprise* and the *Saratoga.*

In the meantime, President Roosevelt announced a need for more escort carriers. Shipbuilder Henry J. Kaiser had impressed the President with the merits of a plan which would permit the mass production of escort carriers, under a program to be supervised by the Maritime Commission.

The first of these, USS *Casablanca* (CVE-55), was commissioned July 8, 1943, and gave its name to the class—CVE-55 through CVE-104. They were also referred to as Kaiser class escort carriers. The Kaiser yard completed its 50-ship program on July 8, 1944. This was an impressive achievement in wartime production program.

The *Casablanca* class had an over-all length of 512 feet, 3 inches, a speed of 19.3 knots, a trial displacement of 9570 tons, and carried 110 officers and 750 men. They had one five-inch, 38 calibre gun and eight twin 40mm AA mounts. The aircraft complement consisted of 12 TBM's and 16 FM-2's; in the flight deck was a single hydraulic catapult, forward.

Final details were worked out for a new class escort carrier during the trials of the *Sangamon* and *Santee* and during the planning for the 1944 building program. These ships were the first Navy-designed escort carriers for which hull and propeller model tests were carried out at the David W. Taylor Model Basin. The design was formally approved by CNO on December 10, 1942 and the contract was let on January 23, 1943. The first of these carriers was the *Commencement Bay* (CVE-105) from which the class got its name. It had an over-all length of 557 feet, a speed of 19 knots, and a trial displacement of 23,100 tons. Few of these ships saw action in the war—the *Commencement Bay* was commissioned in November 1944. Only nine others were commissioned before V-J Day the following September. They incorporated all lessons learned since the *Long Island* was commissioned.

As the escort carriers gained experience, they earned the respect of the Fleet by proving themselves versatile in anti-submarine warfare. The *Sangamon* class first demonstrated combat capability in the support of the North African invasion. The first major carrier-supported amphibious landing in the Pacific was the capture of the Gilberts and Marshalls. Eight escort carriers participated, two of the *Bogue* class, three of the *Sangamon* class, and

three of the *Casablanca* class. The changing status of these vessels is reflected in their redesignation. Originally identified as aircraft escort vessels (AVG's), they were redesignated on August 20, 1942, auxiliary aircraft carriers (ACV's), and finally, on July 15, 1943, a directive changed the escort carrier symbol to CVE, reclassifying them as combatant ships.

At the end of the North African invasion, RAdm. Calvin T. Durgin (then Capt.) evaluated the effectiveness of the escort carriers when he presented his report:

"Due to their low speed, lack of protection and light armament, it is considered hazardous to employ a CVE group in operation where there is likely to be an effective enemy opposition. Such a group can, however, be used to advantage, and is capable of inflicting substantial damage to the enemy in assault where the enemy air and sea opposition is negligible or when it is being contained by other superior forces. When this situation exists, the CVE is well equipped to provide all support until landing strips are established ashore, and it can be effectively employed for bombardment spotting, combat air patrols over beaches and surface forces, for all forms of air reconnaissance missions and for bombing, rocket and strafing attacks."

His experience with escort carriers was to stand him in good stead. On December 13, 1944, the functional type command, Escort Carrier Force, Pacific, was created; RAdm. Durgin was placed in command.

The establishment of this force was made possible by the increasing number of carriers—notably of escort design—made available to the Fleet. Experience at Palau and Morotai and the difficulties encountered later at Leyte all pointed to the need for better planning in advance of operations if the CVE's were to perform efficiently their enlarged responsibilities. Adm. Durgin's command held administrative control over all escort carriers operating in the Pacific, except those assigned to training and transport duty.

On December 15, 1944, the escort carriers provided direct support for landings on Mindoro, and in the assault area on the next two days. Between January 3-22, 1945, 17 escort carriers covered the approach of the Luzon Attack Force against serious enemy air opposition from Kamikaze pilots. This force of ships, Task Group 77.4, conducted preliminary strikes in the assault area, covered the landings in Lingayen Gulf, and supported the inland advance of troops ashore.

In 1945 the CVE's saw a great deal of action. On the last three days of January, six escort carriers under RAdm. Sample (as Capt., first C.O. of *Santee)* provided air cover and support for landings by Army troops at San Antonio near Subic Bay, and at two other nearby Philippine beaches. In February, Adm. Durgin directed his carriers in the battle for the capture of Iwo Jima. In March, the Okinawa campaign began, the last, and, for naval forces, the most violent major amphibious campaign of World War II. As Task Group 52.1, Adm. Durgin, with an original strength of 18 escort carriers, conducted pre-assault strikes and supported the occupation of Kerama Retto, joined in the pre-assault strikes on Okinawa, and, from a fairly restricted operating area southeast of the island, supported the landings and flew daily close support for operations ashore until the island was secure on June 21.

The U.S. suffered few losses to the enemy in these ships. Five carriers of the *Casablanca* class were lost in the Pacific; one *Bogue* class was torpedoed in the Atlantic. During the war years, 76 CVE's of various classes were commissioned, in addition to the *Long Island,* commissioned months earlier. Seven more *Commencement Bay* class were commissioned during the post-war years. During the war, four sister ships to *Long Island* were transferred to the British, as were 34 additional escort carriers of the *Bogue* class. Four were sunk; at the end of the war, the rest were returned to the U.S. from Lend-Lease and were either sold or placed in the reserve fleet.

Through fulfilling a basic need of transporting large numbers of assembled aircraft to various theaters of war, the quickly conceived and executed escort carrier developed into an anti-submarine warfare weapon that defeated the German U-boat threat in the North Atlantic. They provided combat capability in the support of fleet operations in both the Atlantic and the Pacific. In short, they displayed a versatility, proved under the pressures and urgencies of a war that engulfed the world.

VADM. (THEN RADM.) *Calvin T. Durgin was the Commander Escort Carrier Force, Pacific.*

NINE ESCORT CARRIERS *break formation in the Pacific to take up stations. Originally designed for escort ASW work in the North Atlantic, they were designated combatant ships in July 1943.*

NAVAL AVIATION NEWS

NEW DESIGNATIONS

HELICOPTER

H-2 (HU2K)

SEASPRITE

UH-2A . . . *(HU2K-1)*
UH-2B . . . *(HU2K-1U)*

H-3 (HSS-2)

SEA KING

SH-3A . . . *(HSS-2)*
VH-3A . . . *(HSS-2Z)*

H-13 (HTL/HUL)

TH-13L . . . *(HTL-4)*
TH-13M . . . *(HTL-6)*
TH-13N . . . *(HTL-7)*
UH-13P . . . *(HUL-1)*
HH-13Q . . . *(HUL-1G)*
UH-13R . . . *(HUL-1M)*

H-19 (HRS/HO4S)

CH-19E . . . *(HRS-3)*
UH-19F . . . *(HO4S-3)*
HH-19G . . . *(HO4S-3G)*

H-25 (HUP)

UH-25B . . . *(HUP-2)*
UH-25C . . . *(HUP-3)*

H-34 (HSS-1/HUS)

SEAHORSE

LH-34D . . . *(HUS-1L)*
SH-34G . . . *(HSS-1)*
UH-34D . . . *(HUS-1)*
VH-34D . . . *(HUS-1Z)*
UH-34E . . . *(HUS-1A)*
HH-34F . . . *(HUS-1G)*
SH-34H . . . *(HSS-1F)*
SH-34J . . . *(HSS-1N)*

H-1 (HU-1)

UH-1E . . . *(HU-1E)*

H-37 (HR2S)

CH-37C . . . *(HR2S-1)*

H-43 (HUK/HOK)

UH-43C . . . *(HUK-1)*
OH-43D . . . *(HOK-1)*

H-46 (HRB)

CH-46A . . . *(HRB-1)*

H-50 (DSN)

QH-50A . . . *(DSN-1)*
QH-50B . . . *(DSN-2)*
QH-50C . . . *(DSN-3)*

NOTES ON HELICOPTERS

All helicopters (under the new designation system) carry two letters in front of the number. In the interest of simplicity, however, only the H number is carried here (H-1, H-19, etc.). Not all helicopters carry popular names at present. New helicopters for Navy/Marine use have been designated as the H-51 and H-53. (See November 1962 Naval Aviation News, page 14.)

U. S. NAVAL AIRCRAFT

NAVAL AVIATION NEWS

PATROL

P-2 (P2V)

NEPTUNE

P-2D . . . (P2V-4)
P-2E . . . (P2V-5F)
DP-2E . . . (P2V-5FD)
EP-2E . . . (P2V-5FE)
SP-2E . . . (P2V-5FS)
P-2F . . . (P2V-6)
MP-2F . . . (P2V-6M)
TP-2F . . . (P2V-6T)
P-2G . . . (P2V-6F)
P-2H . . . (P2V-7)
SP-2H . . . (P2V-7S)
LP-2J . . . (P2V-7LP)

P-3A (P3V)

ORION

P-3A . . . (P3V-1)

P-5 (P5M)

P-5A . . . (P5M-1)
SP-5A . . . (P5M-1S)
TP-5A . . . (P5M-1T)
P-5B . . . (P5M-2)

MARLIN

SP-5B . . . (P5M-2S)

TRAINERS

T-1A (T2V-1)

SEASTAR

T-2 (T2J)

BUCKEYE

T-2A . . . (T2J-1)
T-2B . . . (T2J-2)

T-28 (Same)

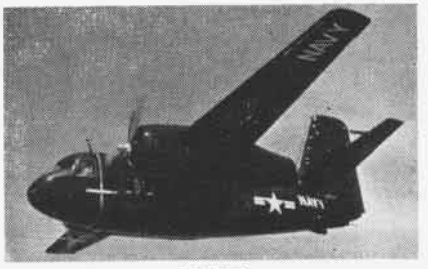
T-33 (TV-2)

T-34B (Same)

T-39D (T3J-1)

CARGO / TRANSPORT

C-1 (TF-1)



TRADER

C-117D (R4D-8)

SKYTRAIN

C-45 (SNB)

C-47 (R4D)

C-54 (R5D)

C-118 (R6D)

C-121 (R7V)

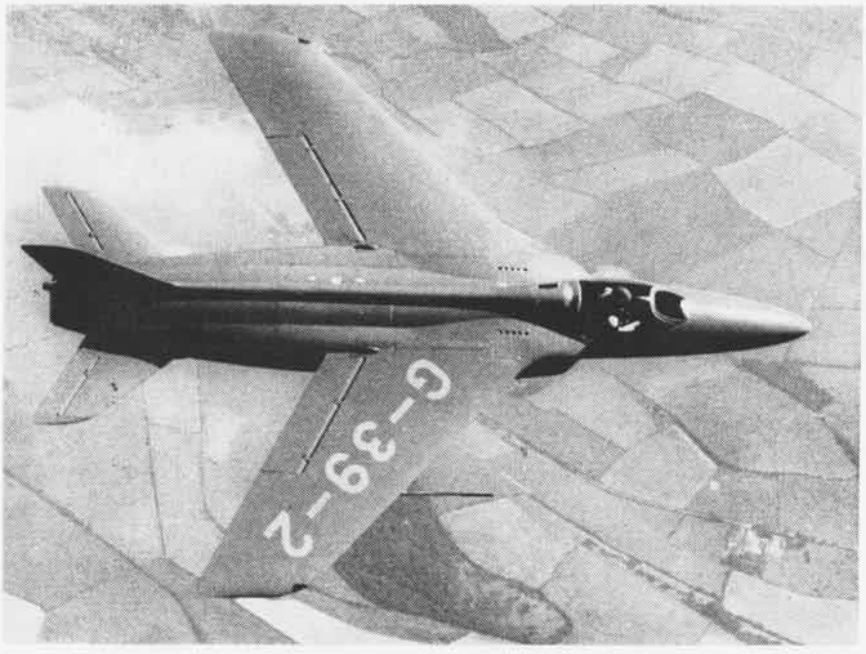
C-130 (GV-1)

C-131 (R4Y)

UTILITY

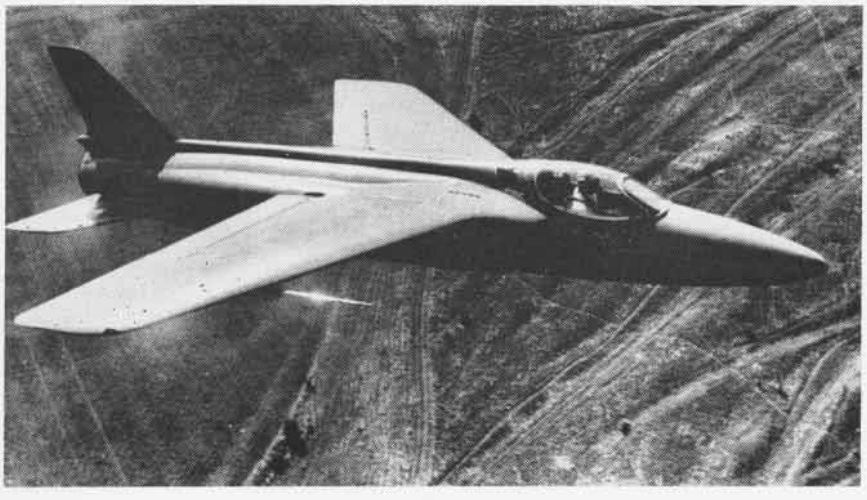
U-11A (UO-1)

U-16 (UF)



BRITISH JET TRAINER 'GNAT'

This lightweight turbojet fighter trainer is designed for either interceptor or ground attack duties. Its sweptback wings are mounted shoulder high on the fuselage. Single seat version is powered by a 4520-lb. thrust engine. The 'Gnat' trainer has a 24-foot span, a length of 31 feet. Manufactured by Folland, it has a maximum range of 700 nautical miles. India, Finland and Yugoslavia have purchased 'Gnats.'



VA-85 Uses 'Dugan Dolly'

Facilitates Handling of Fuel Tanks

DUGAN'S DOLLY ON CVA-59 DECK, CLOSE-UP

Robert Dugan, ADR1, of Attack Squadron 85 power plants division, has designed and manufactured a dolly cart. It is designed to reduce sharply the number of man-hours required for the handling of external fuel tanks. It is not limited to A-1H (AD-6) aircraft.

The dolly is used whenever external fuel tanks are dropped from aircraft for maintenance purposes. Basically, it consists of a movable frame, curved steel cradle arms and a hydraulic jack. The dolly is maneuvered underneath the fuel tank until the aft cradle arm touches the tank surface. The tank locking devices are then unlocked and the tank is lowered onto the dolly. The dolly will necessarily be tilted (forward end up) until the tank is lowered. The tank is then easily pushed away from the aircraft and the actual maintenance work is begun.

Since the hydraulic jack and basic structure of the dolly can withstand weights of better than a ton, external tanks, even when filled to capacity with fuel, can be lowered easily onto the dolly.

During a deployment aboard USS *Forrestal* (CVA-59), time studies were made within the squadron to determine the value of the dolly. For example, in handling an external tank discrepancy without the dolly, the total time for defueling the tank, unhanging it, working off the discrepancy and rehanging the tank required 4 hours, 15 minutes. Using the dolly, the same task required only 39 minutes since defueling the tank was not required.

Whereas without the dolly, six men were required to carry the tank, only three were needed with the dolly. In addition to reducing man hours, the safety factor is enhanced since personnel no longer have to lift heavy loads at the risk of possible injury. Still another value is that the dolly is easily maintained, needs only occasional lubrication and can be disassembled for transportation from a shore establishment to ship facilities. It weighs approximately 85 pounds.

Early Navy Pilot Retires

Had 41 Years Government Service

SULLIVAN KNEW PLANES 'WAY BACK WHEN'

A man who was a pioneer during the building of Naval Aviation retired recently at NAS JACKSONVILLE after 41 years of government service.

He is Leo "Sully" Sullivan of Green Cove Springs, Fla., who for the past 14 years has been an aviation motor mechanic in the power plant division of the station's O&R Department.

Now aged 70, Sully, as he is popularly known, first ventured skyward when he was 17 in 1909. As a member of a carnival company in Oklahoma, he would thrill the crowds through the combination of riding a trapeze bar on a hot-air balloon at the height of between two and three-thousand feet, then cut himself loose and drift back to earth on a parachute made of linen type cloth.

Sully obtained Airman Certificate No. 67, dated January 18, 1917. His naval career from 1920 to 1929 was varied. He was designated Naval Aviation Pilot No. 30, dated October 7, 1920, and on February 21, 1923 became the 16th NAP to qualify as a ship plane pilot. His Free Air and Kite Balloon Airman Certificate is #69.

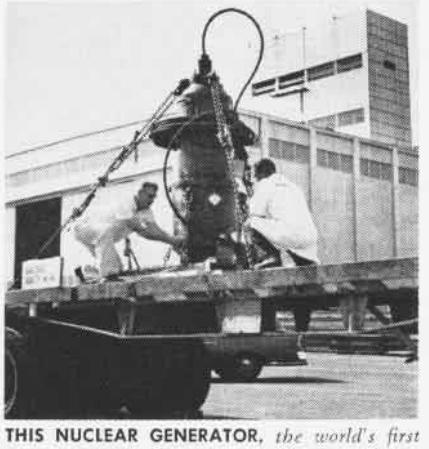
In addition, he holds two commercial licenses—Transport License No. 2816 and Mechanic License No. 2974—and has two FAI licenses, both signed by Orville Wright.

He has flown a variety of aircraft, including monoplanes, biplanes, triplanes, sea and land planes—F5L's, HS2's and N-9's, for example.

In the mid-Thirties, he worked for the Army in connection with the establishment of the U.S. air mail service.

He had just lined up a job with the British government to fly bombers from this country to England as WW II was brewing when he was recalled into the Navy in 1940. It was then he went to Jacksonville and was instrumental in placing in commission the Lee Auxiliary Landing Field near Green Cove Springs.

With a shipmate of the Twenties, Bob Castor of Louisville, Ky., he plans to board a tramp steamer to visit a few ports they missed "way back when."



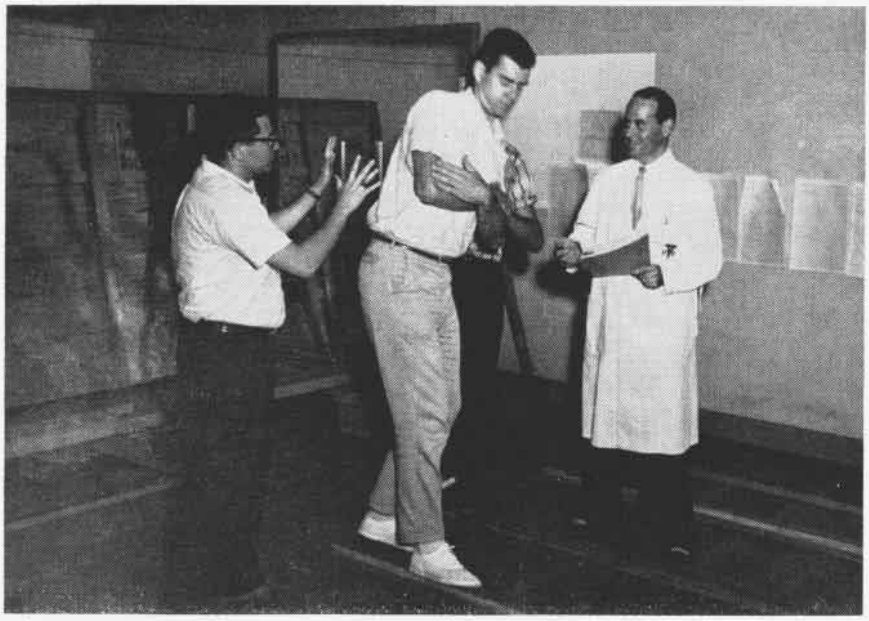
THIS NUCLEAR GENERATOR, *the world's first ocean-bottom atomic power source, has been placed in about 2500 fathoms of water 700 miles east of Jacksonville, Fla. It powers a U.S. Navy underwater navigational beacon.*

Silver Star Medal Given

1951 Korean Action is Recognized

Maj. William J. Longfellow, USMC, was presented the Silver Star Medal last October, by RAdm. M. H. Tuttle, Chief of Naval Air Basic Training, in ceremonies at NAAS WHITING FIELD. RAdm. Tuttle read a citation signed by SecNav, for the President, which described a hazardous flight flown by Maj. (then Capt.) Longfellow in the Korean conflict. At that time, he served with Marine Fighter Squadron 214; he is now assigned to Training Squadron Six.

SCIENTISTS PROBE SENSE OF BALANCE



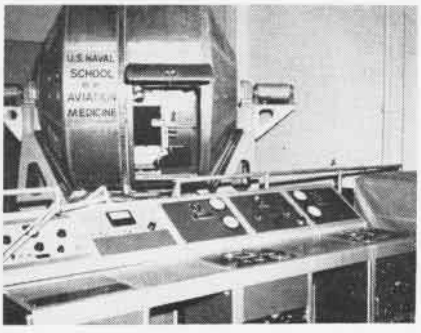
A DEAF STUDENT, EYES CLOSED, TRIES TO WALK NARROW RAIL. DR. A. R. FREGLY GETS DATA

By R. E. Oliver, JO2

How would you like to try your hand at weightlessness? It might be fun, but research scientists at the Naval School of Aviation Medicine in Pensacola, Fla., say it can be an ordeal. Weightlessness is one of the major unsolved problems of space.

One difficulty in studying the problem is that it cannot be duplicated in a laboratory. The only method so far is to perform an arcing maneuver with an aircraft. At the top of the arc, the plane and its contents are weightless, briefly. Neither this method nor orbital flight thus far provides time to study the problem in detail.

To give man's sense of balance an intense probing, scientists have set about trying to confuse the subject's sense of balance, to disorient him so that he is confused about where he is and what direction is up. They induce motion sickness by spinning or tumbling under unusual conditions.



DISORIENTATION DEVICE TURNS, UNIT SPINS

Oldest of the disorientation devices is the slow rotation room, actually a small plywood house built onto what was formerly the school's centrifuge. The room has no windows, so that the subject inside cannot tell his position, speed or movement by looking at objects outside the room. The eyes tell the subject he is not moving, since he is not moving in relation to the inside walls. The sense of balance is not so easily deluded; the resulting conflict between the senses is a factor in the sickness that frequently results.

Early in the history of the rotating room, it was found that men and women who worked in and around it were adjusting to the motion. They could withstand higher speeds for longer times than strangers to the room's rotation.

Squirrel monkeys also learned to adapt to the motion. Although quite active when free, they became motionless inside the room, because the organs of balance do not function unless the position of the head is changed. Three Navy enlisted volunteers and an aviation psychologist spent two weeks inside the room without harmful effects. A slight sickness at the end of the second day did not recur the rest of the time. This experiment was conducted with an eye toward the manned stations of the future.

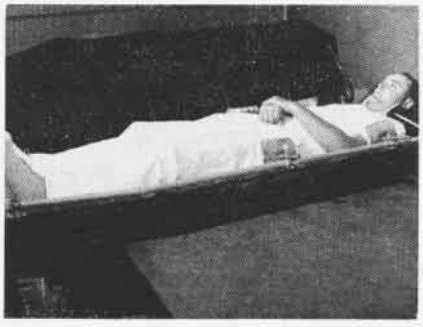
The present slow rotation room is inadequate, so a new device is being built. It will be larger and better equipped than the present one.

Most formidable of the research tools is the human disorientation device which resembles a huge cement mixer. It spins in both horizontal and vertical planes of rotation at speeds up to 60 rpm. The subject inside is strapped to a chair; his condition is monitored by electronic leads and a small TV set.

Few men can withstand this sort of tumbling, but eight men from Gallaudet College, Washington, D.C., are among them. All have deafness caused by damage to the inner ear. They have little or no sense of balance since the organs of balance are contained in the inner ear. In spinning and rotating situations, they are unaffected. It has also been found that even a slightly impaired sense of balance in a subject greatly increases his tolerance for such situations. Comparison with the normal sense of balance provides much information on how our sense of balance works.

Once this has been discovered, scientists will have come a long way toward solving one of the major problems of space medicine for today's programs.

The eight students from Gallaudet went down to Pensacola during their vacation in the summer of 1962, and will probably be called upon again.



RESEARCH SUBJECT READY FOR 'SWINGING'

VR-3 Reports its Progress

Gains Fame as 'Airlift' Squadron

Capt. David C. Carmichael, Commanding Officer of Naval Air Transport Squadron Three, has announced the completion of VR-3's most productive 12 months of flight operations to and from Rhein Main, Germany.

The announcement was made upon the occasion of VR-3's celebration of its fifth anniversary at McGuire.

Since August 1961, VR-3 has flown 245 flights to Germany, airlifting 875,000 pounds of cargo, transporting 2150 passengers, traveling over 1,152,000 miles in slightly over 7840 hours.

The Germany schedule is only a portion of VR-3's overall flight operations each year. Other navy-manned flights, emanating from the Atlantic Naval Air Transport Wing Headquarters at McGuire, touch down at air bases all over the world.

VR-3 moved its headquarters to McGuire in 1957 from Moffett Field, Calif. During its 20 years of commissioned service, VR-3 has also been stationed at Olathe, Kansas and Patuxent River, Md. The Navy squadron is a veteran of the 1948 Berlin Airlift, Korean conflict and the 1958 Chilean earthquake airlift.

This 90% availability is not an exception, as the squadron availability has not fallen below 80% since January 1962 when it was 79%.

AVIATORS AND ASTRONAUT HONORED

On October 24, the third day of the National Aeronautic Associations three-day convention and the 40th Anniversary Meeting, 28 men and one woman received documentation and recognition at the Honors Luncheon "for making America first in the air in 1962."

Through their efforts, the United States took a commanding lead over all other nations in the total number of international air and space records, with 227, after trailing the USSR, 219-140, at the beginning of the year.

Leading the procession were rocket plane pilots Maj. Bob White and Joe Walker, balloonist Donald Piccard, and Jacqueline Cochran, who set 69 distance and speed records during a single flight.

The world straight-line distance record and eight point-to-point marks were established by Maj. Clyde B. Evely, USAF, in a B-52 on Jan. 10-11.

Airlines added 29 speed records to the list, with American Airlines setting 22, including trancontinental commercial speed, and Delta Airlines setting seven.

The first two American space orbit records were established during the year by Astronaut John Glenn.

Time-to-climb records were attacked first by Maj. Walter Daniel, USAF, in a Northrop T-38, then by a team of Navy and Marine pilots in a McDonnell F-4B *Phantom II*.

Ten pilots from the U.S. Navy, Marine Corps and Coast Guard were honored.

In the McDonnell F-4B *Phantom II* (F4H), these were the record holders and their records:

Cdr. David M. Longton, USN
Climb to 6,000 meters: 48.7 sec; Feb. 21

LCdr. John W. Young, USN
Climb to 3,000 meters: 34.5 sec; Feb. 21
Climb to 12,000 " : 1:17.1; Mar. 1
Climb to 25,000 " : 3:50.4; Apr. 3

LCol. William C. McGraw Jr., USMC
Climb to 9,000 meters: 1:01.6; Mar. 3

LCdr. D. W. Nordberg, USN
Climb to 15,000 meters: 1:54.5; Mar. 3
Climb to 30,000 " : 6:11.4; Apr. 12

Cdr. F. Taylor Brown, USN
Climb to 20,000 meters: 2:58.5; Mar. 31

Records made in the Grumman UF-2G *Albatross*, Class C-3 amphibians, were made as follows:

Cdr. Wallace C. Dahlgren, USCG
Speed over 1,000 km closed circuit with 1,000 and 2,000 kg payloads: 231.9 mph; August 13

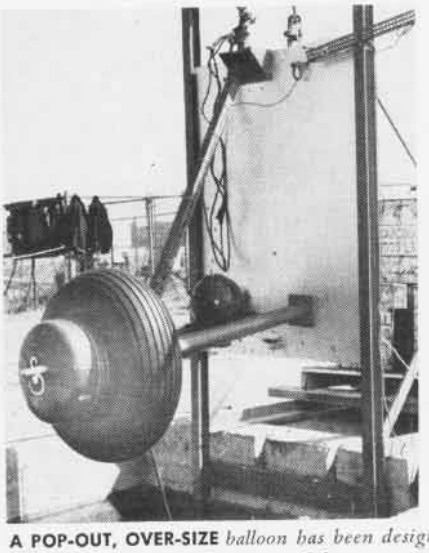
LCdr. Donald E. Moore, USN
Altitude with 1,000 kg payload: 29,460 feet; September 11

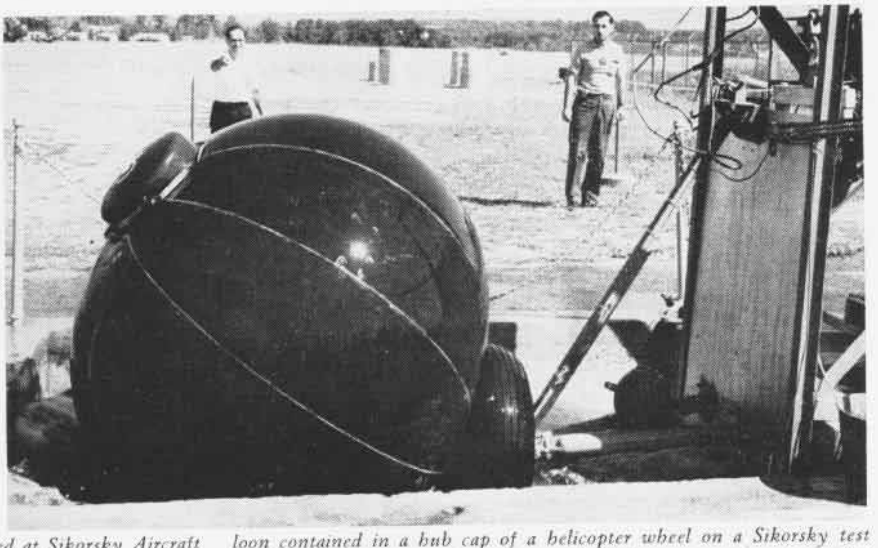
LCdr. Fred A. W. Franke, Jr., USN
Altitude with 2,000 kg payload: 27,380 feet; September 11

LCdr. R. A. Hoffman, USN
Speed over 5,000 km closed circuit with 1,000 kg payload: 151.39 mph; September 16

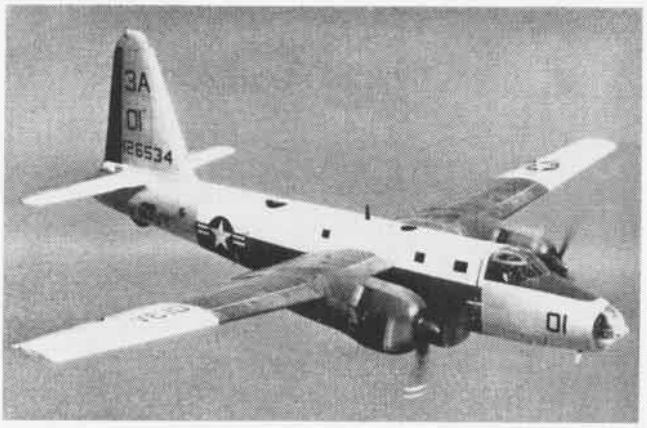
In NASA's *Mercury* space capsule, LCol. John H. Glenn, Jr., USMC, made two records:

National distance with earth orbit: 81,899.66 miles
National duration with earth orbit: 4:55:23

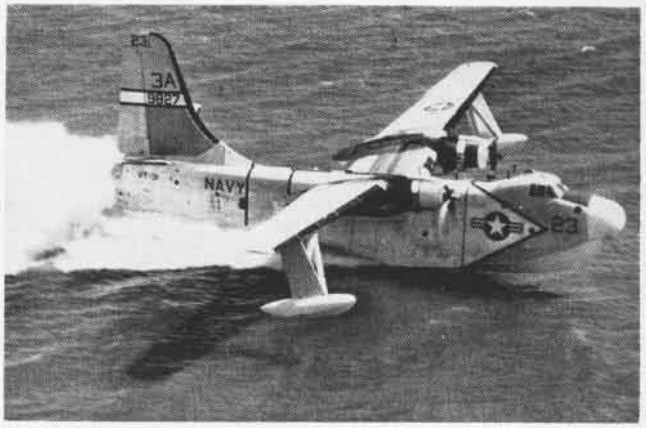




A POP-OUT, OVER-SIZE *balloon has been designed at Sikorsky Aircraft to save lives and helicopters. Salt water triggers a gas generator, and a rubber float, five and one-half feet in diameter, explodes from the hub of a helicopter wheel. The device is known as "automatic emergency floating gear." The picture (left) shows the pop-out balloon contained in a hub cap of a helicopter wheel on a Sikorsky test stand. The balloon explodes from the hub cap as submarine valve hits salt water. Picture above shows balloon in two-second period between valve submersion and inflation. R. G. Brouillette and P. J. Labrecque, Sikorsky engineers, spent 18 months in developing device.*



STUDENTS TRAIN IN ONE OF VT-31'S P-2 LOCKHEED NEPTUNES



A P-5 MARLIN TOUCHES DOWN ON BAY AT CORPUS CHRISTI

VT-31 SAFETY RECORD HITS 50,000

On September 4, 1962, Training Squadron 31, NAS Corpus Christi, flew its 50,000th accident-free flight hour. This time was accumulated while the squadron was engaged in its primary mission, that of training student Naval Aviators in multi-engine patrol type aircraft.

The squadron's present unblemished safety record dates back to June 25, 1959. At that time the squadron (then ATU-601) was flying an old Navy reliable, the *Beechcraft*. ATU-601's primary mission was instructing student Naval Aviators in the art of instrument flying. This continued until May of 1960 when the Training Units were commissioned as squadrons. ATU-601 became VT-31 and with the change in designation, a change in primary mission.

VT-31 is now the end of the pipeline for students destined to fly multi-engine aircraft in the Fleet. Instruction is given in the P-2 *Neptune* (P2V) landplane and the P-5 *Marlin* (P5M) seaplane. Students are normally attached to the squadron for a period of five weeks to complete the required ground school and flight syllabus. The 40-hour flight syllabus consists of familiarization (day and night landings), radio instruments (day and night) and airways procedures.

Coupled with the flight syllabus are a series of flight procedures lectures, designed to acquaint the student thoroughly with the various systems and flight characteristics of the type of aircraft he will fly. Upon completion of his multi-engine training in VT-31, the student receives his Navy Wings of Gold and is ordered to an operational fleet squadron flying the same type aircraft.

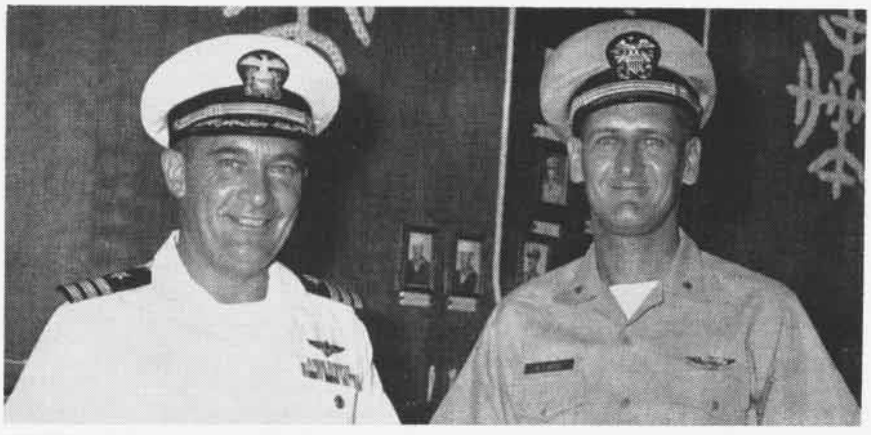
The safety record represents hard work and a fine team effort. Standardization and safe operating procedures dominate the squadron's vigorous and active safety program. This, coupled with an all-hands participation, makes the program effective. Each student class that reports aboard submits a poster denoting some phase of aviation safety. Not only have many good ideas resulted from this practice, but it gives the students a chance to take an active part in the program. The extremely capable flight crew renders assistance to the instructors and students while training flights are being conducted.

Each department in the squadron has its own responsibility. Their close cooperation and understanding of each other's problems enables the squadron to realize its goal—producing the finest multi-engine pilots possible.

The "can do" spirit in VT-31 is pointed up by the fact that during the present unbroken chain of safe flight hours, the squadron was the proud recipient of two consecutive Chief of Naval Operations Aviation Safety Awards (FY 60 and FY 61).

Cdr. William H. Patterson is skipper of Training Squadron 31; and LCdr. K. L. Geitz is aviation safety officer.

The Naval Air Training Command had a 24 per cent reduction in accident rate in FY62. In plain language this is most easily translated as 17 less accidents than the previous year in spite of an increase of 40,000 flight hours in student training flights flown by the training squadrons.



PLEASED WITH SAFETY RECORD ARE CDR. PATTERSON; LCDR. GEITZ, AVIATION SAFETY OFFICER

NAVY MEMPHIS HAS 'WHAT IT TAKES'

MEN OF ALL PAY GRADES at NAS MEMPHIS nudged one another in congratulations in early October, saying, "We're doing pretty good!" MGen. Derrill M. Daniel, commanding the provisional Army headquarters set up at the naval air station, agreed with them. At the time of crisis, the Bluejackets were steaming on all boilers to provide support for khaki-clad Army men being staged through to Oxford, home of the University of Mississippi.

President Kennedy had ordered Army troops, many of them flown into Memphis by Air Force pilots, then air-lifted south 90 miles in Marine Corps and Army helicopters, to Oxford to keep order.

Although "Navy Memphis" is an eight-command complex, the bulk of the credit goes to the men and women of the air station complement under Capt. John J. Munson, USN. Cooks, bakers, drivers, plane handlers, mechs, yeomen, storekeepers, gas pumpers, among others, did their assigned jobs in a way that brought praise from Army.

Navy Memphis' total "population" was nearly doubled with some 10,000 men added to the 13,000 already stationed there. Operations steered over 400 aircraft to safe landings without a mishap. The planes ranged from giant *Hercules* transports to putt-putting spotting planes.

The Federal Aviation Agency's control center, Memphis, "handed over" each of these planes to Navy GCA men and tower operators who brought them in two and three minutes apart during the peak load October 1. GCA men picked them up when the planes were still 50 miles out and had as many as seven on their scopes at a time.

Officers and men at the NAS flight line then worked out a three-ring circus to keep things moving. A *Hercules* would land, loaded with troops, their arms, supplies and light vehicles. It would leave the runway and circle to its left into a taxi area, unload troops, and move out for take-off in a few minutes. That completed one ring and touched on another, made of busses and "elephant train" trailers manned by Navy drivers. These rolled up to the disembarking point, picked up loads of troops and ferried them to other points where Army helicopters, Marine helicopters and *Caribou* transport planes loaded them aboard. Vehicles completed the second ring by circling back for more arrivals.

The third ring was completed when the lighter aircraft lifted personnel to the Oxford aircraft and came back for more.

No plane got a wave-off, nor did one have to repeat its approach. On the ground, NAS maintenance men checked over aircraft and topped them off with fuel. Gas trucks to handle this heavy overload were borrowed from a local Air Force unit and manned by U.S. Navy men.

Other men distinguished themselves in the Army's eyes by keeping trucks, trailers and jeeps fueled up for the final move to Oxford. Still other men, hundreds of yards from the main scene of action, saw that bedding was issued to those who needed it.

On September 30 when 6200 soldiers passed through the Sunday brunch line, they were fed by a crew that had already served up Navy chow to troops arriving through the night.

The Supply Department met the challenge, even coming through with C rations on request. This food item, not often seen in the Navy, was obtained from the Memphis Army General Depot during the emergency.

The Transportation Department probably set a record other naval activities may never surpass in peacetime, filling Army and Navy vehicles with over 7000 gallons of gasoline in three days. Drivers logged mileage they would not have believed possible, ferrying thousands of troops to chow while still performing routine scheduled runs.

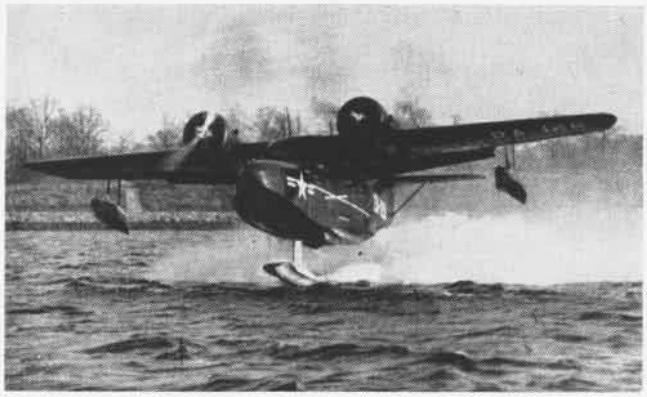
NAS Security had a big load thrust upon it with all watches doubled to insure full security of the station. In addition, close liaison was maintained with troops arriving overland. They were met while outside the Millington city limits and brought to NAS MEMPHIS by the shortest route.

Troops were also escorted from the station to the Mississippi border, just south of Memphis. On three occasions, the gray Navy trucks, their red, revolving roof lamps aglow, led high-speed Army convoys all the way to Oxford at 45 miles per hour.

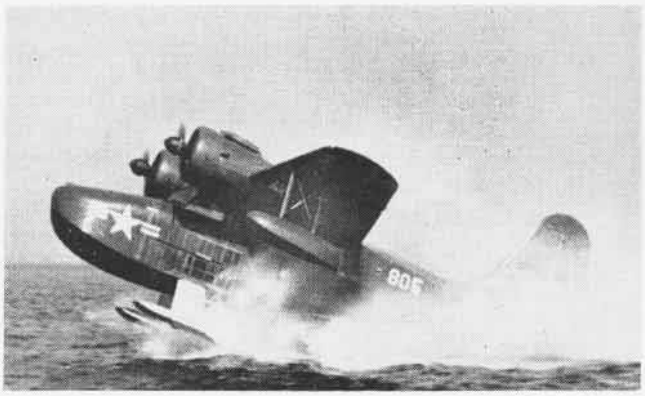
From the command headquarters of the Army came the supreme compliment, recognition of one's peers. Gen. Daniel said that it was "only through . . . the whole-hearted assistance of NAS personnel at all echelons that the sudden, yet enormous, logistical demands . . . have been met."

THE FIRST *active duty Naval Aviator to fly the Bell X-14A aircraft is LCdr. James R. Williford who received his familiarization training at NASA's Ames Research Center, Moffett Field. He is connected with V/STOL branch of Flight Test Division at NATC Patuxent River. The X-14A, a low-winged, jet-propelled aircraft, derives its vertical lift from two G.E. J-85 engines. A cascade diverter, mounted at the engine exhaust pipe exit, enables the pilot to direct thrust vertically for hovering flight, horizontally for conventional flight, or at an intermediate angle for transition. LCdr. Williford flew ten missions. His hovering flights included turning over a fixed spot and flying forward and rearward between 2500 and 3000 feet.*

NAVY'S HYDROFOIL RESEARCH SEAPLANE



RUN OF THE SINGLE HYDRO-SKI JRF SEAPLANE WITH WHEELS REMOVED



TWIN HYDRO-SKI SEAPLANE WITH INTEGRAL BEACHING GEAR IN SKIS

By Eugene H. Handler, BuWeps

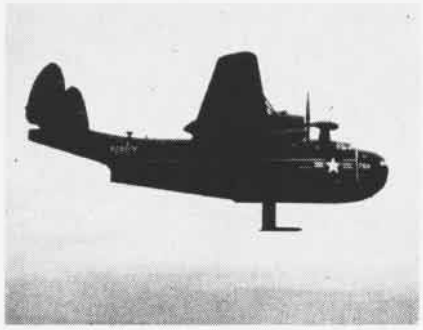
THE U.S. NAVY has operated seaplanes for over half a century, using them for every conceivable mission and purpose, yet it is still conducting research and development studies to provide a flying boat capable of operating routinely from the open ocean. Numerous modified aircraft have been used as test beds for the evaluation of various concepts considered desirable for incorporation into production aircraft. The JRF *Goose* was first fitted with a single hydro-ski and later with twin skis, while the reverse pattern was followed with the twin-ski XF2Y-1 *Sea Dart*, later converted to carry a single ski.

The PBM-5 research seaplane was probably the most successful and impressive of all the hydro-ski aircraft, easily operating in 3-6-foot waves after having been fitted with a ski only 9⅓ feet long and 2½ feet wide (an area about the same as the top of a standard office desk). The pilot took off and landed directly into the wind without concern for the wave pattern. The highly loaded hydro-ski was conclusively shown to provide open-ocean capabilities under normal circumstances.

Since the magnitudes of impacts by waves is roughly proportional to the *square* of the aircraft ground speed, the reduction of takeoff and landing speeds by aerodynamic means seemed an ideal solution. The amphibious "Seacopter" (HUP-2) represented one approach to the problem; its success is evidenced by the many hull type amphibious helicopters in service now. Short takeoff and landing (STOL) aircraft with boundary layer control, such as the proposed Convair ASW seaplane; deflected slip-stream system; double slotted flaps; and other aerodynamic devices have been considered, and their advantages and disadvantages weighed and compared with more conventional aircraft fitted with hydro-skis, or long slender, high deadrise hulls, as on the P6M *Sea Master*.

On the basis of these studies, efforts were continued to improve the capabilities of conventional seaplanes by concentrating upon the development of hydrofoil gear comparable or superior in open ocean if possible to the hydro-skis previously discussed. Aircraft hydrofoils must be far simpler and lighter than boat foils, be easily retractable, have stability characteristics compatible with the takeoff and landing behavior of the aircraft, and weigh as little or less than the ski systems already developed.

Many of the small fighters with conventional landing gear carried aboard ship during WW I were fitted with primitive hydrofoils to assist the pilot in making the ditching which marked the end of each flight. The foils reduced discomfort to the pilot and damage to his machine. Occasionally they permitted an airplane to be flown several times before being smashed beyond repair. The generally satisfactory performance of flying boats after WW I discouraged extensive experimentation, and it was not until the numerous hydrofoil craft of the Fifties appeared that interest in hydrofoil seaplanes revived. The development of "supercavitating" hydrofoils provided the stability necessary for safe takeoffs and landings.



SUCCESSFUL HYDRO-SKI SEAPLANE, '55 TO '61

These foils essentially plane below the surface much as a ski planes on the surface, since the foil's upper surface is covered by an air or water vapor bubble or "cavity." They are excellent for high speed operation because of their consistent lift and stability characteristics, independent of depth of immersion. The Edo Corporation, College Point, Long Island, was requested by BUWEPS to design, build, and install a "Grunberg" supercavitating hydrofoil system on a venerable JRF-5 given to the Navy by the Coast Guard. This system, developed for surface craft and ideal for research, combines a single foil aft and below the boat center of gravity with two bow skis carrying a small percentage of the total weight to guide the boat over large waves. The skis will perform the same function on the seaplane during takeoff as well as serve as safety devices at high speed by preventing the airplane from diving should the foil be damaged.

The supercavitating foil, the largest in the world, is a machinist's nightmare. It has 25° dihedral, inverse taper (11.25 inch chord at the center line; 22.5 inch chord at the tips) and spans 5 feet. Small ribs run along the lower surface and are carefully located to minimize leading edge flutter and consequent fatigue damage. The twin struts supporting the foil, wedge-shaped rather than streamlined, are intended to lead air down to the foil, thereby increasing the size and stability of the cavity covering the foil's upper surface. The bow skis, about four feet long and one foot wide, mounted on heavy struts, can be raised ahead of the seaplane for runway and beaching operations. If a production hydrofoil seaplane is ever built, it very definitely will *not* have bow skis, but rather the foil will be located somewhat ahead of the center of gravity.

It cannot be said that the first tests were a howling success, bringing smiles of pride and satisfaction to the pale and haggard scientists, as so often is the case in fiction. Rather, the first tests were an unpleasant shock. The spray thrown up by the bow skis was so heavy the films show a huge mound of foam and spray mysteriously moving down Flushing Bay, with only an occasional glimpse of the airplane to reassure the shocked observers that it had not yet been completely swamped. After the JRF was brought ashore, the cockpit drained and the pilot dried, the angle of attack of the bow skis was decreased by five degrees. From then on tests progressed to speeds at which the airplane became foilborne with the hull clear of the water.

About this time the pilots discovered they had another problem: The hydrofoil JRF was designed to trim to a level

'SEACOPTER' INSTRUMENTED FOR RESEARCH

or slightly nose-down attitude during takeoff, and as all good seaplane pilots know full well, a seaplane, especially a JRF, with an urge to drop its bow is a dangerous device. So, whenever the foil JRF trimmed down as it rose upon the foil, the pilot instinctively chopped power. After several such episodes, all hands agreed that the airplane was really supposed to behave that way, and the tests were resumed in cautious fashion.

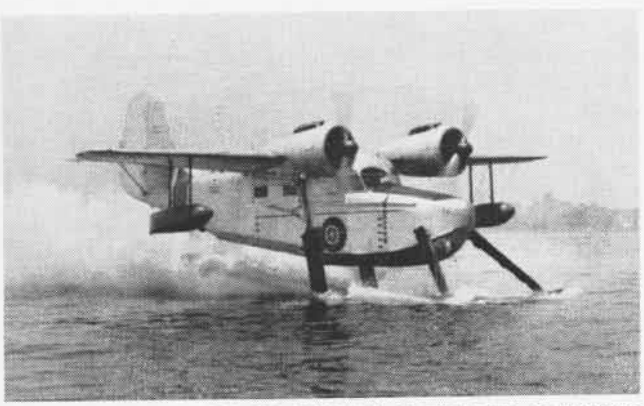
The first takeoffs and landings were made in early July 1962. The conventional nose-high landing resulted in skipping because of the foil's high lift capabilities. It was necessary to touch down at low trim, as intended by the designers, to make a smooth and skipless landing.

After the pilots had passed the "trim barrier" and acquired confidence in the aircraft, techniques were developed to improve the airplane's takeoff characteristics. The nose-down tendencies could be somewhat reduced by operating with retracted flaps until a speed of 50-60 knots was reached and effective aerodynamic control had been established. In direct contrast, landings were improved and skipping reduced by use of full flaps and a forward stick position to lower the trim attitude after contact to give decreased foil lift and increased ski drag to shorten the run-out.

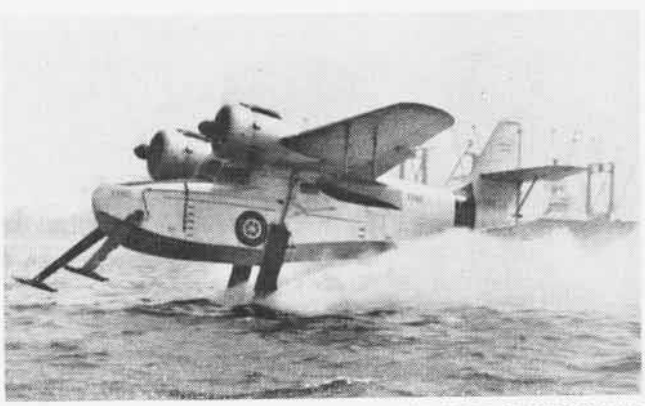
During the calm water tests, it was obvious that the bow skis and struts were causing excessive drag and spray —the hydro-ski JRF's could take off in less time and distance. Careful analysis of recent hydro-ski research has shown that the bow skis can be substantially reduced in size and weight yet still retain the necessary safety features. It is planned to modify the bow struts to form a vee beneath the airplane with a single ski mounted at the apex. If this ski is correctly designed and located, most of the spray will be dissipated against the hull bottom rather than striking the propellers, wing and windshield. During the high speed portion of the takeoff run when the skis are clear of the water, the behavior of the seaplane will be unchanged by these modifications, so that the basic hydrofoil research program will not be interrupted or delayed.

Other foil systems for the durable JRF have been proposed and compared by model tests. A simple rectangular foil with a thin wedge section which can be easily and inexpensively manufactured is being considered.

The foil JRF has been extensively instrumented to provide motion and structural information during the sheltered and rough water test programs scheduled at Edo Corporation and at the Naval Air Test Center. Various alternate foils will be installed and evaluated. The ultimate purpose of the program is the development of a seaplane "landing gear" adaptable to future water-based aircraft, enabling them to more satisfactorily perform Navy missions involving sea operations.

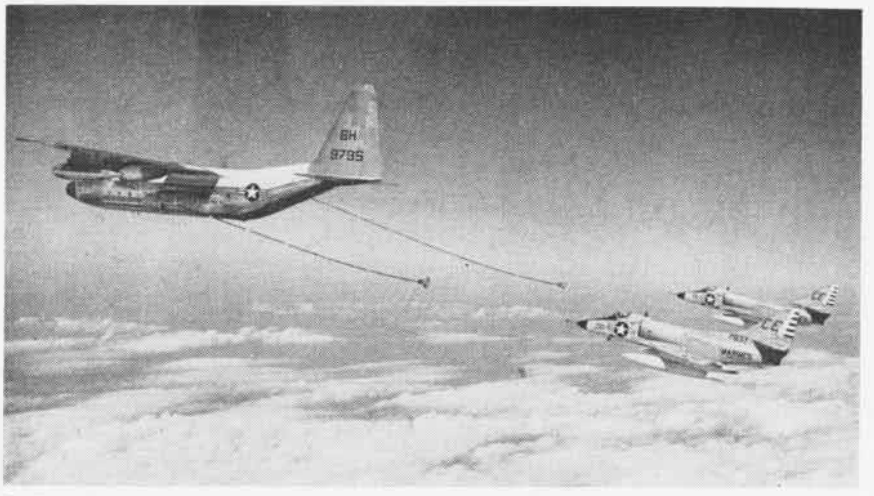


HYDROFOIL JRF RIDES ON THE BOW SKIS AS FOIL RISES TO SURFACE



NEAR TAKEOFF SPEED, PILOT LIFTS BOW SKIS CLEAR OF THE WATER

MARINES MAKE TRANS-ATLANTIC FLIGHT



TWO SKYHAWK JETS GET IN POSITION TO HOOK UP TO VMGR-252 HERCULES AERIAL TANKER

WHILE THIS was the first time a Marine Corps attack squadron had ever made a trans-Atlantic deployment, the entire operation went as smoothly as if we had been doing this for years."

With these words, LCol. Edwin A. Harper, commanding officer of Marine Attack Squadron 225, Cherry Point, N.C., summed up the squadron's historic flight from Bermuda to Rota, Spain, and return.

VMA-255 landed at Cherry Point on October 17 to terminate the Corps' "first" which began on October 8 when 16 of the squadron's *Skyhawk* jets departed for Kindley AFB, Bermuda, taking off from there early the next day for the almost 3000-mile flight to Naval Station, Rota.

With the exception of one plane being forced to return to Bermuda owing to mechanical difficulty, the Kindley AFB-to-Spain leg of the flight was made according to plan. Two in-flight refueling operations, using KC-130F *Hercules* (GV-1) aircraft from Cherry Point's Marine Aerial Refueler/Transport Squadron 252, were conducted en route.

VMA-225 PILOTS CHART ATLANTIC COURSE

LCol. Walter L. Redmond, C.O., of VMGR-252, described his unit's operations in the flight as "a piece of cake with no serious hitches developing." He attributed this to two factors: "The refueler squadron's professional approach to the job and ability to quickly react to unforeseen circumstances, and, the ease with which VMA-225 responded to any and all situations."

Landing at NS ROTA during the afternoon of October 9, VMA-225 remained for four days, departing on the morning of the 14th for Lajes Field in the Azores.

The squadron was scheduled to leave Lajes the following day, but unfavorable weather conditions caused a 24-hour delay. Departing on the 16th, the flight began the non-stop trip to Bermuda, again refueling twice in flight before touching down at Kindley some seven hours later for an overnight stop.

When the squadron returned, led by Col. Jack E. Conger, skipper of Marine Aircraft Group 14, who accompanied the flight and Col. Harper, they were met by their families and military dignitaries, headed by MGen. Richard C. Mangrum, C.G., MAW-2, BGen. Paul P. Fontana, C.G., MCAS CHERRY POINT, and BGen. John P. Coursey, assistant wing commander of Marine Air Wing Two.

Shown below in last minute preparation for the first attempt to deploy one of its single-engine jet squadrons from Bermuda to Rota are from left: Col. Harper, Capt. John A. Jennings, Jr., 1st Lt. Arthur L. Clark, 1st Lt. Dan Kaljian, 1st Lt. James R. Foster, Capt. John E. Carroll and Col. Conger.

MSgt. Logs 1000 Hours

Hercules Flight Engineer Honored

MSgt. Richard D. Gonsalves, USMC, flight engineer in VMGR-352, was honored as the first enlisted man in the Marine Corps to complete more than 1000 hours of flight time in the KC-130F *Hercules* (GV-1) in-flight refueler.

John Clarke, Lockheed Aircraft Corp., technical representative, and Col. Dean Hartley, commanding VMGR-352, presented the sergeant with an engraved plaque, a silver lapel pin in the shape of an hourglass, and a certificate of completion from Lockheed.

MSgt. Gonsalves is the second man in the Marine Corps to receive the honor, according to the MCAS EL TORO *Flight Jacket*. The first plaque was awarded Col. R. O. White of the 1st MAW, Iwakuni, Japan. Only one other enlisted man in the military has received it, a USAF master sergeant.

Marines Get Merit Awards

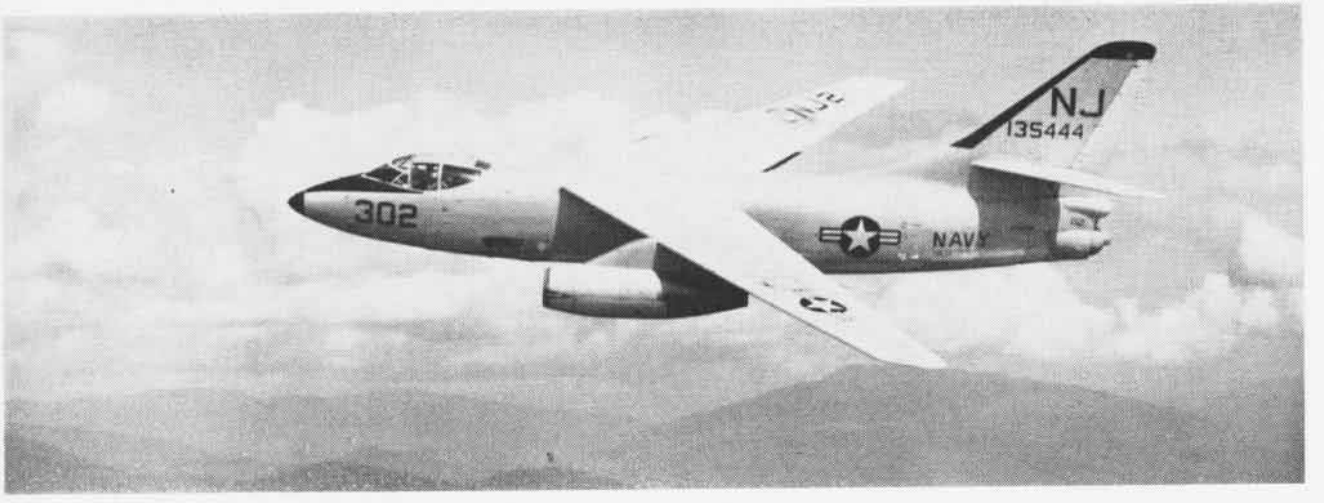
Mayor Cites Search & Rescue Team

Honolulu's Mayor Neal S. Blaisdell cited the heroic performances of the Kaneohe Bay Marine Corps Air Station Search and Rescue Team on October 1, by presenting special citations to Marine helicopter pilots and crewmen.

Captains Francis W. Farnsworth, Robert W. Hofstetter and Joseph F. Golden received special Awards of Merit signed by the Mayor. SSgt. John W. Sitton, Sgts. Acie Bone and Daniel R. Banks, and LCpls. Gary J. Piovesan and Richard T. Moss were presented with personal letters of commendation.

In at least three instances the helicopter pilots maneuvered their helos into dangerous situations to rescue stranded hikers and other persons in distress; they never hesitate to respond to a call.

Mayor Blaisdell praised the Marines for performing rescue missions to save both military personnel and civilians from possible injury or death.



VAH-123 WINS WHIDBEY BOMBING DERBY

VAH-123, COMPETING with Heavy Attack Squadrons 6, 2, 10 and 4, won first place in the annual Bombing Derby sponsored by Commander Fleet Air, Whidbey, Washington.

Under simulated combat conditions, the derby is held for the purpose of increasing the fighting capabilities of A-3 *Skywarrior* (A3D) squadrons at NAS WHIDBEY ISLAND.

Classed in three events, the derby called for many phases of heavy attack training. Each squadron was allowed the participation of three A-3's (A3D's) and a back-up *Skywarrior*. With 15 aircraft and crews competing, the planes were assigned ten-minute take-off intervals. During the derby, only one back-up aircraft was needed.

Event I included celestial navigation over water and high altitude radar bomb scoring on two complexes at Boise, Idaho, and Spokane, Wash.

By B. S. Whitehead, JO2

Event II consisted of a loading drill to test aviation ordnancemen in their speed, efficiency, skill and safe mounting accuracy in arming the modern A-3 (A3D).

In Event III, the crews made low-level, overland, navigational flights and two bomb drops at Fallon, Nev., and Boardman, Ore.

While VAH-123 came out on top of the five participating squadrons, VAH-4 received top honors in Event II for their speedy, safety-conscious aviation ordnancemen and loading officers.

In Event III, VAH-10 "retired the side" with their bombardiers striking hard to edge out the other four squadrons.

Each squadron, in a sense, was a winner in that no squadron led by an excessive number of points. The squadrons' place listings were as follows: (1) VAH-123, (2) VAH-6, (3) VAH-3, (4) VAH-10, and (5) VAH-4.

VAH-6 won the top crew award, which included VAH-6's C.O., Cdr. R. L. Kopps, pilot, with over 1097 hours in an A-3 (A3D) and over 6000 hours total flight time; G. R. Brister, AQC, bombardier/navigator with over 1500 hours in an A-3 (A3D); and W. G. Allison, AOC, third crewman with over 400 hours.

VAH-123 won the second crew place. Cdr. C. F. Fitton, pilot and C.O. of VAH-123; Lt. H. N. Herzog, bombardier/navigator; and Ens. F. J. Parris, third crewman. Third place was taken by another VAH-123 crew: LCdr. J. G. Priest was pilot, Lt. L. R. Salo, bombardier/navigator; and C. R. Gotcher, AQ1, third crewman.

HEAVY ATTACK *Squadron 123 crews who participated in the Derby, were over-all winners.*

TOP TEAM *was W. G. Allison, AOC; Cdr R. L. Kopps, VAH-6 C.O., and G. R. Brister, AOC.*

RADM. W. S. GUEST, *Commander Fleet Air, Whidbey, gives Cdr. Fitton, VAH-123, banner.*

WEEKEND WARRIOR NEWS

LAKEHURST RECRUITERS *and Sea Cadet Squadron get ready to lead the parade at Point Pleasant, N. J. Cadets are sponsored by Navy League.*

WILLOW GROVE *transport squadron prepares for final Atlantic crossing after cruise in England. VR-933 made four crossings within two weeks.*

Parade Leaders from Lakehurst

Sea Cadet Squadron Number One, sponsored by the Jersey Shore Council, Navy League, was the lead marching unit in the big Sea Day Parade at Point Pleasant, N.J. The parade is led traditionally by the NARTU LAKEHURST "Fly Navy" automobile. The Sea Cadets meet monthly at the Lakehurst activity to undergo training.

Grove Squadron with MATS

Flying with the Military Air Transport Service (MATS), Willow Grove's VR-933 spent its active duty tour flying in England and other European countries. The unit, commanded by Cdr. Walter Graf, flew two C-54 (R5D) transports to Mildenhall, England, and Scotland, then operated scheduled flights to the mainland of Europe. More than 32,000 nautical miles of transport flying were accomplished during the two-week cruise.

Los Alamitos Loses a Pilot

Loss of one of its Weekend Naval Aviators was the reason for a press conference at Los Alamitos. The departing pilot was LCdr. Elliot See, VA-771, who is one of nine men named astronauts for the NASA *Gemini* program. A test pilot with General Electric, LCdr. See was detached from his unit to enter the astronaut training program.

Eleven officers and men of HS-773 were presented the Sikorsky Wing "S" award for their part in rescue missions. The awards were made by the station C.O., Capt. J. P. Tanner, Jr. Cdr. James Mann, Lomita, Calif., is C.O. of the squadron.

ASW Trainer at Weymouth

"Yankee ingenuity" has resulted in the commissioning of an ASW Tactical Trainer at South Weymouth. Using the fuselage and electronics equipment of a "strike" S-2 *Tracker* (S2F) that was badly damaged in April 1962, during a crash landing, the ASW section, under LCdr. Paul LeBlanc, rebuilt the avionics and cockpit sections as a tactical ASW trainer. Simulated problems are now being run by Weekend Warrior crews assigned to *Tracker* Squadrons. Cost of the installation was reported as $1100.

ASTRONAUT ELLIOT SEE *bids farewell to C.O., Capt. Tanner, leaves his reserve unit.*

Minneapolis Inspection

Minneapolis Naval Air Station received a new commanding officer during formal CNAResTra inspection ceremonies early in October. Capt. Wiley Howell, USN, assumed command as RAdm. William I. Martin conducted his inspection of the station. Capt. Howell, a former RAF officer, is holder of the British Flying Cross. He relieved Cdr. E. M. Ward. During the inspection ceremony, HS-811 received the CNO Safety Award for reserve helicopter squadrons.

Among visitors to Minneapolis in October was VAdm. Leopold Buerkner, former member of the German High Command who was visiting a daughter in the Minnesota city. Adm. Buerkner was given a station tour and a briefing on the reserve program.

Inheritance at Olathe

A complete set of the publication "Naval Reservist" has been passed to Cdr. L. Hartnett, assistant technical

LOOKING AS THOUGH *it had flown through the hangar to plant its nose outside (center), Weymouth's ASW Tactical Trainer shows what can be done with "strike" aircraft parts. Tracker provided fuselage and avionics parts. At right, CNAResTra, RAdm. Martin, inspects controls.*

training officer at Olathe. The file was presented to him by Cdr. Anton Meyer when he retired recently. Cdr. Meyer started the file in 1946 when he was attached to the Ninth Naval District Headquarters. Cdr. Hartnett has promised to maintain the reserve publication file and keep it going as a reference source for Olathe personnel.

Three in a Row for Jax Squadron

VR-742's commanding officer, Cdr. Philip W. Smith, Jr., accepted the squadron's third consecutive CNO Safety Award from RAdm. J. M. Carson, Commander of Fleet Air Jax. The transport unit was one of 63 VR units in the Naval Air Reserve competition.

Atlanta Navy Relief Branch

NAS ATLANTA opened its first Navy Relief Branch since World War II. Capt. I. J. Schwartz, C.O., accepted a $2000 check from Naval Air Station Pensacola's Navy Relief Auxiliary to open the branch account. Mrs. Jeanne Shields, executive secretary of the Pensacola auxiliary, made the presentation.

WINNING SMILE *of a winning recruiter. Seattle recruiters won CNaResTra's Lockheed Trophy.*

Alameda Flies with MATS

Alameda's VR-872, commanded by a former MATS officer, Cdr. E. M. Barbero, flew its 1962 active duty cruise in association with the Western Transport Air Force (WesTAF) of the Military Air Transport Service. Four flights to Hawaii were included in the training, scheduled as part of the Naval Air Reserve program for MATS augmentation. The reserve squadron used MATS' manuals and guidance, with support provided by VR-7 and NARTU ALAMEDA.

Top Man at New Orleans

Finishing first and second in two successive training courses has earned a letter of commendation for Jerry Phillips, TD2, at New Orleans. Phillips finished courses in Avionics Fundamentals and Tradevman (Class A) to earn the letter. He has been on active duty since 1958.

Glenview Reserve NRA President

Long associated with the Glenview Weekend Warriors, Cdr. George O'Connell, Deerfield, Illinois, has been elected National President of the Naval Reserve Association, national reserve officer's group. Cdr. O'Connell succeeds Capt. A. Winfield (Chip) Chapin, who had served five years in the NRA presidency. Another Chicagoan, Capt. Roger Mulcahy, was named vice president for Naval Air during the NRA's ninth annual conference at New Orleans. Active and inactive duty reserves are members.

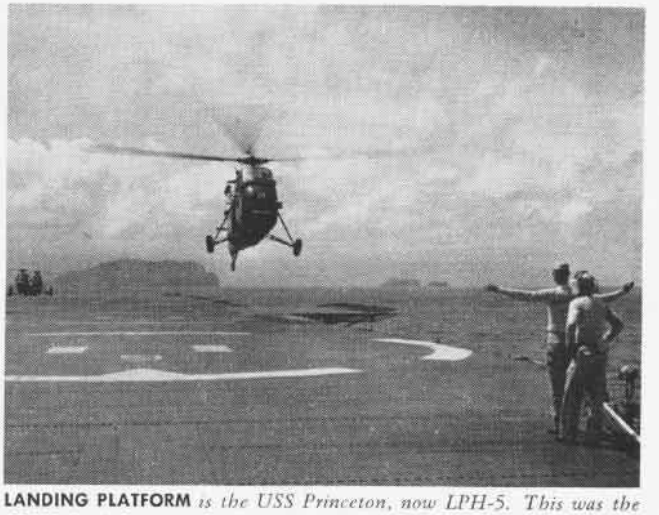
MARTCom Gets Hawk Units

Marine Air Reserve Training Command took command of three Light Anti-Aircraft Missile Batteries on November 1. The three units, each equipped with *Hawk* missiles, are located in three West Coast cities and will be administered through the reserve units at Alameda and Los Alamitos. If mobilized, the reserve units would become the fourth firing battery of each of the LAAM battalions of the regular establishment. *Hawk* is a 17-foot-long, 14-inch diameter missile propelled by a solid fuel and is employed as a surface-to-air weapon. It is guided by radar and can be transported by helicopter or surface vehicles.

NAS GLENVIEW *is duty station of new Naval Reserve Association president, Cdr. O'Connell.*

AT SEA WITH THE CARRIERS

CURIOSITY TURNS *heads of Ranger LSO group during successful tri-service landing. Pilot is AF captain, RIO is Marine in Navy's F-4.*



LANDING PLATFORM *is the USS Princeton, now LPH-5. This was the 23,000th helicopter landing since ship's redesignation in 1959.*

A VETERAN of duty in both Fleets, USS *Antietam* (CVS-36) headed for Philadelphia last month for inactivation. The carrier, first of America's canted deck carriers, was scheduled to be relieved by USS *Lexington* as training carrier attached to Chief of Naval Air Training, NAS PENSACOLA.

Antietam's last few months of active training duty brought a flurry of 1,000th landings in a hurry. Following are the milestone participants and dates:

Landing	*Name of Pilot*	*Date*	*Aircraft*
110,000	Maj. J. W. Coffman	5/11/62	T-28
111,000	Ens. J. D. Moore	5/18/62	T2J
112,000	N/C R. S. Lane	6/11/62	T-28
113,000	Ens. J. W. St. Andre	6/21/62	T-28
114,000	Lt. P. A. Reynolds	7/3/62	T-28
115,000	2nd Lt. L. C. Chandler	7/19/62	T-28
116,000	Lt. Lawrence C. Atkin	7/31/62	S2F
117,000	Ens. John F. Lampe	8/15/62	S2F
118,000	LCdr. S. B. Jensen	8/23/62	T-28
119,000	Ens. John K. Ready	9/19/62	T2J

Landing #120,000 was made by Ens. Kenneth Brodeur in an A-1 *Skyraider* (AD). RAdm. Frank Brandley, CNAVanTra, pinned wings on the young pilot immediately after the landing. It was believed the first time that the pilot's designation had been made officially on the training carrier.

Capt. James H. Armstrong, C.O. of the *Antietam*, may have set an all-time record for landings, himself. While he served as commanding officer of CVS-36 more than 22,000 landings were made. (See C.O.'s Landings, page 36, September NANEWS).

The *Antietam's* catapult crew celebrated on September 26 the ship's 30,000th cat shot.

PACIFIC FLEET

Ranger (CVA-61)

An Air Force pilot, a Marine Corps Radar Intercept Officer and a Navy F-4 *Phantom II* (F4H) aircraft were players in an unusual landing act on the *Ranger*. The AF pilot, Capt. R. N. Corbett, accompanied by Marine 1st Lt. P. S. Kelley, RIO, flew aboard in a *Phantom* owned by VX-4, NAS POINT MUGU. It was the first landing aboard ship for both officers.

Chief Storekeeper Eloy Sandoval, of the *Ranger's* supply department, received the Army Commendation Medal in shipboard ceremonies. Chief Sandoval, formerly assigned to MAAG CAMBODIA, was cited for meritorious service in connection with logistical support of the American aid program in Cambodia.

Princeton (LPH-5)

The statisticians had a busy afternoon on the *Princeton* September 18th.

First came a helicopter flown by Capt. B. B. Smith, USMC, who was hailed as pilot of the 95,000th aircraft to land aboard. A few minutes later, a helicopter piloted by Lt. G. A. Atteberry, USMC, swung to the deck to become the 33,000th helicopter aboard. A few minutes later came a third helicopter, flown by Capt. B. J. Kahler, who recorded the "23,000th landing since *Princeton* was designated an LPH (Landing Platform Helicopter) in 1959."

The Marines have done it again. They've made one of their famous landings right into first place in the sixth annual Navy bean soup contest. Second Lt. Vernon J. Perz, USMC, commissary officer of USS *Princeton* which carries over 1000 Marines, won with his recipe, "LPH-5 Soup." Thus he honored his ship's official hull designator.

Lt. Perz's culinary skill won him a $500 cash award from Kelly Foods Inc., of Jackson, Tenn., $100 from the Michigan Bean Shippers Association, and an inscribed trophy from the Memphis Commercial Appeal which sponsors the contest in cooperation with the Chief of Air Technical Training, RAdm. Joseph C. Clifton.

It is a pinch of nutmeg that imparts to each bowl of Lt. Perz's soup its highly delectable, individual flavor.

Hornet (CVS-12)

Commanding Officers of two ASW squadrons aboard the *Hornet* hit the Centurion and Double Centurion marks at almost the same time. Cdr. William Ziegler, VS-35, became CVSG-57's first 200-landing pilot October 3. Earlier, Cdr. R. G. Coleman, Jr., VS-37, hit the 100-landing mark, first to hit the century in the S-2 *Tracker* (S2F) in the Pacific Fleet.

Hornet hit its fourth port since deployment began last summer—Kobe—and welcomed aboard a new C.O. Capt. E. J. Fisher relieved Capt. Hoyt Mann during an in-port change of command ceremony at Kobe.

Putting back to sea, the *Hornet* conducted its 100th underway replenishment on September 28.

Kearsarge (CVS-33)

America's third man in orbit—Cdr. Walter Schirra, USN—lived three days in the Admiral's cabin aboard *Kearsarge*, a rare honor for a three-striper aviator. Following the at-sea recovery of the *Mercury* astronaut, he was given the cabin as his quarters for the debriefing period en route to Hawaii. *Kearsarge* had a number of press, TV and NASA observers along during the recovery project. Many on board watched the vapor trails of the *Sigma Seven* capsule as it re-entered the earth's atmosphere, also saw the bright parachute blossom out and gently bring the astronaut to the water.

Hancock (CVA-19)

Nearing the end of a yard period in San Francisco, the *Hancock's* crew gave its blood to three worthy causes in the Bay area. Using the forward mess deck as a temporary sick bay, the crew donated 177 pints of blood to the 12th Naval District Blood Fund and to two young women who have a continuing need for blood in their personal battles against disease. Members of "Fox" Division, for example, pledged two pints per year per man to a woman who requires four transfusions each month. *Hancock* received a new bridle retrieving system, mirror landing system and improvements to other gear during her yard stay.

Constellation (CVA-64)

Carrier Air Group 14, NAS MIRAMAR, has been assigned as permanent air group for the newly-arrived *Constellation*. The newest Pacific Fleet carrier, which entered San Diego for the first time September 17, had been accompanied on its Cape Horn trek from the Atlantic Fleet by Carrier Air Group 13. A member of CAG-13's VA-55, Lt. F. H. Magee, now with NAS LEMOORE's VA-125, recorded *Constellation's* 5,000th landing during the cruise, flying an A-4 *Skyhawk* (A4D).

Kitty Hawk (CVA-63)

Kitty Hawk arrived in the harbor at Yokosuka in early October for its first visit to Japan. The ship carried as part of its air group the F-4 *Phantom II* (F4H) fighter, also on its first trip to the Far East. The VF-114 aircraft flew into NAS ATSUGI while the ship visited Yokosuka.

On board the *Kitty Hawk* are a father-son combination. They are CWO Robert Schultz and R. C. Schultz, Jr. Mr. Schultz was the first man to report to *Kitty Hawk* prior to commissioning and his son was the first man sworn into the Navy aboard the ship.

The *Arabs* of VA-115 claimed the *Kitty Hawk's* first Centurion—Commander Richard Layser.

Bon Homme Richard (CVA-31)

A proud moment for Capt. G. C. Bullard, C.O. of the *Bonnie Dick*, came September 26 when he fired off the ship's 40,000th accident-free catapult shot. The C.O. replaced the carrier's cat officer, Lt. J. Muka, Jr., during the launching of an F-3 *Demon* (F3H).

A few days earlier, Capt. Bullard had shared a celebration with Lt. R. R. Floyd, VA-195, and Ltjg. D. Jordan,

BIGGEST FLEET *aircraft is not too big to accept fuel from a small "buddy." Taking fuel is a Vigilante of VAH-7. Passing it out is a Skyhawk from VA-66. Both units were aboard Big E.*

HORNET SKIPPER *passes "200th tailhook" to Cdr. Ziegler as he becomes Double Centurion.*

VADM. O'BEIRNE *(R), ComNavAirLant, gives Essex C.O., Capt. Bogart, Flatley Award.*

VF-191, who had made the ship's 83,000th and 82,000th landings, respectively.

ATLANTIC FLEET

Intrepid (CVS-11)

Intrepid played host to sailors and officers of the Norwegian training ship *Haakon VII* at Norfolk. The Scandinavian ship brought, as a People-to-People gesture, an eight-foot statue "The Norwegian Lady," replica of a wooden figurehead salvaged from a Norwegian ship which sank off Virginia Beach in 1891. The statue was presented to the city of Virginia Beach as a gift of Moss, Norway.

Forrestal (CVA-59)

To Ltjg. John Ellis, VF-103, went the cake for making the 70,000th landing on the *Forrestal* early in September.

Forrestal's VA-85 has inaugurated a Plane Captain of the Month Award. Winners are selected from among the squadron's three-man teams, each of which maintains two squadron aircraft. Receiving the first 72-hour liberty (in the port of their choice) were Airmen F. Patterson, W. Allen and L. Gordon.

A red carpet dais formed the setting for a Fall Fashion Exhibit for 1000 members of the *Forrestal* crew as the ship lay at anchor at Cannes. The show featured six Paris models and the latest fall fashions, including bikinis, suits and a wedding dress. *Forrestal's* PIO said, "Eye-popping bikinis, gracefully exhibited, were enthusiastically viewed by the motionless audience."

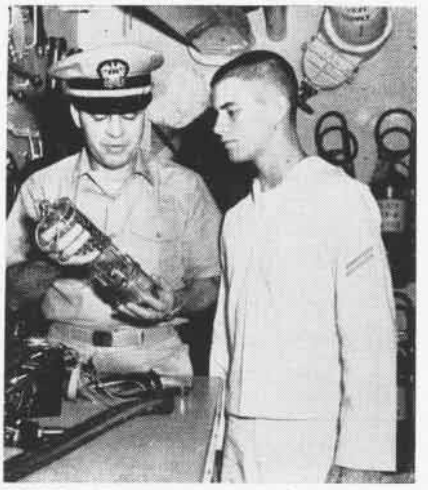
Essex (CVS-9)

Nearing the end of 20 years of service, *Essex* had a special reason for celebrating. The ship, which hits the 20-year mark this month, received the Admiral Flatley Award for accident prevention achievement. The presentation was made by VAdm. Frank O'Beirne, Commander Naval Air Force, Atlantic Fleet. The ship had a record of 6200 faultless landings in fiscal 1962.

Enterprise (CVAN-65)

Returning to her Norfolk home port after a short tour in the Med, *Enterprise* became the flagship for Commander Carrier Division Two, RAdm. John T. Hayward, who previously had flown his flag in *Independence*, *Intrepid* and *Franklin D. Roosevelt*. The nuclear carrier joins the *Saratoga* (CVA-60) in the carrier division.

During her brief first cruise, the *Enterprise* participated in NATO exercise *Riptide III* and *Fall Trap* and made port visits at Cannes and Naples.



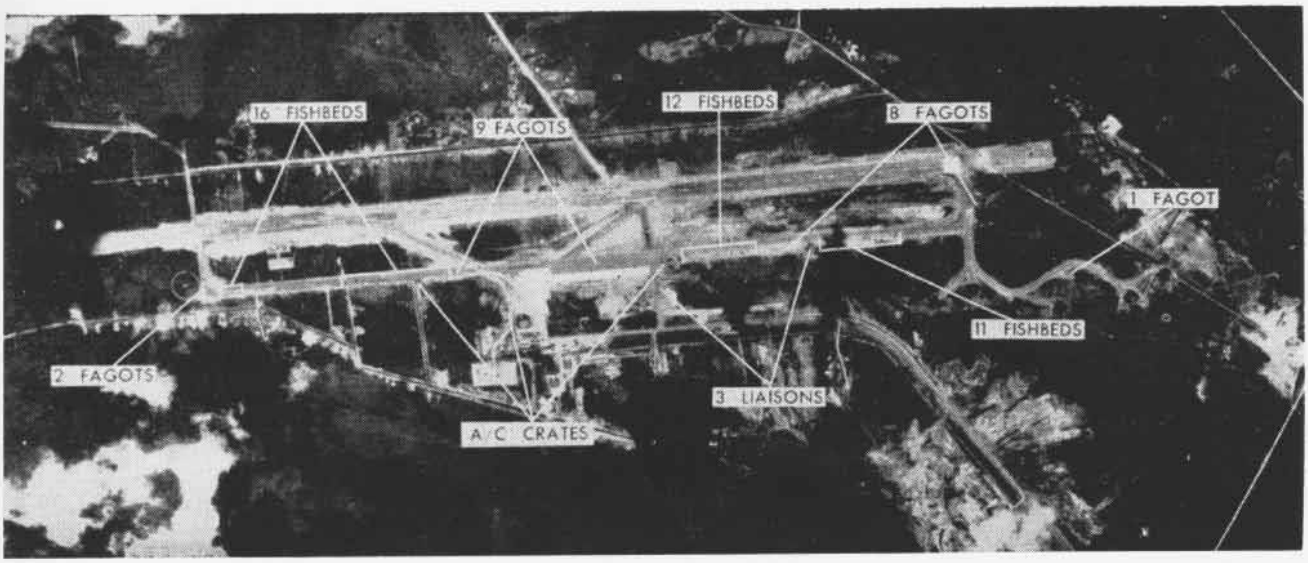
FATHER AND SON, *CWO Schultz and R. C. Schultz, Jr., serving together in Kitty Hawk.*

Independence (CVA-62)

The two-seated F-8 *Crusader* trainer (F8U-1T) made practice landings and takeoffs on the *Independence's* deck, testing the feasibility of landing "from the rear seat." Three Navy pilots, all from the Flight Test Division, Patuxent, conducted the day and night tests.

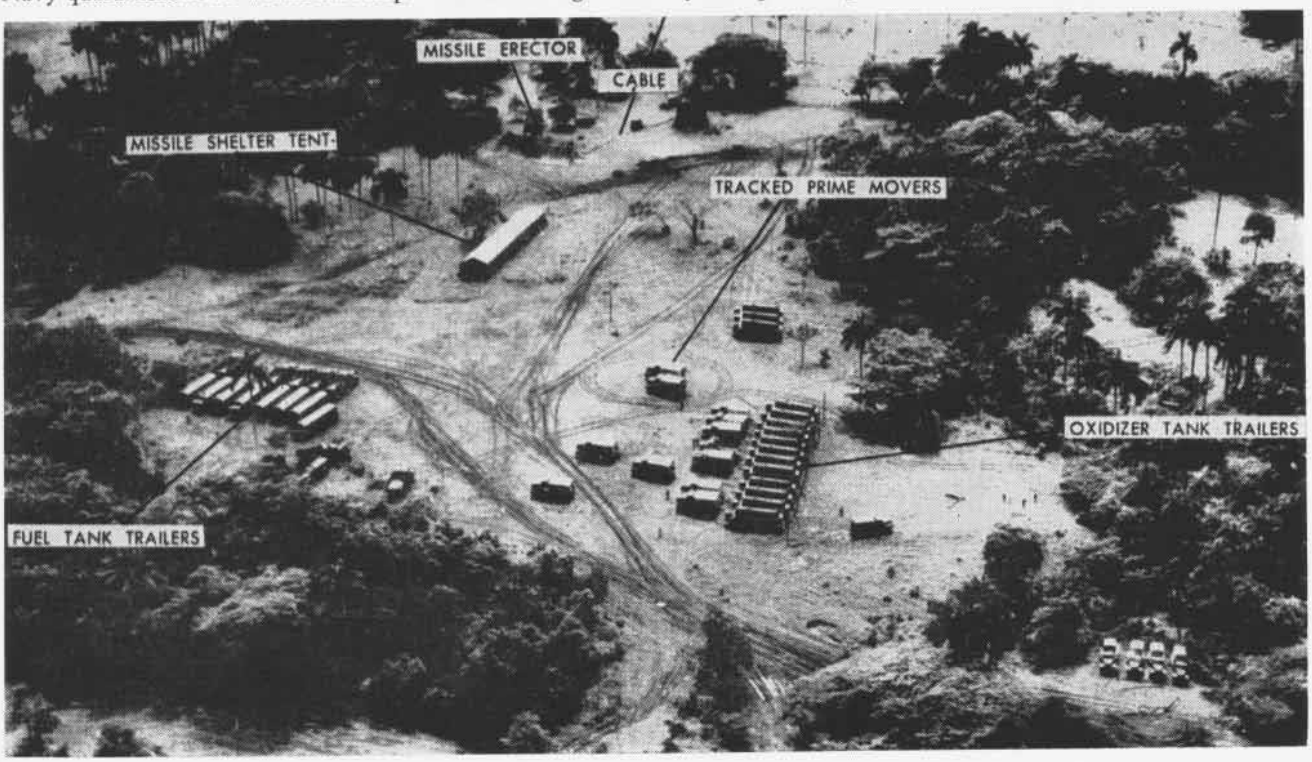
INTREPID WAS *host to officers and men of Royal Norwegian ship Haakon VII, which brought "Norwegian Lady" as gift to Va. Beach.*

A TF-8A CRUSADER *(F8U-1T) comes in smoothly for its landing during a training cruise of the big attack carrier, USS Independence (CVA-62).*



CUBA BUILDUP PROMPTS QUARANTINE

TWO PHOTOGRAPHS show the extent of Cuban buildup in aircraft and missiles supplied by Soviet Union. Top photo shows airfield with dozens of MiG-21 type fighters in flyable condition plus others in crates. Lower photo shows Medium Range Ballistic Missile site at San Cristobal on October 23, one day after President announced U.S. Navy quarantine force would halt ships heading for Cuba with "offensive" weapons. Quarantine was later lifted for two days and re-instituted. By November 1, bases were reported being torn down while negotiations on inspection of Cuban installations continued. Quarantine action resulted in immediate movement of all dependents from Naval Base at Guantanamo, institution of rigid security clamp on ship and aircraft movements, cancellation of ship visitations and involuntary extension of personnel on active duty. CNO Adm. George W. Anderson was named executive agent for the Joint Chiefs of Staff with Adm. Robert L. Dennison, Commander-in-Chief, Atlantic Fleet, as unified commander of forces in the air and sea quarantine; VAdm. A. G. Ward, force commander.



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U.S. NAVAL STATION, *Roosevelt Roads, Puerto Rico, could not function properly if it were not for the maze of electronic gear that can be found in almost all the buildings in the Operations area. Without highly trained technicians, the racks of electronics would be worthless. Above, Blynn Ganse, ETN3, retunes the teletype signal to Roosevelt Roads from the Naval Communication Station in San Juan. Above right, L. R. Williams, ETNSN (left), and R. A. Watkins, AC3, check out the TACAN monitor, located in the Operations tower. TACAN is a navigation aid which provides the pilot with a positive fix on his aircraft by giving him the bearing and distance from the station.*

LETTERS

SIRS:

Congratulations on your NROTC midshipmen spread on page 17 of the October issue.

I regret the necessity of pointing out a most non-professional slip on the part of an otherwise professional magazine. We who are trying to make pro's out of these wonderful young men need all the help we can get. The *Wasp's* effort, as reported, is outstanding. Now, if you would support us by eliminating the undignified and unprofessional reference to "middies," we would all be heading in the same direction. As you probably know, we are all making strenuous efforts to guide NROTC students into Naval Aviation.

Please refer to page 242 of the 1960-61 issue of the U.S. Naval Academy *Reef Points* which defines Middy as "An odious term sometimes used synonymously with Midshipman by mothers, newspapermen, and Hollywood." As I recall, an older edition defined Middy as "an old-fashioned girl's blouse. Term sometimes confused with Midshipman by uninformed mothers, sweethearts, and newspapers." I believe it has been thus for many years.

Your cooperation in giving these young men the dignified and professional treatment they richly deserve will be a service to the NROTC.

V. E. SCHUMACHER, CAPT., USN
N.R.O.T.C.
University of Kentucky

SIRS:

On page 38 (September), I noted a slight misprint which credited another Atlantic Fleet squadron with the first F-8E (F8U-2NE) overseas deployment. True, that squadron was first to receive the -8E while this command was in the midst of a previous F-8B (F8U-1E) Med deployment. True, that squadron was scheduled to deploy first, but because of operational necessity this ship, USS *Enterprise*, with Air Group Six and VF-33 embarked, received the nod.

Tomorrow, September 28, when that command finally relieves us of our Sixth Fleet duties, we shall be the first to congratulate them as the second F-8E (F8U-2NE) deployed squadron.

EBEN "RED" LEAVITT, JR., CDR.
C.O., VF-33

VU-1 Celebrates Birthday

One of Oldest Aviation Squadrons

Utility Squadron One (VU-1), NAS BARBER'S POINT, commemorated its 37th anniversary with a "Birthday Ball" at Hickam Air Force Base. Commissioned in 1925, VU-1 is one of the Navy's oldest aviation squadrons.

The squadron provides aerial services such as photo, target drone, torpedo spotting and air defense to the Fleet and the local area.

DURING VA-144'S *deployment at NAAS Fallon, Lt. R. V. Hagberg, now maintenance officer, scored five out of six bullseyes in dive bombing. He would like to eliminate the bomb which missed and precluded a perfect score.*

New Rocket is Launched

Successful Test Made at Pt. Mugu

A new solid-propellant sounding rocket called the *Archer* was launched for the first time at U.S. Naval Missile Center, Point Mugu, Calif. It reached an altitude of 75 miles and carried a 35-lb. payload.

Almost 12 feet long, 7 inches in diameter, and weighing 330 pounds, the new rocket is capable of carrying a 40-lb. payload to an altitude of 100 miles when launched vertically. It uses the most current and advanced solid-propellant techniques and can be launched from shipboard or truck-mounted mobile launcher.

The *Archer* is being qualified for possible use by Naval Research Lab., and other scientific organizations.

LOCKHEED SCIENTIST *A. E. Brown finds his way with a "bat radar" which uses the bat hearing system principle. This device would permit a blind man to walk toward a wall, locate an open door and pass through it.*

NATOPS NOTICES

Latest NATOPS Releases

A-4A (A4D)	First Revision	Dec.
S-2D (S2F-3)	" "	Dec.
E-1B (WF-2)	" "	Nov.
LSO Original Manual		Dec.

Watch this box for latest NATOPS distribution data.

ABOUT THE AUTHORS

Cdr. Edward Peary Stafford, USN *(The Big E at Christmas, 1943,* pp. 12-13), has had his first literary effort published as "The Big E," story of the *Enterprise*, by Random House. This 500-page volume, which includes charts of USS *Enterprise* during her World War II Pacific travels and travails, took most of the spare time and leave time of almost four years while Cdr. Stafford worked in the Office of Legislative Affairs, with the 50th Anniversary staff at DCNO(Air) during 1961, and lately as BUWEPS Representative, Reaction Motors, Denville, N.J., his present post. At times he was closeted with his volume of notes and battle reports in a BOQ room while his family was at home a few miles away. Grandson of the famed discoverer of the North Pole, RAdm. Robert E. Peary, Cdr. Stafford is also remembered as a winner of the top prize in the television show "$64,000 Question." He is a holder of a B.A. degree (Dartmouth) and M.A. (George Washington University).

Mr. Eugene Handler *(Navy's Hydrofoil Research Seaplane,* p. 28) is the Bureau of Naval Weapons' aircraft hydrodynamic engineer. He directs the research studies and full scale evaluations of seaplane hydro-skis, hydrofoils, hull configurations, amphibious helicopter and VTOL aircraft, and air-towed water-borne craft. His evaluations of full-scale aircraft fitted with hydrodynamic devices, the results of research programs, have furnished much pertinent information on operational problems.

During and following World War II, Mr. Handler served in the USAF's Eighth and Far Eastern forces. He returned to Brown University in 1947 and in 1949 received a Master of Science degree in engineering. He was involved in seaplane studies at the Glenn L. Martin Company until 1954 when he came to Washington to the Bureau of Aeronautics.

U. S. NAVAL AIRCRAFT

Naval Aviation NEWS

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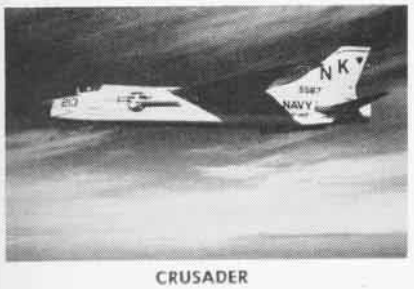
RF-4B . . . *(F4H-1P)*

F-6 (F4D)

SKYRAY

F-6A . . . *(F4D-1)*

F-8 (F8U)



CRUSADER

F-8A . . . *(F8U-1)*
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QF-8A . . . *(F8U-1KD)*
RF-8A . . . *(F8U-1P)*
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S-2B . . . *(S2F-1S)*
S-2C . . . *(S2F-2)*
RS-2C . . . *(S2F-2P)*
S-2D . . . *(S2F-3)*
S-2E . . . *(S2F-3S)*

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