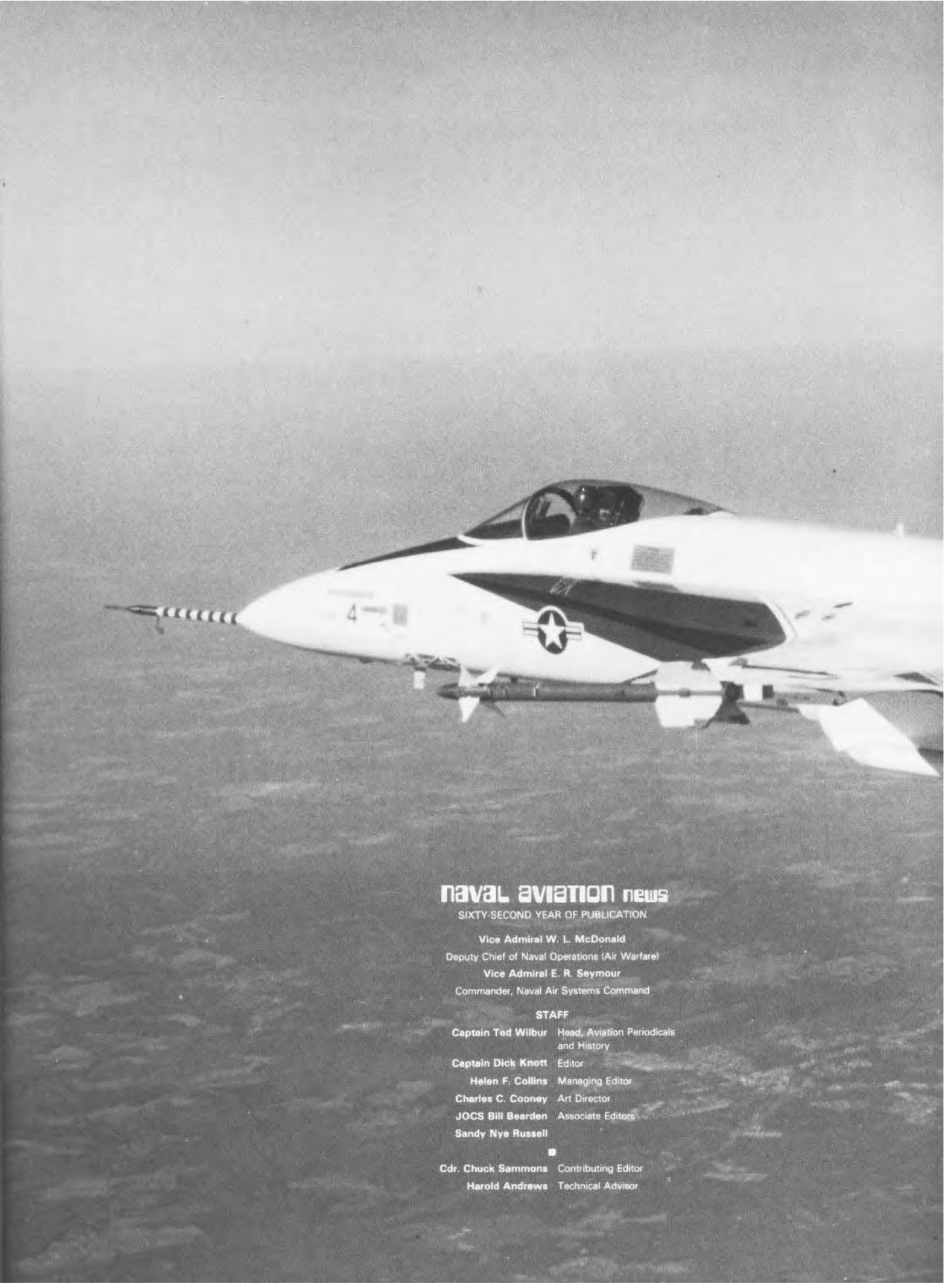
naval aviation news

SEPTEMBER 1980



naval aviation news

SIXTY-SECOND YEAR OF PUBLICATION

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Covers — Paintings are the work of renowned artist and engineer R. G. Smith (inset). Top front captures Douglas DT floatplane lifting off as another DT launches from Langley flight deck. Bottom is of F/A-18 Hornet and back cover shows Blue Angels' formation over Eisenhower (see feature beginning on page 8). Here, Hornet photograph is courtesy of McDonnell Douglas.

EDITOR'S CORNER

Ideas for Aeroplanes. *NANews* reader Max Schwartz of Wyandotte, Mich., submitted the following excerpt which appeared in *The United States Navy* by Henry Williams, published in 1911:

"Serious consideration is being given by the United States, as well as by other naval powers, to the use, in naval warfare, of airships and aeroplanes. The possibilities are great, and though, up to the present time, little has been done to develop them, there is no doubt that each step in improving the reliability of aircraft renders their use for naval purposes more promising. Their importance in this connection must not be exaggerated; however, like the submarines, they are at the best uncertain, easily destroyed if discovered when nearby, and incapable of great offensive action. Their use for scouting purposes would be great and there is not much doubt that in the near future scout cruisers will be equipped with aeroplanes to aid them in their scouting duties.

"That an airship or an aeroplane could destroy a battleship by dropping on it high explosives is hardly possible. It would be difficult in the first place for an aviator going at high speed, as he must if he hopes to avoid being struck by rifle fire from the enemy, to hit the deck of the ship with any explosive which he might drop. Even were he to succeed in landing one or more charges of explosives on the deck of a battleship, it is probable that the damage resulting would be only local, and would not affect the vessel seriously.

"It has been demonstrated by trial that an aeroplane can rise from an especially constructed platform on the deck of a ship, and, after making a flight, can alight in the same place. Thus, it becomes comparatively a simple matter and one of skill in handling and of reliability of the aeroplanes, to use them for scouting from a ship wherever it may be.

"In order for an aeroplane to be of the greatest possible usefulness, and to render it independent of its ship in case it is forced to descend, it should be able, however, to alight and rise from the surface of the water. This, too, has been shown to be possible, by the use of the so-called hydroplane attachment, which permits the aeroplane to float on the surface of the water, and, when the propeller is started, to arise into the air. Similarly, when its flight is finished, it can alight on the surface of the water and remain there until picked up by its ship and hoisted aboard in the same manner as a boat. Even if in alighting on the water the aeroplane could not be recovered, the aviator could be brought on board and deliver his information. The ship could carry easily other aeroplanes.

"It has been proposed also to utilize aeroplanes for spotting the fall of shots fired at long range. As has been seen, especially designed towers of considerable height are constructed on battleships as stations for the spotters, to permit them to see the fall of shots and to correct the range in case the fall of the shots is short or over. An observer in an aeroplane, being at greater height, would be able to make these observations to better advantage and signal them to the ship. It is likely that aeroplanes will be found to be of great usefulness for such work.

"Photographs can be taken readily from aeroplanes in flight, and wireless telegraph messages can be sent and received.

"It is probable that rifle and small caliber automatic gunfire will be relied upon chiefly for defense against aeroplanes, although large guns of a type for firing vertically into the air have been developed. A moving aeroplane presents a difficult target, as there is no means of correcting the range, as is done ordinarily by observing on the surface of the water the fall of the shot. For that reason, in order to attack an aeroplane successfully, a large volume of fire will be necessary, and this can be obtained most readily by means of a number of riflemen."

Matchbooks. These matchbooks were submitted in response to *NANews'* November 1979 cover which featured matchbooks from Naval Aviation's past. The first represents the officers club at NAS Kaneohe in Hawaii. The second was from an Argentinian fan of Naval Aviation, Fermin Luis Gil.

DID YOU KNOW

Peleliu Commissioned The fifth of a new class of amphibious assault ships, USS *Peleliu* (LHA-5), was commissioned May 3, 1980, at the Ingalls Shipbuilding Divison in Pascagoula, Miss. She is named after the October 1944 assault and capture of Peleliu, southernmost island of the Pacific Ocean's Palau Group and a vital link in the Japanese defense line. This successful operation by the 1st Marine Division and the Army's 81st Division secured an advance sea and air base for further operations in the Pacific.

Isbell Trophy The 1980 Captain Arnold J. Isbell Trophy, the Navy's symbol of excellence in air antisubmarine warfare, has been won by VS-28, VP-49, HS-15 and HSL-36 in the Atlantic Fleet, and VS-21, VP-46, HS-8 and HSL-37 in the Pacific Fleet.

The Lockheed-California Company-sponsored award is named for the distinguished antisubmarine commander under whose leadership planes and escort carriers operating in the Atlantic in 1943 developed into a powerful combat force seeking out the enemy and striking with coordinated action in a sustained drive. Capt. Isbell was killed in action in 1945 in the Pacific theater while serving on USS *Franklin.*

The trophy was established in 1958 to honor the memory of the great antisubmarine commander, to motivate superior performance of ASW capabilities, and to present tangible awards to those squadrons judged to be the best during each 12-month competitive cycle.

VS-21 has also won the Golden Wrench Award for excellence in maintenance. (See "People, Planes and Places" in this issue.)

Unitas XXI Ships and aircraft of the U.S. Navy deployed from Roosevelt Roads, P.R., in June to join naval and air force units of South American nations for the 21st year in *Unitas* exercises. The U.S. task group will proceed around the South American continent to engage in a series of bilateral operations with the navies of Venezuela, Colombia, Ecuador, Peru, Argentina, Uruguay and Brazil. The nearly-six-month deployment will include some 27 port visits in 10 different countries and seven Caribbean islands.

The purpose of Operation *Unitas* is to improve the capabilities and readiness of all participants in combined naval operations in order to neutralize any threat to the sea lanes of the hemisphere.

Energy Conservation The Secretary of the Navy Energy Conservation Award for 1979 has been won by NAS Oceana's VA-85 because of its comprehensive program for efficient energy use and the impressive energy conservation effort made by squadron personnel. The squadron carried out an innovative and aggressive campaign to reduce energy usage wherever possible by cutting daily work schedules from three eight-hour shifts to two ten-hour shifts, thereby reducing electricity demands four hours a day; specifically prohibiting fuel dumping from squadron aircraft except when dictated by safety of flight; routinely securing half of the squadron lighting in ashore hangar spaces; operating squadron aircraft in minimum pylon/stores drag configurations to increase fuel efficiency. By stressing carpools, bussing, bicycling and walking, the number of persons driving to work

DID YOU KNOW

alone was reduced by 51 percent; and home energy-saving tips were constantly stressed in the daily plan of the day.

The *Black Falcons'* attitude toward energy conservation is that resources are limited and that it is their responsibility to continually assess and revise existing

procedures while searching for new methods to reduce energy consumption without degrading combat readiness.

The squadron received a SecNav award plaque, a certificate and the Navy Energy Flag, which it will fly for one year.

FFG-21 The guided missile frigate *Flatley* (FFG-21) was launched May 15, 1980, at Bath, Maine. She is named after Vice Admiral James H. Flatley, Jr., who was called the enlisted men's admiral because of his abiding concern for their well-being. Just days before Pearl Harbor he became executive officer of the *White Hat* squadron, VF-2 aboard *Lexington,* which was made up of enlisted pilots. Later, flying from Yorktown, he became one of the war's early heroes during the Battle of the Coral Sea. Toward the end of the war, he planned and directed air operations in support of amphibious landings at Iwo Jima and Okinawa, and air strikes against Japan itself. In his post-war assignments he continued to be concerned for the enlisted man and initiated an educational program to assure that every sailor could study for and obtain a high school diploma.

Thach Award

The Admiral "Jimmy" Thach Award has been won by North Island's HS-8, also an Isbell trophy winner, for its superior performance as a carrier-based ASW squadron during 1979.

The award, which is sponsored by Lockheed-California Company, honors the dedicated officer whose flying achievements and development of tactics were famous in WW II. His name is linked forever with the "Thach weave" a fighter tactic that helped win WW II. It was he who, under Admiral McCain, directed the Navy's final offensive blows against the Japanese homeland. As carrier antisubmarine warfare emerged in postwar years, Adm. Thach applied his earlier successes to the tactical doctrine of Task Group Alpha as its first commander, accelerating the development of antisubmarine tactics and improving readiness in ASW. Later, he expanded the subhunting role of combined air-sea forces as Commander, Anti-Submarine Forces, Pacific. During this period he helped to develop and implement many of the hunter-killer group tactics used by ASW squadrons today.

During the period for which HS-8 was rated, the squadron was embarked on USS *Kitty Hawk* in the Western Pacific and Indian Oceans.

Triple Crown

The *Bluetails* of VAW-121, winners of the CNO Readiness Through Safety Award and the Atlantic Fleet Battle E for 1979, has also won the AEW Excellence Award. The trophy sponsored by the Grumman Aerospace Corporation is awarded for achievement in operational readiness, safety, contributions to tactics and weapons systems development, and retention.

The squadron has flown over 65,000 hours in 13 years of accident-free carrier operations. In 1979, the *Bluetails* set many records in flight time, sorties flown, sortie completion rate and in a number of other categories. They are currently deployed to the Indian Ocean aboard *Eisenhower.*

McClusky Award

VA-115 is the recipient of the Admiral Clarence Wade McClusky Award for excellence among attack squadrons in combat readiness, tactical and weapons system development, aviation safety and personnel retention. The *Eagles* are embarked aboard USS *Midway* as a unit of Air Wing Five, home-ported in Yokosuka, Japan, under the overseas family residency program.

The Vought Company-sponsored award recognizes the heroic Naval Aviator who distinguished himself in leading a bombing attack which put four Japanese carriers out of action in the Battle of Midway, and in leading other repeated aggressive attacks upon the enemy which helped to turn the tide of the war in the Pacific.

Grampaw Pettibone

Booby Trapped

It was a dark night and traffic was pretty well congested over the busy air station. Helicopters were practicing GCAs to a 10,000-foot runway 90 degrees to the wind line. All other traffic was being landed on dual 8,000-foot runways which had a slight downhill slope.

Since there was no-end-of-runway taxiway, all jet traffic which used the whole length of runway on landing rollout was being held on a small stub end of another runway until they could be cleared back downwind on the duty runway to the nearest taxiway, a matter of about 1,000 feet.

An R4Q was cleared to land on the right dual runway, and an F8U on the left dual runway. Three more F8Us were waiting on the stub at the rollout end for clearance to taxi back to the taxiway. The planes were all on primary tower radio frequency and would remain so until clear of the runway. The F8U on landing approach was waved off when the R4Q got in its path, and another F8U called overhead at the break for landing.

The F8U at the break was on ground control frequency. The pilot had been unable to work the tower on tower primary prior to takeoff and had been cleared off on his night hop, utilizing *only* the ground control frequency. As the first F8U in the pattern took wave-off, the three F8Us at the end of the duty runway were cleared to taxi back on the runway to the taxiway. One fighter had its nose gear steering fail. The pilot radioed the tower that he was holding with five feet of his nose sticking out into the duty runway, but he could taxi straight across the runway and hold on the taxi stub between the dual runways until help could be sent out to him. The other two F8Us taxied around him and cleared the runway safely. Meanwhile, the landing F8U

operating on ground control frequency had touched down and was rolling out. Two R5D pilots were also calling the tower on ground control frequency for taxi clearance across the duty runway at the midfield taxiway.

The tower called the disabled F8U and told the pilot it would close the runway after "the plane" rolled out, and taxi him across. The pilot saw an R4Q completing its rollout and starting to turn off the other dual runway, so he called to state he would taxi across and hold. The tower rogered, so he poured the power to it. One third of the way across, the landing F8U plowed into him, driving its nose section right into his plane, hitting it broadside aft of the wing. The plane burst into flames.

The taxiing pilot jumped out and ran to escape the tremendous fire, but the other pilot was trapped in the crushed cockpit, his leg pinned in the wreckage with flames all around.

The crash crew fought heroically to save him, two or three of them protecting the pilot with their bodies and a heavy blanket while foam was sprayed over them all to keep the flames down. After 30 minutes they were finally able to free him, badly burned but alive. He died of his injuries four days later.

Grampaw Pettibone says:

Great balls of fire! This is one of the worst I've run across in many years! The loss of this fine young man was so needless that it's appalling. The pilot had accepted an F8U for a night hop knowing it had a radio incapable of operating on tower frequency! This same gripe appeared on five successive yellow sheets preceding the fatal flight, yet the plane was considered in an up status!

The tower cleared him on this hop on ground control frequency, knowing he had a radio inoperative on tower frequency. The tower cleared a plane to land with three aircraft sitting like bowling pins on the duty runway's upwind end. The tower had not received an "all clear" from the planes cleared to taxi downwind on the duty runway just a few moments before.

As usual in such unnecessary tragedies, many errors had to be committed to set the stage for this one. It behooves every operations officer, whether he is assigned to a station or squadron, to look over his outfit to see if such booby traps exist for the unwary pilot.

(Reprint from *NANews* , April 1960.)

Two Cobras

At 0200 on the third and final day of ground force operations, two AH-

ILLUSTRATED BY Osborn

1T *Cobra* helicopter crews were awakened after five hours' sleep. They briefed for a night flare illumination mission. After launch from their tactical landing zone (LZ) at about 0300, the *Cobras* rendezvoused and proceeded to the mission area. It was a very dark night with neither moon nor horizon. There was a haze layer from 500 to 1,200 feet, but the ceiling was unlimited above, with 5 to 7 miles' visibility.

Once in the target area, the flight orbited for 45 minutes before flare drop commenced. During this time, the weather worsened, forcing the flight leader to abort the mission and return to the landing zone. Because of decreasing visibility, the flight tried a TACAN penetration into a nearby auxiliary airfield. The *Cobras* broke out beneath the haze at 700 feet where visibility was excellent.

The LZ controller radioed that the LZ ceiling was now 600 to 700 with good visibility. Since the two aircraft couldn't refuel at the auxiliary field in time for an 0700 mission which they had been assigned, the flight leader decided to proceed under the overcast at 450 feet altitude to the LZ.

Lead made one identification pass over the LZ at 300 feet and turned downwind for landing with *Cobra* Two in loose cruise formation at lead's five o'clock.

The visibility was worse than estimated, causing the lead some difficulty in locating the 420-by-270-foot landing zone. The pilot, fighting vertigo, flew "on the gauges" while the copilot called vectors to the LZ. *Cobra* Two maintained its five o'clock position on lead throughout the approach.

On final, *Cobra* One's copilot called, "We're low!" Seeing that his closure rate was too fast and visual cues were poor, the pilot decided to wave off. He began a left turn for another try and asked *Cobra* Two for his position. *Cobra* Two said he was at the leader's six o'clock and would stay there but he had lost actual sight of *Cobra* One.

As lead continued his second approach, *Cobra* Two requested *Cobra* One's position from the LZ but received no reply. *Cobra* Two then radioed that he now had the lead in sight. *Cobra* One decided that the visibility was too poor to make a landing and transmitted he was returning to the auxiliary field.

The wingman was 800 to 1,000 feet to the west, paralleling the lead's course. To LZ personnel *Cobra* Two appeared to be dangerously low and in a slight rate of descent. LZ personnel tried to warn the helo but their transmission was blocked out by *Cobra* Two's last transmission: "Lead, I'm at your 11 o'clock low." The helo crashed into the trees, killing the crew.

Grampaw Pettibone says:

This was a tragic and needless loss. There are many lessons to be learned from it. The mishap board concluded that the pilot was attempting to effect a low-level join-up rendezvous on his leader and did not monitor his instrument gauges closely enough to avoid the insidious settling into the trees. Possible courses which could have contributed to the accident were: lack of low altitude warning system; overscheduling, which may have led to pilot fatigue; and nonstandard and inadequate lighting in landing zone.

Gramps wonders whether this crew was ready for such a mission with visibility as poor as it was and their significantly low amount of recent flight hours. (The pilot had 3.7 hours; the copilot .7 hours.) The flyers who were lost were relatively inexperienced.

Clearly, there is a need to be careful in scheduling such crews.

R. G. Smith

the man and his work

By Cdr. Rosario Rausa

I was walking along the corridor in the Pentagon," remembered a Naval Aviator. "There were numerous paintings on the walls depicting the Navy and Marine Corps in action – ashore, afloat, beneath the sea, and in the air. I looked at each of them rather casually until I came upon one which brought me to a halt. A flight of warplanes was winging by a carrier as it plowed mightily through the high seas. A mass of clouds towered skyward in the background. 'This one's different,' I said to myself. 'It has a special vitality.'

"Clearly, the artist was in a class of his own. I looked for a name. Neatly written in the lower right-hand corner was the signature – R. G. Smith."

R. G. Smith does indeed rank in a class all his own. A modest, intelligent, and extremely industrious man, he is both a product of and contributor to what has been called the golden age of aviation. He would prefer the title "configuration engineer," but his productive output of airplane and ship paintings over a period of nearly 35 years appears to preclude that. To the aviation world at large, he is R. G. Smith, the *artist.*

Yet true enough, Robert Grant Smith is also a configuration engineer of high repute. Less well known than his ability to depict on canvas the intense drama of a battle-damaged *Skyhawk,* plugged into a *Skywarrior* tanker wet-winging its way home to a Yankee Station flattop, is the fact that Smith played an instrumental role in the design of every Douglas airplane built for the Navy since 1936.

That includes a fair number of successful birds, among which are the SBD *Dauntless* and, in the famous "Sky" series of tactical flying machines, the *Skyraider, Skyknight, Skyray, Skywarrior* and *Skyhawk*. He had a hand in the famous *Skystreak* and *Skyrocket* research aircraft, also.

R. G. cannot recall how many paintings he's executed. Those on flying and nautical subjects alone number well over 1,000. His art appears at the National Air and Space Museum, the Naval Aviation Museum, in the U.S. Navy Combat Art collection, the Air Force Museum at Wright-Patterson AFB and countless ready rooms aboard carriers. It can be seen in a variety of surface ships, at the Pentagon, in congressional offices, military installations, aerospace industry buildings around the world and, for a fortunate few, in private collections.

The art of R. G. Smith has enlivened the covers and pages of numerous publications. Navy recruiters have made extensive use of his art, in one instance distributing 150,000 lithos of Smith paintings for promotional purposes. More than a million of his lithographs, both commercial and military, are in print and have been distributed throughout the years.

How did it begin? What ignited R. G. Smith's interest in aviation and led to a prolific career as an engineer and artist? Charles Lindbergh, for one thing. The Lone Eagle's solo crossing of the Atlantic in 1927 was an inspiration to the young man from Oakland, Calif., and by the time Smith graduated from high school in 1931, he knew he wanted to

U.S. Navy planes in raid on Korea's Hwachon Dam and, below, boats of the riverine forces in the Mekong Delta.

Above, VA-25 Skyraiders; below, F/A-18 and a Russian Backfire.

design airplanes. He received an engineering degree from the Polytechnic College of Engineering in Oakland, labored for a time in the gold mines of northern California, and in 1936 was hired as a draftsman for the Douglas Aircraft Company at a salary of $18 per week.

"In those days," remembers R. G., "a person joined the aircraft industry because he liked airplanes, certainly not for the money."

Within the next couple of years his engineering layouts came to the attention of chief engineer Ed Heinemann who was extremely impressed. Smith soon found himself immersed directly in the design process. What amazed his seniors as much as his drafting ability and knowledge of conceptual design techniques was his unswerving ability to meet deadlines no matter how much after-hours work was required.

In addition to technical drawings, R. G. painted aerial scenes, in effect beginning the never-ending process of fine tuning his creative techniques. Then in 1947 he met Arthur Beaumont, a well-known watercolor artist. At the time, Beaumont was a naval reserve commander visiting the Douglas plant to do some sketches for the Navy. The two men hit it off well but it wasn't until the early 1950s that the relationship flourished. R. G. began attending art classes which Beaumont conducted in Long Beach. In the next few years, Smith learned much from the accomplished artist including two basic truths about painting: Adherence to fundamentals is essential, and "thinking out" a scene before touching brush to canvas is an absolute necessity. His sessions with Beaumont, who figuratively looked over his shoulder during those weekends, accounts for the only formal art training R. G. Smith ever had.

So, while the *Spirit of St. Louis* nudged him into the world of aviation, Beaumont fostered the artistic skills that enabled R. G. to illuminate that world with the Smith style.

R. G.'s scope extends well beyond airplanes and ships. Although he does less painting for relaxation now than in the past, he continues to create a few impressionistic paintings of the desert. In fact, he knows well many arid expanses in Arizona, New Mexico and California where, to him, a fascinating dimension of natural life still abounds. He is also a history buff with a particular interest in the Civil War. (His middle name is a tribute to General Ulysses S. Grant, incidentally.) A friend who traveled with him to Gettysburg, Pa., not long ago was astonished at the scope of his knowledge during a tour of the battlefield. R. G. had never been to Gettysburg before, yet he knew the terrain as if he had fought in the battle himself. That's attention to detail, a characteristic of his paintings as well.

"In many instances," says R. G., "the execution of a painting takes less time than the research required for it. I consider most of my work a challenge and, since I'm basic-

Above, spotting on the waist cat; below, A-4M close support.

NIGHT ATTACK FROM
TANGO BOAT (ATC)
VINH TE CANAL
CAMBODIAN BORDER

Above, Vietnamese street vendor; above right, R. G. and Norma checking work schedules; and below, member of Navy Seal team.

ally a configuration engineer, my approach is more scientific than theoretical."

R. G. looks much younger than his years, is married, has a son and daughter, and is six times a grandfather. Still, he is at work every morning before 7:30 and seldom leaves before 5:00, frequently to the dismay of Norma M. Bert, his affable and competent assistant for 20 years. Norma would prefer he adopt a less rigorous work schedule and relax more. The unpretentious R. G. insists he keeps those hours to "avoid traffic" but more than likely, the habits of nearly five decades of hard work do not change easily.

He devotes the majority of his working day to painting McDonnell Douglas aircraft (Douglas merged with McDonnell in 1967). However, on occasion, he is involved with design review of new aircraft. "I am still asked for my opinion," he says, meaning he analyzes and comments on new concepts as they come along.

One of the perennial questions he is asked concerns the backgrounds which distinguish many of his works. Magnificent cloud formations, often dark, brooding and even suggestive of hostility, are part of his style. His planes and ships — man-made vehicles of war — somehow blend with the backgrounds without losing their own potency.

Is this intentional? Is R. G. trying to convey some sort of message about combat airplanes and the raw power of the elements? When queried like this, he smiles and answers, "Is it necessary that art always convey some hidden or social message?

"I sometimes wonder," R. G. says, "how today's art critic can view art painted over 200 years ago and know, without doubt, the artist's thoughts at that time. Docents in museum galleries are particularly susceptible to this type of interpretation even when confronted with the artist's written or spoken words to the contrary.

"Perhaps my engineering background enables me to avoid the usual arty cliches and, at times, to quote one of

Freud's classics: 'Sometimes a cigar is just a cigar.' "

In 1968, and again in 1969, R. G. spent 30-day periods in Southeast Asia as a combat artist for the Navy. He operated with "blue water" carrier forces, "brown water" units and I Corps in South Vietnam. He observed, up close, all sorts of combat – from night ambushes to the receiving end of artillery fire – and was in the rear seat of OV-10s during close support missions. He rode in helicopters and fixed wing aircraft and rode down the glide slope to "trap" on flattops. He took full advantage of the experience, sketching and photographing continuously, often working 20 hours a day to record the action.

He still savors those days. "The trips were the highlight of my life," he said. "Seeing combat firsthand, traveling and working side by side with the troops, feeling the pressures that fighting men feel – they brought everything together and added a new dimension to my art."

Time in the war zone also fortified a belief he has held for some time. Says Smith, "Anyone who sweats bringing an aircraft aboard the carrier time after time, day and night, good weather and bad – well, that takes a special breed of cat. I don't think there are words to express the feelings I have for the men who do that."

Over the years, R. G. has received countless accolades and been hailed by many groups. He was cited by the Tailhook Association at its last convention. The Chief of Naval Operations once presented to him a Distinguished Public Service Citation. He was made an honorary *Blue Angel* in 1979. But his most treasured award is one he received several years ago when he was made an Honorary Naval Aviator (Number 10), one of only 12 individuals to share that title.

Perhaps without knowing it, R. G. Smith has not only illuminated the spirit of Naval Aviation with his paintings but raised that spirit to new and inspiring heights. Fortunately, he is still at it every day in his Long Beach office/studio at Douglas Aircraft, a well-lit and well-appointed space where at least one painting is always in some stage of progress. Brush in hand, tie loose at the collar, he's there creating marvels on white sheets of canvas and enjoying himself. "The days go too fast," he admits, "but then, time flies when you're having fun."

Maybe the best way to measure R. G.'s impact on Naval Aviation would be to imagine blank spaces on the countless walls where his works now hang. The loss would be almost palpable. No question about it. Naval Aviation has become much richer because of the special vitality R. G. Smith brings to it.

Painting of Operation "Wet Wing" – A KA-3B refueling a damaged A-4 on Yankee Station.

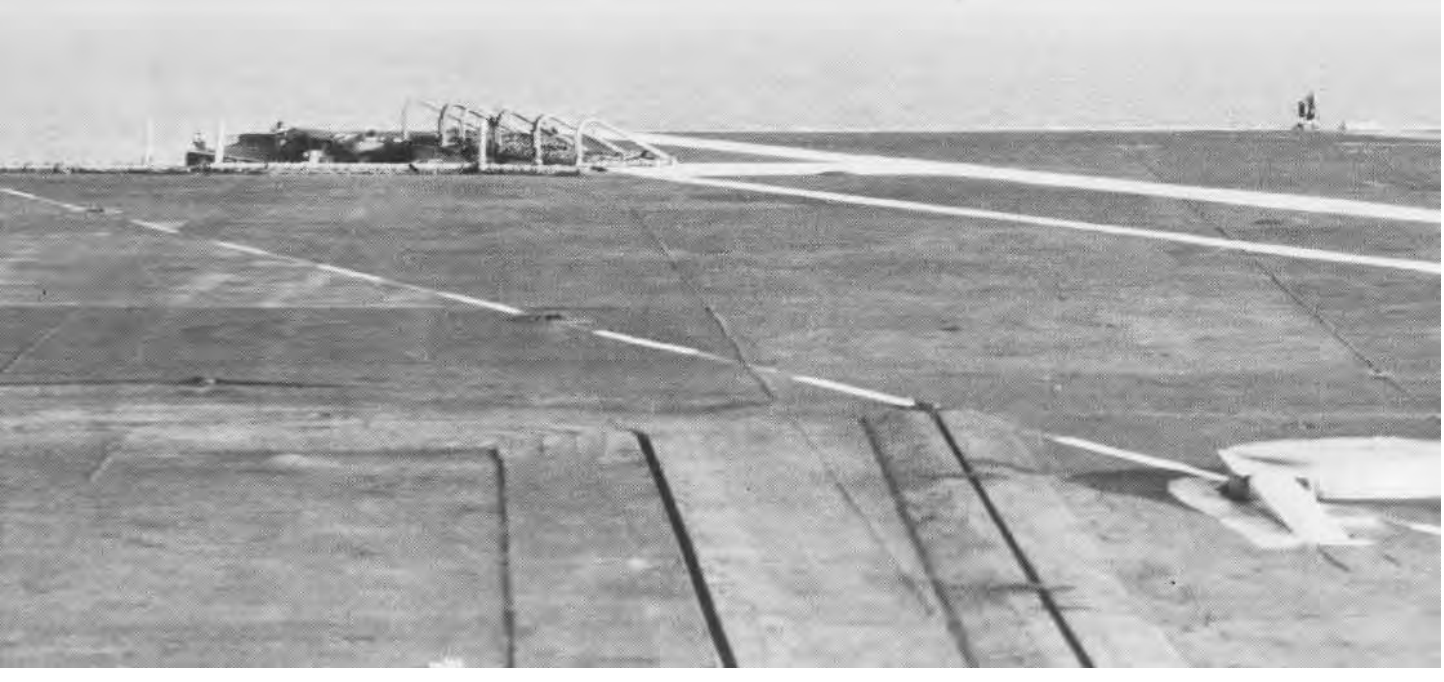
Aboard a *Forrestal*-class aircraft carrier, plowing through angry seas hundreds of miles from the nearest shore, a tense drama unfolds. Though darkness has fallen and sheets of rain periodically sweep across the huge ship, the command "Prepare to recover aircraft!" has been given. On the vast flight deck, a center line of lights glows eerily and every landing aid has been turned on.

Eyes peer into the rain and darkness, straining for a glimpse of the approaching visitor, until now seen only on the ship's radar. Suddenly, dim lights pierce the darkness astern. The plane, a surprisingly large one, approaches, buffeted by wind and rain. It slams onto the deck, stopped almost immediately by the arresting cable.

Sailors in glistening wet gear rush at once to the plane, even as the huge wings turn and fold back along the fuselage. In seconds, the plane is positioned on a deck elevator, taken below and rolled out into the cavernous hangar deck. The rear loading ramp is lowered to disgorge a seemingly endless stream of packages and sacks, large and small. Sailors with forklifts stack the precious cargo for distribution.

That night, machinist's mate James Finnacker will get his hands on a special hydraulic assembly needed to put a waiting F-14 back in action. Avionics shop supervisor Richard Kibbe will take delivery of a new radome he needs to finish repairs to a damaged A-6. And in the morning, Ensign Carleton E. Sawyer III will receive a much-awaited letter from his fiancee in Chicago.

Such is the routine, day-in and day-out, in good weather and bad, of the vital air link to our carriers at sea.



A Flying Truck Named COD

The fighter and attack squadrons, and other tactical elements of an aircraft carrier's air wing frequently win awards for valorous service in combat, for demonstrating skill in weapon-shoot trials or for setting speed, altitude, range and other performance records. Far less is heard of the exploits of another type of aircraft, the COD (carrier onboard delivery) which in appearance and performance evokes little excitement or glamor for who would credit a logistic support airplane with winning an air battle?

But it's in just that kind of "for-want-of-a-nail-the-battle-was-lost" situation that the COD force can contribute to winning air and sea battles. By expeditious onboard delivery of urgently needed spare parts and personnel, the operational readiness of the carrier's air wing can be substantially increased. To each carrier skipper, an increase in readiness of only 10 percent can mean the same as acquiring 8 or 9 more fighters, attack planes or other combat aircraft without having to buy a single one.

The modern aircraft carrier hosts one of the most powerful and busy concentrations of warplanes anywhere in the world. The activity on and around the huge floating airfield rivals that at a busy major air terminal ashore.

Consider what it takes to keep the carrier air wing, some 90 or more planes, going at peak readiness. Literally thousands of parts, most of them small replacement items but also larger ones like rotor blades, gear boxes, jet engines and even munitions, are in demand on a constant daily basis.

Normal air operations at sea, with many varied missions flown every day, use up such parts in a continuous stream. In the heightened tempo of emergency or wartime operations, the stream of support parts may become a torrent. Should the flow falter, the result in terms of aircraft downed to await maintenance can be a severe hindrance to the carrier's ability to carry out her vital missions.

Why isn't a ship as spacious as an aircraft carrier able to store an adequate amount of replacement parts? The carrier is a giant warehouse of sorts. But, unlike an air base ashore which can expand or add buildings, the number and size of the carrier spaces that can be devoted to storing support material are limited.

The problem of space on carriers has existed since the advent of ship-borne aircraft. Despite the enormity of today's supercarrier — a floating city of more than 5,000 men and nearly 100 aircraft — the competition for space is acute. With the introduction of ever-more-sophisticated jet aircraft and advanced weapons systems to counter the growing number of air, surface and subsurface threats, even more space is needed to accommodate new gear and munitions together with a greater amount and variety of spare parts.

Thus it is that today's deployed carrier, a prime example of military self-sufficiency, has storage space for only about 20 percent of the many spare-part line items needed to keep her planes at maximum readiness. For the remainder, she must depend primarily on a unique 24-hour-a-day airline whose mainstay is the COD airplane.

Today, the role of the COD is increasingly important as the Navy tries to keep its carrier task groups and air power at peak efficiency to meet its ever-expanding commitments around the world. In fleet logistics, only the CODs can provide same-day delivery of high-priority items. Resupply by the fleet's auxiliary ships, which carry the bulk of support and replenishment items, may take days and sometimes weeks.

Before the advent of the CODs, the Navy often used the empty bomb bays of attack planes and torpedo bombers for its special delivery jobs. When the occasional, quick-reaction delivery needs proliferated to a daily requirement for hard-to-get machined parts, passengers and mail, larger aircraft were pressed into service as logistic supply vehicles.

When the need became routine and the items to be carried too numerous and too bulky sometimes for converted tactical planes, the first aircraft dedicated to cargo made its appearance in 1955. This was a derivative of an ASW plane, the Grumman S2F-1 — named the TF-1 (later re-

designated C-1). In function and appearance it was and still is a cargo/passenger transport vehicle, with nine rearward-facing passenger seats.

As high-priority cargo items, mainly a variety of small packages, became more numerous and the need arose to resupply the carrier air wings with jet engines and other bulky items, the Navy began looking for a more capacious COD candidate with a larger cargo capacity that would also cut down the number of trips to the carrier. Attention was focused on the airframe of a newly introduced AEW aircraft, the Grumman E-2 *Hawkeye.* Modifications of the big radar surveillance plane removed the huge overhead radar rotodome, extended and widened the interior, added a rear cargo-loading ramp and lowered the four-finned tail. The result was the wide-bodied C-2A *Greyhound,* a big flying truck or bus with an aft-loading ramp, which joined the fleet in 1966 with triple the payload capacity of the older C-1 and nearly twice the speed.

Some technical concerns involving the C-2A's reliability were subsequently overcome and the *Greyhound* continues today as the fleet's major long-distance supply truck. (Other aircraft are also used to a limited degree for carrier onboard delivery. KA-3Bs have been utilized for some long-range COD missions; H-53s regularly fly short hops in the Mediterranean; and one US-3A is used in the Pacific Fleet.)

Only a small number of the new C-2s were purchased and the bulk of these were deployed to the Pacific to maintain the flow of priority material and people to the Navy's carriers standing off Vietnam. The fleet's COD squadrons operated in the Vietnam Conflict in the late 1960s and early 1970s, performing feats of logistic service that won a number of awards. Fleet Tactical Support Squadron 50 received the Meritorious Unit Commendation for its services between the Subic Bay support base in the Philippines and the carrier task forces at Yankee Station in the Gulf of Tonkin from October 1966 to January 1969: "For exceptionally meritorious service . . . in providing around-the-clock air logistic support, in all weather conditions, to deliver high-priority passengers and vital parts for aircraft and ships, mail and critical munitions. . . . " To provide around-the-clock support, VRC-50's CODs delivered a daily average of 19,500 pounds of critical cargo, passengers and mail to the carrier task forces. Many of the flights were made at night and in bad weather.

At the height of the Vietnam War in 1969, VRC-50's C-2s averaged 2.9

round trips daily from Cubi Point, Philippines, to the carrier *Kitty Hawk* during one 125-day period. COD cargo deliveries averaged 18,000 pounds per day with a typical payload of about 6,000 pounds. Later, during the *Pueblo* crisis, the same squadron airlifted about 160,000 pounds of critical materials and munitions in five days to Task Force 71 in the Sea of Japan.

More recently, during the October 1973 Arab-Israeli war, another COD squadron, VRC-24, made 33 flights from its base in Italy to fleet carriers in the Mediterranean, carrying hundreds of passengers, over 10,000 pounds of cargo and 38,000 pounds of mail.

Based on combat records and fleet exercises, analysts have determined that to take part in a sustained conflict today an aircraft carrier probably would need about 28,000 pounds of supplies daily — some 10,000 more than were needed 10 years ago. Again, the increased need can be related directly to the greater support demands of the newer, more sophisticated combat planes and weapons.

Underway replenishment ships normally resupply a carrier every 10 to 30 days at sea, depending on the area, the tempo of operations and other factors. But this does not satisfy the constant demand for high-priority replacement parts, and often the unavailability of certain items may render an aircraft not operationally ready because of supply problems.

Delivery of these critical parts by ship to a repair depot ashore is not the answer because of the time required. While the COD can make such deliveries on a daily basis, it requires a sufficient number of up-to-date cargo planes to do so. Navy planners are looking ahead to strengthening its COD force, especially since the present schedule calls for retiring all C-1 *Traders* — three-fourths of the current COD fleet — in 1983.

Right now, the C-2As in the fleet are undergoing a service life extension program that will extend their usefulness well into the 1980s. However, tomorrow's Navy will need a lot more of the big flying trucks, with their big volume and payload capacity, to help keep the carriers adequately supported for whatever level of air operations may be demanded of them in the 1980s and beyond.

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naval aircraft

HSL-1

The first built-for-the-purpose ASW helicopter? Must have been a Sikorsky. The largest production tandem-rotor helicopter in the mid-Fifties? Certainly a Boeing-Vertol (or Piasecki, the company's earlier name). Wrong on both counts! Bell proposed a tandem-rotor design which won the Navy's first ASW helicopter competition in June 1950. By the time the first XHSL-1 prototype flew in May 1953, production of the hunter-killer antisubmarine helicopter had been ordered for both the U.S. Navy and the British Royal Navy. As events turned out, the HSLs never saw operational service with either navy; however, a small number were pioneers in the airborne mine-sweeper role. The HSL remains one of the least known Navy production helicopters, and it never even got an official name.

With the award of the contract for three XHSL prototypes, engineering design and construction of a mock-up were under way at Bell's Niagara Falls plant in the fall of 1950. Using two two-blade rotors of typical Bell design, powered by a 1,900-horsepower P&W R-2800 engine, the HSL could be operated as either a hunter, with a crew of four and dipping sonar, or a killer, carrying only two crewmen and two Mk 43 torpedoes. Gross weight limits dictated the either/or arrangement, although all HSLs would be able to operate in either mode. Mock-up inspection was completed in December 1950. As development proceeded over the next year, the magnitude of the task undertaken became apparent: Predicted weight increased and the first flight schedule slipped, both significantly. Confidence in the eventual solution of the problems was evident in the award of a contract for initial production HSLs. Bell was proceeding with plans to separate its helicopter business from the aircraft/missile plant, and relocate the helicopter work, including HSL production, in Fort Worth, Texas.

By mid-1952, the first flight article was completed at Niagara Falls and shipped to Fort Worth where ground operations began on July 31. The need for ASW helicopters in the fleet had resulted in production planning for 210 HSLs, including those for Britain, and initial production efforts were accelerated. At the same time, because of concern over delays in XHSL development, the XHSS-1 program at Sikorsky was begun as a backup. By the end of the year, ground running problems had been overcome to the extent that the first flight could be planned and initial hovering took place in March 1953. It was evident by then that production was getting ahead of the development program, and production priority was cut back. Full flight testing of the XHSL-1, commencing in July, disclosed the need for many improvements. A single, triple and finally a double-fin configuration appeared on the flight test aircraft. Other modifications were numerous, though not as evident to the eye. Production HSLs were completed starting in the fall with the early ones joining the flight test program to improve progress. March 1954 saw the Navy preliminary evaluation conducted by NATC; further changes were undertaken to provide a suitable ASW helicopter. By summer, dipping tests using the auto stabilization system were under way at Fort Worth, and the number two XHSL-1 arrived at NATC for flight test demonstration.

Also in mid-1954, for the first time, the HSL was considered for the mission in which it ultimately achieved successful use: minesweeping. During the fall, BIS trials began; a special ground stand was used to test the aircraft in the nose-down towing attitude at high powers; and the first 55-foot-diameter rotors (51.5-foot rotors were standard) were tested. While progress was made towards an acceptable ASW design, the delays resulted in cancellation of the British order and reduction of the Navy buy to 75 at the end of the year.

The shipboard portion of BIS trials was conducted aboard *Kula Gulf* in March 1955. Although 100-percent availability was achieved with three aircraft for eight days, the trials were not completely successful. The aircraft's size, weight and manual blade folding resulted in less than satisfactory shipboard compatibility. ASW trials had also revealed that the very high interior noise of the HSL prevented the sonar operator from properly classifying contacts. As a result, HSL production was further cut back to 50 in July 1955, and the Navy settled on the Sikorsky HSS-1 (SH-34G) as its ASW helicopter.

The HSL's tow capability was evaluated at Corpus Christi, Texas, January-April 1955. During this preliminary evaluation, static pull tests were accomplished and a 310-ton floating yard salvage derrick (YSD) was towed at up to 18 knots. (The YSD was chosen for this test because of its enormous underwater drag.)

ASW Helo

XHSL-1 First Flight

HSL-1

XHSL-1

HSL-1

Rotor diameter	51'6"
Fuselage length	39'9"
Height	14'6"
Engine	
one P&W R-2800-50	1,900 hp
Maximum speed	100 knots
Hover ceiling (OGE)	9,000'
Maximum range	3,000 nm
Hunter	
crew - 4	
no armament	
Killer	
crew - 2	
armament - two Mk 43 torpedoes	

The HSL was evaluated by the Army at Fort Rucker in January 1956 for use as a troop transport, but no orders were placed.

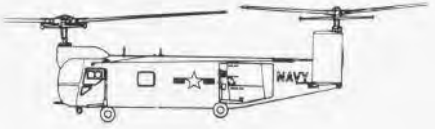
Two tests with minesweeping equipment began in early 1956 at the Navy Mine Defense Laboratory, Panama City, Fla. The HSL was used to tow the size-5G minesweeping gear and proved the lead sweep concept during fleet exercises in August 1957. Additional shipboard evaluation tests were accomplished on an LST following NATC tests aboard USS *Talbot* in the Chesapeake Bay in April 1956.

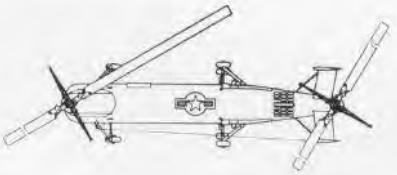
Most of the production HSLs were delivered to Naval Air Stations, Norfolk and North Island in mid-1956 for storage. Six were modified to the minesweeping configuration. As a result of the successful minesweeping evaluation, these were operated at Panama City by the Naval Air Mine Defense Development Unit, supplied by spares from the stored HSLs. The last HSL was flying at NAMDDU until April 1960.

In early 1960, an HSL fuselage was truncated, stripped and slung underneath the Sikorsky S-60 *Skycrane* to provide the capability to deploy, operate and recover the sweeping gear from the aircraft. Although an ignominious ending for an HSL, it was a milestone in minesweeping because it demonstrated that it was feasible to operate without a ship.

The last production HSL was retained at Bell for control system test work to provide mechanical, as opposed to electronic, stabilization and was delivered to the Navy on February 24, 1959.

(Appreciation is extended to Mr. T. H. Thomason of Bell Helicopter for his assistance in preparing this material.)





Plying

The Skyway

Photographs of aircraft operated by the Coast Guard from the days of its first aviator, Lieutenant E. F. Stone (copilot of the Navy NC-4, the first airplane to cross the Atlantic) to the present have been published in a pamphlet entitled *United States Coast Guard Aircraft 1917-1977.*

Compiled by R. W. Davis and W. J. Cohn, the work is a chronology in photographs. A random sampling is reproduced here and on the following pages.

At left is a Sikorsky HO4S-3 (1951-1966) demonstrating the use of a hydraulic-hoisted basket in rescue work. These aircraft were fitted with "Tugbird," a Coast Guard air-sea rescue concept which provided the capability of towing fishing vessels, pleasure and other types of vessels in distress. Two versions of the helicopter, HO4S-2G and -3G, were procured.

The long-range capability and reliability of the Convair P4Y-2G (1945-1959) made these aircraft particularly suitable for use over the ocean. The *Privateers* were based in San Francisco, Calif., and Barbers Point, Hawaii.

The Sikorsky HNS-1 (1943-1948) was used as a rescue vehicle. The one pictured was disassembled in 1946 and flown to Goose Bay, Labrador, in an R5D. It was reassembled and used to rescue 13 Canadian airmen who had been marooned for 13 days in the frozen tundra.

The Viking 00-1 flying boats (1931-1941) were lightweight biplanes used for landing in the open sea. They cruised at 75 knots and had a range of 390 miles.

Fokker (General Aviation) PJ-1 (1932-1941) was the first rescue plane designed specifically for Coast Guard use. It was known as the "flying lifeboat" and was built to transport stretcher cases. These had Pratt and Whitney Wasp R-1340-C-1 engines and fixed-pitch Hamilton Standard propellers.

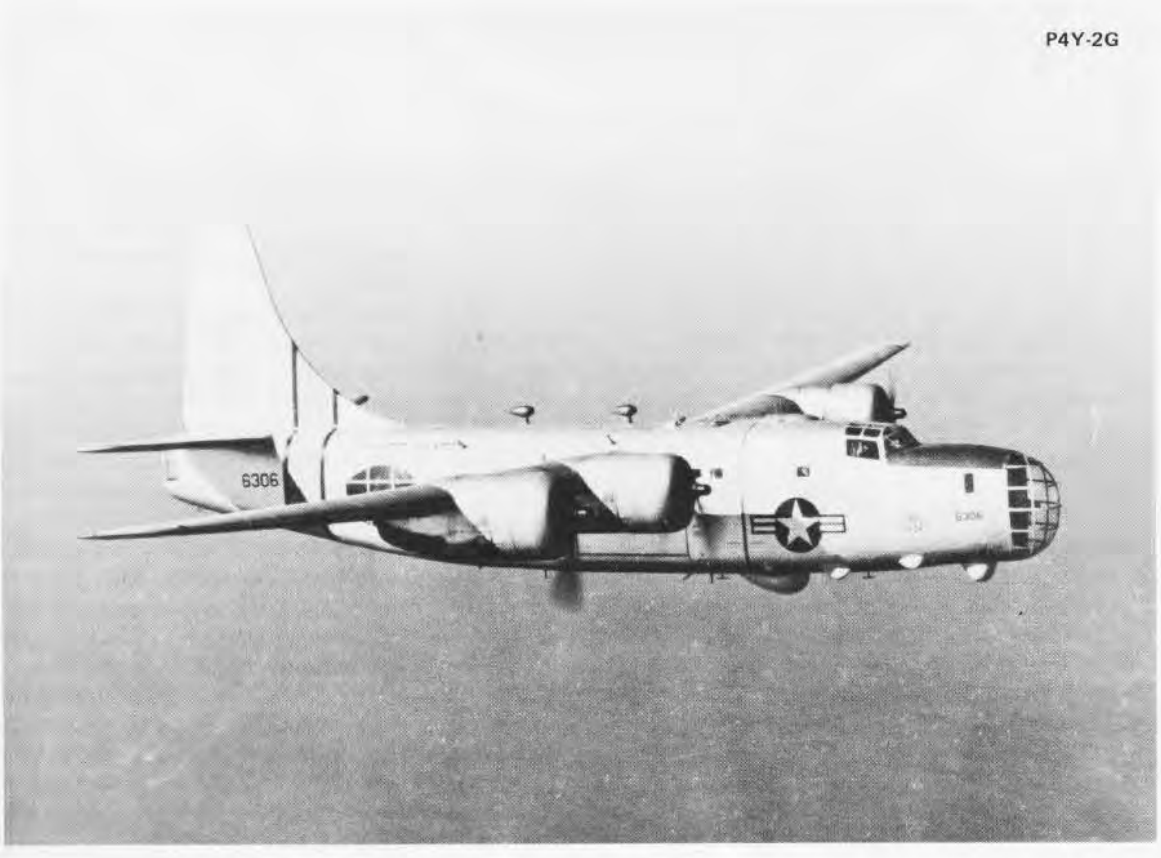
The basic difference between the PJ-1 and PJ-2 was the engine mounting. The sole PJ-2 (serial number 251) had two Pratt and Whitney Hornet engines mounted in the tractor position.

The Coast Guard operated 14 of these Grumman JF-2 (1934-1941) amphibians. This one, V144, was used aboard the cutter *Spencer* in Cordova, Alaska. Aircraft of this type set a speed record in 1934 for flying a three-kilometer course at 191.8 miles per hour, and a load-carrying record in 1935 of 1,102 pounds.

The Northrop RT-1 (1935-1940) was the only *Delta* purchased by the military and was used as a command transport for the Secretary of the Treasury, a utility plane and for personnel transport.

The Consolidated PBY (1942-1954) shown making a full stall landing was employed for every conceivable mission. The amphibian version of the *Catalina* was designated PBY-5A and -6A.

P4Y-2G



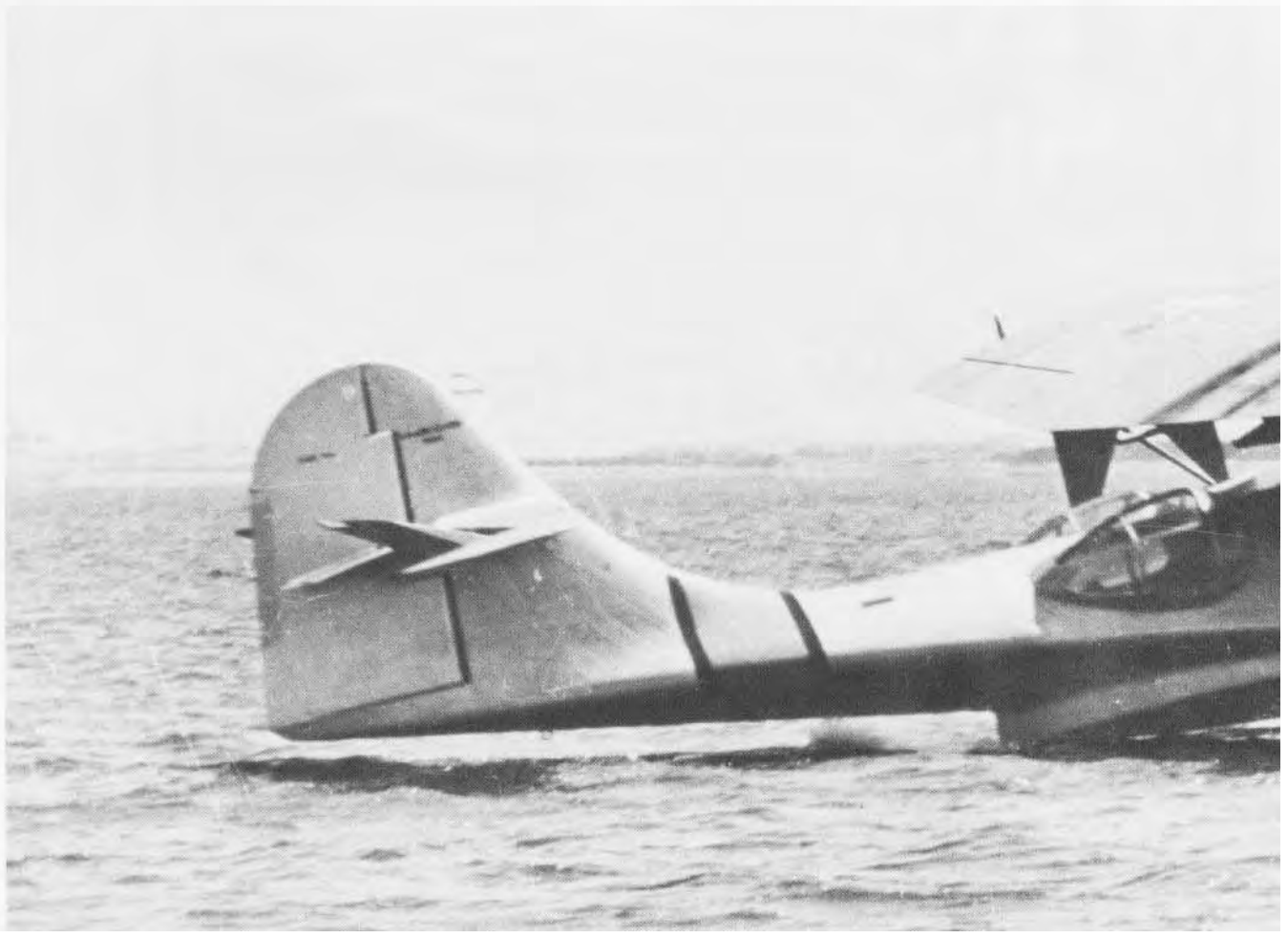
HNS-1

00-1

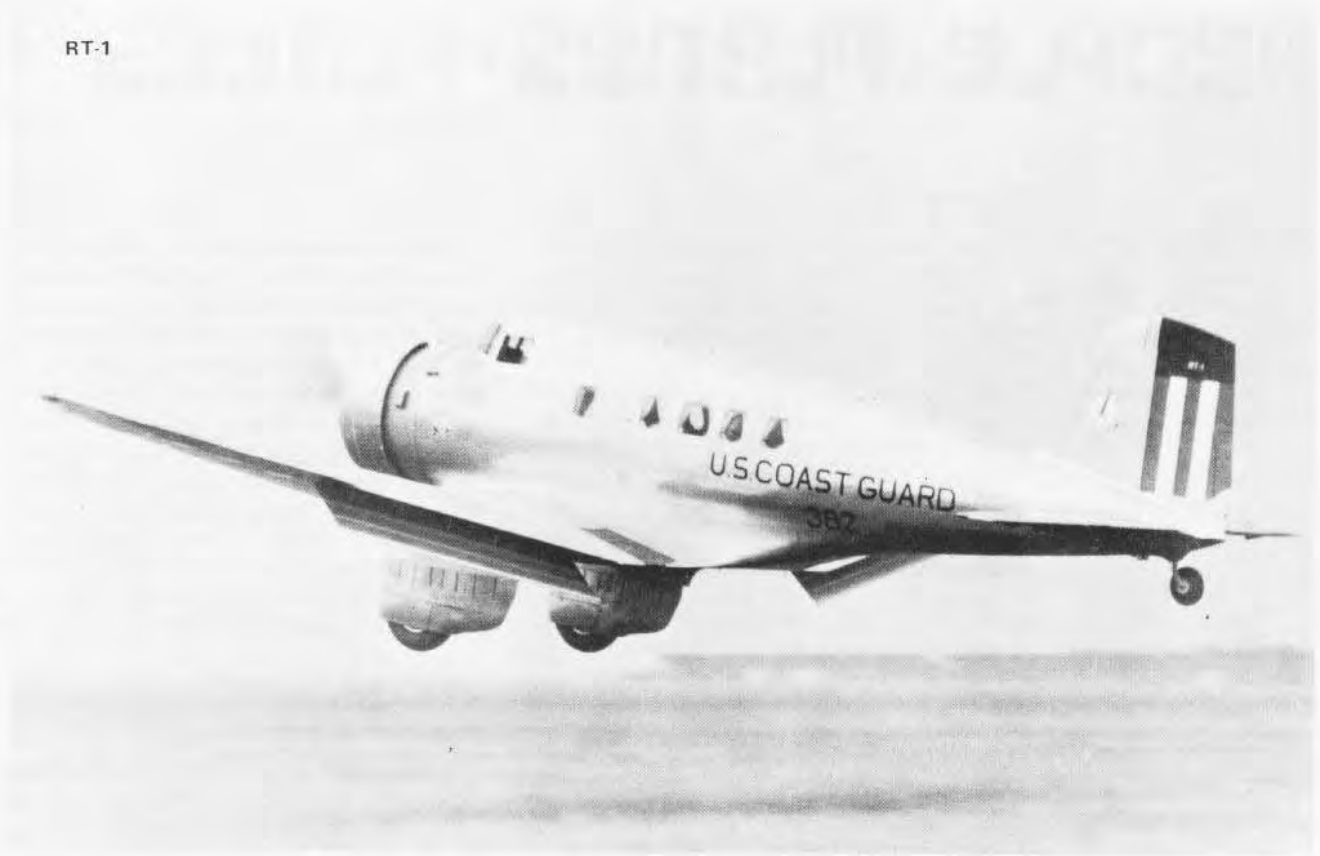
PJ-1

PJ-2

JF-2



RT-1



PBY

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Records

An E-2C *Hawkeye* from VAW-125, piloted by Ltjg. Bill Trolenberg, catches the number three wire to mark *Forrestal's* 250,000th arrested landing.

Recent flight-hour milestones were recorded by the following flyers in their respective aircraft. From VA-25: Cdrs. John Lockard and Jim Stell and Lt. Guy Vereb, 1,000 hours in the A-7; VAW-126: LCdrs. Johnny L. Roberts and Joseph F. Keller, 1,000, E-2C; VA-304: LCdr. Bill Blatt, 1,000, A-7B; VAQ-134: Lts. Ken Krech and Don Marcotte, 1,000, EA-6B; VFP-306: Cdr. Bob Norrell, 2,000, F-8; and VA-81: Cdr. George Webb, 3,000, A-7. VF-213's LCdr. Joe Zahalka surpassed 1,000 hours as a RIO in the F-14.

More records were achieved in flight hours. From VAW-121: Lts. Bill Wolters and Doug Payne, 1,000, and C.O. Cdr. Jay Sprague, 2,000, in the E-2C. HSL-33: LCdr. Michael Putnam, 1,000, and LCdrs. Robert Doane and Charles Raysbrook, 2,000, in the SH-2. VA-97: LCdrs. Mike Surdyk and J. R. Hutchison and Cdr. Mike McGrath, 1,000; X.O. Cdr. Mike Bowman, 2,000; and C.O. Cdr. Dave Carroll, 3,000, in the A-7. VF-102: LCdrs. Jon Everett and Jerry Harp, 2,000, and C.O. Cdr. Dan Bunting, 3,000, in the F-4.

Several units recorded safe flying milestones: VF-1, 5,000 hours; NARF Jacksonville, 13,000; VC-1, 17,000; VS-38, 18,000; VA-15, 22,000; VP-67, 25,000; VA-113, 28,500; HSL-31, 30,000; and VXN-8, 57,000; VAQ-136, 9,700; VF-21, 12,400; VF-24, 13,000; VF-154, 13,500; VF-51, 19,000; VA-147, 30,000; VA-146, 36,175; MAG-36, 40,000; VA-128, 65,000; VQ-4, 88,000; VP-40, 93,000; and VF-302, 8 years.

Awards

Several squadrons were presented with the Donald M. Neal Aircraft Maintenance Award, which is given annually to ASW and patrol squadrons demonstrating the greatest excellence in aircraft maintenance. Also called the Golden Wrench Award, it is sponsored by Lockheed Aircraft Corporation. VS-21 and VP-4 were the West Coast winners, with VS-22 and VP-44 representing the East Coast. VP-69 was winner for the reserve community.

VF-103's LCdr. Clifford "Smokey" Bateman was selected as the East Coast Fighter Pilot of the Year at the annual Fighter Fling in Virginia Beach, Va. Flying the F-4J *Phantom*, LCdr. Bateman demonstrated sustained superior performance in positions of exceptional responsibility and accountability. He was also recognized for individual ACM excellence by consistently placing among the top 10 carrier aviators in *Saratoga's* air wing.

Ltjg. Albert G. Seither, Jr., VF-142, was awarded the 1979 Daughters of the American Revolution Achievement Award for completing flight training with the highest overall grade for Navy students during the year. Seither is currently serving with the *Ghostriders* aboard *Eisenhower*.

VF-74 won *Forrestal's* Golden Tailhook Award for the ship's 1979-80 cruise. Pilots were graded for each carrier arrested landing and squadron grades were averaged at the conclusion of *Forrestal's* Med cruise. The *Be-Devilers* won three of six grading periods for the year, led by LCdr. Dan Gabriel who was named the No. 1 air wing tailhooker of the cruise.

Last April, Miramar's LCdr. Sharon Gurke and AC1 Linda Spencer were presented the Captain Winifred Quick Collins Award for Inspirational Leadership. The ceremony took place at a Navy League convention in Washington, D.C., where CNO Adm. Thomas B. Hayward was guest speaker. Gurke was honored for her accomplishments as Miramar's AIMD officer and Spencer was cited for her managerial expertise in the exacting, high-pressure occupation of air traffic control supervisor.

Anniversary

June 1980 marked the 28th anniversary of NAS Cecil Field. On June 30, 1952, the auxiliary air station was designated a naval air station and the following year began operating as a master jet field. Over the years, Cecil has been the home of squadrons from CAGs 1, 3, 4, 10 and 13. Some of the aircraft flown from the air station in the past include the F2H *Banshee*, F9F *Cougar*, F8U *Crusader*, A4D *Skyhawk*, F4D *Skyray*, FJ *Fury* and F3H *Demon*.

Rescues

In May, the *Bullfrogs* of HC-16, led by Cdr. R. B. Beougher, sent a detachment to assist the Coast Guard in Florida during the massive Cuban exodus. Three HH-46A *Sea Knights* and 29 personnel embarked in *Saipan* off Key West to conduct day and night air searches for disabled vessels. More than 4,000 boats, 16 feet in length and over, attempted the 110-mile crossing from Cuba to Florida. According to HC-16's PAO, Ltjg. Ken Bitar, the helo crews contacted *Saipan* about all boats that passed through the area. When they found a vessel dead in the water, they reported its position to the ship so that a boat could be sent out to pick up passengers. The refugees then started the initial processing aboard the ship. "Search and rescue is waiting for something to happen," said Lt. Letchworth, a veteran of 1,000 flight hours in the HH-46. "That means each helo and crew on this mission must be ready to deploy instantly. Fortunately for the boat captains and their passengers, the weather remained relatively calm, which reduced the need for assistance."

Fourteen members of Memphis-based VP-67 spent a day last May engaged in the rescue of 26 Vietnamese refugees. While on an AcDuTra patrol mission from NAF Kadena, Okinawa, the crew made radar contact with a small object about 160 miles east of Vietnam in the South China Sea. They found a small wooden craft, which signaled the *Orion* crew by waving a red flag and reflecting sunlight from a mirror. After they were unable to communicate with ships in the area because of the language barrier, the P-3 crew finally contacted the British merchantman *Baron Wymess*, and led the ship to the refugees. The entire rescue effort, from time of discovery until the successful pickup by *Baron Wymess*, took three hours and 20 minutes. The *Orion* was piloted by LCdr. Dennis Smart and commanded by LCdr. Jim Chambless.

Honing the Edge

The Korean Air Base at Yechon has become home for Marines on field training, who are normally stationed at Iwakuni or Okinawa. In an area that was once a recreation and soccer field for the base, a minia-

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ture city of 70 tents now stands. "It took about two weeks to build the hardback tents," said Capt. Richard Gregg, from Det D, MWSG-17. "It wouldn't have taken us that long but the rains slowed us down

some." In photo, Marines check an F-4 *Phantom* to ensure all is ready for flight and for practice bombing and close air support.

VF-154's *Black Knights* became the first operational Pacific Fleet squadron to participate in USAF Rapid Deployment Force *Red Flag 80-4* at Nellis AFB, Nev. *Red Flag* is an exercise developed to train the newly organized RDF, designed for quick reaction worldwide. VF-154 is also the first Navy fighter squadron to complete transition to

the F-4S *Phantom II*, an improved version of the F-4J, with the addition of maneuvering slats and improved reliability modifications. C.O. Cdr. G. N. Cook took the photo over the Sierras of the squadron's new aircraft with modified markings.

The *Renegades* of VF-24, pictured over *Constellation*, set a record last May in flight hours while deployed in the Indian Ocean. The *Renegades* flew 779 hours and logged 219 day landings and 107 night traps. Lts.

James Barnett and Ted Harelson logged their 200th *Connie* trap, while LCdr. Jerry Brown and Ltjgs. Chris Berg and John Sill made their 100th.

During the period December 21, 1975, to December 20, 1979, NS Keflavik received special recognition for meritorious achievement in aviation safety. Its two assigned C-118s are used for logistics and training flights and to transport personnel and supplies to and from Europe and the U.S. In 1979, they flew a total of 325,400 miles and 900 flight hours, and carried 74,500 pounds of cargo and passengers. The problems of maintaining 30-year-old aircraft are monumental. Although staffed at 46% of the manning level, flight crew personnel consistently got the job done, performing all of the necessary maintenance functions. While maintaining a 95% mission-capable rate for the aircraft, they completely renovated all OMD spaces, implemented a material/corrosion control program and improved the condition of station aircraft, despite the adverse working conditions of the Keflavik climate. Officials at NARF Norfolk commented that this program is one to be emulated by all.

Et cetera

During a recent port call at Pearl Harbor, Number 805 Squadron on board HMAS *Melbourne* invited its fellow *Skyhawk* pilots from VC-1, Barbers Point, to come

aboard for a tour. Ltjgs. Lucy Young, left, and Andrea Rice, TA-4J pilots from VC-1, accepted the invitation and spent most of the day with the Australian squadron.

It seems fitting that one of the men who wrote the standards for the new Enlisted Aviation Warfare Qualification Program would be the first to complete his personnel qualification standards (PQS) for the program. AD1 David Grimsley received his wings from Moffett Field's VP-31 last May 21. The program involves completing PQS for naval tasks ranging from administrative duties to warfare, first aid and firefighting. It requires the participant to know almost every aspect of Naval Aviation.

These sailors from VFs 101 and 171 and FitWing-1 staff give Oceana's welcome sign

a face-lift in the form of a complete repainting. The F-4 *Phantom II,* near the air station's main gate, has greeted visitors since June 13, 1979.

Change of Command

ComPatWingsPac: RAdm. Gerald W. Mackay relieved RAdm. Charles O. Prindle.

CVW-6: Cdr. T. W. Wright relieved Cdr. R. C. Allen.

CVW-9: Cdr. William E. Newman relieved Capt. Melvin D. Munsinger.

FASOTraGruPac: Capt. Robert G. Conaughton relieved Capt. Robert E. Fraser.

H&MS-31: Maj. J. A. D'errico relieved LCol. John C. Sease.

H&MS-36: Maj. David R. Nay relieved LCol. John M. Tuttle.

HS-3: Cdr. Paul L. Nelson relieved Cdr. Harold E. Perry.

HSL-30: Cdr. E. Earle Rogers II relieved Cdr. R. H. Jesberg.

Kennedy: Capt. Diego E. Hernandez relieved RAdm. Lowell R. Myers.

MAG-31: Col. James M. Mead relieved Col. Jack P. Moore, Jr.

MATCS-18: Maj. Delores Gresham relieved Maj. Edward M. Cooper.

NAF Bermuda: Cdr. Wallace H. Snyder relieved Cdr. Richard C. Leavitt, Jr.

NAF Washington: Capt. James G. Pirie relieved Capt. Joseph A. Muka, Jr.

NavAvScolsCom: Capt. Robert L.Rasmussen relieved Capt. Philip J. Ryan.

NavPRO Bethpage: Capt. Richard Breckon relieved Capt. Norio Endo.

2nd MAW: MGen. William R. Maloney relieved MGen. Hal W. Vincent.

VA-15: Cdr. John Coonan relieved Cdr. John Mazach.

VA-87: Cdr. Dan Hill relieved Cdr. Lewis Dunton III.

VA-192: Cdr. Thomas B. Latendresse relieved Cdr. John L. McWhinney.

VF-74: Cdr. Robert S. Cole relieved Cdr. Michael A. Malchiodi.

VF-161: Cdr. J. L. K. Corcoran relieved Cdr. Andrew L. Burgess.

VMFA-251: Maj. David A. Richwine relieved LCol. Patrick J. Jones.

VP-44: Cdr. Richard E. Goolsby relieved Cdr. Donald W. Avery.

VP-45: Cdr. Lester W. Carl relieved Cdr. Robert F. Stephenson.

VP-92: Cdr. William D. Dobbs relieved Cdr. John A. Wills, Jr.

VRC-30: Cdr. Donald R. Gapp relieved Cdr. William J. Dooley.

VS-21: Cdr. Richard M. Sanford relieved Cdr. Dayton W. Ritt.

VT-6: Cdr. Edward G. Stacy relieved Cdr. James R. Edgar.

Reliability and Maintainability

By Tom White

One element of the F/A-18 development program at NATC is evaluation of the reliability and maintainability of new and modified weapons systems sent to the test center by the Naval Air Systems Command, for eventual fleet use.

According to Major Rod Campbell, USMC, head of the Reliability and Maintainability (R&M) Branch in the Strike Aircraft Test Directorate, the two most important projects currently being evaluated by the R&M branch are the F/A-18 *Hornet* and the AV-8 *Harrier*. Of the 40 military and 18 civilian personnel assigned to the branch, 38 military and 10 civilians are directly involved in the development of the *Hornet*. Additional personnel will join the AV-8 program later in the year as that project progresses.

Navy and Marine Corps personnel assigned to the F/A-18 program act as monitors. They physically watch the contractors' maintenance of the aircraft and document deficiencies. "They are the watchdogs," says Maj. Campbell.

"Now that the prototypes are being flown, our people gather data on equipment reliability. This is the ability of the equipment to function over a specified number of flights without degradation or breakdown under specific conditions or environment."

Monitors in the hangar used by McDonnell Aircraft Company for the F/A-18 turn in deficiency reports to R&M civilians, who key the data into a computer. The data are compared with specifications and analyzed for failure rate per flight hours, and man-hours for repairs versus flight hours. Items which have an unacceptably low reliability are reported to McDonnell for further study to clear up any discrepancy.

The *Hornet* has been designed for ease in maintainability. Equipment which must be replaced most often is located for easy access to maintenance crews. To replace a radio, for example, may take just 10 minutes in the F/A-18.

Monitors verify maintenance publications produced by the contractor to ensure that they are correct and complete. They complete spot checks on certain tasks and submit any necessary changes to the contractor.

R&M personnel also make sure that existing ground support equipment such as tow bars and generators are compatible with the aircraft. Much that was previously considered ground support equipment is built into the F/A-18.

Most aircraft require special computerized test equipment to see if the aircraft's systems are operating correctly, and this equipment has been built into the *Hornet*. In effect, the aircraft sends itself a test signal and the answer comes back, "I am well" or "I have a problem."

R&M monitors are particularly careful about noting any problem areas in this aircraft — for good reason. The on-site development program for the F/A-18 has been so designed that the monitors will become the maintenance personnel in the first training squadron for the *Hornet* after it has been accepted for delivery to the fleet.

Eleven *Hornets* are assigned to the full scale development program at NATC Patuxent River, Md., two of which are the TF-18A two-seat version. The latter is identical to the F/A-18A single-seat version except that a second cockpit with dual controls and a longer canopy have been added at a slight reduction in internal fuel capacity.

A heads up display (HUD) of advanced design presents essential data at normal eye level for the pilot. The up front control, below the HUD on the instrument panel, displays and controls all communication, navigation and identification functions. The pilot need not take his hands off the throttles or stick to perform essential switch operations. All systems have backups for display and operation.

The flight control system is a quadruple, redundant, fly-by-wire system with a mechanical backup to the stabilators. The flight controls consist of both leading and trailing edge flaps, ailerons for lateral control, which are drooped for increased flap area, twin vertical stabilizers and rudders, differential stabilators, and a dorsal speed brake. There are two hydraulic systems, either of which can operate each flight control surface actuator. Two computers control the flight control system.

Built-in-test is designed into almost all systems for rapid fault indication and isolation. To aid the maintenance man, a maintenance monitor panel is incorporated in the nose wheel well. At the end of each flight, the panel is checked for digital codes indicating system faults and fluid servicing requirements. This eliminates the need to check individual fluid levels and allows a more rapid turnaround of the aircraft.

The F/A-18A and TF-18A aircraft are identical to the maximum degree possible so that the aircraft can perform fighter, attack and training missions by changing a minimum of components. Aircraft commonality reduces life cycle costs by reducing training, spares and support requirements. Commonality, safety, reliability and maintainability were given equal status with performance as Navy F/A-18A design requirements. High reliability and maintainability reduce repairs, maintenance and servicing — thus improving aircraft readiness and mission performance.

Navy engineers have been working closely, during full scale development, with McDonnell Aircraft Company and Northrop Corporation engineers for the aircraft, less the engines; and with General Electric Company engineers for the engines. Contractor tests are monitored by the Navy. While Navy and Marine Corps test pilots are flying the F/A-18As and verifying performance, Navy and Marine Corps maintenance personnel are observing contractor maintenance to evaluate the reliability and maintainability of the aircraft. The combined efforts of the Navy/contractor test program are helping to reduce test time and costs while providing an all-systems-ready aircraft to the fleet.

By George Haliscak

SEA SLEDS

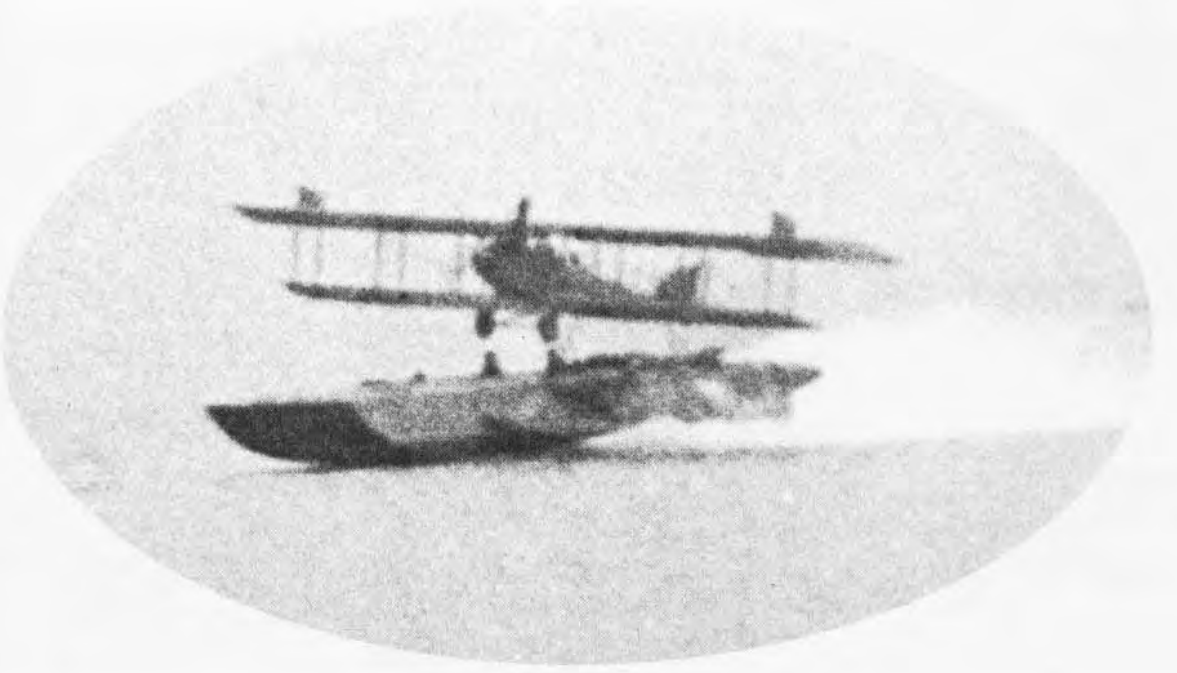
Commander Henry C. Mustin, Naval Aviator No. 11, was an early advocate of a strategic power projection role for Naval Aviation. As the ranking Naval Aviator, he established the aeronautic station at Pensacola and was its first commandant. He commanded the air unit at Vera Cruz, Mexico, in 1914, and in 1915 he made the first catapult launch from a ship underway.

When the United States entered World War I, in early 1917, the situation of the Allies was desperate. The German government had begun unrestricted submarine warfare, and Allied shipping losses were growing at an alarming rate. Delegations from France and England requested massive American assistance in the fight against the submarine menace, including planes, aviators and seaplane carriers. However, at that time we had very few planes and aviators, and no seaplane carriers or ships that could be spared for conversion.

It was against this background, in response to a request from the Chief of Naval Operations for war-winning suggestions, that Cdr. Mustin submitted "Plans for Air Operations against German Naval Bases, including a Plan for an Air Attack on Essen." These plans hinged on the use of aircraft-carrying hydroplanes called sea sleds, based on designs by Alfred Hickman. The sea sleds had been used as crash boats at Pensacola in 1916. Mustin was intrigued with the possibilities of the sea sled, and had conducted model towing experiments, using the sea sled's special hull design — an inverted vee-form forward, and a flat afterbody. Another feature which added to the high speed capability was the use of surface propellers, also invented by Hickman, in which only the bottom half of the propeller was submerged when the sea sled was at planing speed.

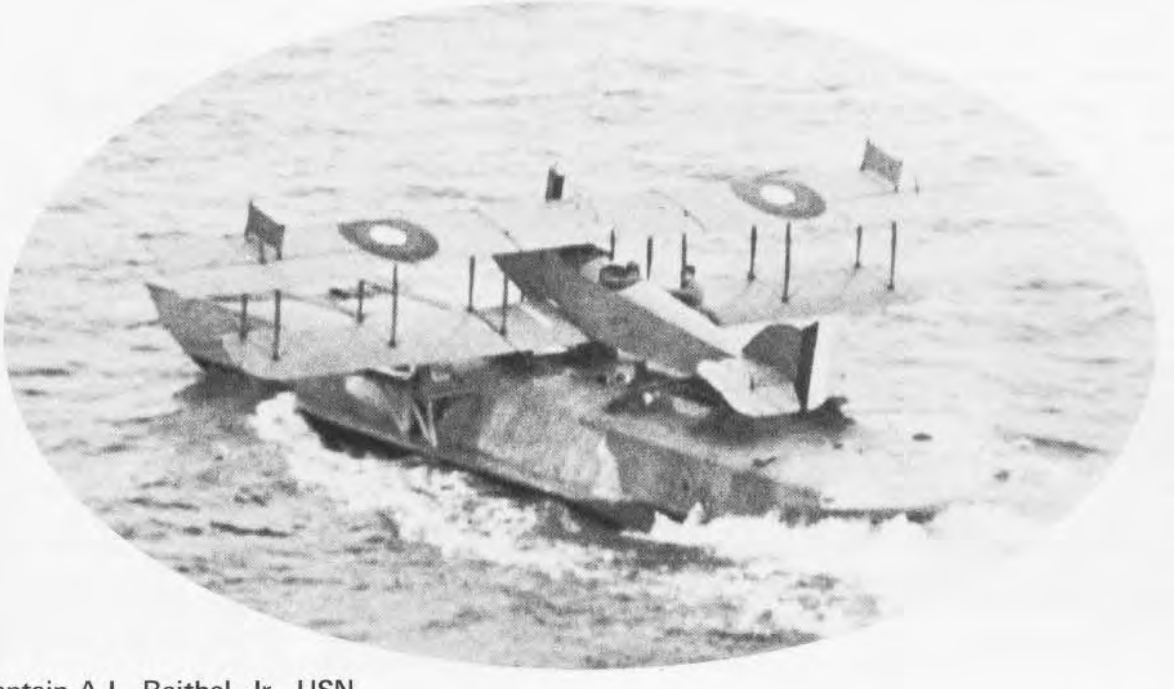
Cdr. Mustin's plans called for the use of three types of aircraft: a single engine fighter or reconnaissance plane armed with guns or cameras; a single-engine bomber capable of carrying a 500-pound bomb; and a three-engine bomber capable of carrying a torpedo or a 2,000-pound bomb. The first two types could be adapted from existing aircraft, but the third would require a new design, and Mustin provided the details.

The plans called for a minimum initial procurement of 2,800 sea sleds and aircraft, 2,800 reserve aircraft and other appropriate spares. A number of factors determined the large size of the force, including errors in bombing; the requirement to drop a large number of bombs as the radius of effect was small; projected losses due to heavy anti-aircraft fire; the requirement for multiple torpedo hits to sink major naval vessels; the requirement for at least one raid each day to achieve the desired disorganization; and finally to replace training losses.



Top left, Navy N-9 airborne; top right, launching from Sea Sled; bottom, on Sea Sled.

Photographs from H. C. Mustin Collection



By Captain A.L. Raithel, Jr., USN

Mustin proposed that, if the Netherlands could be persuaded to agree, the force be based on Texel Island. Then the Zuider Zee, together with the protected waters inshore of Vlieland, Terschelling, and Ameland Islands could be used as a giant aerodrome. The sea sleds could launch in formation and there would be no requirement for the aircraft to use additional fuel for join-up. As an alternative, in the event that the Netherlands failed to agree to the Texel proposal, the force could be based at Yarmouth, England. This would add greatly to the complexity of the operation, and would require much greater internal fuel capacity for the sea sleds.

The plans were reviewed for CNO by Lieutenant Commander John H. Towers, Naval Aviator No. 3. He recommended Cdr. Mustin be ordered to temporary duty with CNO and that the Bureaus of Construction and Repair and Steam Engineering complete and check the plans. Following Mustin's arrival, additional model tests were conducted at the Washington Navy Yard. On May 27, 1918, the firm of Murray & Tregurtha, of South Boston, Mass., was issued a contract for two 50,000-pound sea sleds, each 55 feet long, powered by four 450-horsepower engines.

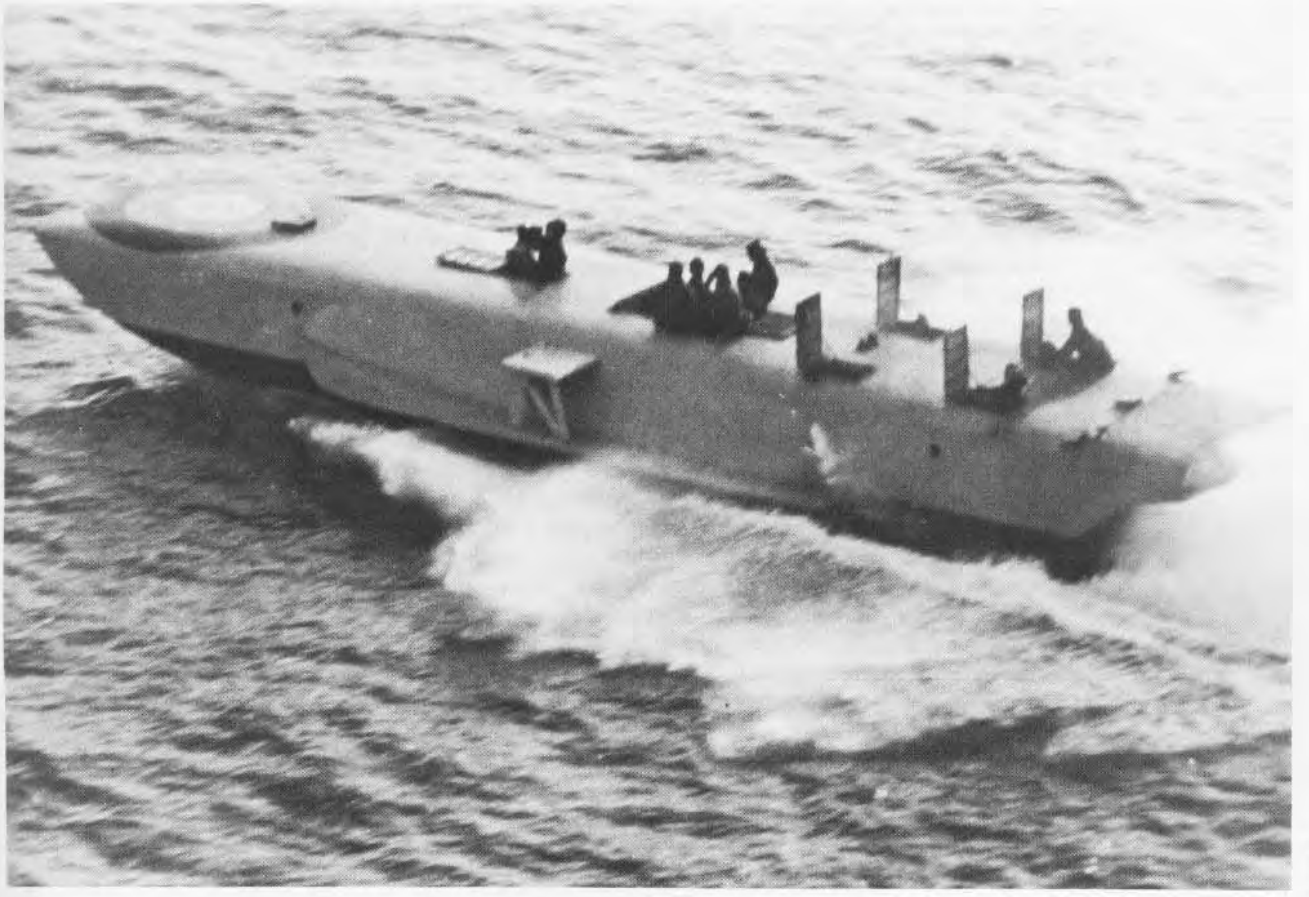
Realizing that operation with the heavy bomber would provide the most critical test for the concept, Mustin and naval constructor J.C. Hunsaker, the Navy's first aeronautical engineer, worked together to adapt the Caproni bomber for the forthcoming tests. The Army Air Service procured a Ca.5 bomber from the Italian Caproni Company and loaned it to the Navy for the trials.

Lieutenant Louis T. Barin, USNRF, chief pilot of the experimental department at NAS Hampton Roads, Va., successfully landed the large Caproni on the dirigible field at Hampton Roads. The field was about one-third the size of that prescribed for such a plane. The Caproni was loaded aboard the sea sled under the watchful eye of Captain Ugo V. D'Annunzio, Italian Air Force, Count Caproni's personal representative. On November 15, 1918, the combination went to sea. With all engines running at full power, a speed of 60 miles per hour was attained — more than that required for the takeoff of the Caproni Ca.5. Ensign Alfred Wolff, USNRF, awaiting takeoff in his HS-1 flying boat, saw the sea sled and Caproni flash by and remarked to one of his crew". . . if they can do that from a sea sled, they can do it from the deck of a ship."

After further refinement of techniques, and development and functional test of the releasing gear, on March 7, 1919, a plane was launched from a sea sled for the first time in Naval Aviation history. A Navy N-9 landplane, piloted by Lieutenant Junior Grade F.M. Johnson, USNRF was launched at a speed of 50 miles per hour. On March 10, the trial was repeated successfully with the N-9 carrying an observer in addition to the pilot. With the completion of the trials, the sea sled aircraft carrier faded from the scene.

Though the sea sled project never saw combat, the ideas formulated by Cdr. Mustin for the strategic application of Naval Aviation in the power projection role were expanded and developed over the years and have served our nation in war and peace ever since.

Top left, Navy N-9 on Sea Sled; top right, Caproni Ca.5 bomber; bottom, Sea Sled underway.



TOUCH AND GO

POW

"Anytime I hear keys rattling," Captain J. M. Hickerson says, "I get a feeling of apprehension." Bob Hill says, "I get the same feeling when I hear a door being kicked open."

The two men are former prisoners of war. Capt. Hickerson, now Pacific Missile Test Center's (PMTC) weapon systems test officer, is a Naval Aviator who was shot down in a raid over Haiphong in 1967. Captured by the North Vietnamese, he spent over five years in POW camps around Hanoi.

Mr. Hill, an electronics mechanic in PMTC's threat simulation department, was a boatswain's mate on USS *Pueblo* when it was taken captive by North Koreans in 1968. He was imprisoned for 11 months near Pyongyang.

When he hears keys rattling, Hickerson immediately thinks of the guard coming down the prison corridor to fetch a prisoner for an interrogation session or a brutal beating. Likewise, at the kick of a door, Hill instantly recalls the dread that he felt when the North Korean guards burst into the prisoners' quarters to haul out a luckless POW for one of the endless interrogation and torture sessions. Both men shared similar experiences. When they were taken prisoner, they were beaten and blindfolded.

"I was so scared I was shaking," Hickerson recalls. "So was I," Hill adds. "Especially when we heard people shouting 'kill the Yankees,' as we were riding in the bus to the prison camp, tied and blindfolded. We were kept that way for 12 hours that day." Also tied and blindfolded, Hickerson was taken by bicycle and helicopter to the POW camp.

Explaining the torture that was part of everyday life in both prisons, Hickerson recalls with irony the "cigarette break" affair. "A guard would be beating a prisoner unmercifully," he says, "when suddenly he would stop, saying it was time for a cigarette break. Then he would give the prisoner a cigarette and, as they both smoked, the guard would speak English in an almost friendly manner to the prisoner." Naturally, the American would smoke his cigarette down to the last shred of tobacco. Then the cigarette break was over and the guard returned to beating the prisoner with renewed vengeance. "Any signs of compassion from a North Korean guard," Hill notes, "resulted in his being immediately withdrawn from guard duty. They really monitored those guards."

Hill remembers once seeing a guard reading a book in English entitled *American Atrocities in the Korean War.* "He threw the book down, dragged a prisoner out from his cell, screamed at him and beat him till his anger died down."

The guards would often torture certain prisoners they considered troublemakers over and over again, Hill recalls. Both Hickerson and Hill agree that every prisoner had a different breaking point. The mere threat of being beaten was enough to make some compliant while seemingly endless torture couldn't break down others.

Capt. J. M. Hickerson

Just before the *Pueblo* crewmen were released from prison, Hill says, the North Korean captors made frantic efforts to cover up black eyes and other disfiguring torture marks on the Americans.

Both men relate similar stories about communicating with fellow prisoners. They were forbidden to talk with one another or communicate in any way. But that didn't stop them.

Ingenious prisoners worked out codes that could be wall-tapped, swept with strokes of a broom or coughed. They often used hand signals. They also mixed ground tile and water to make a red ink that they used to write notes to their fellow prisoners. These notes were left in make-do mailboxes (holes in the wall, etc.) or floated down the benjo (sewage) ditches.

"Our people from *Pueblo*

Bob Hill

were particularly good at devising new ways of keeping in touch with one another," Hill says, "because so many of the crew were communications experts."

Communicating was particularly important for the prisoners. During most of their imprisonment, they received no letters from home to cheer them up. They had only communist propaganda books and magazines to read and no sports or recreation of any kind.

"We were so bored," Hill says, "that we started betting on spider fights and made a game of killing flies. We even made a deck of cards out of toilet paper so we could play hearts or poker." All game playing took place when no guards were around.

The prisoners' nerves would be especially on edge when word leaked that they were about to be released. Then nothing would happen. Beatings would begin again and morale would plummet.

In both POW camps, the meager diet consisted of small amounts, often of maggot or rock-filled rice; water (no coffee or tea); cold, greasy soup with pieces of old, fermented fish floating in it; or delicacies like "sewer trout," a terrible-tasting fish in North Korea, and "sewer weeds," a North Vietnamese specialty featuring boiled grasses and awful-tasting weeds.

"We did have beer one time," Hickerson recalls, "and during Tet (Vietnamese New Year holiday) they gave us some orange wine."

When speaking of the clothes they wore, both men groaned at the memory of tattered underwear (scratchy muslin in North Korea) and socks, shirts and pants that were washed only once a month.

About their return to life at home in the United States, both Hickerson and Hill say they had no trouble adjusting immediately to normal life in the U.S.

"I had several nightmares," Hill admits, "but I enjoyed every minute of getting back into the swing of life here and had lots of fun being with my family and friends again in California and Pennsylvania."

Hickerson says his main problem was getting used to the new liberation – not the women's, but the men's – that had taken place during his years of imprisonment. "The men's fashions had changed tremendously," he recalls with a smile. It wasn't long before a friend asked him, "Where'd you get that loud shirt and tie?"

Letters

Tactical Reconnaissance

In the May 1980 issue of *NANews*, you state that the disestablishment of Reconnaissance Attack Wing One brings to an end the only naval warfare community dedicated to tactical reconnaissance. You also state that an interim reconnaissance capability will serve carrier aviation until a follow-on to the RA-5C is developed. I would like to take exception to these two statements.

VFP-63 based at NAS Miramar and VFP-306 are also into tactical reconnaissance. VFP-63, under various squadron designators and flying various aircraft from the PBJ-1J to the RF-8G, has been providing reconnaissance services since WW II. For the past 22 years VFP-63 has been flying the RF-8A/RF-8G *Crusader*. That is a mighty long interim period. RF-8s have been around for 23 years, compared to the RA-5C's 17 years, and we are still flying. VFP-63 provides tactical reconnaissance services to carrier aviation for both Pacific and Atlantic deployments. As we in the family like to say, "*Crusaders* forever."

M. L. Schneekloth
VFP-63 Det 3
FPO San Francisco, Calif. 96601

An SH-3?

Thank you very much for the interesting and informative article on the SH-60B LAMPS MK III ship/air system. As an SH-3 pilot and trained airborne tactical officer for the LAMPS MK III OpEval which will be conducted at VX-1, it was a pleasure to read such a thorough and complete description of this new and vital helicopter and ship system. However, there is one error. On page 12, you compare the simplicity of the SH-60B main rotor head to the complex main rotor head of the CH-53. Sorry, but I believe that your CH-53 rotor head is really the venerable old H-3.

Lt. Bill Christman
VX-1
NAS Patuxent River, Md. 20670

Re the June 1980 issue of *NANews* page 12, the upper right photos were said to show the comparison between the CH-53 and SH-60B main rotor heads. I've spent little time in the helo community but unless my eyes fail me that top photo is really an SH-3. Right? Please tell me it's so, as I don't think I would look good in glasses.

ADR1 John R. Arndt
NAS Key West, Fla. 33040

Ed's note: Right you are!

Letters

Wings

I have just read the letter about wings in your January 1980 issue. I also agree with AT2 Michael C. Mansfield that the enlisted Wings of Gold should be included on the inside back cover. I have been in the fleet for only one month but just to get where I am, I attended A school for approximately six months, aircrewman candidate school for five weeks, SERF school for two weeks and radio operators school for about four months, not to mention boot camp for eight weeks. I still have about six to twelve more months of training to go through before I receive my Wings of Gold.

There are five officers and nine enlisted in the crew of the P-3B in which I fly, and it takes all of them working hand in hand to accomplish a successful mission.

So, how about it, guys. Let's see some Wings of Gold for the enlisted.

AXAN Larry A. Residori
VP-22
FPO San Francisco 96601

Ed's note: Aircrewman and NFO wings are now depicted on the insignia page.

Answers Solicited

There are two questions to which I would appreciate answers from your readers. In the story of the B-29 *Fleet Admiral Nimitz* the group commander, Col. Boyd Hubbard, Jr., writes "As we flew past the Pacific Fleet with the battle ship *Missouri* steaming into the outer harbor, a group of Navy carrier fighters passed near to investigate." Seeing the name and the admiral's five star flag, and not knowing whether he was aboard or not, the fighters queried, "Sir, anything we can do to assist?" The questions: What group, aircraft, insignia markings from what carrier, angle of approach and peel-off?

During the last days of the war, there were numerous jumps by our naval carrier aircraft on B-29s as they headed for Japan. On one such mission by a B-29 of the 314th Bomb Wing on Guam, the B-29 was jumped by a sizeable force of our naval aircraft. Some passes were close and frightened the crew. On the return trip from Japan, the B-29 pilot said that he would fix "those fellows." So, seeing one of our carriers in the distance, he proceeded down for a landing. Flaps down, wheels down, he headed toward the carrier deck. Pandemonium broke out. The landing signal officer was almost hysterical in his waving. Slowly, the B-29 passed low and over the carrier and headed on to Guam. The question: What carrier was referred to? I heard this story at our base on West Field Tinian during the war and some six years later I met the radar operator who was on the B-29 aircraft. The B-29 *Nimitz* flew 15 missions and the "Grand Old Man of the Sea" sweated them out. Good health and good cheer!

Denny D. Pidhayny
(58th Bomb Wing Association)
1136 South Burnside Avenue
Los Angeles, Calif. 90019

VR-24 Answers Back

In your March 1980 issue, you printed a letter from Mr. Paul Alfieri, U.S. Naval Academy, stating that VX-1 also operates all basic types of aircraft. To set the record straight, VR-24 operates and maintains reciprocal engine aircraft (C-1A), turbo-prop aircraft (C-2A and C-130), turbo-jets (T-39) and turbo-shaft aircraft (H-53). To our knowledge, VR-24 is the only Navy squadron which operates all basic types of aircraft.

Ens. Susan Larison
VR-24 PAO
FPO New York 09523

Escort Carrier Markings

I have enjoyed reading *Naval Aviation News* and, best of all, the articles on WW II Naval Aviation.

I am researching, for a book, markings used on escort carriers during WW II and hope some of your readers may have been members of the following air units whose markings I need: VF-1, AGs 24, 37 and 63 (N), MCVGs 2 and 3, VCs 3, 8, 20, 33, 41, 42, 63, 65, 66, 78, 83, 87, 88, 91, 93, 96 and 97. I would be grateful if anyone who can help would write to me.

Jim Dresser
1222 Marston Avenue
Ames, Iowa 50010

LCdr. Webster Wright

In one of your issues you published a letter that my father, LCdr. Webster Wright, wrote to his son when Webster, Jr., was at the Naval Academy in 1965. It is my sad duty to advise you that Father died on March 22 of lung cancer at the age of 85. He was so thrilled when you published the letter. It was truly a shining moment in his last year. He already knew the cause of his illness and so the publication of the letter had a special signficance for him.

Mrs. Jain Kelly
308 East 94th Street
New York, N.Y. 10028

Ed's note: Webster Wright was one of the few remaining WW I pilots who flew in open cockpits and carried homing pigeons instead of radios.

Information Needed

I am gathering material on the sinking of USS *Langley* (AV-3) by Japanese bombers on February 27, 1942. If any of your readers are *Langley* survivors or know someone who is, I would appreciate their contacting me. Additionally, I need information from anyone who served in USS *Whipple* (DD-217) during that same action, and from survivors of USS *Pecos* (AO-6) which went down a few days later.

Dwight R. Messimer
1892 Elsie Avenue
Mountain View, Calif. 94043

Reunions

The 24th annual Tailhook Reunion takes place September 12-14 at the Las Vegas Hilton. Some of the subjects being covered are the A-6 TRAM and operations in the Indian Ocean. CNO Admiral Thomas B. Hayward will be the keynote speaker at the awards banquet.

For last minute information please call (714) 479-8525.

Make your plans now for the USS Philippine Sea (CV-47) Association meeting in New Orleans, La., June 18-20, 1981. Write A. G. LeBaron, Box 668, Moulton, Ala. 35650.

USS Arizona (BB-39) Association reunion will be held December 3-7, 1980, at the Hilton Inn, Tucson, Ariz. Contact Joseph K. Langdell, USS Arizona Reunion Assn., Inc., 2372 Butte House Road, Yuba City, Calif. 95991, (916) 674-3343 or 5790. The association was formed five years ago and is composed of former officers and men who served aboard *Arizona* from October 1916 to December 7, 1941. The members feel that they belong to a very unique organization since *Arizona* is the only battleship still "in commission."

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SQUADRON INSIGNIA

On July 1, 1965, utility squadrons became fleet composite squadrons, as more representative of their functions and composition. At that time, VU-5 was redesignated VC-5. In the fall of that year, VC-5's F-8 Crusaders began providing target and drone services. The squadron's mission expanded in 1966 to include COD (carrier onboard delivery) operations. The Checkertails are led by Commander William P. Dobbins and are presently tasked with providing aerial targets and threat simulation for operational training of Seventh Fleet and allied forces in WestPac. Home-based at NAS Cubi Point, R.P., VC-5 currently operates A-4Es, TA-4Js and SH-3Gs.

naval aviation news