
NAVAL AVIATION
NEWS
SEMPER FIDELIS
Marine Aviation - 65 years
MAY 1977

OV-10A Harry Gann

NAVAL AVIATION NEWS

Vice Admiral F. S. Petersen
Commander, Naval Air Systems Command

CH-53 hauls Bronco PH1 Dan Burkett

HMM-262 CH-46F and CH-53Ds

VMA(AW)-533 A-6A PHAN B. R. Trombecky

VMFA-323 F-4Ns with VMF-351 F-8Ks Harry Gann

AV-8A launches from LPH-9, USS Guam

KC-130 refuels Skyhawks from VMA-533 in 1960

From CNO

The following is the Opening Summary of the FY 1978 Military Posture and FY 1978 Budget Statement of Admiral James L. Holloway III, Chief of Naval Operations, before the Senate Appropriations Committee, February 2.

Strategic Principles

The principles upon which the United States national strategy depends are significantly influenced by its geopolitical insularity on the North American continent. This requires that U.S. national security cannot be assured without the balance of maritime superiority residing in favor of the United States and its allies. The United States Navy is the principal force to achieve and maintain the maritime superiority upon which the nation relies.

Mission

The mission of the U.S. Navy, as set forth in Title 10, U.S. Code, is to be prepared to conduct prompt and sustained combat operations at sea in support of our national interests; in effect, to assure continued maritime superiority for the United States. This means that the U.S. Navy must be able to defeat, in the aggregate, the potential threats to its continued free use of the high seas. In its simplest terms, defeating the maritime threat means destruction of hostile aircraft, surface ships, and submarines which threaten the seaborne forces of the United States and its allies.

Functions

Maritime threats can be attacked and destroyed on the high seas or in their base areas. Therefore, the functions the U.S. Navy is required to perform to fulfill its mission, as expressed in DoD Directive 5100.1, may be broadly categorized as sea control and power projection.

Sea control is the fundamental function of the U.S. Navy and connotes control of designated air, surface and subsurface areas. It does not require simultaneous control over all international waters, but is selective and exercised only where and when needed. Sea control is achieved by the engagement and destruction of hostile aircraft, ships and submarines at sea or by the deterrence of hostile actions through the threat of destruction.

Power projection is interrelated with sea control and ranges from strategic nuclear response to attacking hostile forces and their facilities ashore through aircraft, missile or gun bombardment to prevent hostile forces and facilities being used against friendly forces and commerce at sea, or the seizure of base areas and facilities ashore through amphibious operations to deny their use by an enemy.

Roles

In the functional exercise of its mission responsibilities within the national military strategy, the U.S. Navy has three main roles: strategic deterrence, overseas deployed forces and security of the sea lines of communication.

Strategic deterrence is provided by the high level of survivability of the fleet ballistic missile force, a major component of the strategic *Triad*.

Deployed naval forces support forward-positioned U.S. ground and air forces and U.S. allies, and provide the nation the capability to use those naval forces in support of political objectives.

Security of the sea lines of communication (SLOCs) requires naval forces implementing their sea control function to assure the security of the SLOCs between the U.S. and its overseas deployed forces, between the U.S. and its allies, and the lines of sea commerce linking the U.S. and its allies with the sources of the world's critical raw materials, particularly energy, upon which the economic survival of the free world depends.

Responsibilities

In order to fulfill its mission, functions and roles, the U.S. Navy has two main responsibilities: current fleet readiness and modernization.

Fleet readiness is the capability of naval forces to carry out their roles in prompt response to the orders of the Commander-in-Chief. Fleet readiness is the product of three factors: personnel readiness, material readiness, and operational training. Personnel readiness depends upon adequate numbers to man and support the fleet, and proper skills to maintain and operate the ships, aircraft and support systems. Material readiness depends upon ship maintenance, aircraft rework and logistic support. Operational training depends upon adequate steaming days, flying hours and exercises.

Modernization is the continuing program of phasing new and modern equipment into the fleet as worn-out and obsolete equipment is dropped from the active force inventory. Modernization includes shipbuilding, aircraft procurement and weapon system development and acquisition.

Shipbuilding

Of these modernization elements, shipbuilding is the most complex and demanding because the long life and high initial unit cost of a ship is generally unique in Defense programs. Therefore, the most careful planning is required to insure that a ship will be a useful investment over its programmed lifetime. For this reason, major ships must be multi-purpose in concept and capabilities in order to adapt to changes in strategies and areas of operation; their design must be flexible enough to permit weapon system modernization needed to counter emergent threats and weapon technologies. The factors which must be considered in shipbuilding are:

Long planning times: The construction period of a major warship will take four to seven years from Congressional approval to initial operational capability (IOC), depending upon size, complexity and design.

The useful lifetime of a major combatant is 20 to 30 years. A ship's lifetime can be extended for another 10 to 15 years through extensive material rework and weapon system modernization.

The high unit cost of a naval ship is due primarily to its complexity in comparison to a commercial ship. All installed weapon systems must be included in the total cost of a naval ship in the end cost system of budgeting. In addition, because of the requirement for full funding, costs must be escalated over a ship's lengthy construction period to accommodate inflation.

Evolutionary nature of fleet modernization: The long life of a ship and the high cost of replacement result in most major ships remaining in active service for the full span of their material lives. For this reason, the composition of the fleet is relatively slow to change. One can predict with precision the force structure of the fleet out to 10 years because of the 5-year shipbuilding plan and the 5-year average construction period. Twenty years from now, 70 percent of the ships in the active force today will still be in the fleet. Forty years in the future, the major units in the fifth year of the 5-year plan will just be reaching the end of their useful lifetimes. Because of the evolutionary nature of naval change, new ships must be designed to operate both in the future and in a compatible way with those ships already in the force.

Continued on page 40

NAVAL AVIATION NEWS did you know?

Space Shuttle

With June 30 the deadline for accepting applications for the space shuttle astronaut candidate program, NASA had received 1,147 before the end of January. NASA is seeking at least 15 pilot and 15 mission specialist astronaut candidates. Those who are successful will report to the Johnson Space

Center in Houston for two years of training and evaluation. Final selection will depend on satisfactory completion of the evaluation period. All applications received so far are from civilians. The military applications will be provided to the NASA selection board just prior to the deadline.

Here, the Space Shuttle Orbiter stands on the flight line at NASA's Dryden Research Center, Calif., mounted on a 747. The Orbiter began a series of tests in February which will lead to a series of free flights this summer. The shuttle is scheduled for launch into Earth orbit in early 1979.

The space shuttle will be launched like a rocket and perform earth orbital missions of up to 30 days. Then it will return to earth, land like an airplane and be refurbished for another mission.

Missile Seekers

Advanced infrared dogfight missile seekers built by Hughes Aircraft are undergoing a five-month series of performance definition flight tests at Nellis AFB, Nev. The seekers are three-gimbal and pseudo-imaging. They have a high tracking rate and enhanced look-angle capability.

Ten sets of flight test hardware were built for the joint Navy/Air Force air intercept missile evaluation program. The goal of the program is to determine seeker performance requirements for a new generation of short-range air-to-air missiles which will be compatible with Air Force F 15s and 16s and Navy F 14s and 18s.

In the tests, the Hughes' seekers, a second new seeker type and the AIM-9L seeker are carried on the weapons racks of F 14s and 15s in air combat maneuvers against F-5s which simulate high-performance targets.

The Navy Weapons Center, China Lake, Calif., supplied the technical direction for the Hughes effort.

NAVAL AVIATION NEWS did you know?

Blue Angels In September, the Navy Flight Demonstration Squadron will select three pilots and a flight leader for its 1978 team. Interested officers are encouraged to submit their applications immediately.

Applicants for the position of demonstration pilot should be tactical jet pilots with 1,500 hours of flight time, regular naval officers, and either rolling to or on shore duty. Letters of application should be endorsed by the commanding officer and forwarded to the Navy Flight Demonstration Squadron with copies to the Chief of Naval Air Training and the Chief of Naval Personnel (Pers-433A) or Commandant of the Marine Corps (Code AA) for Marine officers.

Any officer interested in the billet of flight leader must have 3,500 hours flight time. He must be a lieutenant commander or commander who has been screened for aviation command, and preferably (though not mandatory) have had command of a tactical jet squadron. Flight leader applicants should submit their letters directly to the Chief of Naval Air Training with information copies to the Commanding Officer, Navy Flight Demonstration Squadron and the Chief of Naval Personnel (Pers-433A).

The letter of application should include experience and qualifications.

Any further questions can be addressed via telephone or correspondence to the *Blue Angels* at NAS Pensacola, Fla. 32508.

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F-18 The Secretary of the Navy, W. Graham Clayton, Jr., has announced that the F-18 strike fighter aircraft now under development for the Navy and the Marine Corps has been named *Hornet*.

The name is an old one and has been used often for Navy ships of the

line. It was selected as the common name of the F-18 because the hornet strikes rapidly and produces a sharp sting.

Bob Lawson photographed one the F-18A prototypes, a YF-17A, landing at NAS Miramar after an evaluation hop. LCdr. Monroe Smith, skipper of the Fighter Weapons School, was at the controls for the March 1 flight.

Orion Update II Lockheed's newest model of the P-3C *Orion*, the Update II prototype, is the second in a series of model improvements under the Navy's three-phase program. Deliveries are scheduled to begin in midsummer. The IIs incorporate a variety of new sensor, avionics and weapons systems technology. Included are a passive infrared detection system that locates and

identifies a target from the heat it emits without betraying the presence of the aircraft; a sonobuoy reference system which locates the position of sonobuoys dropped into the water from the aircraft to detect the sounds of submarines and surface vessels; and the *Harpoon* anti-ship missile system that enables the crew to attack surface targets at over-the-horizon ranges.

Update Is, in production since 1975, incorporated a seven-fold increase in the *Orion's* computer memory and added the *Omega* navigation system and other system improvements. Update IIIs, under consideration for 1980 delivery, will add more improvements.

The Update program provides a cost-effective extension of the *Orion's* capabilities. The Navy presently plans to keep the P-3C in production until the mid-1980s, and in its front line operational inventory until the turn of the century.

Solar Panels

One of the answers to the problem of declining energy resources is the energy supplied by the sun. At Point Mugu, two Pacific Missile Test Center buildings have their hot water heated by the sun. Through solar panels, insulated metal boxes enclosing copper tubing, water flows in from one end and when heated by energy absorbed from the sun flows out into a storage container. The center hopes to install more solar panels on their industrial buildings because even on a cloudy day some heat is stored by the solar heating system.

Newest and Oldest

According to a release from HSL-34, Norfolk, Va., that squadron is operating the newest and the oldest SH-2 *Seasprites* in the active inventory.

The oldest, BuNo 147980, has been assigned to every LAMPS squadron on the East Coast. It began service as a UH-2A in early 1962 at Kaman Aircraft Corporation where it was used as a test helicopter until 1965. No. 147980's first squadron service was with HU-1 (since redesignated HC-1) at Imperial Beach, Calif. In early 1968 it moved to NAS Lakehurst, N.J., for service with HC-4. NAF Naples was its next stop, where it served as a station aircraft. In 1970 the aircraft returned to Kaman for conversion to a twin-engine SH-2D. In December 1971 it rejoined HC-4. When the squadron was redesignated HSL-30 in March 1972, it was assigned to the squadron's detachments 33, 35 and 37. Then it was reworked again, to the SH-2F, and flown by HSL-32, Norfolk, and HSL-36 in Mayport, Fla. In August 1976 it became HSL-34's *Green Checker 28* and deploys with the squadron's Det 8.

The newest active H-2, BuNo 152206, came off the production line in 1965. It served with HC-2, NAS Jacksonville, Fla., and with HSL-30. Since its conversion to an SH-2F in September 1974, it has been flown by HSL-34 at home and by the squadron's detachments.

grampaw pettibone

S.O.S.

A flight of six SH3As departed the auxiliary field at 0800 for an ASW training exercise. They arrived on station, seven miles seaward at 0815.

At ten o'clock, during the 12th dip, hovering at 40 feet with the sonar transducer lowered in the water, the flight leader and his copilot heard a loud noise and observed the port engine torque dropping to zero and the port turbine exhaust temperature gauge pegged at 1,000 degrees C. Speed selectors of both engines were advanced, but sufficient power was not forthcoming and a controlled water landing was made into the wind. (Emergency flotation bags were activated.)

The *Sea King* was under control, floating satisfactorily. Heading into the wind, number one engine speed selector was placed in ground idle in an attempt to regain power with manual throttle. This attempt failed to produce any increase in torque and number one was secured. Approximately 15 seconds later, number one's fire warning light came on. The copilot activated the engine fire extinguisher.

At about 1010 the crew ascertained the fire to be out and notified the nearby NAS of the mishap. The NAS dispatched a rescue boat.

A slow downwind water taxi toward the NAS was commenced at 1015. Ground swells of about five feet prevailed from the stern. Water was entering the crew compartment through the sonar tunnel and the sonar hoist enclosure. The crewmen found it difficult to seat the sonar transducer because of the sea state and motion of the aircraft but did succeed some minutes later. At 1045 the pilot turned into the wind and attempts were made to deploy the sea anchor for towing. This proved futile and it appeared likely there would be a long delay for the tow.

At 1050 they gave up the towing idea and began taxiing once again. Almost immediately after turning downwind, a wave lifted the tail of the aircraft and caused the main rotor blades to strike the water. The machine rolled forward and came to rest, inverted in the water. All hands evacuated immediately and were rescued by a motor whaleboat from a nearby destroyer.

Grampaw Pettibone says:

Shades of black shoes! Looks like we gotta go back to basics. Since we ain't in the VO/VS business any more, maybe we're lackin' some of the ole horse sense we always took for granted.

No doubt these fellas found themselves between a rock and a hard place when the stator vane on the port engine gave up the ghost, but from there on just plain ole damage control and seamanship could'a saved the boat.

Seems to me it would'a been a good idea to lighten ship right then and try to get it back in the air. After that, pluggin' holes with anything available makes good sense and would'a kept the draft down to a decent level and seaworthy enough for a tug to the beach or to the carrier that passed within shoutin' distance. (September 1966)

Double Trouble

A Marine Aviator was scheduled for a routine AV-8 training flight. He reviewed the maintenance records and noted that there were some discrepancies concerning engine temperature running higher than most other aircraft. The pilot performed a thorough preflight examination, carefully following the pocket preflight checklist.

ILLUSTRATED BY Osborn

Finding the aircraft in good condition, the pilot manned up and began pre-takeoff procedures.

At takeoff, he felt that the *Harrier* didn't perform as well as it should have, "powerwise." Still, the flight continued uneventfully until he entered the landing pattern.

He was concerned over the engine temperature running high and how it would affect engine performance during a vertical landing. Noting that he had 200 pounds more fuel than the max allowed for a vertical landing under ambient conditions present, the pilot waved off his first approach. The next four approaches were waved off because he felt engine performance was inadequate — and there was some evidence of slight overheating.

Under these circumstances, it is standard for an AV-8 pilot to execute a slow landing which requires less thrust. The pilot felt that for himself, a slow landing was an emergency procedure since he had never done one in training. Therefore, he avoided slow-landing approaches.

On his sixth crosswind turn for approach, he noted that his port fuel flasher had come on (this indicates 250 pounds fuel of which only 100 pounds is usable). At the 180 position, his starboard fuel flasher came on. He was unaware that 150 of the 250 pounds indicated were unusable.

As he rolled in on final, the pilot realized he had to put the aircraft down or run out of fuel. He had originally called for a vertical landing on his final approach but ultimately decided to do a slow landing.

On short final, he felt he was set up well and saw no need to declare a low-fuel emergency. Within a thousand feet of the overrun he noticed his IAS as 108 knots. He also observed that his fuel booster pump lights were on, indicating less than nine psi fuel pressure. Within a few seconds, the engines began to wind down and the nose started to drop. When full back stick failed to raise the nose, the pilot ejected at 100 feet.

The aircraft impacted wings and nose level, short of the overrun. It slid to a stop 256 feet up the center of the overrun. The seat landed on the overrun 550 feet northwest of the aircraft, the pilot about 500 feet in the same direction.

During rescue operations, a crash truck traveling too fast toward the accident site, lost control, rolled over on its left side and slid to within a foot of the port side of the aircraft, which was burning. The minor post-crash fire was extinguished quickly by another crash truck and the six members of the overturned truck escaped with minor injuries.

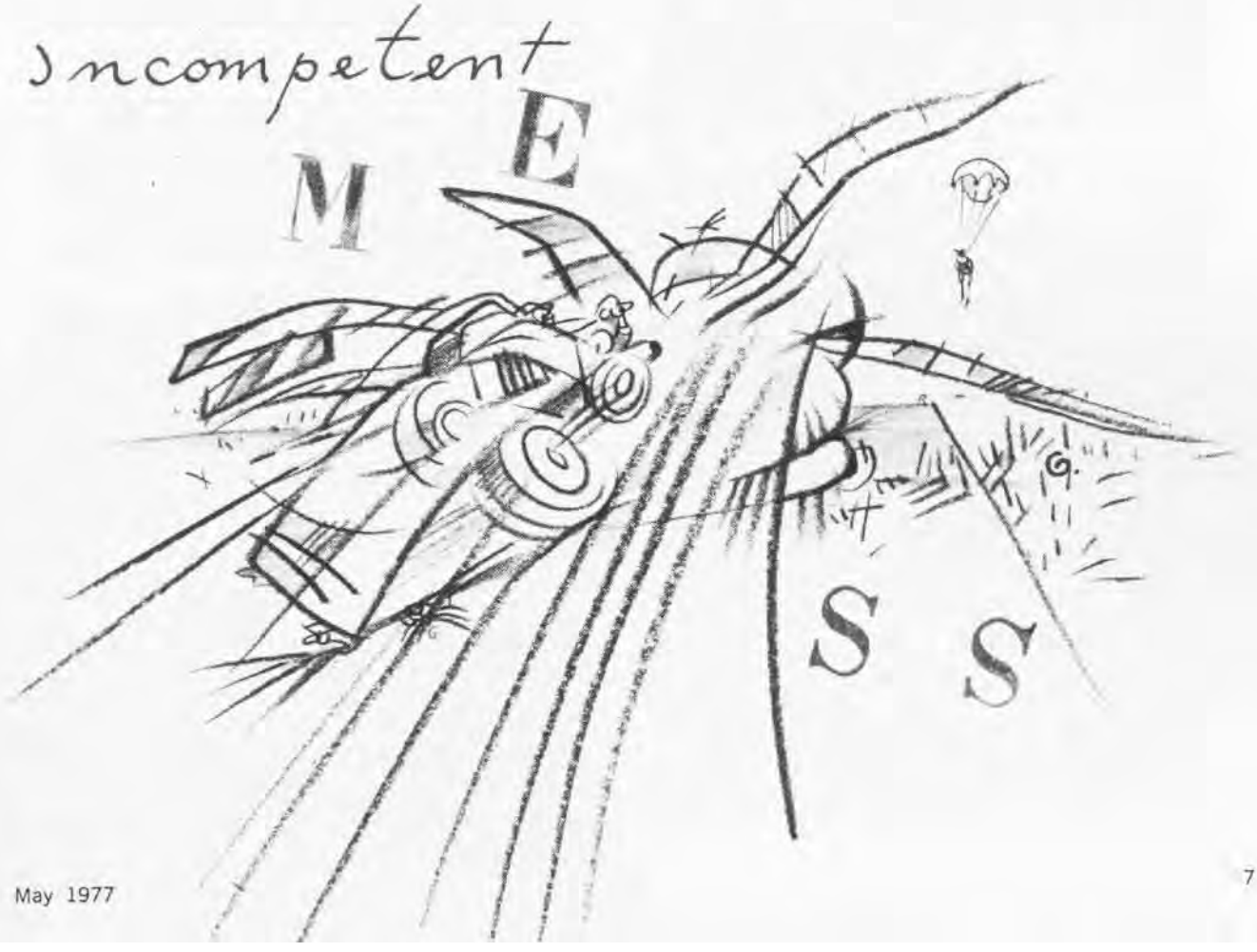
Grampaw Pettibone says:

Oh, my achin' back! What a combination of accidents! What a fiasco!

What the heck does it take to tell a pilot he's running out of go-juice? This gent had all sorts of indications, yet he plowed on. He had five opportunities — that's right five — to land, and didn't.

This is the most primitive type of accident. There's simply no excuse for it. None!

Same goes for the crash-crew driver — no excuse!



On the occasion of
Marine Aviation's 65th Birthday,
NANews interviewed Lt. Gen. T.H. Miller, Jr.

Views from the Top

Lieutenant General Thomas H. Miller, Jr., is the Marine Corps Deputy Chief of Staff for Aviation. As the Corps' top flyer he oversees the activities of more than 42,000 personnel and 1,100 aircraft.

In the mid-Forties he was a squadron mate of John Glenn. The pair often out-hustled each other to get on the flight schedule. "John always wanted to be first," recalls the general. "He was a tough competitor."

Lt. Gen. Miller was the first American to fly the Marine Corps AV-8A V/STOL jet. He also made his mark in aviation history by setting the 500-kilometer Closed Course World Speed Record at 1,216.78 mph in an F4H-1 (F-4B) Phantom in 1960.

He flew combat missions in the Pacific during WW II and in Korea. Included among his many assignments have been tours as project officer and pilot at the Naval Air Test Center, Patuxent River, officer in charge of an evaluation team checking out the A4D-1 and project officer for the F-4B weapons system. He served as C.O. of VMFA-513 and X.O. of Marine Aircraft Group 11, 1st Marine Aircraft Wing, which deployed to Vietnam in May 1965. He had more duty in Southeast Asia in 1969 as Chief of Staff, III Marine Amphibious Force.

He has been Commanding General of the Second Marine Aircraft Wing and of Fleet Marine Force, Pacific. His current assignment began in Aug. 1975.

How do you define the mission of Marine Aviation today?

Marine Aviation, a landward extension of Naval Aviation, primarily provides air power support for Marine ground forces ashore. Secondarily, as a part of Naval Aviation, we are a swing force capable of executing sea control missions from carriers. Thirdly, we perform any other missions as directed. We have both sea and land-based capabilities. We can go either way.

Across the board, military forces seem to be shrinking in both personnel and hardware assets. Is this happening in Marine Aviation?

The Marine Corps was the first service to shrink after the Vietnam War. We were "peeled back" dramatically to pre-Vietnam force levels. Right now we're in a reasonably stable state. Tomorrow is another matter. Weapons systems grow old quickly in this age of rapid technological advancement.

Is the plan for the AV-8Bs to replace the A-4Ms and AV-8As by 1984 on track?

That program is going very well. We're very pleased with the first prototype of the AV-8B now going through full-size wind tunnel tests at the Ames Test Facility, Moffett Field, Calif. In fact, the plane is showing us a little more than we expected.

We're optimistic that it will be a successful addition to the inventory. Because it is very similar to its predecessor, there has been minimum risk involved in "changing" what has been a suitable aircraft design. The 8A has completely satisfied the requirements it was tasked to meet. The B version represents a quantum jump forward in V/STOL as far as we're concerned.

The event didn't get as much media exposure as it deserved but late last year *Harriers* from VMF-231 demonstrated just how flexible and reliable that plane is. Thirteen AV-8As launched from *Roosevelt*, operating in the Mediterranean. They landed aboard USS *Guam* (LPH-9), rode it through the Suez Canal and ultimately arrived off the Kenyan coast.

They flew a demonstration flight over Nairobi, then flew back to *Guam*, rode the ship to the Mediterranean and rejoined *Roosevelt*. All 13 planes—one was to be a spare — stayed in an up status

AV-8B

Chip Maury

AV-8As, like this one from VMA-513, will be succeeded by AV-8Bs. The new V/STOL plane will have supercritical wing and about double the performance capability of the earlier Harrier. Britain's Hawker Siddeley built the A version. McDonnell Douglas is prime contractor for B, with other subcontractors, including Hawker Siddeley, participating. Pegasus 11 engine, developed by Rolls-Royce, will power the AV-8B. V/STOL flight, personified by the Harrier, gives the Marines quick reaction capability through shore or shipboard basing near battle area. High sortie rates also result. Further, greater ordnance loads can be delivered in shorter time periods. New Harrier has improved inflight thrust vectoring system and weapon delivery with angle rate bombing system.

throughout the entire 5,000-mile-plus journey.

What's your opinion of the CH-53E Sea Stallion?

It represents another quantum jump forward. It has double the lift capability of the D version. Three of these helicopters are being evaluated and have accumulated about 800 flying hours. They are now engaging in a second series of shipboard tests.

I have flown the E. It's a powerful machine. At near ground level, without transitional lift, at a forward speed of 15 knots, I pulled the collective all the way up. By the time we went through 7,000 feet, we had achieved a climb rate of about 6,000 feet per minute.

It will be able to handle the buttonhook maneuver with comparative ease. The buttonhook is a maneuver used when retrieving disabled aircraft in, for example, jungle-like terrain or in areas where enemy troops may have surrounded the scene. More than a thousand helos were retrieved by helicopters in Vietnam utilizing this and other techniques.

Basically, the 53E will fly to the scene and, about 100 yards away from the downed aircraft, will execute a 90-degree decelerating turn, wheeling as if it were going to stop. It will then descend, hover over the downed bird, drop a hook which crewmen will connect to the aircraft, then haul it away.

The 53E can lift another 53E. It will also come in handy when a carrier plane is "incapacitated" and in need of repair which can't be performed aboard ship. A plane grounded for an indefinite period occupies precious space. The 53E can collect and deliver it to another ship or to a repair facility ashore, allowing the carrier to remain on the line.

Are you maintaining emphasis on night combat operations?

Definitely. It's important that we train for massive helicopter and fixed-wing, light-attack night activities. We did a lot of after-dark work in Vietnam on interdiction missions. Marine *Intruders* flew close air support and major all-weather strike missions in Southeast Asia. The A-6Es now have TRAM (target recognition attack multisensor) which will increase their night capabilities.

Two A versions of the *Bronco* are being modified by Rockwell International. They'll be OV-10Ds and are called NOS for night observation surveillance.

The new *Bronco* will have more powerful engines, forward-looking infrared sensor and laser-ranging gear, facilities for a Gatling-type gun mounted beneath the aft fuselage and glass fiber props. We anticipate having 18 of these in two squadrons.

Will the ratio of "ground" Marines compared to aviation types change in the future?

The ratio won't change, at least not for a while. The Corps overall has 192,000 personnel. Right now we have a little over 41,000 personnel in Marine Aviation. Base support people would add 4,000 to that number.

Marine Aviation is structured with a single goal — to support that Marine on the ground in achieving his objective. Therefore, our strength level is directly related to the size of the ground force.

If there were a cut in personnel, ground units could sustain it a little better than the air side. This is because, generally, it takes up to two years to train a person in the highly technical aviation fields and more like six months for his counterpart on the ground.

The Marine Corps is the only service whose overall strength is rigidly set by law at three divisions and three wings.

Marine Aviation, incidentally, unless assigned sea control duties with the Navy, always operates under a single commander. We're a totally integrated air-ground force, the only one in the world. In this sense, the Marine Corps is a uni-service composed

of two prime elements—aviation and ground units.

How would you compare the quality of Marine aircrews of today with those of 20 years ago?

There is a significant improvement in the quality as well as the capability. The youngsters of today are smarter. They usually have high school educations. Twenty years ago this wasn't the case. Officers didn't need college degrees then. Now they do.

Importantly, training methods have improved. They have had to. The aircraft and its related components which we're operating are at least 100 times more sophisticated than they were in the 1940s and '50s. The NC-10 starting unit in use now, for example, is more complicated than the entire *Corsair* aircraft we flew in WW II and Korea.

Do the people of Marine Aviation have the same flair—the same spirit which existed a generation or two ago?

Tolerances are very delicate today. I think there has been a natural drift away from the bold, scarf-waving characterization of past years. We're standardized to the nth degree for maximum effectiveness.

The degree of professionalism, necessitated by the high cost of air weapons systems, has resulted in some loss of flair. This is largely because of our serious approach toward conserving the nation's assets. Our people are acutely aware of this, officers and men alike. They recognize the drain on the taxpayer.

At the same time, our safety record is excellent and we are performing our mission effectively and consistently. We may have less flamboyance, but our quality control at both the maintenance and flying level is superb and getting better.

What are the biggest challenges facing Marine Aviation today?

Our biggest task is to maintain sophistication of weapons systems as well as a sufficient quantity of them so that we can meet an adversary on equal ground. At the same time, we endeavor to get the most out of every dollar we spend.

Do you have any other comments?

I would like to clear up some misunderstanding of the dual fighter-attack mission in the VMFA-type community. In these units, 41 percent of the total capability is oriented toward attack or air-to-ground operations. The fighter capability is designed to provide direct support of ground troops. That is, should enemy fighters engage the attacking or ground forces, our dual-role, fighter-attack aircraft must respond and fight the enemy so that the attack can continue against ground targets. Having this capability frees carrier fighters for other missions. In other words, we cover ourselves.

I would add that, at times, it is difficult to explain to some audiences that we Marines fight in the air as well as on the ground. For a long time, Marines were viewed by the general public as infantrymen only. Since the first close air support flights by Marines in Nicaragua in 1927, our flyers have become vital to the total Marine Corps mission.

At the same time, we may seem aviation parochial. That is because as Marines we will "be the best mechanics, the best avionics men, the best aircrewmen and so on." We feel our competition is very tough. By this I mean we compete as Aviation professionals with those in the Navy, Air Force, Army and Coast Guard.

So, Marine Aviation continually strives to achieve that professionalism which is characteristic and synonymous with the title of U.S. Marine.

Mobility and quickness are bywords in Marine Aviation. A rescue mission when Cambodia was overrun several years ago is an example. A dozen CH-53s flew in intervals, three at a time, to retrieve beleaguered civilian personnel. The action took place at noon, when, presumably, enemy troops tended to put down their rifles and rest for a time. More than 250 people were carried to safety by the helicopters within 27 minutes. It was not until the final *Sea Stallion* was outbound from Phnom Penh that the first enemy fire was incoming.

More recently there was a situation in the African country of Uganda. American lives were thought to be at stake. A Washington, D.C., radio station interviewer asked people on the street, "What would you do under the circumstances?" Three out of four said, "Send in the Marines."

Chief of Naval Operations Admiral James L. Holloway III discussed a possible scenario involving a battle and the requirement to neutralize military installations after certain elements of the operation had occurred. "The real way to take care of those bases," he said, "is to go in there with the Marines and seize the territory, and then you own it, you've got it, and it's no problem."

Whatever the assignment, Marine Aviation has a fine inventory of weapons and aggressively-trained, dedicated men and women to do the job.

The following is not an all-encompassing inventory of Marine aircraft. Rather, it is a sampler of those hardware assets which Marine Aviation employs to perform its mission.

Cpl. Carl Davis

Cpl. Joe Vaiksnis

"Marine Aviation's single goal is to support that Marine on the ground in achieving his objective," asserts Lt. Gen. Miller. Above left, Huey over pair of CH-46s; top, UH-1N from HMM-264 during NATO exercise in Turkey; above, HMH-463 Sea Stallion hauls supplies to troops near Da Nang; left, CH-53 delivers howitzer to men at Dong Ha during Vietnam War. Below, in this 1968 photo, combat-ready Marines board CH-53s on USS Tripoli. Workhorse Sea Stallion has been a mainstay. The E version will have 16-ton external lift capability and be able to transport every Navy/Marine tactical aircraft. Three planes, the E-2, A-6 and F-14, would require minor disassembly before pickup.

PH3 Bob Ziel

Hercules gets JATO lift, right. KC-130s provide aerial refueling for Marines. Below, VMO-2 OV-10As climbing. Rockwell International has modified two Broncos which are being flight tested. OV-10Ds should enhance night operations capabilities. They will feature uprated engines, forward-looking infrared sensor and laser-ranging designator in the extended nose of the plane, glass fiber props and a Gatling-type gun mounted beneath the aft fuselage. Center right, some Marine squadrons operate from carriers. Here, VMFP-3 RF-4B catches a wire. Below, USS Tarawa (LHA-1), first of five amphibious assault ships, joined fleet last year. It gives Marines modern platform from which to operate. USS Saipan (LHA-2) is next, with others to follow in years ahead.

Harry Gann

Harry Gann

Chip Maury

Rendering by Harlan Krug

F-18 Hornets are programmed to fortify Marine as well as Naval Air punch in the future, left. Still, as dramatized by Harrier photo above, Marine Aviation depends on how well the hardware and the human element work together to execute the mission virtually any place in the world on short notice.

EARLY MARINE

By Major John M. Elliott, USMC (Ret.)

Cunningham

It is difficult to write about specific early Marine Corps Aviators because practically all of them were heroes. Perhaps it is best to "begin at the beginning. . . ." Certainly Marine Corps Aviation began with Lt. Austell Cunningham in 1912.

He served as a corporal in Cuba during the Spanish American War as a member of the Georgia Infantry Volunteers. His obsession with flying was sparked by balloon flights in 1903. Ten years after being mustered out of the Army, he applied for and received a commission as a second lieutenant in the Marine Corps.

While stationed at the Philadelphia Navy Yard, Cunningham squandered $25 of his monthly pay to rent a home-built airplane from a civilian who had never been able to make it fly. After considerable persuasion the commandant of the yard allowed him to attempt to fly from the one-half-mile field within the yard. Even though the machine was stripped of every possible piece in an attempt to lighten it and a ramp was built to bounce it into the air, *Noisy Nan* never achieved more than a few feet of airborne flight.

Cunningham's persistence was rewarded, however. He was detailed to the Navy's new Aviation Camp at Annapolis, Md., where he reported on May 22, 1912, the date considered the birth date of Marine Corps Aviation. He was immediately ordered on temporary expeditionary duty with Company G, 2nd Marine Regiment aboard USS *Georgia*, returning to Annapolis in July.

He received a basic background in aeronautics and was ordered to the Burgess Company, Marblehead, Mass., on July 29. After 2 hours and 59 minutes in the Burgess-Wright Model F, Lt. Cunningham soloed. It was August 20, 1912. The Marine Corps now had an aviator.

Lt. Cunningham remained at the Burgess factory until late September. During this time, he requested that Sgt. James Maguire, then at the Marine Barracks, Philadelphia Navy Yard, be sent to the Burgess factory to learn to be an aircraft mechanic. As a result the Major General Commandant ordered the sergeant to special temporary duty at the Aviation Field, Marblehead, Mass., where he was to report to Lt. Cunningham. After training at the factory, Sgt. Maguire was, at Cunningham's request, transferred to the Aviation Camp at the Naval Academy on November 6, 1912. Aviation was not to be his line though. After a short tour, the first enlisted man in Marine Corps Aviation returned to line duty at the Philadelphia Navy Yard. Records fail to show that he ever flew in a naval aircraft.

Lt. Cunningham worked in aviation for a year before he returned to line duty. But during this period he witnessed many of the Navy's early aeronautical experiments including the launching of a seaplane from a catapult. While flying at Guantanamo in 1913, he was the first flyer to discover a submerged mine field, thus pointing the way to the use of aircraft in antisubmarine observation.

While detached from aviation, Cunningham was stationed at Marine Barracks, 8th and Eye St., Washington, D.C., and was the Marine Corps member of the Morrow Board which ensured a place in Naval Aviation for the Marine Corps. Also at the barracks was another Marine, Lt. T. C. Turner, who was to influence Cunningham's career.

Capt. Cunningham returned to aviation in the spring of 1915. With the reorganization of pilot licenses he was designated Naval Aviator #5, Marine Corps Aviator #1. In addition, he had been issued license #2 for hydroplanes by the Aero Club of America in 1913. He was assigned to the Army Flying Field at San Diego along with Maj. W. M. McIlvaine, Marine Aviator #3. They became the first Naval Aviators to be trained in flying land machines.

Marine Aviation rapidly expanded under the leadership of Cunningham and the press of World War I. The Marine Aeronautic Company of the Advance Base Force was organized at the Philadelphia Navy Yard in April 1917. From this unit evolved the First Marine Aeronautic Company. It became the first American aviation unit fully equipped and trained to be dispatched to Europe. It went to the Azores in January 1918 to conduct antisubmarine patrols. Pushed out of Philadelphia to make room for the Naval Aviation Factory, Marine Aviation eventually was based in Miami, Fla. At Miami it was organized into a headquarters detachment and four landplane squadrons known as the First Marine Aviation Force. Squadron A was commanded by Capt. Roy S. Geiger who was destined to become the "Grand Old Man of Marine Aviation."

During this formative period, Cunningham served as the officer in charge of Marine Aviation and, as such, took command of the First Marine Aviation Force when it went to France as the Day Wing of the Northern Bombing Group. Its mission was to bomb German submarine bases in the Dunkirk-Calais area. Despite numerous problems, not the least of which was that no one knew they were coming or what they were to do, the 164 officers and 846 enlisted Marines compiled a record to be proud of:

18,792 pounds of bombs dropped
15,140 pounds of bombs dropped while flying with the RAF
4,300 pounds of food dropped while flying with the RAF
6 enemy aircraft shot down
2 Medals of Honor
4 Distinguished Service Medals and
30 Navy Crosses.

After the demobilization and reor-

CORPS AVIATORS

ganization following the Armistice, Maj. Cunningham was relieved by Maj. T. C. Turner on December 13, 1920. Cunningham had practically created and nursed Marine Aviation through its first decade. He was given command of the First Squadron in Haiti for a year and a half but then was returned to line duty where he stayed until his retirement in 1935.

He is remembered through Cunningham Field, Cherry Point, N.C., and the destroyer *Alfred A. Cunningham* (DD-752) which was sunk as a target in 1974.

Another tribute, conceived and funded by his former associates in the First Marine Aviation Force, is the Cunningham Trophy which is awarded annually to the Marine Aviator of the Year. John Glenn was the first recipient.

Thomas Caldwell Turner enlisted in the Marine Corps in 1901 and was commissioned the following year. He served in the Philippines and China prior to being stationed at the Marine Barracks in Washington, D.C., as commander of the 1st Automatic Rifle Company in 1913. There is no record to show that he knew Lt. Cunningham or was interested in aviation at that time. He had tours of duty at Vera Cruz, Mexico, in 1914 and for a year was in command of the Marine detachment aboard USS *Texas*. He assumed command of the Marine Barracks, San Diego, Calif., in late 1916.

It appears that his interest in aviation started with his association with the Army flyers at Rockwell Field (North Island). He learned to fly in his spare time. His ability was noted by Colonel H. H. Arnold who recommended that he be attached to the Army Signal Corps for aviation duty. In August 1917, Maj. Turner's request for duty with the Army Aviation Section of the Signal Corps was approved. He went on to become the officer in charge of the Army's Ellington Field, and later Barron Field, thus becoming the first Marine officer to command a large Army unit.

His appointment as Naval Aviator #772 was approved by the Commandant on March 14, 1918. He was temporarily promoted to lieutenant colonel in August 1918. He continued to serve with Army Aviation until April 1919 at which time he was ordered to the Marine Barracks, San Diego and then to Haiti with the 1st Provisional Brigade. With demobilization after the war, he reverted to major.

Returning from Haiti in December 1920, he relieved Maj. Cunningham as officer in charge of Marine Corps Aviation. Although junior as a Naval Aviator, he outranked Cunningham which would have caused embarrassment in the event he joined Marine Aviation. Such an attempt had been made but was prevented by the Commandant in 1918. While serving at headquarters he was in charge of a two-plane flight of DH-4s from Washington to Santo Domingo and return. This was "the longest flight, unguarded, in a landplane, over water and land, ever accomplished by Naval Aviators at that time." He was awarded the Distinguished Flying Cross for this achievement.

He was promoted to lieutenant colonel in 1921, and remained officer in charge of Marine Aviation until 1925, when he took over the First Aviation Group at Quantico, Va. He assumed command of Aircraft Squadrons, Third Marine Brigade in China in 1927. Two years later he once again commanded the aircraft squadrons at Quantico which were now designated Aircraft Squadrons, East Coast Expeditionary Force, Marine Barracks, Quantico.

Turner

In May 1929, Lt. Col. Turner became officer in charge of Marine Aviation for the second time and was promoted to colonel in the fall of 1930. He was perhaps the most spectacular and ambitious officer in early Marine Corps Aviation. He had a knack of being in the right place at the right time and Marine Corps Aviation grew in stature under his forceful leadership. His brilliant career came to a tragic end during an extended inspection of aviation units in the Caribbean and South America.

Upon landing at Gonaives, Republic of Haiti, on October 26, 1931, the Sikorsky RS-1 in which he was a passenger taxied into a soft spot in the sand. The colonel impetuously pushed the pilot to one side to inspect the damage forgetting that the propeller, which was still turning, was now within four feet of the ground. He was struck in the head. After a remarkable demonstration of determination to live, Col. Turner, in shock but conscious for two days, died in the Marine Field Hospital, Port-au-Prince, Haiti. He was buried in Arlington National Cemetery.

The memory of Col. Turner and his contributions to Marine Corps Aviation is perpetuated at Turner Field, MCAS Quantico (now a Marine Corps air facility).

Roy Stanley Geiger enlisted in the Marine Corps November 2, 1907, and accepted a commission as 2nd lieutenant in February 1909. He commanded the Marine detachment aboard USS *Wisconsin* and USS *Delaware* prior to expeditionary duty in Nicaragua in 1912. He then served with the First Marine Brigade in the Philippines and China from 1913 to 1916. In 1915 he became officer in charge of the Mounted Detachment, American Legation at Peking. Following duty as a "Horse Marine," Capt. Geiger reported to Pensacola

for flight training. He was designated Naval Aviator #49 and Marine Corps Aviator #5 on June 9, 1917.

The Aeronautic Detachment under Capt. Geiger transferred from Marine Barracks, Philadelphia Navy Yard on February 7, 1918, and proceeded to Miami, reporting to the C.O. of the air station, Marc Mitscher. After learning to fly seaplanes, the Det moved to the old Curtiss Flying Field for landplane operations. This became the Marine Flying Field and was the nucleus of the First Marine Aviation Force.

As the senior officer at Miami, Geiger commanded Squadron A and was acting skipper of the entire operation. He commanded the squadron in France as a component of the Day Wing, Northern Bombing Group and was awarded the Navy Cross for his achievements. He was promoted to major in 1918. In December 1919, he assumed command of a squadron in Haiti. He was later relieved by Maj. Cunningham.

He served in various posts prior to taking command of Aircraft Squadrons, East Coast Expeditionary Force, in Quantico in 1929. Upon the death of Col. Turner, Maj. Geiger became officer in charge of Marine Aviation — from November 1931 to May 1935. He became commanding officer of Aircraft One, the new designation for the Quantico-based squadrons, in 1935.

It was while under his command that the squadrons from Quantico became well known through their participation at air shows and exhibitions. Geiger was promoted along the way and eventually selected for major-general rank in 1942.

He became the commanding general of the newly formed First Marine Aircraft Wing in August 1941 and directed it through the bitter days of the Guadalcanal operation until he was relieved in April 1943. Once again Roy Geiger became the top Marine Aviator when he served as Director, Marine Corps Aviation from May to October 1943. In November 1943, in the midst of the battle for Bougainville, he relieved Lieutenant General A. A. Vandergrift as the commanding general of the First Marine Amphibious Corps (IMAC) and simultaneously assumed command of all Allied forces on Bougainville and the Treasury Islands. Vandergrift returned to the States to become the 18th Commandant of the Marine Corps. Thus Roy S. Geiger became the first aviator to command a Corps. IMAC, composed of Marine, Army and New Zealand units, captured the Green Islands and Emirau to complete the campaign of the Northern Solomons.

IMAC was redesignated the Third Amphibious Corps (III AC) in 1944. Under the command of Lt. Gen. Geiger it was to capture Guam. He departed in August for Guadalcanal to prepare for the Palau operation. Following quickly on the heels of the Guam operation, the III AC began landing on Peleliu in September 1944.

The III AC became a component of the Tenth Army for the capture of Okinawa, commencing on April 1, 1945. The Tenth Army Commander, General Simon Bolivar Buckner, was killed by a Japanese artillery attack on June 18, 1945. As senior troop commander, Lt. Gen. Geiger assumed command, thus becoming the first Marine to command an Army. He directed it through final combat operations in the Pacific.

In July 1945, Lt. Gen. Geiger became Commanding General, Fleet Marine Force, Pacific, commanding all Marine tactical units in the Pacific and Far East. He returned to Headquarters Marine Corps again in late 1946. He died at the National Naval Medical Center, Bethesda, Md., on January 23, 1947. In recognition of his achievements he was promoted posthumously to general by the 80th Congress.

Gen. Geiger's achievements and contributions to the Marine Corps are commemorated in the Amphibious Warfare School building at Quantico which is situated on Geiger Road and is designated Geiger Hall.

Geiger

MARTD Willow Grove

Marine Air Reservists are an important element in the total American military structure. MARTD Willow Grove is one of many units dedicated to maintaining equipment and trained personnel so that they are quickly ready to augment active duty forces if and when needed.

By SSgt. C. S. Collins

Marine Air Reserve Training Detachment, Willow Grove is the second largest detachment in the Fourth Marine Aircraft Wing/Marine Air Reserve Training Command.

The history of MARTD Willow Grove began February 26, 1946, when the Marine Air Reserve Training Command was activated at NAS Glenview, Ill. Three Marine air detachments (MADs) were also formed on this date: Atlanta, Dallas and Glenview. Within a year, there were 21 MADS. They consisted of 24 Marine fighter and 8 ground control intercept squadrons. One of these, VMF-451, under the command of Maj. Henry S. Miller, USMCR, was established at Willow Grove, Pa., in April 1946. The MAD formed during the same period was under the command of Lieutenant Colonel J. Frank Cole.

Ground Control Intercept Squadron 17 (GCIS-17) was organized at Willow Grove under the MAD in February 1947. By autumn 1950, all Marine Corps reservists of GCIS-17 were mobilized for the Korean Conflict and remained on active duty until the reorganization of the squadron began in October 1951. VMF-451 was activated in January 1951 to serve in Korea, flying AD-1 *Skyraiders*.

In 1952, with reorganization of the Marine Corps Reserve, 17 air reserve training detachments remained of the 21 MADs, all staffed by regulars.

In 1954, GCIS-17 and GCIS-26, formed earlier in New York, were redesignated Marine air control squadrons (MACS). Four years later, Helicopter Transport Squadron 772 was activated and VMF-511 was reactivated at Willow Grove but remained on the West Coast.

In 1959 Marine Air Reserve Group 25 was the senior reserve command at Willow Grove, with VMF-511 attached.

A change in the concept of the Fourth Wing occurred in 1962 when Marine Aircraft Group 43 (MAG-43) was reactivated along with Headquarters and Maintenance Squadron 43 (H&MS-43). Helicopter Transport Squadron 772 was redesignated in April as Marine Medium Helicopter Squadron 772 (HMM-772). Early the next year, MACS-26 at New York was redesignated Marine Air Traffic Control Unit 73 (MATCU-73), and

on March 1, Marine Air Base Squadron 43 (MABS-43) was reactivated at Willow Grove.

Major reorganization in 1965 saw H&MS-43, MABS-43, VMF-511 and MACS-17 all reassigned to MAG-43, and HMM-772 reassigned to MAG-46, but remaining attached to MARTD Willow Grove. MATCU-73 was assigned to the 4th MAW and remained in New York. On November 1, 1965, MATCU-73 was reassigned to MAG-43 and in May 1967 was transferred to Willow Grove.

The MARTD was also responsible for two sub-units, one at the naval base in Philadelphia and one at Wyoming, Pa. Sub-unit one, at Philadelphia, was the first formed, as the 6th Infantry Battalion in 1949. After Korea the unit became the second Service Supply Battalion as the concept of the reserve forces changed. In 1955 the unit was redesignated the 10th Motor Transport Battalion. On May 1, 1965, it was transferred from reserve ground control unit status under the district director to aviation status as the 10th Transport Squadron and assigned to the 4th MAW. On May 1, 1967, it was redesignated Marine Wing Motor Transport Squadron 4, Sub-unit number 1, under direction of MARTD Willow Grove.

Sub-unit number two at Wyoming was activated as the 6th Truck Company, Scranton, and the 1st Automotive Field Battalion, Wyoming. Both units were combined at Wyoming as the 3rd Motor Transport Battalion which later became the 2nd Motor Transport Maintenance Squadron, 4th MAW. In 1963 its title changed to Marine Wing Motor Transport Squadron 5, Sub-unit number 2.

MARTD Willow Grove administers and supports seven Marine air reserve aviation units consisting of about 600 reservists. They spend one period each summer on active duty at a Marine Corps base for training.

The senior unit at the detachment today is MAG-49 comprised of HAMS-49, MAB-49, HMH-772 and several other squadrons located throughout the United States. VMA-131 is assigned to MAG-42, NAS Alameda, but attached to MARTD Willow Grove. If mobilized, it will be a part of the 4th MAW. VMA-131 is the only Marine fixed-wing squadron home-based at Willow Grove. It flies the A-4 *Skyhawk*.

HMM-772, Willow Grove's only Marine rotary wing squadron, operates CH-53As. The squadron also stands ready to lend assistance to the community during civil emergencies such as the blizzards that blanketed the Delaware Valley in 1965 and 1966 and the 1972 floods.

MABS-49 is organized to provide air base facilities including construction, messing and certain maintenance and logistic functions. Additionally, the squadron can install and maintain the M-21 expeditionary aircraft recovery system for emergencies.

MATCU-73 is the only air traffic control unit in the entire 4th Marine Aircraft Wing to receive FAA certification and has taken operational control of the field at Willow Grove on several occasions.

Volunteer Training Units (Aviation) 25 and 28 consist of reserve officers and enlisted personnel who are assigned annual projects by Headquarters. The reservists of the VTUs serve without pay on a voluntary basis.

Present C.O. of the MARTD is Colonel M. T. Garrison, who wears two hats. He also serves as the commanding officer of MAG-49.

THE SILVER HAWK

By WO Dale Dye

A huge C-130 descends over the dense jungle of Vietnam as it makes its approach to the desolate, shell-cratered airfield at the Khe Sanh combat base. The date is February 10, 1968. The *Hercules* is carrying a cargo of fuel desperately needed by the beleaguered 26th Marine Regiment.

It was the sort of situation that gives most aviators nightmares. But then most aviators don't have nearly 15,000 hours and three wars in their log books. The man at the controls of the C-130 did have that wealth of experience, however, and if Chief Warrant Officer Henry Wildfang survived his final war in Indochina, there was little doubt he would become the Corps' senior aviator—the *Silver Hawk*.

Certainly survival was uppermost in his mind over Khe Sanh that morning as enemy gunfire riddled the cockpit and sides of the *Hercules*, rupturing the fuel containers. Flames lit one wing and explosions began to rock the aircraft as Wildfang fought the controls in an attempt to get gear on the deck before a final fireball ended his long career in the air.

On the ground, Marine *Grunts* gaped in awe as the lumbering C-130, completely ablaze, touched down smoothly. More explosions erupted along the fuselage as Wildfang and his crew fought the bird off the runway to leave it clear for other flights and keep the doomed bird away from troops who could be killed in the final explosion.

It was a feat of astounding airmanship according to everyone but Wildfang. When he received his fifth Distinguished Flying Cross as a result of the Khe Sanh action, he said he was just doing his job. There aren't many people left around to confirm it, but it's likely Wildfang said essentially the same thing when he won his other four DFCs in the Pacific during WW II.

That's the sort of man Wildfang is: more at home in the cockpit of an airplane than answering reporter's questions despite the fact that his status as the Marine Corps' *Silver Hawk* puts him in the media limelight. (Wildfang was named the *Silver Hawk*, senior Marine Corps Aviator, for 1975 and 1976.)

At 60, with over 23,000 flight hours under his belt, Wildfang still musters each morning with Marine Aerial Refueler/Transport Squadron 252 at MCAS Cherry Point, N.C. He holds down the jobs of squadron pilot and quality assurance officer. Most younger pilots and enlisted flight crewmen love to fly with him. "It's like a graduate course in C-130 operations when you sit up in the office with Gunner Wildfang," comments one C-130 flight engineer.

If anyone is qualified to teach a graduate course in flying military transports, it must certainly be this 30-year veteran pilot whose gnarled hands still caress *Hercules* flight controls the way they did in all of the 21 different aircraft types he has flown.

In fact, the veteran has a special fondness for the C-130. "It's an outstanding performance aircraft and does everything it was designed to, excellently, mainly cargo and passenger transport and aerial refueling," he relates. "But, then, I've always liked all of the aircraft I've flown.

"Of course, the flight techniques are different for all of them," he adds. "And they're getting more sophisticated. You definitely have to keep abreast of what's happening in aviation, because it's constantly changing."

The story of Wildfang's seat-of-the-pants climb to the exalted title of *Silver Hawk* reads like a scenario of *The Great Waldo Pepper*. Back in Bismarck, N.D., a young University of North Dakota junior at home for the holidays was looking for a little non-academic adventure.

"My father and brother were interested in flying," Wildfang recalls, "but I didn't think much about it one way or another. My father mentioned a government-sponsored flight training program offered at the university. It was certainly a reasonable fee to get into it, so I did. I think it cost me $25 for my private license."

Wildfang later entered the university's Navy V-5 program and has been in the cockpit of military aircraft ever since. He was designated Naval Aviator #12766 on April 16, 1942, and commissioned a Marine second lieutenant in May of that year. Following a course of instruction at the American Airline Flight School, he found himself overseas wondering about the quality of Japanese pilots in early 1943.

He spent time in the Pacific fighting, at the controls of B-24 bombers and R4D transports. Along the route of his two wartime tours he picked up his first four DFCs. Shortly after the war ended, Wildfang left the Marine Corps as a major but quickly found civilian life a little lackluster.

He reentered the Corps' aviation fraternity in December 1946 and was appointed a master sergeant pilot. He flew out of bases on the East and West Coasts. He was transferred to Japan shortly after the Korean Conflict ended, flying transports into and out of Southeast Asia.

During Korea and Vietnam, Wildfang was appointed a warrant officer and, during the latter, began his long affair with KC-130s, serving tours with *Hercules* squadrons at Cherry Point, N.C., and Iwakuni, Japan. He has piloted C-130s around the world several times.

Currently in his 36th year in the Marine Corps, Wildfang really doesn't know when he'll quit. Most people who serve with him think he'll stop when they lock up all the airplanes and refuse to let him on the flight line. Then and only then. That's probably just the way the *Silver Hawk* would like it.

Birds of Prey

Among the birds of prey in the world, there are about 10 species called Harrier. They are all medium-sized, slender hawks with rather pointed wings, long tails and legs. In most species, the males are mainly gray, the females brown.

They spend much of the day on the wing, flying at low level—gracefully and effortlessly.

They are characterized by their fast reactions and maneuverability which enable them to surprise their prey and strike with great violence before they can reach cover.

The Hen Harrier is the most widely distributed species, breeding across the Northern Hemisphere. A North American sub-species is the Marsh Hawk, the male of which is illustrated for this article.

In the late Sixties isolated sightings of a large and more aggressive member of the Harrier family were reported in Dunsfold, England. Although the speed and natural plumage of this species made it difficult to sight, these characteristics gained for it world-wide attention. Birdwatchers soon isolated numerous communities throughout the hemisphere and the United States promptly established a refuge at Havelock, N.C., and more recently at Yuma, Ariz. Since then the population has shown a marked increase. There is sincere hope that the first successful breeding experiments being conducted at St. Louis, Mo., will begin producing a hardier and more prodigious strain within the U.S.

At present a total of 14 members reside in the Yuma Aviary aboard the Marine Corps air station and are concentrating their daily activities in the area of building #109. The care and upkeep of this community has been placed upon the shoulders of VMA-513. Rumors indicate this group of *Harriers* has become so adapted to human contact they can be fed and cared for by hand.

Caution is advised when attempting to observe these superb creatures, and permission to enter or disturb their habitat must be obtained.

(By GySgt. Al Ward, VMA-513 Career Planner, *Cactus Comet*, January 27, 1977)

Never one of the most glamorous of Navy/Marine fighters, the Douglas F3D *Skyknight* shared with its Douglas stablemate, the AD *Skyraider*, the distinction of serving with combat squadrons in both the Korean and Vietnamese Conflicts.

The Navy turned to jet power after WW II for its carrier fighters. A night fighter was needed. Douglas received a contract for three prototype XF3D-1s in April 1946. The first flew in March 1948. Typical of early jet fighters, it was a straight wing design. A wide cabin providing side-by-side seats for pilot and radar operator, engines semi-buried in each side of the lower fuselage, four 20mm guns under the radar in the nose and large internal fuel capacity resulted in a bulky fuselage. An unusual feature was the escape system — depending primarily on a bailout chute, out through the bottom of the fuselage.

Subsequent flight testing confirmed the basic soundness of the design and led to correction of problems unearthed in initial carrier operation of this large carrier jet aircraft.

Although underpowered with its two Westinghouse J34 jet engines, 28 aircraft were bought while the -2 was being developed to use the higher powered Westinghouse J46. Delays in the J46 program led to use of uprated J34s and the *Skyknight* was never a high performance aircraft.

Initial flights of production F3D-1s in early 1950 led to service introduction late in the year, with VC-3 and VMF(N)-542. A swept wing version, the F3D-3 was also contracted for but was destined to be stillborn, being cancelled before reaching flight.

Another foresighted project involved the F3D in 1950: one of the XF3D-1s was modified to carry and fire four *Sparrow Is*.

The first F3D-2 flew in February 1951. Over the next two years, 237 were delivered. Sixteen of these were F3D-2Ms in the *Sparrow I* configuration, prototyped by the one XF3D-1M in 1950. The F3D-2s served with Navy composite and Marine night fighter squadrons, but went into combat in Korea only with Marine land-based squadrons, in the fall of 1952.

As land-based night fighters, the F3Ds were effective, destroying both jet and prop aircraft in night engagements. However, for carrier use, smaller, single-place night fighters were considered more satisfactory.

By the late Fifties, as the F4D (*NANews*, April 1975) and F3H (*NANews*, March 1974) came into service, the *Skyknights* were converted for trainers and electronic warfare. F3D-2Ts and -2T2s, depending on the radar and fire control system installed, were used for training *Demon* and *Skyray* pilots in radar intercept techniques. The Marines used converted F3D-2Qs as tactical ECM aircraft.

By 1960, the F3Ds were being replaced by later designs. With the DoD redesignations in 1962, the -2Qs became EF-10Bs, and the -2T2s still in service became TF-10Bs. The TFs lasted until late 1963. The EFs continued, flying combat through much of the Vietnam conflict before their retirement.

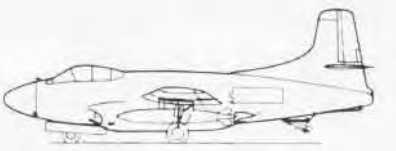
Skyknight

XF3D-1

F3D-2

F3D-2Q

Span	50'
Length	45'5"
Height	16'1"
Power plant	Thrust
1	2 Westinghouse J34-WE-34/38 3,250 lbs.
2	2 Westinghouse J34-WE-36 3,400 lbs.
Max speed	
1	433 knots
2	460 knots
Service ceiling	
1	34,000'
2	36,700'
Range	
1	1,145nm (with ext. tanks)
2	1,195nm (with ext. tanks)
Crew	2
Armament	
All	four 20mm guns
2	two bombs (up to 2,000 lbs.)
2M	four Sparrow Is



Marine Aviation ...

On the Road to Rabaul

By Clarke Van Vleet, Aviation Historian

'WW II Marine flyers were the best. To get back alive they had to be good.'

Joseph Foss, 1977

In early 1942 the Allies were still falling back as the Japanese offensive pushed through the south and southwest Pacific. Down from the Philippines came the enemy to spread through the Dutch East Indies and swing eastward toward the Solomon Islands. The big Australian base at Rabaul fell on January 23, 1942, and two months later the Japanese landed on Bougainville, largest and most northerly of the Solomons. By May the enemy's spreading tentacles stretched 300 miles down The Slot to grasp tiny Tulagi, capital of the island chain, off Guadalcanal.

Meanwhile, Admiral Ernest King, Commander in Chief of the U.S. Fleet, had been formulating strategic plans to stop the invader's advance toward the American-Australian lifeline. These plans also called for counteraction via a step-by-step offensive back through the island territories the enemy had taken.

Operation *Watchtower* — dubbed *Shoestring* by the sparsely equipped men — was to take Tulagi and Guadalcanal as the first step in the drive up the line of Solomons to Rabaul. As it turned out, it would be a tough two-year course.

The first amphibious operation of WW II and the first

VMF-215


VMF-214


VMF-124


VMF-112

VMF-221


VMF-121


VMF-212


VMF-224


VMF-223


Hanson VMF-215


Boyington VMF-214

Walsh VMF-124


Smith VMF-223


DeBlanc VMF-112


Galer VMF-224


Bauer VMF-212


Swett VMF-221


Foss VMF-121

Dust in engines and tropical mud plagued early flyers at Henderson Field.

seizure of beachhead land from the enemy came off as scheduled on August 7, 1942. The 11,000 Marines took the partially completed airstrip — the future famous Henderson Field (named after Major Lofton Henderson lost in the dive bombing raids at Midway).

During the critical two-week period prior to the arrival of Marine air units on Guadalcanal, the enemy maintained unchallenged supremacy at sea and in the air. The Japanese kept up a constant sea and air barrage against the island. At night they built up troops ashore under cover of surface bombardments.

The first air units to fly aboard Henderson on August 20 were VMF-223 with 19 F4F-4 *Wildcat* fighters, under Maj. John Smith, and VMSB-232 with 12 *Dauntlesses*, commanded by Maj. Richard Mangrum. They called themselves the Cactus Air Force after the code name for Guadalcanal. A majority of their pilots were under 21, averaging about 275 hours of prior flying experience. They would be up against veteran enemies who had averaged some 800 hours in the air.

Meanwhile, the Japanese were on their way back, intending to put more troops on the island. Converging toward Guadalcanal on August 23rd was a combined flotilla of 3 carriers, 3 battleships, 15 cruisers, over 20 destroyers and 5 transport ships loaded with troops. Admiral Isoroku Yamamoto, Commander in Chief of the Japanese Fleet and infamous author of Japan's plot against Pearl Harbor, had ordered the loaded-for-bear attack.

Aligned against this force and waiting were the two Marine air squadrons and Admiral Jack Fletcher's Task Force 61 of 3 carriers, 1 battleship, 7 cruisers and 18 destroyers. The Battle of the Eastern Solomons, one of six important naval engagements which eventually centered around Guadalcanal, was joined on August 24. During the battle, Marine Aviation got in its first major licks. On the 24th, VMF-223 downed 16 planes. The next day, Mangrum's men attacked the transports, badly damaging the flagship cruiser covering the transport group. On the 26th, Smith and Capt. Marion Carl accounted for two enemy planes each, as the squadron scored 13 for the day. On the 28th, the SBDs belted three destroyers escorting more troops. One of the DDs sank immediately with a 500-pounder in her bowels. The other two were damaged. On the 30th, the *Wildcats* knocked out 14 enemies, Smith downing four, Carl three.

By the end of the war, Smith was to destroy a total of 19 enemy planes. He was awarded the Medal of Honor. His citation read in part ". . . in spite of the limited combat experience of many of the pilots of his squadron, they achieved the notable record of 83 enemy aircraft destroyed between August 21 and September 15, 1942, mainly attributable to the thorough training under Major Smith." On leave in the States after his overseas tour, Smith requested combat again, but authorities in Washington told him, "Not until you have trained another 150 John Smiths."

The pioneer pilots at Guadalcanal proved that the dreaded *Zero* was not invincible. They learned, however, to avoid protracted dogfights with the more maneuverable enemy fighter. They concentrated instead on the bombers, diving with bursts in direct overhead or high-speed passes before the *Zeros* could jump them. They also teamed in pairs. One pilot said, "The *Zero* could outmaneuver, outclimb, outspeed us. One *Zero* against one Grumman is not an even fight but, with mutual support, two Grummans are worth four or five *Zeros*." Another said, "A *Zero* can't take two seconds' fire from a Grumman, and a Grumman can sometimes take as high as 15 minutes' fire from a *Zero*." The armor on the Grumman *Wildcat* was paying off.

One early problem came from operational accidents on Henderson's primitive field. Takeoffs and landings were dangerous. Dust fouled the engines or deep mud from tropical rains bogged the planes, particularly the heavier *Dauntlesses*. The hard rubber tail wheels on the SBDs rutted the runway like a plow and experiments with wooden wheels proved to be no solution. Another har-

Joe Foss, third from left, with VMF-121 pilots. His war gear is on display at the Air and Space Museum in Washington, D. C.

rassment was "Washing Machine Charlie" — enemy spotter planes dropping nightly flares to light up the field for offshore bombardment by Japanese ships. One day when some of the pilots were complaining about the dangerously bomb-pocked runway, General Roy Geiger, commanding the First Marine Air Wing, climbed into an SBD, weaved his way down the cratered airstrip and personally bombed a Japanese position. He was 57 at the time. He had gotten his Naval Aviator's wings in 1917.

Smith's and Mangrum's outfits were reinforced August 30th when VMF-224 and VMSB-231 flew in under the commands of Majors Robert Galer and Leo Smith, respectively. By coincidence, as so many events in history are, their planes had been ferried down from Pearl Harbor aboard the airplane transports *Kitty Hawk* and *Hammondsport* — the former being the namesake of the site where the first airplane flew, the latter the place where the Navy's first plane became airborne.

Geiger could count 86 pilots and 64 planes, including 3 Army and 10 Navy, then on the island. These included the 31 new planes just received from VMF-224 and VMSB-231. At the same time, the Japanese were reinforcing at double that number — 36 fighters and 27 medium bombers were brought in to bolster their Rabaul bastion. But while the Marines flew in defense of the island, the enemy had fuel and fatigue problems flying the 560 miles from Rabaul and back.

The reinforcements of the original Cactus Force followed in the footsteps of their predecessors. They flew from dawn to dusk during the crucial months of September and October when the enemy was still landing troops on Guadalcanal.

As more Marines came, more heroes were born. During the early months, three performed feats that gained them the Medal of Honor:

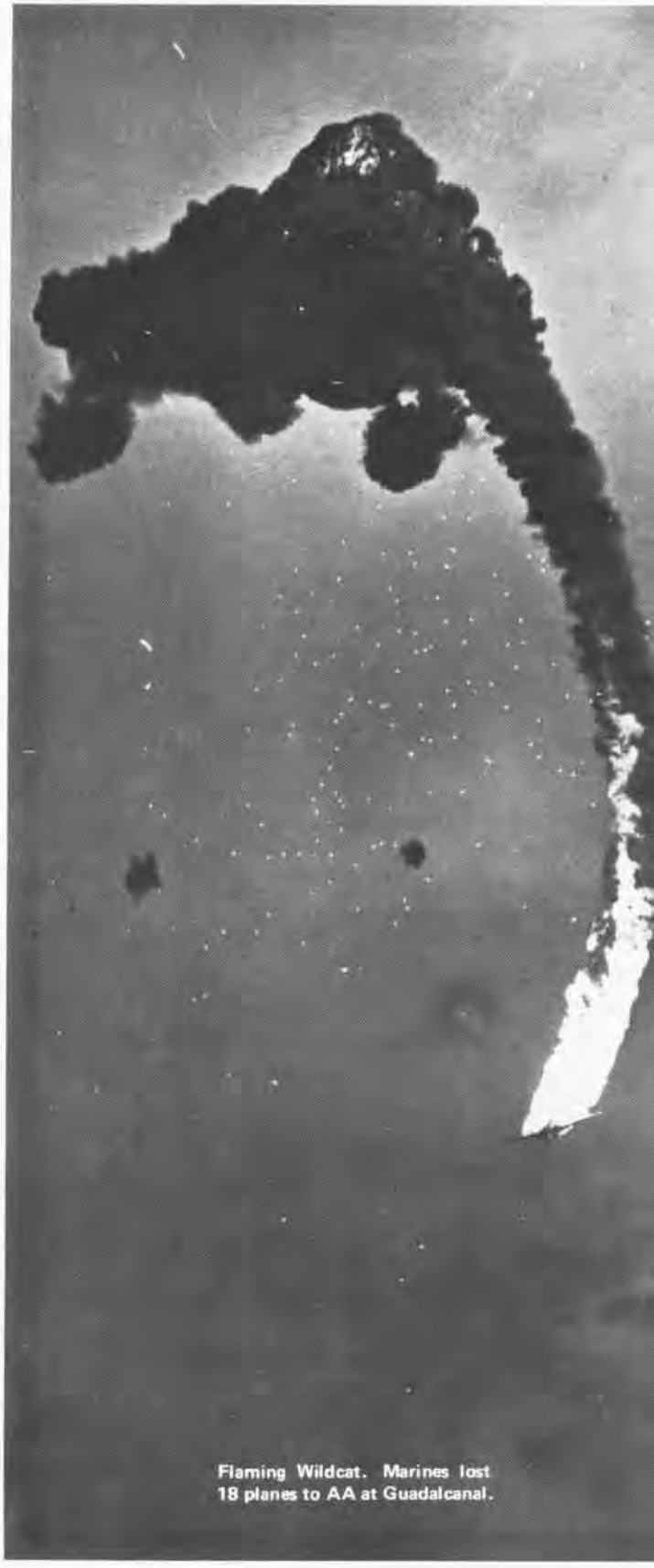
Robert Galer — "Though suffering the extreme physical strain attendant upon protracted fighter operations at an altitude above 25,000 feet, the squadron under his leadership shot down 27 Japanese planes."

Harold Bauer (posthumously awarded) — "Engaged an entire enemy squadron and, although alone, fought his plane so brilliantly that four of the Japanese planes were destroyed before he was forced down by lack of fuel."

Joseph Foss — "Shot down 23 Japanese planes and successfully led a large number of escort missions, skillfully covering reconnaissance, bombing and photographic planes as well as surface craft." Foss became the first American aviator to tie Eddie Rickenbacker's WW I record of 26 enemies shot down. His squadron was credited with 164 enemy planes destroyed in 122 days of fighting. He was to go on to fame and success after the war, being elected governor of his home state of South Dakota.

There were also some serious setbacks in the early months. The carriers *Enterprise* and *Saratoga* were hit, damaged and forced to retire in late August, and the enemy stung *Wasp* and *Hornet*, sinking the former by sub in September, the latter by air attack in October. An American destroyer transport, *Gregory*, was also sunk, along with two of her sister ships, in September.

That same month back in the States, a man whose first name was also Gregory accepted a first lieutenant's



Flaming Wildcat. Marines lost 18 planes to AA at Guadalcanal.

Irony of war: Navy Cross winner USAAF's Thomas Lanphier bagged Admiral Yamamoto over Kahili on April 18, 1943. His brother Charles, who was a Marine pilot with VMF-214, was shot down by the enemy over the same site four months later.

commission in the Marine Corps Reserve. He had just returned to the U.S. in July from China where he had flown 300 combat hours, shooting down six Japanese planes as one of General Claire Chennault's *Flying Tigers*. He would soon arrive in the Solomons to become the Marine Corps' top ace with 28 enemy kills before being taken prisoner by the Japanese. He was Naval Aviator #5160, the designation which he received at Pensacola as a Marine Reserve Cadet in 1937. His name was Gregory Boyington. (But more on him later.)

In January 1943, there was more Medal of Honor action. First Lieutenant Jefferson DeBlanc disrupted a formation of enemy float planes attempting to attack a Marine force of dive bombers seeking out Japanese ships off New Georgia. His actions permitted the bombers to complete their runs and retire, but he tarried on the scene, challenging the superior number of enemy planes, destroying three and dispersing the rest. Then, closed in by two attacking *Zeros*, DeBlanc shot both out of the sky before parachuting into the jungles at a perilously low altitude from his hopelessly damaged *Wildcat*.

The Guadalcanal campaign dragged on until February 1943 when the island was finally secured. By then, 15 Marine squadrons had seen service on the island. The Naval Battle for Guadalcanal occurred in November 1942 and the Battle of Rennell Island was fought in January 1943. Ashore, air forces in great variety — Marine, Army, Navy — provided direct support. They flew interceptor patrols, offensive missions against shipping, and close air support for the Marines and for the Army troops relieving them. Marine air units carried the major air support. They accounted for 436 enemy aircraft destroyed during the campaign.

Had the Japanese won in the air over Guadalcanal, the destruction of the Allies' aircraft probably would have followed, giving the Japanese air superiority. With this, many more U.S. ships would have been sunk and the defeat of the ground forces might well have occurred. Thus, the Allied flyers, particularly the Marines, turned potential defeat into ultimate victory. Statistics for the six-month struggle show that the Japanese lost 436 planes against 118 (18 to AA, 70 in air-to-air combat and 30 operationally) for the Marines. The Japanese lost 23,800 ground troops (dead or missing, including 9,000 dead of wounds and disease) against the Marine Corps' 1,207. In addition, the Marines reported 140 air personnel dead or missing. Ship losses were equal — 24 for the Japanese, 24 for the Allies.

About 75 percent of U.S. aircraft losses occurred in the first three months. Mangrum, for example, was the only pilot to walk away unscathed from VMSB-232 in October. Seven had been killed, four wounded and the others flown out for rehab-hospitalization. The overall aircraft loss rate started out at about 2 to 1 in America's favor and eventually rose to 4 to 1, mainly because of growing U.S. fighter strength and progressive improvements in pilot training, as the enemy's diminished.

The climb up the Solomon catwalk commenced soon after the conclusion of the gruesome Guadalcanal campaign. Russell Island was taken unopposed on February 21st by the Third Marine Raider Battalion. An airfield was immediately constructed as another rung in the ladder leading to Rabaul. The next objective would be the New Georgia group. The enemy, however, was still striking at Guadalcanal. In a flight to intercept a wave of 150 Japanese planes on April 7th, 1st Lt. James Swett led his four-plane team against a formation of 15 enemy bombers. Separated from his division, he alone attacked six bombers, shooting down four. His ammunition nearly exhausted, he closed on a fifth until disabled by a riddled engine, a shattered windshield and a slashed face. He crash-splashed in the waters off Tulagi.

This photograph was autographed by Boyington. Kneeling, left to right, Pappy, Stan Bailey, Virgil Ray and Bob Alexander. Standing are Bill Case, Rollie Rinabarger, Don Fisher, Boo Bourgeois, John Begert, Bob Ewing, Boone Groover and Burney Tucker.

About this time, Gregory Boyington arrived at Guadalcanal's Hotel De Gink, "a rat hole." He relates that at first "by far the greatest thrill I got was Admiral Yamamoto's arrival by plane at Kahili, Bougainville. One night we were drinking with some Air Force pilots, and they informed us that the Allies had broken a coded message telling of the arrival of Yamamoto on the following morning [April 18, 1943]. I remember how we Marines envied these P-38 pilots, for we didn't have enough range with our *Wildcats* to reach Bougainville and return to Guadalcanal."

Among those highly regarded Army pilots was Captain Thomas G. Lanphier, Jr., a former fraternity roommate of the author at Stanford University before the war.

As to the top-level decision to attack Yamamoto, the question of assassination arose even in those days. President Roosevelt, Navy Secretary Knox, Admirals King and Nimitz had consulted on the matter. The consensus was that Yamamoto was a vital element in the enemy's war effort and must be eliminated. The orders read: "Squadron 339 P-38s must at all costs reach and destroy. President attaches extreme importance this operation." It was signed by Frank Knox.

Rear Admiral Marc Mitscher, who had launched Jimmy Doolittle's bombers from the deck of *Hornet* on the famous Tokyo Raid of April 18, 1942, and who was now head of all land-based planes as Commander, Aircraft, South Pacific, gave instructions, "to get this bird." Lanphier's planes took off early from Henderson the morning of April 18, 1943. Skirting wide of the Solomons and clipping the waves at 50 feet to avoid detection, his team of four P-38 hunters, with a covering force of Maj. John Mitchell's 12 *Lightnings*, arrived punctually off Kahili at 9:35 a.m. So did Admiral Yamamoto in a *Betty* bomber. After tangling with the covering force of *Zeros* and shooting down one, Lanphier followed Yamamoto's bomber down to treetop level and began firing a long steady burst. The wing fell off, the *Betty* crashed in the jungle. That night Admiral Halsey, Commander, South Pacific, sent a message to Mitscher: "Sounds as though one of the ducks in their bag was a peacock. April 18th is your lucky day."

Lanphier's sequel concerned his Marine fighter pilot brother. Just four months after the event, his brother Charles, who then had four *Zeros* to his credit, led a flight of eight *Corsairs* on a strafing raid against the same Kahili Airfield on Bougainville. He was shot down at almost the identical spot where Lanphier had bagged Yamamoto. His brother survived and was sent to a prison camp at Rabaul. He died at Rabaul of gangrene just two weeks before the Marines liberated the prison. (After the war, Tom went on to become Special Assistant to the Secretary of the Air Force.)

By the summer of 1943, the latest Marine Corps fighter, the F4U *Corsair*, had replaced the *Wildcat* throughout most of the theater. It was a touchy plane to fly. It could, however, out-perform the *Zero*, except in turning radius. In ruggedness, armor, self-sealing fuel tanks and rapid fire power — six 50 calibers so arranged as to obviate synchronization with the propellor — it also outranked the enemy's standard fighter, which received little engineering improvement during the war.

First Lieutenant Kenneth Walsh was flying a *Corsair* with VMF-124 on August 15, 1943, when he got sandwiched between a layer of *Zeros* and *Vals* attacking Allied troops and ships at Vella Lavella. Though outnumbered 6 to 1, he attacked repeatedly, shooting down a fighter and two bombers. Landing at Munda Field — opened the day before — he was forced to junk his plane as it was so badly shot up. Two weeks later over Kahili he encountered some 50 *Zeros*. Striking alone, he knocked out four. His plane was so badly mauled this time he had to make a dead-stick landing at sea off Vella Lavella. For these acts,

1943 World Series St. Louis Cardinals sent baseball caps to the Black Sheep.

the ex-enlisted Naval Aviation Pilot received the Medal of Honor. By war's end, Walsh had shot down 21 planes.

By that time Boyington had been assigned to VMF-214 and was about to take it into combat from the base on Russell Island. "The boys called me Grandpappy, and I loved this because it came as a word of respect like the Old Man or Skipper. I was content with my nickname, for I was 30 and the rest of the pilots were from 19 to 22." His squadron members liked to call themselves Boyington's Bastards, but he told them, "We're going to have to choose a squadron name that is fit to print, my friends. Try this for size. *Black Sheep.* Everybody knows that it stands for the same thing. And yet no personality is involved, and they can print *Black Sheep.*" (Boyington did not tell them then, but his favorite childhood jingle had been "Baa, baa, black sheep, have you any wool. . . .") They responded by saying, "We like that, Gramps. We can make up a bastard coat of arms like they used to do in England. And we can put it on a shield and use it as our insigna."

On their first escort mission up The Slot to Bougainville in September 1943, Boyington bagged five *Zeros*. He was full of new tricks and innovations which he passed on to his men. With the *Flying Tigers*, for example, he had used this technique: "To make certain that no one sucked me in for a sun approach, or if he did and I couldn't avoid it, I used a trick to keep track of him. I closed one eye, holding the tip of my little finger up in front of the open orb, blocking out just the fiery ball of the sun in front of my opened eye. I found that it was impossible for an enemy to come down from out of the sun on a moving target without showing up somewhere outside of my fingertip if I continuously kept the fiery part from my vision."

After several uneventful missions, Boyington used a ruse one day to lure some *Zeros* up while escorting TBFs over Kahili. "The enemy ground control radio had our frequency. They were pretending to be American pilots. 'Major Boyington, what is your position?' came in as clear as a bell without the slightest trace of an accent. I played along. Help from some cloud formations made the game of hide-and-seek even more interesting." After giving a fake location, Boyington waited for the formation of *Zeros* to streak to the wrong location, whereupon he led his boys down on the enemy and "almost everybody in the squadron got a shot on our first pass." Boyington knocked off three *Zeros* that day.

In October 1943, the *Black Sheep* moved to Munda. The Medal of Honor eventually bestowed on Boyington mentions only one of his many dramatic ventures: "Resolute in his efforts to inflict crippling damage on the enemy, Major Boyington led a formation of 26 fighters over Kahili on 17 October and, persistently circling the airdrome where 60 hostile aircraft were grounded, boldly challenged the Japanese to send up planes. Under his brillant command, our fighters shot down 20 enemy craft in the ensuing action without the loss of a single ship."

Meanwhile, another of America's highest award winners was emerging. He performed acts beyond the call of duty and at the risk of his life. Alone, he attacked six enemy bombers during U.S. landing operations at Bougainville in November. Again in January 1944, over Rabaul, 1st Lt. Robert Hanson of VMF-215 waged a lone aerial duel against great odds while cut off from his division deep over enemy territory. A week before he was to complete his combat tour, he failed to return from a strafing run. By then, he had shot down 25 enemy planes, third highest ace in the Marine Corps after Boyington with 28 and Foss with 26.

Rabaul had become seriously weakened. Enemy aircraft destroyed amounted to about three times Allied losses. By the end of 1943, the enemy found it virtually impossible to perform offensive air operations. The Allies attained complete air superiority over the former Australian base by mid-February 1944. Thereafter the base was dormant till the end of the war.

In the neutralization of Rabaul, statistics show that from October 1, 1943, to February 17, 1944, the F4U *Corsairs* flew 3,300 air-to-air sorties compared to 2,400 for the *Zeros*. The Marines had no ground losses but they counted 50 *Zeros* destroyed on the ground. Operational losses accounted for 70 *Corsairs* and 160 *Zeros;* air-to-air losses were 61 *Corsairs* and 330 *Zeros*. Total *Zeros* lost, 540; *Corsairs*, 131.

By the end of the war, the total tallies for enemies shot down by Marine fighter squadrons showed these to be the top seven: VMF-121 with 208; VMF-221, 185; VMF-112, 140; VMF-215, 137; VMF-212 and VMF-223 tied with 132½ each; and VMF-214 with 127.

Accounts of Boyington's fighting days in WW II became legend. He was shot down January 3, 1944, taking two more *Zeros* with him. The story on the opposite page appeared in one of the popular air classics that proliferated at WW II bookstores.

Boyington autographs a copy of his book, Baa, Baa, Black Sheep.

He was found one day in the terrible Ofuna prison camp. After eighteen months of silence, he told his story.

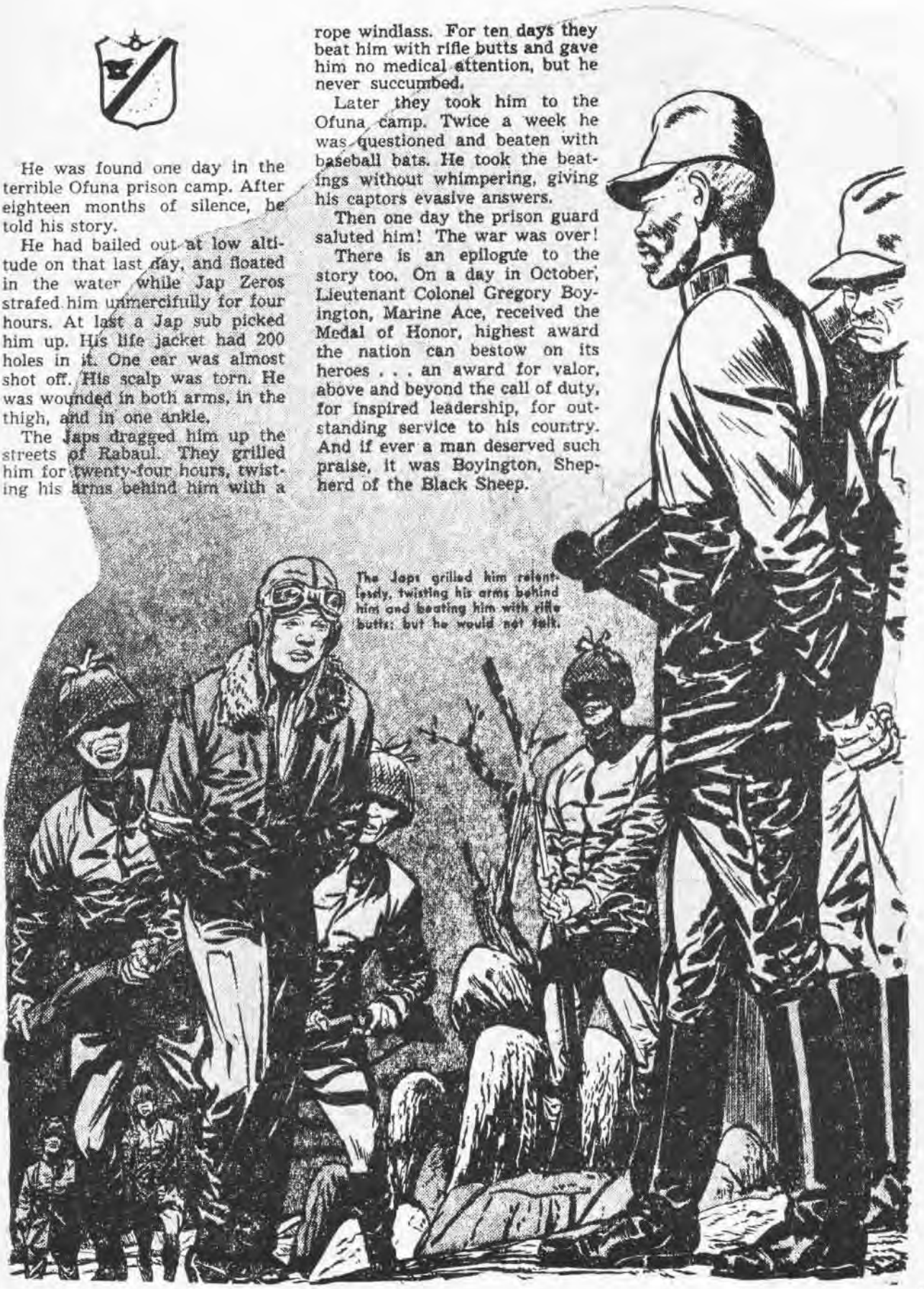
He had bailed out at low altitude on that last day, and floated in the water while Jap Zeros strafed him unmercifully for four hours. At last a Jap sub picked him up. His life jacket had 200 holes in it. One ear was almost shot off. His scalp was torn. He was wounded in both arms, in the thigh, and in one ankle.

The Japs dragged him up the streets of Rabaul. They grilled him for twenty-four hours, twisting his arms behind him with a rope windlass. For ten days they beat him with rifle butts and gave him no medical attention, but he never succumbed.

Later they took him to the Ofuna camp. Twice a week he was questioned and beaten with baseball bats. He took the beatings without whimpering, giving his captors evasive answers.

Then one day the prison guard saluted him! The war was over!

There is an epilogue to the story too. On a day in October, Lieutenant Colonel Gregory Boyington, Marine Ace, received the Medal of Honor, highest award the nation can bestow on its heroes . . . an award for valor, above and beyond the call of duty, for inspired leadership, for outstanding service to his country. And if ever a man deserved such praise, it was Boyington, Shepherd of the Black Sheep.



The Japs grilled him relentlessly, twisting his arms behind him and beating him with rifle butts; but he would not talk.

PEOPLE PLANES AND PLACES

An important change is taking place in VAW-88 this month with the replacement of its E-1B *Willy Fudds*, used since the squadron was commissioned in 1970, with E-2B *Hawkeyes*. VAW-88, with the all-weather, carried-based *Hawkeye*, will be able to provide an improved mission capability to NAS Alameda-based Attack Carrier Air Wing Reserve 30. Commanding officer is Cdr. R. G. Hutton, who as a civilian is captain of the harbor police for the San Diego Unified Port District.

Skipper of the VA-205 *Green Falcons*, Cdr. Bob Sibold, and LCdr. Joe Coughlin point to the sign proclaiming 10,000 acci-

dent-free hours amassed by the NAS Atlanta reserve squadron. The accident-free period from June '74 to January '77 included carquals on four different carriers and a transition from A-4Ls to A-7Bs in 1976.

CVW-8, embarked in *Nimitz*, returned to home base at NAS Oceana February 7 after a seven-month cruise in the Mediterranean. Commanded by Cdr. R. F. Moreau, the wing counted 143 centurions and 23 double centurions. *Nimitz*, commanded by Capt. R. T. Gaskill, received the NavAirLant Battle E during the deployment.

LCdr. Brian Jackson-Dooley, RN, bombardier/navigator, and LCdr. Doug Hamilton, RN, pilot, right, dressed in the uniform of the early Royal Navy, stand

before an A-6E *Intruder* in which they recently carrier qualified on board *Saratoga*. Both officers are attached to VA-42 as Royal Navy exchange officers.

Cdr. R. E. Tucker, Jr., C. O. of VF-74, recorded his 1,000th arrested landing while aboard *Nimitz*. The squadron also received the Admiral Joseph Clifton Award, which recognizes the top performing fighter squadron in the Navy.

VA-35, commanded by Cdr. B. K. Bryans, compiled over 3,200 flight hours and 1,500 arrested landings during the cruise. The *Panthers* now have achieved over six years of accident-free flying amounting to 27,000 accident-free hours.

Cdr. A. H. Fredrickson, C. O. of VF-32, made his 700th carrier arrested landing aboard *JFK* recently. He has amassed nearly 4,000 flight hours. The *Swordsmen*,

flying the F-14A *Tomcat*, also recently reported their first double centurion, Lt. Dave Leestma.

In 1953 Wing Commander Danny Lavender logged his first flight in a military aircraft, a *Provost*, with Great Britain's RAF. He recently completed his 5,000th hour at Point Mugu in an F-4 *Phantom*. He has flown in over 100 different military aircraft.

VF-151 has completed two years of accident-free flying, over 5,500 hours, all in a forward-deployed status aboard *Midway*.

Cdr. Gary W. Mau, C. O. of VA-12, has become a triple centurion aboard *Independence*. Cdr. Mau is nearing 4,000 flight hours in 25 different aircraft. More than 1,000 of these hours are in the A-4 and all models of the A-7.

Cdr. David Boaz, C. O. of VA-304, points to the hash mark just painted on the A-7 *Corsair* by AMH3 Alan Klein. This

signifies the second time running the *Firebirds* have won the coveted Noel Davis Trophy.

Capt. R. C. Eikenberry, USMC, HMA-269 assistant maintenance officer, received the Bronze Star Medal with Combat V recently for his heroic achievements in aerial flight on April 29 and 30, 1975, during Operation *Frequent Wind*, the evacuation of Saigon.

LCdr. Mike Reilly recently flew his 2,500th hour in the A-6 *Intruder*. He has served five tours in A-6 squadrons, VA-65, VA-196, VA-145, and two tours in the West Coast *Intruder* RAG, VA-128. LCdr. Dick Toft, Lieutenants Roy Seth and Jack Samar recently passed 1,000 hours in the A-6. Lieutenants Doug Kuykendall and Chuck Isele have flown 1,000 hours in the TC-4C, all during a tour with the *Golden Intruders*.

VT-86, commanded by Cdr. D. W. Seykowski, has surpassed four years of accident-free flying, over 50,000 hours. These were accumulated in squadron T-39Ds and TA-4Js. VT-86 is tasked with the advanced training of student Naval Flight Officers and their designation as radar intercept officers or advanced jet navigators.

The *Rooks* of VAQ-137 fly EA-6B *Prowlers* and are presently in the process of buildup for deployment to the Mediterranean aboard *America*.

Cdr. Buzz Needham, X. O. of VA-65, and Lieutenant Commanders James Workman, Dicky Davis and Dick Simpson recently completed 1,000 flight hours in the A-6 *Intruder*.

Changes of command:

VA-93: Cdr. J. W. Patterson relieved Cdr. W. Wright.

VA-145: Cdr. V. J. Huth relieved Cdr. R. A. Powell.

VP-66: Cdr. A. M. Kyle relieved Cdr. J. R. Mulligan.

VP-68: Cdr. C. R. Paty relieved Cdr. R. S. Fitzgerald.

VS-32: Cdr. R. H. Bruce, Jr., relieved Cdr. R. R. Proctor.

VAW-88: Cdr. R. G. Hutton relieved Cdr. W. F. Knobloch.

VRF-31: Cdr. C. F. Williams relieved Cdr. C. W. Larzelore III.

VAQ-137: Cdr. R. F. DeWalt relieved Cdr. G. Miller.

H&MS-29: Lt. Col. J. A. Gress relieved Lt. Col. W. C. Ryan III.

HMA-269: Lt. Col. W. C. Ryan III relieved Lt. Col. B. D. Rinehart.

MAG-29: Lt. Col. H. P. Miller relieved Col. W. G. Cretney.

MABS-29: Maj. J. E. Underwood relieved Lt. Col. R. M. Nebel.

By Helen Collins

They fly ...

During the more than 40 years since its first flight, the DC-3 has earned a reputation for longevity unequaled in aviation.

The durable stalwart made its first flight in 1935. In light of the plane's accomplishments since, its first flight ought to be remembered as one of the golden moments of flying history. But the truth is that no one remembers much about it. Since nobody had any idea that it would mark the start of an era, not a single photo of the event is known to exist.

The maiden flight on December 17 at Clover Field attracted few spectators to the Santa Monica airport. It was a routine sortie of 1 hour, 40 minutes. And so, aviation's most enduring legend was born without fanfare.

The simple structural design gave the DC-3 a virtually endless life because replacement of individual elements was readily accomplished. One of the things that made the DC-3 an easy plane to fly was the automatic pilot which became known as "George." (Once leveled off, in good weather, the pilots could relax and "let George do it.") Another nice feature was a long metal air tube which supplemented the cockpit heating system and could be adjusted to throw warm air wherever it was needed.

The DC-3 is a pilot's plane. Ask the flyers what they like about it and they give varied answers: It is honest and straightforward; it handles well; its inherent stability is good; and it responds well to the controls. The DC-3 has good cockpit visibility which facilitates ground maneuvering. It has its weak points, of course. One that the pilots have never stopped griping about is its leaky windshield. Raincoats were carried as standard operating equipment for use as lap robes. "Light rain outside, heavy rain inside," a pilot once reported.

It was primarily the DC-3s' varied wartime role that made them a legend. They were the Model Ts of the air. There were so many DC-3s around the globe, so many servicemen carried in them, so many lives owed to them, that the hardy craft came to be regarded with a reverence bordering on love. Affectionate names proliferated: *Dizzy Three*, *Gooney Bird*, *Dak* or *Dakota* (the British name), *Old Fatso* and *Bouncing Bertha*. Whatever the name, it is just about the best known plane in history.

In all, nearly 11,000 DC-3s were built, including military versions.

When war broke out in Europe, Douglas geared up for mass production of the military versions, the Army C-47 and Navy R4D. During the year before Pearl Harbor, Army and Navy orders began pouring in. The DC-3 was the only sizable multiengine plane actually in production with all the bugs worked out and with proven military experience. The DC-3 thus became a sort of lifeline in the worldwide war. When the last order had been filled, Douglas plants at Santa Monica, Long Beach and Oklahoma City had turned out more than 10,000 military versions of the rugged transports for America and her Allies.

The Naval Air Transport Service (NATS) was established under CNO on December 12, 1941, six days after Pearl Harbor, to provide rapid air delivery of critical equipment, spare parts and special personnel to naval facilities and fleet forces all over the world. Douglas transports for NATS were diverted from the production line and designated R4Ds with the appropriate number to indicate their particular version. Minor aircrew and

interior equipment changes were made. The exterior camouflage paint finish was olive drab. (Spare parts were interchangeable with those in the USAAF C-47 *Skytrain*, as were various accessory components.)

Prior to WW II, purchases of Navy aircraft from Douglas had been handled entirely by Navy procurement. When the war began, it became expedient to place large military contracts and from them allocate blocks of transports for naval use in accordance with logistic requirements.

Most of the 600-odd R4Ds procured for the Navy during WW II came from USAAF contracts. Consequently, the seven main variants in the R4D series each had a USAAF equivalent and carried the same popular name. The R4D-1 was a cargo transport counterpart of the C-47 *Skytrain*. Only two R4D-2s were ever in the Navy inventory. They were ex-Eastern Airlines transports and were used as VIP flagships. R4D-3s and -4s were also ex-airline aircraft and were used as personnel transports. They were equivalent to the USAAF's C-53 and C-53C, respectively. Later major Navy cargo transport variants were the R4D-5 (with a 24-volt electric system, matching the C-47A *Skytrain*), the R4D-6 counterpart of the C-47B, and the R4D-7, identical to the TC-47B navigation trainer.

With Japanese activity increasing in the area of the Aleutian Islands, the first R4Ds operating with NATS squadrons were used to service fleet units building up on bases at Kiska, Attu, Adak and Aguttu. The Alaska-Aleutians flying operations put the aircraft to supreme tests. The sometimes 40 to 50-degree-below-zero temperatures and saltwater atmosphere played strange tricks. Oil became as thick as molasses, rubber fittings crystallized, grease froze in the wheel bearings and windshields iced up. The crews learned how to winterize the rugged transports and they came through.

An official Navy statement after the Japanese gave up in the Aleutians said that retaking the islands would have been delayed for months if air transport had not been able to fly in great quantities of men and cargo quickly.

The DC-3 saw service in every theater of operation and took part in every major invasion and campaign in the Pacific. It carried anything and everything that needed hauling. When its cargo included an airplane wing too big to fit into its fuselage, it carried the wing slung under its belly. Outfitted with litters, it became a hospital plane and evacuated thousands of battle casualties.

In the Solomons, 14 specially-equipped Marine Corps R4Ds, under Southern Combat Air Transport (SCAT), maintained a daily service into Henderson Field on Guadalcanal. SCAT was one of the tools of Commander Air South Pacific. Unarmed R4Ds ran regular schedules between New Zealand, Noumea, Efate, Espiritu Santo and Guadalcanal. As U.S. forces built or captured airfields up the Solomons chain, the line was extended to them. On each flight, wounded were carried back to base hospitals. R4Ds flew in 600 gallons of fuel on sorties to Army Air Force fighters at Henderson Field during a time when they had no other source of supply.

Throughout the Pacific campaign, SCAT operated its regular schedule, which eventually extended as far as Australia. The Third Marine Amphibious Corps had a typical SCAT unit, an air delivery one, which was

part of what came to be known as the Cactus Air Force. These unarmed R4D-1s and early C-47s (like the crews, the transport models were mixed) had a variety of roles which ranged from flying supplies to New Zealand troops at Bougainville to dropping equipment and troops by parachute. They had a spectacular ability to stay in the air and take off with astounding overloads. Sometimes the overload exceeded by as much as two tons the gross weight limit for sister transports flying with U.S. airlines.

Many tales have been told about the DC-3's ability to absorb punishment. On one occasion a plane lost its right wing after being strafed on the ground. Since no replacement wing was available, it was fitted with one from a DC-2 which was a good five feet shorter (for one side only)! Christened DC-2½, it took off and flew just fine.

General Dwight Eisenhower called the DC-3 and the jeep two of the weapons that helped the most to win the war.

In 1946-47, Navy's Operation *High Jump*, led by Admirals Richard E. Byrd and Richard H. Cruzen, was the largest Antarctic expedition ever organized. Six ski-equipped R4D-5s were among the 26 aircraft accompanying the expedition. They were also equipped with JATO bottles for takeoff. Installation of these and modifications for the skis were made by NAS Quonset Point, R.I., which was later the home base of Air Development Squadron Six. VX-6 used the R4Ds in Antarctica for many *Deep Freeze* seasons.

The six R4Ds arrived in Antarctica aboard USS *Philippine Sea* (CVA-47). Their mission was to explore and photograph. The first carrier takeoff ever made with an R4D, a ski-rigged one at that, took place when the first of the twin-engine transports roared down the flight deck, streaming smoke from the four JATO bottles. Twenty-eight photographic hops later, when flying was terminated for the season, the six R4Ds were left at Little America. They were there during the second Antarctic development project in early 1948 but no attempt was made to fly them. In 1955 the icebreaker *Atka* was sent to Antarctica to reconnoiter base sites for the 1957-58 International Geophysical Year. The flights showed that a gigantic separation in the ice shelf had removed about two-thirds of Little America IV, including the airstrip and the six R4Ds. The *Gooney Birds* were on a drifting path to a watery grave. But they had written their share of Naval Aviation history and had paved the way for the R4Ds used by VX-6 in *Deep Freeze* until they were at last retired from Antarctic skies.

On October 31, 1956, during *Deep Freeze II*, R4D BuNo 12418, *Que Sera Sera*, made history by being the first aircraft ever to land at the South Pole. During their 49 minutes on the ground, pilots alternated in keeping the engines turning over. But when takeoff time came, nothing happened. The skis were frozen fast. Four JATO bottles failed to shake the transport loose. Finally, the firing of the remaining 11 bottles, in two sets of four and one set of three, sent *Que Sera Sera* up and away in an explosion of flame, smoke and snow. Congratulatory messages were soon pouring in from all parts of the world.

It made its last landing on December 4, 1958. The airstrip was the ice-covered bay at McMurdo. There it was dismantled, crated and loaded aboard the Navy cargo ship *Wyandot*. *Que Sera Sera* is now in the inventory of the Smithsonian Institution, which has loaned it to the Naval Aviation Museum in Pensacola.

After the end of WW II, Douglas decided that the only real replacement for the DC-3 was another, improved model, rather than an entirely new design. The Super DC-3 was developed simply. It had a standard DC-3A airframe with extensive modifications. Accepted by the Navy, with the designation R4D-8, it became C-117D in 1962 when DOD standardized aircraft designations. (The R4D-5/6 became the C-47H/J.) When the aircraft was modified for cold weather operations, the designation included the prefix L. On December 2, 1967, LC-117D, BuNo 17092, made the last flight of the Douglas DC-3-type transport in Antarctica.

On the map of Antarctica may be found Dakota Pass, R4D Nunatak and Skytrain Ice Rise, commemorating the contribution that the venerable *Gooney Bird* made to the first decade of Operation *Deep Freeze*.

The chronology of airlift operations released by the Military Air Transport Service reveals the part C-47s played in the Berlin airlift.

"June 21, 1948. Last food train goes into Berlin, Russian blockade begins.

"June 26, 1948. Airlift begins with 32 flights of C-47s carrying 80 tons of food supplies into Berlin's Tempelhof AFB from Wiesbaden AFB near Frankfurt. Approximately 100 C-47s, and no C-54s, available in USAFE at this time."

The *Gooney Birds* carried the load alone until reinforcements arrived.

The DC-3 was no stranger to the airspace over Vietnam. In 1965-66, Navy Headquarters Support Activity, Saigon operated four vintage transports, two C-47 *Skytrains*, a U-16 *Albatross* and a Beechcraft C-45. They formed a bush airline known as Air Cofat. (Cofat was a former French

cigarette factory in Saigon that became the headquarters of the activity.) Cofat's primary mission was airlift support for the Naval Advisory Group in the U.S. Military Assistance Command. Its secondary mission was airlift support for military advisory and Seabee teams. Advisors working with Republic of Vietnam troops in mountain, jungle and rice-paddy enclaves owed their existence to air support, because the Viet Cong made road transport hazardous.

Air Cofat's planes ranged out to fields in all the battle zones, most of them just dirt strips in the jungle or marshy deltas. One C-47 airlifted two-and-one-half tons of lumber and building materials to one Montagnard tribe that had fought its way out of a Viet Cong encirclement and set up a new village in the central highlands.

Danger was a constant companion. An engine fire nearly forced one of the *Skytrains* down in the trackless highlands but it limped into the strip at Ban Me Thuot with USAF planes flying cover. While a new engine was being installed, crew members joined Army Special Forces and Montagnard tribesmen in security sweeps around the airstrip.

In 1968, one 16-year-old workhorse, a *Skytrain* converted in 1952 from a C-47, was the only aircraft assigned to Naval Support Activity, Da Nang. The 18-member team of Navy officers and enlisted men fondly called it *Bouncing Bertha*. It supported Army, Navy and Marine Corps personnel in the field. It carried supplies to Seabee outposts, Vietnamese refugees to secure locations, emergency stocks of blood and medical equipment to outlying aid stations and, often, minesweeping, explosive ordnance and underwater demolition teams on short notice.

Although it did not fly on combat missions, it had more than its share of close calls. It was patched up more than once after being struck by shrapnel and ground fire — and kept on flying. Sister aircraft in similar fashion racked up hundreds of flight hours each month over Vietnam.

Each passing year takes more DC-3s out of service, but there are many still flying in commercial, military, government and private sectors. A precise count is impossible because

Left, R4D-5 launched from Philippine Sea using JATO. Above, WW II production line.

Above, Navy C-47 and Air Force C-5A at Rota. Below, R4D at busy Brazilian airfield.

the registries are scattered throughout the world. There are few countries where you won't run into a DC-3 airliner. For many people in the far corners of the earth, it became a tangible American symbol like the Model T and Singer sewing machine. When their flying days were over, DC-3s were even converted into restaurants in South Africa and Sweden.

As late as 1973, other Super DC-3s (C-117Ds) were still logging many flight hours in every corner of the globe, providing naval logistic support whenever and wherever required. Despite the introduction of modern jet transports, 42 of the C-117Ds were still in the Navy and Marine Corps inventory on May 31, 1976.

If some day you are at one of the civilian airports and find yourself hurrying past an anachronism of the air age, a rugged old twin-engine transport plane, regard it with respect. It is probably a DC-3, the most versatile, hard-working flying machine ever made.

A PERIPATETIC GOONEY BIRD

By Gene Kropf, FAA Public Affairs Office

Way back in May 1945 at the Douglas Aircraft Company, Santa Monica, Calif., DC-3 serial No. 33345 left the wartime assembly line for duty with the U.S. Navy. So started a colorful career for this *Gooney Bird* that would span the next 31 years.

The plane was accepted by the Navy on May 22, 1945, and delivered to NAS Clinton, Okla., four days later. She was designated an R4D-6R, BuNo 99854.

In January 1946, she was assigned to an East Coast squadron. In February 1948 she continued her journey east to VR-24 in England.

After returning to Cherry Point for rework in February 1950, she went south for her next assignment — to Rio de Janeiro for a two-year tour. Then it was back to Jacksonville to serve in an aircraft pool for awhile before heading west in September 1953 to NAS Alameda. There she ended her Navy career in December two years later.

Put out to pasture, she spent the next year in storage at Litchfield Park. The hot, dry Arizona climate protected her delicate skin while she languished in inactivity.

In April 1957, this *Gooney Bird* was selected, along with other birds of the same species, to begin a new life with the Civil Aeronautics Authority as a flight inspection aircraft re-identified as N-32. Extensive modifications were called for. By October her face lift was completed at Oklahoma City. She returned to service as a DC-3C, flying CAA colors and insignia.

For the next 18 years, she was flown by CAA and FAA (Civil Aeronautics Authority became the Federal Aviation Administration in 1958) crews in almost constant service, checking navigational aids in all parts of the country. Much of her time was logged in the western states where she did yeoman service checking navigational aids in some of the country's more rugged areas. She also checked

shipboard aids operated by the Navy and the Coast Guard.

Finally the time came for N-32 and FAA to part. On April 7, 1976, N-32 and her crew prepared for her last FAA flight. Taking off from her home base at Los Angeles International Airport, N-32 pointed her nose westward out over the Pacific for a rendezvous with an old friend, the U.S. Navy.

Her target for the day was the cruiser USS *Chicago*, about 80 miles off San Diego. As N-32 orbited the ship and flew the prescribed check patterns, Paul Butler, a veteran electronics technician, quickly noted that the shipboard TACAN system was malfunctioning. With the aid of his airborne electronic equipment, Butler determined the malfunction and the corrective measures that were needed. Navy technicians aboard *Chicago* were able to make the corrections and a final check indicated that the shipboard equipment was again operating satisfactorily. Final FAA mission accomplished!

Heading for home, pilot William Talunas (former Navy pilot) and co-pilot Jack Collins watched as the counter clicked off the airborne hours. When N-32 landed and shut down, the counter showed a total airframe time of 19,661.8 hours. N-32 had flown her last check flight for FAA. But she was still not ready for retirement. Her registration was about to change for the third time.

N-32 now wears the colors of the Department of Agriculture, where she will continue to serve her country fighting the red ant, the screwworm and other pests that need to be controlled to provide a better life for all of us.

Old *Gooney Birds* never die. They just fly . . . and fly . . . and fly . . . and . . .

Left, R4D transport over Sugar Loaf Mountain near Rio de Janeiro. Below, USS Chicago changes course as N-32 checks ship's Tacan equipment. Bottom, N-32 in its heyday as an FAA flight inspection aircraft.

Short Stories DC-3 Style ...

In September 1973, U.S. Navy C-117D, BuNo 17116, left the naval air facility at RAF Mildenhall, England, for her new assignment in the States, with the Marine Corps. Before her departure, American and British friends of the old *Dakota* (British name for the DC-3) assembled for a brief ceremony. Commander Thomas C. Bird, NAF C.O., read a letter to the 29-year-old aircraft: "Since reporting to this command on December 5, 1971, you have worked many long hours in performing routine but difficult and thankless tasks. You have flown low and slow over this beautiful countryside and have contributed immensely to training and indoctrinating many Navy and Marine Corps aviators in the fine art of driving a tail-dragger and performing controlled ground loops. You have been instrumental in providing on-the-job training resulting in the development of cluster-clamp experts and brake-puck specialists at this command.

"You have consistently demonstrated independently sound judgment in a real emergency, such as when your starboard brake went out on landing and the tower said turn right — and without hesitation you turned left, despite all efforts of the crew to the contrary.

"Upon your transfer from this command, it is fitting that your years of outstanding service receive recognition. You now embark on a new career with the U.S. Marine Corps.

"Congratulations Navy 116. All members of the U.S. Naval Air Facility, Mildenhall and our British friends join me in wishing you good luck for you are truly Queen of the Airways."

Completing the ceremony, Cdr. Bird smashed a bottle of champagne over the port landing strut.

Most 30-year veterans would be thinking of retirement, but old 166 is a long way from ending her career. She is one of two C-117s at MCAS Yuma. The two have been serving as routine logistical resupply craft and, when the occasion demands, as emergency medical evacuation planes.

No. 166, in a ceremony last spring, was given another name to add to the already long list of names and designations which have at one time or another been given to the DC-3. The *Gooney Bird* was christened the *City of Yuma*. Her new name emblazoned on both sides of her cockpit and the official seal of the City of Yuma affixed to her fuselage are visible expressions of the cooperation and comradeship existing between the civilian and military communities of Yuma.

Stories about the DC-3 abound in the military services as well as in the civilian community. The storytellers swear they are true. But even if the truth is stretched a bit, at least the stories reveal the depth of respect and affection generated by this doughty plane.

Some pilots claim the DC-3 can fly herself if called on to do so. They tell of a DC-3 that ran out of gas. The pilot and crew bailed out and parachuted to safety. The plane landed gently in a field several miles away.

In one man's autobiography, he tells of a flight on which he and his wife were passengers. They were over an uninhabited area in Paraguay when he noticed that the pilot was sitting in the cabin talking to a passenger. "I began," he said, "to take a real interest when I saw the copilot doing the same." He strolled up front to see what was going on. There was no one there except the steward, who was sitting in the pilot's seat with a book propped up against the control wheel. He was reading and completely relaxed.

Then, there was the C-47 which was the only transport plane officially credited with downing an enemy fighter. A Japanese *Zero* smashed into her tail while she was taking evasive action close to the ground. The *Zero* crashed. The transport, with all but a foot and a half of her rudder gone, returned to base, was repaired and flew again.

Once, a DC-3 landed on a frozen Quebec lake, broke through the thin ice and sank. The owner despairingly sold her to the first bidder, who fished her out, drained her, started the engines and zoomed away.

Many years ago, Donald W. Douglas, who founded the aircraft company bearing his name, received a nine-page letter from a Canadian banker who had been a wartime wing commander in the RAF. The banker had flown a DC-3. When the Japanese destroyed his plane on the ground, he was heartsick. He wrote Douglas that he missed her not as a piece of machinery but as a person. "If ever an inanimate object earned, deserved and received the love of a man, your DC-3 was that object."

From CNO Continued

Generation of Naval Requirements

Because of the unique investment considerations involved in fleet modernization, new ships must produce a force structure which at all times retains the warfighting balance to cope with coordinated air, surface and submarine threats in any theater. The Soviet Navy today has capabilities in all naval warfare areas. And the Soviet Navy continues to grow in capability, especially in its ability to conduct multi-dimensional naval warfare in ocean areas remote from the Soviet Union. U.S. naval forces must be prepared to conduct prompt and sustained combat operations wherever the threat may be. The growth in Soviet maritime capability for distant operations means that today's new ships, over their lifetime, must be able to face the best in weapon systems, in ever broadening areas of the high seas, and win.

Readiness Assessment

Slim margin of superiority: Today the United States fleet has a slim margin of superiority over the Soviets in those scenarios involving the most vital U.S. national interests. In the event of conflict, U.S. forces could retain control of the North Atlantic sea lanes to Europe, but would suffer serious losses to both the U.S. and allied shipping in the early stages. U.S. ability to operate in the Eastern Mediterranean would be uncertain at best. U.S. fleets in the Pacific could hold open the sea lanes to Hawaii and Alaska, but by reason of the shortages of sea control and mobile logistic support forces, the U.S. would have difficulty in protecting its sea lines of communication into the Western Pacific.

Future balance: The foregoing conflict evaluation refers only to the present. At the current rate of improvement of their naval capability, the balance of maritime superiority will tip in favor of the Soviets within the next 5 to 10 years if the United States simply maintains the status quo of the current force structure. Because it takes an average of five years for a unit authorized for construction to become operational in the fleet, the United States must begin now to build the requisite number of ships if the U.S. Navy is not to surrender the capability advantage necessary to accomplish its mission and retain its current marginal superiority at sea.

NAVAL AVIATION NEWS letters

Anyone For Bridge

This is in answer to a question posed by Lt. Tom Perkins, assistant navigator aboard *Midway*, and published in the

October 1976 issue of *Naval Aviation News*, page 40). Lt. Perkins asked if we knew of any all-VF or VA bridge teams.

Well, here they are: the *Ghostriders* of VF-142 aboard *America*. From left to right are Lt. Bob Holt, VF-142's personnel officer, qualified JOOD; LCdr. Emory Brown, operations officer, qualified as OOD underway (fleet); LCdr. Dave Walker, administrative officer also OOD underway (fleet) qualified; Lt. Steve Brown, Natops officers, qualified as OOD underway (independent steaming). All four officers additionally earned CIC surface watch officer qualification.

The photo was taken shortly before *America* returned to her home port, Norfolk.

James A. Leslie, Jr., Ltjg.
PAO, VF-142
NAS Oceana, Va. 23460

Skyhawk

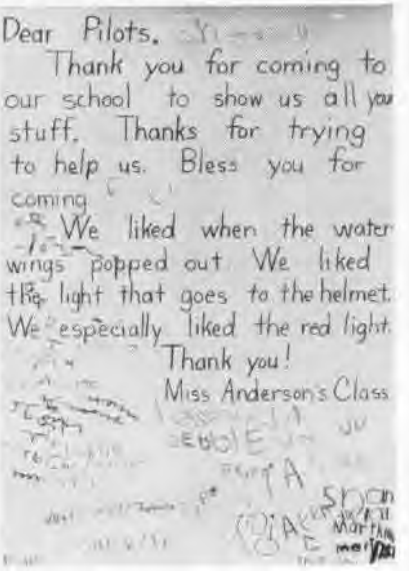
I am a plastic scale aircraft builder and my current project is a large 1/32 scale model of an A-4F of VA-192, BuNo 154998. The plane carries the straight refueling probe and the side number "200" in black with a yellow silhouette. A nameplate under the windshield reads "Cdr. Bill Gurek, COM CVW-19," black on yellow. I am trying to get in touch with either Cdr. Gurek or anyone else who knew the aircraft well and who can answer a few questions on this particular bird.

Greg Kolasa
313 Kipp Avenue
Elmwood Park, N.J. 07407

School Days

To help celebrate the Navy's 201st birthday, two officers from RVAW-120, an E-2 *Hawkeye* squadron at NAS Norfolk, Va., visited the Coleman Place Elementary School to introduce Miss Anderson's kindergarten class to the basics of Naval Aviation.

With flight gear in hand, Lt. Dan Parker and Ltjg. Vern Huber provided



an entertaining presentation to 150 children on the history of the Navy.

The children's note says it all.

H. J. Bernsen
C.O., RVAW-120
NAS Norfolk, Va. 23511

Reunion

The first VP/VPB-11 reunion will take place at the Kansas City Crown Center June 9-12. A feature event will be the belated presentation of Distinguished Flying Crosses to squadron members from WW II who earned the award but were not honored at the time. Reservations should be made with William A. Barker, VP/VPB-11 Association, Route 1, Box 86, Henderson, Texas 75652, telephone 214-836-2435.

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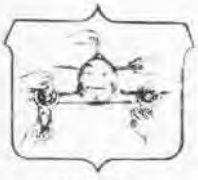
A Sampler of Vintage Marine Corps Insignia

Marine Air Warning Group

Marine Air Station, El Toro



SMS-35

First Marine Aircraft Wing

VMSB-342

VMF-122

VMD-154

VMR-352

VMSB-231

VMB-413

VMB-612

VMR-252

VMF-324

VMF-123

VMF-111

VMF-514

VMO-3

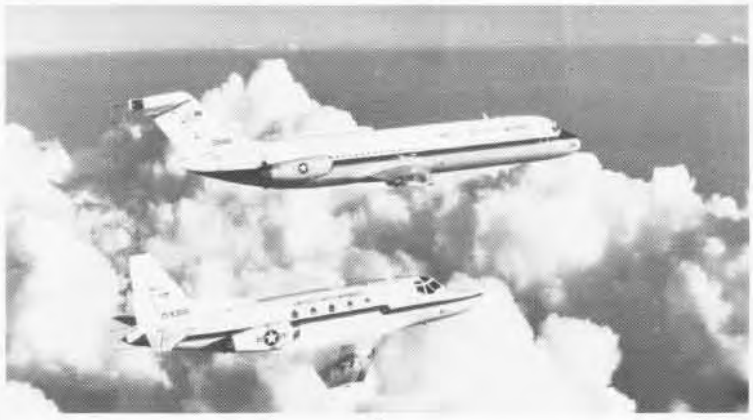
VMF(N)-531

MAG-51

VMF-313

VMF-312

VMF-512



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