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The Voice of Naval Aviation

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75

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Year of
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Aviation*

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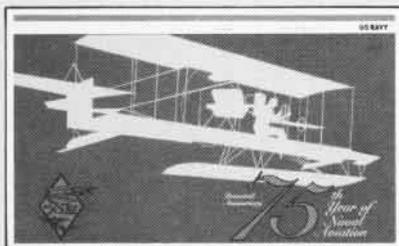
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COVER—This original artwork depicting the A-1 Triad, the Navy's first airplane, was rendered by *NANews'* Art Director, Charles C. Cooney.

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75 Years of Naval Aviation pride and tradition, from early flying boats to today's people and high-tech fighters, are summed up by *NANews'* award-winning photojournalist, JOCs Kirby Harrison, beginning on page 4.



The state of Marine Corps Aviation is discussed by Lt.Gen Keith A. Smith, the Deputy Chief of Staff for Aviation, HQ Marine Corps, starting on page 14.



A six-member U.S. Navy crew, flying their NC-4 flying boat, made history when they made the world's first transatlantic crossing by air in May 1919. Beginning on May 8, 1986, this epic flight will be re-nacted by two private PBY seaplanes. Details begin on page 16.



This Diamond Anniversary issue would not be complete without telling the story of "NAS Pensacola: Cradle of Naval Aviation." It is fitting that the birthday gala will be held at this historic site. Page 20.



A. Michael Leahy, a retired Marine Corps Lt.Col. and Naval Aviator, produced classic watercolors to commemorate three significant eras in Naval Aviation history: WW I, WW II and Korea. Page 22.



The U.S. Coast Guard employs a special brand of Naval Aviation and shares in the traditions celebrated during this 75th Anniversary Year. The Coast Guard is "Meeting the Challenges of the 1980s" in a big way. Page 34.

from the EDITOR'S NOTEBOOK

1911 - 1986



The 75-year legacy of Naval Aviation is a fascinating story of Navy, Marine Corps and Coast Guard achievements and progress, which are the result of teamwork, imagination, patriotism, personal sacrifices, raw courage and the ability to adapt to change. It is a heritage that is the foundation for the spirit, professionalism and enthusiasm reflected in today's carrier battle group operations.

This anniversary year should serve as a reminder of the value of Naval Aviation's history as a vital ingredient in everyday problem solving, and promoting esprit de corps.

It has been said that it is not deeds or acts that last; it is the written record of those deeds and acts. As the "Voice of Naval Aviation," *Naval Aviation News (NANews)* magazine has been one of the most important and enduring vehicles for keeping the community pumped up and well informed, and preserving its ancestry. This issue is one more chapter in the continuing saga of the evolution of the community.

As the Navy's oldest periodical, nowhere is the story more completely preserved and documented than in the 67 volumes of *NANews* that can be found in the Naval Aviation History Office, in Washington, D.C. It covers nearly 70 years of facts and anecdotes about people, squadrons, ships and aircraft,

and countless dramatic moments of heroism and bravery. This remarkable collection of history, which is summed up in more than 17,500 printed pages of *NANews*, and still growing, is surely the most complete and authoritative chronology of U.S. Naval Aviation available.

There are thousands of stories that tell of the spirit of Naval Aviation and its impressive ability to adapt to the changing defense posture of the United States. The thing that makes *NANews* so special is that the stories are written by the people of the Naval Aviation community — the pilots, flight officers, aircrew, and maintenance and support personnel. After all, in the words of one wise man, the only good histories are those that have been written by the persons themselves who commanded in the affairs whereof they write.

One of Naval Aviation's greatest visionaries and most resourceful leaders, Captain Washington Irving Chambers, in 1911 was faced with seemingly insurmountable opposition to the idea of using aircraft at sea. Nevertheless, he did not take no for an answer and persevered, and helped bring into reality the concept of combining the inherent benefits of the ship's sustainability and mobility with the aircraft's agility and precise firepower. The remarkable success of using mobile air fields at sea

as an instrument for protecting the United States' national interests abroad is unquestionable.

Less than six and a half years after Capt. Chambers ordered the Navy's first aircraft on May 8, 1911, the first pages were published that would gradually evolve into the *NANews* magazine you are now reading. It has become an institution on which the active duty, reserve and retired members of the community continue to rely for reliable, factual and interesting information.

As means for implementing ideas, *NANews* has spawned many important programs, some of which have developed into traditions. Grampaw Pettibone, the idea of a dedicated and gifted Naval Aviator, the late Capt. Seth Warner, is perhaps the most familiar. Illustrated by the tireless and dedicated Robert Osborn, it has been in continuous print for over 43 years.

The Diamond Anniversary of Naval Aviation also should serve as an opportunity for the community to pause and reflect on the past and consider what fresh history needs to be shared with the next generation. Virtually every day, Naval Aviation is making history that is worth remembering.

Today's events in Naval Aviation will be the 100th Anniversary's history. Keep those cards and letters coming. ■

DIANA Electronic Bulletin Board

DIANA is a public access electronic bulletin board serving the 75th Anniversary Program and *Naval Aviation News (NANews)* magazine.

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NANews the Sage Interviews of Safety

In an unprecedented literary exercise, *Naval Aviation News'* Journalist Second Class Timothy J. Christmann recently sequestered Grampaw Pettibone for a one-on-one, Diamond Anniversary Year interview.

NANews: Gramps, you have been giving advice and admonishment to Naval Aviators for 43 years. In your opinion, how has it affected the safety consciousness of the aviation community?

Gramps: Most people in the business of flyin' Navy aircraft — and that includes the Leathernecks as well as Coast Guard folk — know who I am. And they know I don't want them to get hurt or hurt somebody else. They also know I fume and fuss over bonehead mistakes that cause injury, damage or, worse, loss of life and flying machines. I like to believe that I've helped a little, that some accidents didn't happen because of something I wrote.

In January, Attack Squadron (VA) 27 officially became the recipient of the first Grampaw Pettibone Trophy. The award is presented to the individual or organization that contributes the most toward aviation safety awareness through communications (published articles, posters, television and radio broadcasts, etc.). Do you think the award will contribute to an improved Naval Aviation safety record in the future?

It will make me feel a lot younger if the Pettibone award does improve the safety record and I think it will. Those fellows from VA-27 are gonna be a tough act to follow, by the way. They got their whole outfit involved in thinkin' safety. When that takes place, good things happen to a squadron. It also indicates

somehin' else I've always believed. The best managed squadrons are the safest.

Looking back over your career, do you think your critiques concerning Naval Aviation mishaps have been fair?

Not always, son. I'm human. But my heart's in the right place, 'cause whatever I write, I write for one reason only — to make Naval Aviation as safe as can be without sacrificing readiness.

What makes you so popular with the Naval Aviation community?

Bob Osborn, mostly. He's been drawin' me since we joined up in the old Munitions Building on Constitution Avenue in Washington, D.C., in 1943, right in the middle of Double U Double U Two. That fellow makes more magic with a few pen strokes and a piece of paper than Houdini

with a chest full of handcuffs. Bob told me once, "I can draw a robin yankin' a worm out of the ground and make you feel it." And he can. He does it with airplanes like nobody else. Also, he judges my moods and puts 'em on the printed page with his special style, just as smooth as apple butter goin' on home-baked bread fresh from the oven. Best of all, he makes you laugh.

Both of us aim for the heart and the mind by way of a sharp jab in the ribs. Although I gotta tell ya, there are times I wanna swat somebody with the flat side of an iron skillet.

In answer to your question, I believe Gramps succeeds because Bob and I try to tell the truth with humor laced with just enough arsenic to agitate the brain cells. We try to get people to turn on their own "think" juices.

What has been the worst accident report you've had to respond to?

There ain't just one. Anytime we lose somebody — a pilot, an NFO, an aircrew member, a plane captain — I bleed the same amount of blood. That particular accident becomes the worst, for the time being, anyway.

How has Naval Aviation changed over the years? Are you happy with the overall safety record? Why or why not?

That's three questions, son. I'll take 'em in order.

Naval Aviation has changed for the better. No doubt about that. Seems like the planes nowadays dang near fly themselves, what with technology that's fancier than the stars, the moon and Halley's comet all put together. But human beings still make the difference, and today's aviators are better trained

and better educated than ever before. Ted Ellyson, John Rodgers and John Towers, the first three Naval Aviators, would agree, I'm sure.

In the 1950s, we borrowed an idea from the Brits — the angled deck — and it saved us I don't know how many lives and aircraft. In the early sixties, NATOPS was born and the accident rate dropped even more. About the same time, replacement air groups — now called fleet readiness squadrons — became a kind of graduate school for flyers and the statistics continued to improve. We're safer than ever. Trouble is, the flying machines nowadays cost so much I get aches in my head and my stomach.

Am I happy over the safety record? It's my business to be unhappy. I see too many reports of near-mishaps — like hazardous cargo abuse and pressin' on with fuel warning lights lit — to change my mind much. I like the progress we've made with the mishap rate, of course. But I want to see it lower. I know we can do it. The point is we've gotta keep the pressure on. We can't afford not to do better, for economic reasons, pure and simple.

In 1916, a bunch of college boys paid for their own flying lessons, formed the First Yale Unit and later earned Naval Aviator wings. Economy rate pilots. But they were good and true. It costs a million or so George Washingtons to train a flyer these days. And a strike-fighter goes for \$20 million!

What advice do you have for junior officers, who contribute to most of the accidents in Naval Aviation?

Practice makes perfect. Know your NATOPS like Billy Graham knows the Bible. Try to do better on every hop, in everything from preflightin' the bird to holdin' airspeed and altitude right on the button. Be a good wingman. Good wingmen make good flight leaders. Know your machine. Read Chuck Yeager's autobiography and note his great respect for flight manuals and knowing emergency procedures. Remember one of my old nuggets of wisdom: Don't worry about what's gonna happen to you. Worry about what you're gonna do when it happens.

John Glenn — fighter pilot, astronaut, senator — told me once that some of his happiest days were as a junior officer in a squadron. He said, "What a great feeling it was to see that row of aircraft on the flight line each morning, then go out and fly once or twice a day."

For a lot of folks in this business, those junior officer years were the best. So, to the younger troops, I say: Work hard but enjoy yourselves. You couldn't have picked a better way to spend your twenties. But be careful. Just by lack of experience, you're a bit more vulnerable than the vets.

What makes you such an authority on safety?

Experience. And experience always will be the best teacher. 'Course I have some friends who are better at book learnin' than me and I'm smart enough to call on 'em when needed to get the straight dope on certain accidents.

I never pretended to be the smartest guy on the block but I don't think anybody cares more about Naval Aviation and its people than me. That's why I get so blasted mad when things go wrong and they shouldn't have.

I suppose I'm like a mother and father who love their children but lose their cool and lean on 'em hard to mend their ways. I just want our flyers and the ground troops to be the best. If there's fightin' to be done — and I pray that's not in anybody's crystal ball — then we better be the best. That's what it's all about.

What are your thoughts on the 75th Anniversary of Naval Aviation, and what do you foresee in the next 25 years?

That's another two for one, son, but I'll answer.

An acquaintance of mine is a wonderful man — a living legend really — named Paul Garber. He's the gent who laid the groundwork for and is the real spirit behind what we now call the National Air and Space Museum. Paul was a friend of Lindbergh before Lindbergh flew the Atlantic. As a boy in the early 1900s, he went out to Fort Myer, Va., just across the Potomac, and watched the Wright brothers fly. Paul spoke at the Tailhook Convention in 1985 and, to this day, is goin' strong. So here's a man who has seen biplanes — those ancient wood and wire flying machines that could hardly stand up to a sharp breeze — as well as 10-ton supersonic jets take a wire on a nuclear-powered flattop.

This is my way of sayin' we've come far, quickly. Some are still around who were there at the beginning. No tellin' what we'll do in the next 75 years. And Naval Aviation helped lead the way. We oughta be proud of that. All these special

events goin' on are a good idea in my book.

Years ago, long after her husband was killed in a plane crash, I had a nice visit with Mrs. Ted Ellyson, wife of Naval Aviator No. 1. She knew many of those fellas who were the pioneers of Naval Aviation. I asked her what her husband and the others were like.

She said, "I recall one day when Ted was testing a catapult at the Washington Navy Yard. The catapult was aimed from shore toward the Anacostia River. Ted was at the controls. Something went wrong and Ted and the machine smashed into the water. He was only bruised a little. The airplane was hauled up and dried out. It wasn't badly damaged. That same day Ted and the airplane gave it another try. The catapult worked! My husband — he was nicknamed "Spuds" — and the others had a lot of fun. But they also worked hard. They knew they were into something very important."

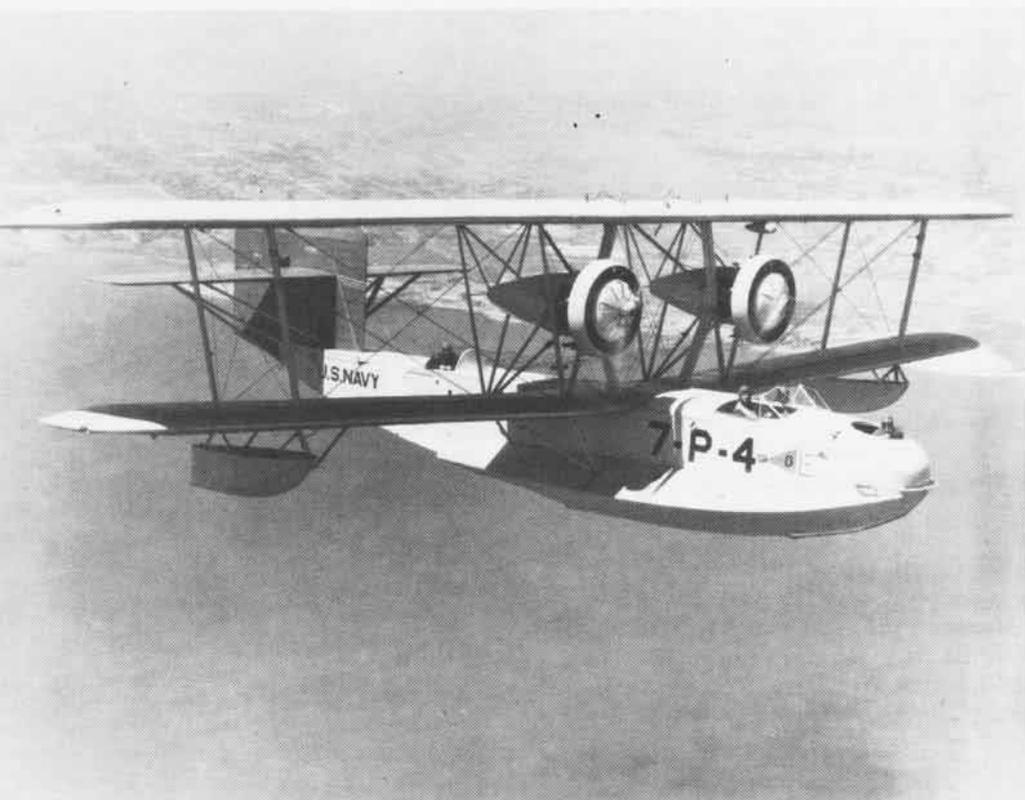
It sure was. It still is. For dang sure, it will stay so. Keeping safe won't be any easier in the years to come, but I like the fire I see in the eyes of the nuggets in the cockpits today. It makes me wish I could go back to Pensacola, get my character formed by those Marine Corps drill instructors, climb into a T-34C, and start all over again.

Guess that's it, son. Wait. One more thing. Accordin' to my calculator, Naval Aviation's gonna be 100 years old in the year 2011. What a centennial that oughta be. Mark it in your book, son. I plan to be around for that one. Count on it. ■



U.S. Naval Aviation 75 Years of Pride and Tradition

By JOCS Kirby Harrison



In the early days of Naval Aviation, flying boats seemed the most logical choice of aircraft to support the fleet. During the late 1920s, new patrol planes were acquired to replace rebuilt WW I flying boats, such as the Martin PM-1 above. They were based on experimental development done by the Navy at the Naval Aircraft Factory in Philadelphia.

In the last 75 years, U.S. Naval Aviation has gone from two fragile aeroplanes of wood and fabric to high-performance jets made of space-age metals and graphite. It has gone from one small aeronautic station to 51 Navy and Marine Corps air stations and facilities, 14 carriers and more than 5,500 aircraft. And it has gone from one stubborn, dedicated man in a cubbyhole office to more than 160,000 men and women playing a major role in U.S. naval strategy.

But growing up is a risky business, and radical new ideas are not easily accepted. A skeptic in 1911 dismissed military use of the aeroplane, saying of aviators, "The most absurd claim is their ability to sail over hostile territory and destroy cities by dropping high explosives."

Fortunately, there were also men like Captain Washington Irving Chambers. A tough, stubborn individual, Chambers was appointed officer in charge of aviation matters in 1910.

Six months after taking over the job, Chambers was moved to the old Bureau of Navigation in Washington, D.C. There, he was told to work at home, as there was not room at the bureau for him. As for Naval Aviation, the implication was clear.

Instead, Chambers moved himself to Room 67 under the basement stairs of the building. For three years, Chambers' eight-foot-square cubbyhole was headquarters for what became the office of the Director of Naval Aeronautics.

It was not an auspicious start. But, as every proposal Chambers made for a separate office of aeronautics was thrown out, interest in Naval Aviation grew in other quarters. On May 8, 1911, Chambers signed requisitions ordering the Navy's first two aeroplanes from Glenn Curtiss. This date is recognized as the official anniversary of U.S. Naval Aviation.

There are critical points in history upon which the present is hinged. A chance meeting between Chambers and a young civilian pilot named Eugene Ely in November 1910 was one of these.

Chambers had earlier asked Wilbur Wright to lend the Navy a pilot and plane to fly from a ship. Wright had not only refused to help, saying it was too dangerous, but would not even meet with Chambers to discuss the proposal. Ely, however, immediately asked to be allowed to try it and, to Chambers' surprise, added that he would even furnish his own aeroplane.

Four days later, Ely's Curtiss pusher took off from a specially-built wooden platform on the bow of the cruiser *Birmingham*. But, instead of gaining altitude, the craft slowly settled toward the water. Ely had shifted the controls to the "climb" position too late and it appeared the flight was destined for a short and very wet footnote in Naval Aviation history.

The Curtiss pusher dipped still lower, wheels catching spray from the waves. Then, vibrating harshly to the broken rhythm of a cracked propeller, the plane broke free and began to gain altitude. Ely desperately began looking for a place to land. A strip of cottages loomed out of the fog and five minutes after his flight began, Ely landed safely on Willoughby Spit, near what is now NAS Norfolk, Va.

Carrier Aviation is Born

Less than three months later, on January 18, Ely in his tiny, 50-horsepower pusher was back aboard ship. This time he landed on a wooden platform built on the stern of the armored cruiser *Pennsylvania*, anchored in San Francisco Bay. A spring-loaded hook suspended beneath his aeroplane caught a series of ropes stretched across the flight deck between 50-pound sandbags and brought Ely to a stop. Less than an hour later, he took off and returned safely to nearby Selfridge Field. Naval Aviation had given birth to carrier aviation.

A man who feared the ocean but dared to fly, Eugene Ely lost his life in a crash in the fall of 1911. He was buried on the day he would have turned 25 years of age.

He never wore a Navy uniform. He never drew a penny of Navy pay. But his contribution to Naval Aviation is not forgotten. He is one of only 30 men elected to the Hall of Honor at the Naval Aviation Museum in Pensacola.

There were other men of courage in those early years. Lieutenant T. G. Ellyson is one of the best known. Naval Aviator No. 1, he was the first Navy pilot to solo in the Navy's first aeroplane, the A-1 *Triad*, on July 1, 1911. He was also the Navy's first aviation flight instructor.

While Ellyson was flying the A-1 from Lake Keuka at Hammondsport, N.Y., Lieutenant Junior Grade John Henry Towers showed up at the Curtiss aeroplane factory there to begin training. Slight of build and shy, the young man from Georgia was introduced to flying in an underpowered aircraft named Lizzy, which was used for initial training.

Lizzy's throttle had been rigged so the engine could not develop enough power to get off the ground. As Towers took the controls for his first lesson, Ellyson assured the novice pilot, "You can't take off." Skeptical on this point, Towers nevertheless opened the throttle and headed toward the lake.

Halfway there, a gust of wind caught the aircraft. Lizzy popped up into the air, stalled, caught a wing on the ground and rolled into a bundle of broken sticks and tangled wire. As Towers crawled from the wreckage with cuts, bruises and a broken ankle, Ellyson came running. "Good God!" he exclaimed. "I did the same thing, but not on my first run. I worked up to it."

Training in those days set the stage for the present relationship between the Navy, Marine Corps and Coast Guard. Pilots from all three services are *Naval Aviators*, and many of the training facilities are common to officer and enlisted personnel in the Navy, Marine Corps and Coast Guard.

First Lieutenant Alfred Cunningham was the Marine Corps' first Naval Aviator. He was assigned to duty for flight instruction on May 22, 1912. Four years later, on March 30, 3rd Lieutenant Elmer Stone and 2nd Lieutenant C. E. Sugden of the Coast Guard received orders to duty for flight instruction. Both services now celebrate these dates as the respective anniversaries of U.S. Marine Corps and U.S. Coast Guard Aviation.

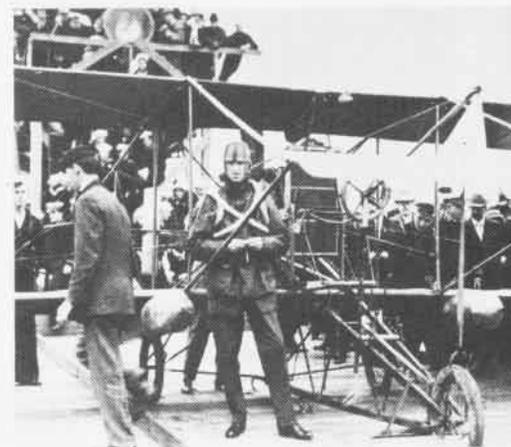
A Hearty Band of Aviators

While Glenn Curtiss and the Wright brothers built aeroplanes, Ellyson and a growing band of Naval Aviators flew them. It was Ellyson who flew the first successful catapult launch of an aircraft in November 1912 at the Washington Navy Yard. The same year, Towers set a world endurance record for hydro-aeroplanes of six hours, 10 minutes and 35 seconds. Newspapers of the day described Towers' flight as risky and daring. Towers logged it as simply "...uneventful."

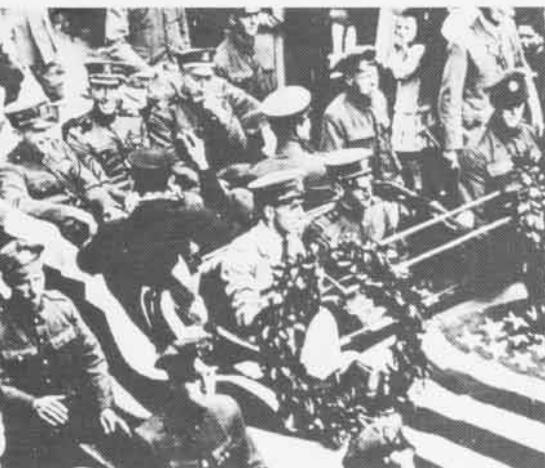
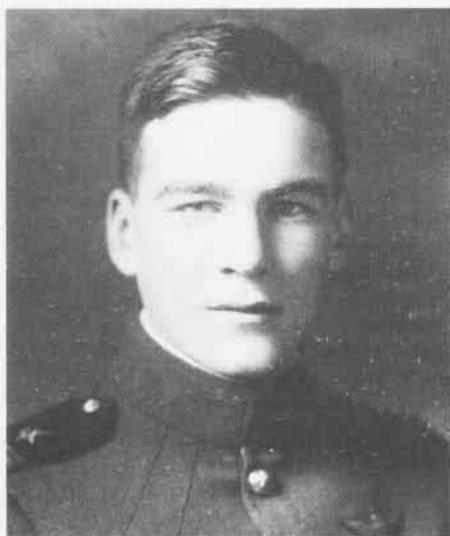
In January 1916, instruction began for the first group of enlisted pilots at the Navy's first aeronautic station at Pensacola, Fla.

The same year, the Naval Air Reserve took on substance with formation of the First Yale Unit. The group consisted of young men who had enlisted in the fledgling Naval Reserve Flying Force at Yale University.

The first naval aircraft were fragile machines, and the pilots sat exposed to the elements. Below, 1st Lt. Alfred A. Cunningham, the Marine Corps' first aviator, poses at the controls of a Curtiss pusher in 1912. Bottom, civilian pilot Eugene Ely prepares to fly off the deck of USS *Pennsylvania* an hour after landing aboard the armored cruiser in San Francisco Bay, January 18, 1911.



Men of the First Aeronautic Unit from Pensacola pose before sailing for France in early 1917. They were the first U.S. military unit to arrive in France during WW I. Center photo, Lt. David S. Ingalls became the Navy's first aerial ace in WW I. The crew of the NC-4, bottom, are cheered by crowds in Plymouth, England, following the first aircraft crossing of the Atlantic in 1919.



When the U.S. entered WW I in April 1917, the French asked that a token U.S. force be sent immediately to bolster morale. In response, the U.S. sent seven officers and 12 enlisted men from the aeronautic station at Pensacola. They arrived in France less than two months after the U.S. entered the war, and were the first U.S. military presence in that conflict. Within weeks of their arrival, men from the First Yale Unit landed in France and were also integrated into the French aviation programs.

They acquitted themselves well, flying with the French, British and Italians. Lieutenant Junior Grade David Ingalls, at age 19, became the Navy's first aerial ace, with five confirmed victories in a period of six weeks. U.S. Marine pilot 2nd Lieutenant Ralph Talbot and his observer, Gunnery Sergeant Robert Guy Robinson, won the Medal of Honor for action against overwhelming odds in the air over Belgium. And Navy pilot Ensign Charles Hammann won the Medal of Honor for his rescue of a fellow pilot off the naval base at Pula, Austria.

By the time the war ended, U.S. Naval Aviation had grown to 6,716 officers and 30,693 enlisted men in Navy units, and 282 officers and 2,180 enlisted men in Marine Corps units. The Naval Aircraft Factory in Philadelphia had been established, the Navy was rapidly building a fleet of lighter-than-air ships, and the golden age of the flying boat was beginning.

First Across the Atlantic

U.S. flying boats caught the world's attention in 1919. On May 8 of that year, three U.S. Navy NC flying boats left NAS Rockaway, N.Y., to attempt the first transatlantic crossing by aircraft. Less than 150 miles from the Azores, in conditions of poor visibility, the NC-1 and NC-3 landed to determine their positions. Both were damaged on landing and unable to take off again.

The NC-4, with her crew, continued flying and on the afternoon of May 17 landed in Horta in the Azores. The NC-4 and her four Navy officers, one Coast Guard officer, and Navy Chief Mechanician, landed in Lisbon, Portugal, May 27, completing the first transatlantic passage by an aircraft. From there until their final stop in Plymouth, England, they were met by cheering crowds, parades and worldwide acclaim.

A month later, British aviators John Alcock and A. W. Brown would make a nonstop transatlantic crossing from Newfoundland to Ireland. Lindbergh in his *Spirit of St. Louis* would not make the first solo nonstop flight for another eight years.

In the period between World Wars I and II, Naval Aviation grew as new technology expanded. Adaptation of aircraft to fleet use continued. Seaplanes were regularly assigned to battleships and cruisers, where they were launched by catapult and were hoisted back aboard after landing on the sea. There were experiments in the operation of aircraft from submarines, and rigid airships and blimps competed with heavier-than-air in search of the ideal Navy aircraft.

Bombs, Carriers and Airships

In July 1921, a series of bombing tests began. They were designed to determine the effectiveness of aircraft against combatant ships, and the ability of the ships to withstand damage.

On the first day, Navy aircraft dropped 12 bombs and sank the German-built submarine U-117. On July 13, Army pilots sank the destroyer G-102 and, on the 18th, the light cruiser *Frankfurt* went down under combined attacks by Navy and Army planes. The significance of the tests were hotly debated. In truth, it was clear only that aircraft *could* sink warships in an unopposed attack. Whether they could do so against maneuvering vessels capable of defending themselves would take another war to prove.

The second event was the commissioning of USS *Langley*, the Navy's first aircraft carrier, in 1922. Converted from the collier *Jupiter*, she owed much to earlier British carrier research and development. More importantly, she signaled a change in direction for naval aircraft development. Ships at sea would soon have an extended striking power greater than the slower, more cumbersome seaplanes, or the big guns of the battleships.

On October 25, 1922, Lieutenant Godfrey deC. Chevalier's Aeromarine biplane settled to the wooden deck of *Langley*. From the underside of the aircraft, a hook had been installed that would catch the cables stretched across the flight deck. It worked. Not perfectly, but well enough. Chevalier's plane came to an abrupt halt, tail in the air and nose very nearly against the deck. Chevalier was shaken but unhurt.

The hook and arresting gear system was improved, but not before a first generation of carrier-qualified Naval Aviators developed what, with typical humor, was dubbed "instrument face." The sudden stops often resulted in a combination of black eyes, loosened teeth and flattened noses caused by collisions of the pilot's face with the instrument panel.

As the 1920s progressed, pilots experimented with aerial torpedoes and new bombing techniques. Aircraft designers built better power plants and better planes, and Naval Aviators set records in them. In June 1923 alone, Navy and Marine pilots set 20 world records for Class C seaplanes and were major contenders in the popular national air races.

As the decade came to a close, the big airships had their moment of glory, a moment all too brief in the view of many who loved and believed in the giant ships of the sky.

In June 1933, the last of the rigid airships was commissioned. She was *Macon*, 785 feet long and 123 feet in diameter. Carried aloft by more than 6.5 million cubic feet of helium gas, she cruised at 55 mph, with a range of 9,540 miles. Perhaps most amazing, her interior included a hangar bay carrying five heavier-than-air fighter/scout planes. She and her sister ship *Akron* were the first and last of these flying aircraft carriers.

Between 1925 and 1935, the Navy lost the rigid airships *Shenandoah*, *Akron* and *Macon* in accidents. With political opposition growing, the loss of *Macon* in February 1935 was the final blow. Although nonrigid blimps still flew, and even played a major part in convoy escort in WW II, the rigid airship program never recovered.

The Age of Carrier Aviation Begins

By the end of the 1920s, the initial phase of carrier aviation had proved its value. *Lexington* and *Saratoga* had been commissioned in 1927 and, in 1934, the Navy's first ship built from the keel up as an aircraft carrier was commissioned USS *Ranger*.

While carrier aviation was gaining momentum, flying boats were establishing for themselves the exclusive mission of long-range patrol, in addition to a role as long-range bombers.

In 1939, President Roosevelt ordered the Navy to establish a neutrality patrol. Within a short time, flying boat crews were guarding the approaches to the U.S. from Greenland to the coast of South America.

Naval Aviation at War

On December 7, 1941, the Japanese attacked Pearl Harbor. U.S. Naval Aviation began the fight with eight carriers, 5,233 aircraft and 27,578 officers and enlisted men. It wasn't enough, but the failure of the Japanese to catch the U.S. carriers in port at Pearl Harbor gave the U.S. and the Pacific allies a fighting chance.

World War II in the Pacific was, in nearly every sense, a naval engagement. Battles there for control of the seas forever changed naval strategy.

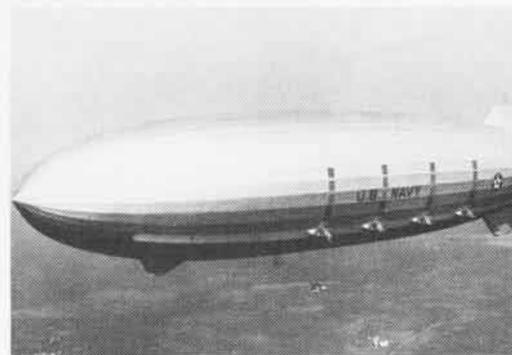
In the Battle of Coral Sea, U.S. and Japanese carrier aircraft fought for four days to gain an advantage. The final score favored the Japanese, but damage inflicted by planes from the carriers *Yorktown* and *Lexington* forced the enemy to abandon plans to occupy Port Moresby. It was the first naval engagement fought without visual contact between ships of opposing forces, and the first sea battle fought between opposing carrier forces.

In April 1942, Naval Aviation and the Army Air Force (AAF) jointly took the war to the Japanese home islands. Flying off the carrier *Hornet*, 16 AAF B-25 medium bombers under the command of Major Jimmy Doolittle bombed Tokyo. The attack left a shocked Japanese high command in its wake and gave U.S. civilian and military morale a badly needed boost.

In June 1942, a month after Coral Sea, the Battle of Midway served as a turning point in the Pacific war. A Japanese strike force, including four carriers, was caught concentrating its attack against Midway Island. On the morning of June 4, dive-bombers from U.S. carriers sank three of the enemy carriers in a matter of minutes. That afternoon, U.S. carrier planes put the remaining Japanese carrier out of action. With the loss of air cover, the rest of the Japanese fleet withdrew.

George Gay, one of only two survivors from Torpedo Squadron Eight, remembers that battle well. Shot down moments after releasing his torpedo and afloat in the middle of the Japanese fleet, Ensign Gay had a ringside seat for the rest of the fight.

The early 1930s saw the age of the rigid airship. USS *Macon*, seen here preparing to take aboard F9C-2 Sparrowhawk fighters, crashed February 12, 1935, and signaled the end of the Navy's rigid airship program, although blimps continued to see active service through the 1950s.



Ensign George Gay, one of only two survivors from Torpedo Squadron Eight in the Battle of Midway, shares news of the naval engagement with an unidentified nurse at a Pearl Harbor hospital. The battle signaled the turning point of WW II in the Pacific in favor of the U.S.

The F4U Corsair is considered by some to have been the finest fighter aircraft in the Pacific in WW II. Below, a Marine Corsair fires eight 5-inch rockets at Japanese positions on Okinawa. Center photo, a Coast Guard PBV-5A takes off from a base in Iceland during WW II.



When WW II ended, demobilization was rapid. Thousands of aircraft were placed in storage, like these in a hangar at Weeksville, N.C., as "money in the bank" against the next emergency.

"Their [destroyer] screen was steaming all around me," he recalls. "I didn't want them to spot me, so I hid under a seat cushion that had floated free from the airplane. When those three Japanese carriers lost headway, they were just downwind of me. They were like blowtorches...the fire was just streaming out of them."

Japanese losses at Midway were more than double those of U.S. naval forces. They never regained the offensive.

U.S. Coast Guard pilots and aircrews were active as the war accelerated. Quickly incorporated into the Navy, they took on the task of convoy escort and the security of thousands of square miles of U.S. coastal waters.

Out of Iceland, across the cold reaches of the North Atlantic, Coast Guard crews flew patrols in the Guard's only PBV flying boat squadron.

In those early days of WW II, the Coast Guard was the major participant in pioneering helicopter aviation. By 1943, it was not only training its own helicopter pilots, enlisted aircrewmembers and mechanics, but Navy and Army helicopter personnel as well. The Coast Guard developed use of the helicopter as an antisubmarine platform, including the technique of dipping sonar while at a hover. By 1944, it had launched the helicopter carrier *Cobb*.

Island Hopping and Black Sheep

As U.S. forces in the Pacific began the island-hopping campaign to take back territory from the Japanese, shore-based Marine Corps and Navy units quickly followed, sometimes so fast on the heels of assault forces that they ended up defending their own makeshift airstrips alongside Marine and Seabee ground units.

One of the best-known squadrons in that island-hopping campaign was VMF-214, known as the *Black Sheep*. The flamboyant squadron members had offered to shoot down a Japanese *Zero* for every baseball cap sent to them by major league players in the World Series. They received 20 caps. By the time the war ended, the Marine Corps squadron was credited with 201 confirmed and probable enemy aircraft.

In no previous war in history was the demand for teamwork so critical to victory. Navy and Marine pilots flew close air support for Marine and Army forces from the Solomons to Okinawa. PBVs on patrol complemented the efforts of U.S. submarines and motor torpedo boats. On many occasions, submarines surfaced under enemy fire to rescue downed naval air crews.

War's End, War's Beginning

As the war progressed, technology scurried to keep pace with the demand. Water-injected radial engines provided far greater performance for U.S. aircraft and, by 1944, naval aircraft were being fitted with 20mm cannon. Radar became an invaluable tool, and jet assisted takeoff (JATO) was developed for use by heavily-loaded seaplanes and logistics aircraft. U.S. industry had awakened, and was giving the military what it needed to win the war.

In the course of WW II, Navy and Marine Corps pilots destroyed 15,000 enemy aircraft and 174 Japanese warships. In the Atlantic, they destroyed 63 German U-boats. The first six Japanese carriers destroyed in the war were sunk by carrier-based SBD dive-bombers. U.S. Naval Aviation had come of age, a potent and flexible component of sea power.

On September 2, 1945, aboard the battleship *Missouri* in Tokyo Bay, Japanese representatives signed the surrender documents. As they stepped to the gangway to depart, the sound of approaching aircraft caused them to pause and look upward. Engines roaring, several squadrons of naval aircraft passed overhead, followed by more squadrons of U.S. warplanes, until the sky resounded to the thunder of their passing. For a brief moment, said an observer who was there, the Japanese watched. Then, faces void of emotion, they descended the gangway in silence to the waiting boat.

Demobilization was rapid following the war. Ships were retired to mothball fleets. Thousands of aircraft were placed in storage or sold for scrap. Within months, the on-board figures for Naval Aviation were a quarter that of the WW-II peak.

In the short period of peace that followed, each service sought a larger share of a steadily decreasing defense budget. Old charges of duplication were raised. Navies were declared obsolete by some critics. And this time, it was not the battleship but the aircraft carrier that was the primary target.

Despite the struggle for funding, progress continued in many areas of Naval Aviation. Fighter Squadron 17A, flying FH-1 *Phantoms*, became the first carrier-qualified jet squadron. In the Pacific, a Navy P2V *Neptune* nicknamed *Truculent Turtle* set a world distance record of 11,235 miles, from Perth, Australia, nonstop to Columbus, Ohio.

As the funding battles continued, the Secretary of Defense cancelled an aircraft carrier already under construction. Too expensive and too vulnerable, said critics. The Secretary of the Navy resigned in protest.

Then, in June 1950, 10,000 miles away, an old conflict burst into war. Korea brought an abrupt, if temporary, halt to interservice rivalries. And it put to rest, also temporarily, charges that the aircraft carrier was an obsolete and expensive luxury.

On July 3, 1950, just eight days after President Harry S. Truman ordered U.S. sea and air forces to give support and cover to Republic of Korea forces, the U.S. and British carriers *Valley Forge* and *Triumph* launched strikes from the Yellow Sea against targets in and around Pyongyang.

The Citizen Sailors

At no time in the history of U.S. Naval Aviation have reservists made such an impact at such a critical time as in the Korean war.

The U.S. entered the conflict on June 25, 1950. On July 20, recall of reservists began. Nine days later, Naval Air Reserve Fighter Squadron 791 was en route to San Diego. By March 1951, it was in combat as the Navy's first all-reserve tactical squadron.

Fighter Squadron 791, citizen sailors all, launched 1,250 sorties in the next seven months. Many historians feel it was the quick and effective response by aviation units in cutting enemy supply lines that gave retreating South Korean and U.S. forces time to regroup.

Korea was much different from the far-flung conflict of WW II. At no time during Korea were more than four large carriers in action at the same time, and air-to-air combat was, by comparison, minimal. Instead, carrier-based planes flew deep support missions against enemy supply lines, bridges, railroads and hydroelectric plants. And they refined the tactics of close air support, assisting ground troops slugging it out in the sweltering summers and bitterly cold winters of the Korean peninsula.

Age of the Supercarrier

The years of the Korean war saw jets rapidly replace propeller-driven aircraft, and helicopters fly from ships to prove their worth as search and rescue vehicles.

The Marine Corps began using helicopters for observation and to carry men and equipment over the rugged terrain. The steam catapult became the standard means to launch aircraft from carriers, and the angled flight deck development made simultaneous launch and recovery of jet planes a reality.

In the end, it was air superiority provided by U.S. and United Nations allies that gave ground troops the momentum to force a truce in Korea.

With the end of the Korean war in 1953, U.S. Naval Aviation moved into a period of incredible technological growth. Supersonic aircraft capable of delivering nuclear weapons were developed. Guns on naval aircraft took a secondary role to air-to-air and air-to-ground missiles and rockets.

To counter an increasingly potent submarine threat, fixed-wing carrier-based S-2 *Trackers* carried magnetic anomaly detection (MAD) equipment, and helicopters were fitted with dipping sonar detection devices.

Development of the big-deck carrier continued. *Forrestal* was commissioned in 1955, first of the "supercarriers," and the first carrier designed for operational use by jet aircraft. She was rapidly followed by more of her generation, *Saratoga*, *Ranger*, *Independence*, *Kitty Hawk* and *Constellation*.

Then the new "queen" was born. In ceremonies at Newport News, Va., the Navy commissioned its first nuclear-powered supercarrier, USS *Enterprise*.



The end of WW II saw the beginnings of jet aviation. Above top, the XFD-1 Phantom flown by Lt. Cdr. James Davidson in the first successful landings and takeoffs of a jet on a carrier is admired by crewmen on Franklin D. Roosevelt during a lull in flight operations. In the Korean war, the U.S. Marine Corps began using helicopters to good advantage, carrying supplies, evacuating wounded and flying observation missions. Above, Lt. J. L. Scott and SSgt. R. E. Hipple, after flying in to a Korean hilltop in an HTL helicopter, prepare to descend to a nearby valley to examine an earlier helo wreck.

The 1960s saw U.S. astronauts going into space on a regular basis and, on July 20, 1969, former Navy pilot Neil A. Armstrong, below, was the first man to walk on the moon. Center photo, Vietnam was also a major influence on Naval Aviation in the sixties. Here, a UH-1 Huey gunship from HAL-3 provides air support for U.S. and South Vietnamese riverine operations.



A cheering crowd in Memphis, Tenn., welcomes home Ltjg. James Bailey on February 15, 1973, less than a month after his release from a North Vietnam prisoner of war camp.

After a normal deployment to the Mediterranean, the *Big E* was detached in July 1964 to begin an around-the-world cruise. In the company of her nuclear-powered escorts, the guided missile cruiser *Long Beach* and guided missile destroyer *Bainbridge*, she sailed 30,000 miles in 65 days, without replenishing fuel or food.

As the 1960s opened, a new frontier opened as well. Naval Aviation personnel were among the leaders.

On May 5, 1961, Navy Commander Alan B. Shepard became the first U.S. astronaut to go into space. In *Freedom 7*, he reached an altitude of 116 miles and was recovered 302 miles downrange from Cape Canaveral, Fla.

The next year, Marine Aviator Colonel John Glenn, in *Friendship 7*, became the first U.S. astronaut to make an orbital flight.

It was in the sixties that the Navy Astronautics Group and the Naval Surveillance System were established. In 1963, the carrier *Saratoga* was the first ship to begin receiving satellite weather pictures. By the end of the decade, U.S. Navy ships were routinely making use of communications, navigation and weather satellite information links.

As the decade came to a close, earthbound humans watched in awe as Naval Aviator Neil Armstrong stepped from his lunar module to the moon's surface. Where seamen had once looked to the stars to find their way, now they reached for them.

War in Southeast Asia

Manned spaceflight overshadowed many events in the 1960s. In Vietnam, the decade left a bitter legacy.

Vietnam was little more than the continuation of thousands of years of conflict between north and south. In the United States, it became a contest of wills that threatened to divide a nation.

Yankee Station became a household term as television brought the war into U.S. living rooms. Americans watched as Naval Aviators struck at targets in South Vietnam, at North Vietnamese infiltration routes, and finally into North Vietnam itself.

If the Viet Cong and North Vietnamese forces owned the night, U.S. air power owned the skies. North Vietnamese MiGs rarely ventured into the air. When they did, more often than not they came out losers. Navy and Marine pilots shot down 57 North Vietnamese aircraft during the war, and had an 8:1 edge.

At the end, Vietnam was to be an exercise in courage and conviction in a lost cause.

It was a war of words and of ideologies. Of claims and counterclaims. When the Vietnam war ended in 1973, 144 of the 145 returning Navy prisoners of war were from the Naval Aviation community. The stories they told of physical torture, starvation and death at the hands of their captors revealed the lie of humane treatment voiced by Hanoi and war protestors at home.

Carrier Battle Group in Action

From lessons learned in four wars came the modern carrier battle group. It is a blend of surface, subsurface and aviation assets, designed to respond quickly as an extension of U.S. policy anywhere in the world.

An example was the October-November 1984 Grenada operation, in which Naval Aviation units from the the carrier *Independence* and amphibious assault ship *Guam* played a major part. Marine Corps helicopters provided assault force transportation and close air support, and Navy strike aircraft flew missions against Cuban and Grenadan resistance.

That rapid response capability was again demonstrated in 1985, when terrorists attempted to flee to safety after murdering a U.S. citizen aboard the Italian cruise liner *Achille Lauro*. The Navy's eastern Mediterranean carrier battle group was quick to respond.

Using the most sophisticated aircraft tracking systems in the world, U.S. surface and air forces threw out an electronic net capable of simultaneously identifying and tracking hundreds of planes.

In early morning over the Mediterranean, the *Tomcat* interceptors found the airliner. With encouragement from the F-14 crews, the airliner changed course and landed at Sigonella, Sicily. Not long after landing, the terrorists were in the hands of Italian authorities.

The carrier battle group is virtually a self-contained force. It may consist of one or two big-deck aircraft carriers and an escort of cruisers, fast frigates and combat stores ships.

Each carrier deploys with a crew of approximately 5,000, divided almost equally between ship's company and air wing personnel. The wing brings aboard a mixed bag of approximately 90 aircraft, designed to give the battle group a balanced air offensive capability, and more complete defense against air, surface and subsurface attack.

Whether or not the big-deck carrier is effective or simply, in the words of some critics, an expensive and very vulnerable target, is again being debated. The critics' allegations are hotly disputed by Naval Aviation spokesmen.

"How expensive is too expensive?" demanded Rear Admiral Edward Clepton, Jr., former commanding officer of the supercarrier *Dwight D. Eisenhower* (CVN-69). "Are two small exotic cars half the price of one large exotic car? The proposal that we could have twice as many carriers if we build smaller ones is a smokescreen. The fact is we would end up with the same number of battle groups, but with less than half the capability we currently have."

As to vulnerability, former Chief of Naval Operations Admiral Thomas B. Hayward has used as an example the 1969 fire aboard the nuclear-powered carrier *Enterprise* (CVN-65). In that incident, nine 500-pound bombs exploded on the flight deck — the approximate equivalent of being hit by six cruise missiles. Not only did the big carrier survive, but within several hours she was ready to conduct flight operations.

He stressed that today's carriers are not built big for the sake of bigness, but with survivability in mind.

Despite the range and striking power of Naval Aviation assets, naval strategists are quick to point out that much of that range and power comes as part of one Navy. The worth of U.S. Naval Aviation, they say, is not simply a measure of its own capabilities, but also of those capabilities as part of the whole.

Well Trained is Well Prepared

In the early days of U.S. Naval Aviation, training was a relatively easy process, often one of trial and error. Manned flight was an infant science, and aviators, aircrew, and ground support personnel learned mostly by doing.

Since those days, technology has taken Naval Aviation at a breathtaking pace toward the 21st century. But despite science, manned flight still carries with it an inherent danger. Mistakes are potentially fatal. At twice the speed of sound, graphite composites and high tensile metals may come apart as easily as the old silk-covered spars did at far slower speeds.

Over the last 75 years, the Navy has learned that training is the single most important factor in making manned flight safe, and ensuring a high level of battle readiness.

Mistakes are caused by people, and the Navy is convinced the best way to avoid mistakes that may cost lives, lose million-dollar airplanes, and lose battles is thorough and effective training programs.

With that in mind, Naval Aviation annually spends more than \$600 million on education and training. And that sum goes far beyond producing pilots.

The Navy also trains flight officers, bombardier/navigators, radar intercept operators, aviation maintenance officers, flight engineers, enlisted aircrews, rescue swimmers and flight deck crewmen. There are more than 50 schools for the 21 Naval Aviation enlisted rating specialties. This does not include hundreds of additional schools for specific areas requiring more specialized skills, and hundreds of correspondence courses and seminars.

The 25,000 officers and 140,000 enlisted persons in aviation-specific positions learn to do what they do very, very well. Anything less may cost a life, and that is not a price the Navy pays willingly.

People are the Key

On May 8, 1986, at air stations and air facilities, and on carriers and amphibious assault ships throughout the Navy, thousands of men and women will celebrate the 75th Anniversary of Naval Aviation.

Despite the advances of technology, computers that do everything but think, and aircraft that fly twice the speed of sound, U.S. Naval Aviation is, more than anything else, people. Without people, all the advanced technology in the world is little more than just a box full of computer chips and microcircuitry.

U.S. Naval Aviation is 75 years of people who are the inspiration for new generations to carry on Navy pride and tradition for the next 75 years. ■

Although publicity for their role in drug interdiction gets headlines, Coast Guard pilots and crews still have as their main mission search and rescue and water safety. Below, an HH-3F helicopter hoists a boating accident victim from a 40-foot sport fishing boat.



More than anything else, Naval Aviation is people. In this informal portrait of the Naval Aviation family taken at NAS Patuxent River are (L-R): Front row, AD2 Tina Hacker, AIMD; and AKC Reynaldo DeLeon, Supply. Second row, Cdr. Robert V. Downey, C.O. VQ-4; and Lts. Beth Hubert and Dan Bursch, Naval Test Pilot School. Back row, AE1 Hugh Kail, air operations; ADAN John Nance, ASW Aircraft Test Directorate; AD1 Jeffrey Goodman, Rotary Wing Aircraft Test Directorate; and AD3 Zeno Taylor, Jr., Strike Aircraft Test Directorate.

Future of Naval Aviation?

How would you envision U.S. Naval Aviation by 2011, the year of its 100th anniversary?

Naval Aviation News posed this question to a variety of people who have contributed much to the community's growth and vitality. More letters will be published in the July-August issue of NANews.

Admiral Thomas H. Moorer, USN(Ret.)
Former Chairman, Joint Chiefs of Staff

U.S. Naval Aviation in 2011 must be viewed, as always, in the context of its contribution to the global strategy of the United States. Today the political systems of the world's nations have polarized and the present pursuit by the Soviets of world domination will continue at an even faster pace as they are encouraged by the lack of action on the part of the western nations and, particularly, the U.S. Congress to halt this expansion. Not only must we [Naval Aviation] protect U.S. and friendly ships from attacks of all kinds, but we must project land and air power from the sea. Because of the vast political, sociological, and technical changes now in process, the U.S. Navy will be the only means of facing crises around the world in the years ahead. We can maintain this advantage so long as we get adequate public support for the quantity and quality of forces required.

Insofar as technology and, hence, Naval Aviation tactics are concerned, we will see during the next 25 years more progressive changes than we have seen in the last 75 years. I believe most of these changes in technology will revolve around electronics, more powerful engines, and more efficient air foil configurations — the latter two leading to more efficient and versatile V/STOL aircraft. A close second will be more accurate and longer-range stand-off weapons. The effect of this technology on formations, together with a close coordination with surface ships and submarines, will be profound. We will see battle groups spread over very large areas as detection and kill capabilities increase in range.

Finally, however, none of these things will reduce the requirement for skillful and dedicated pilots and crew. The Naval Aviator in 2011 will of necessity require the "right stuff," as has been the case for the last 75 years.

Lieutenant General K. A. Smith, USMC
Deputy Chief of Staff for Aviation

Thinking about what Naval Aviation will be in 2011 is exciting in itself, particularly for someone who has been involved in it for the last 35 years.

First, I believe that Naval Aviation's role in U.S. strategy will increase. In a world which is becoming less and less bipolar, the U.S. ability to depend on allied basing infrastructure will diminish and so will the number of U.S. forces permanently based overseas. [Thus] naval forces will become even more vital in the conduct of our national policy than today.

Today, Naval Aviation is on the threshold of a force modernization that is almost unprecedented. We are either procuring or programming equipment replacements and enhancements that will dramatically improve our capabilities across the board. We in the Marine Corps side of Naval Aviation are particularly excited about the V-22, which will be the mainstay of the vertical lift troop assault force in 2011. I believe this aircraft and the AV-8B *Harrier* portend a transition to a new type aircraft, fixed-wing VSTOL, that will be almost universal in Naval Aviation by 2011. Whether tilt rotor like the V-22 or vectored thrust like the AV-8B, VSTOL has the potential of use throughout a broad range of Naval Aviation missions. The benefits will be numerous, but the flexibility of basing, both sea and shore, will be most drastically affected. The result at sea will be a significantly increased number of platforms from which Naval Aviation can operate. Ashore, VSTOL means almost unlimited basing capability throughout the world.

Complementing the basic aircraft transformation will be an even greater breakthrough in the electronic enhancement of the aircrewmen's ability to perform the mission. We are on the threshold of major advances in this area with such programs as night vision enhancements to the AV-8B and F/A-18 *Hornet* and research in the area of voice-actuated weapons systems.

Finally, by 2011, I believe that we will be using Unmanned Air Vehicles (UAVs) for a great many of the missions for which we now use our tactical aircraft. This capability, which we are now beginning to develop, will be particularly useful for reconnaissance and observation in high-threat environments. Not only will these unmanned vehicles prevent needless loss of aircrew but also unnecessary high-risk exposure of our increasingly sophisticated and expensive aircraft.

Considering the programs and research already underway, I look toward our 100th anniversary with a sense of excitement.



Moorer



Smith



Connolly



Pride

particularly for today's younger officers who can look forward to flying the equipment we anticipate tomorrow. What we must not lose sight of, however, is that Naval Aviation in 2011 will be what we program in the next few years. The 100th anniversary is in our hands.

VAdm. Thomas F. Connolly, USN(Ret.)
Former Deputy Chief of Naval Operations
(Air Warfare)

Events and circumstances govern changes; they stimulate actions by the government, stimulation being a product of the perceived danger and other issues. If world turmoil remains about the same and Soviet activities fit an established pattern, government attentions will tend to veer away from pushing defense even though the Soviets steadily increase already very powerful military capabilities. These are almost worst case conditions for national security and Naval Aviation enhancement. Our best hope then would be for procurement programs that replace antiquation and for R&D that keeps us in the forefront of weapon systems technology. This is all we can expect in a free-swinging democracy; democracies are never ready to protect themselves when the tocsin sounds.

On the assumption that nothing will change for the better in Soviet plans and goals — here is what naval carrier aviation is likely to be in the year 2011 — 15 (maybe) large aircraft carriers. In order of age: *Independence* (CV-62), *Kitty Hawk* (CV-63), *Constellation* (CV-64), a rebuilt or a new *Enterprise* (CVN-65), *America* (CV-66), *Kennedy* (CV-67), *Nimitz* (CVN-68), *Eisenhower* (CVN-69), *Vinson* (CVN-70), *Roosevelt* (CVN-71), *Washington* (CVN-72), *Lincoln* (CVN-73) plus two or three new CVNs, at best.

These large carrier decks in 2011 will employ F-14 *Tomcats* and F/A-18 *Hornets* and their derivatives plus A-6F *Intruders* and derivatives with "ATAs" in early stages of fleet introduction as front-line fighters and attack aircraft.

A very important aerospace development in the not-so-distant future for U.S. Air Force and Navy air power will be aerospace machines that take off from runways or are catapulted from carrier decks, zoom to exo-endo atmosphere levels, proceed on orbital, rocket-controlled trajectories, re-enter the atmosphere, fly to and attack objective areas.

Of course, there will be other changes spawned by

advances in avionics, space manufacturing, computers, composite materials, artificial intelligence, and much more. But many things won't change very much. For old-fashioned, endo-atmosphere missions, aircraft with ever "smarter" weapons and equipments will provide deterrence of aggression, much as today. Yet, the next 25 years will be as interesting, important, exciting and challenging as anything Naval Aviators have ever done, which, by the way, has been plenty. But if Soviet aggressions become unacceptable and our forces are ordered into action, what will prevail in the year 2011 becomes essentially this:

1. We lose.
2. We win or manage to prevail.

If we win or prevail, Naval Aviation will watch over potential trouble areas. If we lose, Naval Aviation, the Navy and a lot more will disappear.

Admiral A. M. Pride, USN(Ret.)
Former Commander Naval Air Force, U.S. Pacific Fleet

In view of my long absence from active duty, I hardly feel competent to predict anything about Naval Aviation 25 years from now, but I would guess that the increasing submarine influence would dictate a considerable expansion of anti-submarine activity [for] both land and sea-based [aircraft].

I would surmise, also, that in view of the probability that conflict with a major power would involve immediate or preemptive nuclear attack via intercontinental ballistic missiles, carrier aviation would become irrelevant, except for subsequent defense of overseas surface and antisubmarine operations.

Prior to a major war, carrier aviation will still be a ready instrument for handling lesser conflicts such as we have seen in the Far Eastern Mediterranean. I would expect it [carrier aviation] to continue developing [its] long-range detection, identification and destruction [capability]. Some years ago, there was concern about the availability and suitability of fossil fuel for [future] naval aircraft. Although I do not expect naval aircraft to be driven by synthetic fuel within 25 years, I would expect interest in it to increase. I would also hope, and expect, that equipment will become more and more automatic and less dependent upon human reaction, although I realize that the enormous expense will become a political difficulty.

MARINE AVIATION 1986

By Lieutenant General Keith A. Smith, USMC, Deputy Chief of Staff for Aviation

Marines, along with their Navy counterparts, are standing tall and proud this year as we celebrate the 75th Anniversary of Naval Aviation. This pride can be traced back to the early flights of Lieutenant Alfred A. Cunningham, to the subsequent establishment of the First Aeronautic Company, and to the numerous and heroic events and deeds of Marines over the past seven decades.

Whether recollecting images of early Marine Aviators in their Curtiss pushers, *Jennies* and DH-4s, or watching today's aviator maneuver his *Harrier*, it is easy to sense the strong and positive impact that Marine Aviation has made throughout the world.

Our history has seen the development of new concepts and spectacular aircraft. Innovative ideas, implemented by courageous men and women, are the hallmark of Marine Aviation history. Yet, there is another common thread found in the numerous successes of Marine Aviation — the professionalism and dedication of all those responsible for accomplishing the mission. Today, we are reaping the rewards of the efforts of thousands of Marines and others who have supported Naval Aviation. Due to the skill and foresight of past and present Marines, Marine Aviation today is at the forefront of technological and conceptual advances.

All functions of Marine Aviation are undergoing constant study and revision to ensure that the Marine Corps fields only the best equipment, operated by highly skilled personnel and employed efficiently and effectively. The aviation capability of the Marine Corps today is second to none and is the pacesetter for many.

Marine Aviation performs six functions in support of the Marine rifleman on the ground:

Air reconnaissance has the primary mission of providing the intelligence-gathering capability to support the overall operational mission. Tactical in nature, air reconnaissance includes photographic, electronic and visual capabilities. The photographic capability is provided by the sophisticated imagery of the RF-4B *Phantom* which includes not only optical systems but also side-looking radar and infrared systems. Augmenting the RF-4B is the old, but effective, method of using hand-held cameras in aircraft such as the OV-10 *Bronco*. Electronic reconnaissance is the primary mission of the EA-6B *Prowler*. Gathering and examining signals from the electromagnetic spectrum, this aircraft is state of the art and an absolute necessity in today's combat environment. Visual reconnaissance, while normally defined as the information gained by specially trained personnel, can include sightings by all aircrews in all aircraft.

Antiair warfare provides air superiority to ensure that all elements of the air-ground team can accomplish their mission



With its heavy bomb-carrying capability, the AV-8B is well suited for the Marines' close air support mission.

unimpeded by any enemy air threat. Both air and ground assets are used to perform this function of gaining and maintaining control of the airspace over the battlefield. These forces include the sophisticated F/A-18 *Hornet* and the older F-4 *Phantom*. Supplementing these aircraft in the effort to ensure control of the sky are the *Hawk* and *Stinger* surface-launched missile systems. Other efforts of antiair warfare include air strikes made by attack aircraft such as the A-6 *Intruder* and the AV-8 *Harrier* to destroy enemy air and missile threats before they are launched.

Assault support is the capability to move supplies, equipment and combat personnel of the Marine air-ground task forces using aviation assets. Several different types of aircraft are employed, including the CH-46 *Sea Knight*, CH-53E *Super Stallion*, AH-1 *Sea Cobra*, OV-10 *Bronco*, and KC-130 *Hercules*. Aerial refueling is the primary mission of the KC-130, and helicopter-borne assault troop transport, resupply and medical evacuation are the missions of the CH-46 and the CH-53E. Currently under development to replace the CH-46E is the V-22 *Osprey* tilt-rotor assault aircraft.

Offensive air support delivers firepower against enemy installations, equipment and personnel. Offensive air support includes both deep air support and close air support. Deep air support is conducted at some distance from the ground force while close air support, a trademark of Marine Aviation, is performed in close proximity to the ground element. A variety of attack aircraft are used in offensive air support including the A-6, A-4 *Skyhawk*, F/A-18 and the AV-8. Our close air support capability will increase dramatically with the eventual upgrade of attack techniques resulting from the current night attack initiatives.

Electronic warfare is conducted for the most part by the EA-6B. With the mission of determining, exploiting and preventing the enemy's use of the electromagnetic spectrum, the EA-6B also strives to ensure that the same spectrum is available for friendly use. In addition to the EA-6B, *Sidearm* and HARM missiles also are part of the electronic warfare function. Capable of being fired from rotary and fixed-wing aircraft, these missiles are targeted for enemy radar sites.

The command and control function coordinates and integrates the preceding functions. The integration of all aircraft activities into a single, coordinated effort requires a

variety of sophisticated command and control (C 2) systems. Among the current and planned C 2 systems are the Improved Direct Air Support Center, the Tactical Air Operations Module, and the Advanced Tactical Air Command Center. Working in concert, these systems provide airspace and air traffic control, operational flexibility in the employment of aviation assets, and coordination of the aviation combat element. This function also uses decoys for the TPS-32 and TPS-59 command and control radars.

Several issues, concepts and systems are being constantly scrutinized, reviewed and upgraded to ensure that Marine Aviation remains a viable fighting force. Readiness has always been a primary concern of the Marine Corps and has attained a steady improvement over the past few years. In 1985, a new high of 75-percent mission-capable readiness was recorded for Marine Aviation. In addition to the significant improvement in mission-capable figures, the full-mission-capable rates increased dramatically. There is no doubt that in 1986 Marine Aviation is as well prepared for combat, if not more so, than at any time in its history.

As indicated earlier, none of the Marines' successes would have been possible without a dedicated and professional force. The high levels of readiness are a testimony to the quality of the people who operate and maintain these systems. Not only is the dedication demonstrated by all Marines on a daily basis an extraordinary achievement, but the ability to attain these successes under difficult circumstances in every clime and place is truly remarkable. Never has the quality of personnel in the Marine Corps been higher than it is today.

Two major goals of Marine Aviation are related to training and safety. There is little doubt that a high level of expertise is required to operate and maintain today's sophisticated aircraft and equipment. In addition to the numerous basic training schools and courses available to the aviation Marine, several high-level courses are also available for advanced training. A good example of such a school is the Marine Corps' Aviation Weapons and Tactics Squadron One.

Chartered to provide graduate-level training in aviation tactics and techniques to already highly qualified aircrews, this school produces weapons and tactics instructors who return to their units to pass on their knowledge to other Marine aircrews. Also of paramount importance to the Marine Corps is the conservation of personnel and equipment. With the increase in full-mission-capable aircraft and an improved flight hour program, we have seen improvement in our safety rate. However, the effort to reduce mishaps still remains a prime concern.

Initiatives have been adopted to further reduce the number of mishaps, including the early identification of unsatisfactory aeronautical performance, improved dissemination of safety-related information, and a closer cooperation between aircraft manufacturer and operator. Leadership at all levels continues to be a prime factor in reducing accidents and close scrutiny is given to the selection of commanders. Training and safety programs are the cornerstones in building and maintaining a ready and capable fighting force.

The future of Marine Corps Aviation is also a prime concern of today's Marine. With the current fleet of CH-46s having attained over 20 years of service life, including a significant combat role in Vietnam, the focus on a state-of-the-art replacement aircraft has turned to the V-22. While the *Osprey* will initially be procured as a medium assault aircraft, it incorporates many of the technological features found in modern high-performance aircraft. This aircraft will permit a

rapid buildup of combat power ashore, which is a mandatory requirement for a military organization whose bread and butter is the amphibious and vertical assault operation.

Another modern aircraft, the *Harrier*, possesses unique characteristics particularly applicable to the expeditionary environment of amphibious operations. The AV-8B *Harrier II* can provide timely and accurate close air support to the ground forces and, at the same time, employ flexible basing opportunities which enable it to be dispersed and operated from several geographically separated sites. This, of course, decreases its vulnerability to enemy attack and provides for increased responsiveness to the commander's requirements.

A significant increase in the capability of Marine Aviation can be seen in the Night Attack Development Program. Comprised of several components, including night vision goggles, navigational forward-looking infrared devices, moving map displays and a heads up display, this program will allow our aircraft to operate more effectively during dark hours and bad weather.

Another important improvement to the fighting capability of Marine Aviation will be the introduction of the AH-1W. With an improved engine package and the *Hellfire* missile system, the AH-1W will provide an enhanced capability to engage armored forces from an increased distance and thus ensure an increase in its own survivability.

Command and control systems are also undergoing modernization efforts. The Tactical Air Operations Module provides a state-of-the-art automated command and control system essential to an integrated air defense. With the capability to acquire, correlate and track twice as many aircraft as the current system, the Marine Corps will realize a significant increase in the command and control area. In addition, plans are under way to produce the Improved Direct Air Support Center, which will upgrade the capability to control air support and assault support missions.

The Reserve Marine Force is also being modernized. The aviation reserve will receive the F/A-18 to replace its A-4M/F-4S aircraft. Meanwhile, the transition to A-4Ms continues, the AH-1J will be retrofitted with the *Hellfire* missile system, and the OV-10D aircraft will be introduced in 1988. A significant event is the establishment of a reserve adversary squadron equipped with *Kfir* aircraft. This squadron will commence operation in late 1986 and will serve as a visible reminder of the contributions reserve personnel make to national defense.

The Marine Corps has long been recognized as a force in readiness. From the early aviation exploits in WW I to the recent accomplishments in the Grenada invasion, Marine Aviation has been noted for its foresight, ingenuity, courage and adaptability. Marine Aviation in 1986 is a force to be reckoned with and has laid the groundwork for continued successes in future engagements in any corner of the world.

The Marine Corps used Curtiss JNs (Jennies) as trainers in WW I.



NC-4 Flight: An American Triumph

By JO2 Timothy J. Christmann

It was 1919. A quart of milk was 15 cents, Jess Willard was heavyweight champion of the world, and Naval Aviation was preparing to make the world's first flight across the Atlantic Ocean.

Many thought the idea was impossible. But some of Naval Aviation's mavericks, like Albert C. Read, John H. Towers, and Patrick N. L. Bellinger believed differently. They were the commanding officers of three Navy-Curtiss (NC) flying boats (NCs 4, 3, and 1, respectively), willing to accept the challenge of doing what no man had done before.

Their aircraft, the first and last Navy planes to be formally commissioned like a group of surface ships, were built a year earlier. The 20,000-pound seaplanes were originally constructed to counter German U-boats during WW I. But the war ended sooner than anticipated, so the Aircraft Committee of the Navy suggested flying the planes across the ocean to "display [their] long-distance flying ability."

Eventually 17 men were chosen for the flight. They were divided into three crews: five for the NC-3 and six each for the NCs 1 and 3. They were all part of NC Seaplane Division One at NAS Rockaway, N.Y., and their skipper was Commander John H. Towers.

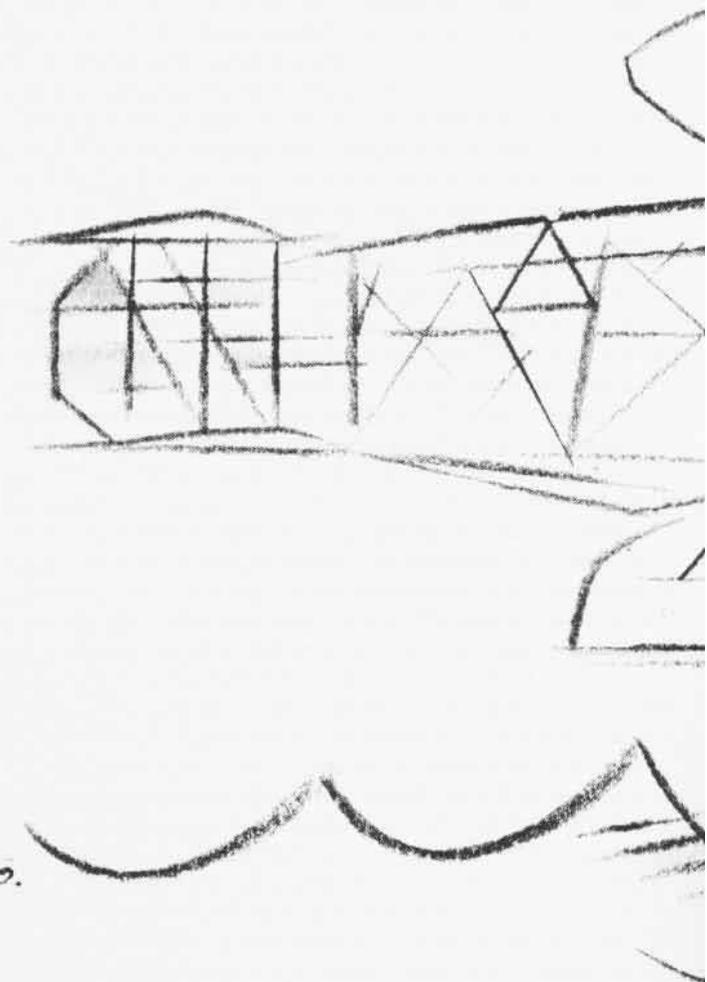
On May 8, 1919, the NCs 1, 3 and 4 took off from NAS Rockaway, amid much fanfare, en route to Halifax, Nova Scotia, their first planned stop of the 3,775-nautical mile journey. NCs 1 and 3 made the trip with no problem, but two of the NC-4's three 400-hp Liberty engines malfunctioned, forcing the seaplane to seek repairs at NAS Chatham, Mass. The NC-4's engines, however, were mended and the crew caught up with NCs 1 and 3 at Trepassy Bay, Newfoundland, on May 14.

Trepassy was the last stop before making the unprecedented 1,200-nm ocean-crossing flight to Horta, in the Azores. Although good weather was predicted, 50 U.S. destroyers and five battleships were spaced 50 miles apart across the Atlantic to assist the seaplanes. The destroyers used, among other things, searchlights and three-inch guns to illuminate a path to the Azores. The battleships, which were positioned every 400 miles along the destroyer chain, acted as meteorological platforms which took weather readings and passed the information on to the seaplanes overhead.

Despite surface assistance, Towers said that the destroyers and battleships were difficult to find, particularly when the

seaplanes flew into stormy weather halfway across the Atlantic.

"Those who think that having destroyers 50 miles apart made navigation as easy as walking down Broadway should have been with us that evening," said Towers after the flight. "It was not until darkness came on and they began to fire star



shells at five-minute intervals that I could think of anything but finding the next destroyer. They could not be expected to be exactly on position and, if we didn't find them just where we expected them, there was always the question, 'Are they wrong or are we?'

Blinded by heavy fog, battered by rain squalls, and numbed by the 30 to 40-degree weather, the three seaplane crews broke formation and attempted to make it to the Azores on their own.

The NC-1 went off course and landed in the stormy seas 100 miles from Flores, in the Azores. Unable to compete with the 30-foot waves, however, the beleaguered crew foundered for five hours before the Greek steamer *Ionia* sailed by and took them aboard. The NC-1 crew wanted to tow their seaplane to the Azores, but towing proved unsuccessful and the aircraft

slipped beneath the turbulent sea. It is presumed that, had it not been for the inclement weather, the NC-1 would have completed the trek to Horta because she had enough fuel and her engines were functioning perfectly.

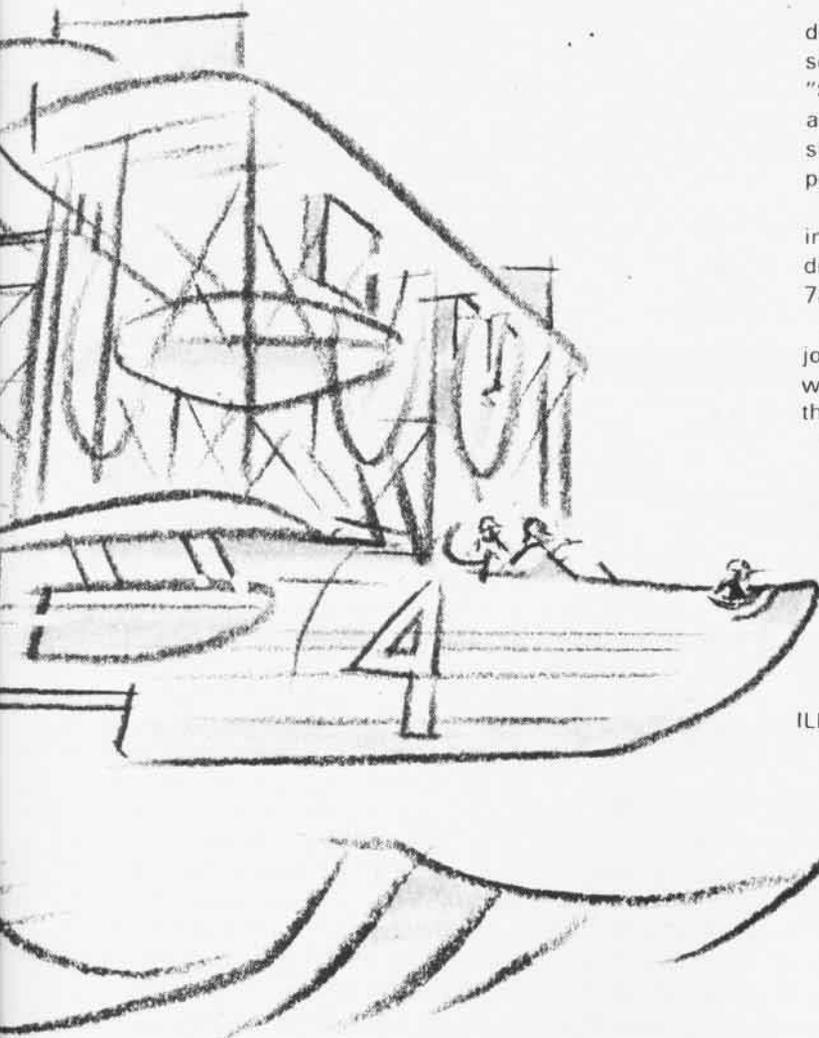
Like the NC-1, the NC-3 also went off course and the crew decided to land on the stormy ocean surface, not knowing that they were only 45 miles from Flores. Had the NC-3 continued flying its course, chances were good that she might have reached the Azores within an hour. Instead, the plane pounced into the waves and sustained crippling damage. With inoperative engines and a cracked hull that was generously admitting water, the NC-3 had no chance of going aloft. But her resolute six-man crew kept the NC-3 seaworthy for the next two and a half days, rigged a sail and maneuvered backwards into Ponta Delgada, in the Azores, on May 20. They had worked so hard keeping afloat that the crew proudly refused assistance from the U.S. destroyer *Harding*, which spotted them seven miles outside Ponta Delgada.

"The water cruise of the NC-3 was a triumphant demonstration of courage, expert seamanship and the seagoing qualities of the seaplane hull," said Lt.Cdr. Read. "Sixty hours in a gale force wind and 30 to 40 foot waves, adrift in a machine designed for entirely different surroundings, the NC-3 overcame all difficulties and arrived in port safely."

Unlike NCs 1 and 3, the NC-4 navigated to Horta without incident on May 17. The seaplane covered the 1,200nm distance in 15 hours and 18 minutes, at an average speed of 78 knots.

After being well received in Horta, the NC-4 crew went on to join the crews of NCs 1 and 3 in Ponta Delgada. There they all were given a tumultuous reception. Church bells pealed and thousands of cheering people lined the streets.

On May 27, the NC-4 flew on to Lisbon, Portugal, for



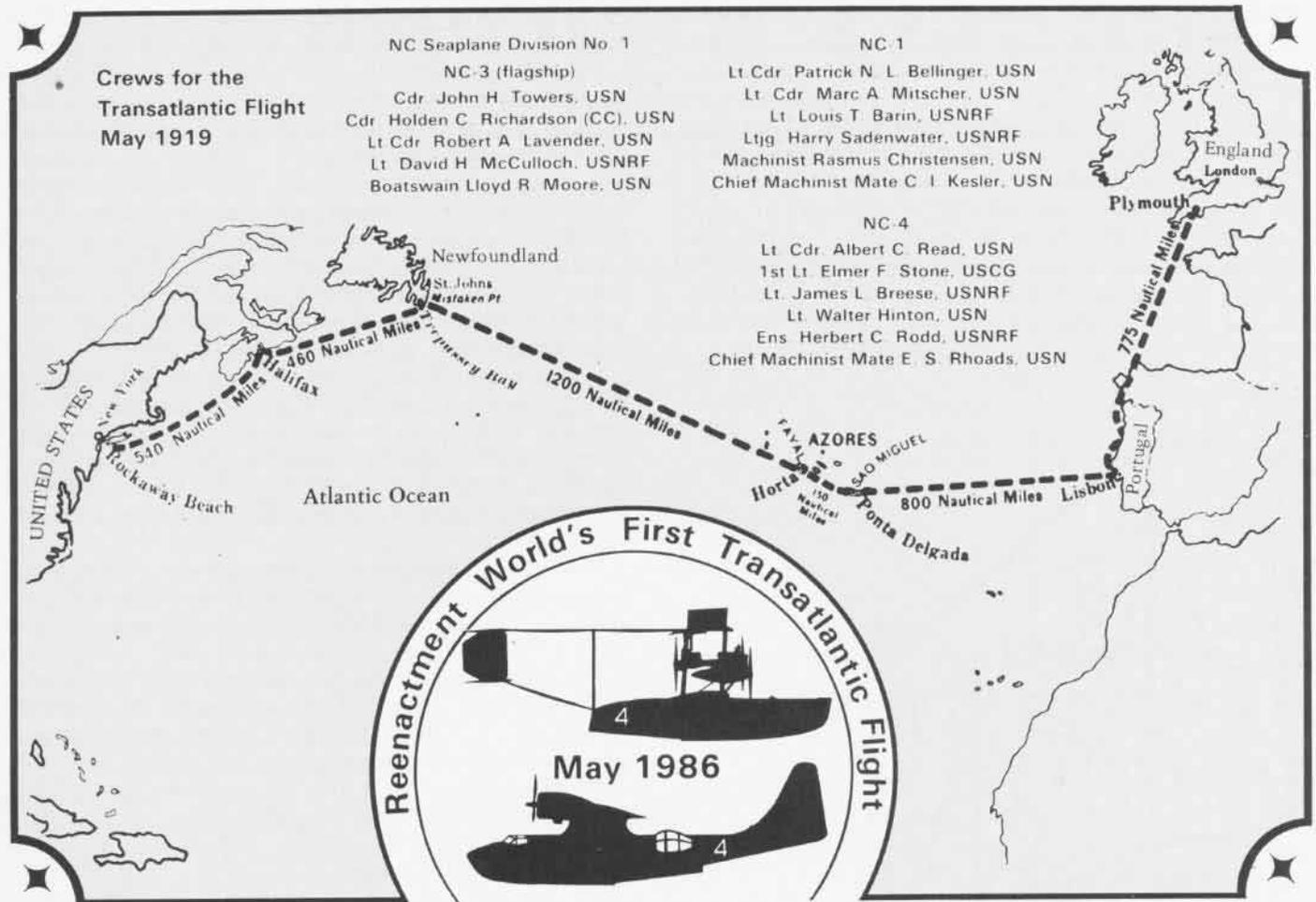
ILLUSTRATED BY *Osborn*

another happy reception. Four days later the crew completed their journey in Plymouth, England.

"If the flight were successful, not only would an immense amount of valuable and much-desired information be obtained concerning long-distance overseas flight, but naval aviation, the Navy department, and the whole country would receive the plaudits of the entire world for accomplishing a notable feat in the progress of the science," wrote Lt. Cdr. Read before the NC-4 flight. "[Also] people would be made to realize the importance of aviation as a valuable arm of the naval service; and the way would be blazed for others to follow and thus act to promote a commercial transatlantic service."

The success of the flight proved the accuracy of this prophecy. Within a few years, the descendants of the NCs were conducting transport, rescue and antisubmarine operations in the Atlantic and Pacific Oceans. And 20 years after the NC-4 journey, Pan American Airways began shuttling passengers across the Atlantic for the price of a ticket.

Today, the NC-4, which is on display at the Naval Aviation Museum, in Pensacola, Fla., serves as a monumental milestone in the progress of aviation — a fitting tribute to an aircraft which nearly 70 years ago was described as "not likely to be of any use whatever." ■



Two PBYs to Trace Historic Journey

NC-4 Reenactment Planned

By JO2 Timothy J. Christmann

Naval Aviation will celebrate the reenactment of one of America's greatest triumphs in May. Two civilians will use WW II vintage PBY *Catalina* seaplanes to retrace the route the Navy-Curtiss (NC) 4 flying boat journeyed when it made history's first transatlantic flight May 8-31, 1919.

Mr. Connie Edwards and Mr. Robert Franks are aviation enthusiasts with 15,000 and 3,500 flight hours respectively, in a variety of aircraft, ranging from hot air balloons to single-engine prop planes and multiengine jets. They volunteered to recreate the NC-4 flight with their personally-owned

PBY *Catalinas* because of the significance of the original flight and because it "sounds like fun."

"[For me] it's going to be the trip of a lifetime," said Edwards, whose PBY will be painted in similar colors (grey fuselage, yellow wings, and red, white and blue tail) to the NC-4 of 1919. "I

read a lot about the NC-4, and I don't think those [Naval Aviators] received the recognition they deserved."

"If you know anything about flying, you know what an amazing feat it [the NC-4 flight] was," added Mr. Robert Franks, whose white PBY bears the name the *Spirit of U.S. Naval Aviation*. "Being involved in the NC-4's reenactment is an incredible opportunity for me."

Sixty-seven years ago, eight years before Charles Lindbergh flew his epic solo flight aboard the *Spirit of St. Louis*, a crew of six daring men proved that transatlantic flight was feasible, contrary to the beliefs of many skeptics at the time. The NC-4 was the only one of three Navy flying boats (including NC-1 and NC-3) that successfully made it to Plymouth, England, via the Azores from a starting point at Rockaway Beach, N.Y. Rain and gale winds forced the NC-1 and NC-3 into turbulent seas before they could reach their destination. The NC-1 sank while under tow by a ship that came to its aid. Unlike the NC-1, however, the crew of the NC-3 did not succumb to the violent seas. Although incapable of continuing the flight, the resolute NC-3 crewmen "sailed" backwards into Ponta Delgada, in the Azores, under their own power.

Besides proving the practicality of transatlantic flight, the NC-4's 52-hour flight, flown mostly through mist and drizzle, demonstrated the potential of flying boats.

Yet despite the NC-4's dramatic accomplishment, historians have not given the Navy or the NC-4 crew its due. Few American classrooms discuss the first transoceanic flight with the same enthusiasm that is devoted to Charles Lindbergh's voyage. But, many things may have contributed to the oversight: The peace treaty ending WW I was being discussed at the time and took precedence over the NC-4's feat; there was a lack of interest in aviation in 1919 (less than 3,000 Americans had aviator licenses); and Lindbergh eclipsed whatever notoriety the NC-4 received by crossing the Atlantic in half the flight hours. Also, unlike the NC-4 crew in 1919, Lindbergh didn't rely on the assistance of surface vessels to help him across. He did it all alone in 1927.

"This [reenactment] flight will whet

young historians appetites and make them look more closely at what the NC-4 really accomplished," said Connie Edwards.

Captain R. Rausa, Head of the 75th Anniversary Naval Aviation Staff, who is helping to coordinate the reenactment flight in Washington, D.C., agreed.

"A lot of people [today] don't realize that the Navy made the first successful flight across the Atlantic," said Rausa. "The reenactment will commemorate the courageous NC flying boat crews and draw attention to the fact that only a lifetime ago an aircraft made it across the Atlantic. Interestingly, the day the NCs departed Rockaway in 1919 is the same date that Naval Aviation was officially begun with the purchase of its first two aircraft in 1911."

According to Capt. Rausa, the idea of the NC-4 reenactment was the brainchild of his predecessor, Captain Richard C. Knott, now retired, who initially headed the 75th Staff. Capt. Knott, who authored two books on flying boats, thought the best way to commemorate the 75th anniversary was to reenact the flight that propelled Naval Aviation into the headlines in 1919, a mere eight years after its birth. Mr. Edwards, a businessman from Texas, heard about the reenactment idea last year and volunteered to make the journey in his PBY. A few months later Mr. Franks also volunteered his services.

"The public should know that these are two privately-owned and operated aircraft," said Capt. Rausa. "The Navy is serving primarily in an advisory role for the event, but wish both crews the best."

According to Rausa, Edwards and Franks are very personable, and dynamic, individuals.

Edwards, who lives in Big Spring, Texas, started flying at 16 and became such an adept aviator that he flew as a stunt pilot for much of the aerial sequences in the movies *Battle of Britain*, *Close Encounters of the Third Kind*, and *Bermuda Triangle*. Franks served four years in the Navy as a photographer's mate and said that the military helped form his character. After his stint in the Navy, he sold vacuum cleaners door to door, then developed his own real estate

business. Like Edwards, Franks has been an avid aviation buff and pilot most of his life.

Like the crew of the original NC-4, Edwards and Franks have ensured their PBYs are ready to make the 3,775 nm journey. They have spent a great deal of time and money servicing their aircraft, which have newly overhauled engines, the latest navigation systems, weather and electronic gear, and fresh coats of paint.

Edwards said that the PBY was the best choice to make the trip because it is the only plane in the world that can fly 3,500 miles on a single tank of gas and land or take off from both land and water.

"It [the PBY] is the greatest plane [around]," he remarked.

The two PBYs will take off from Rockaway Beach, N.Y., on May 8 and follow the exact route the NC-4 flew. They will also strive to match the takeoff and landing times of the 1919 flight.

"The trip from Trepassey Bay, Newfoundland, to the Azores was made at night, but Edwards and Franks will be making it in the daytime for photographic purposes," said Rausa.

Each PBY will have its own crew, and there will be limited seating for VIPs and members of the media. A Navy camera team will document the reenactment and considerable media interest is anticipated during the trip.

Numerous highlights are expected for the PBY crews during the flight. For instance, when the crews land in Lisbon all the city's church bells are supposed to ring just as they did sixty-seven years ago for the NC-4 crew. Also, when the PBYs terminate the flight in Plymouth on May 31, the city's lord mayor will greet the crews just as his predecessor did for the NC-4 contingent. In fact, he will be wearing the same ceremonial robe of his distant countryman.

"[If nothing else] the NC-4 reenactment flight will bring a piece of history to life again," said Rausa. "It will also help to demonstrate the courage, perseverance and determination of the NC flying boat pioneers." ■

Diamond Anniversary 75th Year of Naval Aviation



CRADLE OF NAVAL AVIATION

EARLY HIGHLIGHTS

By Commander Jim Jacobsen, USNR-R



Storm damage at Naval Aeronautic Station, Pensacola in July 1916.

Naval Aviation and Pensacola, Fla., have been synonymous for decades. The Navy has been a part of the culture in Pensacola since 1825 when the Navy opened the Pensacola Navy Yard, which would one day become Naval Air Station, Pensacola.

When a great hurricane and tidal wave hit Pensacola in 1906, it ravaged the Navy Yard and debris lined the beaches. Yellow fever was the next act of nature to hit the area in 1908. By the time Secretary of the Navy Josephus Daniels directed a comprehensive plan for an aeronautical service in the Navy in October 1913, the Navy Yard in Pensacola was in a caretaker status.

The Navy began to realize that the science of aerial navigation had reached a point where aircraft may play a vital role in its defensive and offensive operations. The search for a "home" for Naval Aviation was narrowed down to two locations, Philadelphia and Pensacola. Because of its existing but inactive naval base and its excellent climate and flying weather, Pensacola was chosen.

There existed at that time an "aviation camp" at the U.S. Naval Academy in Annapolis, Md. The order came to move men and aircraft from the aviation unit aboard USS *Mississippi* and *Orion* and to head for Pensacola. There, under the direction of officer in charge Lieutenant John H. Towers, they were to establish a "flying school."

Lieutenant Commander Henry C. Mustin was in command of the headquarters ship *Mississippi* and the aeronautic station. By late April 1914, the Navy's Bureau of Navigation approved a formal course of instruction for student aviators and student "mechanicians," as mechanics were then called. November brought the first administrative reorganization, and command shifted from *Mississippi* to headquarters ashore in Pensacola, which was then officially designated a naval aeronautic station.

In January 1916, instruction began for the first group of enlisted men to receive flight training at Pensacola. Later in the year, the Secretary of the Navy approved a reorganization which established "the training of commissioned and enlisted personnel for aeronautic services with the fleet" as the primary mission of Naval Aeronautic Station, Pensacola.

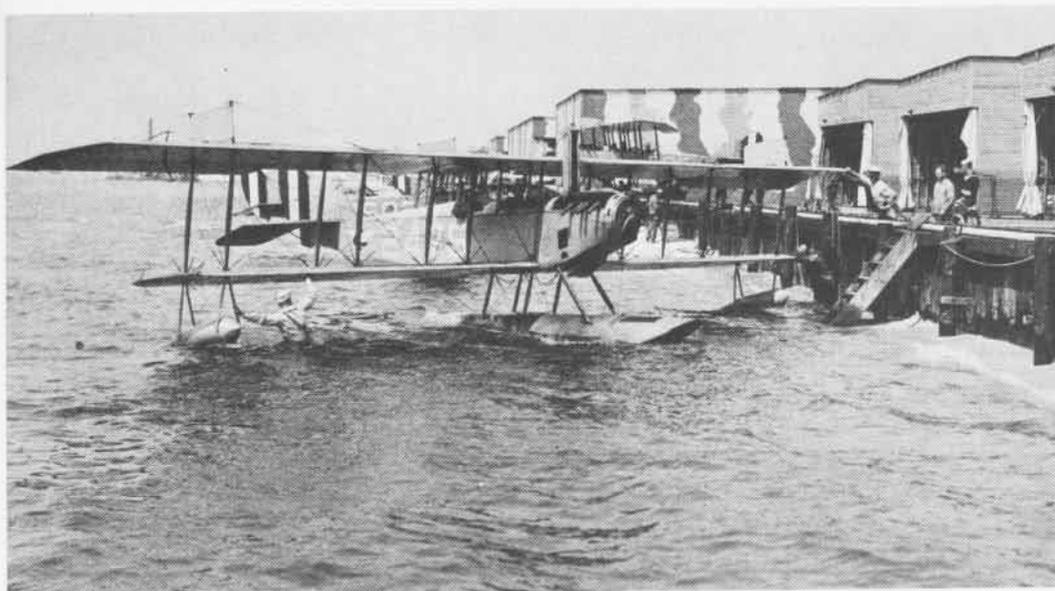
Designated a naval air station in December 1917, Pensacola had changed dramatically during the war. Gone were the canvas tents on the beach, the small training camp with the ramshackle facilities and the capability of training only a handful of students a year.

In May 1918, the Chief of Naval Operations ordered that training goals at Pensacola be aimed toward training aviators for foreign service. He directed that eight elementary training squadrons be operated — two in Key West, four in Miami and two in Bay Shore. This meant that all primary training at Pensacola would cease and in its place training began for patrol plane and night bomber pilots.

Class XVI of July 1922 was the first class of student aviators to be trained in landplanes, a departure from the exclusive use of seaplanes.

In 1936, another small revolution in the training syllabus at Pensacola took place when more emphasis was placed on instrument flying.

A significant milestone in Pensacola's long history occurred



An N-9 returns to NAS Pensacola after a flight, circa 1918.

Below left, ramp and temporary tent hangars at Pensacola, January 1914. Below, updated seaplane hangars in 1917.



in December 1943 with the establishment of the Naval Air Training Command. It was to coordinate and direct, under the auspices of the Chief of Naval Operations, all aviation training in the primary, intermediate and operational training commands. By May 1947, the Secretary directed that the U.S. Naval School of Preflight at Ottumwa, Iowa, be relocated and designated the U.S. Naval School of Preflight, Pensacola, Fla. The following January, Headquarters, Naval Air Basic Training Command was relocated from Corpus Christi, Texas, to Pensacola.

From these humble beginnings, Pensacola has become known as the "cradle of Naval Aviation." The training that began in a most rudimentary form has expanded into one of the world's most sophisticated, electronically advanced training environments.

Today, Naval Air Station, Pensacola is like a giant

corporation. With 52 tenant commands and a combined military and civilian payroll in excess of a half-billion dollars per year going into the city's economy, Pensacola and the Navy have come a long way since 1825 when the Navy Yard was established, and 1914 when the aeronautic station was "born."

Pensacola, in every sense, has been the cradle of Naval Aviation. But more than that, it remains a monument to man's courage and ingenuity. The long years of Navy presence in western Florida have welded bonds of cultural association that will remain forever.

Through the hurricanes, the good times, the bad times, and throughout WW II and the Korean and Vietnam conflicts, a history of aviation accomplishments has bound the Navy to Pensacola. Naval Aviation was nurtured and has grown up in Pensacola. It will always be home. ■



AL '86

Illustrations by A. Michael Leahy

CURTISS HS-2L FLYING
BOAT FROM NAS TREGUIER, FRANCE
PATROLLING ENGLISH CHANNEL
SUMMER 1918







MARINE F4Fs SCRAMBLING —
"CACTUS" FIGHTER STRIP
GUADALCANAL, OCT 1942



NAVY

LOADING UP TANK-KILLING
ROCKETS ON VF-24 F4U-4
CORSAIRS ABOARD THE
USS PHILIPPINE SEA FOR
MISSIONS OVER KOREA
-1951-

ME 86



F4U Corsair

By Harold Andrews



F3A-1



F4U-5N



XF4U-3B



XF4U-1

On the occasion of the 75th Anniversary of Naval Aviation, it is notable that Vought *Corsairs* have been on board for more than two-thirds of the period.

First came the series of biplanes, starting in 1926. Before they were totally phased out, the XF4U-1 entered the scene in 1940. The inverted gull-wing *Corsairs* continued the tradition for a total of some 30 years when the last of the fighter-bomber *Corsairs* was retired. After a break, the A-7 *Corsair II* (the biplane's name was unofficial) picked up in 1965, continuing to the present, with more years to come.

So, it is appropriate to cover the first official *Corsair* on this anniversary year. Significantly, the first biplane *Corsairs* (O2Us), the F4Us and the A-7s have all played key roles in Navy and Marine Corps combat operations.

The story of the *Corsair* of WW II and

Korean operations starts in 1938. The Navy was looking for a new carrier fighter with significant increases in performance over the Grumman F4F and Brewster F2A, then in the development/test stage. In the design competition a Vought proposal — designed around the new Pratt and Whitney 1,800-hp R-2800 Double Wasp engine — was awarded an experimental prototype contract.

The most unusual feature of Vought's design was its inverted gull wing, which allowed a shorter, lighter landing gear. This provided adequate ground clearance for the large-diameter propeller required to absorb the power of what was then the largest engine available for a fighter airplane.

First flown on May 29, 1940, the XF4U-1 had an armament of four guns, two synchronized to fire through the propeller disc, the other two outboard in the wings.

It was the first single-engine fighter capable of over 400 mph.

As part of the U.S. military buildup which preceded Pearl Harbor, production of the F4U-1 was ordered. Based on European wartime experience, increased armament and gunfire protection were required, resulting in extensive redesign of the production *Corsairs*. A large self-sealing fuel tank was located over the wing in the fuselage, while three .50 machine guns were installed outboard of the prop arc in each wing. The fuselage fuel tank caused the cockpit to be moved aft, which resulted in the characteristic "long nose" of the *Corsair*. An unusual feature of the *Corsair* was the fabric covering of the outer wing panels aft of the main spar. The construction was otherwise typically all metal with fabric-covered control surfaces.

Design and construction of the initial production F4U-1s were well along when the U.S. entered WW II. To meet anticipated Navy/Marine needs, Goodyear and Brewster were also given contracts to produce *Corsairs* as the FG-1 and F3A-1, respectively, with Vought-Sikorsky retaining overall design responsibility.

June 1942 brought the first production F4U-1 flight, with testing, Navy trials and service introduction following. Early carrier trials revealed some problems with carrier landings, leading to a decision to operate *Corsairs* from land until satisfactory characteristics were achieved. Thus, the Marines became a major user, along with shore-based Navy squadrons.

While this problem was being tackled, other improvements were made in the -1 *Corsairs* and incorporated at all three production plants. The most obvious was a raised, three-panel canopy for improved visibility. At the same time, a dozen F4U-1s were being modified as F4U-2 night fighters with a radar nacelle on the right wing, outboard. Additional conversions were subsequently made and, in early 1944, these night fighters were the first *Corsairs* based on U.S. carriers. The F4U-1C, with four 20mm cannon in place of the six .50s; and the F4U and FG-1D, with additional store-carrying capability and water injection for the engine, followed. Brewster's *Corsair* production was cancelled before shifting to the -1D.

By the time the -1Ds were in service, the carrier landing problem had been solved. Changes to the main gear oleos and a taller tail wheel assembly led to full

carrier use of the *Corsair*. A large number of -1 and -1D *Corsairs* were provided to the British Fleet Air Arm. Their wing tips were slightly clipped to clear the lower hangar overhead on the Royal Navy carriers, where they were fully operational even before the landing gear fixes were installed. Much of Goodyear's later production was built as the -1A, for land-based use without folding wings and other carrier systems. New Zealand's RNZAF also flew -1s. As a fighter and fighter-bomber, the *Corsair* was one of the outstanding WW II combat aircraft.

Attempts to increase the *Corsair's* performance at altitude led to the experimental turbo-supercharged XF4U-3. While a few FGs were modified late in the war to FG-3 configuration, they did not become operational. The next improved engine installation was the "C" series Double Wasp, first in experimental -4s and subsequently in full production at Vought. Goodyear was in the process of changing over when production there was terminated after VJ day. The improved performance justified continued production after the war, including cannon-armed -4Bs, night fighter -4Ns, search radar-equipped -4Es, and photographic -4Ps. Goodyear's development of a much more powerful *Corsair*, the F2G with the Pratt and Whitney R-4360 engine, was also closed out in the postwar years after 10 production aircraft had been built.

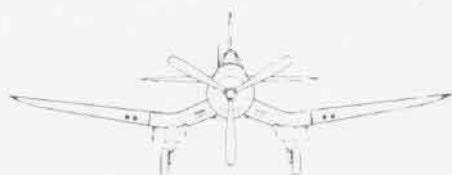
The new E series R-2800 developed by Pratt and Whitney led to the -5 *Corsair*, with further performance improvements. Replacing the -4 in production in 1947, it was the first "all-metal" *Corsair*, including all-metal outer wing panels.

The FG-1Ds continued as mainstays of the Reserves, while the -5s gradually replaced the -4s in fleet squadrons. The -5N night fighters became major components of carrier air groups as the new jets took over the basic day fighter role. Some -5Ps were also built.

Production of the -5 series continued at Vought after its move to Dallas, and the Korean conflict brought the *Corsair* back once more into the forefront. F4U-4s returned in numbers to the carriers and winterized -5NL versions were built to operate better in frigid weather conditions. The Navy and Marines both very successfully employed the night fighter -5Ns and -5NLs. A low-altitude, heavily armored version of the -5 was built as the XF4U-6; production aircraft were redesignated AU-1s. Production of 110 completed the Navy acquisition of *Corsairs*, though the French F4U-7s were the last off the line. With the end of the Korean war in 1953, the *Corsairs* were rapidly released from operational squadrons, though they continued another few years in support roles.

Furnished to several other countries, particularly Central and South America, as well as France, *Corsairs* continued in operational use and in intermittent combat for many more years. They also made their debut in air races soon after WW II, especially with the R-4360 engine, and established a winning record. With their unique wing configuration and outstanding performance, the more than 12,500 built are well commemorated by the few that can still be regularly seen flying at air shows and air races, and those in many museums. ■

F4U-1C



	F4U-1	F4U-5
Length	33'4"	34'6"
Height	14'11"	14'0"
Span	41'0"	41'0"
Gross weight	12,039 lbs.	12,902 lbs.
Engine	P&W R-2800-8 2,000 hp	P&W R-2800-32W 2,300 hp
Performance		
Max. speed	407 mph	462 mph
Service ceiling	36,800'	43,500'
Range	1,515 mi.	1,036 mi.
Crew	One	One
Armament:	Six .50 machine guns and one 1,000-lb. bomb (by field mod).	Four 20mm cannon and up to two 1,600-lb. bombs plus eight 5" rockets.

Air Force Aviators

By JO2 Timothy J. Christmann

Few Air Force aviators get the chance to fly with Navy squadrons and deploy aboard aircraft carriers. But the few who do, thanks to the Personnel Exchange Program (PEP), find Naval Aviation as challenging as any job they've ever had.

"I'm not looking forward to leaving the Navy," said Major Robert W. Shield, Jr., an A-6E *Intruder* bombardier/navigator with Attack Squadron (VA) 196 at NAS Whidbey Island, Wash. "The flying has been the best in my military career. It has really made this [exchange tour] worthwhile."

Maj. Shield is one of about 23 Air Force aviators serving two to three-year PEP

tours in most Navy flying communities, including fighter, attack, airborne early warning, electronic warfare and reconnaissance.

"[PEP] is important because it allows interaction between the two services so that the Navy becomes familiar with the Air Force's operations and vice versa," said Commander Thomas Lloyd, assistant for PEP in the Navy Military

JOCS Kirby Harrison



Most Air Force aviators flying with Navy tactical squadrons find that landing planes like the F-14 Tomcat (above) aboard aircraft carriers is difficult. Unlike flying in the Air Force, with the flexibility of landing planes on 5,000 to 10,000 feet of runway, the space limitations on a carrier flight deck demand that Naval Aviators land well within 500 feet.

Flying Navy

"I've flown F-15s, dropped bombs, and fired air-to-air missiles, but carrier landings were the ultimate [test]."

Maj. Norman Siep.

Personnel Command (NMPC), Washington, D.C. "One of the program's basic precepts is that the services have to have a one-for-one exchange. For instance, if the Air Force sends us a fighter pilot, we must exchange a fighter pilot. Or, if we are looking for someone to go through aggressor school as a pilot, then we have to send a Navy pilot through Air Force aggressor school."

Since PEP works on a one-for-one basis, Cdr. Lloyd said that an equal number of U.S. Navy pilots and Naval Flight Officers (NFOs) are currently occupying various flying billets in the Air Force. However PEP, which began in the mid-1940s, isn't limited to only interaction between Naval and Air Force aviation. All U.S. Armed Forces and a number of foreign militaries are involved in exchange programs. In fact, many Naval and Air Force aviators who volunteer for PEP tours are offered the opportunity to fly with a variety of foreign air forces, including Australia, Canada, France, Germany, the Netherlands, New Zealand, Peru, the United Kingdom and Venezuela.

Air Force Major Brian McLean, for example, had an opportunity to fly as a radar intercept officer (RIO) in F-4 *Phantoms* with either the German or Royal Air Force. Instead, he chose to fly F-14 *Tomcats* with Fighter Squadron (VF) 124, the fleet readiness squadron (FRS) at NAS Miramar, Calif.

As a flight instructor, Maj. McLean, an Air Force Academy graduate who served

two years with VF-124, made 85 traps aboard six different aircraft carriers and accumulated more than 200 hours in the F-14.

"I enjoyed [flying Navy]," said McLean, who left the squadron in March 1986. "It doesn't matter what color you paint the uniforms, fighter pilots are fighter pilots. The people I worked with [in the Navy] were the same caliber and had the same capability as the people I work with in the Air Force, however, [Naval Aviators] are a little nuttier. After all, the idea of flying huge airplanes off boats is a little weird.

Carrier Aviation

Like most Air Force aviators flying in Navy tactical squadrons, McLean knew little about carrier aviation until he joined VF-124.

"I didn't know anything about it," he admitted, "but it sounded interesting. After [experiencing carrier operations] I knew it was the most challenging environment I ever flew in. Naval Aviators and carrier flight deck personnel are outstanding and I don't think they get paid enough for what they do. I have 3,000 hours of flight time in various airplanes, 2,000 in fighters, and I have never seen as frightening an environment as the deck of an aircraft carrier. It scared the hell out of me."

Maj. Shield, who spent most of his career flying in B-52 *Stratofortresses* and FB-111s for the Strategic Air Command, said Air Force aviators "admire Naval Aviators more" because of their ability to

operate safely aboard carriers.

Shield was one of VA-196's safety officers in 1985, and during a six-month carrier deployment he spent a lot of time on the flight deck.

"[On the flight deck] your head feels like it's on a swivel," he said. "You try to do your job and at the same time make sure that you don't get blown overboard or run over. It's a hazardous operation, and anyone who has any knowledge about flight deck personnel have nothing but admiration for them. They have a hard job."

Shield, who has more than 670 hours in the A-6E and 149 carrier traps, said that launching and recovering aboard a carrier — particularly at night — is "just plain exciting.

"You have to know your emergency procedures because anything can happen at any time," he said. "Everything is so [busy] on the flight deck, especially during a catapult shot, that you have to know how to react quickly in any situation."

Captain Michael Cunningham, an Air Force F-4 *Phantom* RIO who flies F-14s with VF-101, the FRS at NAS Oceana, Va., said he felt like "a bowl of jelly" on his first catapult shot.

"I was tense and apprehensive and that's not the way you're supposed to take a shot," said Cunningham, who has more than 470 hours in the *Tomcat* and 77 carrier landings. "You're supposed to be relaxed."

Landing Habits

Besides launching off carriers, blue suit aviators flying Navy must also change their landing habits. In the Air Force, a pilot has the flexibility to land on 5,000 to 10,000 feet of runway. Not so in the Navy. Space limitations aboard aircraft carriers require Navy pilots to thump onto the deck, snag a recovery cable, and shudder to a stop well within 500 feet.

Naval Aviators, especially those assigned to training squadrons, spend most of their debrief talking about precision landing, according to F-111 pilot Captain Kevin Kregel, a student at

the Naval Test Pilot School, at NAS Patuxent River, Md. "The Air Force spends maybe two minutes talking about landing and the rest of the debrief discussing the mission," he said.

Kregel, who flew A-6Es for more than a year with VA-145 prior to going to TPS in July 1984, said that although he broke his Air Force landing habit pattern, Navy pilots fresh out of the training command could still fly the *meatball* much better than him.

"It was a disheartening experience," he added.

Captain Ronald Johnston, an F-4 pilot who spent two years flying F-14s with VF-424, initially thought the Navy devoted too much time refining landing techniques. However, that was before he made his first trap aboard USS *Kitty Hawk* (CV-63) and realized how important proficient landing skills are to a carrier aviator.

Naval Aviation training was particularly noteworthy in Capt. Johnston's case. Unlike his contemporaries, he had never been

aboard an aircraft carrier prior to making his first of 10 traps aboard *Kitty Hawk* in the *Tomcat*.

"The first time I saw the boat was when I was going to land on her," said Johnston. "I'll never forget it. It happened on April Fool's Day 1985."

In stressing the challenge of landing a 20-ton jet on the heaving deck of an aircraft carrier, Major Norman Seip, an F-15 *Eagle* pilot who spent two years flying F-14s with VF-41, said, "I've flown F-15s, dropped bombs, and fired air-to-air missiles, but carrier landings were the ultimate [test]."

Seip, an Air Force Academy graduate, accumulated more than 650 hours in the *Tomcat* and made most of his 205 traps aboard USS *Nimitz* (CVN-69). He said that being the only blue-suited aviator in the squadron made him "stick out."

"I didn't feel like I was representing the Air Force, but I put a lot of pressure on myself sometimes because I knew everyone was watching to see 'how that Air Force guy would do,'" he said. "In

most cases, however, I was just another pilot out there flying the F-14."

Many Air Force aviators flying in the Navy empathize with Seip feeling like a fish in a bowl. Still, the undue attention hasn't affected their flying proficiency or unblemished safety record.

"I've never heard of an incident or accident concerning an Air Force exchange [aviator]," said Commander Jack Snyder, Commanding Officer of VF-124, who has three Air Force aviators flying his squadron's F-14s. "The people we [have] are outstanding instructors and tacticians. I wish we could keep them."

Added Commander Dennis McGinn, who had several Air Force aviators flying his F/A-18 *Hornets* while he was C.O. of Fighter/Attack (VFA) squadron 125, "Across the board [they] were very professional."

Like Cdr. Snyder, McGinn, prospective executive officer of USS *Coral Sea*, is a PEP proponent.

"PEP really pays off for the Navy," he said. "We get high-quality officers from



Air Force exchange aviators who have been involved in flight deck operations describe the environment as "challenging," "exciting," and "frightening." One said that Air Force aviators "admire Naval Aviators more" because of their ability to operate safely aboard aircraft carriers.

More than 25 Air Force aviators typically apply for one available Naval Aviation exchange billet.

the Air Force and foreign services, and they bring with them an expertise in aircraft and weapons systems that we normally wouldn't be exposed to. It [provides] a good exchange of ideas."

Master Sergeant Don Tarlson, NCO in charge of the Officer Exchange Program at Randolph Air Force Base, Texas, said that the aviators the Air Force chooses to serve with the Navy are "among the service's best.

"The selection process is extremely competitive, so selectees must have outstanding records," he said.

Tarlson added that so many Air Force aviators want the opportunity to fly Navy that more than 25 of them typically apply for one available Naval Aviation exchange billet.

Responsibility

Most Air Force aviators learn immediately that being assigned to Naval Aviation billets means supervising people and managing equipment.

According to Maj. Shield, Air Force pilots and NFOs, unlike their Navy counterparts, don't supervise squadron maintenance and administrative personnel.

"An Air Force flying officer doesn't have the opportunity to lead a bunch of men like I have the opportunity to do in the Navy," said Shield, VA-196's avionics armament division officer who is in charge of three other officers, 80 enlisted men, one ordnance branch and three avionics branches. "If there is one thing I've enjoyed on this tour it's been working with the squadron's [leading petty officers and chiefs] in supervising and counseling the junior enlisted personnel."

Capt. Kregel added that he was given more responsibility while assigned to VA-145 than he had in any of his Air Force billets. "For me it was a good deal in the Air Force because [as a junior officer] I got a lot of flight experience and flew a lot of different aircraft," he said. "Naval officers are given supervisory positions almost as soon as they're

ensigns or lieutenant junior grades. In the Air Force, you [usually] have to wait until you're a senior captain before you're in charge of anybody."

According to Capt. Cunningham, the early leadership responsibilities work well in the Navy because they provide pilots and NFOs the opportunity to make their own decisions. "In the Air Force," said Cunningham, VF-101's power plants officer who is responsible for 36 enlisted members, "Everyone looks up to the next guy in the chain and asks, 'What do you think, boss?'"

Misconceptions

If anything, PEP is giving Air Force aviators the chance to correct some of the misconceptions they might have picked up concerning Naval Aviation.

"The premier misconception is that [Naval Aviators] have a cavalier attitude [toward] regulations," said Captain Pat Houren, an F-15 pilot who is the assistant operations officer for VF-101. "But that's just bar talk. Everyone in aviation knows that if you don't take it seriously you aren't going to live very long."

Maj. Seip, who has more than 2,500 hours in fighter aircraft, didn't think the Navy participated in many multinational exercises. But, he wound up flying on more foreign exercises during his two-year Navy tour than he ever did in the Air Force.

"Naval and Air Force aviation are comparable in a lot of ways," said Capt. Johnston. "Both services have extremely dedicated officers, especially in the flying field. Also, both services are parochial. They believe they do things the best, and I wouldn't want to fly with anyone who didn't feel that way."

Capt. Johnston, whose father was a Naval Aviator, added that most of the tactics and concepts both services employ are the same. He said the only major difference is the Navy's specialty of operating off aircraft carriers. "The carrier environment really drives a lot of what they do — more than I ever thought it did," he added.

PEP

Most Air Force exchange aviators feel PEP should be expanded to accommodate more aviators.

"It's a super program," said Capt. Kregel. "The biggest benefit of the program, from my point of view, is that I got a different perspective of how the Navy [operates]."

When Kregel was flying F-111s in England his squadron often engaged in flying missions with the Navy. But the missions didn't always "mesh well.

"The biggest problem was that the Navy and Air Force didn't speak the same language," he said.

While assigned to VA-145, Kregel discovered a way to amend this dilemma. During interservice exercises he served as an "interpreter" who translated Air Force terminology for the squadron's operations officer. The result? Improved communications between the services.

Capt. Kregel said that unlike Air Force aviators many Naval Aviators aren't as interested in a PEP tour because they feel it would hinder their careers. According to Cdr. Lloyd, however, NMPC conducted a review several years ago and discovered that PEP personnel "made out as well as their contemporaries did in all areas."

But Cdr. Snyder, C.O. of VF-124, said that Naval Aviators have a right to be skeptical and should seek counsel from their detailers before volunteering for a PEP tour.

Most Air Force aviators said that although they enjoyed their PEP tours, they were looking forward to going back to their own service. But a few were uncertain.

Capt. Ron Johnston said that he'd prefer going back to the Air Force rather than going on a fleet tour with the Navy.

"Still, there are a lot of good things about the Navy," he added. "[For instance] Naval Aviators stay in the cockpit longer. I'll have a desk job soon, whereas my contemporaries in the Navy will be flying airplanes."

Unlike Johnston, Capt. Cunningham said he enjoys flying with both services and "depending on what day of the week it is, I'd either say I wanted to stay with the Navy or go back to the Air Force."

Maj. Shield empathizes with Cunningham's mixed emotions.

"I'd encourage any Air Force aviator to volunteer to fly Navy," he said. "It's a different type of job than what they're used to, but it's an exciting, rewarding tour of duty." ■

Coast Guard Aviation

Meeting the Challenges of the 1980s

Edited by Commander Victor P. Primeaux, USCG

The current decade has tasked Coast Guard Aviation, and its men, women and flying machines, with ever-expanding responsibilities. The Coast Guard's bread and butter mission, search and rescue, continues to be the aviation wing's primary area of responsibility. But, in recent years, patrol requirements have increased — especially in the maritime law enforcement arena — with heavy emphasis on drug interdiction and fisheries management. What follows are highlights from several recent accounts of the professionalism and daring of the Coast Guard personnel who wear Wings of Gold and how their accomplishments add great credit to their motto — *Semper Paratus* — always ready!

Coast Guard Aviation Training Center, Mobile, Ala.

Hurricane Danny had been battering the Gulf Coast and was on the prowl for more victims. Early in the morning of August 15, 1985, the 41-foot ketch *Fine Wine* was foundering helplessly in 20-foot seas driven by winds steady at 50 knots with gusts of much greater intensity. Due to the severe weather, surface assistance could not be dispatched and the Coast Guard Rescue Coordination Center, New Orleans, La., tasked Aviation Training Center, Mobile with rescuing the seven persons aboard the large sailboat.

The responding aircrew, in HH-3F No. 1492, consisted of Lieutenant Ben Thomason, aircraft commander; Lieutenant Don Rigney, copilot; AE2 Bob McInnes, flight mechanic and hoist operator; and AE2 G. J. Dupree, avionicsman. En route to the scene, the helo skirted numerous thunderstorms

and had marginal radio communications due to the intense electrical activity of the hurricane system. About 50 miles from the scene, the helo established radio contact with an Air Force C-130, which was also attempting to locate *Fine Wine*. Joint efforts by both aircraft helped the C-130 locate the sailing vessel after sighting one of its distress flares, and the HH-3F was vectored to the vessel by circumnavigating a number of severe squall lines in very low ceilings and poor visibility.

When the helicopter finally arrived on scene, the crew saw that *Fine Wine's* sails were missing, the vessel was lying broadside in the heavy breaking seas, and all seven crew members were tied into the rigging. The aircrew would spend a demanding one hour and 40 minutes rescuing all persons on board the sailboat.

Even with *Fine Wine's* masts and rigging flailing from side to side as the seas tossed the vessel like a cork, the helo crew was able to get its rescue basket on deck and remove the first of the survivors. During the effort to remove a second crewman, the tending line on the basket fouled in the sailboat's rigging just as a massive wave rolled *Fine Wine* on her port side. Suddenly, the mainmast bounded into sight and, as the vessel began to right itself, two crewmen who had been washed overboard were able to scramble safely onto the main deck with their safety lines still attached to the vessel. The helo quickly moved in and hoisted off a second survivor.

On the third attempt, the helo's rescue basket was badly entangled in the vessel's rigging and was lost. The aircrew then elected to use a rescue sling, or

horse collar, for the remaining hoists. The third crew member was hoisted aboard just as *Fine Wine* was slammed by another wave, knocked down and rolled over in the breaking seas.

The sailboat slowly righted itself just as the rescue sling was lowered to her bow for a fourth survivor. A maverick wave rolled *Fine Wine* onto her side again and she completely disappeared from view, dragging the rescue device and hoist cable under water, also. As the vessel came up again, the helo crew could see two crew members in the water and two tied onto a lifeline near the mainmast. The crewmen on board cut loose the life raft and climbed aboard, along with one of those in the water. They managed to free the fourth crewman entangled in debris from the deck and rigging and bring him aboard the raft. The crew of the HH-3F could see their rescue cable under the keel of *Fine Wine* and the rescue sling attached to the cable floating on the far side of the sailing vessel. After much maneuvering of the helo and working of the hoist cable, the entire system was wrestled from the boat and its rigging.

After examining the stainless steel hoist cable and rescue sling and locating the life raft with all four remaining crewmen aboard, the helo plucked each survivor, separately, into the safety of the helicopter's cabin. The flight back to New Orleans, through thunderstorms and a very low ceiling, went without incident for the seven shaken but thankful survivors from *Fine Wine*.

Coast Guard Air Station, Kodiak, Alaska

The Coast Guard's largest operational air unit — with six HC-130H *Hercules*,

NAVAL AVIATION news

four HH-3F *Pelicans* and three HH-52 *Seaguards*, and staffed with 330 officer and enlisted personnel — is located in a strategic position in the Gulf of Alaska, occupying the site of the old naval station. CGAS Kodiak provides Coast Guard aviation response for most of Alaska and its adjacent waters, from Ketchikan to Attu Island.

This patrol area covers over a million square miles of water and the mission includes monitoring the foreign fishing fleets in the Bering Sea, deep sea squid and high seas salmon industries, plus the

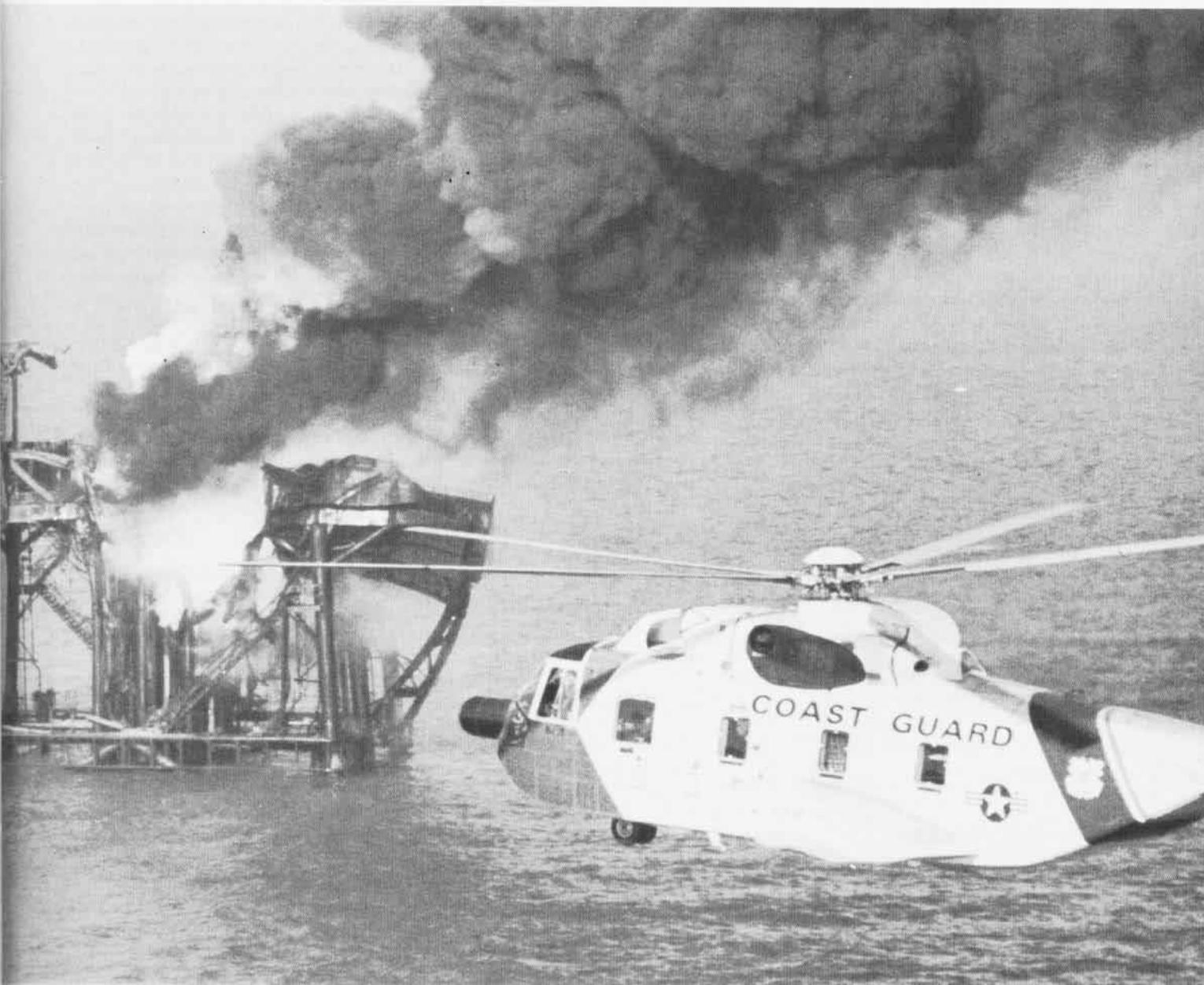
domestic crab, halibut and salmon industries. HH-52As deployed on Coast Guard cutters extend the reach of maritime operations and are the eyes and ears of the cutters for their boarding operations. Recently, the air station was responsible for issuing 81 violations to foreign fishing vessels with over a half million miles flown for law enforcement purposes during one year, including 10,814 sightings.

The air station's HC-130s flew a station record of 6,000 hours in a recent year, which accounted for almost 8,500

foreign fishing vessel sightings — an increase of over 45 percent from the previous year. The half-million miles patrolled required nearly 400 sorties in support of cutters and the National Marine Fisheries Service.

CGAS Kodiak's helicopters also did yeoman service, with HH-3Fs logging over 2,800 hours and HH-52s 1,200. The HH-3F fleet was aggressively used in the law enforcement theater and doubled

An HH-3F Pelican lends assistance while an oil rig blazes in the Gulf of Mexico.



the sightings from the previous year. The HH-3s logged over 16,000 patrol miles for both foreign and domestic fisheries. The HH-52A mission in support of Alaskan Patrol duties averaged over 100 flight hours per month deployed from cutter flight decks, during 245 days under way. The Patrol totaled nearly 25,000 miles and over 1,450 vessel sightings during 194 Enforcement of Laws and Treaties missions. All of this was accomplished in addition to a number of daring rescue missions.

**Coast Guard Air Station,
• Humboldt Bay, Calif.**

Late in the afternoon of August 4, 1985, the joint Coast Guard Air Station/Group command at Humboldt Bay received a report of two people dangerously stranded atop the cliffs on the Mendocino Cape.

A female was trapped on a small ledge atop a 500-foot cliff at a 70-degree slope, with just enough room for a foot and hand hold. And a man had fallen into a small ravine and was feared to be severely injured. Several people 200 feet above at the top of the cliff had attempted unsuccessfully to rescue the rock climbers. One person had made it down to the injured man, located some 100 feet below the outcrop, and was applying first aid.

The HH-52A aircraft commander, Lieutenant Commander Ken Whiting, realized he had insufficient power to hover out-of-ground effect so he landed on the beach to remove his copilot and unnecessary survival equipment. His flight mechanic and hoist operator, AE3 Ginger Barnes, provided voice guidance on the slow ascent back to the site of the injured man. The rotor wash stirred up

lots of dust and debris. This caused the man assisting the injured climber to wave off the helo, because the two on the ground kept sliding down the cliff among the loose rock. Petty Officer Barnes was finally able to guide the pilot into position above the two men, where the rotor wash didn't affect them, and she lowered a trail line with weight bag attached.

On the first attempt to reach the trail line, the assistant lost ground and both he and the victim slid further down the cliff. Lt. Cdr. Whiting maneuvered the HH-52 further up the slope and AE3 Barnes directed the assistant by hand signals to pull the line and litter into his position. With all of the hoist cable payed out, the rescue litter was still far above the two men and Barnes had to "talk" Lt. Cdr. Whiting down the slope, while the helo rotor blades came dangerously close to the cliff. The assistant grabbed the litter and placed the injured person inside. The helo hoisted the patient up and delivered him to a waiting ambulance.

The HH-52 returned to the scene for the woman who was still clinging to the rock outcrop. When the aircraft lowered its rescue basket, blowing dust and an outward sloping cliff wall above the woman made the rescue effort difficult. The copilot, back on board, and AE3 Barnes helped direct Lt. Cdr. Whiting to maneuver the helo about 35 feet above the woman, creating relatively dead air, while managing a few feet of clearance for the rotor blades from the cliff. Barnes pushed the hoist cable to swing the rescue basket into position where the victim could grab it long enough to jump inside for the ride to safety aboard the helo. The HH-52 crew then transported the female rock climber to Fort Bragg for medical examination. AE3 Barnes will receive an Air Medal for her action in this

rescue. She is believed to be the first Coast Guard enlisted, aviation-rated female to receive the award.

Coast Guard Air Station, Miami, Fla.

CGAS Miami has consistently been the busiest Coast Guard air station, from year to year, in the areas of law enforcement and search and rescue.

Aerial law enforcement missions include Haitian Migration Interdiction Operations (HMIO) and drug interdiction. In 1985, the air station was directly involved with over 250 law enforcement cases, seizing hundreds of millions of dollars worth of cocaine, 125 tons of marijuana, and interdicting over 300 illegal aliens. The air intelligence center at the air station coordinated one successful mission that netted a 2,000-pound seizure of cocaine, accomplished with the use of night vision goggles.

The state-of-the-art sensors are also paying off in the new Aireye package for CGAS Miami's HU-25A *Guardian* jets. The Aireye surveillance system consists of side-looking radar, infrared ultraviolet line scan, an aerial reconnaissance camera, and active gated television with laser assist. The sensor operator has real-time and video tape capabilities for the Aireye package, and already the infant system is proving to be a valuable aid in covert surveillance.

During 1985, the air station used its resources in effectively interfacing with three multiagency major law enforcement operations. Each operation lasted from two to three months and the Coast Guard aviation support provided by Miami, in addition to CGAS Clearwater, Fla., was critical. The increase in daily

Left, an HC-130H Hercules transport. Below, the HU-25A *Guardian*, a medium-range, twin-engine jet, was built for the Coast Guard to replace the HU-16 *Albatross*, which was the Coast Guard's search-and-rescue workhorse from 1955 to 1983.



tempo of flight operations for HMIO drug interdiction added from two to four flights to the day-and-night flight schedule. HH-52A helicopters were deployed aboard various Coast Guard cutters for a total 24 three-week underway deployments. HU-25A crews found themselves being staged as far away as NAS Guantanamo Bay, Cuba, for cutter support and law enforcement patrols in the Windward and Mona Passages. The air station logged more than 4,000 hours of flight time in support of law enforcement missions.

To retain its title as one of the busiest air/sea rescue bases in the world, CGAS Miami prosecuted over 785 search and rescue cases, requiring more than 2,100 flight hours by its various aircraft. A total of 518 lives were saved and another 901 persons were directly assisted.

One exceptional case occurred at night when all 72 Haitians were rescued from an overloaded sailboat which struck a reef and broke up. An air station HU-25A dropped a raft and vectored in four station HH-52As, as well as a small boat from a Coast Guard cutter.

To cap off this active year, which encompassed over 8,800 accident-free flight hours, CGAS Miami also began to operate the new HH-65A *Dolphin* twin-jet helo to replace the aging HH-52A.

Coast Guard Air Station, Sitka, Alaska

One day of incredible rescue feats performed by a single helicopter crew from CGAS Sitka is typical of those who

serve in Coast Guard Aviation.

During the afternoon of April 25, 1985, an intense low-pressure system had developed below southeast Alaska and near the Queen Charlotte Islands of Canada. It was racing on hurricane-force winds and in seas up to 45 feet towards the halibut fishing fleet.

The Canadian Coast Guard Rescue Coordination Center (RCC) in Victoria, British Columbia, relayed a request to the U.S. Coast Guard RCC in Juneau, Alaska, to assist a Canadian fishing vessel which was sinking some 210 miles south of Sitka in Hecate Strait. The air station launched HH-3F No. 1434 with a crew consisting of Lieutenant Darrell Folsom, aircraft commander; Lieutenant Junior Grade Siegfried Kirchner, copilot; AM2 John Sherwin, flight mechanic and hoist operator; AE2 James Reavis, avionicsman; HS2 Bonnie Odom, attending corpsman; and Captain Rahman, flight surgeon.

Shortly before arriving on scene, a Canadian aircraft informed the crew of the HH-3F that their assistance would no longer be required. But, while en route, they had received a frantic mayday from another fishing vessel which was sinking with four people on board. The low ceilings and visibility hampered the search effort but, when the helo arrived on scene, its crew witnessed all four men on the vessel being tossed into the frigid waters by a huge wave as they attempted to enter their life raft. All four survivors were hoisted from the sea and delivered safely to awaiting ambulances in Prince Rupert, British Columbia.

Before the day was over, the crew of No. 1434 acted on five more calls for

assistance from vessels in distress. Deteriorating weather, faulty navigational equipment aboard the HH-3F, and a malfunctioning anti-ice system on the copilot's windshield aggravated the search efforts. But the undaunted crew was able to complete each mission and deliver the survivors to safety.

The crew piloted No. 1434 back to Prince Rupert in total darkness and severe turbulence. After landing, Lt. Folsom decided that the crew's 8.5 hours of flight time, in hurricane-force conditions, at low altitude, presented enough of a challenge for one day.

The most familiar form of Naval Aviation is thought to be aircraft carrier operations with air strikes being launched amid hostile combat conditions. But this is only one element of the broad concept of using aircraft at sea to protect U.S. national interests.

While it may not conjure up the awesomeness associated with supercarriers and massive battle groups, Coast Guard Aviation is every bit as fascinating and colorful. In fact a great deal of Naval Aviation's history, development and growth is closely shared by the two services. These include the development of maritime patrol, catapults, aviation training devices, search and rescue techniques and helicopter operations. (See *NA News*, May-June 1983).

The aviation heritage shared by the Navy and Coast Guard is one of cooperation and mutual respect. Regardless of the scale of operations, whenever ships operate at sea with aircraft, Naval Aviation is being employed. ■

Right, an HH-52A answers a distress call. Below, the USCG's newest helicopter, the HH-65A *Dolphin*, is designed for passenger transport, cargo sling operations and patrol and observation in addition to its primary mission of search and rescue.



Conversation with Ace #1

By JO2 Timothy J. Christmann

The reporter wanted to talk to *the expert* in air-to-air combat. So he dialed a number in Lake Worth, Fla.

"Hello," answered retired Captain David McCampbell, the Navy's number one fighter ace who shot down 34 Japanese planes in WW II.

The reporter asked the chipper-sounding 76-year-old if he often reminisced about his war years.

"Of course I reminisce," said McCampbell. "The dates that stand out most in my memory are June 19 and October 24, 1944. Those were the days I had the best shooting during the war."

Indeed. On June 19, 1944, McCampbell, then commander of Air Group 15 aboard USS *Essex* (CV-9), led a handful of *Hellcats* against 80 Japanese aircraft bent on sinking U.S. Task Force 38 in the Philippine Sea. But McCampbell's "Fabled Fifteen" aviators intercepted the enemy force and annihilated it. During the melee, McCampbell distinguished himself by shooting down seven planes.

On October 24, the daring 34-year-

old commander and another *Hellcat* pilot, Ensign Roy Rushing, attacked a formation of 40 enemy fighters. McCampbell skillfully managed to shoot down a record nine Japanese planes before he and Ens. Rushing, who shot down six, left the disorganized enemy group unscathed. The Japanese were so badly mauled, and so disoriented after the attack, that they retreated.

McCampbell's performance in both engagements prompted President Franklin D. Roosevelt to award him the Medal of Honor on January 10, 1945, for his "great personal valor and indomitable spirit of aggression under extremely perilous combat conditions."

The reporter asked McCampbell what he thought about receiving America's most coveted award from one of its most beloved chief executives.

"I thought it was [terrific]," he said. "The first thing Roosevelt said was, 'Aren't you going to introduce me to your mother?' My mother was standing right next to me, so I said yes and made the introduction. She was very proud."

McCampbell said he keeps the medal in a case on a shelf in his den and that he wears it on occasion to "official functions." He said he periodically

stops to admire the award, which is joined by additional honors such as the Navy Cross, Silver Star Medal, Distinguished Flying Cross, Legion of Merit, and many others.

McCampbell won the Navy Cross, America's second highest award, on October 25, 1944. "I led three air groups to the Japanese fleet and we sank four carriers, one cruiser, and two destroyers," he recalled.

The reporter asked McCampbell if he was afraid while flying combat missions.

"No," he said. "At times I was a little

"It was war. I knew that either [the enemy] or I had to lose."

apprehensive about the outcome, but I wasn't afraid."

What was the best way to dispose of the *Zero*, Japan's premier fighter, the reporter wanted to know?

"The *Zero* was a good aircraft, so you

U.S. Navy and Marine Corps Aces

The following information is documented in two publications, authored and published by Frank J. Olynyk — *USN and USMC Credits for the Destruction of Enemy Aircraft in Air-to-Air Combat, World War 2*. Naval aces from WW I and the Korean and Vietnam conflicts are also indicated.

Name	Service	Name	Service	Name	Service
* Aldrich, Donald N.	USMC	Banks, John L.	USN	Berree, Norman R.	USN
Alley, Stuart C., Jr.	USMC	Barackman, Bruce M.	USN	Bertelson, Richard L.	USN
Amsden, Benjamin C.	USN	Bardshar, Frederic A.	USN	** Billo, James D.	USN
Anderson, Alexander L.	USN	Bare, James D.	USN	Bishop, Walter D.	USN
Anderson, Robert H.	USN	Barnard, Lloyd G.	USN	Blackburn, John T.	USN
** Andre, John W.	USMC	Barnes, James M.	USN	** Blair, Foster J.	USN
Axtell, George C.	USMC	Bartol, John W.	USN	Blair, William K.	USN
Bailey, Oscar C.	USN	* Bassett, Edgar R.	USN	Blaydes, Richard B.	USN
Baird, Robert	USMC	Bate, Oscar M., Jr.	USMC	Blyth, Robert L.	USN
* Baker, Douglas	USN	Batten, Hugh N.	USN	Bolduc, Alfred G.	USN
Baker, Robert M.	USMC	Bauer, Harold W.	USMC	Bolt, John F., Jr. (WW II)	USMC
Bakutis, Fred E.	USN	Beatley, Redman C.	USN	Bolt, John F., Jr. (Korea)	USMC
Balch, Donald L.	USMC	Beaudry, Paul H.N.	USN	Bonneau, William J.	USN
Baldwin, Frank B.	USMC	Beebe, Marshall U.	USN	Bordelon, Guy P. (Korea)	USN
Balsiger, Henry W.	USN	Berkheimer, Jack S.	USN	Borley, Clarence A.	USN
				* Boyington, Gregory	USMC
				Boyle, Gerald F.	USN
				Brassfield, Arthur J.	USN
				Braun, Richard L.	USMC
				Brewer, Charles W.	USN
				Bridges, Johnnie J.	USNR
				Bright, Mark K.	USN



McCampbell in an F6F Hellcat in 1944.

had to take advantage of every opportunity," he replied. "The best way was to get on his tail and let him have it. The only thing we really learned early in the war was not to shoot at the pilot or the engine but fire at the wing root. That was where the gasoline was. Most of the Japanese planes we shot down, including the *Zero*, blew up right in front of us when we hit 'em in the wing root."

McCampbell recalled that all 34 enemy planes that he destroyed in aerial engagements were terminated this way.

"I don't think any of the 34 pilots survived," he added. "None of them bailed out."

The reporter asked if this bothered him.

"No," he said. "It didn't bother me then and it doesn't bother me now. I wasn't trying to shoot down a [human being], I was trying to shoot down a plane," he added. "This [reasoning] helped me sleep better at night, and my judgment as a fighter pilot was never affected. It was war. I knew that either [the enemy] or I had to lose."

Despite his impressive combat record, McCampbell "respected" the capabilities of Japanese aviators even late in the war when the enemy had few quality pilots left to fight. "I ran into good Japanese pilots and some bad ones...but the problem was that you never knew which one you were going to face," he said. "I had to run on two occasions from two good enemy pilots because they got me in a disadvantageous position. I had enough fuel and ammunition at the time, but decided to run and fight another day."

McCampbell said that the *Hellcat* was the best plane he ever flew during the war. "It wasn't as maneuverable as most of the Japanese planes because it was heavier," he remarked, "but it could take more punishment, had self-sealing gas tanks, and carried six .50 caliber machine guns with 2,400 rounds of ammunition. Besides this, it was easy and fun to fly."

McCampbell graduated from the Naval Academy in June 1933. But the Depression had forced Congress to accept few active-duty commissions, so he and a majority of his graduating class were sent to the U.S. Naval Reserve. He was called back on active duty a year later.

McCampbell earned his wings in 1938 and accumulated more than 8,000 flight hours by the time he retired in 1964. As a Naval Aviator, he flew everything from PBYs to F11Fs and served as executive officer of USS *Franklin D. Roosevelt* (CVE-42) and commanding officer of USS *Bon Homme Richard* (CV-31).

McCampbell told the reporter that he had been interested in aviation ever since his grandfather took him for a ride in a WW I biplane in 1919. But his illustrious flying career may never have come to fruition had it been up to doctors at the Naval Academy who twice declared him unfit for aviation training because of "faulty eyesight" and "low blood pressure."

"They obviously made a big mistake," said McCampbell, who fought to have the decision overturned.

And, speaking of misjudgments, the Navy's top ace also remembered that an admiral once told him he'd never make a good Naval Aviator.

He made a big mistake, too. ■

Diamond Anniversary 75th Year of Naval Aviation

Name	Service	Name	Service	Name	Service
Brocato, Samuel J.	USN	Chambers, Cyrus J.	USN	Craig, Clement M.	USN
Brown, Carl A., Jr.	USN	Champion, Henry K.	USN	Cronin, Donald F.	USN
Brown, William P., Jr.	USMC	Chandler, Creighton	USMC	Crosby, John T.	USN
Bruneau, Paul J.	USN	Check, Leonard J.	USN	Crowe, William E.	USMC
Brunmier, Carland E.	USN	Chenoweth, Oscar I., Jr.	USN	Cunningham, Daniel G.	USN
Bryce, James A.	USN	Clark, Lawrence A.	USN	Cunningham, Randall H. (Vietnam)	USN
Buchanan, Robert L.	USN	Clark, Robert A.	USN	Cupp, James N.	USMC
Buie, Paul D.	USN	Clarke, Walter E.	USN	Dahms, Kenneth J.	USN
Burckhalter, William E.	USN	Clements, Robert E.	USN	Davenport, Merl W.	USN
Burley, Franklin N.	USN	Clements, Donald C.	USN	Davidson, George H.	USN
Burnett, Roy O., Jr.	USN	Coats, Robert C.	USN	Davies, Clarence E.	USN
Burriss, Howard M.	USN	Coleman, Thaddeus T., Jr.	USN	Davis, Leonard K.	USMC
* Bushner, Frances X.	USN	Coleman, William M.	USN	Davis, Robert H.	USN
* Byrnes, Matthew S., Jr.	USN	Collins, William M., Jr.	USN	Dean, William A., Jr.	USN
Cain, James B.	USN	Conant, Arthur R.	USMC	Dear, John W., Jr.	USN
Carey, Henry A., Jr.	USN	Conant, Edwin S.	USN	De Blanc, Jefferson J.	USMC
Carl, Marion E.	USMC	Conger, Jack E.	USMC	De Cew, Leslie	USN
Carlson, Robert B.	USN	Conroy, Thomas J.	USN	** Delong, Philip C.	USMC
Carlton, William A.	USMC	Copeland, William E.	USN	Denman, Anthony J.	USN
Carmichael, Daniel A., Jr.	USN	Cordray, Paul	USN	Denoff, Reuben H.	USN
Carr, George R.	USN	Cormier, Richard L.	USN	Devine, Richard O.	USN
Carroll, Charles H.	USN	* Cornell, Leland B.	USN	Dewing, Lawrence A.	USN
Case, William N.	USMC	Cowger, Richard D.	USN	Dibb, Robert A.M.	USN
Caswell, Dean	USMC	Cozzens, Melvin	USN	Dillard, Joseph V.	USMC

Name	Service	Name	Service	Name	Service
Dillow, Eugene	USMC	Griffin, Richard J.	USN	Lake, Kenneth B.	USN
Dobbin, John F.	USMC	Gustafson, Harlan I.	USN	* * * Lamb, William E.	USN
Donahue, Archie G.	USMC	Gutt, Fred E.	USMC	Lamoreaux, William E.	USN
Doner, Landis E.	USN	Haas, Walter A.	USN	Laney, Willis G.	USN
Dorroh, Jefferson D.	USMC	Haberman, Roger A.	USMC	Langdon, Ned W.	USN
Doyle, Cecil J.	USMC	Hacking, Albert E., Jr.	USMC	Leonard, William N.	USN
Drake, Charles W.	USMC	Hadden, Mayo A., Jr.	USN	Leppia, John A.	USN
Driscoll, Daniel B. J.	USN	Hall, Sheldon O.	USMC	Lerch, Alfred	USN
Driscoll, William P. (Vietnam)	USN	Hamblin, Lewis R.	USN	Lillie, Hugh D.	USN
Drury, Frank C.	USMC	Hamilton, Henry B.	USMC	Lindsay, Elvin L.	USN
Drury, Paul E.	USN	Hamilton, Robert M.	USN	Loesch, Gregory K.	USMC
Duffy, James E.	USN	Hanks, Eugene R.	USN	Long, Herbert H.	USMC
Duncan, George C.	USN	Hansen, Herman, Jr.	USMC	Lundin, Walter A.	USN
Duncan, Robert W.	USN	* Hanson, Robert M.	USMC	Lynch, Joseph P.	USMC
Dungan, Fred L.	USN	Hardy, Willis E.	USN	Maas, John B.	USMC
Dunn, Bernard	USN	Hargreaves, Everett C.	USN	Mabarry, Lewin A.	USN
Durnford, Dewey F.	USMC	Harman, Walter R.	USN	Magee, Christopher L.	USMC
Eastmond, Richard T.	USN	* Harris, Cecil E.	USN	Mahe, Thomas R., Jr.	USMC
Eberts, Byron A.	USN	Harris, Leroy E.	USN	Mallory, Charles M.	USN
* Eccles, William G.	USN	Harris, Thomas S.	USN	Mankin, Lee P., Jr.	USN
Eckard, Bert	USN	Harris, William H., Jr.	USN	Mann, Thomas H., Jr.	USMC
Eder, William E.	USN	Haverland, Charles H., Jr.	USN	Manson, Armand G.	USN
Edwards, William C., Jr.	USN	Hawkins, Arthur R.	USN	March, Harry A., Jr.	USN
Elliott, Ralph E., Jr.	USN	Hayde, Frank R.	USN	Marontate, William P.	USMC
Elwood, Hugh M.	USMC	Hearrell, Frank C., Jr.	USN	Martin, Albert E., Jr.	USN
Enman, Anthony J.	USN	Heath, Horace W.	USN	Masoner, William J., Jr.	USN
Erickson, Lyle A.	USN	Hedrick, Roger R.	USN	Maxwell, William R.	USN
Evenson, Eric A.	USN	Heinzen, Lloyd P.	USN	May, Richard H.	USN
Everton, Loren D.	USMC	Henderson, Paul M., Jr.	USN	May, Earl, Jr.	USN
Fair, John W.	USN	Henry, William E.	USN	Mazzocco, Michele A.	USN
Farmer, Charles D.	USN	Hernan, Edwin J., Jr.	USMC	* McCampbell, David	USN
Farnsworth, Robert A., Jr.	USN	Hibbard, Samuel B.	USN	McCartney, Henry A.	USMC
Farrell, William	USMC	Hildbrandt, Carlos K.	USN	McClelland, Thomas G.	USN
Fash, Robert P.	USN	Hill, Harry E.	USN	McClure, Edgar B.	USN
Fecke, Alfred J.	USN	Hills, Hollis H.	USN	McClurg, Robert W.	USMC
Feightner, Edward L.	USN	Hippe, Kenneth G.	USN	McCormick, William A.	USN
Ferko, Leo M.	USN	Hoag, John B.	USN	McCuddin, Leo B.	USN
Finn, Howard J.	USMC	Hoel, Ronald W.	USN	McCuskey, Elbert S.	USN
Fisher, Don H.	USMC	Hollowell, George L.	USMC	McGinty, Selva E.	USMC
* Flatley, James H., Jr.	USN	Hood, William L., Jr.	USMC	McGowan, Edward C.	USN
Fleming, Francis M.	USN	Houck, Herbert N.	USN	McGraw, Joseph D.	USN
Fleming, Patrick D.	USN	Hudson, Howard R.	USN	McKinley, Donald J.	USN
Flinn, Kenneth A.	USN	Huffman, Charles W., Jr.	USN	McLachlin, William W.	USN
Foltz, Frank E.	USN	Humphrey, Robert J.	USN	McManus, John	USMC
Foltz, Ralph E.	USN	Hundley, John C.	USMC	McPherson, Donald M.	USN
Fontana, Paul J.	USMC	Hurst, Robert	USN	McWhorter, Hamilton, III	USN
Ford, Kenneth M.	USMC	Ingalls, David S. (WW I)	USN	Mehle, Roger W.	USN
Formanek, George, Jr.	USN	Ireland, Julius W.	USMC	Menard, Louis A., Jr.	USN
Forrer, Samuel W.	USN	Jaques, Bruce D.	USN	Mencin, Adolph	USN
* Foss, Joseph J.	USMC	Jennings, Robert H., Jr.	USN	* Merritt, Robert S.	USN
Foster, Carl C.	USN	Jensen, Hayden M.	USN	Michaelis, Frederick H.	USN
Fowler, Richard E., Jr.	USN	Jensen, Alvin J.	USMC	Miller, Johnnie G.	USN
Franger, Marvin J.	USN	Johannsen, Delmar K.	USN	Milton, Charles B.	USN
Franks, John M.	USN	Johnson, Byron M.	USN	Mims, Robert	USN
Fraser, Robert B.	USMC	Johnson, Wallace R.	USN	Mitchell, Harris E.	USN
Frazier, Kenneth D.	USMC	Johnston, John M.	USN	Mitchell, Henry E., Jr.	USN
Freeman, Doris C.	USN	Jones, Charles D.	USMC	Mollard, Norman W., Jr.	USN
Freeman, William B.	USMC	Jones, James M.	USN	Mollenhauer, Arthur P.	USN
French, James B.	USN	Kaelin, Joseph	USN	Montarper, John R.	USN
Frendberg, Alfred L.	USN	Kane, William R.	USN	Moranville, Horace B.	USN
Funk, Harold N.	USN	Keith, Leroy W. J.	USN	Morgan, John L., Jr.	USMC
Gabriel, Franklin T.	USN	Kendrick, Charles	USMC	Morris, Bert D., Jr.	USN
Galer, Robert E.	USMC	* Kepford, Ira C.	USN	Moseley, William C.	USN
Galt, Dwight B., Jr.	USN	Kerr, Leslie H., Jr.	USN	Mulcahy, Douglas W.	USN
Galvin, John R.	USN	Kidwell, Robert J.	USN	Mullen, Paul A.	USMC
Gayler, Noel A. M.	USN	Kincaid, Robert A.	USN	Munsen, Arthur H.	USN
Gildea, John T.	USN	Kingston, William J., Jr.	USN	Murray, Robert E.	USN
Gile, Clement D.	USN	Kinsella, James J.	USN	Narr, Joseph L.	USMC
Gillespie, Roy F.	USN	Kirk, George N.	USN	Nelson, Robert J.	USN
Godson, Lindley W.	USN	Kirkpatrick, Floyd C.	USMC	Nelson, Robert K.	USN
Gordon, Donald	USN	Kirkwood, Philip L.	USN	Noble, Myrvin E.	USN
Graham, Vernon E.	USN	Knight, William M.	USN	* Nooy, Cornelius N.	USN
Gray, James S., Jr.	USN	Kostik, William J.	USN	Novak, Marvin R.	USN
Gray, John F.	USN	Kunz, Charles M.	USMC	Null, Cleveland L.	USN
Gray, Lester E., Jr.	USN	Laird, Dean S.	USN	O'Hare, Edward H.	USN
Gregory, Hayden A.	USN	Laird, Wayne W.	USMC	O'Keefe, Jeremiah J.	USMC

Name	Service	Name	Service	Name	Service
O'Mara, Paul, Jr.	USN	Shaw, Edward O.	USMC	Troup, Franklin W.	USN
Olander, Edwin L.	USMC	Sherrill, Hugh V.	USN	Trowbridge, Eugene A.	USMC
Olsen, Austin L.	USN	Shields, Charles A.	USN	Traux, Myron M.	USN
Orth, John	USN	Shirley, James A.	USN	Turner, Charles H.	USN
Ostrom, Charles H.	USN	Shuman, Perry L.	USMC	Turner, Edward B.	USN
Outlaw, Edward C.	USN	Sigler, Wallace E.	USMC	Twelves, Wendell V.	USN
Overend, Edmund F.	USMC	Silber, Sam L.	USN	Ude, Vernon R.	USN
Overton, Edward W., Jr.	USN	Singer, Arthur, Jr.	USN	Umphres, Donald E.	USN
Owen, Donald C.	USMC	Sipes, Lester H.	USN	* Valencia, Eugene A.	USN
Owen, Edward M.	USN	Sistrunk, Frank	USN	Valentine, Herbert J.	USMC
Owens, Robert G., Jr.	USMC	Skon, Warren A.	USN	Van Der Linden, Peter J., Jr.	USN
Parrish, Elbert W.	USN	Slack, Albert C.	USN	Van Dyke, Rudolph D., Jr.	USN
Paskoski, Joseph J.	USN	Smith, Armistead B., Jr.	USN	Van Haren, Arthur, Jr.	USN
Payne, Frederick R., Jr.	USMC	Smith, Carl E.	USN	Vedder, Milton N.	USMC
Pearce, James L.	USN	Smith, Clinton L.	USN	Vejtasa, Stanley W.	USN
Percy, James G.	USMC	Smith, Daniel F., Jr.	USN	Vineyard, Merriwell W.	USN
Philips, David P., III	USN	* Smith, John L.	USMC	Vita, Harold E.	USN
Phillips, Edward A.	USN	Smith, John M.	USN	Voris, Roy M.	USN
Phillips, Hyde	USMC	Smith, Kenneth D.	USN	Vorse, Albert O., Jr.	USN
Picken, Harvey P.	USN	Smith, Nicholas J., III	USN	* Vraciu, Alexander	USN
Pierce, Francis E., Jr.	USMC	Snider, William N.	USMC	Wade, Robert	USMC
Pigman, George W., Jr.	USN	Sonner, Irl V., Jr.	USN	* Walsh, Kenneth A.	USMC
Pittman, Jack, Jr.	USMC	Southerland, James J., III	USN	Ward, Lyttleton T.	USN
Plant, Claude W., Jr.	USN	* Spears, Harold L.	USMC	Warner, Arthur T.	USMC
Pond, Zenneth A.	USMC	Spitler, Clyde P.	USN	Watson, Jack O.	USN
Pool, Tilman E.	USN	Stanbook, Richard E.	USN	Watts, Charles E.	USN
Pope, Albert J.	USN	Stanley, Gordon A.	USN	Webb, Wilbur B.	USN
Porter, Robert B.	USMC	Starkes, Carlton B.	USN	Weissenberger, Gregory J.	USMC
Poske, George H.	USMC	Stebbins, Edgar E.	USN	Wells, Albert P.	USMC
Post, Nathan T., Jr.	USMC	Stewart, James S.	USN	Wesolowski, John M.	USN
Pound, Ralston M., Jr.	USN	* Stimpson, Charles R.	USN	West, Robert G.	USN
Powell, Ernest A.	USMC	Stokes, John D.	USN	White, Henry S.	USN
Prater, Luther D., Jr.	USN	Stone, Carl V.	USN	Williams, Bruce W.	USN
Presley, Frank H.	USMC	Stout, Robert F.	USMC	Williams, Gerard M.H.	USMC
Pritchard, Melvin M.	USN	Strane, John R.	USN	Wilson, Robert C.	USN
Quiel, Norwald R.	USN	Strange, Johnnie C.	USN	Winfield, Murray	USN
* Ramlo, Orvin H.	USMC	Streig, Frederick J.	USN	Winston, Robert A.	USN
Reber, James V., Jr.	USN	Sturdevant, Harvey W.	USN	Winters, Theodore H., Jr.	USN
Redmond, Eugene D.	USN	Sutherland, John F.	USN	Wirth, John L.	USN
Register, Francis R.	USN	* Swett, James E.	USMC	Wolf, John T.	USN
Rehm, Dan R., Jr.	USN	Swinburne, Harry W., Jr.	USN	Wood, Walter A.	USN
Reidy, Thomas H.	USN	Swope, James S.	USN	Wooley, Millard J.	USN
Reinburg, Joseph H.	USMC	Symmes, John C.C.	USN	Woolverton, Robert C.	USN
Reiserer, Russell L.	USN	Synar, Stanley T.	USMC	Wordell, Malcolm T.	USN
Rennemo, Thomas J.	USN	Taylor, Ray A., Jr.	USN	Wrenn, George L.	USN
Reulet, Joseph E.	USN	Taylor, Will W.	USN	Yeremain, Harold	USN
Revel, Glenn M.	USN	Terrill, Francis A.	USMC	Yost, Donald K.	USMC
Rhodes, Thomas W.	USN	Thach, John S.	USN	Yunck, Michael R.	USMC
Rieger, Vincent A.	USN	Thelen, Robert H.	USN	Zaeske, Earling W.	USN
Rigg, James F.	USN	Thomas, Franklin C., Jr.	USMC	Zink, John A.	USN
Roach, Thomas D.	USN	Thomas, Robert F.	USN		
Robbins, Joe D.	USN	* Thomas, Wilbur J.	USMC		
Robinson, Leroy W.	USN	Toasperm, Edward W.	USN		
Robinson, Ross F.	USN	Topliff, John W.	USN		
Rosen, Ralph J.	USN	Torkelson, Ross E.	USN		
Ross, Robert P.	USN	Townsend, Eugene P.	USN		
Rossi, Herman J., Jr.	USN	Tracey, Fredrick W.	USN		
Ruhsam, John W.	USMC				
Runyon, Donald E.	USN				
Rushing, Roy W.	USN				
Sapp, Donald H.	USMC				
Sargent, John J., Jr.	USN				
Savage, Jimmie E.	USN				
Scales, Harrell H.	USN				
Scarborough, Hartwell V., Jr.	USMC				
Schecter, Gordon E.	USN				
Schell, John L.	USN				
Scherer, Raymond F.	USMC				
Schiller, James E.	USN				
Schneider, Frank E.	USN				
Seckel, Albert, Jr.	USN				
See, Robert B.	USMC				
Segal, Harold E.	USMC				
Self, Larry R.	USN				
Shackford, Robert W.	USN				
Shands, Courtney	USN				

* Aces with 15 kills or more.
 ** Unconfirmed as aces in WW II.
 *** Ace status acquired from combined kills of WW II and Korea.

Diamond 75th Year of Anniversary Naval Aviation



David S. Ingalls, the first ace in U.S. Naval Aviation, shown here in the cockpit of his special Curtiss XF8C-7 while he was Assistant Secretary of the Navy for Air.

Bob Hope, America's best-loved comedian, will become Honorary Naval Aviator No. 17 on May 8 during "Magic Week" in Pensacola, Fla., a celebration commemorating the 75th Anniversary of Naval Aviation.

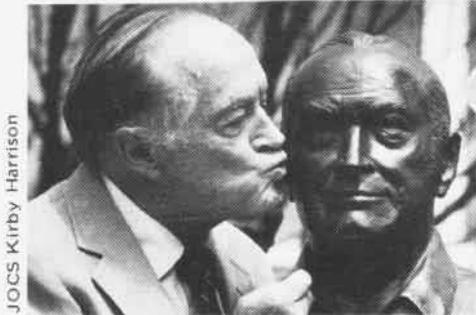
Hope is numbered among the top 10 most admired men of the century and is known as "Mr. Humanitarian," the "King of Comedy" and the "Chairman of American Humor." But the moniker that encompasses the whole man is "Mr. Entertainment."

During this Diamond Anniversary Year, it is fitting that this man, who is older than Naval Aviation itself, be honored for his contributions. Hope has continually lifted the spirit of American servicemen since 1941 when he did his first radio show at March Field (later Air Force Base), Calif. Throughout WW II and the Korean conflict, he traveled more than one million miles entertaining more than 10 million troops. He appeared at



PH1 W. R. Hoster

Bob Hope and Miss Jennifer Hosten, "Miss World of 1971," take part in the Bob Hope Show aboard USS John F. Kennedy (CV-67) in December 1970. Left, Mr. Entertainment plants a kiss on his bust, which was unveiled at the dedication of the Bob Hope USO Building in Washington, D.C., on May 30, 1985.



JOCS Kirby Harrison

almost every American military base in the world and visited many of them annually. It is doubtful that anyone in show business has ever made a more endearing hit than Hope did the moment he stepped before homesick American servicemen and quipped, "Hi, fellow tourists!"

On completion of his 22nd overseas show in 1972, Hope informed the world that *this* was his last Christmas show. But, during Christmas 1973, he was again entertaining in veterans hospitals and has continued this tradition each year. In 1983, he appeared in Beirut, Lebanon, before American troops stationed there as part of the multinational peacekeeping force.

Bob Hope is perhaps America's most visible patriot, although he was born in Eltham, England, on May 29, 1903. Growing up in Cleveland, Ohio, he attended public schools and later worked as a dance instructor, amateur boxer and a newspaper reporter before entering show business. He made his Broadway

MR. ENTERTAINMENT: HONORARY NAVAL AVIATOR No. 17

debut in 1927 in *Sidewalks of New York*. He married Dolores Reade in 1934, and they have four children and four grandchildren.

President John F. Kennedy presented him with one of the nation's highest awards, the Congressional Gold Medal, and called Hope "America's most prized ambassador of good will throughout the world." He has received over 1,000 awards and citations for his humanitarian and professional efforts and 49 honorary doctorate degrees, at last count. He has written and published eight books, but he never finished college.

Mention of his academic degrees will prompt Hope to remind everyone that they are *honorary* doctorates. When asked to speak at commencement exercises, Dr. Hope does not take the task lightly. Many hours are spent in

preparation of a speech which is always topical and "on target" with a blend of inspirational commentary and one-liners. As one graduate was heard to comment, "Hope not only leaves them laughing but he leaves them thinking."

Bob Hope has entertained heads of state throughout the world, including command performances for Britain's royal family. He has appeared before nine presidents and shared the dais with hundreds of government officials through the years. In spite of his exhausting schedule, Hope gives his time and talent to an average of two benefit performances per week.

John Steinbeck once said of Hope, "This man drives himself and is driven. It is impossible to see how he can do so much, can cover so much ground, can work so hard and be so effective. There's a man. There is really a man!" ■

Boyne, Walter J. *Phantom in Combat*. Jane's Publishing Company, England, and Smithsonian Institution Press, Washington, D.C. 1985. 176 pages. Illustrated. \$22.50.

Although the McDonnell Douglas F-4 *Phantom II* is approaching the end of its service life with the U.S. Navy and Marine Corps, it will probably continue to operate in the U.S. Air Force until the year 2000. The aircraft has flown in combat in Southeast Asia, South Asia and the Middle East. It has provided a protective umbrella for North America, the United Kingdom, Europe, the Middle East and the South Atlantic. The aircraft has had many books and articles written about it, but this effort achieves the difficult combination of a design and operational history.

The book begins with a quick introduction to the aircraft and its role in Vietnam, then switches to a review of the company history and McDonnell's early successes with such planes as the FH-1 and F-101. The author next turns his attention to the design and career of the *Phantom II*. It is here that the book really gives the reader his money's worth with fascinating accounts from the men who became aces in the F-4. While the experiences of the Navy's aces — Cunningham and Driscoll — are well known, the equally impressive accomplishments of the Air Force's aces — Ritchie, DeBellevue and Feinstein — are less familiar to Navy readers. It is not generally appreciated that the Air Force crews scored more multiple kills during individual missions.

Closing chapters of the book cover the F-4's use by foreign air forces and record-setting flights. There is also a series of appendices detailing USAF and USN MiG kills in Vietnam and characteristics of *Phantom* variants.

Phantom in Combat belongs in the libraries of those interested in Vietnam, post-Korea military aviation and, of course, the large group of folks who consider themselves "Phantom Phanatics."

Kasulka, Duane. *USN Aircraft Carrier Air Units, Volume 2, 1957-1963*. Illustrated by Don Greer. Squadron/Signal Publications, 1115 Crowley Dr., Carrollton, Texas 75011. 1985. 64 pages. \$7.95.

The six-year period covered by this volume echoes the decades of the 1920s and 1930s as those of colorfully marked Navy aircraft. They, like the period preceding WW II, were times of introduction of new aircraft types — such as the F4D, F3H, F11F and A4D — which remained in service only a few years and were quickly retired, or perhaps spent a few more years flying with the reserves. New carriers of the huge *Forrestal* class made their appearance and these new ships needed new aircraft. The F4H *Phantom II* joined the fleet with VF-74 in July 1961.

This book is a fine effort, replete with rare photos, as well as 15 pages of color profiles and squadron insignia covering every aircraft in use during this time. Charts detailing wing administrative structure and carrier air wing lineage provide useful information as well. And the price makes this book an extremely good value.

The International Countermeasures Handbook, 11th edition, 1986. EW Communications, Inc., 1170 E. Meadow Drive, Palo Alto, Calif. 94303-4275. 444 pp. Illustrated. Indexed. Occasionally, a book appears which is totally dedicated to the involved professional, and this is such a publication. The buff and perhaps the war-gamer can use its contents for points of interest or accuracy, but it is the squadron intelligence officer who will find the most use within the pages.

The book is a knowledgeably written essay on the 1982 Falklands conflict and the various roles each phase of air warfare played in the conduct of the war. A partial list of subjects includes electronic warfare systems of the West, guided missiles of the world, and Soviet weapons and electronics, all of which are supported with photographs of the systems and hardware described as well as the technical specifications. The sections on Soviet systems will aid the intel officer in the preparation of briefings.

Various specific squadrons, such as VAQ, VS, VP and HS organizations, will find this handbook a "must."

Messimer, Dwight. *In the Hands of Fate: The Story of Patrol Wing Ten, 8 December 1941-11 May 1942*. U.S. Naval Institute, Annapolis, Md. 21402. 1985. 352 pp. Illustrated. \$19.95.

The Naval Institute has been responsible for several recent books which cover a heretofore little-known period of WW II, namely the dark months immediately following the Pearl Harbor raid by the Japanese on December 7, 1941. The USNI Press has begun to set matters straight with their publication of such books as *The First Team* and *The Pawns of War*, reviews of which have appeared in prior issues of this column.

In the Hands of Fate continues the momentum and has an incredible story to tell. Patrol Wing 10 found itself caught in the mayhem of the Japanese advance following Pearl Harbor, and the idyllic life of duty in the Philippines was shattered as the men of the PBY squadrons literally fought for their lives. In slow, underarmed flying boats, the men of the wing made some of the first offensive patrols against the Japanese — and took some of the first casualties.

Personalities abound in Messimer's text, including two future four-star admirals, Moorer and Hyland. It is not just a story of gold braid and khaki. The enlisted story is told here perhaps in greater detail than in many other histories for it was the enlisted personnel who made up the bulk of the PBY crew, serving from radioman to gunner and even to enlisted pilot.

Supported with photographs and maps, this book is a fine effort and fills a gap in the story of WW II.

1986 Blue Angels Schedule

May

3-4 MCAS EI Toro, CA
 10-11 NAS Pensacola, FL
 16-17 NAF Washington, DC
 19 Naval Academy, MD
 24-25 Carswell AFB, TX
 31 Knoxville, TN

June

1 Knoxville, TN
 7-8 MCAS Cherry Point, NC
 14-15 Kalamazoo, MI
 21-22 Fargo, ND
 28-29 Mount Comfort, IN

July

4 New York, NY
 6 Peoria, IL
 12-13 Otis AFB, MA
 19 NAS Pensacola, FL
 26-27 NAS Miramar, CA

August

2-3 Seattle, WA
 9-10 Abbotsford, BC, Canada
 16-17 Offutt AFB, NE
 23-24 Schenectady, NY
 30-31 Cleveland, OH

September

1 Cleveland, OH
 6-7 NAS Atlanta, GA
 13-14 Grand Junction, CO
 20-21 NAS Oceana, VA
 27-28 El Paso, TX

October

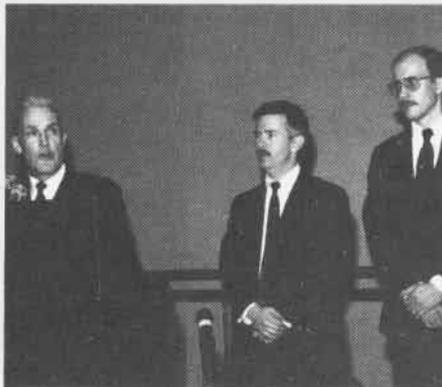
4-5 Little Rock AFB, AR
 10-11 San Francisco, CA
 18-19 NAS Point Mugu, CA
 25-26 Opa Locka, FL
 31 NAS New Orleans, LA

November

1 NAS New Orleans, LA

Awards

JO2 Timothy J. Christmann



In a recent ceremony at the National Air and Space Museum, Lt. William G. Armstrong, Jr., a Naval Reservist attached to the Naval Reserve Office of Information Det 102, New York, and his copilot Michael C. Emich were awarded the National Aeronautic Association Certificate of Record by VAdm. Edward H. Martin, DCNO(Air Warfare). They received the award for breaking a 58-year-old national distance record in a Navy surplus gas balloon. The 515-mile flight from Akron, Ohio, to Northboro, Mass., took place on October 26-27, 1985, in a 19,000-cubic-foot hydrogen gas balloon.

In January, the U.S. National Park Service designated USS *Intrepid* — now the Sea-Air-Space Museum — a national historic landmark. The ceremonies were held aboard the carrier, which is berthed on the Hudson River in New York City. Senator Alfonse D'Amato presented the Intrepid Museum Foundation's chairman, Zachary Fisher, with a bronze plaque in recognition of *Intrepid's* role in the WW II Pacific campaign.

Six thousand dollars is no small sum, especially to AMCS Merlin H. Morgan of HC-4. During ceremonies held last November, Morgan received a check for that amount for a beneficial suggestion he submitted while assigned as the AIMD Airframes Division Chief, NAS North Island, Calif.

Working with a variety of aircraft at North Island, Senior Chief Morgan recognized numerous areas needing im-

provement. One problem was the S-3A *Viking* engine intake screens, used to prevent foreign object damage during high power turn-ups. Originally purchased from General Electric more than a decade ago, the screens had become ill-fitting and in many cases unusable. Repair of the screens had not been attempted due to scarce resources.

After consulting with GE personnel and obtaining the blueprints and fabrication process for the intake screens, Morgan began an extensive repair program. Using stock materials, he designed and manufactured several dies for the requisite tools and fittings. During off-duty hours and weekends, the senior chief reconstructed and in some cases completely refabricated numerous engine intake screens, as well as training many personnel in the repair process. Through his ingenuity and perseverance, Morgan's design and retrofit procedures resulted in a first-year savings of approximately \$545,640 for the Navy.

Two aviation ordnancemen were recently awarded the honor of Sailor of the Year at two different commands — AO1 Kenneth M. Kelly, NAS Willow Grove, Pa., and AO1 C. Dale Jones, VP-68, NAF Washington, D.C. Both TAR petty officers were chosen for their professional and military bearing and their positive attitudes toward achieving the Navy's goals for preparedness.

Records

Delivering a product efficiently and safely has been the way of life for the staff at NAF Mildenhall, England, as evidenced by a record 26 years of accident-free flying. In 1984, the command received a CNO Safety Citation marking a quarter-century of outstanding aviation safety.

Serving U.S. naval logistics requirements in the British Isles and Northern Europe since 1953, the aviation unit has carried numerous designations and flown

a wide array of utility and transport aircraft, including the R4D, C-45, C-1, C-2, C-117, C-118 and C-131. Presently, the command utilizes two UC-12Bs to transport high-priority cargo, registered mail, etc., with a "safety-first" approach to all missions.

The following units marked accident-free flight time: ASW Directorate, NATC, 14,500 hours; HMA-169, 30,000 hours; HMA-369, 20,000 hours; HMM-362, 10,500 hours; HMT-301, 30,000 hours and 11 years; HSL-37, 13,000 hours and two years; HT-18, 50,000 hours and five years; NAS Bermuda, 5,300 hours and eight years; Rotary Wing Directorate, NATC, seven years; VA-174, 25,000 hours; VA-205, 40,000 hours and 11 years; VA-304, 40,000 hours and 11 years; VAW-114, 25,880 hours and 15 years; VAW-121, 35,184 hours and 19 years; VF-126, 27,000 hours and five years; VMFA-333, 22,000 hours and six years; VMFAT-101, 8,000 hours and one year; VMFP-3, 30,000 hours; VP-46, 170,000 hours and 22 years; VQ-2, 70,000 hours and 10 years; VQ-4, 157,000 hours and 14 years; VS-38, 12 years; and VT-24, 83,000 hours and six years.

Rescue

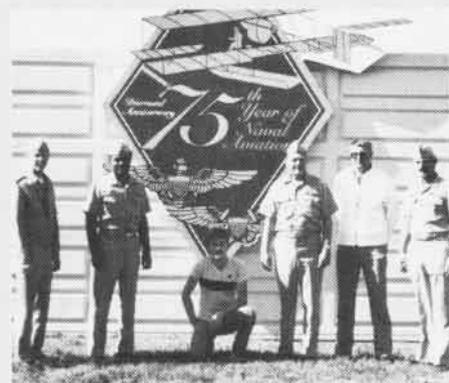
While conducting routine operations in the Indian Ocean, USS *Kirk* (FF-1087) crew members responded to a distress call that an A-7 from USS *Midway* had gone down. While *Kirk* steamed towards the

downed plane, embarked HSL-33 Det 3's LAMPS helicopter, piloted by Lts. R. Kikla and J. Clark, was launched to make the rescue. With assistance from *Midway* aircraft and a P-3C from VP-50, the helo crew found the A-7's pilot floating in a life craft.

Rescue swimmer AW1 G. Permann was lowered from the helo to assist. Due to rough seas and the pilot's injuries, AW2 D. Davis had to direct the helo pilots in positioning the helo, while operating the hoist slowly to retrieve the pilot and swimmer. Once he was aboard *Kirk*, a doctor was sent from *Midway* to examine the pilot who fortunately had only minor injuries. The rapid response, superb coordination, and professionalism displayed by the crews ensured the successful completion of the mission despite adverse weather conditions.

Et cetera

One more aircraft heads for the boneyard. The T-39D *Sabreliner* recently flew its last flight as a training aircraft for the Navy. VT-86, NAS Pensacola, Fla., marked the end of an era in Naval Aviation when it retired the last T-39 from service on January 13, 1986. The next generation of Naval Flight Officers will all train on the T-47A *Citation II*. Six of the eight remaining Navy *Sabreliners* will be stored at Davis-Monthan AFB, Ariz., and the other two will become VIP transports.



PH3 Fred Brewer

This larger-than-life copy of the 75th Anniversary of Naval Aviation logo was constructed by the men and women of NAS North Island's staff civil engineer corps. The logo, which is mounted near the station's flag circle, will eventually be joined by insignia representing some of the 55 tenant commands, including more than two dozen air squadrons, stationed aboard the NAS. On hand for the official unveiling were (left to right): Cdr. John Miller, a reservist with NR NAS 0194 and project officer for the replica's construction; Capt. Buddie J. Penn, C.O., NAS North Island; AWAA Martin Childress, who did most of the painting; RAdm. Roger Rich, ComASWWing-Pac; BU1 Charles Brown; and Cdr. Leland R. Billings, X.O., NAS North Island.

When its designation changed from Attack Squadron to Strike Fighter Squadron, VA-192 also got new aircraft to meet the needs of its current mission. On February 14, VA-192 transferred the last A-7E from the squadron, exactly 16 years after its first *Corsairs IIs* were

(continued on page 46)



During WW II, many squadrons trained aboard Naval Auxiliary Landing Field (NALF), Crows Landing, Calif., prior to conducting antishipping strikes against Japan from air bases on Okinawa. Members from one of the squadrons, VPB-123, recently returned to Crows Landing for their 40th reunion. After completing training at the NALF in April 1945, VPB-123 and its PB4Y-2s sank 67,000 tons in enemy ships and downed 16 Japanese planes.

The NALF Crows Landing flight line circa 1944.

Photo courtesy of Cdr. William Ewers, USN(Ret.)

PEOPLE · PLANES · PLACES

accepted. Pilots and maintenance personnel have begun transition training in the F/A-18 *Hornet*.

VAdm. Lawrence Retires

VAdm. William P. Lawrence, after 34 years, retired from active naval service during ceremonies at the Washington Navy Yard in January.

Lawrence, a Naval Aviator, saw service in a variety of assignments ranging from test pilot and fighter squadron commander to later duties as Commander, Third Fleet. His last assignment was Deputy Chief of Naval Operations for Manpower, Personnel and Training and Chief of Naval Personnel.

Upon his retirement, VAdm. Lawrence was appointed to the newly established Chair of Naval Leadership in the Naval Academy's Division of Professional Development. The new faculty chair was created for an individual who has exceptional experience and knowledge in the field of naval leadership.

Anniversaries

Tradition is built on perseverance, accomplishments and longevity. The following units have contributed their fair share of each and recorded them in recent

anniversaries: NAS Meridian, Miss., and the Naval Space Surveillance System, Dahlgren, Va., celebrated 25 years; VA-72, 30 years; and MAG-31, 43 years.

JCOCS Kirby Harrison



VAdm. Edward H. Martin, DCNO (Air Warfare) and Ms. Helen Takemori, his secretary, pose for a picture with a model of one of the two PBV Catalinas that will reenact the NC-4's 1919 transatlantic flight in May. Ms. Takemori recently celebrated her 30th year in government service — most of which were spent in the office of the DCNO (Air Warfare).

Change of Command

ComCarGru-3: RAdm. Edward W. Clexton, Jr., relieved RAdm. John R. Batzler.

CVW-5: Cdr. Mike Bowman relieved Cdr. Tim Beard.

CVW-6: Cdr. William E. Beaty III relieved Capt. Carter B. Refo.

CVWR-20: Cdr. William E. Franson, Jr., relieved Cdr. David E. Lovelady.

CVWR-30: Cdr. Douglas J. Bradt relieved Capt. Christopher T. Wilson.

HMM-163: LtCol. Edward D. Smith relieved LtCol. John E. Rhodes.

HSL-34: Cdr. R. Timothy Ziemer relieved Cdr. Richard G. Fenn.

NAS Whidbey Island: Capt. David D. Williams relieved Capt. Richard A. Powell.

NavStkWarCtr: Capt. James H. Finney relieved Capt. Joseph W. Prueher.

VA-34: Cdr. Richard Coleman relieved Cdr. James Dadson.

VAQ-129: Cdr. W. Denny Bird relieved Cdr. Douglas A. White.

VAQ-209: Cdr. Joseph V. O'Brien, Jr., relieved Cdr. James E. James.

VF-21: Cdr. F. A. Roberts relieved Cdr. G. V. Southgate.

VF-213: Cdr. Richard J. Bradley, Jr., relieved Cdr. John F. Junek.

VF-301: Cdr. Phillip K. Norris relieved Cdr. G. Cress Bernard.

VR-46: Cdr. Robert C. McAfee relieved Capt. James G. Moore.

VR-62: Cdr. J. P. Guinn III relieved Capt. R. B. Lambert.

VT-26: Cdr. Gordon C. Smith II relieved Cdr. Michael A. Isban.

Medal of Honor Awards in Naval Aviation

To Naval Aviators and NAPs in Connection with Aviation

Name	Rank at Time	Occasion for Award	Name	Rank at Time	Occasion for Award
Bauer, Harold W.	LtCol., USMC	Air combat, South Pacific, 28 Sep-3 Oct 1942; posthumous.	DeBlanc, Jefferson J.	Capt., USMC	Leader of a fighter mission in air combat off Kolombangara Island, South Pacific, 31 Jan 1943.
Bennett, Floyd	CWO, USN	Pilot of plane on first flight over North Pole, 9 May 1926.	Eiroad, Henry T.	Capt., USMC	Air and ground combat in defense of Wake, 8-23 Dec 1941; posthumous.
Boyington, Gregory	Maj., USMC	Air combat, Central Solomons, 12 Sep 1943-3 Jan 1944.	Estocin, Michael J.	Lt.Cdr., USN	Leader of air attack against enemy targets in North Vietnam, 20 and 26 Apr 1967; posthumous.
Byrd, Richard E.	Lt.Cdr., USN	Command of plane on first flight over North Pole, 9 May 1926.	Fleming, Richard E.	Capt., USMC	Leader of dive-bombing attack, Battle of Midway, 4-6 Jun 1942; posthumous.
Corry, William M.	Lt.Cdr., USN	Attempted rescue of pilot from burning plane, 2 Oct 1920; posthumous.			

Name	Rank at Time	Occasion for Award	Name	Rank at Time	Occasion for Award
Foss, Joseph J.	Capt., USMC	Air combat in defense of Guadalcanal, 9 Oct-19 Nov 1942.	Swett, James E.	1stLt., USMC	Air combat, Solomon Islands, 7 Apr 1943.
Galer, Robert E.	Maj., USMC	Air combat, South Pacific, Aug-Sep 1942.	Talbot, Ralph	2ndLt., USMC	Air combat, Europe, 8 and 14 Oct 1918.
Gordon, Nathan G.	Lt., USN	Rescue of 15 officers and men under fire in Kavieng Harbor, 15 Feb 1944.	Van Voorhis, Bruce A.	Lt.Cdr., USN	Determined low-level heavy bomber attack, Battle of Solomons, 6 Jul 1943; posthumous.
Hall, William E.	Ltjg., USN	Determined attacks on enemy carrier, Battle of Coral Sea, 7-8 May 1942.	Walsh, Kenneth A.	1stLt., USMC	Air combat, Vella Lavella, 15 and 30 Aug 1943.
Hammann, Charles H.	Ens., USNRF	Rescue of fellow pilot under fire during raid on Pula, Austria, 21 Aug 1918.	To Naval Aviators for Action Not Associated with Aviation		
Hanson, Robert M.	1stLt., USMC	Air combat at Bougainville, 1 Nov 1943, and New Britain, 24 Jun 1944; posthumous.	Antrim, Richard N.	Lt., USN	Action in behalf of fellow prisoners while POW, Apr 1942.
Hudner, Thomas J., Jr.	Ltjg., USN	Attempted rescue of squadron mate downed behind enemy lines, Korea, 4 Dec 1950.	Edson, Merritt A.	Col., USMC	Leading ground action in defense of the airfield at Guadalcanal, 13-14 Sep 1942.
Hutchins, Carlton B.	Lt., USN	Remained at the controls of his plane after a midair collision to allow his crew to escape, 2 Feb 1938; posthumous.	Stockdale, James B.	Capt., USN	Action in behalf of fellow prisoners while POW, 4 Sep 1969.
Koelsch, John K.	Ltjg., USN	Attempted rescue by helicopter during heavy overcast and under fire, Korea, 3 Jul 1951; posthumous.	To Personnel Later Designated Naval Aviators, NAPs and Observers		
Lassen, Clyde E.	Ltjg., USN	Night helicopter rescue of 2 downed aviators under enemy fire, North Vietnam, 19 Jun 1968.	Commiskey, Henry A.	2ndLt., USMC	Leading a ground attack on strong enemy position near Yongdungpo, Korea, 20 Sep 1950.
McCampbell, David	Cdr., USN	Air combat during Battles of Philippine Sea and Leyte Gulf, Jun and Oct 1944.	McDonnell, Edward O.	Ens., USN	Establishing signal station ashore and maintaining communications under fire, Veracruz, 21-22 Apr 1914.
O'Hare, Edward H.	Lt., USN	Air combat in defense of carrier off Rabaul, 20 Feb 1942.	Moffett, William A.	Cdr., USN	Action in command of a ship, Veracruz, 21-22 Apr 1914.
Pless, Stephen W.	Capt., USMC	Helicopter rescue under enemy fire of 3 American soldiers beset by a large group of Viet Cong, 19 Aug 1967.	Ormsbee, Francis E., Jr.	CMM(A), USN	Rescuing enlisted man and attempted rescue of pilot downed in seaplane crash, Pensacola Bay, 25 Sep 1918.
Powers, John J.	Lt., USN	Determined attacks on enemy ships, Battle of Coral Sea, 4-8 May 1942; posthumous.	<hr/> <p style="text-align: center;"><i>Diamond 75th Year of Anniversary Naval Aviation</i></p> <hr/>		
Schilt, Christian F.	1stLt., USMC	Air evacuation of wounded under fire, Qualili, Nicaragua, 6-8 Jan 1928.			
Smith, John L.	Maj., USMC	Air combat in defense of Guadalcanal, 21 Aug-15 Sep 1942.			

75th Anniversary Logo

I usually look forward to each issue of *NAVNews* but, recently, I noticed something which should cause even Grampaw Pettibone to utter a "Jumpin' Jehoshaphat" that would rattle the windows in Diego Garcia. I am referring to the 75th Anniversary of Naval Aviation logo.

I can just see it now, Ol' Gramps and his buddy Dilbert admiring the new insignia: "It's beautiful, of course . . . the A-1 Triad, the dramatic gold on blue, the diamond shape, the Golden Wings, so proudly worn by our pilots, naval flight officers and enlisted aircrewmen.

"But wait. Alack and alas. There is somethin' amiss here, Dilbert. They've forgotten the enlisted personnel. You remember, the guys who fixed then flew 'em. The ones that manned the guns and kept the *Zekes* and *Hamps* off our tails at Midway, Truk, the Marianas and over downtown Tokyo. The guys who man the sensor stations in *all* of our ASW aircraft. The guys who tell ya to extinguish all smoking materials when ya ride the C-9 after they've made sure all the cargo is strapped down securely. The guys who operate the hoist that sets the mail down gently on the landing pad of the new *Spruance*-class destroyers and picks up the medevac just as gently from the same place. Remember, the guys who jump into sea state six and drag you into the warm, dry confines of that beautiful helicopter after you so foolishly forgot to flick that switch that made the difference between the O.K. 3 and the nylon GCA. And they've even forgotten the guys who take some of the pictures we publish right here in good ol' *NAVNews*. What have they done?!! "

In a more serious vein, except for the fighter and attack communities, just about every aviation community has a role for the enlisted aircrewman and somehow, conspicuously, the Naval Aircrewman has been left off the logo. I realize that I've probably missed several roles that aircrewmen fill and I apologize for that. I realize the impossibility of having all the aviation insignia on any device. I'm trying to make a point — that Naval Aviation is a lot more than Naval Aviators and

Flight Officers. In fact, there are a multitude of specialized roles that only the Naval Aircrewman can fill.

Well, I've had my say. Thanks for your time. Maybe in another 25 years, we'll remember . . .

AW1 Michael C. Maule
VS-41 SENSO Training
NAS North Island, CA 92135

Ed's note: There is no doubt that the enlisted naval aircrew community is an important part of Naval Aviation's 75-year legacy and deserves to share in this year's celebration.

There is a total of 12 sets of officially approved Navy wings, all of which could not be included in the logo for design aesthetic reasons. It was decided that the pilot's wings, which have been with us since 1917, would be used to represent the traditional aspect of Naval Aviation, combined with the more recent NFO wings signifying the adaptability of Naval Aviation to constantly changing technology.

An important goal of the 75th Anniversary is to promote the idea that Naval Aviation is a team effort and everyone is an essential member of the team. The March-April 1986 issue of *NAVNews* devoted its pages to the vital contributions made by the enlisted aircrew, maintenance and ground support members of the team. We hope you enjoyed it.

We appreciate your letter and welcome, as always, any enlisted input to Naval Aviation News.

Corrections to *NAVNews*, March-April 1986:

Page 13, "Naval Aviation Enlisted Wings" — The Naval Parachutist wings are entirely gold vice "a gold open parachute centered on straight silver wings;" and Marines can qualify for them only under certain conditions specified by the Commandant.

Page 24 — AW1 Pete Lister's byline inadvertently appeared on "Maintenance Control: Keystone of Squadron Ops."

VRF-1

I am trying to locate former members of Air Ferry Squadron One of the Naval Air Transport Service and its predecessor, the Aircraft Delivery Unit, during the period from early 1942 until 1946 for a possible 1987 reunion.

Lt. James L. Thompson, USNR(Ret.)
135 Erin Drive
Zephyrhills, FL 34248

UNM NROTC Alumni Association

A University of New Mexico NROTC Alumni Association is being formed. For information, contact LtCol. Don Garrett, NROTC Unit, University of New Mexico, Albuquerque, NM 87131, (505) 277-7023 or 1-800-ALUM UNM.

Self-Study Courses at PG School

The Naval Postgraduate School recently published its 1986-87 Catalog of Self-Study Credit Courses, which is available at Navy Campus Educational Services offices throughout the Navy and Marine Corps. A copy may also be obtained from the Office of Continuing Education, Code 011, Naval Postgraduate School, Monterey, CA 93943-5100, autovon 878-2558 or (408) 646-2558.

Thanks

I want to thank the *NAVNews*, History and 75th Anniversary staffs for your hard work and good spirit and for making my last tour in the Navy the most memorable.

On the face of it, our mission has been the collection and dissemination of information, but the bottom line has always involved that magic quality called esprit de corps. That, I think, is the payoff for our efforts. It is something that can't be measured like units of hardware or hours flown, but no military organization has ever been successful without it.

I look for great things to come from the OP-05D family, and I am proud to have been a part of the team.

Capt. Dick Knott, USN(Ret.)
Former Head, Aviation Periodicals
and History

Ed's note: Capt. Knott retired on February 1, 1986.

OS2U Book

I am doing research for a book on the Navy OS2U of WW II and would like to contact ex-Kingfisher personnel.

Dave Lusk
1710½ Market St.
Lewisburg, PA 17837

Escort Carrier Book

I am writing a book on Allied Escort Carriers in World War II, which will include several chapters on U.S. Navy escort carriers in the Atlantic and Pacific. I would like to contact any readers who served with the above or who could suggest any source of information, photographs or drawings.

Kenneth Poolman
48 Wellington Rd., Hampton Hill
Middlesex TW12 IJT, Great Britain

High on Kalamazoo

The Michigan International Airshow will feature the 75th Anniversary of Naval Aviation and celebrate the 40th anniversary of the first flight demonstra-

tion of the *Blue Angels*, on June 14-15, 1986. A large display of former and current naval aircraft will be on hand in both flying and static display. One event will be the Historic Flight of the Grumman Cats, including all the Grumman fighters which used "cat" as part of their names. For more information, contact High on Kalamazoo, Inc., Enterprise Suite, 128 N. Kalamazoo Mall, Kalamazoo, MI 49007, (616) 381-8237.

Reunions, Conferences, etc.

VR-24 Association reunion, August 7-10, Dallas, TX. Contact AT1 Pete Owen, USN(Ret.), 24633 Mulholland Hwy., Calabasas, CA 91302, (818) 348-4056.

6th USMC Defense Battalion, Midway Island 1941-45 reunion, June 4-7, St. Paul, MN. Contact George A. Lavis, P.O. Box 2286, Metropolitan Station, Sacramento, CA 95811.

P2000/VPI reunion, June 13-14. Contact VP International, HQ Wing, Canadian Forces Base, Greenwood, Nova Scotia, Canada BOP 1NO, (902) 765-3391, ext. 2681.

Association of Aviation Ordnance-men reunion, June 19-22, Reno NV. Contact Gerald F. Gannon, 1245 Cunningham Ave., St. Charles, MO 63301, (314) 946-0503.

Soviet Seapower Education Program

presentations: May 5, NAS Pensacola, FL; May 19, MCAS Cherry Point, NC; May 22, MCAS Beaufort, SC; and June 3, NS Keflavik, Iceland. For the complete schedule, contact Lt.Cdr. John P. Fortugno, Soviet Seapower Education Program, NMITC, Building N25A, NS Norfolk, VA 23511.

USS Salisbury Sound (AV-13) reunion, July 11-14, Indianapolis, IN. Contact Don Wade, 560 Campbell Hill, Marietta, GA 30060, (404) 426-7883.

USS Yorktown CV-5 Club reunion, October 9-12, Daytona Beach, FL. Contact Bob Good, P.O. Box 1187, Thonotosassa, FL 33592, (813) 752-9479.

USS Enterprise (CV-6) reunions: September 26-28, Arlington, TX. Contact Ed Doss, P.O. Box 791, Westport, WA 98595, (206) 268-9742. December 6-7, Painesville, OH. Contact Bill Kochever, 1840 Mentor Ave., Painesville, OH 44077, (216) 354-9530.

USS Wasp CV/CVA/CVS-18 reunion, September 1986, Providence, RI. Contact Michael Crawley, 7 Sir Charles R., Lincoln, RI 02865.

USS Natoma Bay (CVE-62)/VCs 9, 63, 81 and CarDiv-24 reunion, June 11-12, Reno, NV. Contact Glenn McWilliams, 966 Harbor Towne Rd., Charleston, SC 29412.

Marine Corps Aviation Association symposium, October 9-12, Dallas, TX. Contact MCAA, P.O. Box 296, Quantico, VA 22134.

USS Princeton (CVL-23) Association union, June 27-28, Valley Forge, PA. Contact Capt. Victor A. Moitoret, USN(Ret.), 3812 Tom Lyons Dr., Silver City, NM 88061.

USS Cabot (CVL-28) reunion, November 6-9, Pensacola, FL. Contact Ray Miller, 318 Milan Pl., Anaheim, CA 92801, (714) 828-1851.

Aviation Boatswains Mates Association reunion, August 5-9, Pensacola, FL. Contact Bill Sundermeier, A.B.M.A. Pensacola Chapter, 2565 Granada Camino, Pensacola, FL 32507, (904) 453-9188.

USS Norton Sound (AV-11/AVM-1) Association reunion, September 24-28, Port Hueneme, CA. Contact Robert Hovestadt at (805) 485-6144; Clyde Taylor at (805) 642-1413; or USS Norton Sound Association, P.O. Box 487, Port Hueneme, CA 93041.

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