

# ALL HANDS

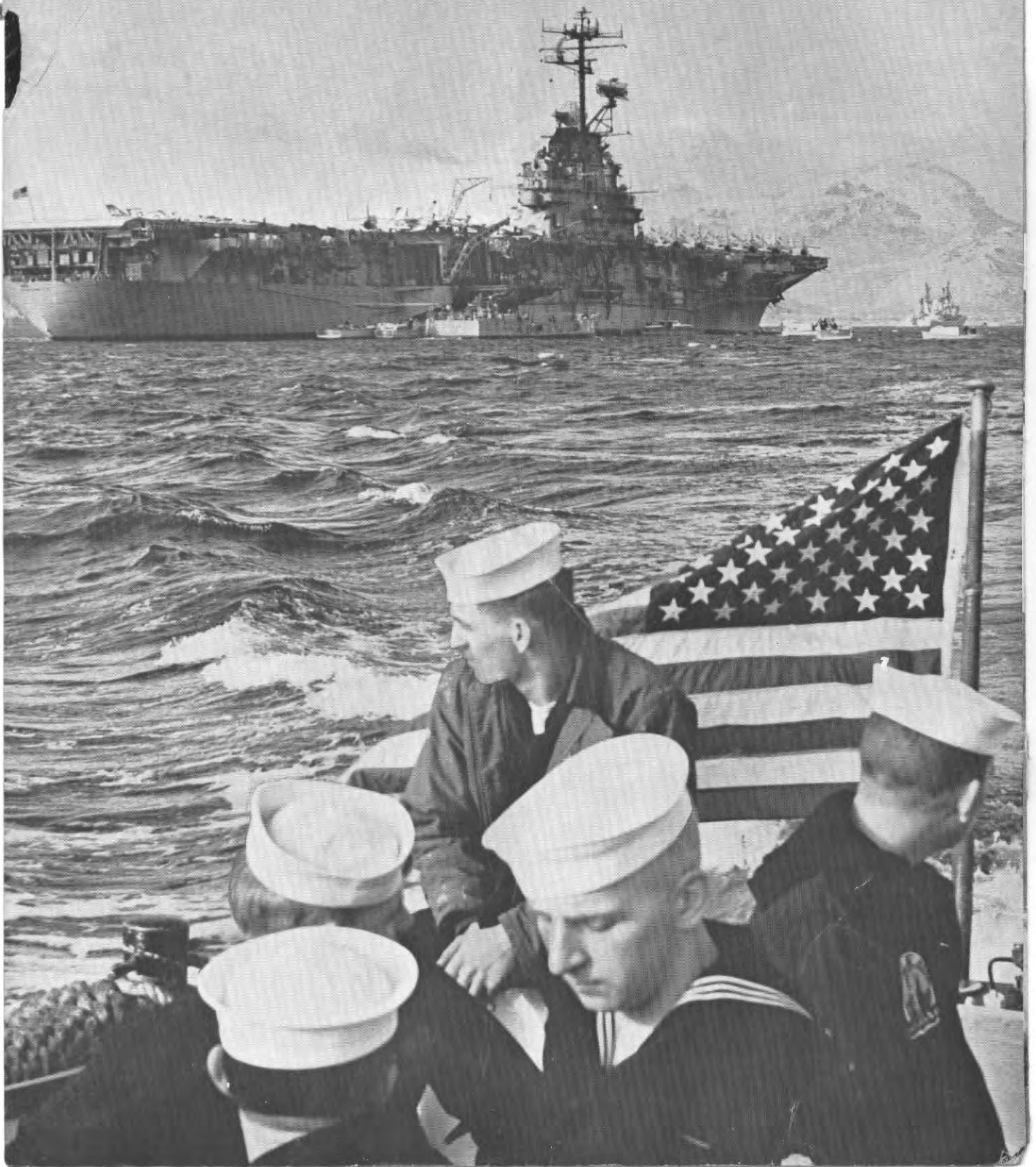
THE BUREAU OF NAVAL PERSONNEL CAREER PUBLICATION

in this issue:  
**The Carrier Navy**



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for 10 readers. All should  
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MAY 1965







# ALL HANDS

THE BUREAU OF NAVAL PERSONNEL CAREER PUBLICATION

MAY 1965

Nav-Pers-O

NUMBER 580

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The Chief of Naval Personnel

REAR ADMIRAL J. O. COBB, USN

The Deputy Chief of Naval Personnel

CAPTAIN JOHN W. HIGGINS, Jr., USN

Assistant Chief for Morale Services

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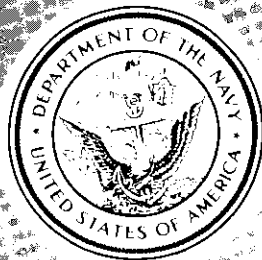
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John A. Oudine, Editor

Associate Editors

G. Vern Blasdell, News

Jerry Wolff, Research

Don Addor, Layout & Art

French Crawford Smith, Reserve

• **FRONT COVER:** HIGH OCTANE—RA5-C Vigilante refuels from A3B Skywarrior high above its mobile air station, U. S. Seventh Fleet aircraft carrier USS Ranger (CVA 61) during operations in the South China Sea.

• **AT LEFT:** SHIP TO SHIP—Crew members of USS Shangri La (CVA 38) ride launch across the Bay of Pollenza on the Island of Majorca to the carrier USS Forrestal (CVA 59) for briefing on Sixth Fleet operations in the Med.

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## JOINT ACTION IN VIETNAM

# Carrier Strike Force

**E**VENTS over the past months have again drawn Navy carrier strike forces into responsive action against communist-controlled North Vietnam.

Seventh Fleet carrier planes bombed and strafed guerrilla staging areas north of the 17th parallel, in response to communist armed aggression against South Vietnam.

The events that began on 7 February are now an episode in history. Here's a capsule report of those eventful days, and the action that followed.

The recent guerrilla actions were perhaps the most aggressive yet conducted, particularly against Americans. At 0200 on 7 February the Viet Cong attacked two South Vietnamese airfields, two U.S. barracks areas, several villages and one town, causing substantial casualties. The attacks were staged in three areas, including a U. S. military compound

and nearby airstrip at Pleiku; villages and aviation gas tanks at Tuy Hoa and villages near Nhatrang—all in South Vietnam.

U. S. casualties in the Pleiku area were eight killed and 129 wounded, plus five helicopters destroyed, nine to 11 damaged, and six fixed-wing aircraft damaged.

Most of the destruction in the Pleiku area was caused by mortar fire, launched from a position outside the compound perimeter. Several Viet Cong troops, in addition, infiltrated the camp area under cover of darkness and planted explosives. An American sentry detected them and opened fire, thus saving the lives of many of the approximately 180 U. S. military advisors—most of whom were asleep. The sentry later died of wounds he received.

The other U. S. dead were enlisted men trapped in a shelled

barracks. In all there was major damage to seven barracks, moderate damage to 10 others, and minor damage to 35 buildings.

**I**MMEDIATELY following the attacks, U. S. representatives in Saigon met with representatives of the South Vietnamese government. They jointly agreed that responsive action was required.

About six hours after the attacks President Johnson met with Secretary of Defense Robert S. McNamara and other members of the National Security Council. The President subsequently ordered action by United States forces in concert with South Vietnamese forces.

At 1400 7 February aircraft were launched from the carriers *USS Ranger* (CVA 61), *Hancock* (CVA 19) and *Coral Sea* (CVA 43), which were steaming in the South

China Sea about 100 miles off the coast of South Vietnam and south of the 17th parallel.

A total of 49 aircraft, including A-4 *Skyhawks* and F-8 *Crusaders* from *Coral Sea* and *Skyhawks*, *Crusaders* and two reconnaissance planes from *Hancock*, carried out 49 sorties against Donghoi in the southern part of North Vietnam. This area has been used by the Hanoi regime as a staging base, where guerrillas and equipment are dispatched down infiltration routes leading through Laos into South Vietnam. *Ranger* planes launched for this strike aborted their mission due to adverse weather conditions.

Other U. S. and South Vietnamese aircraft were also prevented from attacking their assigned targets because of poor weather conditions.

IN ANNOUNCING the strike before a nationally televised press conference, Secretary McNamara stated that it was quite clear the communists intended their attacks as a test of will and a clear challenge of the political purpose of both the U. S. and South Vietnamese governments.

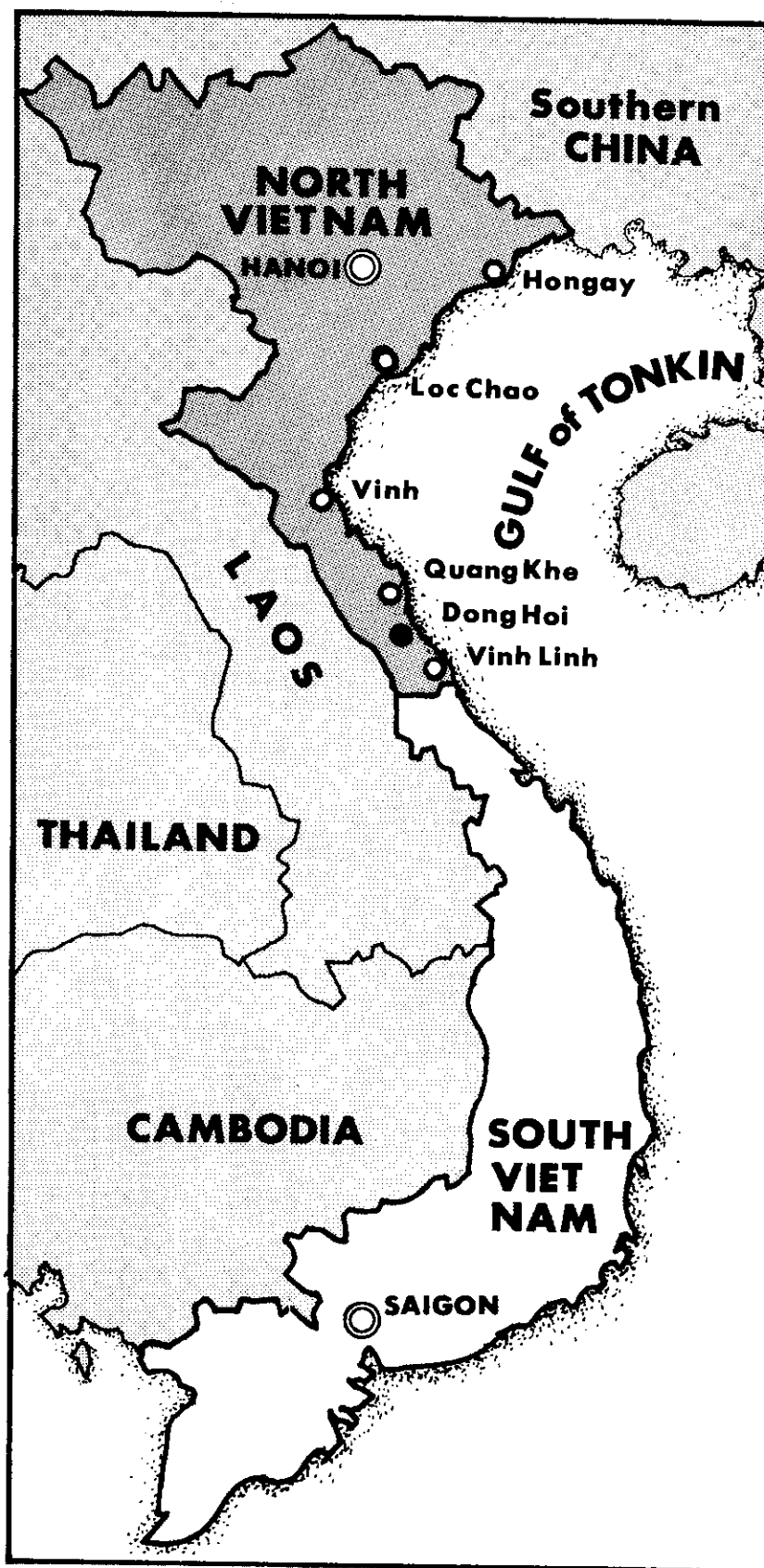
"It was a test and a challenge, therefore, which we couldn't fail to respond to," he said, "without misleading the North Vietnamese as to our intent and strength of purpose to carry out that intent."

The Defense Secretary reported that captured documents the U. S. has obtained from individuals infiltrating from the north, plus prisoner-of-war reports obtained in recent months, indicate that the volume of infiltration has expanded substantially recently. The number of Viet Cong infiltrating South Vietnam in 1964 was probably double the 1963 figure.

"This, plus other evidence, leads us to believe that Hanoi (capital of North Vietnam) has consciously and purposely stepped up the pressure against the South Vietnamese," he said. "And we have every reason to believe, based on our intelligence sources, that the attacks on Pleiku, Tuy Hoa and Nha Trang were ordered and masterminded directly from Hanoi."

Mr. McNamara assured the nation that our forces are on the alert and prepared.

Admiral Ulysses S. Grant Sharp, Jr., Commander in Chief, Pacific, was in charge of the strike operations. One A-4 from *Coral Sea* was lost, with the pilot reported





**ON THE MOVE**—Vietnamese soldiers, U. S. advisors resupply troops on front lines by means of helicopter while under fire from Viet Cong guerrilla band.

missing, and seven other aircraft were damaged by antiaircraft fire.

President Johnson ordered that all U. S. dependents be brought home from South Vietnam, and that a Marine Corps *Hawk* surface-to-air missile battalion be deployed there.

**I**N HIS STATEMENT, President Johnson said it is quite clear that Hanoi has undertaken a more aggressive course of action against both South Vietnamese and American installations, "and against Americans who are in South Vietnam assisting

the people of that country to defend their freedom."

"We have no choice now but to clear the decks and make absolutely clear our continued determination to back South Vietnam in its fight to maintain its independence," he said.

The following day—8 February—the Viet Cong continued their raids. They fired 15 mortar shells at the U. S. Army helicopter base at Soc Trang, but no casualties or damage resulted.

**M**EANWHILE, Mr. McGeorge Bundy, the President's special assistant for national security, visited the areas which were attacked by the Viet Cong the previous day. He was present in South Vietnam on a special mission when the communists initiated their coordinated attacks, but was not endangered by them. Mr. Bundy also visited U. S. casualties in hospitals.

On his return to Washington that day, Mr. Bundy reported to the National Security Council that the communists represent the gravest kind of danger to the freedom and future of South Vietnam.

Shortly before this address, 24 South Vietnamese planes, accompanied by U. S. Air Force fighters, bombed a military communications center in Vinhlinh, North Vietnam, in a follow-up to the previous day's strike.

On 9 February the Viet Cong shot down three American helicopters. One Army crewman was killed and eight other Americans injured.

The helicopter casualties came as the first planeloads of American dependents were departing Saigon airport, and as the bodies of nine dead American soldiers commenced their final homeward journey.

At about the same time, the Marine *Hawk* battalion, arriving from Okinawa, was made operational at Danang air base, which is 50 miles south of the 17th parallel dividing North and South Vietnam. The Marines will provide antiaircraft defense against possible communist sorties from the North, using the 20-plus-mile range missiles.

Viet Cong marauders next struck at an American barracks in Qui Nhon, where 62 non-combat troops were billeted. Striking again at night, the guerrillas exploded two large bombs on the sides of the building, demolishing it. The four-story structure collapsed into a heap of rubble about 30 feet high.

Nineteen of the 62 men were not

### Message to a Carrier Crew

A few weeks ago Prime Minister Phan Huy Quat of Vietnam came aboard *uss Coral Sea* (CVA 43) and addressed the crew. Here are excerpts from his address:

"I'd like to have your permission to say a few words to our friends on the *uss Coral Sea*.

"My dear friends, it is indeed a pleasure for me to be here today with you, and to personally bring to you the warm greetings of the Vietnamese people. We in Free Vietnam are following with great interest your everyday activities in this part of the world for we know that they are mainly aimed at helping us preserve our independence and territorial integrity in the face of blatant communist aggression coming from the North.

"We in Free Vietnam are proud to count you among our friends, for friends you are indeed. In our hour of greatest need, when our very survival as free men is at stake, we are also deeply thankful that you have willingly accepted many sacrifices in serving out here, serving your great country but also, and more importantly, serving the sacred ideals of liberty and justice.

"I do hope that the communists in North Vietnam and the Chinese communists soon understand that, facing the men in the mightiest fleet in the world, they will decide to stop their aggression against Free Vietnam, and then peace, the peace that we all so ardently desire would come. We are not afraid of talking about peace but we want a peace to be enjoyed by proud, free men.

"Friends, know that while you are doing your best out here your families are missing you and you are missing your dear ones, but I am sure that they understand the importance of your mission and are rightly proud of you. I ask you to please convey to your dear ones back home the kindest regards of the entire Vietnamese people and our heartfelt thanks to them for sending you out here to assist us."

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inside at the time, and 22 survivors were rescued. Seabees and Army engineers combed the wreckage for the remaining 21 men.

**D**URING RESCUE operations a fleet of about 50 Viet Cong junks, commandeered from local fishermen, attempted an amphibious landing near the site to attack the rescue party. They were driven off by Vietnam gunboats and U. S. copters.

Response for this latest assault was swift. A total of 160 U. S. and South Vietnamese planes again flew northward to bomb communist installations.

In the three and one-half hour strike, three Navy planes were lost—two to ground fire and one in an emergency landing.

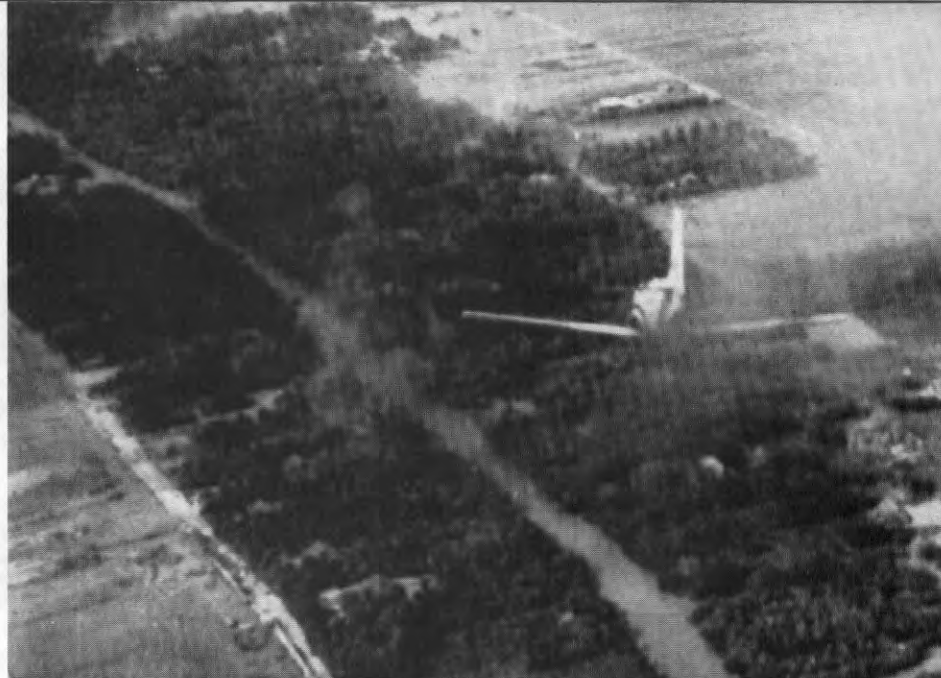
This time the air strikes were aimed at other staging areas in North Vietnam adjacent to infiltration routes. It was the biggest single attack yet staged against the communists.

**A** WHITE HOUSE statement reported:

"United States air elements joined with the South Vietnamese Air Force in attacks against military facilities in North Vietnam used by Hanoi for the training and infiltration of Viet Cong personnel into South Vietnam.

"These actions by the South Vietnamese and United States governments were in response to further direct provocations by the Hanoi regime.

"Since 8 February a large number of South Vietnamese and United States personnel have been killed in an increased number of Viet Cong ambushes and attacks. A district town in Phuoc Long Province has been overrun, resulting in further Vietnamese and United States casu-



VIETNAMESE Air Force strafes Viet Cong troops. Below: Junk Force hunts enemy.

alties. In Qui Nhon, Viet Cong terrorists, in an attack on an American military billet, murdered Americans and Vietnamese. In addition, there have been a number of mining and other attacks on the railway in South Vietnam as well as assassinations and ambushes involving South Vietnamese civil and military officials.

"The United States Government has been in consultation with the Government of South Vietnam on this continuation of aggressions and outrages. While maintaining their desire to avoid spreading the conflict, the governments felt compelled to take the action described."

What happens next may be stale news before this report is in print. But this report will have no less meaning as to why our forces in WestPac are on constant alert.

—Bill Howard, JO1, USN



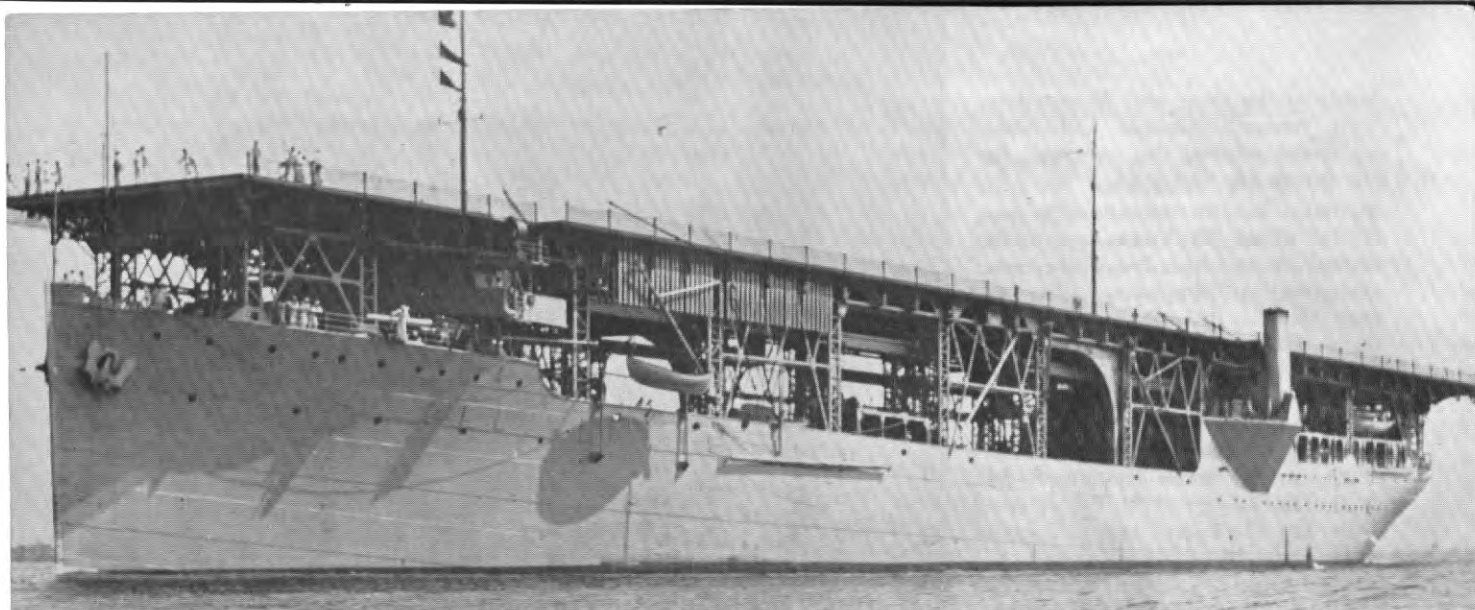
FLOATING NAS—Planes from USS Coral Sea (CVA 43) and Ranger (CVA 61) hit military targets in North Vietnam.



MAY 1965







NUMBER ONE was USS Langley (above). Below: WWII carrier task force.



# Evolution

IF YOU'RE WILLING to stretch a point ever so slightly, it might be said that the Navy had an aircraft carrier long before it had airplanes. The first such carrier cost the government \$150 and was worth every cent—but not much more.

Here's how it all came about:

For some time during the Civil War, the authorities had been annoyed by importunate daredevils who insisted upon the military value of balloons. It would be possible, they claimed, by ascending in the air to gain a panoramic view of the enemy and to detect its early intentions. The powers-that-be were pretty doubtful of the whole idea but were finally induced to permit, on 11 Nov 1861, a certain Thaddeus Lowe to make his observations from a balloon.

Earlier that year the Navy had bought, for \$150, a ship by the name of *George Washington Parke Custis*. This was converted to a combination coal barge and balloon boat. It is unlikely, however, that it will be necessary for history books to be rewritten to any great extent for, although a balloon can be considered an aircraft and *Custis* certainly carried Lowe's balloon, *Custis* will never displace *Langley* as the Navy's first official aircraft carrier.

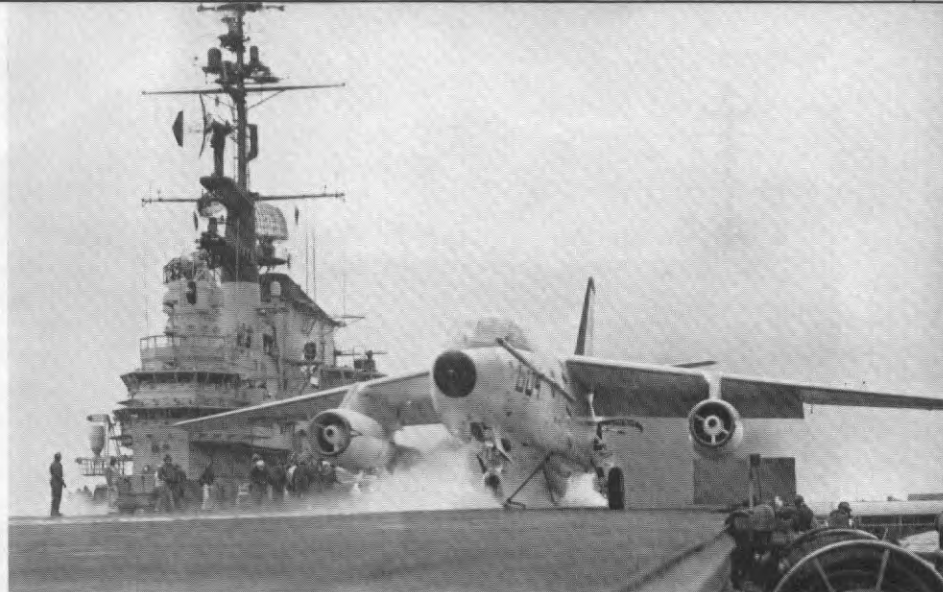
This is Lowe's story: "I left the Washington Navy Yard early Sunday morning, towed out by the steamer *Coeur de Lion*, having on board competent assistant aeronauts,

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together with my new gas generating apparatus, which, though used for the first time, worked admirably. We located at the mouth of Mattawoman Creek, about three miles from the Virginia shore. Yesterday proceeded to make observations accompanied in my ascensions by (Brigadier) General (Daniel E.) Sickles and others. We had a fine view of the enemy's camp-fires during the evening, and saw the rebels constructing new batteries at Freestone Point."

**T**HIS PRESUMABLY was the end of the Navy's interest in Civil War aircraft carriers. (The use of observation balloons is another story



# of the Flattop Navy

which we won't go into here.)

Except for this single isolated oddball incident, the idea of naval aviation really didn't take hold until 1910 when Eugene Ely made his historic flight from the old cruiser *Birmingham*. Two months later, in January 1911, Ely landed aboard the armored cruiser *Pennsylvania*. It wasn't long afterwards that naval aviation became a reality.

However, not until a little over four years after World War I did carrier aviation begin its rapid growth. They were the years which witnessed startling aeronautical innovations and brought about the beginnings of our carrier fleet.

For a number of years, naval minds at home and abroad had been speculating on the possibility of carrying airplanes to sea and launching them from ocean-borne platforms. It was a tantalizing prospect and, if successful, would open wide military vistas to the nation which succeeded in perfecting it.

After the war, the U.S. Navy turned its attention to the idea, and the collier (coal hauling vessel) *Jupiter* was converted into the carrier *USS Langley* (CV 1). In the early '20s an improved catapult was installed aboard the flattop.

**I**T WAS A DAY to be remembered by naval flyers when, in October 1922, *Langley*—the first aircraft carrier of the U.S.—stood out to sea and started the development of the

Navy's basic carrier operations. Because of her unlovely lines, she quickly became known as the "Covered Wagon." But upon her deck naval flying grew, and "firsts" appeared with startling regularity.

On 17 Oct 1922, Lieutenant Commander V. C. Griffin, in a VE-7-SF, earned the distinction of being the first flyer to take off from her deck.

Nine days later, with *Langley* underway, LCDR Godfrey Cheva-

lier, perhaps in recognition of the fact that no one had worked harder than he on perfecting the arresting gear, made the first landing on the carrier's deck.

Commander Kenneth Whiting, first to be successfully catapulted from the deck, took off at the controls of a PT aircraft on 18 Nov 1922.

The Navy, happy with the results of the *Langley* experiments, incorporated many improvements in *Lex-*

PLANE AWEIGH—An A3B Skywarrior catapults from *USS Franklin D. Roosevelt* (CVA 42). Below: *USS Enterprise* (CVAN 65) is world's biggest warship.





PACIFIC 'ISLANDS'—USS Oriskany (CVA 34) steams Pacific waters. Rt: Hancock (CVA 19) patrols South China Sea.

ington (CV 2) and Saratoga (CV 3). These two large ships, converted from cruiser hulls, were added to the Fleet in late 1927.

In addition, the carriers *Ranger* (CV 4) (first ship to be built from the keel up as a carrier), *Yorktown* (CV 5) and *Enterprise* (CV 6) helped carry naval aviation through the '30s. (They were to play a significant role in the critical days following the Japanese attack on Hawaii.)

UNTIL 1929, the true role of CVs in the Fleet was only hinted. And then came Fleet Problem IX, when *Saratoga* indicated the poten-

ALL ABOARD—Pilots mount up as flight deck crew readies plane for launching aboard USS *Independence*.



tial of these ships. *Saratoga* after making a wide sweep maneuver, launched planes which bombed, theoretically, the Panama Canal and rendered it inoperable (also theoretically).

The Navy, from that time on, conducted intensive studies on a wide variety of carrier tactics. Some of the very same procedures were followed by the Japanese Navy later in its attack on Pearl Harbor.

THEN CAME WORLD WAR II and the U.S. emerged as the world's first naval power. As the war progressed, carriers were essential to three of the principal missions assigned to naval aviation:

- *Air strikes*—Planes attached to fast carrier task forces were discovered, at the beginning of the war, to be most effective.
- *Antisubmarine warfare*—Hunter-killer planes attached to small car-

rier task forces always were on the lookout for enemy subs.

• *Air support to amphibious operations*—Planes flying from jeep carriers provided close air support for amphibious landings as well as logistic support for fast carrier forces and advance bases.

AS TECHNOLOGICAL developments came about in the post-war era, *Essex* class carriers became obsolete. To modify these carriers so they could meet their new operating requirements, an improvement program, called Project 27A, was begun in October 1947.

The principal changes were directed toward increasing the carriers' capabilities so that heavier aircraft (up to 40,000 pounds gross weight) could operate from the flattops. The flight decks were strengthened and the five-inch guns on the flight deck were removed to

OLD TIMES—Biplanes take off from deck of USS *Ranger* (CV 4) back in 1937.







**SEA QUEENS**—Attack carriers such as *USS Kitty Hawk* (CVA 63) and *USS Constellation* (CVA 64) are mobile jet bases.

decrease topside weight (all other guns were retained). The change also provided more deck space for parking planes and increased safety aspects of the landing area. (About this time it was decided that carriers didn't need guns for protection—they would use their planes and escort ships). Other changes included special provisions for jet aircraft, such as jet blast deflectors, increased fuel capacity and jet fuel mixers.

**I**N THE immediate post-war years, the first U. S. tests of jets for shipboard operations were conducted aboard *uss Franklin D. Roosevelt* (CVB 42), using the FD-1 Phantom jet aircraft. As the experiments continued, they inevitably led to a carrier-based all-jet squadron. On 5 May 1948, Fighter Squadron 17A, equipped with 16 FH-1 Phantoms (redesignated from

FD-1 in 1947), became the first carrier qualified jet squadron in the U.S. Navy. It took three days to do it, but all squadron pilots qualified aboard *uss Saipan* (CVL 48) with a minimum of eight landings and takeoffs each.

Project 27A originally was intended to apply to more than just nine of the *Essex* class carriers, but with the development of the steam catapult and more advanced aircraft coming into operation, the project had to be modified to meet future needs. Thus, Project 27C was initiated.

*uss Hancock* (CV 19) was the first U.S. carrier to receive the new "steam slingshot", followed by *Intrepid* (CV 11) and *Ticonderoga* (CV 14).

Even as these changes were made in the three carriers, the Bureau of Aeronautics proposed, in mid-June 1952, that a new flight deck design

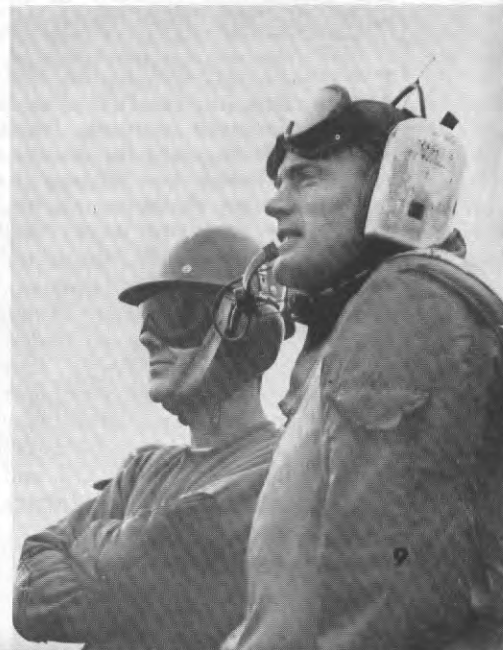
be installed in *uss Antietam* (CV 36). The previous May, both jet and propeller type aircraft had been tested on a simulated angled deck aboard *uss Midway* (CVB 41).

*Antietam's* deck was extended outboard on the port side from the normal flight deck, allowing aircraft to land at a 10-degree angle from the ship's centerline. At first it was called a canted deck, but the term officially gave way to the now more familiar "angled deck."

The advantages were so obvious from the beginning that men wondered why they hadn't thought of the idea years earlier. By eliminating the centerline elevators and

**ON THE AIR**—Arresting gear officer watches landing. Miniature radio keeps him in touch with control units.

**HOT SPOT**—Crew fights bomb damage aboard *USS Saratoga* during battle.







COMING UP—Artist shows how USS John F. Kennedy (CVA 67) will look.

using one or more deck edge elevators (which were not installed in *Antietam*), more elevators were available to bring up spares and take others down to the hangar deck. And, once landed, the planes could easily taxi onto a starboard deck edge elevator without halting flight operations.

It was also possible to catapult and land aircraft simultaneously, which gave the carrier improved combat readiness.

The pilots were given an extra margin of safety: No longer would they be in danger of crashing into gassed and armed planes parked forward of the landing area.

Other changes in this project included: The reintroduction of the hurricane bow of the original *Saratoga* and *Lexington*; air conditioning and sound proofing for more comfortable and efficient island spaces; and improved deck lighting.

*Lexington*, *Shangri La* and *Bon Homme Richard* all received the improvements, and they were so successful that *Hancock*, *Intrepid* and *Ticonderoga* returned to the yards for this new conversion.

**T**HE TREND extended to the *Midway* class. In May 1954, *Franklin D. Roosevelt* entered Puget Sound Naval Shipyard for the conversion, followed by *Midway* in September 1955. *Coral Sea* was the last aircraft carrier of World War II design to be reworked under the post-war modernization program. She emerged in January 1960.

While the carriers were undergoing this physical change, they received new missions. To reflect this change, they were given new designations. In October 1952 the then familiar designations CV and CVB were replaced by CVA (attack

aircraft carrier). Antisubmarine support aircraft carrier became a new classification in July 1953. The following August, five other CVAs were given the CVS designation

(for ASW support aircraft carrier).

July 1955 marked the beginning of the end of escort carriers as combat ships of the Fleet. *Thetis Bay* (CVE 90) became CVHA 1 and later LPH 6. Thirty-six escort carriers, designated CVE, CVU and CVHE, were changed to AKV for cargo ship and aircraft ferry, and by May 1959, the CVE designation was abolished.

On 30 Sep 1957 the last of the light carriers, *uss Saipan* (CVL 48), was decommissioned, and that designation, nearly two years later, was stricken from the Navy register when four support carriers and seven light carriers were changed to auxiliary aircraft transports (AVTs).

**A**LL THIS reflected Navy thinking and planning. The programs were steps in a schedule designed

## Here Is a Capsule History

*Below you'll find a quick run-down on carriers from the first through number 66. To some it'll bring back nostalgic memories; to all of the Navy it points up the progress and development of the carrier forces.*

- **USS Langley (CV 1)**—This ship was commissioned on 7 Apr 1913, but not as an aircraft carrier. It was commissioned *Jupiter*, Fleet collier number three. The designation was changed to CV on 11 Jul 1919, and the ship was commissioned *Langley* (CV 1) on 21 Mar 1922. In 1937 she was converted to the seaplane tender AV 3. On 27 Feb 1942, *Langley* was sunk by Japanese aircraft south of Java.

- **USS Lexington (CV 2)**—Originally this ship was under construction as *Constitution*. On 10 Dec 1917 she was renamed *Lexington* and, on 1 Jul 1922, was designated CV 2. She was commissioned on 14 Dec 1927. After sustaining severe damage at the Battle of the Coral Sea in May 1942, *Lexington* was sunk by our own destroyers.

- **USS Saratoga (CV 3)**—Begun as a battle cruiser, *Saratoga* was designated a CV on 1 Jul 1922, and commissioned on 16 Nov 1927. She was sunk in the atomic bomb test in July 1946.

- **USS Ranger (CV 4)**—The first U. S. vessel designed and constructed as an aircraft carrier, she was commissioned on 4 Jun 1934, and sold in January 1947.

- **USS Yorktown (CV 5)**—Commissioned on 30 Sep 1937, she was lost in action after the battle of Midway 7 Jun 1942.

- **USS Enterprise (CV 6)**—She served as a CV from her commissioning on 12 May 1938 until 1952 when her designation was changed to CVA. In 1953, she was made a CVS. She

was decommissioned in 1947 and sold for scrap in 1958.

- **USS Wasp (CV 7)**—Commissioned on 25 Apr 1940, this ship was sunk on 15 Sep 1942 by U. S. ships after sustaining severe damage near Espiritu Santo, New Hebrides.

- **USS Hornet (CV 8)**—One week after her first birthday this ship was sunk at the battle of Santa Cruz Islands. She was commissioned on 20 Oct 1941, and sunk on 27 Oct 1942.

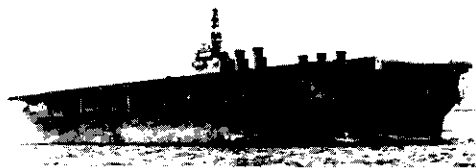
- **USS Essex (CV 9)**—*Essex* was the first aircraft carrier commissioned after the United States entered World War II. She was commissioned on 31 Dec 1942. In March 1960 she was redesignated a CVS, and is currently assigned to the Atlantic Fleet.

- **USS Yorktown (CV 10)**—This ship was originally under construction as the *Bon Homme Richard*, but her name was changed to *Yorktown* on 26 Sep 1942. She was commissioned as CV 10 on 15 Apr 1943, made a CVA in October 1952, and later a CVS. She is still active in the Pacific Fleet.

- **USS Intrepid (CV 11)**—She was commissioned on 16 Aug 1943, and her designation changed to CVS in 1962. She is now assigned to the Atlantic Fleet.

- **USS Hornet (CV 12)**—*Hornet* was commissioned on 29 Nov 1943. In October 1952 she was redesignated as a CVA. Now a CVS, she is assigned to the Pacific Fleet.

- **USS Franklin (CV 13)**—This ship was commissioned on 31 Jan 1944. In October 1952



USS Ranger (CV 4)

to utilize carriers to the best extent. As the carriers aged (some faster than others because of battle damage in World War II), they were transferred from the CVA designation to the CVS, then to LPH, and ultimately retirement. With the new construction programs it was possible to keep the number of operating CVAs up to the prescribed limits. As each new ship was acquired, it took the top position among the CVAs while the one in the bottom position moved to the top of the next lower class.

Other new developments have had quite an effect on carrier aviation. In 1955, for instance, a new type of arresting gear, the Mark 7, was installed in *Hancock*. Its primary advantage was the ability to arrest a plane with a minimum amount of hook load. With the earlier pressure

SUB HUNTER—USS *Yorktown* (CVS 10) hunts sub with British destroyers.

controls, it was necessary to stop the heavier aircraft in shorter run-out in case the aircraft came in too fast. This had been found rather hard on the plane. The new system is set for the weight of the landing

aircraft, so that a 60,000-pound plane would pull out no more wire than a 10,000-pounder.

When *uss Forrestal* (CVA 59) was commissioned in October 1955, her design incorporated the sum of ex-

## of the Aircraft Carrier—By the Numbers

she was redesignated as a CVA and in August 1953 a CVS. Now in the Reserve Fleet, she has been redesignated as AVT (Aviation Ship, Transport) 8.

- USS *Ticonderoga* (CV 14)—Originally under construction as *Hancock*, she was named *Ticonderoga* on 1 May 1943. She was commissioned on 8 May 1944, and her designator was changed to CVA in October 1952. She is assigned to the Pacific Fleet.

- USS *Randolph* (CV 15)—This Atlantic Fleet ship was commissioned on 9 Oct 1944. She was redesignated CVA in October 1952, and later to CVS. She is still in active service in the Atlantic Fleet.

- USS *Lexington* (CV 16)—Originally under construction as *Cabot*, the ship was renamed *Lexington* on 16 Jun 1942, and commissioned on 17 Feb 1943. She was redesignated a CVA in October 1952 after she was transferred to the Reserve Fleet in 1947. She was recommissioned on 15 Aug 1955 and is now in the Atlantic Fleet as a CVS.

- USS *Bunker Hill* (CV 17)—Commissioned on 25 May 1943, *Bunker Hill* served until January 1947 when she was placed in the Reserve Fleet at Bremerton, Wash. In October 1952 she was redesignated a CVA, later a CVS, and most recently AVT 9.

- USS *Wasp* (CV 18)—Originally named *Oriskany*, *Wasp* was commissioned on 24 Nov 1943. This Atlantic Fleet carrier was redesignated CVA in October 1952, and later became a CVS.

- USS *Hancock* (CV 19)—This ship was originally named *Ticonderoga*, but on 1 May 1943, was renamed *Hancock*. She was commissioned on 15 Apr 1944 and was designated a CVA in October 1952. The ship is now active in the Pacific Fleet.

- USS *Bennington* (CV 20)—Commissioned on 6 Aug 1944, *Bennington* was redesignated a CVA in October 1952. She was inactivated in 1954, but is now active as a CVS in the Pacific Fleet.

- USS *Boxer* (CV 21)—This ship was first commissioned on 16 Apr 1945, redesignated a CVA in October 1952 and again redesignated as LPH 4 in January 1959. *Boxer* is now serving in the Atlantic Fleet Amphibious Force.

- USS *Independence* (CV 22)—She was originally under construction as the cruiser *Amsterdam*, but her name and designation were changed in early 1942 to *Independence* (CV 22). On 15 Jul 1943 she was changed to a CVL. Battered by atomic bombs during Operation Crossroads, the ship was destroyed on 27 Jan 1951.

- USS *Princeton* (CV 23)—CL 61 was the original designation of this ship. In 1942 her original name of *Tallahassee* was changed, along with her designation, to *Princeton* (CV 23). She was commissioned on 25 Feb 1943. On 15 Jul 1943 she was redesignated CVL and on 24 Oct 1944, she was lost at the Battle for Leyte Gulf. After sustaining heavy damage the ship was sunk by U. S. forces.

- USS *Belleau Wood* (CV 24)—This ship was changed from CL 76 to CV 24 on 16 Feb 1942, and from *New Haven* to *Belleau Wood* on 31 Mar 1942. Commissioned 31 Mar 1943, she was redesignated CVL on 15 Jul 1943. In 1953 this ship was transferred to France on a loan basis under the Mutual Defense Assistance Program (now MAP).

- USS *Cowpens* (CV 25)—Originally under construction as *Huntington* (CL 77), she be-

came *Cowpens* (CV 25) in March 1942. On 15 Jul 1943 she was redesignated CVL 25, and in January 1947 was placed in the Reserve Fleet at San Francisco. She was redesignated AVT 1 on 7 May 1959.

- USS *Monterey* (CV 26)—This ship was originally *Dayton* (CL 78). In March 1942 she became *Monterey* (CV 26) and later, in July 1943, CVL 26. Commissioned on 17 Jun 1943, *Monterey* is now in the Atlantic Reserve Fleet. In May 1960 she was redesignated as AVT 2.

- USS *Langley* (CVL 27)—This ship underwent many changes. She was originally *Fargo* (CL 85), then *Crown Point* (CV 27) and finally *Langley* (CVL 27) on 15 Jul 1943. She was commissioned 31 Aug 1943. In January 1951 she was transferred to France under the Mutual Defense Assistance Program.

- USS *Cabot* (CVL 28)—Originally *Wilmington* (CL 79), this ship became *Cabot* (CV 28) in June 1942. Her designation was changed to CVL shortly before she was commissioned on 24 July. She was placed in the Reserve Fleet at Philadelphia in 1955. In May 1959 she was redesignated as AVT 3.

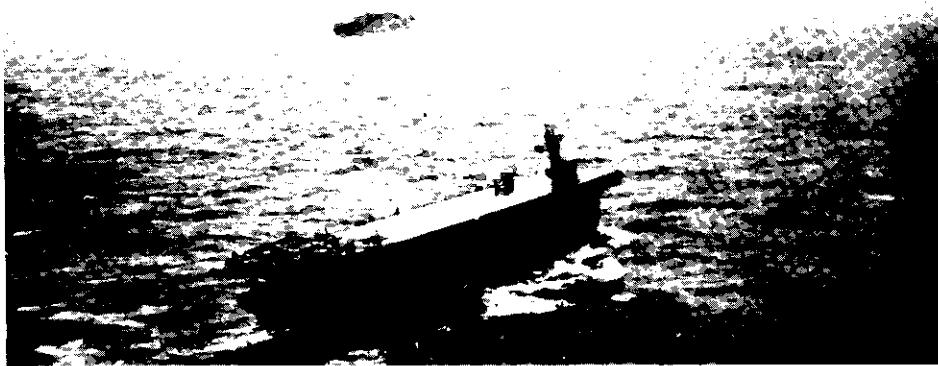
- USS *Bataan* (CVL 29)—*Buffalo* (CL 99) was the original name and designation of this ship. Her designation was changed to CV in June 1942 and her name to *Bataan* in June 1943. In July she was redesignated CVL and finally commissioned on 17 Nov 1943. She went into the Reserve Fleet at



USS *Saratoga* (CV 3)



USS *Lexington* (CV 2)



**BIG JOB**—Small escort carriers played big role guarding convoys in WWII.

perience of her predecessors. Even so, many further changes took place.

When *Forrestal* was first authorized in March 1951, she was to have an axial or straight type deck. Architects went back to original *Langley*, *Ranger* and *Long Island* designs by

sweeping the flight deck clear of an island structure. The carrier was to have a small island on an elevator apparatus, which would be lowered during flight operations.

But the flush deck design barely left the drawing board before it was

changed. The new design provided a maximum landing area which eliminated the hazard of island superstructure—a common problem on an axial-type flight deck.

With the development of the angled deck, *Forrestal*'s design was changed again. The new angled deck gave *Forrestal* a 1039-foot length instead of the 1030 feet which was originally planned for her. She was christened 11 Dec 1954 and commissioned 1 Oct 1955.

**I**N 1953 Secretary of the Navy Dan A. Kimball announced that a new carrier, similar to *Forrestal*, would be built and named *Saratoga* (CVA 60). This new carrier was christened at the New York Naval Shipyard and commissioned 14 Apr 1956.

### From USS Langley to USS America: Sea/Air Power (Continued)

San Francisco and, eventually, was scrapped.

- *USS San Jacinto* (CVL 30)—This ship was changed from CL 100 to CV 30 on 2 Jun 1942, and from *Newark* to *Reprisal* on 23 Jun 1942. On 6 Jan 1943 her name was changed to *San Jacinto*. Later that same year her designation was changed to CVL. She was commissioned on 15 Dec 1943 and is now in the Reserve Fleet at San Francisco. AVT 5 is her latest designation.

- *USS Bon Homme Richard* (CV 31)—Commissioned on 26 Nov 1944, the ship was redesignated CVA in October 1952. She went into the Reserve Fleet on the West Coast in 1953, but was later given an angled deck and taken out of retirement. She is now active in the Pacific Fleet.

- *USS Leyte* (CV 32)—*Crown Point* was the original name of this ship. It was changed, however, to *Leyte* on 8 May 1945. She was redesignated CVA in October 1952 and CVS in July 1953. Commissioned on 11 Apr 1946, the ship is now in the Reserve Fleet as AVT 10.

- *USS Kearsarge* (CV 33)—This ship was commissioned on 2 Mar 1946, and her designation was changed to CVA in 1952 and later to a CVS. She is now in the Pacific Fleet.

- *USS Oriskany* (CV 34)—She was commissioned on 25 Sep 1950 and in October 1952 was redesignated CVA. She is active in the Pacific Fleet.

- CV 35—Cancelled 12 Aug 1945.

- *USS Antietam* (CV 36)—Commissioned on 28 Jan 1945, *Antietam* was designated a CVA in October 1952 and a CVS in July 1953. She was decommissioned in 1963.

- *USS Princeton* (CV 37)—Originally named *Valley Forge*, the name was changed to *Princeton* on 20 Nov 1944. She was commissioned on 18 Nov 1945. In 1952, she was changed to CVA, in 1953 to CVS, and most recently to LPH 5. She is active in the Pacific Fleet Amphibious Force.

- *USS Shangri La* (CV 38)—This ship was commissioned on 15 Sep 1944 and in October

1952 was changed to CVA. She entered the Reserve Fleet in 1955, but is now with the Atlantic Fleet.

- *USS Lake Champlain* (CV 39)—Redesignated CVA in October 1952, this ship is now active in the Atlantic Fleet as a CVS. She was commissioned on 3 Jun 1945.

- *USS Tarawa* (CV 40)—Commissioned on 8 Dec 1945, she was redesignated CVA in October 1952, and CV5 in January 1955. She was designated AVT 12 in 1961 and decommissioned in May 1963.

- *USS Midway* (CVB 41)—The first of her class, she was changed from a CV to CVB on 15 Jul 1943, and was commissioned on 12 Sep 1945. In October 1952 her designation was again changed, this time to CVA. She is on active duty in the Pacific Fleet.

- *USS Franklin D. Roosevelt* (CVB 42)—Originally named *Coral Sea* (CV 42), she was changed to CVB in 1943, commissioned in October 1945 and redesignated CVA in 1952. She was in the Reserve Fleet for a short time, and was later modernized. She is now active in the Atlantic Fleet.

- *USS Coral Sea* (CVB 43)—*Coral Sea* was changed from a CV on 15 Jul 1943, and was commissioned on 1 Oct 1947. In 1952 she was redesignated CVA. In 1957, she underwent conversion at Puget Sound and was recommissioned March 1960. She is now in the Pacific Fleet.

- CV 44—Construction cancelled on 11 Jan 1943.

- *USS Valley Forge* (CV 45)—This ship was commissioned on 3 Nov 1946, and her designation was changed to CVA in November 1953. She is now active in the Pacific Fleet as LPH 8.



USS Langley (CVL 27)

- CV 46—Construction cancelled on 12 Aug 1945.

- *USS Philippine Sea* (CV 47)—Originally named *Wright*, she was renamed *Philippine Sea* on 12 Feb 1945. This ship was redesignated CVA in October 1952, and later redesignated CVS. She was placed in the Pacific Reserve Fleet in 1959 as AVT 11.

- *USS Saipan* (CVL 48)—Commissioned on 14 Jul 1946, this ship is now undergoing conversion to AGMR (major communications relay ship).

- *USS Wright* (CVL 49)—This ship was commissioned on 9 Feb 1947 and is now in the Atlantic Fleet as a command ship. Her conversion for that specialty was completed in 1963. Her designation is now CC 2.

- CV 50 through 57—Construction cancelled on 27 Mar 1945.

- *United States* (CVA 58)—Construction cancelled on 23 Apr 1949.

- *USS Forrestal* (CVA 59)—The first of her class, she was commissioned 1 Oct 1955, and is now active in the Atlantic Fleet.

- *USS Saratoga* (CVA 60)—This Pacific Fleet ship was commissioned on 14 Apr 1956.

- *USS Ranger* (CVA 61)—*Ranger* was commissioned on 10 Aug 1957, and is assigned to the Pacific Fleet.

- *USS Independence* (CVA 62)—Launched in June 1958, she was commissioned 10 Jan 1959 and is active in the Atlantic Fleet.

- *USS Kitty Hawk* (CVA 63)—The first of a new class of attack carrier, *Kitty Hawk* was commissioned 29 May 1961. She is assigned to the Pacific Fleet.

- *USS Constellation* (CVA 64)—Commissioned 27 Oct 1961, this ship is in the Pacific Fleet.

- *USS Enterprise* (CVAN 65)—This first nuclear powered aircraft carrier was commissioned 25 Nov 1961 and will be transferred to the Pacific in the latter part of this year.

- *USS America* (CVA 66)—The latest attack aircraft carrier to join the Fleet, *America* was commissioned in January this year.



Sister ship *Ranger* (CVA 61) had one outstanding exception to distinguish her when she was commissioned 10 Aug 1957. The angled deck was altered slightly so that her over-all length was 1046 feet compared to the 1039 of *Forrestal*.

Another improvement, an all-welded aluminum elevator, was installed on the port side and replaced the conventional steel types on the other *Forrestal* class carriers.

Construction of *uss Independence* (CVA 62) was begun in a smaller drydock at New York Naval Shipyard. The island was not installed until she was moved to a larger dock. *Independence* was commissioned 10 Jan 1959, the fourth carrier of the *Forrestal* class to join the Fleet.

*Kitty Hawk* (CVA 63) and *Constellation* (CVA 64) essentially were designed along *Forrestal* lines, but they were developed into a separate class, the *Kitty Hawk* class. The major difference: These ships were armed with the *Terrier* surface-to-air guided missile.

The over-all fuel capacity of the *Kitty Hawks* is greater than the *Forrestals*, but aviation gasoline capacity is a little less. The angled part of the flight deck is some 40 feet longer while there is only a one or two foot difference in over-all length. The elevators and catapults have greater capacities than those on the *Forrestal* class carriers.

On 4 Feb 1958, Secretary of the Navy William B. Franke announced that the world's first nuclear powered aircraft carrier would be named *Enterprise* (See page ). That same day her keel was laid.

Right from the first, the designers and builders appeared to have hit the jackpot. For the first time the customary builder's trials of a major combat ship were eliminated, and the ship was presented to the Navy for acceptance trials on her first trip to sea. Six days later, after she had made a clean sweep of the trials, *Enterprise* returned to Newport News with a giant broom attached to her masthead. She was commissioned 25 Nov 1961 at Norfolk.

*uss America* (CVA 66), commissioned on 23 Jan 1965, and the most recent carrier to join the Fleet, is expected to lead the way to continued freedom of the seas. This carrier will be followed by *uss John F. Kennedy* scheduled to be launched as CVA 67 in 1967.

—John Ramsey, JO1, USN

## The ABC's of Navy Carrier Designations

In July 1920, while *uss Langley* was being converted from a collier, she was designated CV—aircraft carrier first line. But after 1931, the designation CV simply meant aircraft carrier.

By the time the U. S. entered World War II, carriers were generally in two sizes. To distinguish the smaller carriers from the larger ones, the Navy assigned the classification CVL—light aircraft carrier—to the smaller ones. As the war continued, larger carriers were built, and on 15 Apr 1945 the large aircraft carrier designation (CVB) came into existence. Thus by the end of the war there were three classifications for carriers—CVL, CV and CVB.

On 1 Oct 1952 all CVs and CVBs were changed to CVA, attack aircraft carrier. Antisubmarine support aircraft carrier (CVS) became a new designation in July 1953 and applied to those attack carriers assigned to ASW.

The last of the light carriers, *uss Saipan* (CVL 48) was decommissioned on 30 Dec 1957. The CVL designation was stricken from the register when, two years later, the classification of four support carriers and seven light carriers was changed to auxiliary aircraft transport, AVT.

During World War II another type of carrier came into existence, the escort or jeep carrier. There was

always a need for planes and personnel overseas. And when a landing force went ashore, air support was needed until an airstrip could be built. The escort carriers supplied this support.

This type of ship began as aircraft escort vessel, AVG, and was first assigned 31 Mar 1941. The classification was changed to auxiliary aircraft carrier, ACV, on 20 Aug 1942, and on 15 Jul 1943 they received the familiar term CVE, escort aircraft carrier.

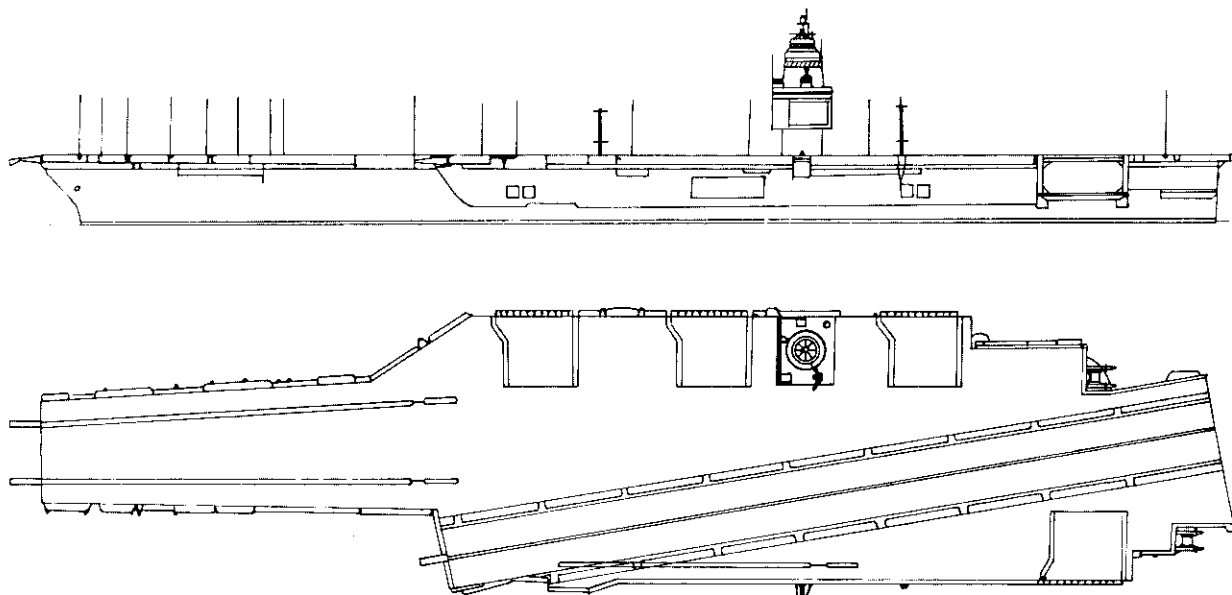
After 12 May 1955 some CVEs received the designation utility aircraft carrier (CVU, and others, escort helicopter aircraft carrier, CVHE). In July of that year *Thetis Bay* (CVE 90) became CVHA 1, and was the first move in the eventual disappearance of escort carriers from the Fleet. On 7 May 1959, 38 escort carriers (CVE, CVU and CVHE) were changed to cargo ship and aircraft ferry, AKV.

The first amphibious assault ships to be in commission were *uss Boxer* (LPH 4) and *Princeton* (LPH 5); both received their new classification from CVS in January 1959. *uss Thetis Bay* became LPH 6 in May of that year, followed by *Valley Forge* (LPH 8) in June 1961. Although *uss Iwo Jima* (LPH 2) and *Okinawa* (LPH 3) were not commissioned until 1961 and 1962, they were authorized before the older ships were reclassified.

VOICE OF COMMAND—*USS Wright* (CC 2), a former carrier, CVL 49, carries the most extensive communications facilities ever aboard ship.



# Nuclear Carrier Enterprise



IN SEPTEMBER 1960, the nuclear-powered attack aircraft carrier *Enterprise* (CVAN 65) was christened, but when she moved out of her dry dock at Newport News, she still had a long way to go before she would be ready to join the Fleet. Ahead were many months of sea trials and putting on the finishing touches.

In October 1961, she finished her initial phase of sea trials. With her commissioning the following month, the long-awaited event was achieved—the blending of the strike power of jet aircraft and missiles with the nearly unlimited cruising range and staying power of nuclear propulsion.

*Enterprise* is the second Navy surface ship to be nuclear powered. The guided missile cruiser *Long Beach* (CGN 9), placed in commission in September 1961, was the first. The guided missile frigate *Bainbridge* (DLGN 25) became the third when she was commissioned in October 1962. A fourth, the frigate *Truxtun* (DLGN 35), will be commissioned sometime in early 1966.

As the world's largest warship, *Enterprise* is 1101 feet long, 252 feet across the flight deck, and displaces 85,000 tons.

Eight pressurized-water nuclear power plants enable *Enterprise* to operate for extended periods. (After steaming nearly 200,000 miles, the carrier, for the first time, is now be-

ing refueled in Newport News, Va.) In combination, her eight reactors constitute the largest U. S. nuclear installation ashore or afloat.

A few of the more tangible assets which nuclear propulsion provides for *Enterprise* include:

- Logistic support requirements are sharply reduced; her aviation fuel capacity is hundreds of thousands of gallons greater than that of conventional carriers, which must use much of the tank space to carry bunker oil for their engines.

- She is capable of sustained high speed, making her less vulnerable to submarine attack.

- Since stacks aren't needed, more electronic gear was installed. In addition, it is possible to close the ship more completely when under attack, thus reducing danger of atomic radiation to the crew. (Fire-rooms aboard conventional carriers depend upon outside air for operation and make it impossible to completely seal the ship in case of nuclear, biological or chemical attack.)

- With the elimination of stack gases, air turbulence is greatly reduced in the landing approach area. Such gases have created problems aboard conventional carriers when operating high-performance aircraft.

- Along with her greater endurance and speed, the carrier's strategic and tactical flexibility is greater because she does not have to depend

upon the frequent resupply of fuel.

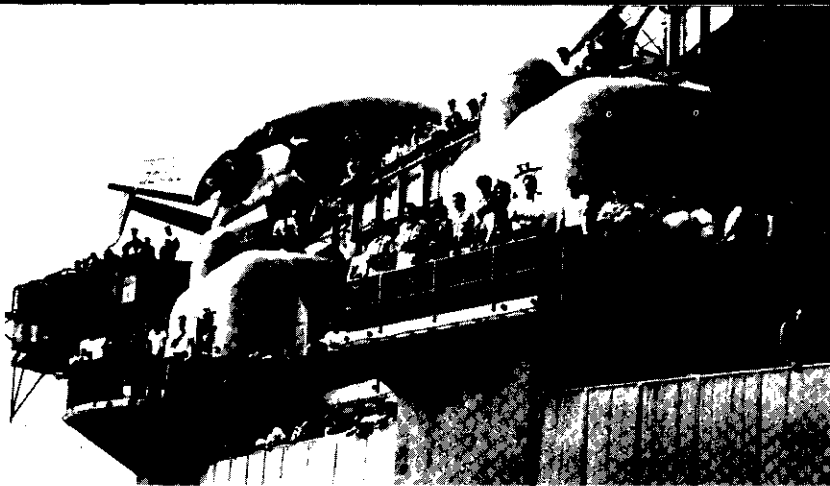
All this was demonstrated when *Enterprise*, *Long Beach* and *Bainbridge*, forming nuclear Task Force One, sailed around the world on Operation Sea Orbit. Before leaving the Med, all three ships had taken on provisions and did not do so again until they reached the east coast of the United States.

Although an operation such as Sea Orbit would, theoretically, be child's play for nuclear powered vessels, the Navy wanted to be sure no unforeseen complications would arise during a long cruise by such ships.

Sailing around Africa, Task Force One made its first in-port visit at Karachi, West Pakistan. From there, it went to Australia, New Zealand, around South America and home. Sixty-five days and 30,000 miles after Sea Orbit had begun, the three ships pulled into Norfolk.

The modern attack carrier is a mobile floating base for aircraft. Planes taking off from her deck, armed with air-to-ground and air-to-air missiles, can deliver either conventional or nuclear-tipped weapons.

Add the facts we've already mentioned—*Enterprise* can move these aircraft near any trouble spot and keep them operating for much longer stretches without stopping operations to replenish and refuel—and you get some idea of the firepower such a ship is capable of delivering.



THE GALLERY—Rangermen watch ship's divers during helicopter recovery.

## Ranger Rescues an Angel

**S**HARKS have never been noted for their sociable tendencies, and most people make it a practice to avoid their company. But then, a guy can't always have life's little niceties.

A while back *uss Ranger* (CVA 61) was operating in the South China Sea when one of her helos had a little bad luck and ended up in the drink. The crew, all uninjured, were soon rescued by another *Ranger* angel. This left the helo bobbing upside down, suspended just below the surface by its emergency flotation gear.

Helos are worth quite a sackful of money, and though this one was a bit soggy it did not appear damaged beyond repair. Then too, the Navy would be very curious as to why the accident happened. So, when the crew members were safe aboard *Ranger*, salvage operations began on the copter.

*uss George K. MacKenzie* (DD 836) was the first ship on the scene. As she neared the downed bird a diver was sent out to bend a line onto the plane's tail wheel, which was conveniently protruding from the water.

In the meantime three of *Ranger's* explosive ordnance disposal divers had been down below climbing into their swimming gear and were now standing by. When the carrier arrived the divers entered the water and passed the helo's line to 40 *Rangermen* who pulled the bird alongside the number four elevator. They also inflated three life rafts inside the helo, making extra sure it wouldn't sink. Then, being very careful to avoid the sharp edges of the broken blades, they attached a manila line to the main rotor head.

*Ranger* Navymen on the hangar deck then attempted to right the helo by the old heave-ho method but, as it turned out, the sailor-power technique just couldn't cut the mustard. The operation was abandoned by the exhausted white-hats and the helo rolled a few degrees to its original position.

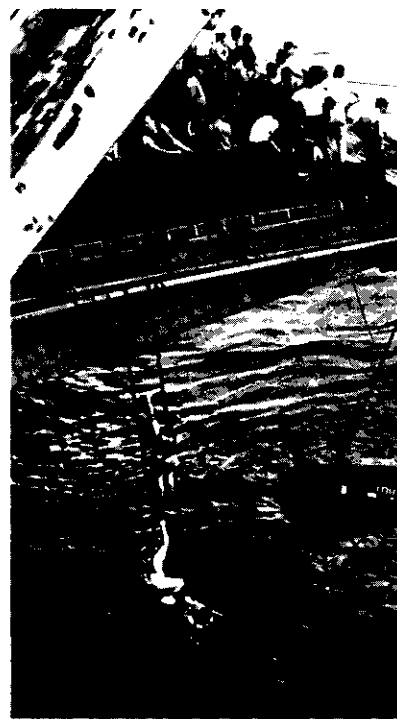
**W**HILE ALL THIS was in progress a large crowd of catwalk superintendents had gathered and were taking in the action. Generally speaking, working types ignore kibitzers completely, since they can seldom offer anything constructive. But every rule has its exceptions. "Shark!" Someone hollered from a gun tub.

At precisely that moment the three divers were in the process of attaching a wire rope to the rotor head. While Marines discouraged the sharks with rifle fire the divers finished their job in a remarkably short time and scrambled back up the rope ladder to the elevator.

All three breathed a sigh of relief, happy to have *that* job over and done. They stood, dripping wet, and watched while the wire was attached to the boat crane winch, the winch began to spin, and the wire rope snapped.

This was obviously one of those days. There was nothing for it but to go back in the water and do the whole thing over again. While the Marines checked their weapons, the divers climbed back down the ladder. This time they intended to attach several cables. Heavy duty cables. Enough was enough.

No sooner had the divers entered the water than one of their finny friends appeared. The ropes were



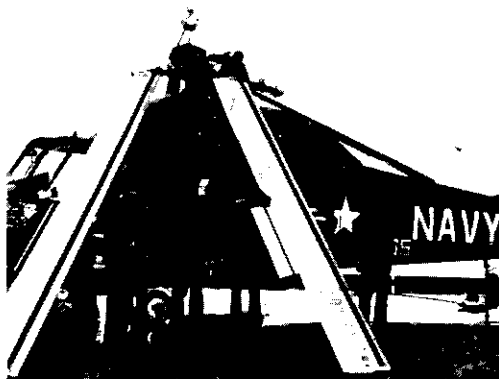
TO THE RESCUE—Divers descend ladder to attach rope to rotor head.

attached in record time, but not before the Marines had driven off three interested sharks. Finally, the divers scrambled back aboard.

This time, when power was applied to the boat crane winch the helo slowly rolled over. Water poured out as she was lifted up. When the bird reached the hangar deck level a helo mechanic climbed aboard and dropped the landing gear. Three hours after the crash, the helo was back aboard.

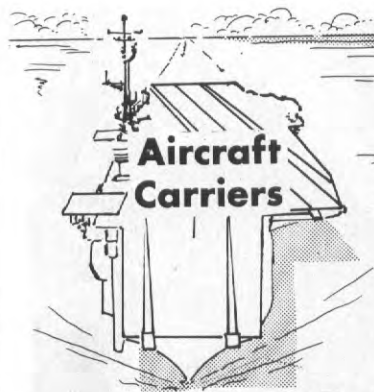
A tip of the whitehat to the *Ranger* divers, Ensign Dennis P. Rejda, Chief Torpedoman's Mate Gerald C. Evans and Aviation Structural Mechanic First Class Jay C. Irving, for a fine job.

COPTER rests on the elevator.





# Ships and Planes



**Aircraft Carriers**



CVA 59 Class—USS Forrestal



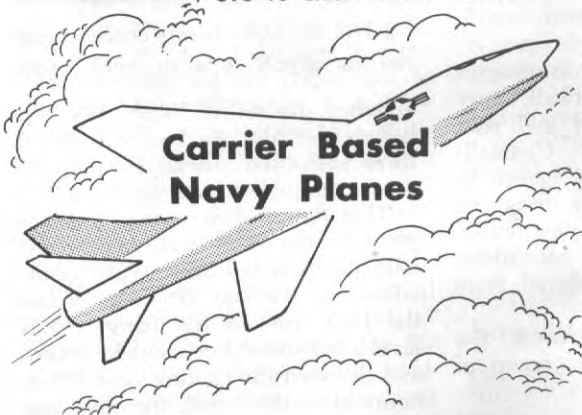
CVAN 65 Class



CVS 10 Class—USS Yorktown

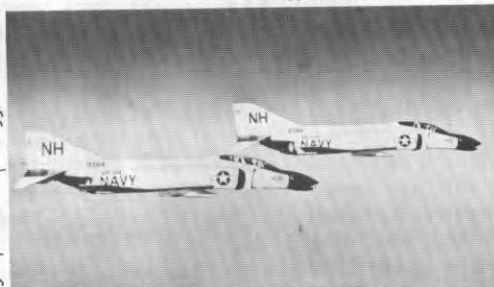


CVS 11 Class—USS Intrepid



**Carrier Based Navy Planes**

Note: For simplification, series numbers of most models have been omitted.



**F-4 PHANTOM**  
Two-seated interceptor and attack bomber



**RA5C**  
Two-seated Navy



**F-8 CRUSADER\***  
All-weather fighter



**A-1 SKYRAIDER\***  
Prop-driven attack plane



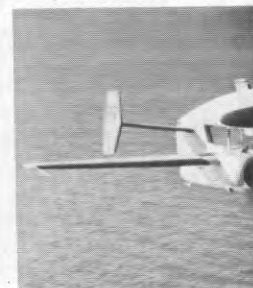
**E-2A**  
All-weather early



**C-1 TRADER**  
Utility aircraft for supplies and personnel



**A-4 SKYHAWK**  
Single-seated light attack bomber

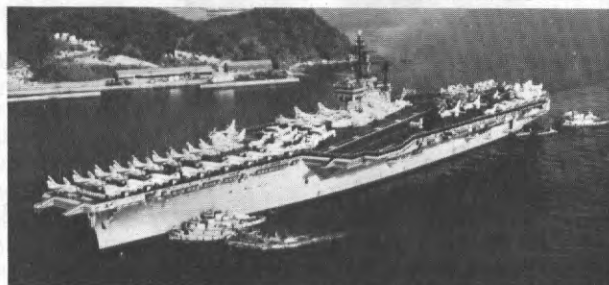


**E-1B**  
Early warning

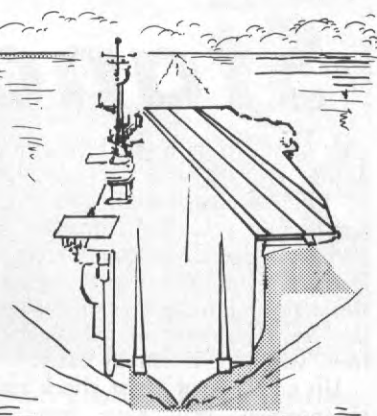
# of the Carrier Navy



—USS Enterprise



CVA 63 Class—USS Kitty Hawk



CVA 19 Class—USS Hancock

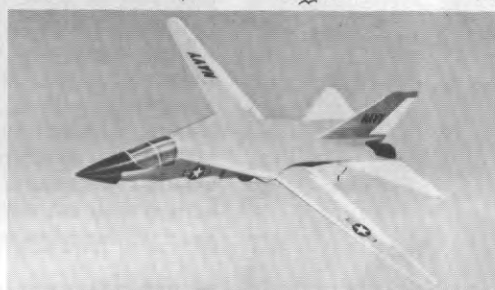


CVA 41 Class—USS Midway

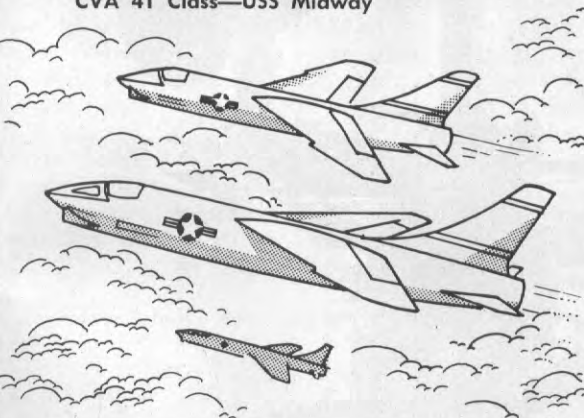
\* Being phased out.



**VIGILANTE**  
reconnaissance aircraft



**F-111**  
Proposed all-service interceptor/bomber



**HAWKEYE**  
warning aircraft



**A-3 SKYWARRIOR\***  
Heavy attack bomber



**A-7**  
Proposed light attack aircraft



**TRACER**  
Navy aircraft



**A-6 INTRUDER**  
Two-seated all-weather attack bomber



**S-2 TRACKER**  
Four-seated submarine search and attack plane



# Stand By to Launch

IT'S GOING to be a great day for flying.

"Flight quarters, flight quarters, all hands man your flight quarters stations." It doesn't matter which carrier you're on. The words are much the same and the boatswain has made the announcement many times before. The hour is usually early.

Up on the roof night check maintenancemen, who have spent the dark hours with their birds, close up tool boxes and head below to chow down and sack out.

The flight deck is quiet. High above the roof, jutting out from the after section of the island, the pri-

mary flight control booth is vacant. A few sleepy-eyed seamen are out for a stroll in the fresh air. They won't be there later.

It's going to be a great day for flying.

**A**IRDALES appear on deck. Flight quarters is called 90 minutes or so before the first launch, so there is no great rush. Everyone has time to tap the coffee pot.

They wear colored jerseys, either red, green, blue, brown, white, yellow or checkered. If you know the code you can tell their specialties and position on deck at a glance.

Just now, most are bareheaded, their Mickey Mouse sound helmets swinging from their belts.

On the flight deck forward a handful of greenshirts snake out catapult bridles between the almost parallel shuttle tracks. After secure last night an intrepid young lad in a safety harness crawled out on the horns to retrieve the bridles which accumulated during yesterday's launches.

There are also two catapults back on the angle deck, but they won't be used this morning.

The green, cat-crew jerseys are stenciled with large C's, front and back. This distinguishes the men from the green shirted arresting gear crew, who are identified by an A, and squadron maintenancemen, who wear green with a wide black vertical stripe.

Scattered here and there about the flight deck are petty officers and officers in yellow jerseys. Regardless of their rate or rank, they are the elite of the flight deck corps. The commissioned types are the honchos—the Catapult Officer, Flight Deck Officer, Aircraft Handling Officer and assistants. The noncommissioned types are plane directors, usually rated aviation boatswain's mates who have earned their exalted positions through years of experience.

**D**URING air operations a signal from a man in a yellow jersey is an unquestionable order, obeyed explicitly by everyone from the senior pilot down to the greenest airman deuce. And if the senior pilot disagrees with a signal he'll argue the point later.

A Corpsman, decked out in a white jersey with a red cross, stands by beneath the big BEWARE OF PROPS AND JET BLAST sign on the island. Nearby, another Navyman is climbing into an asbestos hot suit. Sobering.

A few blueshirts may also be seen, though most are below. Many of the plane directors began their careers wearing blue. Down on the hangar deck, where there is no room for



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**SLOT MACHINE**—Cat men, USS Hancock (CVA 19), attach bridle to Skyhawk as the steam pressure is built up.



# Aircraft

tractors, they pushed aircraft, carried chocks and heavy chain tie-downs, and generally did what they were told by a hangar deck yellowshirt. Later on, a little older and much saltier, they moved to the blue shirt gang on the flight deck. Then, one day, they traded the blue jersey for yellow.

**L**AST NIGHT, when air ops were secured, the birds were spotted on deck in preparation for the first launch. Two F4B *Phantoms* are now positioned over the cats and will be the first to go this morning. More aircraft are lined up behind the catapults: They will go next. A4E *Skyhawks* are lined up wingtip to wingtip along the angle deck, their blackened tail pipes extending over the side. A pack of A1H *Skyraiders* are back aft. A big RA-5C *Vigilante* is spotted in the patio between the number three and four elevators.

Redshirted Navymen drag heavy hoses across the deck as they fuel the birds for launch. When each aircraft is fueled the crew carefully records the number of pounds used. The figure will later be used to compute the total weight of the bird for cat shot.



**READY AND WAITING**—Pilot gets set to go during seconds before launching.

On or near each plane is a brown-shirt, a plane captain. Unlike the flight deck red, blue, green and yellowshirts, the brownshirt is not a member of the ship's company. He is attached to a squadron in the embarked air wing. As a line crewman, he is assigned one aircraft.

His bird is his responsibility. When it flies, he preflights it. When a corrosive accumulation of salt builds up on the plane, he washes it. He sees it is securely fastened to the deck with at least nine chain tiedowns. When it is moved, he sits in the cockpit and rides the brakes. During flight quarters he may leave it only if relieved by another brownshirt. When there's a lull, it is completely permissible for him to grab 40 winks . . . providing he curls up in the cockpit or on the wing.

A squadron Navyman usually receives his first flight deck experience as a brownshirt. Before coming aboard ship he is sent to airman's school, then goes through a shore-based training period with his squadron. Usually non-rated, the plane captain is supervised by an experienced line petty officer, generally either a chief or first class.

After a cruise or two topside the brownshirt makes rate and, like the blueshirt, trades his jersey for one of a different color. Then, as an experienced airdale, well aware of the idiosyncrasies of flying machines, he will be transferred to one of the squadron's maintenance shops.

**T**HE AIR WING on board most deployed attack carriers consists of six squadrons plus several splinter

**THAR SHE GOES**—Catapult officer has just signaled and an A1 *Skyraider* streaks down cat on board *USS Ranger*.

