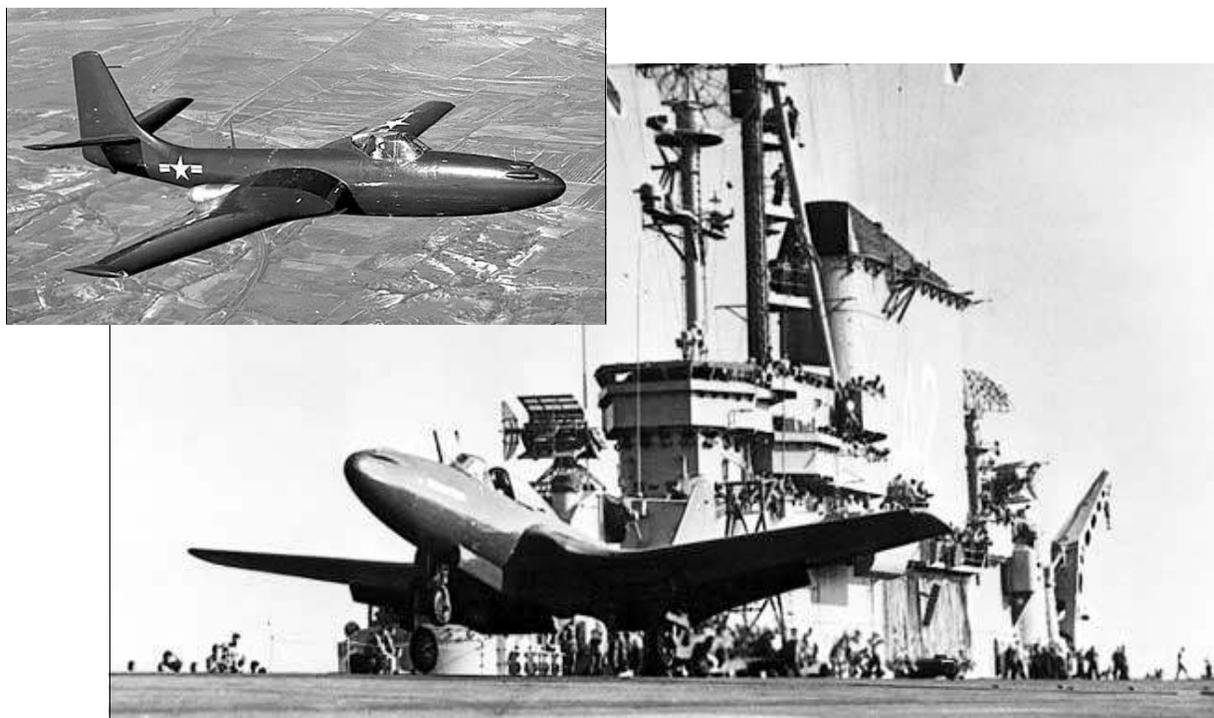


# THE MIDWAY-CLASS CARRIERS: FIRST FOR THE ATOMIC AGE

[PART II]

## THE THREE SISTERS WIN LAURELS FOR RECORD-SETTING FEATS

Early in their careers the *Midway-class* established a memorable roster of 'first.' In addition to being the largest warships yet built for the U.S. Navy, they were the first new warships too wide to transit the Panama Canal; thereby having to trek around the Cape of Good Hope to reach the Pacific stations. The first American carriers to boast armored flight decks; their immense hangars were longer than two pre-war destroyers placed bow to stern - 692 feet long by 85 feet wide. Much later, *MIDWAY* was also the first carrier to be home-ported outside the continental United States - at Yokosuka, Japan.



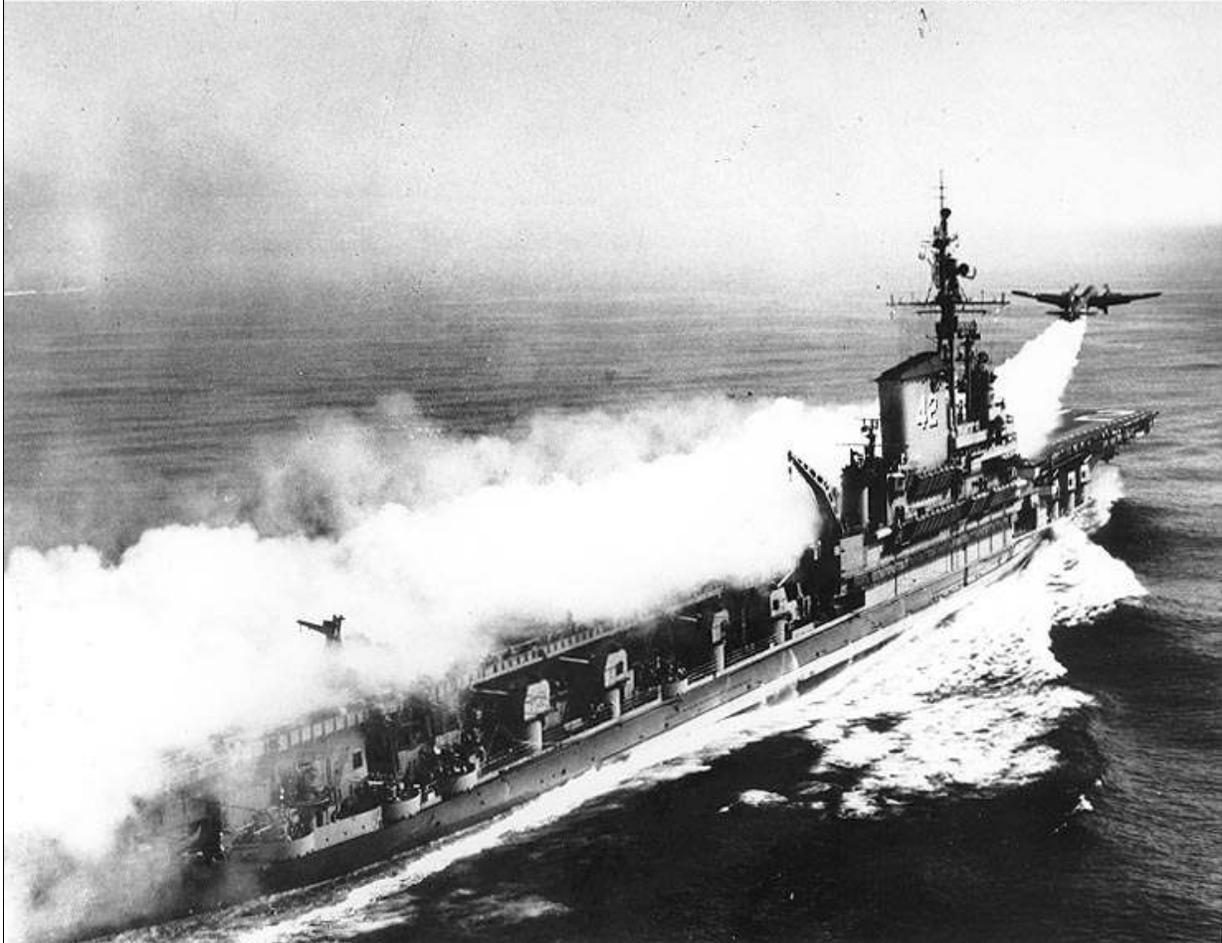
**XFD-1 Banshee [first pure-jet fighter] landing on the *ROOSEVELT*.**

An impressive indication of naval aviation's future was demonstrated aboard the *FRANKLIN DELANO ROOSEVELT* on 21 July 1946 when a prototype XFD-1 Banshee made history as the first pure-jet fighter to land on any carrier. Sister *MIDWAY* shortly earned laurels on her own in September 1947; the first moving platform to fire captured German V-2 missiles from her deck. During the early stages of the Vietnam War in mid-April 1965, *MIDWAY*'s aviators scored another memorable 'first'; downing the first three MiGs credited to US forces in Southeast Asia. Not to be outdone, *CORAL SEA* kept up with her pace-setting sisters when a Lockheed P2V Neptune set a record all-up 74,000-lb. gross weight take-off from her deck on 7

March 1949. A year later *CORAL SEA* was the first carrier to test-land the A-bomb-carrying AJ-1 Savage. Still later in her career she was the first ship to operate the famed Vietnam-era F4H Phantom.

Determined to develop a carrier-based nuclear strike capability the Navy modified twelve Lockheed P2V Neptunes to carry the 9,000-lb. Long-range patrol bomber clear the deck with JATO-assisted rolling takeoffs. Unable to be launched by the ship's hydraulic catapults because of the aircraft's weight, the P2V's wingspan barely cleared the 'island' during its takeoff run.

Photo # 80-G-629296 JATO launch of a P2V from USS Franklin D. Roosevelt, July 1951



A 'make do' aircraft modification too heavy to land on the *Midways*, the P2Vs turned in impressive performances flying up to 4,880 miles on mock 'A-bomb' runs. Soon replaced by the more suitable folding-wing AJ-1 Savage, the Navy nevertheless proved that its carriers had nuclear delivery capability.

### REFITS KEEP PACE WITH THE INCREASED REQUIREMENTS OF JET AIRCRAFT

The first two years of operations revealed several shortcomings which were progressively addressed with refits and modifications to maintain the trio's first-line assault carrier status. In

1947/48 their flight decks were reinforced to accept the landing weight of the new 45,000-lb. twin-engined, jet-augmented AJ-1 Savage. At this time the process of reducing wartime armament began when four of their eighteen five-inch/54 DP guns were removed. Also begun was the gradual replacement of 40mm Bofors with twenty new three-inch/50 fast-firing semi-automatic AA guns. Since the *CORAL SEA* was commissioned without 40mm armament she was the first to receive the new three-inch mounts. During this evolution all 20mm guns were removed.

The harsh test of rigorous steaming soon revealed several other deficiencies which could not be ignored. Slippers complained that the *MIDWAY*'s bridge area was too cramped. This was corrected during construction by extending the island structure on the *CORAL SEA*, and retrofitting enlarged areas to the *MIDWAY* and "*FDR*" during overhaul. These changes also afforded better placement of the gun directors. Later, the trio would be fitted with 'hurricane' bows that enclosed the forward flight deck and hull.



New "Hurricane bow"

Amazingly, for accommodation was so crowded in that the man on top of the unable to roll over without Ventilation was poor; blower noise so irritating that a 1947 investigation by the General Board reported: "These conditions could seriously impair fighting efficiency in combat, and become a serious deterrent to re-enlistments in the regular Navy...." Officers fared little better; with no privacy in the heads, nor was basins in staterooms.

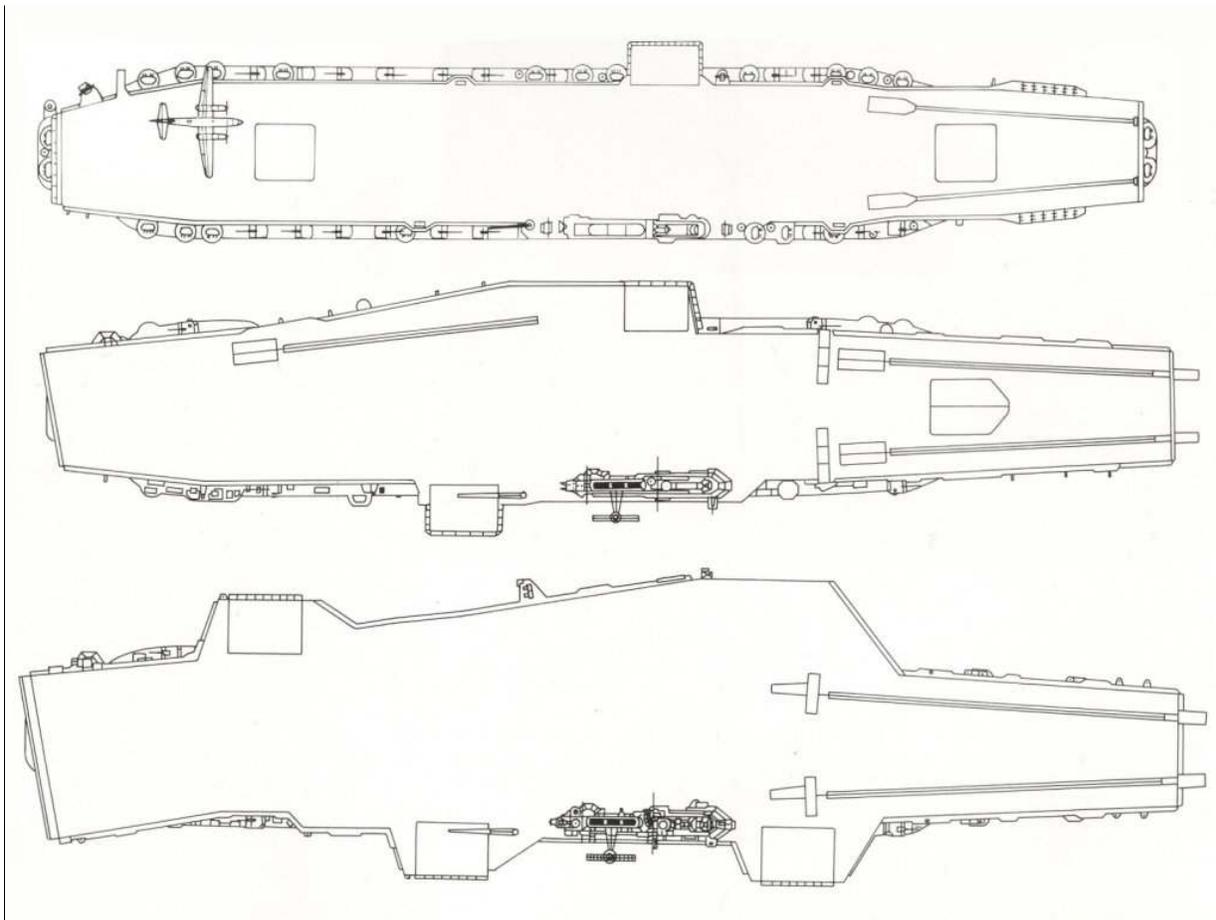
Old bow....

ships their size, crew considered abysmal. berthing compartments four-tier bunks was snagging the overheard.

While one could assume postwar crew size might be reduced, the opposite was true with the *Midways*. New weapons systems like the Regulus I, added in the 1950s, provisions for

atomic bomb stowage and assembly, and the increased complexities of jet aircraft maintenance increased crew size to more than 4,100, of which 1600 were air group personnel. Problems of habitability were never fully rectified. By 1990, *MIDWAY*'s total complement had risen to 4,328 officers and men in all. Lucky by that time most interior spaces had received air-conditioning.

While the gradual removal of armament helped to curtail the burden of excessive weight, the advent of the canted carrier deck not only added additional tons of displacement, but became a serious factor in stability. Built as axial, or straight-deck carriers, the problem of cycling and spotting aircraft for either launching or recovery operations remained a detriment to combat efficiency since only one function could be performed at a time. The angled flight deck, pioneered by the British, changed all that.



The transformation of the three sisters....the top 'flight deck' is what they started with....and eventually they ended up with the bottom decking....almost four acres of operating area.

In May 1954, the *FRANKLIN DELANO ROOSEVELT* became the first of the trio to begin a major modernization program. Tons of belt armor and eight of its 18 five-inch guns were removed to accommodate the new angled flight-deck, enclosed bow, and increases in aviation fuel bunkering from 350,000 to 450,000 gallons. At this time new C-11 steam catapults were installed along with stronger arrestor gear. Relocated at the deck's edge for greater handling efficiency, larger elevators were installed. New radar/ECM arrays and supporting structures

rounded out the improvements, all of which raised FDR's original displacement from 47,387 tons to 51,000 tons standard; 63,400 tons deep load. With its flight deck now 272 feet wide, aircraft capacity fell to a mix of about 80 F8Us, F3Hs, A-3Ds and ADs.

Sometimes referred to as 'battle' carriers, the designation CVB actually stood for 'Big' rather than 'Battle' in naval parlance. In October 1952 the Navy adopted new classifications for many ships with the result that the three CVBs were re-designated CVA - 'A' for 'attack.' On 30 June 1975 the classifications were again changed; the *Midway*-class now designated CV, which they retained for the rest of their service life.

The years 1956-60 saw the *MIDWAY* and *CORAL SEA* undergo even more extensive modification programs. With minor variations in catapult, elevator capacity and arresting gear upgrades, these improvements provided years of extended service life. The net result was more efficient flight decks offering nearly four acres of operating area for the still larger aircraft joining the Fleet. Yet, despite this updating, hangar restrictions made the *Midways* incapable of operating the celebrated F-14 Tomcat and S-3A Viking.

### FOND FAREWELL TO THE USS *FRANKLIN DELANO ROOSEVELT*

After three decades of virtually continuous steaming the "FDR" was seriously showing her age. As newer, larger carriers were commissioned to replace the fast disappearing *Essex*-class, the "FDR" became something of a dinosaur unable to keep up with her own sisters. Long troubled by her General Electric Main powerplants (*MIDWAY* and *CORAL SEA* had Westinghouse units), the burden of excessive compartmentization, and with hangar ceilings too low for many of the large new aircraft, "FDRs" usefulness became increasingly limited. Mid-1960s budget constraints eliminated the "FDR" from extensive further modifications afforded *MIDWAY* and *CORAL SEA*, making her the least capable of the trio. However, "FDR" was given a scaled-down refit in 1968 that saw her centerline elevator removed and one added in front of the island. At this time her five-inch battery was reduced to four guns; the three-inch/50s shipped.

For all of her problems, the *FRANKLIN DELANO ROOSEVELT* went on a short tour of duty off Vietnam late in 1966. Proudly serving another ten years, severe post-Vietnam cutbacks reduced the funds available to refit aging warships. Her fate sealed by the rigors of long service in peace and war, the decision was made to retire *FRANKLIN DELANO ROOSEVELT* from the Atlantic Fleet. Decommissioned in 1977, she was broken up for scrap the following year, a noble warrior like her namesake, laid to rest with honor and deep appreciation.



The USS *FRANKLIN DELANO ROOSEVELT* (CVB-42)...Photo taken very near her last days of service....a proud and tired lady she was!!

*MIDWAY* and *CORAL SEA* undauntedly steamed on. Further modified in the late-60s, and then again in the mid-80s, *MIDWAY*'s flight deck was lengthened to 979 feet, new elevators installed capable of handling 100,000 lbs., along with improved C-13 steam catapults. At this time, hull bulges had to be added to create additional buoyancy to compensate for the increased tonnage. However these ungainly appendages seriously effected *MIDWAY*'s stability. During sea trials in 1986, excessive rolls in moderate seas took green water over her flight deck, thereby hampering flight operations. A 1988 Senate committee, outraged by the inept modifications carried out in the Japanese shipyard, voted to retire *MIDWAY* early as a cost-saving measure. However, after considerable Navy lobbying the committee was overruled, with \$138 million voted to remedy her stability dilemma.

While the *MIDWAY* saw only eight months of combat operations off Vietnam in mid-1965, the *CORAL SEA* made several combat deployments to SoWesPac. In 1977 she was employed as a training carrier, but returned to the status of a back-up assault carrier in 1979. Time, dogged service, and increasing obsolescence also caught up with the much honored *CORAL SEA*. Stricken from the active ship roster on 30 April 1991, *CORAL SEA* was decommissioned and laid up in reserve. Despite several attempts to save her as a memorial warship, she was broken up.

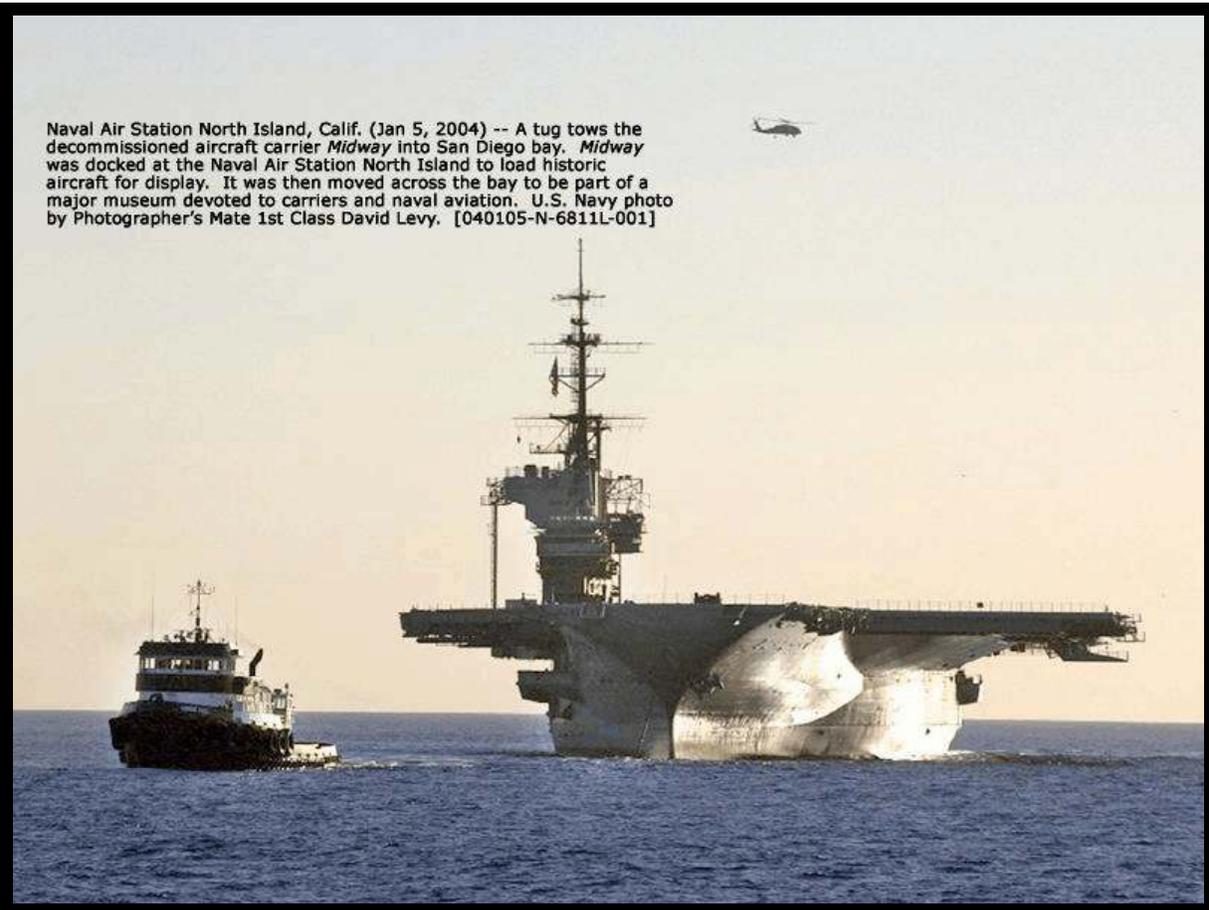


This photo of the USS *CORAL SEA* (CVB-43) was taken just a few days before de-activation and stripping at Norfolk.

## TWILIGHT FOR THE *MIDWAY*

Class leader and sole class survivor, *MIDWAY* ended her long career providing considerable support to air operations during the 1992 Gulf War. Recipient of the most upgrading of any in the trio, and having served slightly longer as well, *MIDWAY*'s distinguished career came to an abrupt end with the naval down-sizing that followed the collapse of Soviet Russia.

*MIDWAY*'s last combat action in 'Desert Storm' was the most intense of her career. Arriving in the Persian Gulf early in November 1990, *MIDWAY*'s air wing dropped 1500 tons of ordnance on Iraqi targets and flew more than 4,000 sorties before returning to Yokosuka. Last operating three squadrons of F/A-18 Hornets and two A-6 Intruder squadrons, plus one SH-3H Sea King helicopter squadron, *MIDWAY* carried only three 20mm Mk-16 Phalanx CIWS and Sea Sparrow missiles for defense when she retired shortly after returning from 'Desert Storm.' During *MIDWAY*'s voyage back from Japan - home port from 1973-1991 - *MIDWAY* evacuated thousands of US dependents from Subic Bay following the eruption of Mount Pinatubo. Decommissioned 11 April 1992, *MIDWAY* was mothballed and placed in reserve.



USS *MIDWAY* (CVB-41)..She gave her best....now it is time to rest.

Best remembered as the only carriers able to usefully operate sophisticated new aircraft and weapons systems in the late 1940s, the three *Midway*-class sisters proved their worth time

and again.

For all their faults they were not only guinea pigs for all manner of naval testing, but indomitable warships that did more than their share of keeping the peace during the 40-year 'Cold War.' Untold tens of thousands of sailors and airmen cut their eye-teeth serving aboard these pace-setting warships. Though *MIDWAY* was the only one of the trio to be modified to the equivalence of modern carriers, sisters *FRANKLIN DELANO ROOSEVELT* and *CORAL SEA* also well-deserve their place in the annals of great American fighting ships.

END

