# EVOLUTION OF THE ESCORT CARRIER ( CVE )

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1993 Book: **ESCORT CARRIERS of the U.S. NAVY**

In March of 1941 the US Navy purchased the ***MORMACMAIL*** and the ***MORMACLAND*** - two standard C3 type, diesel - powered merchant ships - for conversion to smaller - sized Aircraft Carrier use. The possible purposes proposed were limited: aerial surveillance of ship convoys; location of submarines -- German or Japanese or otherwise; and the smoke - bomb marking of submarine locations.

In three short months at Newport News, Virginia, the ***MORMACMAIL's*** conversion was completed by June 2, 1941. It was renamed the ***LONG ISLAND*** (AVG -1), our first Escort Carrier.

Over 125 such ships would be converted or built before World War II came to an end and the last U - Boat or Japanese vessel sunk. These Escort Carriers would play a significant role in the winning of that war at sea and on the shore.

Fleet Admiral Chester W. Nimitz was to write of them in a letter, 24 September 1945:

> *"The story of the escort carriers is like a story with a surprise ending. When the United States began to build them, there was a definite purpose in view – fighting off submarines and escorting convoys. But as the war progressed, the small carrier demonstrated surprising versatility. It became a great deal more than its name implies. From a purely defensive measure, the escort carrier emerged as an offensive weapon."*

In its original conception, then, the escort carrier -- CVE -- could sail with a convoy of merchant vessels, and chase down the U - boats which were "shadowing" the convoy -- waiting to move in for a kill. From there it would evolve into a defensive weapon in the

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earlier stages of an amphibious landing where its aircraft could provide air cover for the troops and equipment going ashore, then watch over them until an airstrip was built.

A third use to which CVEs were put was as aircraft ferries -- to transport spare aircraft to Fleet carriers or to island airstrips everywhere -- for example, in the Pacific islands. And forthly, the CVEs could formidable offensive tools in sea battles. In this setting, they would also become useful in the pre-invasion bombardment to "soften" up enemy positions -- say on North Africa or Okinawa in the South Pacific.

And so before it is over, the story of these small carriers will take us around the world and back -- often in harm's way. It will leave some ships and men at the bottom of the sea. God rest them. And it will make of many -- largely unsung -- heroes.

Before we can follow the escort carriers onto the high seas, let's look briefly at their original and evolution.

In the late 1930's with Franklin D. Roosevelt as President of the United States, two aircraft carriers -- the *YORKTOWN* and *ENTERPRISE* -- were built, but argument continued over the necessity of a "flying deck cruiser." Was a smaller carrier even feasible given the demands of modern aircraft? High naval officials had come to doubt it. Helicopters were in development stage by now too, and there was serious interest in designing a vessel to host them even though the Navy had none of the aircraft, by 1940 the trend in thinking had begun to edge toward an "auxiliary aircraft carrier," and what would become the escort carrier.

It was President Roosevelt himself who got behind the project that would lead to the escort carriers. His "Lend - Lease" agreement with Britain necessitated the trans-Atlantic transportation of new aircraft for the Royal Air Force. In the Pacific, a similar need had developed where the Fleet carriers were being distracted by aircraft transport duties as well. A smaller carrier was urgently needed, then, for reasons other than convoy escort. It was time to move ahead, and President Roosevelt wanted it fast.

How important were these escort carriers to be? When the war began in 1939, only a few were thoroughly convinced that an

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aircraft carrier of any size would truly make a difference. However, by 1942 it had become the new capital ship, and the air-craft carriers of all sizes were to completely change the nature of warfare at sea as well as how amphibious invasions were conducted.

CLASS Specifications:

## Long Island Class

The *Long Island's* conversion met the President's insistence on a three month deadline. Its flight deck of wooden planks was to be 360 feet long to accommodate the SO3C Seagull Aircraft. It was to hold 16 aircraft and have only one aircraft elevator. Its top speed would be 17.6 knots. 190 officers and 780 enlisted would man it. Although it was experimental and used to train, the *Long Island* was the first such carrier to sail for us.

After the *Long Island's* trial runs, it was determined that improvements would be made on future conversions-- more hanger space, and two -- not one-- elevator were needed. For safer operation, a longer flight deck was called for--438 ft. By 79 ft.

Instead of diesel, there would be steam propulsion; and stronger antiaircraft armament was needed. There was to be a small island on the deck's starboard side. At its front edge -- and under the deck level -- was fitted a narrow bridge. The hanger and aircraft repair shops were located between the flight deck and the hull in the after half of the ship. The hanger was open at the forward end.

With these new specifications, the Navy ordered 24 merchant ship conversions to escort carriers after the attack on Pearl Harbor.

The first ten were for the U.S., then ten for the British under the Lend Lease Agreement between the two countries. Those lent to the British would later form the *Bogue* Class as we shall see below. In the end, 33 went to the British and 94 stayed under the U.S. flag. (Of the original five *Long Island* class conversions, the H.M.S. *Charger* was kept in the U.S. to train British pilots).

## Bogue/Prince William Class

All the 45 ships in this class went to the British Navy and became members of the *Prince William* class except the USS *Bogue.*

The *Prince William* was all but identical to the *Bogue* class except British arrangement of the 40 mm AA guns.

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**Here are detailed specifications from Mr. Stefan Terzibaschitsch's Escort Carriers and Aviation Support Ships of the U.S. Navy.**

***"A characteristic of this class was the enclosed aircraft hanger which extended under the wooden flight deck. Two aircraft elevators connected the hanger to the flight deck. Galleries and several sponsons were fitted to the side of the ships at the level of the main deck. . . to accommodate AA machine guns. Bogue, Card, and Core had two catapults at the forward end of the aircraft deck, while most of the other ships of the class had to make do with one."***

***"In contrast to the Long Island class which was diesel powered, steam engines were chosen for these ships. Exhaust gases were vented via small smoke ducts on both sides of the flight deck, slightly aft of amidships. If normal flight operations were envisaged, the ships could carry 28 aircraft, but there was space for up to 90 aircraft in the hanger and on the flight deck for transport purposes."***

***"The original AA armament of two quadruple 40mm mounts was later reinforced with four twin mounts, two of them at the forward end of the main deck--with the other two aft on the main deck. An average of 10 additional 20mm AA guns were also installed. A radar system was part of the basic equipment of these ships."***

## Sangamon Class

**The flight deck grew even larger -- 503 ft. By 85 ft. -- in the *Sangamon* class of escort carriers which were converted from four Navy oilers of the T3-S2-A1 type in 1942. It was larger than both the *Long Island* and the *Bogue* classes and could accommodate up to 34 aircraft. Had there been more oilers available, their design may well have become the standard for future conversions. As we shall see later, they were finished at the last minute for operations off North Africa in September of 1942.**

**This class was not only larger, but of higher performance as well. The hanger deck was enclosed. As Mr. Terzibaschitsch describes it:**

***"The engines-aft arrangement made it convenient to locate the exhaust uptakes right at the stern, where they were fitted horizontally at the edge of the flight deck."***

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*"Two catapults were fitted forward, although the second catapult was not installed until late Autumn 1944. The hull side was flat with no sponsons unlike the Bouge class. Several openings in the sides -- which was feature of this class -- provided better ventilation of the hanger."*

*"In the course of the war, some of the ships were fitted with two extra quadruple 40mm and six twin mounts, plus about ten 20mm AA guns."*

These four escort carriers were often used in combat, and at such times often operated as a team in both the Atlantic and the Pacific.

## Casablanca Class

The 50 escort carriers (herein CVEs) in the *Casablanca* class were built in 1942 - 44 in Vancouver, Washington when the President urged more were needed and ship builder Henry J. Kaiser promised he could do it quickly. These ships utilized the unfinished hulls of merchant ships of the MARCOM S4-S2-BB3 type. The first one was christened in July of 1943. None of them was lent to the Royal Navy, and all operated primarily in the Pacific.

They had one catapult and two elevators. Mr. Terzibaschitsch says that: *"A characteristic feature was the flat transom, above which the single 5"/38 gun was fitted in a gun tub. In addition, there were numerous AA mounts located under the flight deck edges, in contrast to the Sangamon class."*

He also goes on to say that apparently because of a shortage of turbine propulsion systems, reciprocating engines with two screws were installed in these ships. *"The two exhaust uptakes emerged under the flight deck on each side towards the stern."*

## Commencement Bay Class

The last class -- in size similar to the *Sangamon* -- was the last to be developed, and its designers had gained knowledge from the trials and errors and successes of the earlier classes. It was the only class which was fully "purpose-designed." With greater length, it could accommodate more aircraft.

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The lead ship -- *Commencement Bay* -- was commissioned late in 1944. 23 ships were ordered from Todd Pacific, Tacoma, Washington, and 19 were completed before the end of the war. The first was completed in 1944 and the others in 1945 which meant it had more advanced radar and other electronic equipment.

This class had steam turbine propulsion with twin screws. As for AA armament, they were fitted with *"a quadruple mount on the forecastle, two quadruples of the same caliber on the fantail, and two twin mounts on the side galleries in a superfiring arrangement."*

According to Mr. Terzibaschitsch. *"A feature of this class was the two AA mounts on the flight deck forward of the small island."*
He also goes on to point out that only a few saw action due to their late completion date, so they were used on into the 1950's, and some were reactivated for the Korean War. In fact, two were even used in the Vietnam War as aircraft ferries.

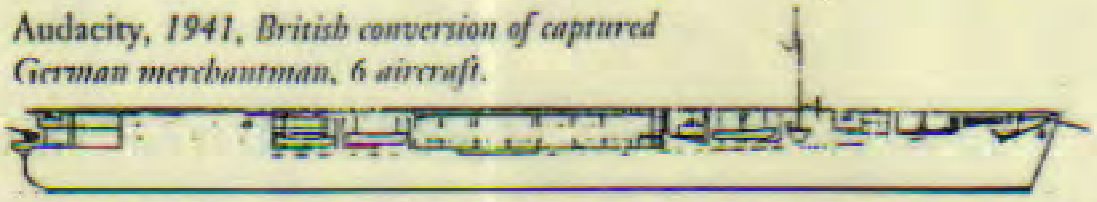
NOTE:

Additional specifications on each ship class, can be found at the beginning of each section in this album.

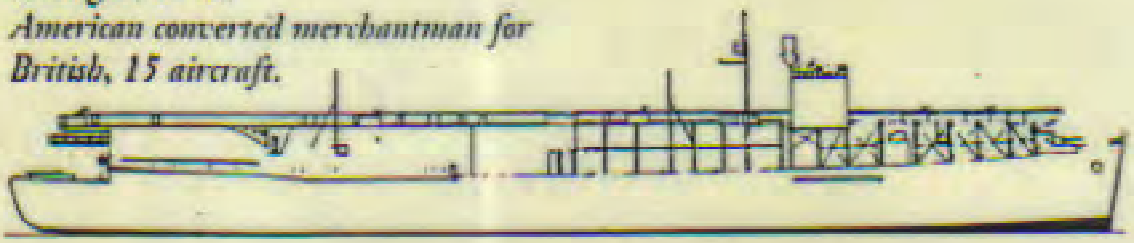
## THE EVOLUTION OF THE ESCORT CARRIER 1941–1945

*Date is completion or conversion; scale is 1/1500.*

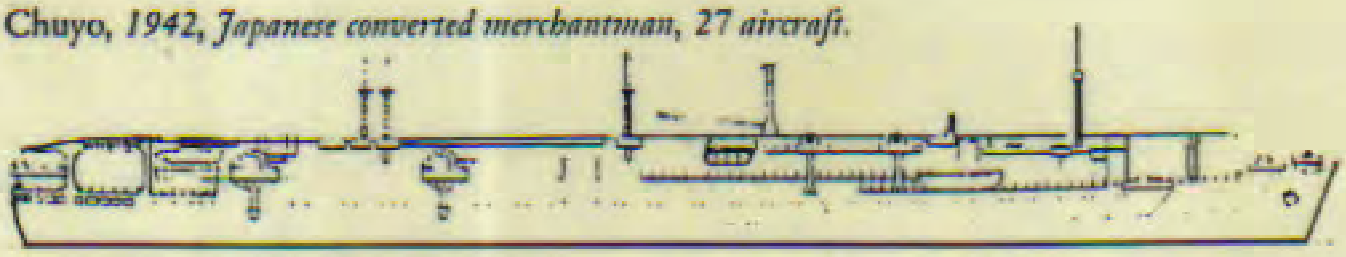
Audacity, *1941, British conversion of captured German merchantman, 6 aircraft.*



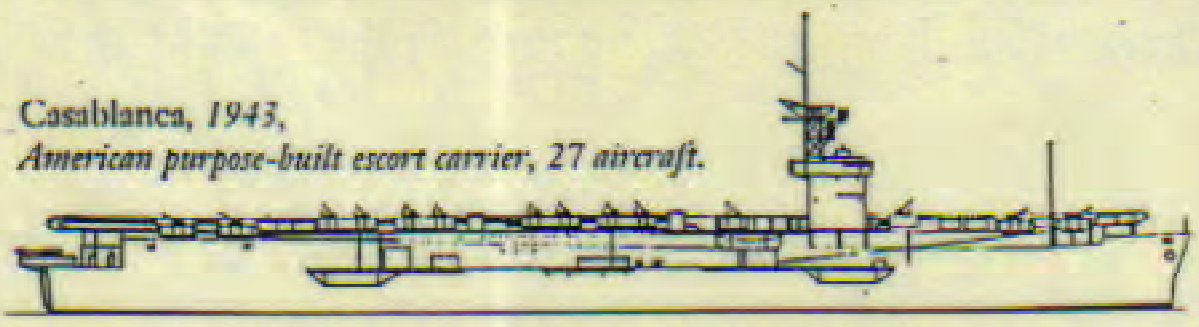
Avenger, *1942, American converted merchantman for British, 15 aircraft.*



Chuyo, *1942, Japanese converted merchantman, 27 aircraft.*



Casablanca, *1943, American purpose-built escort carrier, 27 aircraft.*



Commencement Bay, *1944, American purpose-built escort carrier, 33 aircraft.*