

XPBS-1 No. 6166

THE EXCALIBUR

By PETER BERRY

Amongst the dusty files of many aviation historians is one marked "Excalibur." Although only one military and three commercial models of this design were built by Vought-Sikorsky, their development and service are brought together here as a basis for further addition and comment.

The prototype XPBS-1 Excalibur resulted from a U.S. Navy Contract No. 42868, dated June 25, 1936, for a four-engined, all-metal high-wing cantilever monoplane flying-boat design "to explore the value of large flying boats in national defense and having a long patrol range and large military load."

Final design and construction was completed a year later and resulted in a 124-foot span, large oceangoing flying-boat, powered by four Pratt & Whitney XR-1830-68 engines of 1,050 hp, turning Hamilton-Standard, constant-speed propellers. Gross weight was 47,455 pounds, war load some 4,000 pounds over a range of 3,170 miles and Max Range with 3,600 US gallons of fuel was 4,545 miles. There were six crew members. Nose, dorsal and tail-gun turrets were featured as well as an APU powered 110-volt electrical system.

First flights were made from Housatonic Bay, by Stratford lighthouse, Conn., by Edmund T. Allen on August 13, 1937, and the prototype (BuAe. No. 9995) was delivered to Norfolk NAS on October 12, 1937.

Returned to the manufacturer in July 1938, the XPBS-1 was finally accepted by the U.S. Navy in January 1939 for development flying and special tasks.

Several of these tasks are well reported¹ and began during the time of the U.S. Neutrality Patrol being mounted by 12 U.S. Navy patrol aircraft off the East Coast of the United States from bases at Argentina, Newport, Norfolk, Charleston, Key West, San Juan, Trinidad and Bermuda.

On October 22, 1941, Lt. Norman Miller USN, of VP-51, landed at Norfolk after a patrol from Bermuda. He was assigned the XPBS-1 and began a series of special flights, transporting Congressmen to the Caribbean, escorting Winston Churchill to Ber-

muda (January 15, 1942), before flying the XPBS-1 to San Diego at the end of January to pick up a 7,500-pound load of PBY spares for the war-torn South Pacific.

After a long and rough takeoff from San Diego, and a strenuous flight of 20 hours 25 mins, the XPBS-1 arrived off Hilo, but with not enough fuel to reach the mooring buoy. Once fuel was taken aboard, the flying-boat was taken to the PanAm base at Pearl City to repair damage to engines and propellers from the heavy water takeoff at San Diego.

Before departure on the morning of January 30, 1942, a last-minute passenger was put aboard, General Patrick Hurley, carrying \$250,000 for transport to Darwin, Australia. Their route was via Palmyra, Canton Isle, Suva, Noumea and Townsville, Australia. Each water takeoff in the heavily laden boat was an adventure, with runs as long as five minutes 45 secs to get airborne.

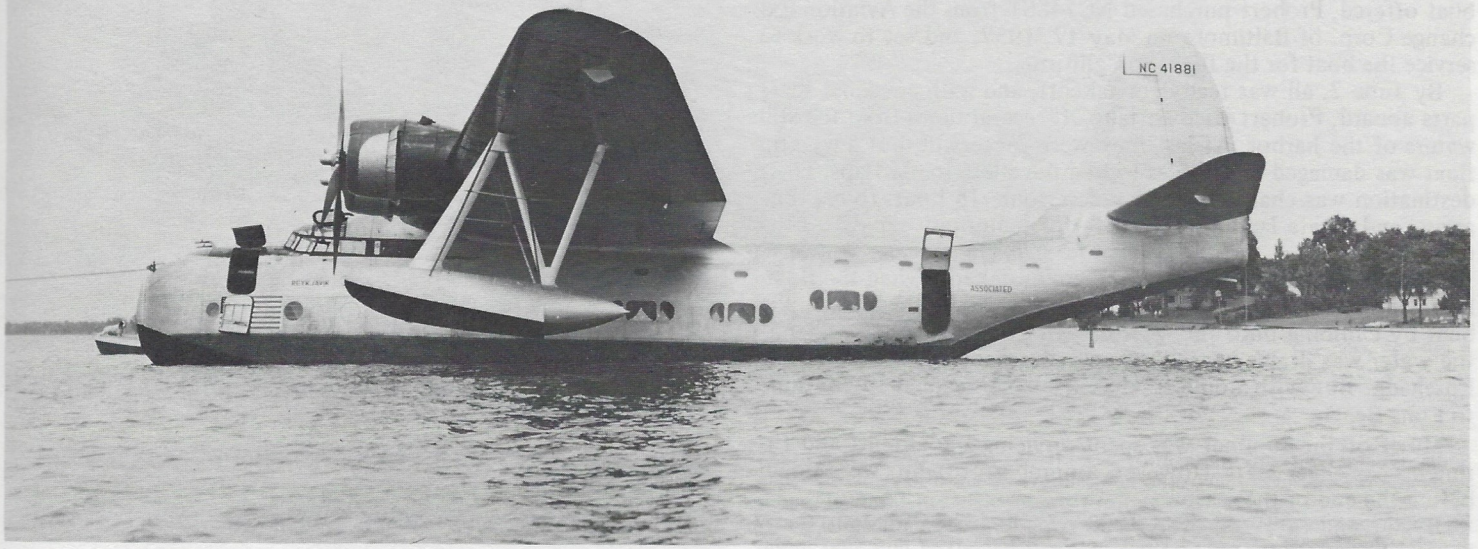
Groote Eylandt was the next stop; struggling to cross the Gregory Range en route, and finally to Darwin. Here the XPBS-1 was moored astern of CV-1 "Langley," mother to PatWing 10. Within days the ship was sunk, attempting to transport P-40 fighter planes to Java.

With the precious cargo of PBY spares and torpedo detonators aboard, the boat was off again, heading across the Timor Sea to 115°E before turning north for the 13-hour flight to Soerabaja.

Here, the remains of the "Cold Turkey Patrol" told of their losing battle and bloody retreat from the advancing Japanese forces. The PBY spares were of little use, only two serviceable aircraft were left, but the torpedo detonators were valuable.

The XPBS-1 retraced its track to San Diego, making pickups of military personnel and cargo en route, where Lt. Miller left his command. After overhaul, the XPBS-1 was delivered to the Naval Air Transport Service.

On its very next flight, with Admiral C.W. Nimitz aboard, the prototype was lost, turning turtle after landing in San Francisco Bay.



The Sikorsky NC41881 on Lake Minnetonka, Minnesota, 1947. Logan Coombs.

VS-44A

Following the three survey flights across the North Atlantic by American Export Airlines in the summer of 1939, with their PBV-4 "Transatlantic" NC18997, three VS-44A transport developments of the prototype XPBS-1 were ordered in 1940, for commercial air services across the North Atlantic.

As the first aircraft, NX14880 (c/n.4400), was being completed, the U.S. Navy took over the order. On January 12, 1942, they were assigned the designation JRS-1 and serials BuAe. 12390-2. General Charles F. Blair has related much of the war-time history of the Excalibur fleet², when he became chief pilot of American Export Airlines in 1940 to run the projected airmail service from New York to Lisbon.

The first aircraft, NX14880 (c/n.4400), cost \$2,100,000 and was christened Flying Aces "Excalibur" on January 17, 1942, by the wife of the Vice President, United States, Mrs. Henry Agard Wallace. Although capable of carrying 40 passengers on flights of some 3,000 miles at 200 mph, the long transatlantic routes demanded only 16 passengers be carried for the 24-hour-long flights expected.

The initial flights were made the following day, January 18, by Capt. Charles Blair and Dick Mitchell. Development flying continued from the NAS at Jacksonville, Fla., and a temporary operating certificate for the North Atlantic route was awarded to AEA on February 10, 1942.

The second aircraft completed, NC14881 (c/n.4401) was accepted in April and NC14882 (c/n.4402) was accepted in June.

The first crossing, Port Washington to Foynes, Ireland, via Botwood in Gander began on June 20, 1942, with NC14880 and Capt. Blair at the controls. The first westbound crossing, made June 22, suffered the usual headwinds for much of the flight, and Capt. Blair took advantage of flying low over the water, in the "ground cushion," to save valuable fuel. This technique resulted in the first non-stop Foynes-New York flight in 25 hours 40 minutes. "A remarkable voyage," commented passenger Admiral Cunningham, RN.

Early air crossings of the North Atlantic in winter favored a more southerly route than the Great Circle track from Newfoundland to Ireland, but soon weather forecasting was accurate enough to permit non-stop eastbound flights of some 3,100 miles in 20 hours or less. The westbound crossings were quite difficult and frequently demanded southerly routes as far south as the

West Coast of Africa and Trinidad.

These early beginnings were marred by the loss of the flagship, NC14880 on October 3, 1942, while attempting a takeoff from Botwood for Gander Lake. With full flaps selected, Capt. Mike Doyle struggled to get the boat under control, but it dived into the sea and was lost.

A formal Approved Type Certificate No. 752 was granted the VS-44A on July 14, 1943 and the two remaining flying-boats continued in transatlantic service throughout the war completing more than 405 crossings.³ A notable westbound crossing with 19 passengers and 2,686 pounds of mail was recorded in January 1944 from Foynes to New York in 21 hours 26 minutes, and the fastest eastbound crossing was made with Capt. Blair, from La Guardia to Foynes on October 22, 1944, in 14 hours 17 minutes.

After the war NC14881 and NC14882 were sold through the Reconstruction Finance Corporation. Insurance certificates were registered in the name of Tampico Airlines (June 17, 1946) and again to Skyway International of Miami (June 17, 1947). Both aircraft are believed to have been operated by TACI of Montevideo. In July, 1946, one of the boats was reported in use by Condor Airlines of Peru on a service from Lima to New York.

In the summer of 1947, a large military base was being constructed at Keflavik, Iceland, and transport was required to airlift the men and equipment to support the contract. Capt. Charles Blair and Associated Air Transport Inc. flew several flights with NC58021, a DC-4, but shortage of capacity found a use for the VS-44A, NC14881, which was returned from South America and became "Reykjavik" for Associated Air Transport.

Operations were begun from Lake Minnetonka, Minn., via Gander Lake to Iceland, and occasional flights continued to Stockholm, until the contract was completed in September 1947.

At this time, NC14882 was being used by rebels fighting the government of Paraguay to transport supplies out of Montevideo. This boat was lost in a night landing on the River Plate, near the Punta Brava lighthouse on August 15, 1947.

After the Iceland contract, NC14881 was returned to Harbour Field, Baltimore, and in 1948 it was seized by the city for non-payment of fees. Two years later, in 1950, NC14881 was reconditioned and taken to South America again for use by a mining company. It was later left abandoned at Ancon Harbour, near Lima, Peru.

In 1957, the president of Avalon, Wilton R. (Dick) Probert, who ran the "shuttle" service with Grumman Goose amphibians from Long Beach to Catalina Island, heard that the VS-44A was for sale. He flew to Lima to see the boat, and perhaps fly it back to California. His first attempt resulted in a return to the harbor due to engine trouble. But impressed with the capabilities the boat offered, Probert purchased NC14881 from the Aviation Exchange Corp. of Baltimore on May 17, 1957, and set to work to service the boat for the flight to California.

By June 2, all was ready for takeoff, and with crew and spare parts aboard, Probert tried to take off several times from the still waters of the harbor. At last they were successful, but a wingtip float was damaged and pieces locked the ailerons and flaps. Their destination was changed to Acapulco, some 18 hours flying time away, and a safe landing was made for temporary repairs to the damaged wing.

Disaster again nearly overtook them on takeoff when the floatless wing was allowed to touch the water. The crew saved the boat by climbing onto the opposite wing until help arrived. Once the water was drained, a safe takeoff was made and course set for Ensenada. But with home so close, Probert decided to continue to Long Beach.

Much of the summer was spent servicing the aircraft and fitting 46-passenger seats. However, a number of flights were flown before the end of the season.

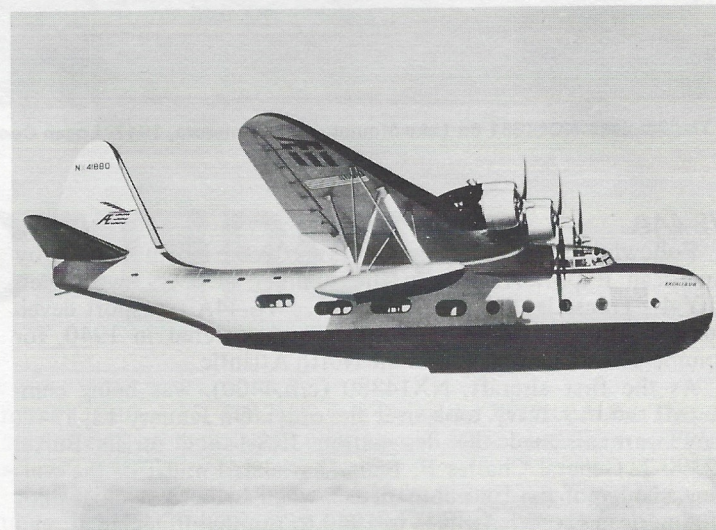
By the end of 1960, over 1,000 trips had been made to Catalina, and some 25,000 passengers had been carried.

In 1968, NC14881 was sold to Antilles Air Boats (who else but Gen. Charles Blair again), and she flew more than 1,000 flights from the Virgin Islands.

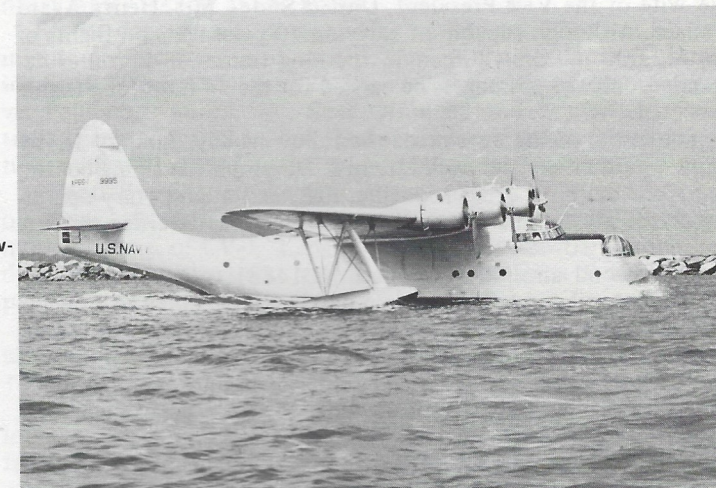
On January 3, 1969, the aircraft was damaged while taxiing for takeoff in St. Thomas Bay, Virgin Islands, and she was beached. Inspection found the aircraft was beyond economical repair and NC14881 was finally retired. In March 1972, she was mounted on a concrete base and converted to a hot dog stand.



NC41882 at Floyd Bennet Field. Harold Martin



VS-44A NC41880 in flight.



XPBS-1 No. 9995 taxiing.

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Letter from WTL, September 14, 1967.

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(2) Red Ball in the Sky, Blair. Jarrolds, 1970.

(3) ATC.752 awarded to the VS-44A on July 14, 1943, noted the following limits:

Gross Weight	—	59,534 lbs.,	airspeed limit 185 mph
Landing Weight	—	51,809 lbs.,	airspeed limit 211mph
Fuel Capacity	—	3,820 US gallons	
No. of seats	—	39	
Max. baggage	—	9,220 lbs.	
Power	—	P&W R-1830- S1C3-G,	1,200 hp.
Span	—	124 ft.	
Length	—	79 ft. 3 in.	
Height	—	27 ft. 7 in.	
Empty Weight	—	30,200 lbs.	
Cruise	—	160 mph at 10,000 ft.	

Some notable performances of the VS-44A "Excalibur" were:

Fastest non-stop flight, Foynes—New York in 18 hr 5 min.

First non-stop flight, New York-Lisbon in 20 hr 14 min.

First non-stop flight, Baltimore-Foynes in 16 hr 2 min.

First non-stop flight, Bermuda-North Africa.

First non-stop flight, Bathurst-Port of Spain.

First non-stop flight, Bathurst-San Juan.

Fastest time, Foynes-Botwood-USA in 17 hrs 45 min.

Peter Berry, an early member of AAHS, is an oceanic air controller at the Shanwick Centre, Prestwick, Scotland. He has researched and contributed several items of U.S. aviation history and hosted several AAHS members visiting Scotland. Peter is a private pilot and Secretary of the Prestwick Flying Group. He is also Secretary of the Prestwick Branch, Royal Aeronautical Society.