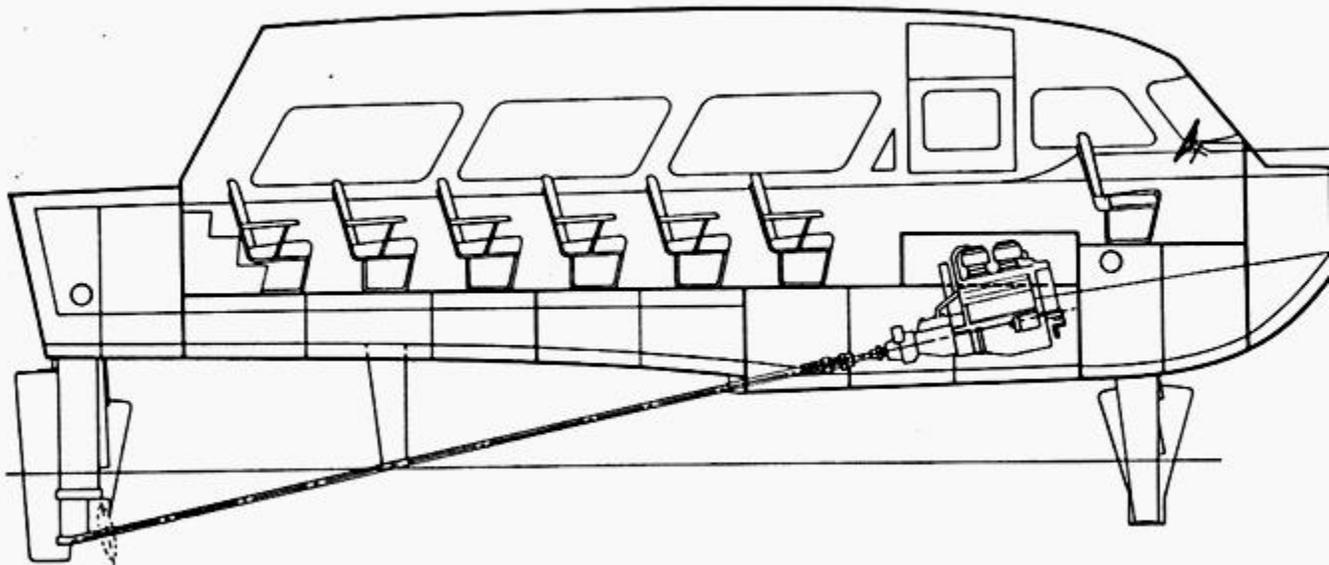


Hydrofoil Pioneers...



CUTAWAY SIDE VIEW OF THE ALBATROSS SHOWING SEATING ARRANGEMENT

ALBATROSS I and the Commercial Hydrofoil Era in America

(Last Update 2 Dec 02)

By Paul Miller

Restoration Photos Courtesy of [Bob Miller](#), Dec 2002

Additional Albatross history provided by William S. Stewart, Nov 2009

Correspondence about *ALBATROSS* is reprinted [below the article](#)

The concept of the surface skimming hydrofoil had spent most of the 20th Century as a designer's dream or an inventor's toy. By the early 1960s, it appeared that the hydrofoil was an idea whose time had come. It was more than just the development of light-weight hull materials and power plants that made the early 60s bode so well. It was also the economic prosperity and social and technological optimism that pervaded society in those halcyon days. These trends found a single focus and outlet in a great event of the decade that, fortunately, was ideally suited for the introduction of the USA's first commercial hydrofoil: the New York World's Fair.

The market for commercial hydrofoils in the USA was seen as commuter service. It was noted at the time that 23 of the USA's 25 largest cities were on or near navigable waterways that were mostly under-utilized and could carry hydrofoil traffic with none of the huge outlay required to increase the capacity of highways and commuter railroads. All that was needed to unite the technology with this market was the construction of a fleet of hydrofoils. One firm that was ready to accept the challenge was a subsidiary of C.I.T., Wilson Shipyard Inc. of Delaware, and its entry was the hydrofoil *ALBATROSS I* and her sisters.



ALBATROSS I was designed by the noted hydrofoil designer [Helmut Koch](#), who moved to the USA from his native Chile in 1955. The original construction and testing was done in 1961-62 by Hydro-Capital, Inc., of Newport Beach CA and involved 180,000 manhours of work. The California tests were very successful, and foilborne speeds up to 40 mph were achieved with a full load of 24 people. On the basis of these tests, *ALBATROSS I* received United States Coast Guard certification to carry passengers commercially, the first U.S. hydrofoil to do so.

ALBATROSS I was then shipped to the Wilson Yard at Wilmington DE for its introduction to the public. In late September, 1962, Wilson announced that the firm planned to build 25 of the *ALBATROSS* Class hydrofoils and scheduled its first demonstration for October 1st on the Potomac River in Washington, D.C. The *ALBATROSS I* was meant to attract attention and it did. A strange looking vessel, it resembled a bus on stilts racing through the water. The hull and large windowed cabin were all aluminum, with the hull seams welded. Her length has been variously reported as 34' 1", 33' 10", and 31' 9". Her beam was 11' 2" and 15' 2" across the foils. Original displacement was variously reported at 5, 12, 14, and 15 tons. Internal arrangements were bus-like, 6 rows of double seats abeam, with an aisle down the middle. Entry to the cabin was down stairs amidships aft. The pilot seat was on the portside, right above the forward foil.

The engine, a GM 6V-53 two cycle diesel, was under the deck amidships, immediately aft of the pilot's seat. This engine produced 181 hp at 2800 rpm and drove a single 20" x 24" propeller through 1.5:1 reduction gears. Because the prop had to remain in the water, the drive shaft was long, penetrating the hull right at the "step", and being supported by one "vee" strut before

ending between the aft foil and the bottom of the hull. The foils were of the fixed surface-piercing type. They were fabricated from welded aluminum extrusions and attached with "break away" stainless steel bolts designed to prevent damage in case of striking a submerged object. The *ALBATROSS I* could become fully foilborne after a run of only 500', and on foils, her draft was only 2' 6" as opposed to 6' 6" when floating on the hull. Other features included foam in the hull cavities for flotation and strength, a second cabin hatch on the port side just aft of the pilot's seat, hydraulic steering and a cooling water intake in the rudder post. Regular passenger loads were limited to 22; one pilot operated the boat during daylight, a second crew member being added for night runs. Production cost for the *ALBATROSS* Class was to be US\$75,000 each.

So the stage was set for the introduction of hydrofoil commuter service in the Metropolitan New York target area. The first runs were planned for Spring 1963, but there were complications. By mid-winter, the "Commuterboat Corp." of Oyster Bay, New York, had already demonstrated its imported 22' Dutch hydrofoil. Smaller, but cheaper than the *ALBATROSS*, the "Commuter Boats" had the advantage of already being in production in Holland, and available for US\$16,000, while the *ALBATROSS* still consisted of only the prototype.

The economics of the plan saw a fleet of 25-30 *ALBATROSS* Class hydrofoils operated by the American Hydrofoil Corp. providing thrice daily service between 23rd St. on the East River in Manhattan, and various "commuter ports" on both shores of Long Island Sound. It was figured that the boat could be run profitably, even if only 1/2 full, and would be able to run 210 days a year. The run selected for the first trial was from Manorhaven, Long Island on April 9th, 1963. It was a success, but one could foresee problems as the \$1.75 fare for the one way trip was already higher than the equivalent \$ 1.21 train fare, and the trip was 4 minutes longer!

The first scheduled commuter run didn't happen until July 15th, 1963, and was more notorious than famous. On that run, the *ALBATROSS I* had to stop to rescue the elderly movie mogul Samuel Goldwyn and party from a disabled cruiser, then stop again to report to the Coast Guard, during which, her skipper fell overboard. The commuter arrived at Wall Street 40 minutes late. It got a lot of publicity, but hardly the kind that the project needed! Spirits at American Hydrofoil were undampened though, and they still predicted that by April 1st, 1964, 35 hydrofoils would be in service to Long Island and Westchester.

The commuter service was expanded through the summer of 1963. A glowing magazine article in August accentuated the thrill of the ride (and the wave-induced oscillations!). The company couldn't help but prosper. More than half the crew on that run were volunteer members of the "Albatross Club" that paid \$100 per month for the privilege of being "hydrofoil pioneers"! Five new boats were scheduled for delivery in September, and the firm had "more offers in routes than we know what to do with," and expected to see 65' length, 100-passenger boats in the not too distant future.

It would be instructive to leave the commuter hydrofoils at this halcyon point of their careers, and look at what was happening in the fleet's construction. Despite all the initial publicity, Wilson Shipyard dis-involved itself after the *ALBATROSS I*, and all subsequent ships in the class were built by Ludwig Honold Manufacturing, Inc. at Eddystone PA. Therefore, in actuality, Wilson never physically built any of them!

Construction ended by 1964, and despite all the glowing promises, only 17 hydrofoils of the *ALBATROSS* class were built. They were *ALBATROSS I* through *VI*, *AQUAFOIL VII* through *XII*, *HIGHTIME*, *ROYAL FLYER*, *AQUAFLITE I*, *GATEWAY FLYER*, and *HONOFOIL*. Only the first 13 (through *HIGHTIME*) saw service in New York Harbor. *HONOFOIL* was a one of a kind sportfisherman built on an *ALBATROSS* class hull. [*Helmut Kock has said that there were twenty vessels produced; 14 went to New York, 3 operated on the Potomac River, one went to the Virgin Islands, one to Lebanon, and one... unaccounted for? Some clarification is needed here! - Editor*]

As the opening of the New York World's Fair approached in the Spring of 1964, one can see that American Hydrofoils' announced hope to eventually have "more than a score of hydrofoils on the World's Fair run alone" was pure hype. The commuter runs were little mentioned anymore.

Service to the World's Fair at Flushing was started April 22nd. The American Hydrofoil fleet left docks on the East River at Wall Street and 25th Street at 5 to 10 minute intervals. The fare was \$3.50 one way, \$6.00 round trip. More than 100,000 passengers were carried to the Fair by hydrofoils without injury during that peak summer of 1964.

When the World's Fair finally closed in the Fall of 1965, the sole surviving reason for the hydrofoils' presence in New York Harbor had ended. The American Hydrofoils fleet was disposed of largely to U.S. Hydrofoils of New York, Florida Hydrofoils, and even a tour company in Bolivia. In the succeeding years, the fleet became more and more dispersed through resales. Their names were changed, the aluminum foils were removed and junked, and at present, none of the survivors is known to be operating as a hydrofoil. Honold Manufacturing Co. held on to several of them, but by 1974, even its last, the *HONOFOIL* was no longer registered to them. Four survivors are known to still be in the New York area, more than twenty years after their glory days. One, renamed the *CEE BEE*, operated as a floating bank in Fire Island waters during the summer.

In 1984, the *ALBATROSS I* and another sister were in a coal yard in East Northport, N.Y., stripped and vandalized. The *ALBATROSS I* was purchased and is now stored in Centereach, Long Island. Despite its historic value, no interest in her has been shown by any maritime museum; but her hull is sound, and she will be around for a long time to come, perhaps long enough to be famous again. The story of the "Albatrosses" can't end without asking the inevitable question: "Were they a success or a failure?" Technically, they were a success -- they were fast, safe, and efficient, even if the surface-piercing, fixed hydrofoil is obsolete. Economically, through their trial in New York, they can only be judged a failure, for reasons of both geography and timing.

Geographically, New York was a poor location because conditions in the harbor during winter made any kind of marine operation difficult, and hydrofoil operation impossible when ice formed in the river, or ice spray built up on the hull or foils. Further, the vast majority of New York commuters lived inland with no easy access to the harbors where the foils operated from.

Even when competing against mass transit and highway systems of the early 1960s, the hydrofoils couldn't beat them by either cost or time and had no hope of moving their volume (i.e.

one rail car could carry as many passengers as 4 Albatrosses!). In light of this, their introduction right at the time when the Interstate Highway System in the metropolitan area was being pushed to completion, and the State government took over and rebuilt the major commuter rail lines, was particularly poor.

There is a niche for the hydrofoils though, where waters are calm, speed important, and mass transit impractical, they will prosper, and the technical and historical contributions of the "Albatrosses" to development of the commercial hydrofoil in America will be remembered.

ALBATROSS I Conversion From Hydrofoil Ferry to Houseboat...



(Above) ...As found by the author in a coal yard in Northport, Long Island. Note the still-visible eye and smile on the bow.

(Right) ...Sandblasted and coated with yellow primer...



(Right) ...As she looks presently with her black and white paint scheme which caused some of the author's friends to nickname her "SHAMU."



BIRTH OF THE ALBATROSS - AMERICAS FIRST HYDROFOIL CERTIFIED TO CARRY PASSENGERS FOR HIRE

By William S. Stewart, IHS Member

Entered Nov 2009

I much appreciate the historical work the IHS has done on hydrofoil boats. I think it is an important part of American history, and I hope IHS can keep it alive. I'd be happy to contribute all my many articles, publications and other things I have collected if you have a use for them. I learned of the IHS great web site just recently when I was told about it by Steve Dowd, Ira Dowd's son in Newport Beach, CA. On the site, I found lots about Helmut, but nothing about Ira E. Dowd except two references in listed periodicals.

I'm a little surprised that Helmut didn't give Ira **all** the credit for the development of his hydrofoil here in Newport Beach by HYDRO-CAPITAL of which Ira was the Chief Executive, and I was Treasurer. Ira and I ran the company that had a subsidiary, Island Transportation Company that operated two passenger ferries to Catalina Island, 26 miles off the coast of Newport Beach, CA. One day, in mid- 1961, Helmut Koch walked into our offices with a roll of plans under his arm and stated that what we needed was a hydrofoil boat to cut the transit time to Catalina in half, and he could build one. Helmut said that the plans were of a German hydrofoil fleet, all of which the Nazis had scuttled when they saw they were going to lose the war. The plans, he said, were smuggled out of Germany to an agency in Chile which dealt in spy-collected material for sale to the highest bidder. Helmut said that because of his work in the German shipyards before the war, he was interested in the hydrofoil plans and made a copy for himself, which he brought to us.

Ira and I liked the idea and made a deal with Helmut to buy a lightweight aluminum glass bottom boat, *Discoverer*, that was being used in the tourist business in La Jolla near San Diego CA. We bought the boat and set up Helmut in a small Tod Shaffer Shipyard in San Diego to put foils on her. When it was finished, we all went to San Diego for the launching. The shipyard owner refused to launch until the job was paid in full, in case it didn't work, so we were delayed until I could get a wire transfer made. While we waited, the photo was taken of Helmut and me in front of *Discoverer* which is shown on the IHS website as a photo of the three of *Discoverer*. Luckily, for all, the *Discoverer* flew beautifully, and we took it to Newport Beach to make plans for a production model that became the *Albatross*. I and our bank President and Loan Officer at Union Bank were scuba divers, so we put the Glass Bottom *Discoverer* to much use taking us to Catalina and other places to scuba dive. The bankers were sufficiently impressed with the performance of *Discoverer*, that they lent us the money to build the *Albatross* in Costa Mesa, near our Newport Beach Offices.

As we ran into foil production problems, Ira found another important man in William R. Batley, Jr. of Brawley, CA who helped us develop the extrusion process and the welding techniques for the foils. Bill Batley is in his 80s and doing very well and lives near San Diego now. He and I have remained close friends and occasional business associates since I first met him on the *Albatross* project. Bill Batley and I also participated in the rescue of FDR's presidential yacht which laid derelict on the bottom of the Bridgetown, Barbados carenage. That's where I was when the *Albatross* patents were sold to Wilson, but that is a whole other story. The Potomac is now fully restored as when FDR sailed on her. She is operated by the Port of Oakland, CA as a tourist attraction.

The Hull of *Albatross* was built in Costa Mesa, then taken to Long beach for completion. The photo is of an early test of the foils with me driving, Ira Dowd standing next to me and Helmut

sitting at the stern. Helmut and I took another test drive from Long Beach to San Diego before we added the windshield—a very wet ride in rough seas when she would crash due to a large following swell—the downfall of a surface-piercing foil craft. Ira Dowd and I made trips to the Coast Guard in Washington D.C. to gain approval of the *Albatross* to carry passengers for hire - the first in the U.S. We were successful subject only to actual sea trials in Long Beach with a capacity 30 persons on board which was done with Ira Dowd, the press and several Coast Guard aboard. They tried every maneuver to swamp the *Albatross* in 10-foot seas, but the flared foil tips, which give greater lift, prevented her from rolling over.

On completion of the *Albatross*, we tried her from Newport Beach to Catalina Island and back. Going over was great, but returning with a following sea caused many uncomfortable crashes. This could only be avoided by taking across the swells so as not to raise the stern so high as to plow downward off the foils. We had to rule out that passenger route, and instead, used her along the lee coast of Catalina Island quite successfully. We decided the only practical use for a surface-piercing foil craft was in the still waters of the east coast harbors and inland waterways.

So, we sold the patent rights to Wilson Shipyard of Wilmington, DE. When Wilson determined that they couldn't build the boat, Ira Dowd went east and moved the production to the Ludwig Honold Manufacturing Co. in Folcroft, PA where the remainder of the *Albatross* class boats were built.

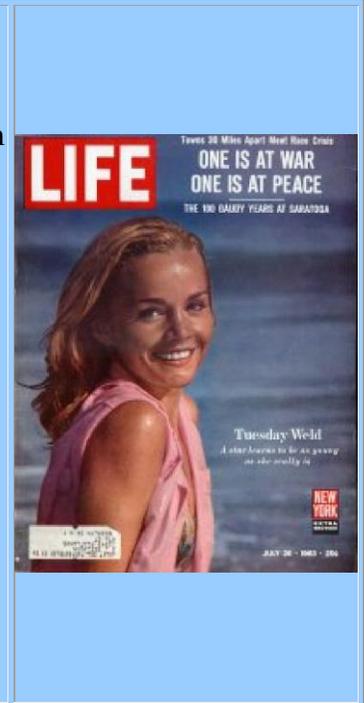
Ira Dowd then set up the passenger business from Manhattan to the 1964 New York World Fair, with 14 *Albatross* class boats logging over 50,000 passenger miles that summer.

When the World Fair was over, Ira Dowd used some of the same boats in a hydrofoil commuter business to and from Manhattan in the name of American Hydrofoils Inc. of which he was President. That operation gained nationwide publicity when, on their first run, Ira rescued movie producer Samuel Goldwin, his wife and investment banker Robert Lehman from Lehman's disabled yacht in the Hudson. That event gained 6 pages in the July 26, 1963, issue of Life Magazine, (below) the last page of which shows Ira coming up out of the water after falling overboard while talking to the Coast Guard about the incident.

That high-end commuter service came to an end due to lack of financing. Ira and Helmut went on to promote the use of Russian hydrofoils in Canada and the West Indies before returning home to California. In my opinion, Ira E. Dowd was the most successful promoter of Hydrofoil use in the United States. I was his Chief Financial Officer until he left California for the east coast, I opted to stay behind and get married, but Ira kept me informed of all his and Helmut's progress in the hydrofoil industry. Helmut the designer, and Ira the promoter, are truly the backbone of the hydrofoil industry in America.

LIFE Magazine 7/26/63,

"Exclusive Picture Log of a Mad Maiden Voyage", pp NY2-NY8 (New York Extra Section). Nine large B&W photos by Dan McCoy. Excerpts from the text: "It was the maiden voyage of the *ALBATROSS* and the dawn of a sparkling new era in New York commuting... aboard were the city's first hydrofoil commuters -- 24 passengers bound out of Port Washington for Wall Street. But barely had these sea-going commuters settled back in their seats... when a crazy saga started to unfold. Before the *ALBATROSS* finally reached lower Manhattan they had taken part in a dramatic rescue, found themselves face-to-face with some stranded celebrities, and then, as the whole improbable voyage was about to end, almost lost their leader,..." The rescued celebrities were movie producer Sam Goldwyn and his wife, and investment banker Robert Lehman, who were foundering off Steppingstone Light. "I've made movies with less excitement," observed Mr. Goldwyn." A little later, the president of American Hydrofoil Lines Ira E. Dowd stepped out on deck to watch as a Coast Guard vessel approached and he toppled overboard. All ended well, however; he was pulled back aboard, his suit dripping wet, but otherwise OK.



William S. Stewart - Bill was in the Air Force from September 1946 to September 1949, becoming a radar technician at Keio U. In Tokyo, Japan. He went over by troop ship to Okinawa and Manila, and returned home by troop ship from Guam. After discharge, he entered Cal Tech to become an electronics engineer, but was soon recalled to active Air Force duty during the Korean War, spending all his overseas time in Casablanca, Morocco. On return home, he received an accounting education and became a CPA, then later a management consultant, with Price Waterhouse & Co. in L.A., CA. As a hospital business expert, he was sent to Newport Beach, CA to fix some problems at Hoag Hospital there. Living on Newport Harbor, he bought a Lehman 14' sail boat, and developed a love for the sea crewing in races on Stars, Rhodes, other sloops, and a schooner, and was in several Ensenada races.

Correspondence

ALBATROSS Needs New Home

[7 Nov 02] Looking for a good home for the H/V *ALBATROSS*. Hull and cabin are in good condition. However, she's missing foils, strut, shaft, rudder, and engine. Anyone knowing of a museum, school, conservator, etc. interested in having it donated to them, please let me know. -- Robert Miller cbbi@aol.com

Remembering the ALBATROSS

[9 Sep 00] When I was a kid, my dad was hydrofoil operations manager for the Wilson Line in Washington DC. He was able to talk management into moving one of the boats to Crisfield MD to run tourist to and from Smith and Tangier Islands in the Chesapeake Bay. I have a few photos and one brochure (also an 8 mm film) The boat was a pretty popular attraction in the area, and the cruises were usually full. I seem to remember, though, that the boat was a little under powered and would not 'lift' loaded into a stiff breeze. I was on one boat in 1983 in Miami. I heard something about a mobile bank for Key Biscayne (sounds familiar). I enjoyed your articles. -- Skip Lilliston (firefan@mindspring.com)

Hydrofoil Wanted For Conversion to Houseboat

[31 Aug 00] I am interested in finding a hydrofoil to convert to a houseboat as Bob Miller did (see above). Any tips on where I might find one? -- Ken Tuccillo, phone: 914-478-6375, email: ktux@netzero.net [*this email address reported 2 Dec 02 as not working - Editor*]

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