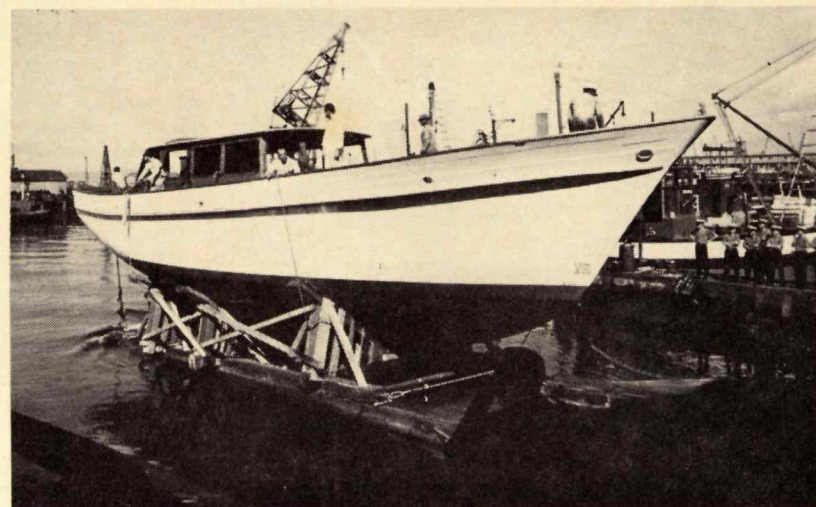


NEW TRAINING SHIP LAUNCHED

The South African Merchant Navy Academy's training ship, at launching day in Cape Town. She was named the Howard Davis at the formal opening of the new General Botha Academy on December 10, after the son of T. B. Davis, the man who gave the ship that enabled the first academy to be started at Simonstown after World War I. The new ship, fully described in our September issue, is a sturdy 66 ft. LOA by 18 ft. 4 in. beam, and will give full training in sail and power as well as the latest aids to big-ship navigation in her spacious working deck-house. Photo: David Baker



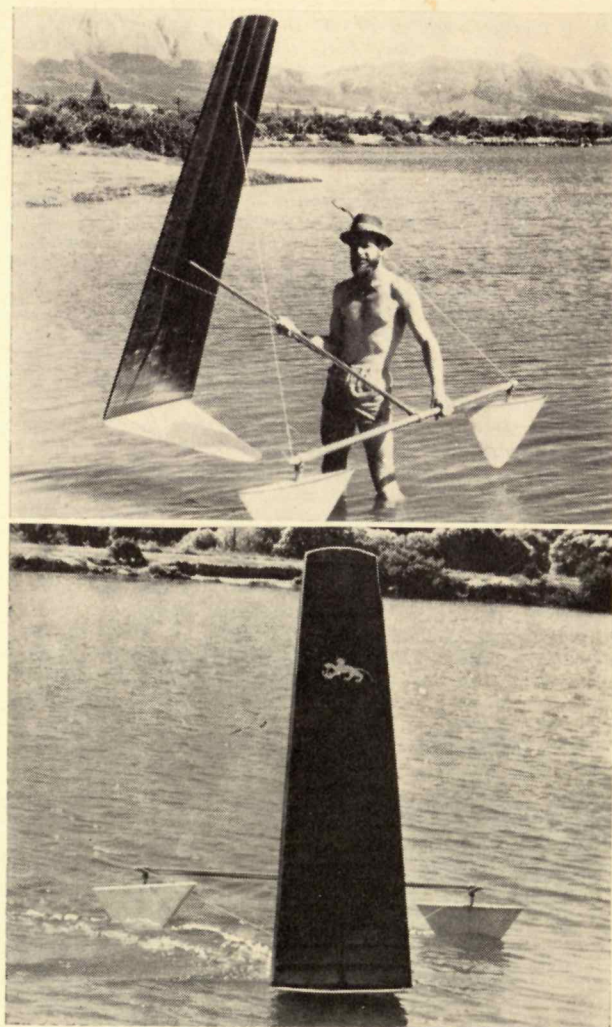
Lorraine's Treble Century

Arthur Holgate's magnificent owner-built 75 ft. schooner *Lorraine* left Cape Town for the West Indies on November 7 in a howling south-easter and already seems to be chalking up some of the terrific 24-hour runs we predicted she would achieve. With her seven-man crew is David Baker, left, *S.A. Yachting's* photographer, who will record the passage for readers.

She did the 1,700 miles to St. Helena in 10 days. According to radio messages, her first stint, starting at 8 p.m. on Monday November 7, put 700 miles under the keel "by the end of Wednesday" ... we presume midnight. She left St. Helena on November 23 and, apparently, has done another treble century in the first 24 hours. In that part of the South Atlantic help from current would have been negligible.

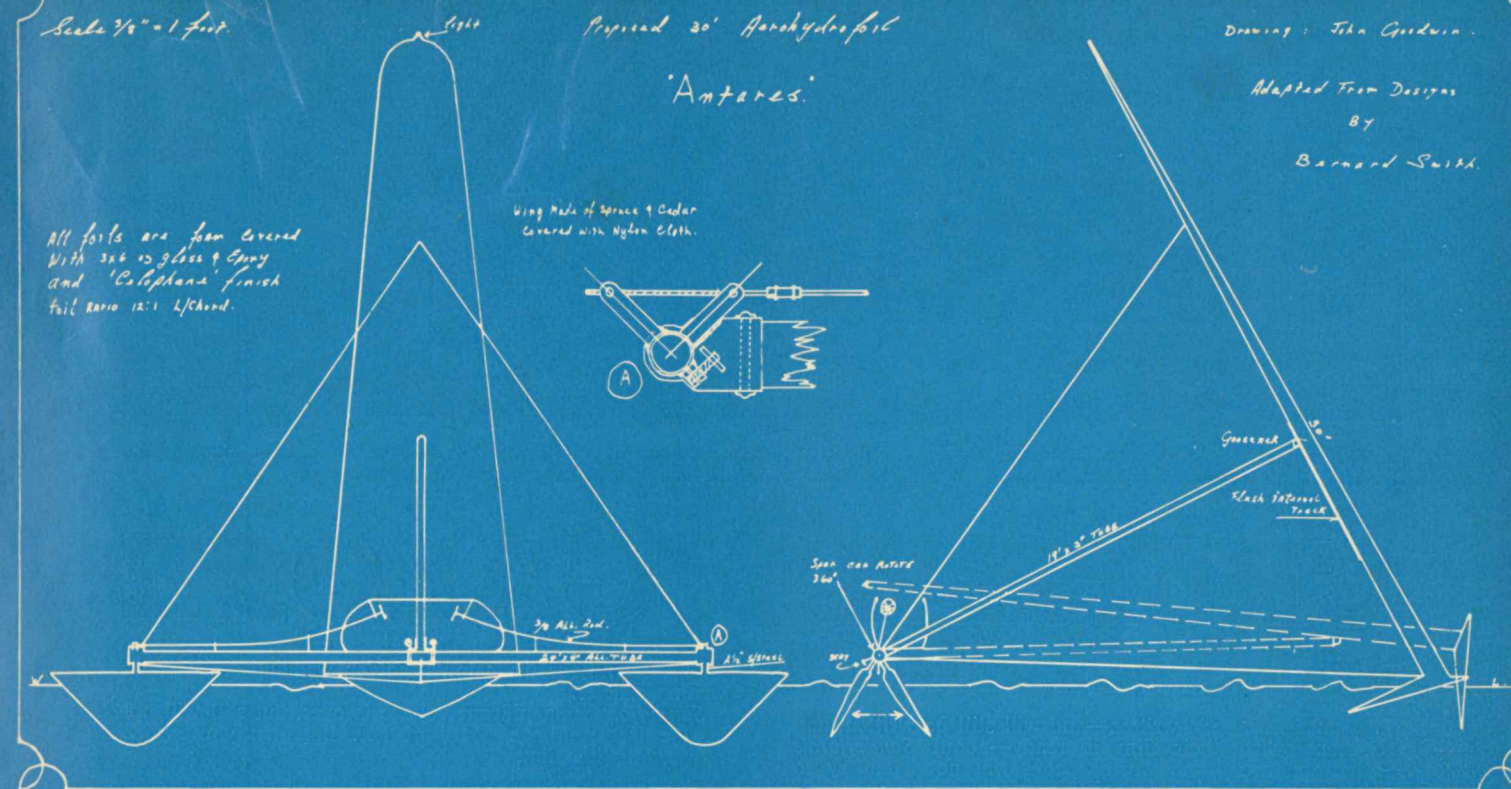
When one remembers that the gollywobbler alone is 1,500 sq. ft. and that there are no halliard or sheet winches in the modern ocean-racing idiom, an idea can be formed of the day's work being put in by the small crew.

Besides the skipper and David Baker on board are: Lorraine van Vuren, of Cape Town; Ken French, a movie cameraman; Rhodes Garwin, a Rhodesian and former American Field Service scholar; Grenville Stephenson and Paddy Denyssen, 22, of Port Elizabeth.



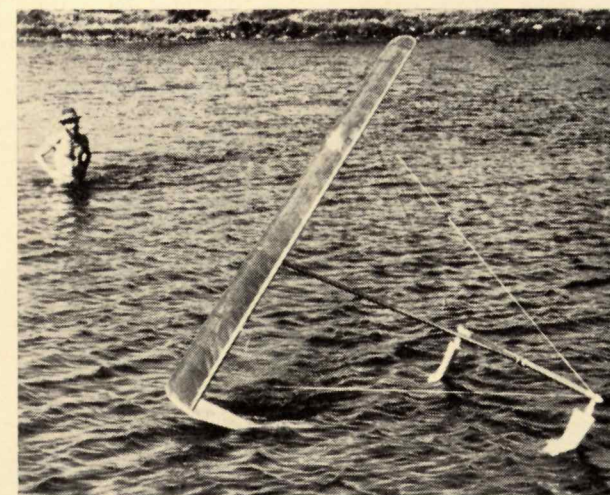
JOHN GOODWIN, above, holding his model of the "40-knot yacht" at the Sandvlei near Muizenberg. Also shown is the sailing aerofoil under way. He hopes to have a man-carrying version to experiment with soon.

SOUTH AFRICAN YACHTING—December, 1966



This is one of the drawings for the 30-ft. aerohydrofoil on which preliminary work has already started at Hout Bay.

40-Knot Yacht Experiments Under Way ...



John Goodwin watching his version of Bernard Smith's brain-child working to windward. Although nothing conclusive can be assumed till a manned version is built, the indications are that apart from high speeds an incredible ability to sail as close as 15 degrees to the wind is likely. Careful adjustment of the angle of attack of the three hydrofoils, and of the shape of the main member below the wingsail, is essential.

SOUTH AFRICAN YACHTING—December, 1966

THE Aerohydrofoil is designed for speed on water using the wind as motive power.

Speed-restricting factors in conventional yachts are: (1) The hull, which has to be dragged through the water together with the heavy keel, and (2) the mast, rigging, and terylene sail which present so much windage and are so inefficient.

The Aerohydrofoil skims over the surface of the water like an ice yacht on foils which give dynamic lift. The airfoil is far more efficient than soft sails and, while I do not propose discussing aerodynamics here as it is too big a subject for this short article, I would point out that my model has sailed 15 degrees off the true wind with ease.

Two years ago I came across Bernard Smith's book *The 40 Knot Sail Boat* and started building my own models. I now have a large pile of discarded foils, spars and parts to show for my work, but am still not satisfied and am at the moment redesigning the leeward foil for the umpteenth time.

Mr. Smith, who is technical director of the U.S. Naval Weapons Laboratory, wrote to me recently saying that his model had just been tested in 8-knot winds and had logged 20 knots! I have not been able to achieve this yet.

The Aerohydrofoil reverses direction instead of coming about when tacking and the airfoil is always slanted to windward; for reefing the foil is canted farther to windward and is stored flat.

The problem of controlling a model in various wind speeds led me to consider the building of a man-carrying version, which is shown in the drawing.

In this craft the pilot would be able to make adjustments to the foil pitch and to the critical air foil angle.

If the air foil is slanted too far to windward the centre of effort is projected below the windward foils causing them to dig in. On the other hand, should the air foil be too near the vertical a gust of wind would capsize the craft and catapult the pilot in a curved trajectory through the air and into the water. The craft might then right itself and sail on, leaving him to consider his mistake.

Progress as this project develops will be reported in later issues of *S.A. Yachting*.

John Goodwin

23