



The Latest News from AeroSouth - January 2022



Progress Report: "Classic", our new Sunfish Class Replica Daggerboard

As reported in our December, 2021 newsletter, **the "Classic"**, AeroSouth's new Class Replica Daggerboard for the Sunfish, is moving ever closer to being in full production.

We now have the first prototypes in testing, such as the one seen here, finished in bright *AeroSouth red*. Given the ongoing global shortage of Class Replica and Class Legal boards, we are pushing this development rapidly forward. As the headline above implies, the Classic will not be an official "Class Legal" board, but will perform at least as well, making it the perfect board for training or for regattas where the class legal board is not required.

We expect to make an announcement concerning its availability in a few weeks.

The price is the same as for our high-performance **Sabre daggerboard**, \$300 plus taxes and shipping. As with all AeroSouth products, it will be 100% made in North Carolina and will ship within 24 hours of order.

Contact AeroSouth today to pre-reserve your own **AeroSouth Classic Daggerboard**.



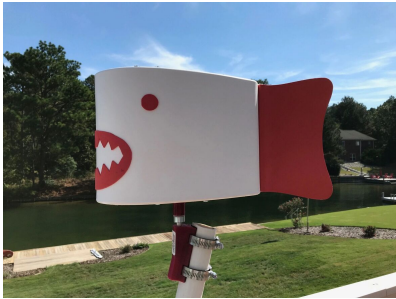
Another "Should have had a Dinghy Bob" moment

An AeroSouth customer recently reported on an event that occurred at one of their winter regattas: "We had a scary experience Saturday. An experienced sailor capsized and his spar and mast

got stuck in the mud and the water was dangerously cold. It took three people to get him and the

boat safely back to shore." This could not have happened with an [AeroSouth Dinghy Bob](#) mounted on the top of the rig.

In stock and ships in 24 hours and still for only \$99 plus shipping. Order a Dinghy Bob today from the [AeroSouth Store](#) and have it on your boat in a week.



Send us your Dinghy Bob Mug Shot

To all [Dinghy Bob](#) owners - We now ship a small piece of sticky-back, EVA craft foam with each unit so you can customize your float as we have ours, as shown here. Since we're sure that dinghy sailors are a creative bunch, we invite you to send us a Mug Shot of your Dinghy Bob and we'll display it in our [online Gallery](#) for all to see. Use craft foam, stickers, hair pieces, horns, wings, propellers,

etc. to individualize your Dinghy Bob. We'll also display your images in future newsletters. See submission instructions [here](#), and thanks in advance!



Optimist Sailors - Now Hear This!

Along with the Sunfish and Laser, the Optimist is undoubtedly one of most common small sailboats in use today, especially for the youth. At AeroSouth we're adapting some of our products to the "Opti", in particular our [Breezy wind indicator](#), [Dinghy Bob](#) mast float and [Mainsheet hanger clips](#). We're looking for a few Opti owners willing to test our prototypes.

[Contact us](#) please if you are interested.



The Science of Sailing #5 - The Flying Sunfish - Part 1

One of the most remarkable creatures of the sea is the Flying Fish. Propelled out of the water by a large, strong tailfin, the flying fish can cover distances of 50 meters or more. Some have been observed to cover an astounding 400 meters in the air. Water being

approximately 800 times denser than air, a few strokes of its underwater tailfin is all the fish needs to take flight on its pair of tandem wings shown in the picture here. Divers and snorkelers too take advantage of the high density of water when they use fins.

Just as the higher density of water allows a sailboat designer to offset large sail forces with relatively small centerboards and rudders, one can imagine offsetting the weight of the boat with a small underwater wing. In the early 1980s, Dutch engineer Joop Slooff (an advisor to AeroSouth) worked with Australian America's Cup designers to develop the first practical winged keel -

eventually revealed underneath their winning boat, the [Australia II](#).

But what if the wing were large enough to lift the entire hull free of the water, resulting in much less drag and consequently greater speeds? We know such boats today as Hydrofoils. Strictly speaking, the "foil" is the 2D cross section of a lifting surface, as airfoils are to airplane wings. The cross-sections of wings that operate under water would correctly be called "hydrofoils".

Judging from the fact that many sailboats now operate well on hydrofoils, this appears to be a mature technology. Shouldn't it be possible to devise some underwater wings for dinghies like the Sunfish, to give recreational sailors their first experience at flying? Before exploring the possibilities further, let's review some history of the technology.

"Foiling" boats have been around for many decades, with the first experiments having been conducted in the US, Italy and Germany prior to WWII. Even famed American inventor Alexander Graham Bell made important contributions to early hydrofoil boats. On September 9th, 1919, his [HD-4 set a world's marine speed record](#) of 70.86 miles per hour, a record that stood for ten years.

An outstanding summary of the history of powered foiling boats may be seen in the Swiss video ["HYDROFOIL -- Supramar AG History by Thomas Wuhrmann"](#).

In Part 2 of this mini-series on foiling next month, we'll do some basic calculations to see what might be needed to make a Sunfish fly.

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