



**Reach 12,000  
readers a day..**

[Sun Herald](#) | [Venice Gondolier](#) | [Classifieds](#) | [Marketplace](#) | [Real Estate](#) | [Autos](#) | [Boating & Fishing](#) | [Entertainment](#)

**Sun** and weekly Herald **Venice** Gondolier Sun

**boatingandfishing.com**

*WaterLine*  
Southwest Florida's Boating & Fishing Journal  
A weekly edition of the Sun, serving readers from Venice to Fort Myers

[Our Community](#) | [Interact](#) | [Business](#) | [Sports](#) | [Charlotte News](#) | [Englewood News](#) | [North Port News](#) | [DeSoto News](#)

**Local News**

[Waterline News](#)

**Classifieds**

[Buy A Boat](#)  
[Sell A Boat](#)  
[Boater's Bargains](#)  
[All Sun Classifieds](#)  
[Classified Advertising Info](#)

**Weather**

[Buoy Reports](#)  
[Storm Warnings](#)  
[Tide Charts](#)

**Fishing**

[Lures & Bait](#)

**Interact**

[Boat Photos](#)  
[Fish Photos](#)  
[Nautical Flags](#)

**Links**

[Aquarium](#)  
[Fishing](#)  
[General](#)  
[Government Agencies](#)  
[Magazines](#)  
[Power Boats](#)  
[Sailing & Yachting](#)  
[Newsgroups](#)  
[Florida Guides](#)  
[Glossary](#)

**Other Websites**

[Our Town Charlotte](#)  
[Our Town Englewood](#)  
[Our Town North Port](#)  
[Discover Venice](#)  
[Physicians Directory](#)  
[Real Estate](#)  
[Sunline](#)  
[Sun Newspapers](#)  
[Venice Gondolier](#)  
[Sun Classifieds](#)  
[Free Classifieds](#)

**It's a bird, it's a plane -- it's a red tide glider**

The latest weapons in the battle against red tide launched this week.

On Wednesday, April 12, Mote Marine Laboratory, the National Oceanic and Atmospheric Administration, and the Florida Fish and Wildlife Research Institute let loose three yellow torpedo-like devices about a mile offshore of Sarasota. Each is designed to detect the alga that causes red tide -- *Karina brevis*.

For the last year and a half, as red tide decimated much of Sarasota Bay and the nearby Gulf, we've all wondered, "why doesn't anyone do something about it?"

There's plenty of blame getting thrown around, much of it at the usual suspects: corporations (the phosphate industry), newcomers and real estate agents (overdevelopment), rich people (the fertilizer run-off from the golf courses they play on), and global warming (more hurricanes).

But no one really knows why red tides occur or how they begin. Warm, nutrient-rich water is thought to encourage red tide blooms, but there's no conclusive proof even of this. Until we know more, there's nothing much we can really do about red tide. We need more information.

That's where the gliders come in. Until recently, scientists seeking to measure red tide levels had to go out on boats and get water samples. Even with generous funding (which there wasn't), it would be nearly impossible to cover the amount of water necessary to get meaningful data. It's like the needle trying to get to know the haystack.

Then Dr. Gary J. Kirkpatrick, a senior scientist at Mote Marine Laboratory, had an epiphany a few years ago while drinking a few beers with fellow marine scientists from Rutgers University. They were using a large version of the glider for their project to map the Mid-Atlantic Bight. Kirkpatrick, who is also an engineer, thought a smaller version would be perfect for catching red tide in action.

A type of autonomous underwater vehicle, or AUV, the glider is an aquatic missile that "flies" a preprogrammed mission,

Contact Us

Write Us

recording key measurements such as water temperature, water density and any other data the scientists want. It can operate on the water's surface, at the bottom of the Gulf and anywhere in between -- a range that's essential for ferreting out red tide.

At the heart of the AUV's payload is a \$15,000 machine called the BreveBuster -- invented by Dr. Kirkpatrick and engineered by Jim Hillier, the instrument specialist for Mote's Phytoplankton Ecology Program.

The BreveBuster is basically a spectrometer -- a machine that measures the properties of light. As a sample of seawater runs through a small quartz tube inside the BreveBuster, a light is shined down the length of the tube. The resulting light spectrum on the other end of the tube tells scientists whether red tide is present.

The glider transmits this data in real time by high-frequency radio to a NOAA satellite, which feeds the report back to NOAA headquarters, Mote and the FWRI. The gliders can remain at sea for 30 days at a time.

They literally do the work of many scientists in far less time.

Two of the three gliders will be out and about at any given time, patrolling a predetermined course from the shore to 20 or 30 miles out, from about Englewood to Clearwater. Like a pair of bird dogs working a field, if one glider detects red tide, the other will be programmed remotely to join it and the two gliders will intensely survey the area.

They'll also supplement the work of NOAA's satellites; when they record red tide on the Gulf's surface, one or both of the gliders will be dispatched to take measurements. The third glider will remain at Mote and either spell the other two or deploy to areas of red tide as needed.


Eventually, the gliders will be used around the state. But for now, they'll remain in the Gulf nearby and, from time to time, in our bays. You just might see one. Here's how to identify the gliders:

- \* They're canary yellow, with a short black nose.
- \* Each is approximately six feet long and perhaps ten inches in diameter, about the size of a good-sized log.
- \* Each has two thin wings that angle back from either side.
- \* Each has a yellow tailwing similar to a jet's tailwing. When the glider is on or near the surface, this wing will extend out of the water.

If you do see a glider, give it a wave and a wide berth. And take heart that, finally, someone is doing something about red

tide.

**By Joe Polidoro**

**Sunline**  © 2006 All rights reserved.  
Your Local Internet Service Provider  
A division of Sun Coast Media Group Inc.  
Publishers of the Sun newspapers.