

Computer points out where they're biting

Computer whiz helps anglers find best fishing hole

By STEPHEN K. DOIG
Herald Staff Writer

Some fishermen use live bait to catch fish. Others use lures.

But Mitchell Roffer, fisheries scientist and entrepreneur, catches them by satellite and computer. He never wets a hook.

Roffer works out of his Kendall home, sitting in a small office cluttered with computer terminals, telecopiers, charts and reference books. Each day, he mixes a decade of research experience with the latest in satellite equipment and imagery.

His products, sold as Roffer's Ocean Fishing Forecasting Service to dozens of recreational and commercial fishing clients from Maine to Mexico, are custom charts of where the big ones will be biting today.

"I can't guarantee that anyone will catch a fish at a particular spot," Roffer says. "But I can put you in the right neighborhood."

Roffer's clients, he says, have won big-money game fishing tournaments, quickly filled their holds with tuna and other commercial fish and saved hundreds of gallons of fuel each trip by avoiding fruitless searching.

Studying at the University of Miami's Rosenstiel School of Marine and Atmospheric Sciences, Roffer did his doctoral thesis on the influence of seawater temperatures and other environmental factors on the abundance of bluefin tuna along the Atlantic coast. While he was doing his research, the sport and commercial fishermen who let him gather data and samples aboard their boats began to ask his advice on where to find fish.

Roffer learned, for instance, that tuna prefer certain environmental conditions, such as water temperatures in the upper 60s. He also learned to use infrared satellite images of the ocean to read sea surface temperatures.

And he began to track the meanderings and eddies of the Gulf Stream, the vast warm current that flows past Florida and

up the Atlantic coast toward Europe. With the satellites' help, Roffer each day charts the shifting boundaries between warm and cold waters.

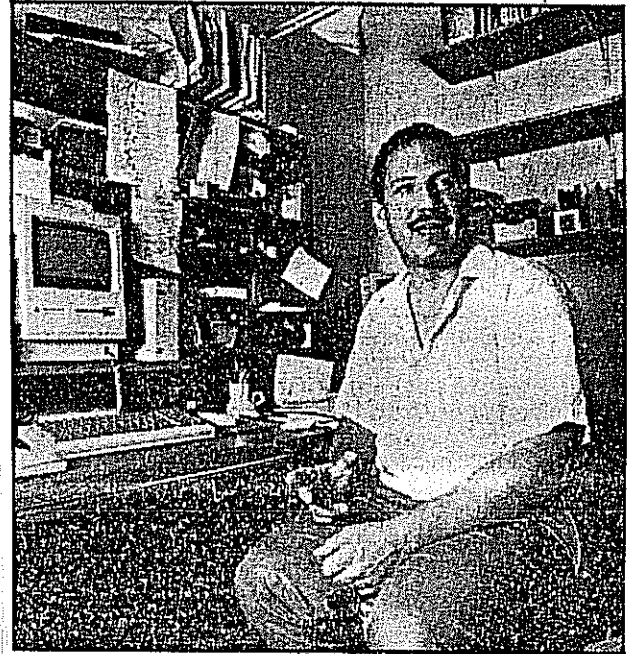
"I look for places where there are sharp temperature changes, because those aggregate fish," Roffer says. "If a temperature change lasts for more than 24 hours, it will begin to gather fish."

On false-color satellite images, the temperature boundaries look like swirling smoke, spinning off fish-attracting tendrils and circular side currents that can persist for weeks.

The problem for fishermen, however, is that such features rarely stay in the same place for long.

"We often see significant changes on the order of six to 12 hours," says Roffer. "A good spot can move 30 miles in a day, and the fish go with it."

That, of course, is where Roffer comes in. For a subscription fee that averages out to about \$10 a forecast, Roffer produces local nautical charts with the temperature gradients marked and the most likely fishing grounds dotted.



MICHEL duCILLE / Miami Herald Staff

Satellites help Mitch Roffer locate prime fishing areas, and people pay him for it.

For billfish tournaments — where prize money and side bets can make catching a fish worth tens of thousands of dollars — Roffer will produce custom charts based on the latest satellite pass for fees of up to \$250.

"Our biggest problem is clouds," Roffer says. "When it's cloudy, the satellites can't see the water temperature."

Getting timely information to customers scattered down 4,000 miles of coastline requires more high-tech gadgetry. Roffer gets the satellite images from a satellite-data distribution service. He interprets the data, then send his own analysis chart by telecopier, which with the right equipment can be received even at sea.

Roffer doesn't believe his service will cause fishermen to deplete game fish stocks.

"There's still plenty of skill required in the fishing," he says.

Oddly, perhaps, Roffer rarely goes fishing much himself.

"Hey, I didn't spend 10 years getting a Ph.D. just to spend my life on a fishing boat," he says.