

## Robot designed to shoo birds attracts interest

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Associated Press

A Tennessee entrepreneur has licensed for commercial development the Scarebot, a small solar-powered boat developed by the LSU Agricultural Center and designed to chase cormorants, pelicans and other birds from farmers' catfish and crawfish ponds.

The most recent version of the device resembles a small ping-pong table on flat oval pontoons, with a tiny rounded head on one end, an angled silver-and-black tail on the other. When it senses birds, it heads toward them at speeds up to 7 mph, then stops to spin and make random zig-zags, shooing the birds.

"A break dancing robot?" asked crawfish farmer David Savoy of Church Point, La. He chuckled.

"Any kind of erratic motion, as opposed to a straight back and forth, tends to scare the birds," said Steve Hall, an LSU AgCenter engineer who was one of the inventors of the robo-scarecrow.

During years of work on the project, Hall said he found that if you chivvy solitary wading birds, like herons and egrets, away from a fish pond, far fewer flocks of big eaters - pelicans and cormorants - will drop by. They seem to use the wading birds as a cue telling them that fish are present, Hall said.

The losses to farmers from bird feeding can reach tens of thousands of dollars worth of aquaculture stock.

After languishing several years on a website aimed at matching university-designed technology with potential developers, Scarebot drew the interest of John Cole of Martin, Tenn., owner of Mt. Pelia Innovative Solutions LLC.

"I'm looking for niche type products," Cole said in a telephone interview.

He said his company is building a Scarebot for testing this year, and he foresees developing a basic model to meet many needs.

His non-exclusive license calls for him to have his own prototype ready early next year, with a year for testing; he hopes to have a product ready for sale sometime in mid to late 2012. LSU will get about a 7 percent royalty on sales, he said.

Hall said the device can run unattended for long periods and could be used for other tasks such as measuring water quality.

At one end of the gizmo is an infrared sensor and a GPS unit that can give the Scarebot a "territory" to patrol and keep it from hitting pond banks. There's an antenna at the other and a 6-inch-wide pipe holding the electronic brains in between. Cole thinks that, at least to start, they'll run about \$2,000 each.

That's high for some farmers.

Rick Moyer, owner of Quiver River Aquaculture in Sunflower, Miss., has 57 ponds averaging 10 acres each. He chases birds off by riding around the ponds and honking, shouting and firing guns.

"It might chase them out of one pond, but they'll just go to another," he said. Something that cost less than \$1,000 per pond, per year, might be worth it, he said.

Farms raising baitfish - big business in Arkansas - or exotic tropical fish might be a viable market, as might government agencies that need regular water tests, Cole said.

Some tropical fish farms are fully protected against attacks from above. "We do not use outdoor ponds. We use burial vaults inside greenhouses," Mike Szumigala, owner of Mike's Cichlids, south of Daytona Beach, Fla., wrote in an email.

Mike Drawdy of Imperial Tropical Fish in Lakeland, Fla., said two propane cannons at each of his two farms seem to do the job. He raises about 60 kinds of fish in a total of nearly 500 ponds.

He estimates that birds eat about 10 percent of his stock, mostly from the ponds farthest from buildings, where he raises the most prolific breeders. "It's kind of a natural balance for the pond, so 10 percent doesn't affect us," he said.

The easiest prey - fish most likely to swim at the top of their ponds - are near buildings and human activity, so birds stay away, he said.

Hall said a couple of boats were tested at drinking water reservoirs, including one in New York City, to chase birds that might foul the water. Many kinds of sensors can be hung from the boats to test water quality, he said.

"My sort of dream? We'd like to see them on Walmart shelves, Home Depot. We would like to see a low-end version ... that could be used as a toy or very simple sort of tool," Hall said.