

# Cormorant Problem Tackled on Two Fronts...



By Bonnie Coblentz

Photos by Tommy King

Mississippi catfish producers want consumers to eat lots of their product, but when those consumers are predatory birds, it's time to get out and patrol the ponds.

Double-crested cormorants are large, black migratory seabirds related to pelicans. They can be up to a yard long with a wingspan of more than 4 feet. They seem to have an endless appetite for fish, especially young pond-raised catfish.

Jim Steeby, aquaculture specialist with the Mississippi State University Extension Service, said cormorants prefer fish 5-7 inches long, although they feed on ones as large as 10 inches.

"If you didn't do anything, they could eat you out of house and home. In 3 weeks, they could clear a 10-acre pond of small fish," Steeby said. "The only reason they don't eat that many fish is we don't give them a chance to."

Catfish producers use a variety of methods to scare cormorants off their ponds and keep them moving, including loud noises from "screamers" or "bangers," propane cannons, and strings placed across catfish ponds about 60 yards apart. Cormorants and pelicans need about 100 yards of open water to take off and land, and these strings limit what is available to the birds.

One of the most successful harassment techniques being used against cormorants is roost dispersal. Steeby said cormorants typically sleep in the cypress breaks at night, and if they are repeatedly disturbed as they roost, they usually move on.

"You have to use a whole variety of things to keep them at bay," Steeby said. "They have really good eyesight and really good clocks in their heads, and they arrive the moment they know the farmer is leaving."

Cormorants take up residence in and around Mississippi's wetlands and aquaculture ponds in late November to early December, and they usually don't leave until the following March.

"It takes a good deal of man-hours and fuel to patrol the ponds and keep the birds from spending a significant amount of time on the ponds," Steeby said. "But if you don't take these measures, the amount of fish they consume will be very high."

Another tool in the fight against profit-eating cormorants is depredation, or the legal killing of predatory birds.

"The largest thing we do in the fight against cormorants is harassment, but to make that work well, you do have to take some birds," Steeby said. "We don't really put a dent in the population, but it keeps the birds dispersed from the ponds."

Valerie Burton, an aquaculture biologist with Wildlife Services within the U.S. Department of Agriculture-Animal and Plant Health Inspection Service, said cormorants in Mississippi were first counted at roost in 1990. There were 28,584 birds that year. 2004 was the peak cormorant year, with 81,873 counted at midwinter roost. In 2007, that number was 67,455.

## Catfish Producers Fight Cormorants to Save Crop

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Producers with aquaculture depredation order Form 37 on file with Wildlife Services can kill as many cormorants as needed on their farms to protect their ponds.

“Cormorants caused Mississippi catfish producers \$10.3 million in losses by eating 1,350 metric tons of fish in the 2000-2001 cormorant season,” Burton said. “They ate 1,780 metric tons of catfish for a \$13.7 million loss in the 2003-2004 season.”

Burton said extensive efforts are being made in their summer nesting grounds around the Great Lakes to limit cormorant reproduction. In the winter feeding grounds farther south, catfish farmers and others are trying to reduce the number of these

predatory birds and move them off aquaculture ponds.

“If we were effective and pushed just 10 percent of the cormorant population to the Mississippi River where they feed on shad and other native fish, that would save the Mississippi catfish industry \$1.2 million to \$1.5 million a year,” Burton said.

Catfish farmers can help their own cormorant control efforts by reporting to Wildlife Services the number of cormorants they kill on their ponds each year. Not only is this a legal requirement of the depredation order, but Wildlife Services can kill only 25 percent of what farmers report taking each year.

## MSU Student Tracking the “Crow of the Sea”



**By Karen Brasher**

Nearly 1,500 miles from home, Mississippi State University student Jennifer Chastant finds her way through the cormorant nests on the Lake of the Woods Island in Kenora, Ontario, Canada, to pick out the largest bird.

The Alpharetta, Georgia, native measures, bands and records the notorious predator, which has a

**Jennifer Chastant among the “sea crows.”**

52-inch wing span, as part of research started more than 20 years ago to determine the impact of double-crested cormorants on natural resources, fisheries and aquaculture operations.

The MSU graduate student is banding the young birds to track their movements and better understand the species' seasonal migration patterns.

“It's my job to examine the entire region from eastern Lake Ontario to the Lake of the Woods to develop a more comprehensive overview of the birds,” Chastant said. “By understanding their reproductive rate and migratory patterns, we can develop better computer models to develop strategies that will keep their populations under control.”

Understanding the sleek, black water bird, whose name is derived from Latin for “crow of the sea,” is important to the 370 catfish farmers in Mississippi. Cormorants can dive up to 60 feet to retrieve their food. Researchers in MSU's Forest and Wildlife Research Center estimate the predators cost the state's catfish growers more than \$10 million a year.

To contend with the wildlife/human conflict, in 1998 the United States Fish and Wildlife Service issued a depredation order authorizing freshwater aquaculture producers in the Southeast to harass or kill cormorants preying on their fish stocks.

Chastant, under the direction of wildlife and fisheries assistant professor Richard Minnis and U.S. Department of Agriculture,

Wildlife Services, National Wildlife Research Center research wildlife biologist Tommy King, records specifications of each banded bird for tracking if they are spotted in Mississippi.

This is the second year of her study, measuring eggs, counting birds, recording banding data and photographing seasonal changes in their plumage.

“When it wasn't raining and foggy, I was out on the island, looking for leg bands and collecting data on the number of eggs in a nest,” Chastant said.

The study will allow biologists to determine where the birds nest, their movements during the breeding season, dispersal of young and their preferred wintering grounds.

“The bands help researchers track the birds' annual migration patterns,” Chastant said.

While officials in Canada are concerned primarily with impacts to habitat, it is along the Mississippi River where the main human/wildlife conflict is introduced. Tens of thousands of birds arrive annually to spend the winter feeding on fish stocks contained in commercial aquaculture ponds.

To determine where the birds originate, Chastant is working with staff from the Ontario Ministry of Natural Resources, Canadian Wildlife Service and USDA to band 1,500 cormorants a year at the three study areas.

Funded by the Berryman Institute—a research center in the Forest and Wildlife Research Center dedicated to resolving human/wildlife conflict—Chastant has found that out of three to five eggs per nest, fewer than two of the birds will survive to migrate south in the fall.

“Cormorants typically don't start breeding until age 3 and will continue to reproduce for the next 15 years before reaching a ripe old age of 20,” Chastant said.

Cormorants are related to pelicans and have an orange pouch. The inside of the bird's mouth is bright blue, and cormorants have distinctive crest feathers, which only appear during breeding season. A colony of the birds makes a colorful and noisy display when it's time to attract a mate.

“They're hilarious, they're clumsy and stumble around a lot on land,” Chastant said.