


Soupy Weather and Eggs Make
Gator Aid an Adventure

in **Alligator Egg
Harvesting**

By Cindy Lowe



Two officers with the Florida
Game and Freshwater Fish
Commission fly overhead in a
helicopter and radio the location
of nests to gator farmers in
airboats on the lake.

A blanket of gray shrouded the rising sun, keeping its bright orange rays from coloring the sleepy waters of Lake Griffin near Leesburg. Soon this peaceful early morning quiet would be awakened by loud buzzing noises.

A crew of a dozen "gator farmers" laughed and joked as they received their airboats and loaded their gear.

Gator veteran Don Ashley of Ashley Associates in Tallahassee, who headed the group, is a consultant to the alligator industry in Florida and Louisiana, and is a promoter of gator products worldwide. He has been conducting egg hunts for 20 years and is well acquainted with the reptile behavior.

Before the day's journey began, Ashley educated his three student "egggers." The female gator, after mating in April, begins the process of building a nest. Finding a fairly dry place, she clears it by biting off the tough grasses and shrubs in her way.

Working for hours, with back-and-forth movements of her massive body across the muddy ground, she scrapes up leaves and grasses into a pile. "She grabs everything [around her] with her feet and mouth," Ashley explains.

Day and night she works, building an earthy cone-shaped mound of vegetation, whose base is four to six feet or more in diameter and about two feet high.

With her hind feet, she forms a hole nine inches across and about a foot deep. She will lay her eggs in this cavity later.

After depositing 20 to 70 three-inch-long eggs, she covers them with wet vegetation, which, as it decomposes, generates the heat needed to incubate the eggs. She will guard the nest mostly from afar.

Toward the end of the nine-week period, her instinct tells her to visit the nest more often. "When 30 to 40 hatchlings start

chirping, the mama gator comes and digs out the nest," Ashley continues. From within the wet, decaying vegetation emerge the eight-inch-long babies, each weighing about two ounces.

The young usually make it out of the opened nest on their own, but sometimes they get help from their mother. Ashley speaks with wonder almost akin to affection, "You wouldn't think something strong enough to crush a turtle shell would be tender enough to pick up hatchlings without hurting them."

One by one, each of the five airboats sped from the shore. A sixth airboat carried two officers with the Florida Game and Freshwater Fish Commission. Two other commissioners flew overhead in a helicopter to spot alligator nests and radioed their locations to those on the airboats.

The helicopter pilot reported a rainstorm moving across the lake from the east. Ashley radioed the other airboats that he was making a dash over to the covered docks at Treasure Island.

As the group crowded on the small dock eating snacks, Ashley told about some of his own experiences. "I had to put my son up a tree once," he recalls, speaking about a time when he was gathering eggs from a nest. "That female was the hardest-fighting gator I've ever seen in 20 years! She was after me!"

He said he couldn't believe it, but at the very next nest he encountered the same situation. "I was always convinced they were sisters!" he laughs. He added that in two decades of harvesting, nobody had gotten hurt.

The rain was letting up when the unmistakable sound was

heard of the whirlybird's blade. The crew members climbed back into their respective boats and headed out again in search of gator nests.

The pilot, with his bird's-eye view, directed Ashley to a nest that was way back in a canal off the lake.

Ashley idled into the mouth of the narrow passage. Seeing how constricted it was with vegetation, he radioed the pilot to be sure a wide enough spot would be available where he could turn around—airboats cannot go in reverse.

The waterway was nearly unnavigable in parts, as wax myrtle branches and willow limbs reached out over the canal. At last, the nest was in sight—and so was the mother gator, half submerged in the canal's cool tannic waters. She was guarding her clutch.

Ashley turned his craft around and reached for his "equalizer," a long wooden crook. Bopping the reptile on the nose with the staff made her flee—at least temporarily. Ashley was then relatively safe while he robbed her nest.

Ashley climbed out onto the large mound of brown, muddy vegetation that rose nearly three feet beside the water's edge. He started taking nest material from the top, placing it as a bed in a rectangular stackable tray basket.

As he dug, he uncovered the egg cavity. Meticulously, Ashley withdrew each egg, marked the top and then gently laid it in the tray. He removed 53 eggs from that one nest, then the airboat carefully navigated its way back to the open lake.

Meanwhile, all the other airboat crews had been harvesting eggs and they rendezvoused with Ashley to give their reports. He directed them to collect from a few more nests. Then the group dispersed.

Lake Griffin is one of the most populous lakes, gator-wise, with about 50 of the reptilian residents per mile of shore-

line, producing some 120 nests.

Florida harvesters can take eggs from only half the nests, and don't return any to their natural habitat.

Ashley says that only about half of the eggs and hatchlings would survive in the wild. Heavy rains flood and destroy many nests. Raccoons and bears are famous for seeking out alligator nests for the tasty eggs. The defenseless hatchlings are preyed upon by great blue herons, snapping turtles, cottonmouth moccasins and even bullfrogs.

"Some are going into the food chain; we want them to go into the farm chain," Ashley says.

After lunch, the pilot directed Ashley to a nest hidden in the saw grass on the edge of the lake. He moved in, and once on the nest, began to dig. He found only an aluminum can and a fisherman's lure; no eggs here. Finally he decided to quit for the day—even though they would be short of their expected take.

At the end of the day's harvest, one of the gator farmers took a penlight and "candled" each egg in tray after tray. He placed the light directly on each egg shell; if the egg glowed pink inside—showing normal blood flow in the vessels, and had a band around the middle, indicating the attachment of the umbilical cord, it was a healthy embryo.

Only about 5 percent to 10 percent of the eggs are found to appear unsound. These are sent to the University of Florida to be studied by Dr. Paul Cardeilhac, professor of veterinary medicine.

Cardeilhac has been examining gator eggs for more than 10 years. He knows the normal physical properties of these eggs, such as expected weight and length of a hatchling from a certain size egg.



Ashley carefully removes and marks the eggs.

He and his students receive from the season's harvest a sampling, which is usually less than 2,500. The fertility status and age of each egg are determined, and the live eggs are then disinfected—to work toward the eradication of alligator diseases, and then incubated. The alligator benefits from these studies, the farmer is helped by increased production, and the environment is protected.

Cardeilhac states that by recording the number of embryonic deaths and malformations, it allows close monitoring of the lakes. "You can check different levels of pollution of different lakes by alligator eggs," says Frank Godwin, owner of Gatorland Zoo, located between Orlando and Kissimmee. "When alligators start dying out of the system, you know you're in trouble. That's what happened to Lake Apopka," he continues. Godwin regularly takes part in the harvest, and purchases eggs for Gatorland's alligator farm.

Ashley agrees that the decline of the gator is the first sign of water contamination. "In 1979, Lake Apopka was the same as Lake Griffin [is now]. But, within two years, the population crashed," he adds.

He believes that Lake Griffin is now in danger: The average hatch rate is 70 percent; Lake Griffin is at 50 percent. He thinks the culprit is pesticides. "Somebody better be looking at the birds and other amphibians," he warns.

"Alligators are a top-level predator. Whatever they eat is a good sampling of the system. They may be picking up pesticides or chemicals including mercury," declares Allan Woodward, alligator research biologist at the Wildlife Research Laboratory of the Florida Game and Freshwater Fish Commission in Gainesville.

Woodward says that alligators are more resilient to contaminants than humans; gators can ingest more poison without serious brain damage. These prehistoric creatures are, therefore, valuable as natural barometers in a modern world of chemical use. "They're good indicators of health hazards for humans," he adds.

Humans owe a debt of gratitude to the crocodilian for continually tipping off authorities to any existing pollution problems. Alligators also benefit people financially. Gator skin is a worthy and durable high-grade leather. Sixty percent of the world's supply of classic reptile skins comes from the United States. And the demand for alligator is at the top of the list.

Gator farming, a \$30 million trade, is a viable business in Florida. Records at the Wildlife Research Lab show that Florida had 46 permitted gator farms in 1996. Of that, 24 are functional as commercial operations. The alligators raised on these farms are primarily hatched from eggs obtained in the wild for which the farmers pay a per-egg charge to the state.

During last year's egg harvesting season in July, Ashley's group harvested 7,320 eggs from Lake Griffin and the St. Johns River in Central Florida, and, in the south, Lakes Istokpoga and Okeechobee, and the Everglades. Approximately 26,947 alligator eggs were collected by harvesters from Florida's waterways in 1996, Ashley reports.

Of those commercial farms, seven shared in the season's haul collected by Ashley's band. One is in Christmas. Owner Ed Froehlich, Sr., received nearly 3,500 eggs from last year's harvest.

Although most farmers produce one-third to one-half of their hatchlings on their farms, and supplement with harvested wild eggs, Froehlich says that breeding his own hatchlings is out of the question. It would require much more property than he has—including a lake. The cost of feeding the "big ones" would be prohibitive for him, he adds. And if he did, he would have to replace his breeding stock every 15 years—another added expense.

Froehlich, who was the first in the state to raise alligators for profit from the sale of the skins and meat, says he is totally dependent upon getting eggs from the wild. So, harvesting means everything to him: "Without it, I'd go out of business. It's my sole restocking program."

Farm life benefits the gator. Untimely fatalities are nearly nonexistent in that environment because of the lack of predators. Less

than 3 percent die prematurely on farms, but in the wild, only 17 percent will live to reach a length of four feet, Ashley says.

Addressing the farmers' desire to guard against the possibility of using the alligator to extinction, Ashley states, "Farmers don't want anything to happen to gators. They make their living from them and want to pass it down to their children."

However, some always will believe that people should not tamper with animals in the wild. Woodward acknowledges the wide array of attitudes toward gator harvesting. But he points out that the large majority have no problem with harvesting—as long as it is not detrimental to the species.

Cardeilhac says the old way of preserving a species by stopping all hunting of the animal sounds like a good idea, but, realistically, it just doesn't work.

In many cases, for people to want to preserve a species, the animal has to work for them, he remarks. "Some gators have to die so that others can live."

Cardeilhac, who says he is basically a conservationist and belongs to the International Union for Conservation of Nature and Natural Resources, adds that he wants to make farming successful because "farming is a way to conserve the alligator."



The other harvesters rendezvous with Ashley on the side of the lake.

Ashley is also convinced that "the way to conserve them is to use them."

Woodward agrees, "Sustainable use" permits harvesting, but at the same time, it allows the population to replenish itself. This seems to be working out "reasonably well."

Woodward reports that populations have "basically leveled off" so that now roughly a million or so gators reside in the waterways of our state.

However, it's still important to consider the protection of their habitats. According to Ashley, our state has lost about 50 percent of its wetlands. And he adds, "Alligators can survive anything except loss of marsh."

But in this, too, a program of sustainable use is beneficial to the gator, as well as to all kinds of wildlife. "Some of the income from alligator products goes back to the land owners. [Because of this economic incentive], they're more apt to protect the environment," Woodward says.

"The goal is management," Woodward states.

Ashley concurs, "If we manage the number of alligators, tag the skins [to guard against illegal harvesting], and monitor the results, then the alligator will never be in danger." ☀