At Little Grassy Fish Hatchery, visitors get to see how the channel catfish becomes a keeper.

In the Company of C

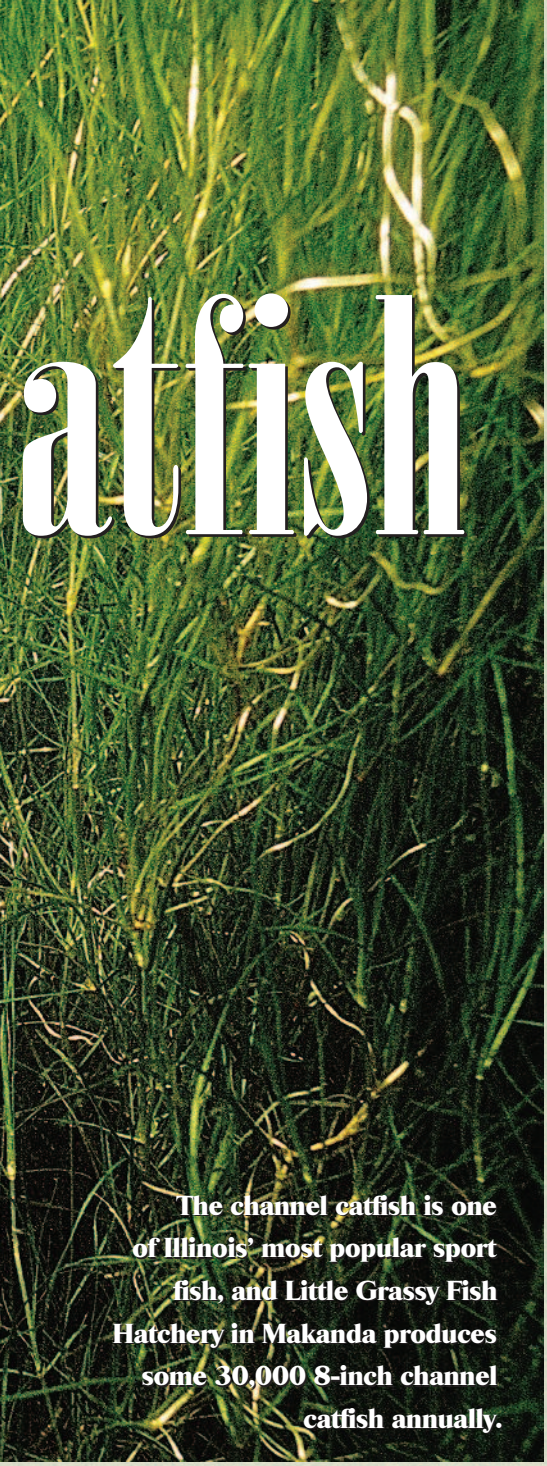
Story By Brenda Garver
Photos By Little Grassy Hatchery Staff

As the summer vacation season approaches, planning the summer itinerary kicks into full gear. What places should you visit? What events are there to attend?

For something a little out of the ordinary, why not include a trip to view the annual catfish production at Little Grassy Fish Hatchery?

Little Grassy Fish Hatchery is one of southern Illinois' hidden jewels. Located 7 miles south of Carbondale within the Crab Orchard National Wildlife Refuge, Little Grassy Hatchery is one of three fish hatcheries operated by the Department of Natural Resources. Little Grassy, labeled the "warm-water" hatchery, is DNR's sole producer of channel catfish. Approximately 220 state- or pub-

In late spring, staff at Little Grassy Fish Hatchery prepare the concrete raceways for catfish spawning production.



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The channel catfish is one of Illinois' most popular sport fish, and Little Grassy Fish Hatchery in Makanda produces some 30,000 8-inch channel catfish annually.

(Photo by Eric Engbretson, Engbretson Underwater Photography.)

After a successful spawn, the egg mass is removed from the spawning chambers and brought into the hatchery buildings for the hatch.

lic-owned waters are stocked each year with 8-inch nonvulnerable (of a size that is less vulnerable to predation by larger fish) catfish.

Little Grassy Lake provides the water necessary to operate the hatchery. When the lake water temperature reaches 75˚ F (usually by the first of June), the catfish spawn is triggered. Just prior to the anticipated spawning event, adult channel catfish are retrieved from on-site outdoor ponds. Adult male and female catfish are paired up according to body weight, placed into spawning cubicles in outdoor raceways and provided a nesting site (in this case large metal milk cans). As the water warms to the appropriate temperature, the catfish enter the nest site and lay their eggs. Fertilized eggs are then collected by technicians and taken into the hatchery facility to be weighed and prepared for the next step in the production process.

Spawns collected out of the cans are not individual eggs but a mass of thousands of eggs held together by a clear, connective matrix. Before the eggs can be placed into incubation jars, this mass must be separated. This is done by placing each spawn into a large stainless steel bowl, covering the eggs with a 1.5 percent sodium sulfite solution and stirring gently for six to eight minutes until the connective tissue is liquified and the bowl contains thousands of individual eggs. The eggs are counted, placed into tall, cylindrical hatching jars and placed on racks in the incubation room. A water tube into each jar allows oxygenated water to continuously flow over the eggs, gently rolling the eggs until they hatch six days later.

One would expect to see a miniature version of an adult catfish when the eggs hatch, but this is far from what appears at the end of six days. Newly

About six days after incubation, catfish eggs hatch and develop tiny tails. A few days later, the clumsy eggs become increasingly mobile and begin to swim to the surface and feed as fry.

(Photo by Joe McFarland.)

Prior to the spawn, individual catfish cages in raceways are equipped with milk cans to serve as "nests."

hatched eggs are nothing more than a yolk sac with eye spots and a tiny flagellum-like tail. These strange little creatures are very mobile at this stage—whirling, spinning and wiggling. The tiny tadpole-like fry are then placed into shallow start troughs where they continue their development.

Over the course of the next five to seven days, the fry absorb their yolk sacs, gradually develop all body parts and begin looking like a catfish, complete with whiskers. As the yolk sac is depleted, fry begin to become more mobile, eventually swimming to the top of the water, an indication that they are actively searching for food.

Automatic feeding boxes are set up on each of the start troughs and the catfish are fed around the clock. The small fry (0.25 inches) are kept in the start troughs for approximately three weeks and are fed a high protein, fish-meal-based powdered food.

The young catfish are moved out of the facility to outdoor ponds and fed well to support their explosive growth phase. A mechanism for survival in the wild, changing quickly from a tiny speck to a mobile fish helps ensure survival among many and varied predators. By September, the catfish hatched in early June average 4 inches in length.

As winter approaches and the water temperature drops, the channel catfish fingerlings eat less. When the water temperature drops to 50˚ F and lower, the fish cease to actively feed and seek the warmer, deeper sections in the ponds. Here they stay until springtime, when water temperature begins to gradually warm. In mid April, technicians drain the ponds and harvest the 4- to 6-inch fingerlings using fish pumps.

Fingerlings are placed into 80-foot-long and 12-foot-wide outdoor concrete tanks called raceways. Approximately 30,000 catfish are placed into each raceway and it is here that they will finish their growth to the nonvulnerable length of 8 inches. The peak of feeding occurs at the height of summer when water temperatures reaches 85˚ F to 90˚ F. It is usually mid- to late July when the first nonvulnerable catfish are ready to be stocked.

From July through September catfish are delivered and stocked into their new destinations. Visitors to the hatchery are allowed to feed the hungry catfish during the hot summer months until all are stocked out. It is always fun to take a bucket of floating catfish food to the raceways and watch as thousands of catfish fight and splash while trying to grab a few morsels of food.

So whether you live in the area, or are planning a trip to southern Illinois, add a visit to Little Grassy Fish Hatchery to your list of things to do this summer. You'll be glad you did.

Facts at a glance

Address: Little Grassy Fish Hatchery, 1258 Hatchery Lane, Makanda, IL 62958.
Telephone: (618) 529-4100.
Website: www.ifishillinois.org/programs/Hatcheries/stocking.html.
Directions: Take Giant City Road south from Route 13 (E. Main Street) in Carbondale and proceed south for approximately 7 miles to Grassy Road. Turn left (east) onto Grassy Road. Travel 1 mile and turn left onto Hatchery Lane. Follow the lane to the visitor parking lot.

Comments: Open to the public every day from 8:30 a.m. to 3:30 p.m. Walk-in visitors are welcome. Appointments encouraged for families or large groups. Call to arrange educational tours.

Brenda Garver is the site interpreter at Little Grassy Fish Hatchery.

Adult catfish collected in hatchery ponds are identified by sex and placed into individual cages, one male and female per cage.