

The Commission's *by Tom Pekarski* Walleye Stocking Program



photo-Art Michaels



photo-Tom Pekarski

Pennsylvania Fish & Boat Commission employees begin the process of spawning, rearing and stocking walleye during the spring.

Each spring as the Great White Fleet begins to roll down the highway toward lakes, rivers and streams in anticipation of Pennsylvania's opening day of trout season, a small number of dedicated Pennsylvania Fish & Boat Commission employees begin the process of spawning, rearing and stocking walleye.

At two widely separated state fish hatcheries (SFH), Pleasant Mount SFH and Linesville SFH, Commission hatchery employees set trap nets to capture adult walleye. Pennsylvania is lucky to have two lakes with populations of walleye high enough to allow the capture and spawning of wild fish—Lake Wallenpaupack and the Pymatuning Sanctuary.



Each spring as the ice leaves these waters, walleye begin to travel the lake shorelines in search of suitable spawning areas.

Walleye are one of the most sought-after sport fish in Pennsylvania. A member of the perch family, they derive their

name from their prominent opaque eyes. They have 19 to 22 rays in the dorsal fin and 12 to 14 rays in the anal fin. Scales along the lateral line range from 80 to 89. The cheek as a rule is sparsely scaled. see the sidebar on walleye identification. The current Pennsylvania state record is a 17-pound, 9-ounce fish that was a bit over 36 inches long caught in Kinzua Reservoir in 1980.

The walleye is known by many names throughout Pennsylvania—walleyed pike, yellow pike, pike perch and Susquehanna salmon. The Cree Indian called them *okow* and the French Canadians call them *dore* or *picarel*. Among early fur traders of British America they were known as horn-fish. The Commission has been raising and stocking walleye in Pennsylvania waters for well over 100 years.

The Commission is committed to large-scale walleye spawning activity that supports a diverse walleye culture effort. Walleye brood stocks are captured with the use of the Pennsylvania-style trap net. These nets are constructed with 125-foot leads of 1.5-inch mesh netting leading fish into the crib and trap section, which is encased with 1-inch mesh knotless nylon netting. The entrapment portion is fabricated on 4-foot square aluminum frames to ensure that the net will not collapse in shallow water and to make removing fish easier. Cone-shaped netting

on the crib section allows fish to enter easily but prohibits their escape. Each net is checked daily and the walleye are brought to the hatchery to begin the spawning process.

Upon arrival at the hatchery, walleye are separated by sex and females are checked to see if they are ready to spawn. Those females ready to spawn are referred to as "ripe" and those not ready are referred to as "green." Green females will be checked daily until they ripen. The walleye are anesthetized and eggs from the ripe females and sperm from the males are mixed in basins. The eggs and milt are expressed into the basin by applying slight pressure on the abdomen. Several males are used to fertilize each female to ensure a high rate of egg fertilization. The walleye eggs are extremely adhesive and are stirred in a special clay solution of fullers earth for 30 minutes to remove the adhesive qualities. These eggs are stirred with turkey feathers because the soft fibers protect the fragile eggs and natural oils prevent the eggs from sticking.

During this time the eggs absorb water and swell to almost twice their original size. This process is referred to as water-hardening. Walleye eggs (140,000 per quart) are unusually small in comparison to trout eggs (5,000 per quart). Each day's egg take is referred to as a "lot." Each lot of eggs is enumerated by counting small samples and measuring



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lake from which they were captured and released. They seldom return to the shallow water and aren't caught in our nets again the same year.

When walleye hatch from the eggs, the small fry swim to the jar's surface and out into holding tanks. At this time they're called "fry." Each fry has a yolk sac attached to its belly that provides sustenance for the first five days. After five days the fry begin to seek out live food.

Many walleye are stocked into lakes and rivers at this stage each year. The average number of fry stocked in each of the past five years has been between 70 million and 80 million. The fry numbers are estimated by displacement, about 200 fry in a milliliter of water. The fry are placed in

the total volume. The eggs are placed into specially designed jars that keep the eggs in suspension and provide oxygenated water until they hatch. In the hatchery environment, the protected eggs have a much higher survival rate than in a stream or lake. The eggs are incubated in these jars for 21 days at 50 degrees, at which time most will have hatched.

Information is recorded on the walleye used for spawning such as weight, length and age. Walleye are long-lived and can live in the wild for as long as 25 years. Unlike salmon that die after spawning, the walleye may spawn for many years. The day following spawning, all walleye are taken back to the



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plastic bags with water. All the air is forced out of the bags and replaced with oxygen. These fry can then be transported long distances and stocked in areas requested by the Commission fisheries managers.

Other walleye continue their life at the hatchery. Large ponds are fertilized and lime is applied to enhance the growth of phytoplankton and zooplankton populations. Walleye fry are stocked into these ponds and continue to grow quickly by actively feeding on the zooplankton. When the population of the zooplankton starts to decline, more fertilizers are added to increase the available food supply. Fish culturists pay close attention to all factors that influence walleye growth, including the water temperature, the oxygen content, and pH of the pond water.

The walleye are reared in these ponds for about six to eight weeks. At this time they have reached about 2 inches in length and are ready for harvest. The hatchery ponds are specially designed to drain into small catch basins at the deepest end. All walleye congregate in these catch basins and are netted out and loaded onto transport trucks. They then travel to the hatch house where they are unloaded into concrete holding tanks.

The walleye are separated from any other fish or amphibians that may have

been in the pond. They are counted and requested stocking numbers are separated for specific water areas. Again they are loaded onto stocking trucks and transported to various waterways all over Pennsylvania. Upon arrival



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at the waterway, the fish culturists check water temperatures and conditions to ensure a smooth transition from hauling truck to lake or water area.

The stocking program for walleye and other coolwater fish allows anglers all over the state to enjoy increased fishing opportunities. Many of the lakes and rivers support a population of these game fish but lack the habitat and conditions that would allow natural reproduction in numbers high enough to sustain them. By stocking fry and fingerlings in these waters, the Commission provides anglers with a fishery that could not exist on its own. So the next time you're fishing your favorite water and happen to catch a walleye or two, think about the effort that went in to providing that fish, and remember that it was your license dollars that made it happen.

For more information about the walleye stocking program, visit Linesville SFH www.fish.state.pa.us/images/



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[fisheries/fcs/linesville/fcs.htm](http://www.fish.state.pa.us/images/fisheries/fcs/linesville/fcs.htm) or Pleasant Mount SFH www.fish.state.pa.us/images/fisheries/fcs/plmount/fcs.htm, or the Pennsylvania Fish & Boat Commission web site, www.fish.state.pa.us.

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