

PGC Biologist Bands Barn Owls for Research

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AS PART of the Game Commission's Barn Owl Conservation Initiative, Richard Fritsky, Game Commission Northeast Region wildlife diversity biologist, carefully crimped metal bands on the right legs of five juvenile barn owls on a farm just outside of Turbotville, Northumberland County. He was assisted by William Pursell, a student at Hazleton Area High School, and William's father, Kevin.

Fritsky entered the dank and dark confines of a long-abandoned grain silo that a female owl found to be a perfect location for rearing young.

"The adult female silently stared down at me with black eyes from high atop the silo, and then took flight," Fritsky said. "Five owlets snapped their beaks and hissed like an angry nest of vipers in an attempt to scare me away. Their fuzzy bodies, with comically big heads, were each placed in a cat litter container and transported to the tailgate of a pickup truck where we would collect biological information."

The processing of the young owls consists of determining their age, weight and genetic characteristics. Age is estimated by using a combination of measuring a flight feather and comparing the bird in hand with photos of owls at known ages. The owlet is held in position throughout the process with the ingenious application of PVC pipe. The bird is then placed in a cloth bag and held aloft to find the bird's weight in grams. A down feather is plucked from the chest and the genetic material found at the base of the feather will be tested by York College students to obtain a DNA profile. Determining the sex of an owl at this early age is difficult and not necessary.

Lastly, the owl is fitted with a metal leg band supplied by the U.S. Geological Survey. The band has a 9-digit number specific to each owl and has both a toll-free number and website address. All information is gathered in an effort to study barn owl health, population trends, dispersal patterns and causes of mortality.

The Game Commission began a Barn Owl Conservation Initiative in 2005 to study the biology and ecology of barn owls in an effort to better understand and conserve the species. Biologists from each of the agency's six regions conduct yearly site visits to verify active nests, monitor young, conduct public outreach to farmers, and determine suitability for artificial barn owl nesting box placement. Nest boxes are mounted at least 15 feet above ground and mimic the conditions found in natural tree cavities. They are usually placed in the interior of a barn, with a hole cut into the side of the barn, so the birds can fly directly into the box from the outside.

Short Lifespan

"The five owlets are within four and five weeks of age and all appear to be in good health," Fritsky said. "At around eight weeks, barn owls leave the nest to work on their flying and hunting skills. The adults will continue to feed the young for another five or six weeks. Owlets mature and breed within their first year. This remarkable reproductive capacity probably developed because of their short lifespan of two to four years."

Fritsky gently passes each owl through the small silo door and lowers them onto the boney remains of countless mice and meadow voles. They waddle to the far end of the silo and transform into one fuzzy body with five hissing heads. Fritsky shuts the door and secures the latch. He and his helpers will visit four other sites before the day ends. Later, probably just before dark, the female barn owl will return to the silo bearing the spoils of the hunt.

Close Association

Prior to the 1800s, barn owls were probably rare in Pennsylvania due to the unavailability of suitable habitat. They prefer open agricultural grasslands for hunting near suitable cavities such as those found in hollow trees, silos, and barns for nesting. Their close association with manmade structures such as barns is where they got their name.

The barn owl population dramatically increased in the 1800s to the early 1900s as agriculture opened up the eastern forests and barns provided ideal nesting locations. The shift from pastures to row crops and more efficient clean-farming practices used today have caused a significant decline in meadow vole population, the primary food source for barn owls.

An average family of barn owls can consume up to 3,000 rodents during the course of the breeding season. Loss of nesting sites due to silos being replaced with sealed units, and old barns being torn down, contributed to the decline. The barn owl is now considered a species of special concern in Pennsylvania.

Barn owls differ from typical owls; they have a long heart-shaped facial disk compared to the round facial disk of other owls, and their vocalizations include hissing and piercing scream-like screeching sounds. Pairs are typically monogamous, but males may have two mates during the same breeding season if there is a shortage of males in the vicinity. Breeding usually takes place from March through June with an average clutch size of four to six. The female lays one egg every two to three days, beginning incubation with the first egg. The eggs hatch in the order they were laid, resulting in siblings being as much as two weeks apart in age. Both male and female birds attend to the young.