VOLUME 12, NO. 4 Winter 1994

A Model for Conservation and Education
One state park is making the most of its bat population, not only educating the visiting public, but also enhancing habitat . . .

One state park is making the most of its bat population, not only educating the visiting public, but also enhancing habitat . . .

CANOE CREEK State Park, just south of Altoona, Pennsylvania, is one of the state's biggest conservation successes for bats. Located in the rolling hills of the Allegheny Mountains in the central part of the state, visitors come for swimming, boating, and fishing in the park's large lake. But in recent years, a nearby bat population has also attracted nature lovers who come to see the nightlife.

Many of the bats hibernate in a large limestone mine at a remote end of the park. Sometime after the mine ceased operations in the early 1900s, bats moved in. For years, three huge entrance tunnels, designed to remove limestone via a stone-car railway, had enticed would-be explorers and posed a potential hazard. The park decided in 1978 to close the mine permanently by backfilling the entrances; what they didn't know was that the site was the winter home to a small number of Indiana bats *(Myotis sodalis),* a species that had been declared endangered only two years before.

Fortunately, John Hall, a biologist from Albright College in Reading, learned about the closure soon after it happened and notified the park immediately. Hall's research on the distribution of Indiana bats is well known. Acting quickly, Eugene Duffy, then Park Superintendent for the Pennsylvania Bureau of State Parks, went to assess the situation. As a result, the backfilling was removed at the uppermost part of each entrance in time for the fall return of the bats. In 1985, the Pennsylvania Game Commission formally declared the mine site a protected area for Indiana bats, and three years later the entrances were fitted with specially designed bat gates. Cal Butchkoski, a wildlife technician from the Pennsylvania Game and Fish Commission, was instrumental in getting the gates installed.

When airflow is altered in a cave or mine, it can dramatically affect the temperature and therefore the site's suitability for bats. Many times, the result has been disaster. But in this case, the mine, because of its huge multiple entrances, had been a little too cold for an optimum hibernation site; at the time the gates were installed, the mine did not house great numbers of bats in the winter. Partial backfilling and new gates changed that. The temperatures rose slightly, enough to attract not only the Indiana bats, but also little brown bats (Myotis lucifugus), eastern pipistrelles (*Pipistrellus subflavus*), big brown *bats (Eptesicus fuscus),* small-footed myotis *(M. leibii),* and northern myotis *(M. septentrionalis).* Little brown bats are the most abundant.

Today, the mine shelters Pennsylvania's largest known bat hibernating population. Even better, the number is growing each year. At last count, from the censuses conducted once every other winter, there were some 13,000 bats present. When biologists return this winter, they fully anticipate as many as 20,000. Further temperature monitoring will be conducted this time to determine whether the mine is still too cold and whether completely closing one of the entrances would help.

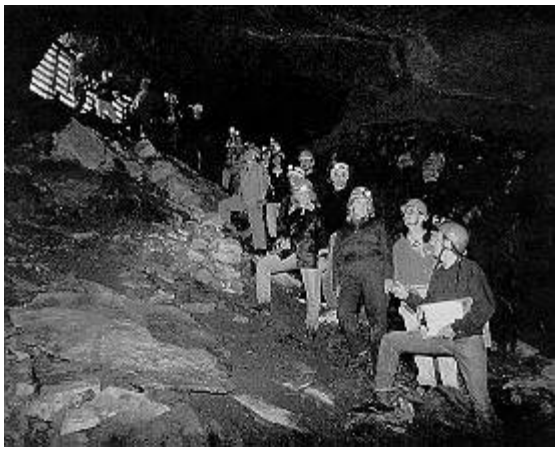
AT THE TIME the gates were installed, Cal Butchkoski also seized the opportunity to interest Canoe Creek State Park in highlighting bats in the park's interpretive services. Visitors can now view an exhibit, which features BCI photographs and materials, in the interpretive center and can hear Kerry Estright-Pruznak, a park naturalist, talk about the bats. Once a month during the summer, she leads a special night bat walk, catching a few of the bats by use of a mist net and light-tagging them with small transparent capsules, containing a fluorescent dye. She then releases the bats so that visitors can observe them feeding over the lake in the dark. The capsules fall off within a few hours. Michael Gannon, a bat biologist from Penn State University, also presents special slide-lecture programs each summer.

A recent addition to the summer bat program is viewing the evening bat exodus from the attic of a 19th-century church. The church, just outside the entrance to the park, was turned over to the park as a separate unit last year. Kerry takes special tours over to the church to see the bats emerge at dusk. The event has become extremely popular, and some evenings, as many as 150 people walk over with her. Long abandoned by people, the church attic has been occupied by about 10,000 little brown bats for at least the past decade. When the park took over last year, they repaired the building and replaced and shored up the flooring, removing a great deal of old guano, which went to good use in local gardens.

Cal Butchkoski, who has done a great deal of research with Penn State researcher Lisa Williams on bats in artificial roosts *[BATS,* Spring 1993], has been experimenting with increasing the roost space in the attic. He has suspended large sheets of plywood from the apex of the roof, creating additional roosting crevices of several different widths. Bats have readily moved into the new space, typically preferring the narrower three-quarter to one-inch widths. Since it appears that little brown bats are in need of roost space in the area, Butchkoski also hopes to build a large, separate artificial roost on nearby park property, patterned after the attic.

Park officials are also very enthusiastic about developing special evenings for small groups of visitors to observe a seldom-seen fall ritual at the entrance to the mine. Thousands of bats arrive here late each summer and early fall. Before entering hibernation, they form large "swarms" as they hunt for mates and scout out potential hibernating sites. Some of them will stay, and others will eventually move on to other sites. With a red light and strict quiet from the watchers, disturbance to the bats would be minimal, and visitors would be afforded a rare opportunity.

Canoe Creek has gained a reputation as a place to come and learn about bats. The park also provides service to the community, offering local consultation on bat nuisance problems and advice on building bat houses. For visitors interested in seeing and learning about bats, Canoe Creek offers an extraordinary experience.



Above: A limestone mine in Canoe Creek State Park now shelters the state's largest known bat hibernating population, comprising six species. A BCI workshop this summer gave participants the opportunity to learn about how to protect such sites.

Above: Park naturalist Kerry Estright-Pruznak checks on a colony of little brown bats during their dawn return to the attic of an old church. For many park visitors, a special guided walk to see these bats emerge at dusk is an unforgettable experience.

Below: Canoe Creek State Park proved an ideal site for BCI workshop participants to learn how to identify eastern bat species and observe seasonal behavior. Verne Read, chairman-emeritus of BCI (front, left) took part with educators, biologists, and many others.

All articles in this issue: