

## VOLUME 25, NO. 4 Winter 2007

### Working Together

BCI builds success with the U.S. Forest Service

Robert Locke

When Unimin Corporation learned in 1995 that about 100 bats were hibernating just inside the crumbling entrance to an old silica mine that was soon to be sealed, the mining firm contacted U.S. Forest Service geologist Tudi Smith for advice. Smith called Bat Conservation International. So did Susan Armentrout, Unimin Senior Environmental Specialist. The result of those calls was an exceptionally productive partnership that is still paying off for the endangered Indiana myotis (*Myotis sodalis*).

Dan Taylor, BCI's Bats & Mines Coordinator at the time, discussed the abandoned Magazine Mine with both women, then all three visited the Illinois mine to assess its importance. Conditions seemed near ideal for Indiana myotis, Taylor recalls, and some of the endangered bats were identified. The partnership, which also included the Illinois Department of Natural Resources and U.S. Fish and Wildlife Service, stabilized the main entrance and installed a bat-friendly gate. When a second collapsing entrance threatened to disrupt desirable airflow, the partners stabilized and fenced it. Thanks to those and other efforts, the number of hibernating Indiana myotis "a species in alarming decline for decades" increased at the mine from a few hundred to 43,500 by 2007.

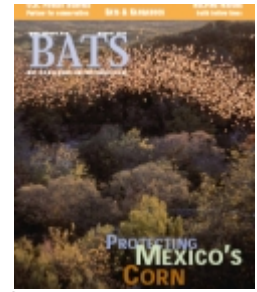
Magazine Mine is considered a model of effective conservation collaboration, and Unimin's commitment to this important hibernation site has earned the company several major conservation awards.


The tables turned a few years later, when BCI needed help with another Indiana myotis site, this one in Virginia. In 1999, BCI Founder Merlin Tuttle was frustrated after years of trying to permanently protect Rocky Hollow Cave. Once "before frequent human disturbances" the cave had sheltered a hibernating Indiana myotis population estimated at a million or more bats. The logjam was finally broken by Forest Service biologist Lisa Nutt, an enthusiastic graduate of a BCI Bat Conservation and Management Workshop.

Nutt led the way through a complex maze of ownership and jurisdictional issues to win long-term protection for this potentially vital cave. A partnership engineered by Nutt and BCI brought tons of material to the mountaintop site by helicopter and built a 25-foot (7.6-meter) gate in three days with mostly volunteer labor. The site was given special protection as a "Significant Cave" by the Virginia Cave Board.

BCI and the Forest Service have been working together, formally and informally, to protect and study bats and their habitats for years. We have collaborated on bat-friendly gates at mines and caves, experimented with artificial roosts, conducted a remarkable variety of bat research, produced publications, co-sponsored symposia and partnered on such programs as Water for Wildlife and Bats and Wind Energy. A Memorandum of Understanding, inaugurated in 1994, commits BCI and the agency to work cooperatively in bat conservation and research.

"The Forest Service has demonstrated a deep and abiding commitment to bat



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conservation," Tuttle said. "We at BCI are proud of our long alliance with this dynamic agency and extremely pleased that our relationship is expanding in new directions. I'm delighted to see that, together, we are accomplishing more for bats each year."

Forest Service initiatives are expanding worldwide through its International Programs section, which is funding up to 10 special BCI Student Research Scholarships a year. These Bats in International Forestry Scholarships, designated for conservation-relevant research in developing countries, enables us to increase the overall number of BCI scholarships "from a total of 13 in 2005 to 21 in 2007" and to double the maximum award to \$5,000.

In the past two years, Bats in International Forestry Scholarships supported 21 students working in Argentina, Brazil, Colombia, French Guiana, Kenya, Madagascar, Malaysia, Mexico, Panama, Peru, the Philippines and Thailand. (For an example, see "Protecting Mexico's Corn," page 12.) This research contributes greatly to scientific knowledge, but the greater impact likely will be the young biologists whose skills and careers benefit from the support and recognition.

The scholarships, as well as collaboration for a 2009 BCI bat-conservation workshop in Nicaragua, are part of the International Programs' Wings Across the Americas effort, which covers migratory birds, butterflies and bats. It is overseen by biologist Carol Lively, who describes herself as a joint-venture guru. "Our philosophy is that conservation is a long-term process, and it takes a big network of people to really make it happen on the ground. Capacity building [as by encouraging research and nurturing young scientists] is one of the most valuable activities I can be involved in."

About 30,000 Forest Service employees manage 193 million acres (78 million hectares) of land divided into 155 national forests and 20 grasslands that contain an incredible variety of habitats and wildlife. Its scientists and forest managers, on their own and in collaboration with other agencies, industries and organizations, conduct wide-ranging research and conservation projects. Bats are very much a part of those efforts, and BCI, especially through its hands-on workshops, has helped prepare many Forest Service staffers to work with bats "and to convince more than a few to focus their attention on bats. Smith said her work at Magazine and many other mines over the years "pretty much all grew out of that [bats and mines] workshop" that she attended in Idaho. For Nutt, attending a workshop "literally opened the door to a now 13-year-long love of all things bats and was the beginning of meeting all the great folks I've worked with at BCI."

"I love bats, I really can't get enough of them," says BCI Member David Saugey, Wildlife Biologist at the Ouachita National Forest in Arkansas. "BCI had a real impact on me. I read the magazine and enjoy seeing how big bats are becoming (as an important conservation issue) all over the world." Saugey, who was among researchers who discovered red bats hibernating unexpectedly in leaf litter on the forest floor, also takes to heart the Forest Service's commitment to public education and outreach. "I've presented more than 800 school programs since 1990. The kids are little sponges. They're so interested in this kind of stuff. There seems to be a disconnect between children and nature these days, so we have to take it to them."

Terri Marceron attended one of the first BCI workshops, hosted by biologist Brock Fenton in Ontario, Canada, in 1989, when she was an assistant district ranger in Montana. After the workshop, bats became the prime focus of her community and school education efforts. She designed a traveling bat-education program that the Forest Service used throughout the region, was part of a Forest Service speakers' circuit and gave many bat-oriented talks

to Forest Service staff.

Marceron is now the Forest Supervisor for the Lake Tahoe Basin Management Unit in California and Nevada and says she rarely has time these days for bat presentations, but “I continue to keep my pulse on bats.”

More than 200 Forest Service staffers have participated in various BCI workshops, including several co-sponsored by the Forest Service.

“BCI workshops are the best thing out there for getting the word out, not only for appreciating bats but for working with them,” says Jerry Trout, the Arizona-based National Coordinator for Cave Resources. Trout, who attended a 1995 workshop to hone his species-identification skills, provides printing of course materials used at BCI workshops. He highly recommends the workshops, partly for the passion that usually results: “They take that enthusiasm home with them and it can be infectious.”

After 35 years with the Forest Service, Trout also notes some “tremendous changes” regarding bats. After re-establishing a system of 10 regional cave and mine coordinators, he said, “Four of those ten coordinators are wildlife biologists. Their expertise is not in caves, but in bats. Four out of ten! That’s amazing.”

Forest Service Region 6 Bat Specialist Pat Ormsbee of Oregon has been working since 2002 on the powerful concept of a “Bat Grid” – a standardized bat inventory and monitoring program with centralized data collection throughout the Pacific Northwest. Her collaborators include Joe Szweczak of Humboldt State University and Jan Zinck of Portland State University, with Aimee Hart of the Willamette National Forest as the Field Team Lead. BCI contributed through a North American Bat Conservation Fund grant. The system to improve regional information gathering should serve as a model for use in other areas.

Ormsbee credits much of the Grid’s success to the 35 to 40 people who collect data each year, after standardized training. “We love it when people show up at our training sessions after they’ve been through a BCI workshop. They’re really pumped up and ready to go.”

Wildlife Biologist Sybill Amelon, a prolific scientist at the Forest Service’s Northern Research Station in Missouri, attended a 1995 workshop and is now an instructor at many of them. She says the intense sessions “cover all the basics to get you going [in bat management and research] and there’s no other place where you can get that much in such a condensed, focused package.”

She encountered BCI very early in her career, “when I went to a [Forest Service] Watchable Wildlife program and Merlin Tuttle was the keynote speaker. That was a real turning point for me. It made a big difference in the decisions that I made.” Amelon later earned a Ph.D. with a speciality in bat ecology and now works fulltime as a Forest Service bat researcher.

Ecologist Ted Weller of the Forest Service’s Redwood Sciences Laboratory in California is a frequent instructor at BCI’s Acoustic Monitoring Workshops. “It’s a great service,” he says. “It’s a chance for folks, especially agency biologists, to live bats for a week, to just think about them all the time. Some of these people, they leave the workshops and then you come across them in the scientific literature

a few years later. That training really pays off.â€

A particularly innovative BCI-Forest Service collaboration emerged from a 1995 workshop. Biologists Melissa Siders and Dan Garcia de la Cadena of the North Kaibab Forest Ranger District in Arizona learned during the session that, while some bats roost under the peeling bark of dying trees or snags, such snags were fast disappearing from managed forests.

Garcia came up with the idea of making artificial bark and mounting it on healthy trees to increase roosting options. Tuttle, who was leading the workshop, â€was very excited and supportive of the idea,â€ Siders recalls. She and Garcia spent several years developing the idea, sampling roost temperatures, arranging production of unobtrusive artificial bark and testing the system. It worked in Arizona and has been modified for use elsewhere.

Siders, who moved from the Forest Service to the Bureau of Land Management a few years ago, said the workshop refocused her career onto bats since â€I didnâ€™t know hardly anything about bats before that.â€ During her 12 years at the Forest Service, she used BCI materials and photos to build â€bat-education boxesâ€ that were distributed throughout the region. â€We also did a lot of (bat) research projects at North Kaibab (especially in identifying unexpected roosting and foraging areas), and we got funding from BCI for some of them.â€

Weller figures that despite great research progress, countless questions remain. â€There really is a lot of opportunity, especially for new grad students, to make a real contribution right away,â€ he says. â€Thatâ€™s why I got into this.â€ Weller discovered in 2001 that fringed myotis (*Myotis thysanodes*) actually roost in large snags (dead trees), rather than exclusively in caves, mines and buildings.

â€You never really know whatâ€™s going to come up next. Problems with wind energy caught us completely unprepared.â€ Weller is now active with the BCI-led Bats and Wind Energy Cooperative in seeking solutions to the alarming rate of bat fatalities at wind-energy facilities.

So is Dennis Krusac, Endangered Species Specialist for the Forest Service Southern Region. Krusac signed on after seeing BCIâ€™s documented research on bat kills at a West Virginia wind farm. â€Wind energy is coming to federal lands, so I figured the Forest Service should be involved early on because we have the potential to be a huge player. I am optimistic that we can learn how to develop wind energy and minimize the effects on bats.â€

Krusac, another BCI workshop graduate, says his career tilted toward bats in the mid-1990s, when the Forest Service faced litigation over timber sales in habitat used by the endangered Indiana myotis. â€Working with field biologists and partners, we developed proactive conservation measures for bats. Now when we get sued, we usually prevail because we are using the best available science to design our conservation measures.â€

Krusac also stresses the outreach and education aspect of Forest Service work: â€We view it as part of how we can get the conservation message ingrained into society. People are bombarded with all these old myths about bats, but if you take the time to teach them, they realize, â€Hey, bats are really pretty darn cool.â€â€

Amelon cites a striking jump in scientific interest about bats, at the Forest Service and

almost everywhere else, since the early to mid 1990s. “Fifteen years ago, there literally were just a handful of bat researchers. Now, when you go to a NASBR [North American Symposium on Bat Research] meeting, the place is just full to overflowing.

“I know there were other things that were going on, but I think BCI is strongly behind that” increased attention to bats.

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