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A Treasure Trove of Fruit Bats
Robert Locke

BCI helps a tireless friend protect a crucial cave in the Philippines

Most of the cave's limestone walls are densely studded with fruit bats, an average of 60 of them per square foot (645/square meter). Tens of thousands roost in remarkably exposed locations, giving visitors an up-close look from outside the cave. An estimated 1.8 million bats, the largest known population of Geoffroy's rousette fruit bats in the world, are overloading Monfort Bat Cave on the Philippines' Samal Island. Yet bat populations have plummeted by more than 99 percent at other nearby caves. Such is the power of uncompromising protection.

The Inigo-Monfort family has owned and safeguarded this cave, which also sheltered humans against World War II bombing raids, since the 1900s. Norma Monfort is the current owner/trustee of the cave, the bats and the surrounding 57 acres (23 hectares). "Since the time of my ancestors, our family has left undisturbed the thousands and thousands of *Rousettus amplexicaudatus* in the cave in our backyard," she says. She enclosed the property and posted a guard around the clock to discourage bat hunters and other uninvited visitors. Though occasional guests could marvel at the huge clusters of bats and the spectacular emergences, she allowed almost no one except conservation scientists to enter the cave.


In 2003, regional tourism and local government officials asked Monfort to donate the cave, promising royalties but sharply limiting her control in its management. Fearing that changing local government leaders could not guarantee permanent protection, she declined and began planning the Monfort Bat Conservation Park. Then she faced possible loss of the cave through agrarian-reform laws, which limit individual ownership of agricultural land to 12.39 acres (5 hectares). An application to convert the property from agricultural to ecotourism zoning remains pending with the Department of Agrarian Reform.

Norma Monfort, with a remarkable natural resource in her care, needed expert guidance in managing it wisely, sharing its wonders and developing its educational potential – without putting her beloved bat colony at risk. Ignored by a local conservation group, she turned to Bat Conservation International. Then things started happening.

"My concern is simple," Monfort wrote to BCI in February 2006, "where do I go from here? Who can I tap to do research or tell me where to start? My goal is to have a Bat Research and Conservation Center, which I believe would be the first of its kind in the Philippines."

Merlin Tuttle, BCI's founder and president, quickly replied that the colony offered "a wonderful opportunity, not only to protect a key resource but as a center to educate visitors regarding the vital contributions of bats to ecosystem and economic health." He proposed an on-site visit to assess the colony's significance and immediate needs and to suggest a management plan for the cave's use in education, research and ecotourism. A visit by an internationally respected organization and scientist, said Monfort, would be "a great honor,



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a dream come true.”

Tuttle and Dave Waldien, who directs BCI’s cave programs, knew when they left for the Philippines in June that the mission was important, but during a hectic and extraordinarily productive 10 days on Samal Island, they discovered that both Monfort Bat Cave and Norma Monfort exceeded their expectations.

At one point, she thanked Tuttle “for the kind words, which serve as inspiration to me. When I feel the weight at times, I remind myself that this is my real purpose in life.” Monfort’s commitment to conserving these bats is absolute, Tuttle said, and her energy is amazing.

The Island Garden City of Samal, part of Davao del Norte Province, is off the coast of Mindanao, third largest group of the Philippine islands. Monfort Bat Cave is about 245 feet (75 meters) long and has five entrances. Bats cover 75 percent of its ceilings and walls. These are large bats, with males averaging just under a quarter of a pound (112 grams).

Geoffroy’s rousette fruit bats feed on fruit and nectar. Their role as pollinators and seed dispersers is essential in sustaining Philippine forests, including such important commercial fruits as durian. Each bat consumes 1 1/2 to 3 times its body weight nightly in fruit and nectar. This colony could consume 550 tons (500,000 kilograms) of nectar from durian and other trees, pollinating an incredible number of flowers.

Worldwide, cave-dwelling bats are in alarming decline due to human disturbance and destruction of their cave roosts. In some areas, including Samal Island, bats are recklessly killed for food with little or no regulation. Colonies like the one in Monfort Bat Cave are now rare and in urgent need of protection. Their loss would jeopardize the health of forests and human economies.

Tuttle and Waldien’s survey of the cave immediately confirmed its importance. It also revealed that the bat population is at or near its all-time high and exceeds the cave’s capacity for safe shelter. The overcrowding dramatically increases the fruit bats’ vulnerability to predators. Monfort reports that the cave colony has grown sharply since the 1970s. Visits to three of the area’s largest caves revealed the probable reason.

These caves showed strong evidence (the unmistakable staining left over time by roosting bats) of previous populations totaling more than 525,000 bats. In June, Tuttle and Waldien found just 2,052 bats of several species in all three caves. They also found evidence of hunting: bamboo poles used as clubs or snares, torches and old fishing nets.

No indication of any hunting was found in Monfort Bat Cave, an obvious result of 24-hour guards. The bats, however, are subjected to hunters when away from the cave. One nearby property owner described catching fruit bats for food by setting ripe bananas coated with fishhooks tied to monofilament fish lines. Bats coming to the bananas would be hooked.

Over-hunting for food appears to be the primary threat to the area’s cave-dwelling bats, and Monfort Cave – the island’s refuge of last resort – would doubtless be a magnet for bat hunters if protection were relaxed. Tuttle suspects the Monfort colony probably is the main reason any rousette fruit bats are still found in other area caves. It serves as an overflowing nursery from which many young bats must find homes elsewhere.

The colony should be able to survive natural predators – crows, rats, 10-foot (3-meter) pythons and occasional monitor lizards – just as bat populations do elsewhere. Feral dogs and cats, however, also seem to be taking a toll at Monfort Bat Cave and efforts to eliminate their access are being intensified.

BCI presented recommendations for ensuring the continued health of the cave colony, which Monfort enthusiastically endorsed and has already largely implemented.

Also during Tuttle and Waldien's visit, Norma Monfort, BCI and six government and non-government organizations signed a Declaration of Understanding on the Co-Management of the Monfort Bat Conservation Park.

Conserving this colony and other bats on Samal Island, however, ultimately requires a regional commitment to bat conservation and the protection of other important caves. "So little is known here about bats, which means there is much to do," Monfort told Tuttle. "I am hoping that with the 70 caves around Samal alone, I can jump-start some kind of conservation activity, especially with the youth, whom I always target because they are the hope of the future."

During Tuttle and Waldien's 10 days on the island, Monfort and Nina Ingle (one of three leading experts on Philippine bats who conducted their Ph.D. research with BCI scholarships) organized and partnered with the BCI scientists to conduct a bat conservation and management workshop. The session was co-hosted by the Kinaiyahan Foundation, Inc. and the Monfort Bat Conservation Park. Attended by 100 people, including national and local representatives of the Department of Environment and Natural Resources, academics, cavers, conservation groups and local officials, the workshop was a powerful forum for demonstrating the values of bats and the Monfort Bat Cave.

Tuttle and Monfort also held a news conference that attracted local and national newspaper and television reporters and produced favorable bat stories throughout the Philippines and Southeast Asia. That press conference definitely fired local imaginations, Monfort reports.

"Because of your visit, the local government is really appreciating the bats – and me – now," she told Tuttle. "Everyone agrees that it gives [us] great pride to have the largest rousette colony here. ... The City Council passed, on time and against all odds, an official resolution interposing no objection to my application for reclassification of the bat cave property to ecotourism. This local-government support boosts the conversion application that is still pending in Manila.

"Now," Monfort said, "people are getting as excited as I am and really want to help me pull this off."

Among examples of progress:

- The Philippine Tour Operators Association is showing interest in promoting the Monfort Bat Conservation Park after seeing Norma Monfort's bat-education exhibit at a Mindanao Travel and Tours Expo.
- Despite the current absence of overnight accommodations, visitors are camping out at the park in order to gather outside the cave entrances and peer at countless fruit bats covering the walls almost to ground level. Guests recently included 400 students in one day. "The

constant praises I hear from visitors have started to convince me that I have started something good,” she said. “Visitors leave the park enthused, knowing these creatures aren’t scary after all and are so vitally important to our ecology.”

- Delegates to the Wildlife Conservation Society of the Philippines’ annual symposium at nearby Davao City in April are planning to visit the cave, presenting a prime opportunity to promote bat awareness among the conservation community.
- Monfort is planning bat-conservation workshops in cooperation with Holy Cross of Davao City College, where Tuttle lectured during his visit. The college already has begun dispatching students to the cave for field trips, and science instructors are supervising bat-research projects.
- On top of everything else, Monfort founded, with other conservationists, Philippine Bat Conservation, Inc., a nonprofit organization independent of the Bat Conservation Park. BCI’s Waldien was invited to serve as a founding trustee. The organization plans to educate individuals, communities and government about the values of bats and the importance of their conservation and to support research and conservation action.

BCI, meanwhile, is planning a major survey of Philippine bat caves and pursuing funding to support it.

The tireless Norma Monfort summed up in a December email to Tuttle: “My bats and I have been blessed with your visit. Consequently, my question last January 2006 when I opened the park officially – ‘Where do I go from here?’ – has been replaced with: ‘Oh, my! There is so much to do, so many challenges, and all will be accomplished one step at a time.’”

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