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Paper, Pencils & Flying Foxes

A poster contest pays off in Madagascar

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Take a few hundred youngsters, stir in some unsuspected facts and, for spice, toss in a colorful video in their own language, then add some paper and colored pencils. Top it off with a few prizes, and you've got a hard-to-beat recipe for bat conservation.

Two organizations in Madagascar found that teacher training in "Bats and the Environment," coupled with visits to remote schools and a popular bat-poster contest, magnified their message well beyond children. Parents, officials and whole villages were drawn into their efforts to protect the Madagascar flying fox (*Pteropus rufus*). Our efforts were funded in part by a grant from Bat Conservation International's Global Grassroots Conservation Fund. A team of enthusiastic and dedicated Malagasy bat workers made it all possible.

The project was undertaken as a collaboration of a national bat-conservation organization (Madagasikara Voakajy) and a local flying-fox conservation group (Arongam-pahiny Culture, Communication and Environment, or ACCE). The Mada-gascar flying fox is a rapidly declining species that is hunted for food and plagued by habitat losses to slash-and-burn agriculture.

We focused our efforts on 17 grade schools in the Alaotra-Mangoro Region of eastern Madagascar. The area features a rare intact belt of rain forest between two national parks and flying-fox colonies that are vital to the health of the island's fragmented rain forests because of the seeds they disperse. Protecting these colonies will pay real dividends for the region's remaining rain forests.

The three-day "Bats and the Environment" education workshop drew 65 people, including 44 teachers who traveled an average of 75 miles (120 kilometers) for the training. We provided materials and explained the unsuspected diversity of Madagascar's bats, their importance to the region and nation, and the threats facing them. We especially stressed that protecting flying foxes is a critical part of maintaining and regenerating the forests on which they depend.

During the workshops, we planned the poster competition as an effective way for teachers to incorporate their new knowledge about bats into their classrooms. A few weeks later, ACCE teams on motorcycles visited the 17 schools to talk with the children.

The good news: The youngsters were clearly intrigued by what they were learning about bats, and many reported that their parents were also very interested in their stories about the bats. Each class was given 20 sets of colored pencils and entry forms for the poster contest.

The bad news: Although the communities were near large flying-fox populations, many children were unfamiliar with the animals and had a hard time drawing them. So we returned to the schools a month later, this time in rented four-wheel-drive vehicles, with a TV set, power supply and our bat-conservation video in the Malagasy language.

The video was a big hit, especially since the schools have no electricity and the children rarely see films. In addition to 1,034 students and 39 teachers, a total of 1,319 parents and others showed up to watch the video. After the film, the children were charged up and



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ready to work on their posters. Teachers chose the 10 best posters from each class, for a total of 220, and judges from seven organizations selected the winners on the basis of concept, message and artistic merit.

The top five student posters were incorporated into a professionally produced poster that was printed and distributed to schools. Nine winners, along with five teachers, received their awards at a regional World Environment Day celebration attended by the mayor and a Member of Parliament. The posters demonstrated that many of the children understood and remembered our bat-conservation messages.

At a subsequent meeting between ACCE and government authorities from 12 districts, the mayors agreed, in principle, to a dina for sustainable management of the remaining forest fragments and protection of the flying foxes. A dina is a traditional social contract in Madagascar that typically is more effective than national legislation in rural settings. The conditions are established and policed locally.

This is important in an area where flying foxes not only are classified as game and widely hunted, but where national laws on hunting seasons and quotas are difficult to enforce.

ACCE drew on local pride, as well as scientific facts, to broker the agreement, since most bat hunters in the region are visitors from other areas.

Bat conservation is a new concept in Madagascar. Our initial efforts have been impressive, and have the potential to provide hope to other parts of Madagascar where local communities seek to conserve fruit bats.

Since the 2004 education project, we have been invited by the Ministry of Education's Environmental Education Department to develop, test and produce booklets on bat conservation for Malagasy primary schools. Targeted for three levels (4-7 years, 7-10 years and 10+ years of age), these books will enable teachers to incorporate bat conservation into their curriculum. The booklets already are being tested- in 20 primary schools in eastern Madagascar, including nine that participated in the 2004 Grassroots project.

Our education efforts operate in tandem with conservation-science projects because we need to provide information on habitat use and roost occupancy. In 2003, the Malagasy President, Marc Ravalomanana, pledged at the World Parks Congress to triple the size of Madagascar's protected areas. This project, known as the Durban Vision, represents a real opportunity to include fruit bats in newly protected areas and is especially important since few Madagascar flying fox roosts are located within the existing network of reserves and parks.

We see this project as a useful template for other regions of Madagascar with similar conservation problems. And much more education and training is needed to build on our initial success in Alaotra-Mangoro.

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