Madagascar’s Forests Get a Reprieve—But for How Long?

Conservation biologists are cautiously celebrating a victory in the effort to pull Madagascar’s unique biota back from the brink of extinction. Last week, after months of pressure from scientists, conservation groups, and foreign diplomats, Madagascar’s military rulers announced a ban on the logging and exportation of rosewood, a commodity from a threatened ecosystem. Logging of rosewood was banned before but resumed after a military coup toppled Madagascar’s science-friendly government a year ago and relaxed controls (Science, 27 March 2009, p. 1654). By decree on 24 March, the military government reversed its decision of 6 months earlier.

The government decree has cheered ecologists who have heard only bad news from Madagascar for the past year. “We made it,” says Lucienne Wilmé, editor of Madagascar Conservation & Development. But now, she says, the challenge is to ensure that the rosewood ban is enforced.

Madagascar has 43 species of rosewood trees—all but one of which exist nowhere else—and thousands of endemic plant and animal species that depend on them. One such species is the silky sifaka, a lemur. It is one of the rarest mammals on Earth, found only in Madagascar’s northeastern rosewood forests, where loggers are encroaching.

Conservation in Madagascar has never been easy, says Brian Fisher, an entomologist at the California Academy of Sciences and director of the Madagascar Biodiversity Center in Madagascar’s capital, Antananarivo. Inhabitants of the California-sized island are among the poorest in the world. They have stripped more than 90% of the forests for agriculture and charcoal. Since the coup, most foreign aid to the country has been frozen and eco-tourism has plummeted, worsening poverty.

In the months after the regime’s relaxation of restrictions on the hardwood trade in September 2009, researchers watched helplessly as Madagascar’s forest reserves were plundered. “First come the loggers,” says Fisher. After the loggers cut down trees, “the next victims are the lemurs, as [loggers] set up lemur traps to feed themselves and to sell locally for cash.”

If it stopped there, says Fisher, “these forests might recover.” But what comes next is far more destructive: The vegetation is cleared to the ground, and “the door is now open for loggers.” In the middle of the northeastern Ambatovaky Reserve, a government official “has built his home out of rosewood and moved in 60 cattle,” says Fisher. “If the land grab continues another year, there will be nothing left of what was once the most beautiful, species-rich lowland forest in Madagascar.”

“The northeast is a precious area, and it is being hit very hard right now,” says Anne Yoder, director of the Duke Lemur Center in Durham, North Carolina, but it’s not the only place. Data gathered by Meredith Barrett, Yoder’s Ph.D. student at Duke University, reveals that other rosewood forests across the country are in danger. Rosewood is particularly sensitive, says Barrett,
because “it is slow-growing and also grows at a very low density.” Populations of rosewood could go extinct locally in a matter of “months or years,” she says. To be more exact she needs more data.

But studying Madagascar’s forests has become dangerous. Fisher says visitors are sometimes threatened by organized criminal loggers. During his recent survey of the northeastern forests, he says, “we had to monitor our food for possible poisoning.” He found only a single unpaid ranger “confronting the lemur trappers and loggers. … His life is continually threatened.”

Will the new rosewood logging ban reverse the damage? “Given this government’s track record, I would be surprised if they actually enforce the decree,” says Yoder. She says it is likely “a PR move” to placate international aid donors. Rosewood exportation remains temptingly lucrative. Edelin Calixte Randriamiamisoa, a former army officer who is now Madagascar’s Minister for the Environment, declined to comment. Still, the ban is undeniably “good news,” says Yoder. “The government is obviously beginning to feel the international heat.” But she says the international community needs to move quickly.

“The next and best step” is to protect all of Madagascar’s rosewood trees as threatened species under Appendix III of the international Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Nine of Madagascar’s rosewood species are already listed as endangered. But once the trees are reduced to logs, “identifying specific species is next to impossible” without a DNA test, says Erik Patel, a lemur biologist at Cornell University. So all of Madagascar’s rosewood trees would need equal protection, he says.

Madagascar could call for protection of its rosewood unilaterally under Appendix III of CITES. If it doesn’t, the next chance to propose global protection of rosewood will be at the 2011 meeting of the CITES Plants Committee in Geneva, Switzerland. But if the 2 years go by without enforcing the logging ban, says Barrett, “then the outlook does not appear good.”

—JOHN BOHANNON

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