Science & Technology

Can We Act Sooner to Save Endangered Species?

At-risk animal populations should receive protections earlier, urge Columbia researchers.

By
David J. Craig
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Loggerhead sea turtles, which live in US coastal waters, are threatened by habitat loss. (Mark Conlin / Alamy)

Since its passage in 1973, the Endangered Species Act has in some ways been a great success, helping to prevent the extinction of hundreds of fish, plant, and animal species.

But a new study led by Columbia doctoral student Erich K. Eberhard reveals a significant flaw in the act's administration. Eberhard and his coauthors, Princeton biologists Andrew P. Dobson and David S. Wilcove, find that at-risk species do not typically receive protection until their populations have dwindled to the point where they cannot fully recover. Inclusion in the official list of endangered species, in other words, tends to be a one-way ticket to biological purgatory: species may be prevented from disappearing altogether, but their numbers don't bounce back to healthy levels. This is evidenced, the authors say, by the fact that of the more than one thousand species added to the endangered list over the past five decades, only fifty-four have ever rebounded enough to be removed from it.

Part of the problem, the researchers report in the journal *PLOS One*, is that the US Fish and Wildlife Service, which manages the endangered-species list, takes too long to review petitions for species' inclusion. The agency has often taken ten years or longer to evaluate petitions that are supposed to be processed within two. By the time species are finally added to the endangered list, they typically number fewer than one thousand. "For many species, this makes a robust recovery extremely difficult, if not impossible, and it substantially increases the risk of extinction," says Eberhard, who is a PhD candidate in the Department of Ecology, Evolution, and Environmental Biology.

The researchers say that the federal government ought to allocate more money to the US Fish and Wildlife Service for assessing species vulnerability; they point out that the agency's workload has increased significantly over the last few decades, while its annual operating budget has shrunk.

"Funding this work is essential if the Endangered Species Act is to live up to its reputation as one of the world's most powerful environmental laws," says Eberhard.

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