

### Despite Progress, Biodiversity Declines

Erik Stokstad

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### Museums Help Prioritize Conservation Goals

Mason J. Ryan Federico Bolaños, Gerardo Chaves

Department of Biology, University of New Mexico, Albuquerque, NM 87131–0001, USA

E. Stokstad's News Focus ("Despite progress, biodiversity declines," 10 September 2010, p. 1272) reviewed modifications to 6 of 21 subtargets of the Convention on Biological Diversity (CBD). The Targets are being discussed at the CBD meeting in Japan to set conservation goals for 2020. Target Two states: "prevent the decline and extinction of known threatened species and improve the conservation status of at least 10% of these species." We argue that natural history museum data, including traditional object-based (specimen) and event-based (presence/absence, abundance) data (1), should be used to achieve this goal by prioritizing conservation actions based on historical documentation.

Amphibians exemplify the extinction crisis because they are rapidly declining worldwide [43% of 6,317 species threatened or extinct (2)]. Museum records reveal that many threatened amphibians are well represented in collections and were easily detected in past surveys (3, 4). Such species are excellent candidates for renewed survey efforts as opposed to species that were always rare in collections. We illustrate this approach with two recently rediscovered frogs from Poás and Barva volcanoes, in Costa Rica.

*Incilius holdridgei* (5) [declared extinct (6)] and *Craugastor fleischmanni* [critically endangered, last seen in 1986 (7)] experienced severe population declines in the 1980s. Examination of museum records determined that both of these species were once abundant and suggested that new surveys might be fruitful. Between 1963 and 1986, 118 surveys on the two volcanoes yielded 163 specimens of *I. holdridgei* and 41 specimens of *C. fleischmanni*. Following declines in 1986, these species went undetected for 22 years (70 surveys) and were rediscovered through additional surveys in 2008 and 2010, respectively. Furthermore, other missing Costa Rican amphibians have recently been rediscovered using the same framework.

These examples demonstrate how museums helped prioritize species likely to be rediscovered and thus should be central in achieving Target Two of the 2020 CBD.

Mason J. Ryan

Department of Biology and Museum of Southwestern Biology, University of New Mexico, Albuquerque, New Mexico 87131–0001, USA.

Federico Bolaños, Gerardo Chaves

Museo de Zoología, Escuela de Biología, Universidad de Costa Rica, San Pedro, 11501–2060 San José, Costa Rica.

#### References

1. A. V. Suarez, N. D. Tsutsui, *Bioscience* 54, 66 (2004).
2. S. N. Stuart *et al.*, *Science* 306, 1783 (2004).

#### Conflict of Interest:

None declared

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**Forgotten Habitat****David C. Campbell**

Tuscaloosa, AL, USA

In the News Focus story "Despite progress, biodiversity declines" (10 September 2010, p. 1272), E. Stokstad notes that in protected areas, relatively good progress has been made toward conservation for terrestrial eco-regions, and rather limited progress has been made for coastal and marine ecosystems. However, this entirely omits mention of freshwater ecosystems, which

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