

LETTERS

edited by Etta Kavanagh

Scientific Description Can Imperil Species

SCIENTISTS ARE RACING TO DISCOVER AND describe new species in the face of a global biodiversity crisis. Ironically, in cases of commercially valuable taxa, publishing new species descriptions may inadvertently facilitate their extinctions. These descriptions advertise “novelties” for hobbyists and drive new markets. Most modern descriptions provide detailed information on the locality and habitat where the new species occurs, turning a scientific article into a treasure map for commercial collectors. Researchers in fields with application to bioterrorism are debating codes of conduct to ensure that their findings do not fall into the wrong hands, the so-called “dual-use dilemma” (1). Taxonomists describing new species that have the potential to become commercially valuable are also faced with a dual-use dilemma.

Three of us have published descriptions of new species of restricted-range reptiles and amphibians that tragically aided their commercial exploitation. Immediately after being described, the turtle *Chelodina mccordi* from the small Indonesian island of Roti (2) and the gecko *Goniurosaurus luii* from southeastern China (3) became recognized as rarities in the international pet trade, and prices in importing countries soared to highs of \$1500 to \$2000 each. They became so heavily hunted that today *C. mccordi* is nearly extinct in the wild (4) and *G. luii* is extirpated from its type locality (3). The salamander *Paramesotriton laeensis* from northern Laos was not known in the international pet trade prior to its recent description as a new species (5). Over the past year, Japanese (6, 7) and German collectors used the published description to find these salamanders, and they are now being sold to hobbyists in those countries

A *Goniurosaurus luii* gecko

for \$170 to \$250 each. Similar cases are known from elsewhere in the world and from other taxa.

Withholding locality information from new species descriptions (8) might hamper profiteers, but it also hampers science and conservation.

However, with the aid of the Internet, scientists can now monitor commercial demand for species just as commercial collectors can monitor scientific journals. This means prior information exists on which taxa will likely become commercial commodities (we should become concerned for any newly described species of *Chelodina* and *Goniurosaurus*). In such cases, taxonomists should work closely with relevant governmental agencies to coordinate publication of the description with legislation or management plans that thwart overexploitation of the new species. Of course, this will not always be easy or successful, and may lengthen publication time, but alternative solutions that allow taxonomists to continue their work without contributing to species decline are wanting.

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8. For an example, see G. Nilson, C. Andr n, B. Fl rdh, *Amphibia-Reptilia* **11**, 285 (1990).