

Current research on land snails and land snail conservation: Leslie Hubricht Memorial Symposium on Terrestrial Gastropods

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A symposium and identification workshop for land snails was held at the American Malacological Society annual meeting in Carbondale, Illinois on 30 June and 1 July 2008 (Anderson *et al.* 2008). The symposium was organized with three goals in mind. The primary goal was to bring together as many people currently doing research on land snails and land snail conservation as possible. This goal was given maximum importance since both kinds of research are facilitated by interactions between people who might not often attend the same meeting. The second goal was to have experts in identification and taxonomy train non-experts how to identify the different groups of land snails. The final goal was to update the scientific community on the current state of land snail research.

Over the two days, 14 papers were given in the symposium and 12 identification presentations were offered. While the identification workshop was focused on North American land snails, the papers in the symposium cover a wide scope of geography. These geographic regions ranged from islands in the Pacific Ocean to Mexico and the Americas. Topics covered national and regional-scaled research through population-level studies of single species, well-known faunas to understudied micro-snails. However, a common focus remained: land snails as one of the most endangered groups of organisms worldwide (Lydeard *et al.* 2004).

These symposium papers in the *American Malacological Bulletin* are the product of the symposium and identification workshop, and represent diverse approaches to understanding the diversity, distribution, and conservation of land snails globally. The symposium was dedicated to Leslie Hubricht, a leading expert in the taxonomy, distribution, and ecology of land snails in the United States, who recently passed away. In the first paper, Gerber details Hubricht's contributions to malacology and provides a complete list of his publications and new taxa.

Nekola and Coles revise the eastern North American Pupillidae, one of the smallest (by shell size), diverse, and important but understudied groups of land snails in North America that is often unfortunately overlooked in the

literature. Naranjo-García and Fahy review the 34 lesser-known families of Mexican terrestrial molluscs, pointing the way to future Mexican snail research on regions of the country that have never been surveyed for land snails. Rundle reviews land snail diversity on the Pacific island nation of Belau, a spectacular fauna that is also one of the most threatened globally. Minton and Perez use museum collection records and GIS methods to examine the current state of land snail conservation in Alabama, a state with a relatively well-studied land snail assemblage. Coppolino gives an overview of the advantages and disadvantages of various qualitative and quantitative land snail collecting methods. This paper also suggests best practices for survey methods and extensions of snail surveys to include relevant ecological data and enhance the role of land snails in conservation planning. Sinclair examines in detail the population genetic structure of a single species, *Ventridens ligera* (Say, 1821), pointing to rivers as potential routes facilitating gene flow between land snail populations. Finally, Örstan reports on the life history and describes the reproductive behavior of the succinid *Oxyloma retusum* (Lea, 1834), providing the sort of demographic information that is crucial to successful conservation, but is unknown for the vast majority of land snails.

All papers in the symposium focus on the conservation threats facing land snails in the current, changing environment. We hope this symposium generates momentum toward a new synthesis of research on land snails and their conservation.

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LITERATURE CITED

- Anderson, F. E., M. Coppolino, and S. Clutts. 2008. *Program and Abstracts of the 74th Annual Meeting of the American Malacological Society*. Carbondale, Illinois. Available at: <http://www.malacological.org/meetings/archives/2008/AMS-2008-ProgAbs.pdf>; accessed on 13 October 2009.
- Lydeard, C., A. Bogan, P. Bouchet, S. A. Clark, R. H. Cowie, K. S. Cummings, T. J. Frest, D. Herbert, R. Hershler, K. E. Perez, W. F. Ponder, B. Roth, M. Seddon, E. Strong, and F. G. Thompson. 2004. The global decline of nonmarine mollusks. *BioScience* **54**: 321-330.