

McPHERSON, S. 2007. Pitcher Plants of the Americas. McDonald and Woodward; Blacksburg, VA, viii + 320 pp. Hardback, ISBN-13 978-0-939923-75-5, \$44.95 [also as paperback, ISBN-13 978-0-939923-74-8, \$34.95].

If National Geographic magazine were to publish a book on pitcher plants, it might resemble this one, which has excellent color photographs and line drawings, and a straightforward text. By straightforward, I mean that it is written in English prose, not as a technical scientific book with text packed with specialist botanical terms and literature references. Nor is it written as a product of some government agency full of bureaucratic self-importance (think of the words “impact” vs. effect, “utilization” vs. use, “methodology” vs. method, and you will recognize bureaucratise). How refreshing.

It gives an account of the pitcher plants of the genera *Darlingtonia*, *Heliamphora* and *Sarracenia* (Sarraceniaceae) and also two species of *Brocchinia* and one of *Catopsis* (Bromeliaceae), all of them native to the Americas. Their distributions are described and mapped, their habitats are described, and their flowering periods are documented. Each species, subspecies and variety mentioned is assigned its current scientific name (noting with a full citation where the original description was published), and hybrids and cultivars are discussed. Many of the 15 *Heliamphora* species, all native to South America, are only recently described, and there are eight species of *Sarracenia* and just one of *Darlingtonia*. There is a chapter on habitat loss and threat of extinction, a chapter on cultivation and horticulture, a glossary, and a bibliography. This book enables the identification of these pitcher plants without using botanical keys, and it does much more.

Each pitcher of a pitcher plant is a modified leaf able to trap terrestrial insects and other organisms and produce enzymes which digest the trapped organisms. Well, maybe, because the enzymes have not yet been detected in *Darlingtonia* and *Heliamphora*, nor in all *Sarracenia*. They have four aspects of entomological interest. First, some moth larvae eat them; second a long list of organisms has been found to be trapped in them; third, they are pollinated by insects; and fourth, some insect larvae and other organisms manage to live in the digestive fluid in the pitchers of a few of them, especially *Sarracenia purpurea* L. in

North America. These entomological aspects receive only passing mention in this book. The entomological literature on *Sarracenia* pitcher plants is quite extensive—perhaps one day someone with a deep enough understanding will write a thorough review. After that, perhaps the same person or another will write a non-technical review of the quality achieved in this book for the plants. Illustrating such a review to reveal the secret lives of midges and mosquitoes and aquatic mites will take exceptional photography.

Catopsis berteroniana (Schultes and Schultes) Mez, *Brocchinia hechtoides* Mez, and *B. reducta* Baker are bromeliads, and they impound water in a central cup formed by a rosette of leaves. They, too, trap terrestrial insects and harbor aquatic insects. But none of them has been shown to produce digestive enzymes (despite equivocation in this book); instead the insects drown, are decomposed by bacteria, and the nutrients they contain are absorbed by the plants. A website (<http://BromeliadBiota.ifas.ufl.edu/carnbr.htm>) has a partial account of their entomological aspects. The same website explains the mechanism initially suggested for trapping insects (differing from the explanation in this book), involving an ultraviolet-reflecting white powder produced by *C. berteroniana* leaves. Another part of that website (<http://BromeliadBiota.ifas.ufl.edu/wvbrom.htm>) explains the history of the Mexican bromeliad weevil *Metamasius callizona* (Chevrolat) in Florida, and how it has ravaged populations of native bromeliads. The weevil has **not** yet been seen to attack *C. berteroniana* in nature probably only because the weevil has not yet encountered the restricted populations of the plant.

The book is a bargain for its illustrations and the wealth of information it contains, a ‘must have’ for any entomologist who needs to identify them or work with the insects associated with them.

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