

## **Book Review**

*Herbivores: Their interaction with secondary plant metabolites.*

Edited by Gerald A. Rosenthal and Daniel H. Janzen. Academic Press, New York, 1979. 718 pp. \$59.50.

The title of this book is misleading. It's really an updating and attempted resynthesis of that part of chemical ecology dealing with chemical mediation of herbivore-plant interaction. The emphasis is on insect herbivores and secondary plant compounds. The 20 chapters are divided into eco-evolutionary and primarily chemical. The latter are very competent reviews of what ecologists may derisively call "chicken-wire chemistry" and their bibliographies are absolutely indispensable for anyone working in this field. The former, where the fun is, display once again that chemical ecology reduces intellectually to the ploy-counterploy model published by Fraenkel in 1959, and that its practitioners must constantly do battle against unjustified assumptions of adaptivity, "function," and evolutionary history. The most interesting chapter in the book is by Janzen, who cautions his colleagues against all these deadly sins and in the process spins a tall tale about phylogenetic inertia (which might even be true). His caution that "herbivores do not eat Latin binomials" should apply especially to Lepidopterists, long plagued by questionable host records and the assumption that "a rose is a rose is a rose." Gertrude Stein was not a biologist. Hard-headed hypothesis testers may well feel that many chemical ecologists aren't either. Whether or not one is happy about chemical ecology as an explanatory or a predictive science, this is an important book.

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