

# Studies in Palm Ecology: An Introduction

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The ecological articles in this issue are based on papers presented during a symposium entitled "The Ecology of Palms," part of the 1985 American Institute of Biological Sciences meeting at the University of Florida. Topics covered range from biomechanics and physiology to population biology and community ecology. It has become obvious that palms are excellent subjects for ecological investigations; the economical, botanical, and ecological importance of palms more than justify all the attention they have received.

Why have palms recently attracted so much attention from ecologists? There are probably as many answers to this question as there are ecologists but most are related to the relatively simple growth forms of plants in this family. Studies of biomechanics, for example, are facilitated by the usual lack of above-ground branches. An even more fundamental feature of palms is that their age can be estimated by counting the scars of fallen leaves. Although it is becoming increasingly clear that leaf production rates vary considerably, population biologists who study palms are far better off than those who work on dicotyledons in tropical forests where such trees apparently do not produce annual growth rings.

Much of what is included in the following papers is new to science and possibly of fundamental importance to the field of

ecology. Palms are glorious organisms but nevertheless are sufficiently peculiar that some caution is advised in extrapolating the results to other taxa. Whether or not the results lead to generalities, investigations of palm ecology can serve as "out-group" comparisons in studies of other sorts of trees; models of demography or biomechanics developed for palms, for example, can be tested with data from other species.

Emphasis during the symposium was on population biology; consequently, coverage of the field of palm ecology was not thorough. For example, aspects of reproductive biology that are under active investigation (e.g., pollination and seed predation) were given little attention. Herbivory and below-ground ecology were also not emphasized, but this may reflect our profound ignorance of these topics.

Many of the exciting recent developments in palm ecology seem to be on the interfaces between scientific disciplines. In the papers that follow, it becomes obvious that the tools and techniques of engineers, anatomists, mathematicians, and physiologists can be of great use in studies on the ecology of palms. It is comforting that with all the high-powered methods at their disposal, researchers in palm ecology still pay due respect to natural history. They seem inspired by the organisms they study.