the author's own investigations. More than 20 years ago Williams noted that, as a group of organisms is collected and sorted according to species, a rather constant number of new species is added to the previous total each time the sample size is doubled. A logarithmic series could be fitted to such data. In subsequent years, the author gathered together information from a variety of sources about frequency distributions to which this series could be applied. This book represents, in large part, a compilation of such data, including numbers of genera per family, numbers of parasites per host, and estimates of species diversity among a large number of situations. There is some reference to the log-normal and the negative binomial distributions, which, in some ways, are theoretically superior to the logarithmic series. Because it is pertinent, although, at the moment, somewhat heterodox, a recent comment about one of these is worth quoting: "It is possible, therefore, that the fact that the number of individuals per species in plant and animal communities tends to follow a log-normal distribution results simply from a tendency for the factors which influence abundance to combine in a multiplicative manner" [P. J. Clark, P. T. Eckstrom, and L. C. Linden, *Ecology* **45**, 367 (1964)].

The general problems associated with species diversity have recently become an increasingly active area of research in ecology. Thus, the data assembled by Williams should provide useful information, since many are not easily accessible elsewhere. However, anyone who expects a seasoned assessment of the various contributions that have distinguished progress in this field over the last few years will be disappointed. Although some of the contributions made by Margalef, MacArthur, and Preston are listed in the bibliography, for example, no attempt is made to synthesize them in the text. In fact, the author fails to discuss most of the important contributions made during the last 5 years. One must also point to a curious lack of editorial judgment in the makeup of the book. Identical data are repeatedly presented on successive pages, once in tabular and again in graphic form. For the level of specialization achieved, the text at times is unduly didactic. In a book of this kind, one does not expect half a page of discussion about a simple change in the bases of logarithms.

The title of this work misled me into thinking that Williams might have aimed at an evaluation of the important and sweeping generalizations that have recently been suggested as applicable to biological communities. Unfortunately that book remains unpublished, and probably unwritten.

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Botany

The Living Plant. Alan J. Brook. Aldine, Chicago, 1964. x + 529 pp. Illus. $10.

I began this book with considerable optimism, having observed in the preface the statement that ". . . subjects where great and exciting advances are at present being made and which are of fundamental biological importance, have been given special prominence." Unfortunately, this claim was not substantiated. The content of the book is not significantly different from that of a botany textbook of 20 years ago. Indeed, the book serves as a good example of the type of text that the author was attempting to avoid. Examples could be provided, almost *ad infinitum*, of the extremely conservative nature of the text, but only a few can be afforded here. Chapter 16, "The products of plant metabolism: Carbohydrates, fats, and proteins," is ten pages long, of which one entire page is devoted to a full-page plate that illustrates starch grains from four different species (the starch grains would appear to be nearly alike to a student). In the next chapter, "Enzymes," which is five pages long, one-half page is used purportedly to show the digestion of starch grains by amylase in human saliva. Chapter 14, "Transpiration," is the same length as chapter 25, "Heredity." Perhaps more important than mere length of treatment, the content of many sections is conspicuously outdated. Chapter 19, "Catabolism and respiration," six and one-half pages long, is replete with illustrations of trivial laboratory experiments but devoid of cogent modern treatment of energy exchange.

Terminology is excessive, so that no botanical usage, however archaic or superfluous, is withheld. Hence, we see such terms as *rhytidome*. Even such words as *land utilization* are italicized. Many of the illustrations are extremely poor. The author is more effective in his treatment of the basic descriptive aspects of the subject, and the line drawings are good.

Since the strongly stated prefatory remarks and the subsequent content were so extremely divergent, I was led unavoidably into a preoccupation with the paradox—to try to comprehend it, and to extrapolate the situation in some way to botany at large. Much of the content of the book is adequate and, in proper intellectual context, important. Yet, from this book, botany emerges once again at the periphery of modern biology.

Somehow, the fact that the chronological molecular topology of the developing plant represents a dynamic system, indistinguishable in fundamental attributes from other forms of life, must be reiterated until this axiom and all of its implications are generally appreciated. The present book has, unfortunately, failed to go beyond the platitude.

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Antarctic Research

Soviet Antarctic Expedition, Information Bulletin. vols. 1 and 2. Translated from the Russian by Scripta Technica. Elsevier, New York, 1964 (vol. 1, 420 pp. $17.50; vol. 2, 328 pp. $15). Illus.

In expeditionary-exploratory science there is usually a long time lag between field operations and final reports, particularly when the work is a multidiscipline, multiagency, or multination effort and data from many sources must eventually be combined in the final product. There is, therefore, a need for preliminary information, presented in as much detail as possible, on the areas covered, the types of work performed, and the equipment used. This will allow others to avoid expensive duplication of efforts in areas where the logistic costs are usually far greater than the science costs.

The *Information Bulletin of the Soviet Antarctic Expedition* provides such information, describing in general terms the progress and achievements of the U.S.S.R. in Antarctica, since the impetus for research in this area began under the aegis of the International Geophysical Year. The two vol-