

The Genus *Monadenium*, with Descriptions of 21 New Species

By Peter R. O. Bally. Pp. 111+34 photographic figures+32 plates. (Berne: Benteli-Verlag, 1961.) n.p.

THE genus *Monadenium* is a close relative of *Euphorbia*, the spurge genus, differing in the structure of the inflorescence. It is altogether confined to tropical Africa, and almost restricted to East Africa. Although, with some exceptions, the species are not distinguished for their ornamental qualities, their life-history is full of interest, particularly in the way that their structure has become adapted for the evasion or endurance of a rigorous climate. Their habit ranges from herbs an inch or so high with underground storage-organs to succulent-stemmed trees of 18 ft.

So happy a union of botanical skill and artistic excellence as that shown by Mr. Bally is but rarely found. The result is an authoritative taxonomic revision of the forty-seven species of *Monadenium* (twenty of which were first described by Mr. Bally himself), coupled with 32 splendid plates, the majority coloured, from the author's talented brush. The usual herbarium specimens of this genus are so deplorable that plates of this sort, made from living plants, become not only ornamental but also a necessity.

Indeed, this revision indicates very strongly the value of a knowledge of the living plants in their native home in producing good systematic accounts of difficult genera which respond poorly to the normal methods used for preparing specimens for the herbarium.

In spite of the sub-title, which has an odd contradiction between the dust-cover and title-page (18 new species on the former, 21 on the latter), only three of Mr. Bally's species are described here actually for the first time.

J. P. M. BRENNAN

The Pattern of Progressive Mineralisation in Human Dental Enamel

By Dr. H. S. M. Crabb and Dr. A. I. Darling. (International Series of Monographs on Oral Biology, Vol. 2.) Pp. xi+99. (London and New York: Pergamon Press, 1962.) 35s.; 5.50 dollars.

THE nature and mode of development of dental enamel have engaged the attention of histologists and other workers for many years, but owing to the relative difficulty of working with this tissue it has not received so much attention as have most other tissues of the body. Special techniques have also been more important in the microscopy of enamel than in the case of other tissues, and thus much of the evidence on which our present theories of the development and mineralization of enamel are based depend on microradiography and polarized light microscopy as well as on information derived from studies of decalcified material by ordinary transmitted light.

Interpretation of the findings yielded by the various techniques have in the past shown considerable variation, and as a result opposing and contradictory theories of the pattern of enamel mineralization have been current. Workers in this field will, therefore, welcome this authoritative monograph, which gives a clear and succinct account of recent research on enamel mineralization. The authors discuss and criticize the older theories and put forward their own conclusions, which agree very closely with those

recently obtained by other groups of workers. It seems clear that the older views of enamel maturation cannot sustain critical re-examination, and that ideas much closer to those now put forward will take their place.

R. B. LUCAS

The Preservation of Timber

By Dr. W. P. K. Findlay. Pp. xiii+162+14 plates. (London: Adam and Charles Black, 1962.) 25s. net.

MUCH has been written about the preservation of timber, but Dr. Findlay has succeeded in putting into one book, and in easily understandable form, the information on the subject required by architects, builders, householders, farmers and a host of others. The reader is given the necessary basic essentials of the subject in chapters on "The Nature and Durability of Wood", "Agencies of Destruction", "Preservative Methods" and "Wood Preservatives". Non-pressure, pressure and diffusion treatments are described, and the preservatives are also classified into the three main groups of tar-oil derivatives, water-borne chemicals and chemicals in organic solvents. The advantages and disadvantages of each kind and the methods of application are discussed. Most of the succeeding chapters deal with wood preservation for specific requirements such as building timber, woodwork in garden and farm, timber in constant contact with water and the large category of poles, sleepers and mining timber. The preservation of wooden antiques is also considered. Fire-retarding methods are described and the author ends with well-chosen examples demonstrating some economic aspects of wood preservation.

Dr. Findlay has dealt with his subject in a concise and very masterly manner. His book provides the information to enable the most suitable preservative to be chosen for a particular purpose and to be used to the best advantage. In an appendix is a list of the preservatives generally available in Great Britain.

All users of timber and timber products will welcome this informative and very well-illustrated book.

C. J. TAYLOR

Reports on Astronomy

Edited by D. H. Sadler (Transactions of the International Astronomical Union, Vol. 11A—Reports.) Pp. viii+579. (London: Academic Press, Inc. (London), Ltd.; New York: Academic Press, Inc., 1962.) 80s. net.; 11.50 dollars.

THIS volume of *Transactions*, which has appeared in less than a year after the 1961 meeting of the International Astronomical Union, contains the draft reports of the Commissions as presented to the General Assembly and later amended. As usual these reports review the work done in each field covered by the Commissions since the preceding meeting, together with an extensive bibliography. The reports of the Commissions on Notation, Bibliography, Telegrams and Exchange of Astronomers have not been published in this volume. These four reports will be published in *Transactions 11 B* in view of their administrative character.

Volume 11 B, to be published later, will contain the proceedings at the 1961 General Assembly, the resolutions adopted, the invited discourses and other business of the Union. This new policy of publishing separately the reports of the Commissions and the proceedings will be greatly welcomed since the rapid publication of the reports enhances their value as a reference work.

D. McNALLY