

crusts . . . are all relict formations'' (p. 126) or that oil drops and crystal of calcium oxalate in plant tissues have a ''protective role and raise the resistance of plants to heat and drought'' (p. 306).

All in all, the main merit of the book is that the author, who is himself an eminent desertologist, deals so largely with the Russian literature, which is often not easily available outside Russia. The book is therefore indispensable for desert researchers.

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Biomechanics

Mechanics and Energetics of Animal Locomotion. R. McN. ALEXANDER and G. GOLDSPIK, Eds. Chapman and Hall, London, and Halsted (Wiley), New York, 1977. xii, 346 pp., illus. \$37.50.

''Our knowledge of animal locomotion has advanced remarkably in the past two decades. . . . It seems a good time to produce a book.'' These words from the preface of Alexander and Goldspink's book tell us why they have solicited several of the most expert researchers in muscle biology, locomotor coordination, and biomechanics to write reviews covering a remarkable range of topics in these fields. The result is not a volume for those hoping to learn of the newest, heretofore unpublished, investigations of the contributors, nor will it serve as a textbook to introduce novices to their efforts. Rather, it seems best suited for the reader who has a basic knowledge of the relevant subjects but has been unable to keep abreast of developments as well as he or she has wished.

Three of the 11 chapters in the book cover material to which I have had little previous exposure. Of these, D. V. Holberton's contribution on the locomotion of protozoa and single cells is particularly impressive because it combines anatomy with experimental and theoretical biomechanics to produce a true functional morphology of cilia, flagella, and pseudopods. F. Delcomyn carefully analyzes the role of central programming in invertebrate locomotion, drawing attention to the important fact that walking differs from flight and swimming by virtue of its greater dependence on continuously monitored sensory input. The chapter by E. R. Trueman and H. D. Jones is a short compendium of the different ways in which snails, worms, and larvae manage to anchor one portion of

their bodies in order to propel the remainder for the purposes of locomotion and burrowing.

The review of the molecular and cell biology of muscle by D. C. S. White is highly readable and requires the least in the way of previous knowledge on the part of the reader. M. C. Wetzel and D. G. Stuart author a chapter on the coordination of vertebrate locomotion, but concentrate rather heavily on the location of the central program for stepping in the cat.

The majority of the chapters in the book are contributed by the editors. Alexander, one of the most creative researchers in the field of animal mechanics, discusses terrestrial, aquatic, and aerial locomotion. He touches on many fascinating problems, some rather briefly, but of special value is his discussion of energy conservation by elastic storage in tendons. However, while reading some of Alexander's sections I felt that complex mathematical analyses were being pursued as much for their own beauty as for their ability to illuminate biology. Quite the opposite impression is conveyed by Goldspink's excellent chapters on energetics of muscle and locomotion, where clear emphasis is placed on the biological significance of the data. The discussion of different fiber types and their relationship to locomotor behavior is the best I have read.

In summary, this book comprises a set of fairly independent reviews to be read selectively by those wishing to compensate for deficiencies in identifiable areas. A high level of scholarship is in evidence throughout the work.

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Books Received

Abortion Politics. The Hawaii Experience. Patricia G. Steinhoff and Milton Diamond. University Press of Hawaii, Honolulu, 1977. x, 258 pp. Cloth, \$10; paper, \$4.95.

Acoustical Holography. Recent Advances in Ultrasonic Visualization. Vol. 7. Proceedings of a symposium, Chicago, Aug. 1976. Lawrence W. Kessler, Ed. Plenum, New York, 1977. xiv, 654 pp., illus. \$29.50.

Advances in Botanical Research. Vol. 5. W. H. Woolhouse, Ed. Academic Press, New York, 1977. xii, 240 pp., illus. \$19.25.

Advances in Nutritional Research. Vol. 1. Harold H. Draper, Ed. Plenum, New York, 1977. xviii, 344 pp., illus. \$27.50.

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utor, Halsted [Wiley], New York). xiv, 220 pp., illus. \$12.95.

Alternatives to Growth—I. A Search for Sustainable Futures. Papers from a conference, Houston, Oct. 1975. Dennis L. Meadows, Ed. Ballinger (Lippincott), Cambridge, Mass., 1977. xxviii, 406 pp. Cloth, \$16.95; paper, \$6.95.

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Annual Review of Psychology. Vol. 29. Mark R. Rosenzweig and Lyman W. Porter, Eds. Annual Reviews, Palo Alto, Calif., 1978. x, 748 pp. \$17.

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Atherogenesis. Morphology, Metabolism and Function of the Arterial Wall. Papers from a conference, Vienna, Apr. 1977. H. Sinzinger, W. Auerswald, H. Jellinek, and W. Feigl, Eds. Karger, Basel, 1977. x, 352 pp., illus. \$57.25. Progress in Biochemical Pharmacology, vol. 13.

Avian Immunology. Proceedings of a conference, Honolulu, Mar. 1977. Albert A. Benedict, Ed. Plenum, New York, 1977. xvi, 408 pp., illus. \$39.50. Advances in Experimental Medicine and Biology, vol. 88.

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The Behaviour and Design of Steel Structures. N. S. Trahair. Chapman and Hall, London, and Halsted (Wiley), New York, 1977. xxvi, 320 pp., illus. Paper, \$19.75.

Beyond Technics: Humanistic Interactions with Technology. A Basic Collection Guide. Judith Mistichelli and Christine Roysdon. Humanities Perspectives on Technology Program, Lehigh University, Bethlehem, Pa., 1978. vi, 58 pp. Paper, \$2.

Biochemistry of Parasitic Protozoa. W. E. Gutteridge and G. H. Coombs. University Park Press, Baltimore, 1977. x, 172 pp., illus. Paper, \$16.50.

Biological Activity and Chemical Structure. Proceedings of a symposium, Noordwijkerhout, The Netherlands, Aug. 1977. J. A. Ke-verling Buismann, Ed. Elsevier, New York, 1977. x, 314 pp., illus. \$44.60. Pharmacology Library, vol. 2.

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