

observed mortality. The author concludes that intraspecific competition from wildebeest and topi to some extent limits the food supply even more but that rainfall and retention of soil moisture ultimately set limits on the carrying capacity for all ungulates.

Sinclair concludes with a discussion of the management implications of his research. He rightly points out that conservation attempts in East Africa and elsewhere are hampered by deficits in our knowledge concerning distributions and our inability to define even an approximation to the carrying capacities of habitats designated as National Parks. His work is a refreshing blend of ethology, ecology, and management. It deserves to be read not only as a major field study of an ungulate species but also as providing a valid, pragmatic approach to the resolution of critical ecological questions related to long-term preservation.

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## Muscle Research

**The Biochemistry of Smooth Muscle.** Proceedings of a symposium, Winnipeg, Manitoba, Canada, Aug. 1975. NEWMAN L. STEPHENS, Ed. University Park Press, Baltimore, 1977. xviii, 734 pp., illus. \$34.50.

This book is an essential source of information for all those interested in a remarkable set of relatively primitive cells, many of which can and do contract spontaneously and rhythmically and all of which can be stimulated to contract or relax by many drugs and can respond in many ways. Although we cannot control our own smooth muscles consciously, their behavior has enormous control over us and we should know much more about them. This symposium volume is a contribution to such knowledge.

There are 37 papers by 66 contributors in seven sections dealing with the energetics of contraction, carbohydrate and fat metabolism, cyclic nucleotides, contractile proteins, calcium metabolism and cell membranes, and applied biochemistry.

There is a significant degree of overlap between this book and an earlier symposium volume (*Physiology of Smooth Muscle*, Edith Bülbring and M. F. Shuba, Eds., Raven, 1976); both books are necessary reading for those interested in recent developments in our

knowledge of smooth muscle. Many of the gaps in earlier books on smooth muscle are filled by material in this one, and accounts of the subject are now reasonably adequate.

The book is as up to date as could be hoped. The references give ready access to what was known in 1975, although a flood of new, important, and sometimes contradictory findings has appeared since the symposium.

Perhaps the most remarkable development in the study of smooth muscle in recent years has been the effective application of virtually all appropriate sophisticated techniques to a tissue that for many years was mainly the basis for bioassays by pharmacologists. Smooth muscle was deliberately ignored by most others as being too variable and difficult to study properly. Many years ago it was even described as "headache muscle" (by A. Csapo in *The Structure and Function of Muscle*, G. H. Bourne, Ed., vol. 1, p. 232, Academic Press, 1960) because it plays a role in headaches, because thinking about it caused headaches, and because through "a lack of appreciation of the significance of adequate techniques, smooth muscle physiology [had become] an isolated and retarded discipline, conducted without regard to the fundamental similarity of contractile tissue."

That time has long passed, as this book clearly demonstrates. In fact, the great range of structure and behavior exhibited by smooth muscle makes it likely that investigations of it will produce new advances in even greater profusion than will investigations of skeletal and cardiac muscle.

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**Body Politics.** Power, Sex, and Nonverbal Communication. Nancy M. Henley. Prentice-Hall, Englewood Cliffs, N.J., 1977. x, 214 pp., illus. Cloth, \$9.95; paper, \$3.95. A Spectrum Book.

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