is weaker than the previous one, and the last three devoted to the luminescence of living tissues would hardly be suspected to originate from the same hand that wrote chapter 1. The author, who shows himself capable of critical discrimination in dealing with the problem of the molecular oscillators in tryptophan, abandons any such strict criteria in dealing with the far more intricate problem of the luminescence of living tissues. The climax is reached when Gurwitch mitogenetic radiation—which for very good reasons has been relegated to oblivion—is dusted off and put into circulation once more with the help of experiments and interpretations open to the gravest doubts. Konev's proposal of a mechanism of action which consists of cooperative changes in protein conformation extending over indefinitely large numbers of molecules following a single photon absorption by one of them is contrary to all the foundations of this field, some of them, paradoxically enough, due to Konev himself.

In summary: this is a readable account of protein luminescence that starts well and ends badly. If the reader can skip over Konev's opinionated conclusions and concentrate on the experimental material described he will find profit in this book. The opposite—which could easily happen to the enthusiastic beginner—might be disastrous.

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Primates

Progress in Primatology. First Congress of the International Primatological Society, Frankfurt, July 1966. D. STARCK, R. SCHNEIDER, and H.-J. KUHN, Eds. Fischer, Stuttgart, 1967 (distributed in the U.S. by Abel, Portland, Ore.). viii + 446 pp., illus. $21.40.

In 1953, at a symposium in Boston devoted to the nonhuman primates, I noted the then-current decline of research in primatology. Recent years, however, have witnessed a most remarkable revival of interest in the nonhuman primates. This involves not only the classic fields of comparative morphology and paleontology but also the application of such newer approaches as those of molecular biology and physiology. Also included in this revival is a tremendous expansion of behavioral studies, especially of primates in their native habitats. Nor should the relatively recent great increase in use of nonhuman primates in medical research be overlooked. This is providing not only valuable information for the medical sciences but also primate material for other studies.

The symposium here reviewed clearly reflects this revival and expansion, which is truly international in scope. Hence it should prove of interest to anyone concerned with the nonhuman members of his order. Although the majority of the 57 papers were presented by scientists working in the United States and West Germany, researchers from Great Britain, Holland, Belgium, France, Italy, Switzerland, Canada, Japan, and Central Africa are also represented. Of the papers, 43 are written in English, 12 in German, and 2 in French.

As Dietrich Starck noted in his opening address to the congress, "primatology" is best defined as a very heterogeneous discipline including in its scope those scientists interested in and working with members of the order Primates, the order to which man belongs.

The papers in the present volume are presented, as at the congress itself, in sections reflecting the various interests of the participants. The part entitled General Paleontology, Systematics, Evolution consists of six papers, dealing respectively with the work of Ernst Haeckel (one paper), catarrhine paleontology (two), taxonomy of Old World monkeys (one) and of chimpanzees (one), and primatological research in Central Africa (one). Morphology, Embryology, Functional Anatomy comprises 12 papers, treating aspects of reproduction (two papers), locomotion (one), teeth (one), skeleton (two), musculature (three), and brain (three).

The seven presentations under the heading Karyology are concerned with the ear-bones of catarrhines (one paper; why placed here?), chromosomal morphology of various primates (four), DNA in anthropoid-ape lymphocytes (one), and nuclear appendices of anthropoid-ape polymorphonuclear leucocytes (one).

By far the largest section, Ecology, Ethology, includes 20 papers. Twelve of these deal with various aspects of behavior, chiefly in the wild state, of a number of simian primates (*Callithrix, Saimiri, Cebus, Macaca, Colobus, Pan*); one is concerned with the effects of group density on social behavior in normal, autistic, and brain-damaged human children; three with learning responses in simian primates (*Saimiri, Macaca, Hylobates, Pongo, Pan, Gorilla*); two with visual (in *Macaca* and other genera) and one with auditory discrimination (in *Papio*); and one with nocturnal activity in lorisine lemurs. The final group of 12 papers, Primates in Medical Research, Serology, Hematology, covers a range of topics—use of nonhuman primates in medical research (seven papers), hemoglobins (two), blood groups (two), and immunoglobulin G (one).

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A Medium for Life

Soil Biochemistry. A. DOUGLAS MCLAREN and GEORGE H. PETERSON, Eds. Dekker, New York, 1967. xiv + 509 pp., illus. $22.75.

Soil-Plant Relationships. C. A. BLACK. Second edition. Wiley, New York, 1968. viii + 792 pp., illus. $19.95.

Although from their titles one might expect these two books to have much in common, such is not the case. They are written at about the same level, but they serve quite different interests. McLaren and Peterson's *Soil Biochemistry* is a volume of 17 chapters by 25 authors who take up a diversity of topics, without continuity. It is indeed a collection of essays held together loosely by the title. Black's *Soil-Plant Relationships,* on the other hand, is the work of one author who in nine chapters builds a coherent account of the characteristics of soils which affect their capacity to sustain plant growth. The Black volume is meticulously addressed to the subject of its title and is a solid scholarly achievement.

Among the chapters in *Soil Biochemistry* deserving special notice one should mention that by C. Steelink and G. Tollin, in which they discuss, in some 20 pages, the subject of free radicals in soil, with particular reference to humic fractions. Their speculations on the possible role of radicals in soils are novel and stimulating. Another is the chapter by J. J. Skujins on the origin and state of free enzymes in soil, a topic to which