have believed that hairs are modified scales, others have thought they are teeth that have lost their dentine and failed to become calcified, and still a third group has suggested a resemblance to the feathers of birds. Also, since mammals are thought to have evolved directly from reptilian ancestors, theories attributing a relationship of hairs to the femoral glands or to the tactile corpuscles of reptiles enjoyed support for a time. Actually it would appear from the available evidence that the hair system is uniquely a characteristic of the class Mammalia. No other class of veretebrates has anything even remotely resembling this system.

In a like vein, Gabe's discussion of the arguments advanced by certain scientists to demonstrate the superiority of one race of humans over another is both amusing and instructive. One such "scientific" argument concerned the glands of the skin. To the older mammalogists the apocrine sweat glands represented the more primitive form, the eccrine glands being the possession of mammals more evolved. One scientist then championed the superiority of the Mongol race over all others because members of this race had the fewest glands of the primitive form. The whole argument was demolished later when it was demonstrated that monotremes, considered the most primitive of mammals, were provided with both types of glands.

Cartilage, osseous tissue, and osteogenesis are also handled by Gabe in a fashion similar to that found in the standard histology text. Form and growth of bone are covered by Jacques Lessertisseur and Roger Saban, and the mammalian skull and the hyobranchial skeleton are handled by Dietrich Starck and Jean-Pierre Gasc, respectively. Lessertisseur and Saban also are responsible for a thorough study of the vertebral column and appendicular skeleton.

More than two-thirds of this book is devoted to studies of the skeleton. Every conceivable aspect of the mammalian skeleton is treated—for example, asymmetry and peculiarities of cetacean skulls, the value of the hyobranchial apparatus to the vertebrates, and the evolution of the spinal column and the "enderostes" (a French term for ectopic bony structures such as the os penis). Nearly every page contains a black-and-white drawing or diagram depicting the arrangement and form of bones in various mammals. These excellent sketches are probably the perfect way to illustrate skeletal parts.

The book will be useful to many biologists. Students and teachers alike will appreciate it because anatomy, histology, physiology, and biochemistry are all under the same cover. Comparative anatomists will find it an indispensable reference for matters pertaining to the skeleton. The section on the integument will be less valuable because of the lack of comparative material.

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Some Trees

The Genus Pinus. N. T. MIROV. Ronald, New York, 1967. 610 pp., illus. $15.

This volume covers the pines of the world, both living and fossil. Not primarily a taxonomic revision, it is much broader than the classic monograph with the same title by George Russell Shaw (1914). Mirov's experience with pines is unique, ranging from fieldwork with most species of the world to chemical studies of oleoresins. He has succeeded admirably in his objectives, stated in the preface, of assembling as much information as possible on pines, answering many questions about them, and offering some generalizations and speculations as a stimulus to more research, and this reference will be useful to many classes of readers. Certain practical aspects of pines are not included, however—for example, silviculture, forest management, insect pests and diseases, and physical properties of lumber.

The book is mainly a review of the literature, enriched with many Russian-language citations, but it also has some new material. The ten chapters are well-organized compilations of information on history, paleobotany, and paleogeography (105 pages), geography (192 pages), genetics, morphology and reproduction, physiology and ecology, chemistry, chemical geography, and taxonomy. Geographic distribution ranks first in number of pages. Material about the various species is scattered among several chapters with slight repetition, but it can be found easily with the help of the detailed index. Among the numerous illustrations is a remarkable collection of photographs of forest trees of nearly every pine species.

The taxonomic treatment, accepting 105 species (counting two varieties), and including Martinez's many Mexican pines, is not conservative but is intermediate between those of Harrison (in Dallimore and Jackson, 1966), with 80, and Gaussen (1960), with 120. Shaw's classification is followed, with the rearrangement of the subsection *Pinaster* by Duffield (1952). There are no taxonomic descriptions or drawings of each species, no taxonomic citations, and no lists of synonyms or specimens. Only under geography is each species treated separately with a map and photograph. Incidentally, the detailed distribution maps recently published by the U.S. Forest Service [*U.S. Dept. Agr. Misc. Pub. 991* (1966), 97 pp., illus.] were the result of a project begun by Mirov before his retirement in 1963.

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Books Received

The Adaptable Black Bear. J. R. Matson. Dorrance, Philadelphia, 1967. xii + 147 pp., illus. $4.

Advances in Agronomy. Vol. 19. A. G. Norman, Ed. Prepared under the auspices of the American Society of Agronomy. Academic Press, New York, 1967. xii + 370 pp., illus. $15.50.

Advances in Biological and Medical Physics. Vol. 11. John H. Lawrence and John W. Gofman, Eds. Academic Press, New York, 1967. ix + 356 pp., illus. $15.

Advances in Control Systems: Theory and Applications. Vol. 5. C. T. Leondes, Ed. Academic Press, New York, 1967. xii + 426 pp., illus. $18.50.

Advances in Immunogenetics. Tibor J. Greenwalt, Ed. Lippincott, Philadelphia, 1967. x + 223 pp., illus. $13.50.

Alcohol Problems. A Report to the Nation by the Cooperative Commission on the Study of Alcoholism. Prepared by Thomas F. A. Plaut. Oxford University Press, New York, 1967. xvi + 200 pp. $4.75.

Algebraic Theory of Particle Physics. Hadron Dynamics in Terms of Unitary Spin Currents. Yuval Ne'eman. Benjamin, New York, 1967. xvi + 334 pp., illus. Cloth, $10; paper, $5.95. Frontiers in Physics.

The Alkaloids. Chemistry and Physiology. Vol. 9. R. H. F. Manske, Ed. Academic Press, New York, 1967. xvi + 589 pp., illus. $27.

American Junior Colleges. Edmund J. Gleazer, Jr., and Paul L. Houts, Eds.

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