sometimes elsewhere, Epstein takes long detours into obscure human history; for instance, his discussion of the Afrikander breed of cattle covers 27 pages, but much of this is concerned with historical problems concerning Bushmen, Hottentots, Bantu, Dutch, and Portuguese, all of whose movements, and their moving of cattle, had or could have had an influence upon the ancestry of Afrikander cattle. On such topics Epstein is often both thorough and erudite, although he cannot always give a final answer to a specific problem amid the conflicting assumptions of the past.

Epstein treats characters of skulls, horns, humps, and color patterns with loving care. Indeed, the number of pages dedicated to such descriptions, combined with a diffuse (that is, old-fashioned) organization (plus the horrendous price), will decrease the popular sale of these useful and often interesting volumes. Yet the set, in its way, is a tremendously useful one, saving untold hours of library research for anyone entering into the bibliographic maze on the origins and history of the major domestic mammals of the Old World. At the same time, Epstein largely ignores the rich patterns of the economic and other values to man of the animals discussed and pictured here with such care; there is material on this subject for another two volumes, which it is to be hoped someone will write soon.

CHARLES A. REED
Department of Anthropology, University of Illinois, Chicago

Animal Resources

Conservation of Nonhuman Primates in 1970. BARBARA HARRISSON. Karger, Basel, 1971 (U.S. distributor, Phiebig, White Plains, N.Y.). vi, 100 pp. $6.70. Primates in Medicine, vol. 5.

This important book provides a broad view of current problems in primate conservation. It is divided into two major sections, one entitled The Exporting Countries, which considers primate population trends and supply problems in Latin America, Africa, Madagascar, and Asia, and one entitled The Importing Countries, which focuses on the volume of trade and the use of primates in Europe and the United States. The book is well balanced, considering the interests of both the naturalist, who views nonhuman primates as important faunal components of their native habitats, and the biomedical researcher, interested in primates as laboratory subjects. It discusses the species of greatest prominence in research and pharmaceutical production, such as the rhesus macaque, the squirrel monkey, the vervet, and the chimpanzee, as well as those not used in laboratory research but currently endangered because of ecological problems, such as the lion-tailed macaque, the douc langur, and the red colobus monkey.

Many species of nonhuman primates are in need of concerted conservation attention because of pressures from human populations. One of the most serious threats, according to Harrisson, is the loss of habitat due to the destruction of tropical forests. Increased logging and deforestation are a major trend throughout the tropics. Nonhuman primates are also sought in many areas for food, and in others they are exterminated as agricultural pests. Finally, primates are caught in large numbers for use in scientific research, pharmaceutical production, zoos, or the pet business. In 1968, approximately 200,000 live nonhuman primates were transported worldwide. In many cases, this trade represents a wasteful and inefficient utilization of valuable animal resources. For example, in 1968 the United States imported 75,000 primates from Latin America, of which 29,000 were destined for the pet trade. Animals shipped for this purpose often experience high mortality and present a public health hazard of infectious disease.

The author gives particular attention to chimpanzee populations and utilization. Although total African population figures are not available, it is apparent from many field studies that chimpanzee populations are declining seriously, as are those of all the great apes. The process of capture and collection is so wasteful that Harrisson estimates an annual drain on wild populations of 4500 to 6000 individuals to meet the current demand of 750 chimps a year.

Harrisson concludes with a number of recommendations to alleviate losses of nonhuman primates. These include: (i) increased emphasis on the significance and value of nonhuman primates as scientific resources of international importance, (ii) greater development of natural reserves and refuges, (iii) more intensive research programs on primate population ecology in natural habitats and in areas where conflicts exist between human and nonhuman primates, (iv) improved methods of trapping, holding, conditioning, and transportation, (v) development of breeding colonies for biomedical research, (vi) greater care in selecting species as research subjects, and the substitution of nonprimates whenever possible, and (vii) more careful regulation and licensing of the simian pet trade by public health authorities.

Certain details and charges in the books are controversial—for example, contrary to the opinions quoted, I think the Indian government and exporting firms have made very substantial improvements in the export of rhesus monkeys, and I would not characterize present conditions as "highly unhygienic." Also the book lacks numerical population data on most species, but this accurately reflects the state of the field.

In general, Harrisson has provided a vital service in this small book. She writes with clear authority and detailed knowledge from the field, and she also expresses considerable understanding and sympathy toward the valid use of primates in biomedical research. Her book deserves to be read and discussed by a wide audience of ecologists and conservationists as well as biomedical and behavioral researchers interested in the welfare of their subjects.

CHARLES H. SOUTHWICK
School of Hygiene and Public Health, Johns Hopkins University, Baltimore, Maryland

Man's Morphological History

The Ascent of Man. An Introduction to Human Evolution. DAVID PILBEAM. Macmillan, New York, 1972. x, 208 pp., illus. Paper, $3.25. Macmillan Series in Physical Anthropology.

As little as two years ago David Pilbeam produced for the World of Science Library an introduction to the evolution of man. That volume, although containing a personal interpretation, was aimed primarily at the layman, the student reading outside his major field, and possibly the beginning student of human evolution. This new book is subtitled "an introduction to human evolution," and Pilbeam does attempt to make the language and con-