Book Reviews

The Cultures and Evolution of the Indians

The Indian Heritage of America. ALVIN M. JOSEPHY, JR. Knopf, New York, 1968. xxx + 384 pp., illus. $10.

Man's Rise to Civilization as Shown by the Indians of North America from Primeval Times to the Coming of the Industrial State. PETER FARB. Dutton, New York, 1968. xx + 332 pp., illus. $8.95.

Indians, their origin and nature, have fascinated European writers and their American offshoots since the early 17th century. After 150 years of romantic "philosophizing" had spawned a welter of ideas and possibilities, mostly born of fantasy, William Robertson of Edinburgh introduced reason and fact into the picture. In his *History of the Americas* (1777) Robertson clearly formulated the outlines of later 19th-century social evolutionism in his synthesis of knowledge concerning the Indians of the Americas. In Robertson's schema, early lithic cultures devoid of domesticated plants and animals, metal tools, and writing made up a long period of "savagery," followed by a stage of "barbarism" in which the art of metallurgy was finally achieved along with "dominion over the animal creation." Robertson's grand endeavor was "to contemplate man in all those various situations in which he has been placed . . . [and to] follow him in his progress through the different stages of society as he gradually advances from the infant state of civil life toward its maturity and decline." His method was ecological and culturological rather than psychological or racist; to wit, "the disposition and manners of men are formed by their situation, and arise from the state of society in which they live." Robertson was also the first to establish a proof of the prehistoric derivation of American Indians from Siberia by way of Bering Strait.

Peter Farb and Alvin M. Josephy, Jr., are two authors engaged in the unending updating of Robertson. Each is a popular, nonacademic writer by profession. Josephy, who is editor of general books for American Heritage, has written two previous historical works on Indians of the northwestern United States. He is a careful scholar, well versed in his subject.

The evolutionary theory in Josephy's treatment of American Indian cultures is implicit rather than explicit. Nonetheless, it is there. The prehorticultural late Pleistocene cultures are first treated in general terms. This treatment is followed by a good general summary of the archeological record of the first development of domesticated plants and the effects of horticulture on Indian cultures of 5000 years ago. Chapter by chapter, the archeological evidence for the earliest manifestations of man's presence in each of the major culture areas of the entire Western Hemisphere is carefully and informatively presented, beginning in the Arctic north and working systematically southward, more or less as the first migrants to the Americas would have traveled. As one gets into the protomodern periods for each culture area, the linguistic identities of the major tribes are spelled out and the most representative tribal cultures and the known historical interactions among tribes are competently described with adequate richness. Josephy offers a reliable—and interesting—introduction to New World ethnography.

For the serious-minded reader, Josephy's *Indian Heritage* is to be commended with scant reserve. It is broad in its coverage (including all of Middle America, the Caribbean, and South America), rich and accurate in detail, full in historical substance, honestly sympathetic in its treatment of the tragic consequences of the European invasion and conquest of the Indians. It is written with a style and elegance that command attention and respect.

Peter Farb, as the title to his book indicates, is somewhat more directly in the line of Robertson's tradition, although he evinces no awareness of Robertson's existence. Farb has picked up his social evolutionary ideas from Leslie White and Elman R. Service, who draw their intellectual inspiration from Sir Henry Burnett Tylor, Lewis Henry Morgan, and Karl Marx cum Frederick Engels. Social evolution in its 19th-century formulations was largely unilineal, or general. As rephrased by Service and his colleague Marshall Sahlins (and also by Julian Steward), it has become not only general but specific, or multilineal. On each level, characterized by sequentially determined advances of technological mastery of energy and degree of complexity of social organization, there is room for considerable cultural variation. Variation is the product of differential adaptation to specific environments and historical experience. Farb attempts to use multilineal evolution as the framework on which to hang his account. His primary hierarchy of evolution, following Service, is formulated in a sequence of maximal types of sociopolitical organization—running from the band, to tribe, chiefdom, and state. These types, in turn, are related to the quantity of economic surplus which the technology can generate. All the culture areas of North America north of Mexico are touched upon by Farb, but in an order determined by their politics rather than by their geography. This has meaningful possibilities, but they are not realized by the author. In the first place, this heuristic device has not been well developed and tested by the anthropological specialists who espouse it. Beyond that, Farb lacks the essential competence to do the job. Although he has written a number of books in the field of natural history, this is his first foray into culture history. He seems to have read fairly widely, but he has not studied his subject in depth. The result is a lack of feel for the essence of the cultures (the emic view), a considerable amount of simple ethnographic error, and a failure to note self-contradictions or to deal fairly with alternative theories and points of view. Thus, in the discussion of the band as exemplified by the Great Basin Shoshone one reads that they based their descent on the father and not the mother (p. 7), when they are in fact bilateral; that the male head of the Shoshone family was its entire political organization (p. 23), when in fact band headmen were not uncommon; and that the Shoshone suffered from such a low calorie input that when "he wanted a

drink of water, his cupped hands did as well as a cup that would have required calories to manufacture" (p. 29). This uncritical inference from White's energy theory is offered in the face of a photograph (p. 21) showing a Paiute woman surrounded by baskets one of which is especially noted as being made watertight with a coating of pitch. Shoshones and Paiutes drank from woven vessels pitched just to the right degree to allow very slow evaporation to keep the water cool and delicately pine-flavored. In the desert, this makes for *good* drinking.

The book is replete with large generalizations, dogmatically asserted. Bombast is often substituted for substance in an effort to carry a point.

There are, of course, different criteria for evaluating Farb's book. Service, in writing the introduction, praises it as the best general book about North American Indians he has ever read and states that it is a very good book in an absolute sense for two reasons: its "contribution to the theory and practice of cultural evolutionism," and because the author "writes like a breeze" (p. xix). But then, Service with innocent candor claims, "Many American readers are Boy Scout types like me, who refuse to grow up. . . . This is a great book for them (us)" (p. xx).

Per contra, for readers who have grown up and who prefer scholarly and scientific craftsmanship to the work of a breezy Boy Scout, Farb's book is not the one.

E. ADAMSON HOEBEL
Department of Anthropology, University of Minnesota, Minneapolis

Controlling Populations

The Problems of Birds as Pests. Proceedings of a symposium, London, 1967. R. K. MURTON and E. N. WRIGHT, Eds. Published for the Institute of Biology by Academic Press, New York, 1968. xvi + 256 pp., illus. $9.50. Symposia of the Institute of Biology, No. 17.

The theme that emerged from this conference is the necessity of understanding the behavior and ecology of a species before starting measures to control its numbers or evade its depredations. The conference considered two topics: birds as hazards to aircraft and birds as agricultural pests. There was one paper on urban birds, but nothing on birds as carriers of human disease.

Of the two most noteworthy papers, one, by G. W. Schaefer on the microwave reflectivity of birds, is only tenuously related to the main problem. The other, by R. K. Murton, is a masterly review, in simple language, of observational studies of the population dynamics of birds. In the cases studied, the population was limited ultimately by the amount of available food, and behavioral interactions determined which individuals from the annual surplus were eliminated. Attempts to control the species merely hastened this elimination and had negligible effects on the eventual population level. Although the ultimate goal of pest control is thus shown to be extremely difficult to achieve, the factors controlling these populations are now well understood: it is singular that the mathematical model-builders have paid no attention to this work during the last 10 years. Deductive models incorporating these factors can easily be built: any model that does not incorporate them is simply wrong.

This exemplifies the other point beautifully made in this book: the difficulty of making nonbiologists appreciate the implications of field studies. The difficulty, clearly illustrated in the lively discussions which follow the groups of papers, is reflected in the inability or unwillingness of most government agencies to recognize that taking account of natural principles, and planning in accordance with them, may be cheaper than attempting to defy them. Thus most airlines, federal agencies, and airport managers continue to seek technological solutions to bird-strike problems, or to ignore their costs and damage. Governments have not made use of knowledge of bird movements laboriously gathered at their expense. Agriculturists continue to support methods of destruction such as payment of bounties, despite proofs that these measures are useless.

This book should be required reading not only for administrators but for theoreticians and population biologists.

WILLIAM H. DRURY
Massachusetts Audubon Society, Lincoln

Insects and Man

Entomological Parasitology. The Relations between Entomology and the Medical Sciences. MARCEL LECLERCQ. Translated by G. Lapage. Pergamon, New York, 1969. xviii + 160 pp., illus., + maps. $8. International Series of Monographs in Pure and Applied Biology: Modern Trends in Physiological Sciences, vol. 29.

This short book is a translation of a work by a medical man who has become an entomologist. It is largely an encyclopedic account of knowledge about arthropods of interest to medical practitioners. Its import is that of a bridge to entomological knowledge—it is not a compendium on insects. The format of the book suggests that it was compounded from a series of lectures.

The book is comprised of 13 chapters. The first, and longest, chapter deals with pathogens afflicting man that are, at times, in or on arthropods. Much of the detail is presented in tables listing the pathogens according to their taxonomic associations. Otherwise, short paragraphs are devoted to the distribution and vector complexes of many pathogens. Chapters 2 through 8 discuss human reactions to arthropods. Arrangement is according to mode of attack—(i) puncturing for blood, (ii) injection of venoms by bite or sting, (iii) induction of allergies by secretions, by inhaled allergens, or by fragmented bodies, and (iv) annoyance. The last 40 pages deal with miscellaneous topics such as insects as sources of therapeutic agents, as sources of food, and as factors in legal aspects of medicine, and aspects of control.

Possibly the best discussion, and one presenting information little known generally, is the chapter on entomology and legal medicine. The sequence of necrophagous insects invading a body may provide clues to time and causes of death. The discussion of insects as occupational hazards should be of interest to medical practitioners and entomologists.

The book is most valuable for the lists of references cited at the end of each chapter. References are numerous and include many important ones, particularly of European and Asian origin.

Sketchiness is the price paid for brevity in this account. The extensive bibliography compensates for this state where adequate libraries are available. Pages devoted to the control of arthropods might have been more helpfully