

was, but in using the historical record to illuminate what *is*. This is most clearly seen in the stimulating article "Chemical elements and primordial matter: Mendeleeff's view and the present position." Historians of chemistry can still read it with profit; it should be made required reading for every teacher of chemistry, especially those who think philosophy to be the natural enemy of science.

The value of the volume is greatly enhanced by a bibliography of Paneth's writings. It is regrettable that no index is provided.

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The Indians of North America

The Native Americans: Prehistory and Ethnology of the North American Indians. Robert F. Spencer and Jesse D. Jennings, Eds. Harper and Row, New York, 1965. xiv + 539 pp. Illus. \$10.90.

This impressive book will be rated by many anthropologists as the best one-volume work on North American Indians. The total pagination fails to convey that it weighs 3 pounds and contains 400,000 words, achieved by using 8-point type and a double-columned page. The list price is a bargain for a hardback book that is almost twice as long as its competitors. The volume contains 90 pages of archeology by Jennings, 19 pages on language by Spencer and Charles Dibble, 371 pages of areal ethnography by six other authors, and a 17-page terminal chapter on acculturation by Kenneth Stewart, who also wrote one of the areal sections.

The most original and welcome part is that on archeology, for Jennings provides the best overview of the North American continent to date. In addition to describing the content area-by-area, he accounts for the similarities and differences by postulating diffusion, independent invention, migration, and other processes of culture change. This is also done in the archeological introductions to the chapters on the Southwest, the Southeast, and Meso-America, where one may read that certain aspects of culture originated in Meso-America and were spread by diffusion to other areas. Other chapters concerned with ethnography stay more

within their own boundaries and have less to say about the origin of the cultural manifestations they describe.

Spencer's section on language is among the best treatments of the subject (of its length) for the nonlinguist, and Dibble's brief account of Aztec writing is excellent. Kenneth Stewart's chapter on acculturation is also a good summary, although it contains little that is news for the anthropologist.

The continent is divided into eight major culture areas with some minor subdivisions which bring the total areas to 12. Although this scheme differs from all previous ones in some respects, it is acceptable for the most part. The most glaring defect is the lumping of northeast Mexico with Meso-America. This apparently follows Kroeber and ignores a mountain of dissenting evidence from Swanton, Beals, Kirchhoff, Massey, and Driver. Northeast Mexico was literally a cultural sink, no more complex than the Great Basin of Nevada and Utah. The boundary between the hand-to-mouth nomads of this area and the high sedentary cultures of Meso-America was one of the sharpest on the continent and should not be ignored in any areal scheme, no matter how simple.

The ethnographic sections describe from one to four typical societies for each area. On the whole the choice of tribes is good, but one may question why William Wallace chose the Hupa and Mohave for California when both fall outside the boundary of the California culture area as given on his own map (p. 230). The Penobscot are also a poor choice for the northeastern United States, because Speck, the author of the book condensed by Elden Johnson, places them in the eastern Sub-Arctic.

Most illustrations are carefully redrawn from previously published ones, as the acknowledgments say, but 12 in the ethnographic sections are original line drawings of full-page size with captions, not artistic gems, but packed with information.

Typographical and other petty errors can be found every few pages in some chapters, but few will change meaning for the general reader and fewer still for the anthropologist. Not even this one—"an average house could measure 40 feet in length by 30 ins. width" (p. 173)—is likely to confuse many readers. More serious is the following contradiction which involves two authors: (p. 285) the earliest

date for maize is given as 5000 B.C. in Puebla, Mexico, and in the United States as 4000 B.C. at Bat Cave, New Mexico; (p. 487) "The earliest maize known is primitive pod-pop corn from Bat Cave, New Mexico, going back at least to 2000 B.C." MacNeish (1964), in an article that is not cited, gives 6500 B.C. in Mexico as the earliest find of maize.

Although I concede that nine anthropologists know more about Indians than one, this joint work suffers from too great a time lag between completion of many of the sections and actual publication. For instance, on page 285, in the chapter on the Southwest, there is no reference to work on domesticated plants published after 1958; and, on page 440, in the chapter on Meso-America, none to work later than 1960. A tabulation of the dates of all references cited in the ample terminal bibliography reveals that only 15 of the works cited were published in 1961, 14 in 1962, and none at all during 1963 or 1964.

Despite these caveats, and a too short index, this book will be widely used for text and reference and will take its place among the major syntheses of knowledge on North American Indians.

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On Cultivating the Sea

Maurice Aubert's *Cultiver l'Océan* (Presses Universitaires de France, Paris, 1965; 212 pp., F. 16), an optimistic treatment of the possibilities for cultivating the sea and its environs, is written in a purple variety of French that concludes as follows: "Que sur la moire obscure des mers s'allument les myriades de diamants des phosphorescentes noctiluques et l'homme dont la connaissance contemplative devient action, l'homme saura que, dans cette nuit océane, une richesse est née pour lui."

To be sure, the author is not unaware of the difficulties of cultivating the ocean and has assembled an interesting lot of information between his phosphorescent passages. But collecting man's birthright from the sea will not be an easy matter.

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