

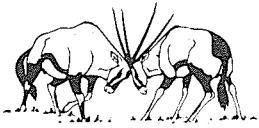
*Science & Technology***SAVAGES AND SCIENTISTS:
The Smithsonian Institution
and the Development of
American Anthropology,
1846-1910**

by Curtis M. Hinsley
Smithsonian, 1981
319 pp. \$19.95

Between the Smithsonian Institution's founding in 1846 and the death in 1902 of John Wesley Powell, one of its most celebrated scientist-administrators, the nation's museum was the driving force in the development of American anthropology. As they studied American Indian languages, beliefs, social organization, and technologies, James Mooney, W. J. McGee, Matilda Stevenson, and other old-fashioned generalists, soldier-intellectuals, and missionaries sought above all to confirm their beliefs in the sacred unity of an evolving Nature. Their ideas often had practical consequences, notably for the effort by educators and missionaries to draw Indians into the rest of American society. In this first thorough study of American anthropology, Hinsley, a Colgate historian, concludes that Powell's Bureau of American Ethnology was a response to the times—the product of booming material progress, spiritual malaise, and unquestioning trust in evolutionary ideas. There has been a loss as well as a gain in the transition to 20th-century expertise. The old anthropology was addressed to the whole American nation, not only to a “well-defined academic peer group.” It was inspired by moral and religious commitments, bent on constructing a unified science of humanity that would itself help bring about the future “generalized race.” It was also an “exercise in self-study,” seeking to explain and justify the “wide disparities in human conditions, past, present, and future.”

**THE OXFORD
COMPANION TO
ANIMAL BEHAVIOR**
edited by David McFarland
Oxford, 1982
657 pp. \$29.95

Do animals suffer from boredom, use language, live longer in or out of captivity? Are carnivorous species more or less prone to cannibalism than other species? And what is the evolutionary significance of animal hypnosis? Providing answers to these and hundreds of other related mysteries, ethology—the study of animal behavior—has been par-



Fighting oryx. © 1982 by
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**NATURE'S SECOND
KINGDOM**

by Francois Delaporte
translated by Arthur
Goldhammer
MIT, 1982
266 pp. \$20

ticularly successful during the past four decades. McFarland, an ethologist at Oxford University, has assembled more than 200 articles on topics ranging from aggression to wildlife management, from Darwinism to mating systems (over 90 percent of the birds in the world are monogamous). The *Companion's* 69 specialist-contributors do not ignore rival theories and point out, wherever relevant, significant parallels or differences between animal and human behavior.

“That plants and animals are analogous we may be convinced if we only consider the manner whereby they receive their nourishment,” wrote Antoine de Jussieu in 1721. In an age before biology was a clearly defined scientific pursuit, explains Delaporte, a historian of science at the Universidad Nacional Autónoma de México, 18th-century natural philosophers remained within the intellectual framework of their time; they took animal physiology as the starting point for the study of the plant kingdom. In defining what was essential to plants (their “vegetality”), investigators first examined *functions* they found to be common to both animals and plants: nutrition, reproduction, and movement. Delaporte works in the tradition of Michel Foucault, a modern French historian who traces the organization of man’s knowledge at different periods. He shows how natural philosophers, following frequently erroneous rules and assumptions, often arrived at essentially correct conclusions about the nature of plants (describing pollination, for example). Only at the end of the 18th century did naturalists begin to think about plants in terms of structure rather than function. The discovery of the plant cell by Konrad Sprengel and others in turn led to a reversal of the earlier animal studies, as the focus shifted to physiology and the animal cell.