sumed to be representatives of the genus *Homo*) existed side by side in the same environment one and three-quarter million years ago, and still continued to live side by side about half a million years ago (as some have supposed to be the case in South Africa)." This argument certainly has merit, provided that the absolute dates assigned to these two regional groups of fossil hominids are reasonably accurate. These dates, particularly those attributed to the Olduvai fossils, are currently in dispute, however. Thus Sir Wilfrid's analysis of "Homo habilis" does not clarify the taxonomic status of this intriguing fossil, which remains in doubt. One can only hope that more specimens will be uncovered.

This stimulating book embraces more aspects of the australopithecine problem than can be covered in this review. Many of its arguments are provocative even when one does not agree with them. I can recommend it highly to all students of human evolution.

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Exotic Journeys

First Footsteps in East Africa. SIR RICHARD BURTON. Edited with an introduction and additional chapters by GORDON WATERFIELD. Praeger, New York, 1966. 334 pp., illus. $10.

A Mission to Gelele, King of Dahome. SIR RICHARD BURTON. Edited with an introduction and notes by C. W. NEWBURY. Praeger, New York, 1966. 382 pp., illus. $10.

In 1854, fresh from his pilgrimage in disguise to Mecca, Richard Burton set out across the Somali desert to Harrar, a city forbidden to Europeans in what is now Ethiopia, as a first step in the search for the sources of the Nile. The expedition ended in bloodshed, confirmed the Establishment's distrust of Burton, and resulted in a book, *First Footsteps in East Africa*, that remains among the best descriptions of Somali society. In the next seven years, Burton fought in Crimea, explored in East Africa, and visited the Mormons at Salt Lake. From 1861 to 1864, as consul for West Africa, he climbed Cameroon Mountain, looked for gorillas in Gabon, visited the Congo, surveyed the economy of the Niger delta, studied local languages, and led a mission to the king of Dahomey, whom Britain hoped to persuade to give up the slave trade. This mission failed, but Burton's report became an anthropological and historical classic. These two books (Burton wrote some 40) are now once again available, and their editors have set a standard for reprints (of which there is a rising flood) of early African sources.

A superb practical linguist and a conscious practitioner of what later came to be called "participant observation," Burton had a genius for the meticulous reporting of the significant (even if not always understood) detail. In his description of the Dahomean court, for example, the modern anthropologist is given, as if cinematically, the living expressions of cultural complexes that he recognizes and can interpret but can never hope to see acted out at present. In an age when it was easy to see Dahomey as a mere "barbarian despotism," Burton saw the delicate checks and balances in it. He antedates professional anthropology by a good half-century in his understanding the segmented stateless politics of the Somalis as more than shapeless anarchy.

In what would now be called high-level theory, Burton is very much an intellectual of his time. His weakness, in Newbury's summation, "was to use his remarkable range of information to confirm . . . his sense of cultural superiority as a European." But the judgment condemns the age, not the complex man. A 19th-century racist, Burton felt most at home among Indians and Arabs and Somalis, railed publicly against the Army color bar, and was dubbed "white nigger" by his fellow officers. A convinced imperialist, he made enemies of the East India Company and the Colonial Office. An advocate of trade, he despised traders. If he had any religion at all, it was Islam; but he married a devout Catholic and enjoyed shocking society with his open interest in sexual customs. Had Burton been wealthy, he might have been one of the eccentrics in which the century abounded. As it was, the paradoxes he embodied had to be played out by a servant of the Establishment that barely tolerated him. Burton reciprocated by baiting it and, fortunately for us, by scholarly malingering. That he failed to close the gap between his theories and his observations and actions is a measure of his greatness. He did not entirely transcend the world view of his times but, unlike lesser contemporaries, he did not bend his perceptions to it.

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Turkistan. Notes of a Journey in Russian Turkistan, Kokand, Bukhara and Kuldja. EUGENE SCHUYLER. An abridgement of the 1876 edition, edited with an introduction by GEOFFREY WHEELER. Praeger, New York, 1966. 341 pp., illus. $10.

As American consul general in St. Petersburg Eugene Schuyler in 1873 had the opportunity to take a journey to Central Asia. *Turkistan,* the result of eight months of travel and careful observation, was the first book to deal comprehensively with this relatively unknown region. Precious little has been written on the area since.

The purpose of Schuyler's journey in Central Asia was to study the "political and social condition of the regions which had only six years previously been annexed by Russia, and to compare the state of the inhabitants under Russian rule with that of those still living under the rule of the Khans." Schuyler's chapters detail all aspects of urban social life from Islamic patterns of ritual, to sanitation, entertainment, bazaars and trade, and local government. It is an important book for understanding the peoples of Central Asia, an area which today supplies 80 percent of Russia's cotton needs.

An introduction by the editor enhances this abridged edition. Wheeler summarizes the history of the Russian conquest from 1730 when the Russians first appeared in Turkistan, a vast, uncultivated countryside, sparsely populated by nomads and sedentary people. Although this edition includes most of the original chapters dealing with Schuyler's impression of the country and its peoples, Wheeler leaves out Schuyler's most interesting chapter on Russian administration and policies in the area. It was, however, through the editor's introduction that I was drawn to read the original edition. Wheeler compares the Russian system of colonial administration in Turkistan with the British colonial administration in India, indicating that both regimes were fundamentally imperialistic. He draws attention to the essentially mili-

tary character of Russian rule and contrasts this with the organization of the British government's India Office. Anybody interested in the comparison of colonial policies or in the history of development plans should refer to the original edition of Schuyler's work. Schuyler, a very perceptive individual, writes of the "too rapid introduction of Western institutions without adequate preparation" at a time when such ideas were not core considerations in plans for change.

This book has appeal for those interested in Central Asia, in Russian imperialistic policy, and in the very informative notes of an extraordinary and outstanding American diplomat who may be better known in this country for his book *American Diplomacy and the Furtherance of Commerce.*

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Life in Wytham Woods

The Pattern of Animal Communities. CHARLES S. ELTON. Methuen, London; Wiley, New York, 1966. 432 pp., illus. $14.

Charles S. Elton, of the Bureau of Animal Population at Oxford, has perhaps done more than any other person now living to bring recognition to the science of ecology. A substantial part of the generation that dominates the field today was introduced to the subject through his *Animal Ecology* (1927). It is noteworthy that he was able to make headway in advancing ecology in those years when other fields of biology, especially genetics, were the "in" subjects and natural history and taxonomy were old-fashioned. Consequently, when shortly after his retirement publication was announced of an imposing volume by him bearing the title *The Pattern of Animal Communities*, we naturally assumed that here was the *magnum opus*, the substance of all that Elton had learned in a long and exceptionally productive career characterized by exceptional insight. Unfortunately for those of us who would like to read such a *magnum opus* by Elton, this is not that kind of book.

Wytham Woods is an estate of 3400 acres very near to the city of Oxford and owned by Oxford University. This book is an account ("records a modest beginning") of an ecological survey and of miscellaneous pieces of ecological research begun there in 1942 and supported since 1951 by grants from the Nature Conservancy, a government agency to be envied by Americans, which has now adopted the procedures developed by Wytham Woods for its management of Natural Nature Reserves.

The Woods is surrounded by farmland which is bounded on three sides by the Thames River; it includes two wooded hills and a variety of diverse habitats including marshes, perennial springs, arable land, and meadows. Its soils are calcareous, and heath, moor, and bog habitats are absent; nevertheless, present tabulations suggest that the two square miles intensively surveyed to date harbor 15 to 20 percent of the total animal species occurring in the British Isles.

The history of the use of the land has been traced, more or less, back to medieval times, and it is known that, in the interest of promoting forest regeneration, part of the major study area was fenced against grazing mammals in the 16th century. It has not been virgin terrain for a millennium: parts have been grazed by cattle, parts cut for lumber and then used temporarily for agriculture; rocks have been quarried, and exotic species have invaded—most notably, perhaps, the sycamore tree, the European rabbit, and the American gray squirrel.

Into this long-disturbed area, which, as Elton realizes, must distress an American ecologist who can still obtain access to what has been called "quasi-virgin forest," have come numerous talented investigators, each analyzing a bit of the kaleidoscopic complexity. There is, I think, reason to believe that Americans appreciated Elton's special qualities before the British did, and Americans who went to England expressly to be associated with him are very much in evidence in this volume; indeed, it is dedicated to "Thomas Park whose laboratory experiments have thrown so much light on Nature."

This is an esoteric book but one that must be read by anyone contemplating an ecological survey. We may not want to classify habitats or punch cards in the same way, but the great variety of techniques that has been used at Wytham cannot fail to provide ideas to others.

From place names and colloquialisms, I judge that the book was not originally written for export. It did not enlighten me, for example, to learn that a survey was done "of a sand-dune complex running along the distal four miles of the remarkable narrow tongue of Spurn Penninsula, on the Yorkshire side of the Humber estuary." I didn't know what kinds of substrata were meant by "shingle" and "drifted sea-wrack," and I still don't know what a "marchair" is. The signal/noise level is lower here than in any previous Elton book I have read, and I was startled by teleological expressions such as a reference (p. 329) to insects "on their travels to find another corpse, to collect fuel or to go into hibernation for the following year's work." A quick check seems to confirm my memory that Elton's previous books were not written like this. The suspicion is that this was written for mature professionals who wouldn't be corrupted. In support of this view we note that a reader would be lost or overwhelmed if he had to stop to look up "staphylins," "composites," "psocids," and the like. But it is to be hoped that many amateur naturalists and conservationists will be persistent, because there is much for them diffused throughout this volume. Elton is a great generalist and never hesitates to draw on foreign literature as necessary to interpret local phenomena. His long-admired insight flashes brilliantly into view at times. Various ecologists have recognized that individual species of plants have special attributes, usually chemical defenses, which force the animals that exploit them to become specialists, but Elton derives this conclusion and documents it by a unique route; as the material is transformed from living vegetation to litter and finally soil, the faunas exploiting different species become progressively more similar. Any naturalist will be fascinated to learn what the European rabbit has been doing to English vegetation; the magnitude of its influence could not be fully appreciated until the myxomatosis pandemic of 1954. And here we have an intensive ecological survey spanning the period of transition!

As is usual with Elton's books, this one is replete with fascinating natural-history observations. One cannot find