territory, however, to demonstrate homology in animals and humans would require more evidence than Leyhausen or any other behavioral scientist could now present. In the essay on territoriality in animals and the need for space in humans (essay 6), Leyhausen concludes, "*Our individual and social need for space has been laid down by our phylogenetic history and is therefore a basic characteristic of the genus*, i.e. within certain limits it is an *immutable natural right*" (p. 109). He asserts that space utilization in man and territoriality in animals are basically homologous, and therefore the laws applying to the latter apply to the former. To prove the biological homology, Leyhausen goes through the classic steps of developing a logical analogy. First, he postulates certain characteristics of animal territoriality (for example the innate mechanism of its causation and its heritability). Then he must set up the basis of resemblance between the human and the animal case. If he is successful, he can apply the properties derived from the animal situation to the human. In setting up this basis of resemblance, though, Leyhausen uses arguments that are weak and speculative and do not adhere to the standards of rigor and clarity he uses when discussing ethological concepts like displacement movements. The empirical bases for this analogy include the following: "Although the information we have about the life of the anthropoid apes in the wilds is so far only scanty, it does reveal some striking correspondences with the social life of primitive hunting and food-gathering peoples . . . the main social community is the family or a tribe. . . . Relations between neighboring tribes are in general quite friendly. . . . Communal life within the tribes proceeds in circumstances of relatively loose spatial connection" (p. 103). "Especially common is the way that every social community . . . strives to reserve one certain area as its property and to repel any intrusion by others" (p. 104). These are broad, not precise, similarities and are more akin to biological analogs than to homologs.

While Leyhausen's attempts to expand instinct theory to the mammalian (and human) case often require him to use arguments weaker than those used in discussing other aspects of animal ethology, his attempts are always explicit and clear. Whereas other, more popularized books on human ethology often leave the basic theoretical framework unstated, Leyhausen's articles are consistently intellectually forthright—even when he is going beyond his evidence. Whether human ethology will ever blossom (as its parent discipline of animal ethology has) remains to be seen. For anyone interested in exploring the possibilities of this new field, or for those interested in a sampling of classical ethology, this volume is worthwhile. The translation by B. A. Tonkin is good and the material always interesting.

NORMAN T. ADLER
Department of Psychology,
University of Pennsylvania,
Philadelphia

Comparative Primatology

An Atlas of Primate Gross Anatomy. Baboon, Chimpanzee, and Man. DARIS R. SWINDLER and CHARLES D. WOOD. University of Washington Press, Seattle, 1973. xiv, 370 pp., illus. $30.

Recent years have witnessed a remarkable renaissance and modernization of comparative primate morphological studies, characterized by multivariate statistical approaches to large, diversified osteological data sets and experimentation with electromyographic and cineradiographic techniques on living animals. But no matter how refined the technology or how sophisticated the research strategy, a substantive part of the explanation of morphological complexes, in evolutionary perspective, will depend upon the comparative anatomical expertise of the theorist. Thus, an increasing number of evolutionary anthropology programs now include one or more courses on comparative primate morphology. Unfortunately, more often than not, the prospective primate morphologist must obtain whatever dissection materials are locally available and learn selected aspects of the subject free-lance.

Formal courses and independent study will now be greatly facilitated by Swindler and Wood's atlas of primate anatomy. The book is a generally well-organized comparison of common baboon, common chimpanzee, and human morphology. The approach is regional, beginning with a bone-by-bone survey of osteological features and progressing to head and neck, forelimb (or upper limb), back, thorax, abdomen, pelvis, and hindlimb (or lower limb). Neurological, angiological, and splanchnological features are presented. But most of the nonosteological sections focus on muscles.

The text is brief, useful, and generally accurate. The illustrations vary in quality and detail from good (plate 64, for example) to poor (plate 73). Readers should be informed that the left-hand figure on page 185, looking rather like Lenin during the lean years, is the senior author. The format seems inordinately expansive and the volume is expensive. Some typographical and factual errors occur, so students should be prepared to take their own specimens as the final authority in case of discrepancy. For instance, in plate 108 (p. 229) the distal segment of the penis of *Pan* is labeled "glans penis" when in fact the poor creatures lack this structure (Graham and Bradley in *The Chimpanzee*, G. H. Bourne, Ed., vol. 5, p. 122, University Park Press, 1971).

In brief, though not the Charles Atlas in an ideal realm, this volume should find a ready market among anthropologists, evolutionary biologists, veterinary scientists, and other researchers who employ catarrhine primates.

RUSSELL TUTTLE
Department of Anthropology and
Committee on Evolutionary Biology,
University of Chicago,
Chicago, Illinois

Vespoidea

Wasps. An Account of the Biology and Natural History of Solitary and Social Wasps. J. PHILIP SPRADBERY. University of Washington Press, Seattle, 1973. xvi, 408 pp., illus., + plates. $17.50. Biology Series.

Since the first sentence on the dust jacket proclaims this to be the first major book on wasps since 1868, this reviewer may perhaps be forgiven if he begins his review by waspishly pricking this particular assertion. The statement is possibly true if one accepts the author's definition of a wasp as a member of one group, the Vespoidea, which he calls the "true wasps." But one looks in vain here for a review of the extensive literature on the vast majority of wasps, belonging to other groups and therefore by implication "false wasps." Furthermore, one quickly discovers that the book is primarily about British wasps, other faunas being mentioned mainly as they increase understanding of the British species. The British species consist chiefly of hornets and yellow jackets (Vespinae), even the common paper wasps (*Polistes*) being treated lightly since they occur in Bri-