

be four times as long as that used for photographing a full moon. Actually nine would be a better factor for the first quarter and slightly more for the last quarter. However, if an amateur underexposes his first moon photograph, he can make corrections on his second try.

Paul suggests that one start by photographing star trails; as an illustration he uses an excellent photograph made by Paul W. Davis, of circumpolar trails. He might have mentioned that, by comparing such a photograph with one taken 50 years earlier, one can learn quite a bit about the precession of the equinoxes.

The book deserves a better binding and an index. It is an excellent book to recommend to amateurs seeking answers to questions about celestial photography.

CHARLES H. SMILEY

*Ladd Observatory,
Brown University*

Cultures and Societies of Africa. Simon Ottenberg and Phoebe Ottenberg, Eds. Random House, New York, 1960. x + 614 pp. Illus. \$7.50.

Few editors have had the courage or the opportunity to present their intended readers, college and university teachers and students, with a selection such as this. The articles and excerpts reprinted here are largely by professional anthropologists, written mainly for fellow professionals. The volume is focused not on all the cultures and societies of Africa, but on those of Africa south of the Sahara; the primary stress is the traditional way of life in these areas. Anthropological "readers" are rarely organized within such strict limits. The editors and their publisher are to be congratulated for breaking new ground.

There are six sections: the 81-page general introduction by the editors; "People and environment" (five selections); "Social groupings" (seven selections); "Authority and government" (six selections); "Values, religion, and aesthetics" (eight selections); and "Culture contact and change" (six selections). There are, then, 32 articles and excerpts, by as many authors, included here. The majority deal with specific groups, and only four or five might be styled summary or survey articles. Most of the major areas of sub-Saharan Africa are represented, although unequally. For

example, western Africa claims a major share, ten groups, compared with four groups for the central African Republic and two for the Congo area. Ethiopia and the Cape are not touched upon. In general, the representation is more even in terms of types of groups; these range from the Pygmies to the Ashanti.

The editors evince a strong predilection for materials published originally in English, and only two of their selections are translations. For each item an introduction and a section of annotated references "For further reading" are provided. The volume concludes with a 33-page classified bibliography, biographical notes on the contributors and editors, and an index. There are 26 pages of plates. An attractive end-paper map gives the approximate location of 28 tribes mentioned in the selections. In some cases, the location is *very* approximate (for example, the Tswana and the Swazi), and in one case (the Luapula) it is an area, not a tribe, that is designated.

The editors, and their cooperative publisher, have set high standards and have largely succeeded in maintaining them. Prospective users of the book should be warned, however, that there are a few traps.

Although the selections treat only sub-Saharan Africa, the editors, in the introduction, devote substantial space to the northern regions, space which might well have been devoted to a fuller treatment of the area actually covered by the volume. There are aspects of the introduction's organization which may lead to difficulties in the classroom: for example, among 13 subheads, one is called "Climate and cultures" and another "Means of livelihood." The rationale of this organization is unclear, and the reader must work back and forth to see where there are, or are not, cross-correlations among climate, culture, and means of livelihood. Most students will not willingly do this, and the task will inevitably fall to the teacher. Again, the authors create unnecessary work for teachers by subsuming kinship under "Social groupings"; and by saying, "The three basic kin relationships are those of descent, filiation, and marriage," only to dismiss filiation with a few brief sentences (page 28 and following). Regrettably, these and other lapses render the introduction somewhat less useful than it could have been.

A quarter of the selections are by American anthropologists; not all of these anthropologists were trained in

this country, nor do they all write in the prevailing American tradition with its emphasis on culture. The remaining three-quarters are overwhelmingly by scholars who write in the British tradition of social anthropology. In fact, a majority of the more important British Africanists, with certain notable exceptions, are represented. This source of the selections means that, in most, there is a strong emphasis on problems, and even the more descriptive pieces often have a good deal of theory implicit in them. If a course happens to be organized on regional lines, or to be heavily factual in its orientation, the topical organization, in combination with the substantial theoretical content of the volume, may make this book a difficult one to use.

Many teachers and students will no doubt welcome the stimulating challenge of such a book. This challenge, met squarely, will prove richly rewarding.

ALFRED HARRIS

*Department of Anthropology,
Brandeis University*

High Energy Nuclear Physics. W. O. Lock. Methuen, London; Wiley, New York, 1960. xi + 190 pp. Illus. \$3.25.

The latest volume in the Methuen monograph series on physical subjects is this pocketbook by Lock. I believe that these short books are the correct approach to providing excellent coverage of a limited subject which is part of a rapidly changing field. In contrast to some recent lengthy books on nuclear physics, to which a number of authors contributed incoherently on topics (and on the number of pages) assigned by an editor, this book, written by one person, provides a well-written, coordinated account of high-energy, pion, and nucleon physics, which is technically good and which is easy to understand.

The book is based on lectures given to first-year postgraduate students in nuclear physics at Birmingham University. Lock assumes that the reader will have an elementary knowledge of quantum mechanics and that he can supplement this knowledge by reference to the books and articles listed at the end of each chapter.

The text (188 pages) is subdivided into eight chapters: "Introduction"; "Properties of the pions"; "Fundamental concepts"; "The scattering of pions by protons"; "The photoproduc-