

the choice of "Cross section for collision" and "Cross section for scattering" trying to say the same thing again, without succeeding quite as well.

Whatever such flaws may be, this work is a serious and monumental endeavor, and will be a very useful addition to the "first aid" kit of any library in colleges, schools, and industrial research labs. Its price will probably put it outside the reach of most individuals. Printing and presentation are excellent.

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Mankind in History

The Story of Man. From the first human to primitive culture and beyond. Carleton S. Coon. Knopf, New York, ed. 2, 1962. xxxviii + 438 pp. Illus. + plates. \$7.50.

The anthropologist's view of history is a different view that covers a million-year span, most of it before the written record began. The anthropologist's history is concerned with major changes in the ways of life, in the arts and the sciences of living. To the anthropological mode of thought the potato was more important to Ireland than Parnell, taro more world-shaking than the Council of Trent, and the Polynesian sampan shares equal glory with the *Santa Maria*.

But such a world view demands a unique guide, fitted with twenty-league boots, a curator's eye, and an adventurer's spirit of adventure. It demands personal familiarity with archeology and experience in human biology, minus the usual circumlocutions. And this job description perfectly fits Carleton Coon, who, in numerous books (including at least one novel), has prepared himself to tell *The Story of Man*.

Within 425 pages and a 10-page glossary the history of man is compressed, from the protohominids that deserve cogeneric billing with us to the age of the working atom. Halfway through the book, man (and Coon) are still in the Neolithic. Not until perilously near the end does he come to the "rise of America." This is a proper and important antidote to the parochial view of world history.

This handsomely illustrated and

beautifully printed second edition is a Christmas book and a birthday book, ideal for grandparent and niece. Besides, it is a useful nucleus for a general education course, and downright interesting reading. One can read about, and see pictured, advances in man's conquest of the world, from the axes and scrapers of the Paleolithic to the mass-production of power.

True, one can question Coon's acceptance of the Improbable Snowman, and his stop-press delight with a "still undescribed fossil from Jordan." One may ask why Coon, leader in showing climatic adaptation as a cause for racial differentiation, has not given equal time to malarial selection (responsible for hemoglobin S and GSH polymorphisms) and smallpox selection (probably responsible for regional variations in ABO frequencies). But praise be to Coon for picturing Neanderthal, not as a stoop-shouldered slouch, but as an intelligent man as sapient as we, plagued with arthritis (and submissive to surgery). And good for the discussions of important and controversial problems, like the origin of maize and the distribution of the yam, that involve half of the peoples of the world.

This is an excellent book for spouse, progeny, or colleague to read in bed, by the fire, or at sea. But it is deceptive. The scientific reader may not realize, until he has put it down, that *The Story of Man* is neither popularization nor oversimplification but an expert, if selective, account of the story of man.

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Corning Glass Monographs

Analyses of Ancient Glasses, 1790-1957. A comprehensive and critical survey. Earle R. Caley. Corning Museum of Glass, Corning, N.Y., 1962. 118 pp.

This is an excellent book, which lives up to its title and subtitle. The chapters are "Early investigations," "Investigations of the past half century," "Egyptian glass," "Near and Far Eastern glass," "Roman glass," and "Altered or decomposed ancient glass."

The discussion is critical and scholarly, both of the analyses themselves

and the provenance of the samples. The question as to where glass was made first, in Egypt or in Asia Minor, "is a question that cannot be answered decisively at present." Specimens from Abu Shahrein (Iraq) and from Tell Asmar, both dated about 2600 B. C. "are certainly the oldest known specimens of glass," except possibly a few Egyptian beads claimed to be of earlier date but not proved to be so. However, there is no actual proof that either of these specimens was composed of glass manufactured in Mesopotamia. It is interesting to note that the first analyses of an ancient glass were made by Klaproth, in 1801, on three samples of Roman glass.

This is volume 1 of "The Corning Museum of Glass Monographs". It is to be hoped that the succeeding monographs will live up to the high quality of this one.

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Basic Axioms and Theory

Quantum Mechanics for Mathematicians and Physicists. Ernest Ikenberry. Oxford University Press, New York, 1962. xii + 269 pp. Illus. \$8.

This book, which should prove to be a valuable contribution to the literature of physics, is written on a level intended for first-year graduate students. The author is primarily interested in giving a clear, logical presentation of the mathematical foundations of elementary quantum mechanics. The basic axioms are presented; the theorems which follow from them are clearly stated and are either proved in the text or are relegated to a series of problems of gradually increasing complexity. (There are 352 of these problems throughout the book, and they should prove of immense value to one who is trying to understand and learn the subject matter.) Particularly good are the chapters on the mathematics of linear operators, the solution of the harmonic oscillator by factorization, eigenfunctions and eigenvalues, matrix representations, and above all the chapter on measurement theory, in which the basic theorem on the relation between commuting operators and compatibility of observables is discussed.