ures, Herzberg's 80, and Slater's 68. I am confident that there will be an early demand for a second edition, if it is not stifled by reaction to the unconscionable price of 3 cents per octavo page. In a second edition several improvements should be made in the format: Cross reference can be made easier by printing chapter and section numbers (and perhaps even figure, table, and equation numbers) at the top of each double page; the plates, usually many pages removed from their context, should be collected in one place or always referred to by the number of the facing page; the cumbersome and undoubtedly expensive foldouts should be replaced by two-page spreads; and almost all the lazy tables should be righted so that they can be read without rotation of book or student.

J. E. MACK Department of Physics, University of Wisconsin

## Man's Family Tree

Ideas on Human Evolution. Selected essays, 1949–1961. William Howells, Ed. Harvard University Press, Cambridge, Mass., 1962. xiii + 555 pp. Illus. \$10.

This volume, as its editor-himself a distinguished anthropologist and authority on man-points out in his preface, is intended to survey the views developed on the subject of human evolution during the decade immediately past. It is a range of ideas by leading authorities in this field that the editor aims to present, not primarily data or facts well-known to the profession. Again, as Howells indicates, these "facts" are subject to varying interpretations. In this, save for the range of time represented, they are no different than the facts of written history which have a way of altering their shapes and meaning with the passage of time and human generations that look upon them differently.

The papers making up the volume represent the contributions of renowned foreign and American scholars such as Dobzhansky, Weidenreich, Straus, Schultz, Simpson, Mayr, Gregory, Le Gros Clark, Oakley, Washburn, Vallois, and others equally well known. Their individual subjects range from the Italian Neanderthals to the earliest subhuman phases of man's family tree. Each paper has been skillfully chosen, not alone for content but also for its ability to reveal the provocative and exciting nature of new developments in a field always marked by controversy even after the full acceptance of the evolutionary point of view. The more the number of primate fossils has increased, the more devious and elusive appear the paths by which we may have reached our present status.

There has, furthermore, been an almost unconscious shift in our approach to the human phylogeny. The 19th- and early 20th-century workers were confronted with a paucity of human remains. Scientists were faced, therefore, whether consciously or unconsciously, with the problem of convincing the general public that human evolution was a reality. Until the Pleistocene phase of man's history was explored, it was scarcely possible to grapple satisfactorily with his more remote relationships.

As one studies the papers in this volume, it becomes apparent that the precise point of divergence of the brachiating anthropoids from the less specialized primates, who also gave rise to bipedal man, is still a debatable question, confused by the dangers of mistaking parallelisms for more intimate relationship. In addition, these earlier phases of human history have had to wait upon the examination and analysis of remains closer to us in time. Now at last the hunt goes deeper, but there are still million-year gaps in human history and much room for honest, anatomical difference of opinion.

Howells has done a great service to science by collecting into one volume some of the most important evolutionary papers of our generation. To indicate a few untreated facets of the subject would be only to say that each worker has his own preferences, that any book can contain only so much material, and that vast areas of the world and man's history within it still remain to be explored.

Human ideological differences today obstruct the examination of regions now known to contain great evolutionary secrets. It is a pity that ferocious and irrational nationalisms threaten to stifle one of the most dispassionate of scientific pursuits. No contemporary animus can shift the cusp on a single fossil tooth or change the road by which we have reached our present dubious status. It can serve only to underline the fact that we are still divided, halfworld creatures glancing alternately backward into an obscure past and forward into a future that we increasingly tremble to enter. *Ideas on Evolution*, if read with perception, should aid in giving us, if not confidence, at least that long, wide range of philosophical detachment which characterizes the species *sapiens* in some of its nobler moments.

LOREN EISELEY Department of the History and Philosophy of Science, University of Pennsylvania

## **Economic Statistics**

Trends in Natural Resource Commodities. Statistics of prices, output, consumption, foreign trade, and employment in the United States, 1870– 1957. Neal Potter and Francis T. Christy, Jr. Johns Hopkins Press, Baltimore, Md., 1962. ix + 568 pp. Illus. \$17.50.

Potter and Christy tabulate the production, trade, consumption, prices (at the "wellhead"), and labor required for production of 90 percent (by their estimate) of what we casually call "raw materials." These results are for the United States over essentially the century since the Civil War; no regional distribution is given. The great bulk of the book is concerned with individual commodities. Procedure in resolving conflicts among different sources are. in general, clearly shown; notes keep the reader straight on what is being done; and references provide a wealth of signposts to the background.

The authors are concerned with the economy, with constant-value dollars, gross national product (GNP), and commodities in the market rather than with the resources from which they came. Accordingly, one expects no mention of the acres of open land, of the quality of wilderness, of the frequency of wood thrush songs, or even of how much air remains unused for smog and how much water is still available for contamination. The reader who wants per capita caloric intake will have a struggle, but if he stays with the single commodity tables he can make it.

Only occasionally do difficulties arise—for example, in determining that the statistics given are for rough rice, not for brown rice. Again, hydropower is not mentioned.