troduction, Levey adequately covers the major types of Arabic literature on pharmacology, although the term is poorly defined in the footnote on page 3. He does better with the etymology and sources of Arabic names in materia medica but gives little attention to the life and times of al-Kindī.

It is, however, refreshing to note that Levey has included a reproduction of the original Arabic manuscript. He has rendered the translation thoughtfully, with good taste, and, for the most part, with meticulous accuracy. In several passages, however, words and sentences are incorrectly translated (see, for example, Nos. 13, 85, and 216 on pp. 42, 100, and 210 to 212, respectively). A few titles of subdivisions, moreover, have been ignored or overlooked—for example, No. 95 on page 108, where a new paragraph should read: "*Dentifrices:* The white dentifrice used to arrest (cure). . . ." No. 99, on page 110, should read: "Another dentifrice for the aforementioned ailment . . ." and No. 102, on page 112, should read: *The Yahūdī's (Jewish) Dentifrice* not the "Jewish Tooth." This possibly refers to a recipe prepared by Masarjawayh or another Jewish physician of the 8th or 9th century.

The publisher deserves credit for the excellent format, the fine reproduction of the Arabic manuscript, and the beautiful Arabic script included with the materia medica.

Scholars and Arabists interested in the history of Arabic medical sciences and etymology will find this book a welcome addition to any research involving the evolution of Arabic pharmacy and medical therapy.

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Organic Evolution

Important contributions to evolution in modern times have included numerous original books devoted to technical considerations of one aspect or another of this extremely and increasingly complex field. The names of such authors as Darlington, Dobzhansky, Fisher, Ford, Grant, Haldane, Huxley, Lerner, Mayr, Rensch, Schmalhausen, and Waddington at once rise to mind, and the list is very far from being exhaustive. Nevertheless there has been a dearth, one could almost say absence, of works covering the whole field of modern evolutionary theory briefly, simply, and authoritatively. That need is now filled by **Processes of Organic Evolution** (Prentice-Hall, Englewood Cliffs, N.J., 1966. 191 pp., $2.50) by G. Ledyard Stebbins, who also belongs in the previous list as author of a large technical work on variation and evolution in plants, one of the bases of the current synthetic theory.

As the title indicates, this book is concerned with the "how" of evolution ("What makes evolution go?"), and not with the what ("What has happened in the course of evolution?"), or the why ("What is the meaning of evolution, its transcendental reason, or its philosophical impact?"). It covers the selected field very well, indeed amazingly so for so concise a work. The first chapter outlines the synthetic theory and its origins briefly (it will go without further saying that everything is brief). Variation and variability (nature, sources, and significance) are next considered, first as embodied in organisms and then as itself organized and operative in reproducing populations. Progressive evolution in populations is dealt with, giving special consideration to competition and to the critical points of extreme delicacy and complexity of adaptation and of apparently nonadaptive characteristics.

Speciation is treated in a usefully restricted sense, as the outcome of reproductive isolation. The counterpart of such isolation is hybridization, a special interest of the author, given somewhat more space than would otherwise be expected. Inferences from the fossil record and such long-range phenomena as rates, trends, and emergence of novelty are summarized in the chapter "Major trends in evolution." Finally, human evolution is the exception to the intention not to discuss the course of evolution, but here, too, relevant processes are emphasized.

Each chapter is followed by questions, and the presentation is that of a text. It is otherwise an excellent one, but the material is scanty for a separate course on evolution, and as a textbook this may be most useful for inclusion as a part of a more general introductory biology course. It should also be accessible to honest enquirers outside of schools.

Illustrations are numerous and useful although a few are puzzling or contain misprints. There are also some other indications of careless editing. Many printings should be called for, and revision will be possible. In the meantime, this is an excellent book as it stands and worthily fills a great need.

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International Conference on the Earth Sciences

Advances in Earth Science (M.I.T. Press, Cambridge, Mass., 1966. 516 pp., $20), edited by P. M. Hurley, is a record of the papers presented at the International Conference on the Earth Sciences held on the occasion of the dedication of the Cecil and Ida Green Building at the Massachusetts Institute of Technology in September 1964. The papers are by 15 distinguished authors, one each from Munich, Oslo, Moscow, and Canberra and the other 11 from institutions well distributed in the United States. The subject matter ranges widely across many of the active fields of earth and space science—from solar and interplanetary physics and planetary astronomy (Goldberg, Biermann, and Kuiper); through atmospheric circulation and other meteorological phenomena (Lorenz, Eliassen, and Obukhov); oceanic circulation, waves, and sediments (Stommel, Munk, and Arrhenius); to a group of six papers on the "solid" earth: the figure of the earth as evidence of its mechanical properties, recent advances in seismology, the constitution of the earth's interior (MacDonald, Press, and Ringwood), and heat flow, geochronology, and convection in the upper mantle (Birch, Wasserburg, and Elsasser).

The type of treatment accorded these topics varies almost as widely as the subject matter. A few of the papers are quite technical; two offer no references to the literature of their topics; one or two are original contributions of new knowledge; but many of them are competent to excellent critical reviews of current literature and activities in their fields—reviews that have been written primarily for a nonspecialist audience. In commenting on a book that contains many excellent critical reviews and original contributions, it may seem unmannerly to mention one or two articles individually. Nevertheless, the ar-