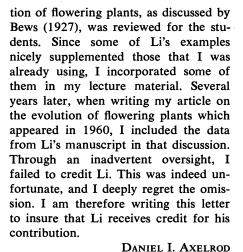
As a kind of general reply to my critics, let me be clear about one point. I make so much of the extravagance of the authors' claims because the document is addressed indirectly to the general public. I do not mean to say that a science of man and his institutions is impossible. Such a claim would just substitute one extravagance for another. I am not against hope, only against misinformation. Elsewhere in the document the six authors are not quite so extravagant in their claims. They ask: "Can such a complex scientific assault . . . really succeed? No one knows." But inconsistency in claims is just as irresponsible in a document as extravagance of claims.-J.T.

## **Adaptive Radiation**

The principle of adaptive radiation, early championed by Henry Fairfield Osborne, and later by Matthew, Lull, and Romer, states that the descendants of a generalized ancestral type spread out into many different environments with a great variety of adaptive characters. The variations in structure are to be correlated with adaptation to different habits, as much as to the habitat. The general principle has provided a sound basis for understanding the evolution of the tetrapods.

Adaptive radiation has also occurred in flowering plants, as shown by Andrews of Australia (1913, 1914) and Bews of Africa (1925, 1927). In general, however, botanists have largely ignored the phenomenon even though it is one of the most important and fundamental aspects of all evolution. In this connection there have recently appeared two discussions of adaptive radiation in flowering plants. The one by me [in Evolution of Life (University of Chicago Press, 1960), pp. 237-243] devotes several pages to it in an analysis of the larger problem of the evolution of flowering plants. The paper by Hui-Lin Li [J. Wash. Acad. Sci. 50, (1960)] is an essay devoted solely to the problem. These discussions are sufficiently similar to require comment.

The similarity is attributable to the fact that I had access to Li's manuscript in the early 1950's, at which time I was asked to appraise it. At that time I was giving part of a general course in paleontology in which adaptive radia-



Department of Geology, University of California, Los Angeles

## Carbon Dioxide Production in Asparagus

Dedolph, Wittwer, and Tuli, in "Senescence inhibition and respiration" [Science 134, 1075 (1961)], reported rates of CO<sub>2</sub> production for asparagus in the range of about 1.5 to 3.0 mg of CO<sub>2</sub> per kilogram per hour at 21°C. These values are about 1/100 as large as those reported in the literature for about that temperature [see H. Platenius, Plant Physiol. 17, 179 (1942); S. Tewfik and L. E. Scott, J. Agr. Food Chem. 2, 415 (1954); J. Schweigart et al., Vorratspflege u. Lebensmittelforsch. 2, 28 (1939)]. Insertion of a correction in Science is desirable, to prevent the apparently erroneous data from permanently entering the literature.

WERNER J. LIPTON U.S. Agricultural Marketing Service, Fresno, California

## **Pictorial Atlas**

Walter Deshler (University of Maryland), in his review of *Life Pictorial Atlas of the World* [*Science* 134, 1234 (1961)], regrets that "the price is sufficiently high to limit its distribution to institutions." I doubt that this will be true, particularly in view of the fact that 300,000 individuals have already purchased this atlas, sight unseen, at prepublication prices of approximately \$14, \$20, or \$21 (as compared to the publication price of \$30).

ROBERT T. JORDAN Council on Library Resources, Washington, D.C.

