of them was neither scientific nor practical. Indeed they not only detracted from his reputation but also finally vitiated some of his theoretical views in science, notably on the evolution of man.

Miss George is not particularly concerned with Wallace's strange personality or with details of biography in the ordinary sense. For example, she notes in passing that Wallace married an 18-year-old girl when he was middle aged, but his wife and family life are never mentioned again. As she says at the outset, Miss George is primarily concerned with the history of Wallace's scientific ideas and their present status. She has diligently examined recent technical literature on subjects treated by Wallace. This endeavor is highly interesting and is successful on the whole, although Miss George is not always quite clear on modern evolutionary theory and sometimes remains muddled on points that were inevitably obscure to Wallace. Her writing is usually clear but lacks distinction.

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Paleobotany

Tretichnyye Flory Zapadnoy Sibiri [Tertiary Floras of Western Siberia]. P. I. Dorofeyev. Komarov Botanical Institute, Academy of Sciences of the U.S.S.R., Moscow, 1963. 346 pp. Illus.

The fossil floras described in this monograph occur at 20 localities in the West Siberian Lowland, most of the sites lying between 55° and 60° latitude along the rivers Tavda, Irtysh, and Ob'. The continental Tertiary deposits here, as in other parts of Soviet Asia, have been studied intensively during the past decade. P. I. Dorofeyev (or Dorofeev, as he prefers to transliterate it) of the Komarov Botanical Institute has been the principal investigator of fossil fruits and seeds. This volume, which summarizes, revises, and adds to his earlier reports, is a most welcome contribution.

The material is arranged in such a way that even those who are unfamiliar with the Russian language can obtain useful information. A map with the localities is provided on the first page of the brief introduction. A discussion of stratigraphy follows (the fossils were taken from both Oligocene and Miocene horizons); then each site is described individually and its fossils listed. This portion of the book concludes with a discussion of phytogeographic affinities and ancient Siberian climatic conditions and with a tabular list of 182 fossil species and their distribution in the Tertiary deposits of western Siberia. The remainder of the work presents formal descriptions of the species, many of them new, along with synonyms, nomenclatural changes, and comparisons with modern forms. Fifty plates, a bibliography, and a two-page English summary complete the volume. Unfortunately, the English summary does not list the 20 localities in the same numerical order as the introductory map; readers who ignore the Russian legend to the map will be confused.

Dorofeyev believes that the plant remains are derived from a single flora (American writers might say geoflora) that flourished in western Siberia with little change from the beginning of the Oligocene epoch until the end of the Miocene. The 129 genera in 72 families that have been identified indicate a warm temperate climate. The diversity of the fossil flora and the abundance of deciduous forms are in marked contrast to modern forests of the region, in which pine, larch, and fir predominate and in which species of broadleaf trees are few. Many genera of the ancient Siberian flora now occur only in eastern Asia, eastern North America, or both. Among these are *Taxodium, Glyptostrobus, Nyssa, Halesia, Fortunearia, Liriodendron, Leitneria*, and *Magnolia*. Although fruits and seeds of the Siberian deposits are fairly similar to those found in central European brown coals of the same age, the higher latitude of the former was not without effect: some of the more tropical elements of European brown coals—for example, Symplocaceae and Mastixioideae—are absent.

A paleobotanist must deal with floras consisting of dozens of families, and, obviously, he cannot be a specialist in all of them. Nevertheless, I am bewildered by some of Dorofeyev's statements with respect to modern *Nyssa* (familiar to Americans as tupelo or black gum), with which some of his most interesting fossils are allied. The endocarps (stones) of *Nyssa sylvatica* Marsh. are said to attain a length of 19 millimeters: actually, the maximum length is about 12 millimeters. The fossil fruit *N. macrocarpa* Dorof. is said to resemble the fruits of both *N. biflora* Walt. and *N. uniflora* Wangenh. (= *N. aquatica* L.), a puzzling statement, since fruits of these two modern species are very dissimilar. Most remarkable is the author's assertion that endocarps of these species contain two, three, or four seed cavities. In fact, fruits of both modern species have a single seed cavity, and in making this error, Dorofeyev missed an interesting point: his multilocular *Nyssa* fossils are structurally more primitive than unilocular fruits of modern *Nyssa*. Even granting the difficulty of obtaining modern material for comparison, these mistakes are inexcusable, for accurate descriptions of *Nyssa* fruits are to be found in the literature that Dorofeyev consulted in preparing his treatment.

Although this work is not as magnificently done as *The London Clay Flora* of Reid and Chandler or Kirchheimer's *Die Laubgewächse der Braunkohlenzeit*, it must share a place with those volumes on the shelves of the few who specialize in Tertiary fruits and seeds. The many botanists who are interested in the phylogeny and distribution of modern seed plants should acquaint themselves with the book, and anyone who thinks that the fossil record of angiosperms consists only of leaf impressions should at least examine the plates.

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Mathematics

Foundations of General Topology. Ákos Császár. Translated by K. Császár. Pergamon, London; Macmillan, New York, 1963. xx + 380 pp. Illus. $15.

The present work is an expansion of the first edition—*Fondements de la Topologie Générale* (Akadémiai Kiadó, Budapest, 1960). The author's goal is to treat uniform, proximity, and topological structures from a common viewpoint. He accomplishes this by developing a very general theory of "syntopogenous" structures in which the above emerge as special cases. The idea is simple and interesting. A syn-