Document Number 8452 with the ADI Publications Project, Photoduplication Service, Library of Congress, Washington 25, D.C. For photoprints or microfilm copies address inquiries to: Chief, Photoduplication Service, Library of Congress. Kindly cite document number" (p. xi).

The bibliography presented by Hodge and Smith supplements that of Roholm, although some papers published prior to 1937 are cited. Some of these entries are also cited in Roholm's book but most of them are not. That few of the citations were published after 1960 suggests that the editor and the authors should make immediate plans to provide detailed coverage of the material published after that date. The 8-page subject index covers both chapters.

Generally the authors have done most of the writing. "Effects of fluorides on enzyme systems" (p. 176) is done briefly by relying on a review published by Borie in 1945. The section "Histogenesis and mechanisms in the development of osterofluorosis" (pp. 424 to 441) was written by Lent C. Johnson.

Tabulated material, including a few brief tables not assigned numbers, fills approximately 455 pages. A list of the titles of the tables is provided (pp. xv to xviii). Some of the more than 80 figures present several aspects of the subject matter.

The following quotation is from the preface by the editor, J. H. Simons: "An extensive survey and discussion of a vast amount of research on the physiological properties of fluoride ion and of substances capable of producing it in aqueous solution are given in this volume of 'Fluorine Chemistry.' These vary from the detrimental effects of excessive fluoride ingestion, through the beneficial effects of optimal amounts, to recognized detrimental effects, i.e., the greater incidence of dental caries accompanying suboptimal fluoride intake. Fluoride metabolism is discussed fully, e.g., the capacity for storage of fluoride by the bones and the rates of excretion of fluoride from the body. Of particular importance is the relation of fluoride ion to the health of teeth and bones: this volume reviews a good deal of careful research on this problem."

Generally the sections are followed by concise, conclusive summaries stated in such a way that "lifting them from context" will be difficult.

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Laboratory Methods in Clinical Virology

The British have been major participants in the exuberant growth of virology during the past generation, and this little book, **Diagnostic Methods in Clinical Virology** (Davis, Philadelphia, 1966. 139 pp. Illus. $5), by N. R. Grist, Constance A. C. Ross, Eleanor J. Bell, and E. J. Stott, is evidence of their excellence in the practical field of laboratory diagnosis as well. The book is concise, explicit, and well organized. Although the only methods presented are those used in the Regional Laboratory in Glasgow and alternatives are not given, the selection is a good one, and laboratory workers familiar with the basic principles will doubtless find it very useful indeed.

The laboratory identification of virus infections has never reached the stage of practical value that bacteriologic diagnosis has attained. It is more cumbersome and slower. Thorough testing remains a large undertaking, and mixed infections are more difficult to identify than bacterial infections. But there is less need to identify the responsible virus, because there is little to offer in the way of specific treatment. The greatest value of the kind of procedures described in this book has come from the study of outbreaks and through better understanding of the diseases. Fortunately, good clinicians rarely need the laboratory, and, on more than one occasion, clinical findings have been more reliable than laboratory tests. Joint observations, made in hospitals by virologists and practitioners, and intensive study of particular patients may well be most rewarding, and this little manual should encourage clinical pathologists to undertake more laboratory testing. By so doing it would provide new opportunities to further define the manifestations of virus infections and the value of laboratory tests.

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Quaternary Deposits in the U.S.S.R.

Atlas and Keys of Fruits and Seeds Occurring in the Quaternary Deposits of the U.S.S.R. (Nauka, Moscow, Russia, 1965. 366 pp.), by N. Ja. Katz, S. V. Katz, and M. G. Kipiani, a manual in the Russian language with an English summary, will be of interest to all contemporary students of Pleistocene and Holocene deposits in North America. Because manuals of this caliber are needed, it forms an outstanding contribution to the existing illustrative literature on determination of Quaternary fossils.

The book provides recommendations for the collection of samples for carpological analysis, methodics of paleocarpological analysis, and methods for determining the age of floras as well as the age and genesis of the deposits containing them. Brief characteristics of carpological floras are given for different periods of the Quaternary for the U.S.S.R. and adjacent territories.

The keys, which are easy to follow, include 108 families and more than 1100 species. Two types of keys are given—a morphological key and a taxonomic one. Diagnostic features of fruits and seeds are given together with data on their present geographical affinity with each taxon. One table is devoted to line drawings of oögonia of Charophyceae, and spores of Salviniaceae, Marsileaceae, Isoëtaceae, and Selaginellaceae. Locations of fossil discoveries are listed following literature data from the U.S.S.R., Poland, Germany, and England, and findings made by the authors are included.

The authors are to be highly commended for their thoroughness and technical knowledge in preparing this manual and for the excellent line drawings of recent comparative fruits and seeds; in many cases they have provided actual drawings or photographs of fossil material. The various faces, cross sections, and detailed cell structures of fruits and seeds are well reproduced and greatly facilitate determinations of fossil material. Dimensions and magnifications are incorporated in legends or descriptions.

Although the manual deals chiefly with Russian and to some extent with European Quaternary deposits, I feel that it can be of great value to workers in Quaternary research in North America. The English summary will be useful to those who are not familiar with the Russian language. The book is attractively bound in a sturdy cover.

I recommend this manual to workers