In its preparation, the new map was designed not only for manuscript notes, but for reduction to at least half-size in publication, and full permission is generously given by Dr. Hall and the publishers for the reproduction of this map to illustrate geographical distribution of plants (or animals) in scientific publications.

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MECHANICS OF INDEXING

THE "Easier Method for Making an Index" (SCIENCE, March 10) is extremely rapid and simple in comparison with the method described in the issue of January 20, but it involves perforated sheets, which are not always available; tearing off the slips takes time, and perforated edges do not facilitate filing. In this department we have used a slightly different method. Typewriter paper is marked off in rectangles, ten of which may be used on a sheet if entries are brief. After writing a few sheets, the typist becomes familiar with the spacing, and guide lines are unnecessary. When the typing is completed, all the sheets, whether 50 or 500, are sheared (in one operation) with a paper cutter to the dimensions of the original guide lines. This procedure was used here in 1936 in indexing a bibliography ("Non-Metallic Inclusions . . ." by McCombs and Schrero) with 2,136 items, and three or four times that number of entries in the index.

For an index which is to be printed, rather heavy paper should be used. A compositor expects his copy on sheets, and sometimes does not welcome slips. We use a rack or "gadget" which holds several hundred slips directly in front of the compositor. If the paper is not too flimsy, this works very well. Before going to the printer all slips, including cross references, should, of course, be consecutively numbered with a numbering stamp. After all, this mechanical work of recording and filing entries is only a very minor part of making a good index.

E. H. MCCLELLAND
CARNEGIE LIBRARY OF PITTSBURGH

SCIENTIFIC BOOKS

ASIATIC BOTANY

A Bibliography of Eastern Asiatic Botany. By ELMER D. MERRILL and EGBERT H. WALKER. Sponsored by the Smithsonian Institution, Arnold Arboretum of Harvard University, New York Botanical Garden and Harvard-Yenching Institute. Quarto. Pp. xlii + 719 (double column), 2 maps. Jamaica Plain, Mass.: Arnold Arboretum, 1938. Price, $12.50.

ALTHOUGH most large bibliographies defy "reviewing" in the ordinary sense, such an ambitious undertaking as that cited above should certainly be brought to the attention of all botanists and scientific libraries. It is the type of work whose every page betrays many hours of careful and persistent searching, note-taking and checking, not to mention the arduous task of proofreading and rechecking the numberless details for which none but the authors can be responsible.

Work on this bibliography of eastern Asiatic botany covered a period of ten years, beginning at the Smithsonian Institution in 1928 when Mr. Walker, engaged in identifying material at the United States National Herbarium, found it necessary to familiarize himself with the literature of the plants of China. The project grew in scope until the area finally covered by the bibliography comprises China, Japan, Formosa, Korea, Manchuria, Mongolia, Tibet and eastern and southern Siberia. In addition, the major published papers pertaining to adjacent areas, such as the Philippines, Indo-China, Siam, Burma, India and central and northern Asia, are included, "because of their importance in the study of the plants of eastern Asia, and because through them the subsidiary literature on these areas can be reached."

The bibliography proper (occupying 550 double-column pages and printed in a compact but very readable style of type) contains more than 21,000 titles listed by author. The majority of the entries are briefly annotated, and there are hundreds of cross-references.

Following the main section is an appendix consisting of (1) a list of older Oriental works, many of which have not been heretofore mentioned in botanical literature; (2) a reference list and index of Oriental serials, with titles given in English, in Chinese or Japanese characters and in transliteration; (3) reference lists of Oriental authors (also with the Chinese or Japanese characters); (4) a subject index (in three parts—general, regional and systematic); (5) a family index of generic names of vascular cryptogams and seed plants; and (6) an index of the principal geographic names used in the subject index. In addition, the bibliography is prefaced by a reference list of more than 1,200 serial publications that are cited, with their complete and abbreviated titles. These various indices and appendices render the work extremely usable, though the labor of their compilation must have been great. Fortunately, both Dr. Merrill and Mr. Walker have worked in the Orient and were familiar with many problems, such as the need for careful translation and uniform transliteration of Chinese, Japanese and Rus-

sian characters, that are uncommon to most bibliographic enterprises.

Bibliographies as thorough and as well appointed as this one are definite milestones in the progress of research, in no matter what field. With the bewildering increment of literature in all branches of science, the great need for bibliographies is scarcely to be disputed. The most serious problem these days is to find funds for bibliographic publication after the necessary work of compilation has been done. In the present case the assiduity of the compilers and the interest and generosity of the sponsors, including one anonymous contributor, are especially gratifying. Botanists and plant scientists of at least three continents are the beneficiaries.

PAUL H. OEHSER

U. S. NATIONAL MUSEUM

GRIGORE ANTIPA

Grigore Antipa. Hommage à son oeuvre. 10 décembre, 1867—10 décembre, 1937. Bucharest, Imprimeria Natzională, 1938. (Published under the auspices of the Roumanian Society of Sciences.) Pp. 727; numerous plates and illustrations.

THIS noble volume, admirably printed and illustrated, is a tribute to one of the wisest and kindliest of modern biologists—Director Antipa, of the Bucharest Natural History Museum, Haeckel's assistant for many years at Jena, ex-minister of agriculture and world-renowned leader in fresh-water fishery development. Tendered to him on his seventieth birthday by pupils and friends, it contains a bibliography of his writings, accounts of his work as scientist, sociologist, economist and museum director; but its main bulk consists of valuable scientific papers in French, German, Italian and English (very few in Roumanian). These touch almost every phase of scientific interest, from the weathering rate of sedimentary rocks in Switzerland and the Pliocene fauna of Roumania, to sardine fisheries on the Chilian coast and an article by our own Henry Baldwin Ward on "Environmental Stimuli and Salmon Migration"; we even have an article by Netzhammer on Christian martyrs in the Danube basin and one on the development of forensic medicine in Zurich. It is interesting to discover that American "pumpkinseeds" and "bullheads" have made their way into the Danube system; there are specially valuable articles on wheat rust, on vitamin D from Black Sea sharks' livers, on the science of museum display, where Antipa was a pathfinder; but perhaps the most important have to do with pisciculture, in which we recognized Antipa's leadership some years ago by inviting him to investigate and make recommendations for the Mississippi Valley fisheries. Space limits prevent listing of the 52 articles; suffice it to say that this volume should adorn every large biological reference library, and the separate articles should go into the bibliographies. And all of us who have enjoyed the hospitality of Dr. Antipa and his charming wife will rejoice in the worthy quality of this hearty tribute—headed by King Carol himself—to a gentleman and a scholar of the highest rank and a patriot who showed his mettle under the trying conditions of the German occupation of Roumania; and we may take courage for the future of scholarship in the proof it affords of his stimulating influence on the younger generation.

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REPORTS

PURE AND APPLIED SCIENCE RESEARCH AT MELLON INSTITUTE

EIGHTY-SIX industrial fellowships, of which 30 are multiple and 56 individual, have been in operation in Mellon Institute during its fiscal year, March 1, 1938, to March 1, 1939. These investigations have employed 161 fellows and 96 fellowship assistants. During this fiscal year the institute has spent $1,104,405 in carrying on these research programs and its broad studies in pure science, which have been becoming more and more important, according to the twenty-sixth Annual Report of the director, Dr. E. R. Weidlein, to the trustees of the institution.

Of outstanding interest in this report is the account of the investigations on the chemotherapy of pneumonia under way in the institute's department of research in pure chemistry. Several active compounds have been discovered, but none appears to be as generally suitable as hydroxyethylapocupreine. The conclusions of the medical collaborators, Drs. W. W. G. Maclachlan, J. M. Johnston, M. M. Bracken and G. E. Crum, following three years of clinical experience with this drug, demonstrate that the mortality figure in pneumococcic pneumonia in adults during the past year has been greatly reduced in those cases which received hydroxyethylapocupreine. In comparing the mortality figures of the chemically treated cases, which were of course smaller in number, with the serum-treated cases in Pittsburgh, for the same types of pneumonia during the same period of time, almost identical results were observed by these specialists. Hydroxyethylapocupreine, which has shown no evidence of disturbing vision, can be used effectively in all types of pneumonia. Clinical studies of the drug in cities other than Pittsburgh have been arranged for. Experiments