Book Reviews

Woorks intended for notice in this column should be sent direct to the Editor (P. P. Ewald, Polytechnic Institute of Brooklyn, 99, Livingston Street, Brooklyn 1, N.Y., U.S.A.). As far as practicable books will be reviewed in a country different from that of publication.

Laboratory Manual of Crystallography for Students of Mineralogy and Geology.

By G. TUNELL and J. MURDOCH. Pp. v + 55 with 20 figs. Dubuque: Brown. 1957. Price $2·75.

In relation to its title this is a curiously-devised book. The contents are presented as ten 'chapters', the shortest of which occupies only half a page, reproduced photographically on single sides of loose leaves united by a plastic binder. Brief accounts are given of crystal symmetry, crystallographic notation and calculations, stereographic projection and the crystal systems and classes. The names of all forms in each of the thirty-two classes are tabulated, and eight further pages are occupied by stereograms and drawings of general forms. In a brief manual intended for beginning students, and for geologists rather than crystallographers, it is surprising to find mention of such matters as axes of rotatory reflexion (in addition to those of rotatory inversion), of the reciprocal lattice and of the *Barker Index*. Most astonishing of all is the devotion of fourteen pages out of fifty-five to a list of minerals arranged according to crystal systems and classes. The 'laboratory' aspect mentioned in the title seems to be almost confined to a few simple questions and problems. It does not appear likely to the reviewer that either the scope or the price will commend this manual for use in laboratory classes in British universities.

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World Directory of Crystallographers.

Compiled by WILLIAM PARRISH. Pp. 79. Irvington-on-Hudson: Philips Laboratories.* 1957. Price $1.50.

This unpretentious booklet, listing the names, titles, place of graduate study, current address and special field of interest of 2260 crystallographers in 54 countries, will be warmly welcomed by all whose interest reaches beyond the cell edges and structure parameters to the people who are performing the measurements or observations. It is a first attempt at gaining a world-wide survey of places and institutions where crystallographic research or teaching is being carried out. From a professional point of view the *Directory* represents the logical sequence to the establishment in 1946/8 of the International Union of Crystallography as a focus for all matters crystallographical: here is the list of those who claim to take special interest in these matters.

The credit for having pressed for the preparation of a *World Directory* goes unambiguously to Dr W. Parrish. His proposal that the International Union of Crystallography should undertake this compilation dates back at least four years and was repeatedly discussed thereafter. It was not considered advisable that the Union set up a special organization for this task of unknown magnitude; instead, Dr Parrish was encouraged to begin work on a specimen directory which might show the full extent of a complete list. In what Dr Parrish has presented at the Fourth General Assembly (and distributed to those registered at the Congress) he has far surpassed a specimen list. With the unstinting organizational backing of the Philips Laboratories and the generous assistance by the various National Committees of Crystallography, UNESCO and other agencies he has produced a nearly complete *Directory*. Its pages are the most convincing argument for the usefulness, and even necessity, of this work. Such a list, with periodic revisions, has come to stay.

The information given in the *Directory* is based on the answers to a questionnaire sent out to the individual crystallographers between January and May 1957; some 50 late replies—up to 3 June—are listed at the end. The typing, offset printing, binding and mailing in time for the Montreal Congress, beginning on 10 July, sets an example of quick publication. Naturally, there are shortcomings in this first list, as the author himself points out. A major one is the absence of a list of crystallographers in mainland China, in spite of efforts to obtain it; minor ones are omissions of names which should figure in the list—the outstanding example being G. M. J. Schmidt who is mentioned in the preface as having procured a list of Israeli crystallographers but evidently did not return his own questionnaire for inclusion in the *Directory*. A complete list should include, among others, Sang Dong Kim in Seoul, Tommasi in Italy, Keith and Abrahams in U.S.A., Dehlinger, Kochendörfer and Wever in West Germany, and others who are actually, or have been recently, engaged in X-ray diffraction work. One would like to see those included whose main work on crystals lies farther back but who may still take interest in their former field, like Wasastjerna in Finland and Hylleraas in Norway. A problem of any such list is the delimitation towards neighboring fields of chemistry, mineralogy, metallurgy, and particularly solid-state physics. For future editions workers in the neighboring fields might well be sent questionnaires on a larger scale so that their answer would give an indication of their interest in being included in a list of crystallographers.

In the preface the author has devoted four pages to a statistical survey of his collection. Although this is but a first attempt, and not fully consistent in itself, it is full of suggestions to all interested in the social aspects of science, in the divisions of academic teaching, and finally in the research output in the various countries. A perusal of the directory along these lines shows that an extension of the present listing into a real *Who's Who in Crystallography* would be very valuable. Maybe that in a later edition this dream could fully or partly come true. For the moment we can only thank the author for his insistent initiative and the thought, time and work he has put into the directory.

The booklet is priced so that the actual cost of printing and distribution—but not of the clerical work and correspondence—may be recovered by the sale; any surplus will go to the Union as a help in the preparation of the next edition.

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