a synonym of *Rotularia*] under the gastropod family Vermetidae and labeling the figure as an aberrant turritellid.

Names for taxa of family group level and higher are given in a French vernacular form; this would be a serious disadvantage if the book were to be used in America as a primary text. However, as a supplementary reference work, it seems worthy of commendation.

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Arctic Bibliography. vols. 6 and 7. Prepared for and in cooperation with the Department of Defense, under the direction of the Arctic Institute of North America. Marie Tremaine, Ed. Department of Defense, Washington, D.C., 1957 (order from the Superintendent of Documents, Government Printing Office, Washington 25, D.C.). xiii + 1208 pp.; xiii + 1071 pp. Maps. $4.50; $4.25.

With the publication of the seventh volume (fourth supplement), this excellent, specialized, annotated bibliography now covers 43,464 entries on arctic subjects. The literature is reported up to 1955. The general task of the project was fully explained by the chairman of the directing committee, Henry B. Collins, Jr., some years ago in *Science* [**119**, 3A (26 March 1954)] after the publication of the basic bibliography [volumes 1–3 (1953) (4478 pages)] containing entries 1 to 20,003 and the subject index.

Some words may be said about volumes 4 and 5, announced by Collins but not reviewed in *Science*. These two volumes cover the literature issued in the years 1950 to 1953, inclusive, and contain the entries Nos. 20,004 to 33,125. They form the first two supplements to the basic bibliography and include also publications issued earlier than 1950 but for various reasons not listed in the three first volumes.

Volume 6, published in 1956, reports the literature on arctic subjects published in 1954, and includes, also, earlier studies dating back to before the 19th century which were omitted previously. It covers entries 33,126 to 38,410. Volume 7, issued in 1957, includes the arctic publications for the year 1955 (entries 38,411 to 43,464) and also reports earlier literature not included in the previous volumes.

The whole bibliography is an extremely impressive example of fine and conscientious teamwork, performed under the direction of Marie Tremaine. She and the members of her staff are to be heartily congratulated.

The four supplements as well as the three volumes of the basic bibliography enumerate the publications in alphabetical order, by author, including the first and second names of the authors and dates of birth and death. Where a publication has more than one author, careful cross references are given to the name of the first author, the title (abbreviated), and the running entry number. Though the different subjects are mixed, the extended and complete indexes enable the user to find every subject very easily. Titles of publications are given in the original language (languages using letters other than roman have been transliterated) and in English translation. In spite of the innumerable titles in foreign languages that are included, there are practically no mistakes in spelling. In this respect the *Arctic Bibliography* can be cited as a model for similar undertakings. German users will especially appreciate the fact that the nouns in German titles are not "decapitalized," as they often are in such publications. It is really astonishing to find that even words which had to be broken are divided according to the rules of the language in question. References to periodicals and (for separate publications) to editors are given in an extremely clear manner; included are the full title of the periodical, the number of volume and part, the number of pages, plates, figures, and maps, the year (for journals), and the editor's name and the place and date of publication (for separate publications). Misleading abbreviations have been avoided; this facilitates finding the original publication, especially since at least one library in the United States where the publication has been seen by the analyst is mentioned for each report. (These libraries are listed at the beginning of every volume.) The annotations are very extensive and give, generally, a good idea of the subjects treated in the publications.

This bibliography is still incomplete, doubtless because of the great task involved in reporting the literature for such a large geographical area, but each new volume serves to bring it nearer completion. Volume 5 contains a table showing the names and the subjects treated by the members of the staff of the Arctic Bibliography project; in the previous volumes these were mentioned only in the introduction. Starting with volume 6, the index gives the titles only in English, whereas the indexes of the previous volumes gave them in the original language. This change is a contribution to clarity and facilitates use of the index. In the two recent volumes, 6 and 7, the reports are still more extensive than in the previous volumes, and therefore even more useful.

In future volumes perhaps an effort might be made to complete the author citations with respect to first and second names and to dates of birth and death; these have been left out in many cases in the published volumes. Finally, one might be interested to know the name of the reporter of a publication; he might be cited, by his initials, at the end of the report.

Without any exaggeration, the *Arctic Bibliography* may be called a milestone in its field and may be taken as an excellent example for all similar undertakings. Especially for scientists it is an indispensable reference work, due to its broad basis, and not only for those who are students of the arctic regions. It would be extremely useful if similar projects could be undertaken for other areas, for the antarctic and the tropics in particular.

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Semiconductors and Phosphors. Proceedings of the International Colloquium, 1956. M. Schön and H. Welker, Eds. Interscience, New York; Vieweg and Sohn, Braunschweig, Germany, 1958. viii+864 pp. Illus. $16.50.

This proceedings volume of the international colloquium held at Garmisch-Partenkirchen in 1956 presents the complete text of the 100 papers contributed by American, Dutch, English, French, German, and Russian researchers. The papers cover a wide field, from general properties of semiconductors and phosphors to specific problems, such as thermoelectric phenomena, incorporation of foreign atoms in phosphors, trapping mechanisms, hole motion, magnetic properties, and energy-transfer problems.

The articles, written either in English, French, or German, offer interesting and stimulating reading and will be highly welcomed by researchers and all other scientists interested in this rapidly expanding field.

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The Green Flash and Other Low Sun Phenomena. D. J. K. O'Connell. (Vatican Observatory publication.) North Holland, Amsterdam; Interscience, New York, 1958. 192 pp. Illus. $6.

The green flash, or the green ray as it is sometimes called, is a phenomenon resulting from atmospheric refraction. The last bit of the setting sun or the first tiny segment of the rising sun may be a vivid green or at times a bright blue. In presenting an accurate and detailed account