

## BOOK REVIEWS

DE RE METALLICA, BY GEORGIUS AGRICOLA. Translated by Herbert Clark Hoover and Lou Henry Hoover, Dover Publications, New York. xxxii+638 pp., 1950; Price \$10.00 (Originally published by the *Mining Magazine*, London, 1912).

This is not a new edition but an exact reprint of the well known Hoover translation. Plates, pagination and arrangement are identical with the 1912 edition. Only the size has been changed; the over-all size is about  $\frac{1}{8}$  of that of the earlier printing ( $13\frac{3}{4} \times 8\frac{3}{4}$ ") and the plates and printed pages are about  $\frac{7}{8}$  as large as in the original printing of the Hoover translation, which was very nearly identical in size with the original Latin edition.

The publishers are to be congratulated for having brought out an edition of this world famous and historically important book priced so that anyone who really wants a copy can own one. This was accomplished largely by avoiding a new type-setting job and by using not too expensive paper and binding. Although the present printing may not be as appealing to the ardent bibliophile as the earlier one, it is a very well bound volume printed on a good grade paper and will be a substantial, permanent and useful addition to the library of anyone interested in the history of technological chemistry, metallurgy, mineralogy, geology, mining or engineering. The plates have lost none of their clarity or pleasing effect by the reduction in size and the type is still large enough to be easily readable.

In addition to the complete translation of all twelve books of Agricola's original work there are three interesting and useful appendices. The first one gives a review of Agricola's principal works; a list of all his other known writings including works on other subjects, and lost or unpublished works; and bibliographic notes on contemporary and earlier works referred to in the text. Appendix B is a concise discussion of ancient authors (9 pages) and Appendix C is a discussion and list of weights and measures, with modern equivalents where these can be determined. There are 12 pages of general index, 7 pages of index to persons and authorities and a 2 page index to illustrations. Facsimiles of the original title page and of four pages of the Latin text are included.

*De Re Metallica* is too well known to require more than a brief reminder that it was one of the first treatises of early modern times on the above mentioned subjects, and the most complete and authoritative treatment of mining and mining engineering. It is also the best known work of its time on metallurgy, in spite of the fact that Biringuccio's very fine treatment of the subject, *De La Pirotechnia* (1540), had appeared sixteen years earlier and Agricola's discussion of some of the metallurgical and related operations was based on Biringuccio's work. *De Re Metallica* was better known and more widely used than *De La Pirotechnia* principally because the former was published in Latin, the scientific language of the day, whereas the latter appeared in Italian. Agricola's work also had many more and better illustrations than the other; it was the standard text and reference book on production of metals for almost 200 years after it was first published in 1556.

The Hoover translation is by all odds the most complete and accurate translation to be published in any modern language. The Hoovers spent five years in making the translation and expended a tremendous amount of effort in research and careful writing to insure the accuracy of the work and to preserve the original flavor insofar as this was possible. Such a task was possible only by a combination of rare linguistic ability and a thorough knowledge of mining and related sciences. The text is supplemented with copious and invaluable footnotes by the translators. These deal not only with meanings of words and references to other works by Agricola, but also give a great deal of historical and geographic background that add much to the usefulness of the book and to the reader's enjoyment of it.

This classic should be in the library of every department where any Earth science is taught and in many more general libraries that have an interest in natural history. It is

to be hoped now that this work is more readily available than it has ever been before that some familiarity with its contents will be required of students rather than just a knowledge of its existence.

EARL INGERSON,  
*U. S. Geological Survey,*  
*Washington, D. C.*

SYMPOSIUM ON MINERAL RESOURCES OF THE SOUTHEASTERN UNITED STATES. Pages 236. University of Tennessee Press, Knoxville, Tennessee.

This being a symposium by 20 different authors on 19 types of mineral deposits, it seems advisable to give the table of contents as follows:

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The volume opens with a preliminary section by Robert A. Laurence on Geologic Investigations and Exploration in Southeastern United States. This gives a historical outline of mineral explorations in the region and emphasizes the great need for detailed geologic mapping. This is a problem of more than usual difficulty, because of the geologic complexity of the region and the exceedingly thick residual mantle covering much of it.

The section on the tectonic framework gives a very valuable outline of the geologic provinces of the region together with a map. These are discussed individually, and the complex tectonic features are presented with the help of numerous diagrams. This difficult

task is done as fully as space, the complexity of the region, and an acknowledged incompleteness of information will permit.

The section on problems of genesis of mineral deposits discusses 10 classes of mineral deposits, an unusually large and varied number for any region. Under the head "Problems in Genesis," the following topics are discussed: nature, source, and movement of zinc- and lead-bearing solutions; origin, nature, and zoning of ores of the Ducktown type; sedimentary iron ores; and residual iron, manganese, and aluminum deposits.

Although the 15 papers on specific mineral deposits differ among themselves in the extent to which they analyze geologic relationships, all present an adequate discussion of mineral resources. Moreover, most of them list very full bibliographies, the paper on zinc deposits containing 80 entries. Many of the papers have excellent maps, diagrams, and plates. One map in a folder shows the very detailed geology and the complex structure of the Ducktown region.

Some of the papers are much more than statements of mineral resources and outlines of relationships. They make original contributions to our knowledge of the geology of the deposits themselves and also to a broader understanding of the geology of the region as a whole. Thus, others than those interested in the commercial possibilities of the region will have occasion to consult the volume. As an example of a paper contributing to the broader geologic relations in the region, the one on bauxite deposits by Josiah Bridge, may be mentioned.

The last two papers in the volume, the ones on Ground-Water Geology and on Ground Water in Relation to Mining, are perhaps unusual but certainly interesting and useful additions to a symposium of this type.

The volume is well printed on good paper, and is one of which the Chairman of the Symposium Committee (F. G. Snyder), those who cooperated in its organization, and the contributors may all be proud.

CLARENCE S. ROSS

*(Publication authorized by the Director, U. S. Geological Survey.)*

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#### ANNUAL MEETING

The thirty-second annual meeting of the Mineralogical Society of America will be held in Detroit, Michigan, on November 8-10, 1951, with headquarters at the Hotel Statler.

Abstracts of papers to be presented at the annual meeting must be received by the Secretary on or before *July 16, 1951*. Abstract blanks may be obtained from the Secretary.

C. S. HURLBUT, JR., *Secretary*

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A procedure is now available whereby prospectors and mine operators in the Upper Midwest may receive financial aid through the Defense Minerals Administration in their search for new ores essential to the Nation's military and civilian defense production program. Applications for assistance in Region V should be filed at the Defense Minerals Administration office at 2908 Colfax Ave. South, Minneapolis 8, Minnesota. Region V covers the States Minnesota, Wisconsin, Michigan, North Dakota, South Dakota, Nebraska, and Iowa.