BOOK REVIEW

Pliny the Elder on Science and Technology

*By John F Healy (Emeritus Professor of Classics, University of London),
Published by Oxford University Press,
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ISBN 0-19-814687-6, Price £65.00*

Pliny the Elder (in Latin 'Gaius Plinius Secundus') was born in 23/24 AD in Novum Conum (Como, Northern Italy). He died at the end of August 79 AD while trying to save friends during the Vesuvius volcanic eruption. He became most famous for his 37 volume encyclopaedia 'Naturalis Historia', which deals with everything existing and happening in nature.

The Naturalis Historia and its author have interested scientists as well as humanists ever since the early Middle Ages. This latest book on Pliny, is not only on the Historia Naturalis but also on the man himself and his life, and has been written by John F Healy, Emeritus Professor of Classics, University of London, a well known science historian.

Gold has fascinated mankind right from antiquity to the present day. It is therefore not surprising that Pliny included an extensive discussion of gold in Volume 33 of his book. Of the 467 pages of the present book, nearly 80 pages deal with metals (Chapter 17), and of these 25 pages are devoted to gold (Section 17.4). After a short introduction into the properties of metals in general, in the light of Pliny and earlier writers, *eg* Strabo, the author discusses the origin of natural gold, its mining and final refining (mostly from silver) before going onto amalgamation, coating processes and finally to quality testing (Section 17.4.9). In many cases Pliny's text is cited in the Latin as well as the translated form so that the reader can

check the accuracy of the translation. Every detail of some of the chapters would not stand close scrutiny by modern gold specialists, but further details can be gained by consulting the Projektgruppe Plinius publications, *eg* on gold (1) or the books 'Prehistoric Gold in Europe' (2), 'L'or dans L'Antiquité de la Mine à l'Object' (3) (see *Gold Bulletin*, 2000, **33**, 67), or for the most up-to-date information, Degussa's Edelmetalltaschenbuch (4) (see *Gold Bulletin*, 1996, **29**, 34). In these books there is much about the modern science of gold but far less about historical ideas, observations, and their development. *Gold Bulletin* is the most frequently cited journal in the chapter on gold, thus underlining this journal's importance. It is the combination of antique philosophy and knowledge with traditional materials technology which makes the book unique and interesting reading. The book's excellent standard is what one has come to expect from the Oxford University Press. Some of the technical terms used by the author reveal his origin as from the humanities rather than science.

There is even a Chapter 19 on 'Pliny and the Environment', giving proof that human beings have not changed much in 2000 years! The impact of Pliny on later generations is revealed in the book's final Chapter 20 on 'Natural History – Middle Ages and After'.

The selected bibliography is helpful and reasonably complete, even it is called a 'Selected Bibliography'. The reviewer would, however, have liked to have seen a few more references to the 'modern continental European' literature on Pliny. There is a unique – but conveniently handy – Index Locorum, beginning with Pliny the Elder himself (references to the other volumes of

Pliny). Later antique scribes are listed alphabetically (from Ammianus Marcellinus and Ausonius, Mosella, to Xenophon in a total of 18 pages). The General Index is carefully prepared – it begins with Abu Bakr Muhammed ibn Zakyriya al Razi (Rhazes) and ends with zinc – vapour pressure, zopissa, and zura wild thorn. That the book is intended to be used for academic lectures is indicated by the fact that there are no illustrations other than that on the jacket of Pliny seated in his studio surveying the world of nature (a book illustration of the 15th century).

The book can be recommended to anyone interested in interdisciplinary work and especially in the interconnection between the humanities and science from yesterday until today. Glückauf to the book and its author!

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References

- 1 'Werkheft Projektgruppe Plinius (Herausg.) Gold und Vergoldung bei Plinius dem Älteren', Attempto Verlag, Tübingen, 1993
- 2 'Prehistoric Gold in Europe', ed. G. Morteaux and J.P. Northover, NATO ASI Series E : Applied Sciences, Volume 280, Kluwer Academic publishers, Dordrecht / Boston / London, 1995
- 3 'L'or dans L'Antiquité de la Mine à l'Object', ed. B. Cauet, Aquitania Supplement 9, Bordeaux, 1999
- 4 'Edelmetalltaschenbuch', Herausg., Degussa AG, Frankfurt, Hüttig Verlag, Heidelberg, 1995