

PREFATORY NOTE

THE need for a new edition of this volume allows me to correct some misprints and mistakes in the text and translation. I am gratified to reviewers for pointing out a few that I had not noticed myself. Some of the mistakes of nomenclature were due to the plan of publication, which precluded postponing Book I, Pliny's Table of Contents, till the whole of the treatise had been worked through and the objects mentioned had been so far as possible identified by his descriptions.

H. R.

October, 1943.

INTRODUCTION

GAIUS PLINIUS SECUNDUS—usually called Pliny the Elder to distinguish him from his nephew and ward, Gaius Plinius Caecilius Secundus, whose collected correspondence has preserved such a vivid picture of Roman life in the time of Trajan—belonged to a family of wealth and position in the North of Italy. He was born at Como in A.D. 23. After studying at Rome he started when twenty-three years old on an official career, serving in Germany under L. Pomponius Secundus, and rising to the command of a cavalry squadron. Seven or eight years later he came back to Rome and took up the study of law. During most of Nero's principate he lived in retirement, but towards the close of it he re-entered public life and became Procurator in Spain. He held this post until Vespasian won the principate, when he returned to Rome and was admitted to the Emperor's intimate circle; they had been acquainted in earlier days when at the front in Germany. He also launched into another field of activity, receiving a naval commission.

Throughout his busy career as a man of action he had kept up a constant practice of study and authorship. His interest in science finally cost him his life, at the age of 56. He was in command of the fleet at Misenum on the Bay of Naples in A.D. 79

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when the famous eruption of Vesuvius took place on August 23 and 24, overwhelming the little towns of Herculaneum and Pompeii. Pliny as a man of science sailed across the bay to obtain a nearer view; he landed at Stabiae, and there was killed by poisonous fumes. The circumstances are recorded by his nephew in a letter to Tacitus (Pliny, *Epp.* VI. xvi). Vespasian had died and had been succeeded as Princeps by his son Titus two months before.

Pliny's earlier writings were on subjects suggested by his professional experiences, *e.g.*, the use of the javelin by cavalry, a history of the German wars, the training of the orator. During his retirement he produced *Dubius Sermo*, a treatise on grammar, and later a continuation down to his own time of the history of Rome by Aufidius Bassus; and lastly *Natural History*, the largest and most important of his works and the only one that has survived, although his historical writings on the defence of the German frontier and on the events of his own period were clearly works of value, the loss of which is much to be regretted. The substance of both, however, is doubtless largely incorporated in the writings of Tacitus and Suetonius, the former indeed repeatedly citing Pliny as his authority both in *Annals* and in *Histories*.

Natural History is dedicated to Titus, who is referred to in the Preface, § 3, as 'sexies consul'; this dates the completion of the work at A.D. 77, two years before the author's death and the accession of Titus. It is an encyclopaedia of astronomy, meteorology, geography, mineralogy, zoology and botany, *i.e.* a systematic account of all the material objects that are not the product of man's manu-

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facture; but among these topics, which are implied by the title, Pliny inserts considerable essays on human inventions and institutions (Book VII), as well as minor digressions on similar subjects interspersed in various other parts of the work. He claims in his Preface that the work deals with 20,000 matters of importance, drawn from 100 selected authors, to whose observations he has added many of his own; some of the latter he has indicated as they occur, and there are doubtless others not so labelled, but even so they form only a small fraction of the work, which is in the main a second-hand compilation from the works of others. In selecting from these he has shown scanty judgement and discrimination, including the false with the true at random; his selection is coloured by his love of the marvellous, by his low estimate of human ability and his consciousness of human wickedness, and by his mistrust of Providence. Moreover his compilations show little methodical arrangement, and are sometimes unintelligible because he fails to understand his authority, or else because he gives wrong Latin names to things dealt with by his authorities in Greek.

Nevertheless it is a mistake to underrate the value of his work. He is diligent, accurate, and free from prejudice. Though he had no considerable first-hand knowledge of the sciences and was not himself a systematic observer, he had a naturally scientific mind, and an unaffected and absorbing interest in his subjects. If he gives as much attention to what is merely curious as to what has an essential importance, this curiosity has incidentally preserved much valuable detail, especially as regards the arts; moreover anecdotes that used to be rejected by critics as

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winter protected by mittens so that even the inclemency of the weather might not steal any time from his studies; and with this object he used to go about in a chair even in Rome. Once I remember his pulling me up for going somewhere on foot, saying "You need not have wasted those hours!"—he thought all time not spent in study wasted. This resolute application enabled him to get through all those volumes, and he bequeathed to me 160 sets of notes on selected books, written on both sides of the paper in an extremely small hand, a method that multiplies this number of volumes! He used to tell how during his Lieutenant-governorship in Spain he had an offer of £3,500 for these notes, and at that date they were considerably fewer in number.

TEXT

A large number of MS. copies of Pliny's *Natural History* have been preserved; the oldest date back to the 9th or possibly the 8th century A.D. Attempts have been made by scholars to class them in order of merit, but it cannot be said that even those that appear to be comparatively more correct carry any paramount authority, or indeed show much agreement on doubtful points, while the mass of scientific detail and terminology and the quantity of curious and unfamiliar erudition that the book contains has necessarily afforded numerous opportunities for copyists' errors and for the conjectural emendation of the learned. Many of the textual problems raised are manifestly insoluble. Only a few variants of special interest are given in this edition.

Many editions have been printed, beginning with

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that published by Spira at Venice, 1469, an edition by Beroaldus published at Parma, 1476, and that of Palmarius at Venice, 1499. Commentaries start with *Hermolai Barbari Castigationes Plinianae, Romae*, 1492, 3.

The text of the present edition is printed from that of Detelesen, Berlin, 1866; it has been checked by the Teubner edition of Ludwig von Jan re-edited by Karl Mayhoff in two volumes, 1905, 1909 (Volume I reissued 1933), which is admirably equipped with textual notes.

Useful are the commentary by G. Brotier in *usum Delphinii* (1826); *Pliny: Chapters on the Hist. of Art* by K. Jex-Blake and E. Sellers (1896) and more recently *Pliny's Chapters on Chemical Subjects* by K. C. Bailey (1929-); and D. J. Campbell's commentary on Book II (1936).

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Pliny's Preface. This is in the form of a covering letter from Pliny, to accompany the gift of his treatise on Natural History to his friend Vespasian Caesar (*i.e.* the ruling Emperor Vespasian's son, Titus, his successor as Princeps, who had already been vested with *Imperium* and *Tribunitia Potestas*). The reference to him in § 3 dates the passage: see above, p. viii. The author goes on to say that this dedication places the work outside the class of books intended for the general reader, and invites serious criticism. The subject does not admit of an elevated style—the treatise is a plain record of the facts of Nature, designed for utility

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2. Minus Secunders.

PLINY

NATURAL HISTORY,

WITH AN ENGLISH TRANSLATION
IN TEN VOLUMES

VOLUME I

PRAEFATIO, LIBRI I, II

BY

H. RACKHAM, M.A.

FELLOW OF CHRIST'S COLLEGE, CAMBRIDGE



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