

nature

INTERNATIONAL WEEKLY JOURNAL OF SCIENCE

Volume 357 No. 6375 21 May 1992 £3.00

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Investigating ancient enigmas

Robert Temple

Natural Knowledge in Preclassical Antiquity. By Mott T. Greene. *Johns Hopkins University Press*: 1992. Pp. 182. \$28.50, £18.

MOTT Greene is a brilliant and original investigator of ancient enigmas. This lucid and thoroughly accessible book contains seven essays exploring aspects of knowledge in antiquity up to the time of Plato. The first essay is a devastating attack on conventional notions of 'pre-history'. Greene tears to shreds the cosy assumptions that there can be such a "buffer zone" between "the biological ascent of hominids" and "the 'ascent to civilization' of the abstract 'mankind' of humanistic historical writing." He exposes the wishful thinking, the unwarranted assumptions and the modern myth of "the boundary between 'us' and 'them'" — "the myth that we are somehow special and different or even new".

The central importance of the book, however, is Greene's discovery that Hesiod's *Theogony*, a Greek mythological poem of the eighth century BC, preserves eyewitness descriptions of the eruptions of two ancient volcanoes — Thera (Santorini) circa 1470 BC and Mount Etna in Sicily (either the eruption coincident with Thera's or the eruption of 735 BC). As the author of a book on the history of geology, Greene knows this subject well. He is aware, for instance, that in the past 10,000 years there have been 5,564 identifiable eruptions of 1,343 volcanoes, 627 with specifiable dates. But the close survey of several volcanoes in the Mediterranean has allowed him unambiguously to match two of them to the two different eruptions described in *Theogony*.

The eruption of Thera is portrayed in the section of the poem known as the Titanomachy. Greene breaks down the poem's description into 15 successive stages and shows that these precisely

match the kind of eruption that took place at Thera, and supplements the work with much fascinating volcanic information, including results of a study in 1963 of the volcanic island of Surtsey. Greene's case is strongly convincing, especially as "there is a complete one-to-one correspondence with no missing elements and . . . they are all in the correct order." This is an important discovery, showing that the violent Thera explosion was so traumatic that a detailed eyewitness account of great accuracy was preserved for seven centuries before being incorporated into Hesiod's mythological poem.

Greene also seems to have resolved, in a truly ingenious manner, the interminable debate over the identification of the sacred intoxicant *soma* in ancient India. It was *not* the fly-agaric mushroom. And he explains how Thales, credited with being the first scientist philosopher of Greece, actually managed the 'impossible' feat of diverting the Halys River to enable King Croesus's army to cross. As a hydraulic engineer, Thales understood the principles of meanders and diverted the river into an empty crescentic channel, a remnant of a former oxbow lake, merely by cutting through the silted-up entrances upstream and downstream. Now flowing in channels, the river became fordable without undue effort or time spent digging a fresh channel. So the diversion of the Halys was not a mere "mythical accomplishment".

Greene is a promising iconoclast whose investigative work should continue. He explains that the MacArthur Foundation made this book possible — let us hope more such results emerge from its largesse. □

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