

AN UNPUBLISHED MEMOIR ON METEORITES BY LYMAN SPALDING, 1810

Ursula B. Marvin

Harvard-Smithsonian Center for Astrophysics
Cambridge, MA 02138

The Proceedings of the American Philosophical Society show that on February 2, 1810, at a meeting attended by 14 members, a paper entitled *An Attempt to Explain the Origin of Meteoric Stones* by Dr. Spalding of New Hampshire was read and referred to Hare, Cloud, and Dickerson. Every paper presented at Society meetings was assigned to a committee of referees whose verdicts are duly recorded. Typical recommendations are: "worthy of publication," "advisable not to publish," "returned to author," or "committee continued." However, the published account of the following meeting, on February 16, states: "Report on Spalding's memoir laid on the table." There is no other instance in that era of the simple tabling of a referee's report, but no further explanation is offered and Dr. Lyman Spalding's memoir remained unpublished. A handwritten copy of Spalding's manuscript was recently discovered in the archives of the Francis A. Countway Library of Medicine in Boston and the text is published here for the first time.*

Following his title page (Fig. 1) and a note of transmittal (Fig. 2), Spalding stated that he would base his hypothesis of origin on the "essential characteristic appearances" of meteors without discussing their chemical properties, as these had been ably described by others. This approach allowed him to ignore (if he was aware of it) the crucial importance of the discovery of Ni in stones by E.C. Howard and the Count de Bourmon (Howard, 1802). That discovery distinguished meteoritic stones from terrestrial rocks and associated them with irons, which Spalding also ignored. Spalding dismissed without comment two of the then predominant theories of origin: that meteor[ite]s are hurled from the moon or tossed up from the earth by volcanoes. After listing several fall phenomena, which he represented by numbers and symbols, he compiled brief descriptions of 15 falls using the format shown in Figure 3. Table 1 compares Spalding's data with those in *The Catalogue of Meteorites* (Hey, 1966). Clearly Spalding's information was unreliable; some of his dates are wrong by days or years, two falls (Point-de-Vesle and Bordeaux) are no longer considered valid, and Abbé

*I wish to express special thanks to Professor Clifford Frondel of Harvard University, who discovered Spalding's manuscript in the course of his own historical research, for generously forwarding a copy to me and urging that it be published with suitable background materials although he declined to do so independently or collaborate on the effort.