

THE METEORITE FALL AT L'AIGLE ON APRIL 26th 1803 AND THE BIOT REPORT. M. Gounelle^{1,2}. ¹CSNSM, Orsay, France (gounelle@csnsm.in2p3.fr). ²Department of Mineralogy, The Natural History Museum, London, UK.

“*Il est tombé des pierres aux environs de l'Aigle le 6 Floréal an 11*”. Stones fell around l'Aigle, July 26th 1803. Thus ends the results section of the Biot report [1] read in front of the Institut de France, the 29 messidor an 11 (July 17th 1803). In a France that still used the revolutionary calendar, Jean-Baptiste Biot, a young scientist aged 29, was sent by the Home Office Secretary Chaptal to report on the spectacular fall of stones, at l'Aigle, 140 km at the Northwest of Paris.

At the time of the l'Aigle fall, the mere existence of meteorites was harshly debated [2,3]. Chladni's book on iron-masses [4] had been published in 1794, but his ideas had not yet convinced the savants of the time. Biot himself defended the theory of a lunar volcanic origin for meteorites [5,6]. This might be the reason why Chaptal, a scientist himself, sent Biot to l'Aigle when rumours started to fill Paris with stupor and astonishment [7].

Despite, or because of his interest in the matter Biot claimed himself as “*a witness foreign to any system*” [1] when he departed from Paris to l'Aigle, with a compass, a 1/86400th map of the area, and a sample of the Barbotan meteorite (fall, 1790). He did not start his enquiry at l'Aigle, but in the nearby town of Alençon to check on the local mineralogy and human artefacts. Traveling between Alençon and l'Aigle, he questioned travellers and coachmen about the meteor seen the same day the stones fell. Once in l'Aigle, he questioned clergymen as well as laymen on the apparition of stones, and on the meteor.

Summarising his observations, Biot distinguished 2 kinds of evidence of an extraterrestrial origin of the stones. Physical evidence included the absence of any stone or human artifact in the area similar to the fallen stones, the sudden appearance of a large number of identical stones similar to previous meteorites such as Barbotan. Moral evidence included the number of witnesses who saw “*a rain of stones thrown by the meteor*” as well as their diversity in term of profession, interests and social status. Together, these lines of evidence pointed toward the fact that extraterrestrial stones fell around l'Aigle, July 26th 1803 [1].

With Biot report, the existence of meteorites was recognised. In addition to a celebration of the bicentenary of the l'Aigle fall and the Biot report, our paper will aim at retracing the social context that lead a scientist for the first time to a thorough enquiry of stones fallen from the sky.

References: [1] J.-B. Biot, in: Mémoires de la classe des sciences mathématiques et physiques de l'Institut National de France 7, Paris, 1803, pp. 224-265.[2]R. Westrum, *Social studies of science* 8 (1978) 461-493.[3]U.B. Marvin, *MAPS*. 31 (1996) 545-588.[4]E.F.F. Chladni, Riga, 1794, 63 pp.[5]J.-B. Biot, *Bull. Sci.Soc. Philomatique* 66 (1802) 159-160.[6]J.-B. Biot, *ibid* 68 (1802) 153-156.[7]C.P. Brard, in: Dictionnaire des Sciences Naturelles, Strasbourg, 1824.