

QARABAWI'S CAMEL CHARM: AN EGYPTIAN IRON METEORITER. G. Mayne^{1,2}, T. Rose², C.M. Corrigan², and S.E. Smith¹¹Department of Geology, Texas Christian University, TCU Box 298830, Fort Worth, TX 76129²Smithsonian Institution, National Museum of Natural History, 10th & Constitution NW, Washington, DC 20560-0119

Background [1]: In 1977 the Smithsonian acquired a circular iron pendant from the Geological Museum in Cairo, Egypt. The sample was described as a 'Camel's Charm' from the Ababda tribe of nomadic bedouin in the eastern desert of Egypt. The story given was that a fallen star had been found in the desert by a member of the tribe and made into charms and daggers by a local blacksmith. The pendant was hung around the neck of a camel to ward off evil eyes and keep the camel healthy. The charm was named Qarabawi's Charm after the bedouin from whom it was purchased.

Revealing its Charm: Qarabawi's Charm was made using relatively primitive blacksmithing methods, as shown by its rough, unpolished surface. It has been kept in its original state and any destructive analyses or surface polishing would significantly alter its appearance and value. This means that any analyses of the Camel Charm are complicated by its unpolished, tarnished, and dirty surface. Semi-quantitative analyses were taken using the electron microprobe in the Mineral Sciences Department at the Smithsonian Institution in 1985 to confirm the meteoritic authenticity of the Camel Charm. It was found to have a Ni content of 6-7% and a Co content of approximately 0.5%. These results were never published.

This study used the FEI Nova NanoSEM 600 in the Mineral Sciences Department to increase our understanding of this meteorite. The energy-dispersive x-ray detector (EDS) yielded a Ni content of around 6.8% and high-resolution x-ray maps of the surface revealed areas of high-Ni, likely taenite lamellae that survived the blacksmithing process.

Possible Meteorite Pairings: It is hard to establish if Qarabawi's meteorite charm is a piece of a previously classified iron or an unclassified meteorite. A search of all Egyptian irons was conducted and their Ni content compared to that measured for the Camel Charm; currently, Aswan, with reported a Ni content of 8% [2] is the closest match. However, nomadic bedouin often travel and trade extensively throughout desert regions so it is possible that this meteorite was found outside of Egypt. A more extensive search of middle-east desert iron meteorites suggests that the Camel Charm may be a piece of Wabar, a IIAB iron found in Saudi Arabia. It was initially reported to have a Ni content of 7.62% [3], although more recent measurements yielded 6.8% [4], which matches the EDS measurements of the Camel Charm. More extensive analysis of the Charm is planned to expand the current compositional dataset.

References: [1] Smithsonian Accession Record for Qarabawi's Charm [2] Wasson J.T. and Kallemeyn G.W. 2002 *Geochimica et Cosmochimica Acta* 66:2445-2473 [3] Scott E.R. et al. 1973. *Geochimica et Cosmochimica Acta* 37:1957-1976 [4] Mul-lane E. et al. 2004. *Chemical Geology* 208:5-28