

A BRIEF HISTORY OF THE METEORITE COLLECTION AT THE FIELD MUSEUM

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Introduction: The Field Museum of Natural History has been associated with meteorites and meteoritics since its beginning in 1894. The Museum houses one of the world's largest meteorite collections. With 1,800 distinct meteorites comprising of 13,057 cataloged specimens, it is currently the largest collection at a private scientific research institution. The collection started modestly with 170 meteorites that formed a part of the natural history exhibit by Ward's Natural Science Establishment at the 1893 World's Columbian Exposition in Chicago. The entire display was bought by Marshall Field, the Museum's founding donor. In 1895, as one of the first publications of the Museum, the first Curator Oliver Farrington published the Handbook and Catalogue of the Meteorite Collection [1]. At that time only over 530 distinct meteorites were known to science, compared to more than 70,000 today [2]. Oliver Farrington was followed by five curators in charge of meteorites Henry Nichols, Sharat Roy, Edward Olsen, Meenakshi Wadhwa, and Philipp Heck. In 1933, the Meteoritical Society was founded at the Field Museum in Chicago as The Society for Research on Meteorites. The Society came back to Chicago for its Annual Meetings in 1972, 2000, and 2021.

Collections growth since 1893: A significant addition was made to the meteorite collection when the Ward-Coonley collection was purchased in 1912 [3]. This collection contains some rare pieces from the James Gregory collection in London and select pieces from the Count Julian Siemaschko collection in St. Petersburg. In addition, Ward also collected and purchased some large specimens from all over North and South America by sending flyers to geologists and dealers announcing that he desired to purchase meteorites.

Subsequent growth came through purchases, exchanges, gifts and field finds. In the 21st century, the monetary values of meteorites have risen significantly so that purchasing scientifically important specimens has become increasingly unaffordable for the Museum. Thus, currently the Field Museum relies on the generosity of private collectors and meteorite dealers as donors. For example, one of the major holdings of the Museum is the CM2 chondrite Murchison that fell in 1969 in Australia. Thanks to the financial support of Chicago-area donors, Glenn Commons, Reinhold Groh, and David Wren almost 40 kg of Murchison were acquired by the Field Museum shortly after the fall. The majority of all meteorite donations to the Field Museum in the last decade came from private collector Terry Boudreaux and his family. Boudreaux's goal is to support meteoritics through the acquisition of new and potentially important meteorites and to make them accessible to science. Particularly notable among the recent donations by Boudreaux are almost 2 kg of Aguas Zarcas, the pristine 2019 Costa Rican CM chondrite fall, the largest CM fall since Murchison. Other examples of Boudreaux gifts and loans are currently on public display at the Field Museum in the Grainger Gallery and include the spectacular green primitive achondrites NWA 6704 and 7325. In 2020, the museum has received a large donation of the famous martian meteorite NWA 7034, also known as "Black Beauty", from meteorite collector Jay Piatek.

The Robert A. Pritzker Center for Meteoritics and Polar Studies: In 2008 the Field Museum received a major gift from the Chicago-based TAWANI Foundation to endow operations for Meteoritics in perpetuity. This grant enabled the renovation of the collections space to provide a state-of-the-art repository for the meteorites. Most meteorites are held in dust-tight cabinets with desiccant drawers to regulate humidity. Selected specimens have been placed into auto desiccators, vacuum desiccators, a nitrogen cabinet or cryogenic storage. The endowment also supports the salary during the academic year for a meteorite curator and a full-time collections manager. These positions are currently held by Philipp Heck and James Holstein, respectively. The endowment also supports scientific expeditions to the Polar Regions by Field Museum researchers in other areas of research including earth and life sciences and anthropology.

While the collection is used extensively for in-house research, the meteorites from the Field Museum collection can be requested for research loans by qualified scientists. We see it as our obligation to permit the use of our collection for current and future high-quality research projects, for both non-destructive and destructive analysis. At the same time, we need to conserve enough material for future generations of scientists, reference, reproducibility studies, and verifications of controversial results. Studies on specimens from the Field Museum's collection are performed worldwide and contribute to advancing our knowledge about the origin and evolution of our Solar System.

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