

NATURAL HISTORY MUSEUM (LONDON) METEORITE COLLECTION DIGITISATION PROJECT

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Introduction: The Meteorite Collection housed at the Natural History Museum (NHM) in London is one of the world's leading collections encompassing some 1975 individual meteorites as 4845 registered specimens with associated preparations (e.g. thin sections, powders) and curatorial documentation. The Collection is a heavily used resource for scientists around the world, for example over the last five years the Museum has carried out 297 individual loans, of 1156 specimens to 93 individual borrowers. A key strategy of the NHM is to increase access to the collections and enhance the value of the collections through the integration new scientific data for each specimen. With the implementation of the KeEMu database system [1] we have initiated a number of projects to provide more detailed information on the Meteorite Collection, which be made available to scientists, historians and members of the public.

Digitisation strategy: The first element of the project was a thorough audit of the carbonaceous chondrites and achondrite meteorites. This work included weighing of all samples (including fragments, chips and powders at the milligram level), rehousing specimens into conservation grade storage, photographing all specimens and associated 'permanent labels' – the permanent label is the original paper label that is created on specimen registration and all information relating to that specimen is added to the label as and when curatorial action occurs. All of this data is now entered into the EMu database adding to the level of information readily available for each specimen. Importantly this work has provided up to date holdings information for scientifically valuable samples, which we use when evaluating requests for material for study [2].

The second element of the project (still ongoing) is the digitisation of all information relating to fall meteorites held in the collection (the NHM currently holds 682 of the 1095 recognised fall meteorites). This includes a full audit, photography of all specimens and permanent labels and digitisation of all locally held paper records and archives including register entries, correspondence, newspaper/magazine articles, paper-held data records, chemical data and scans of thin sections.

A third element is the acquisition of compositional imagery of thin sections by automated analytical electron microscopy, which will allow for the 'virtual loan' of specimens [3].

Value to the community: The NHM's significant investment in a holistic approach to collections digitisation provides unrivalled levels of information on each registered specimen, considerably enhancing the Collection for present and future users. In return we expect users of the Collection to provide us with information obtained during their studies. Using this model, meteorite collections enhancement is a dual responsibility of both institutions and collections users. We encourage the community to consider this approach to ensure the sustainability of limited resources for the continued benefit of all.

References: [1] Sendino C. 2009. *Collections: A Journal for Museum and Archives Professionals* 5: 149-158. [2] Smith C. L & Welzenbach L. C. 2006. *Meteoritics & Planetary Science* 41 Suppl: A164. [3] Kearsley A. T. et al. 2011. This volume.