Efficient Digitisation of Unaccessioned Specimens in a Large Vertebrate Fossil Collection to Enhance Data Quality and Mitigate Risk

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Abstract

The Museums Victoria (NMV) Vertebrate Palaeontology Collection holds more than 130,000 specimens, including the single largest collection of vertebrate fossils from the state of Victoria, Australia. Accessioned specimens make up around one third of the collection; however, few of the other, unaccessioned specimens have been catalogued. Vertebrate fossil accession at NMV is carried out in three stages: registration under a permanent specimen number, entry into the database software catalogue Axiell EMu, and barcode-based location tracking using a handheld device linked to an online application (http://mvwise.museum.vic.gov.au). In the past, unregistered specimens have been catalogued or location- tracked only infrequently, and the scale of legacy subcollections makes full registration an impractical goal for unaccessioned specimens. Accurate knowledge of unaccessioned specimens is essential to estimate collection size and composition, and predict future resource needs. Where such knowledge is held by staff but not documented, there is a persistent risk of dissociation or loss. Further, having accessible digital records greatly enhances data discoverability for research and exhibition users.

We describe an EMu-based workflow for unaccessioned specimens in the NMV Vertebrate Palaeontology Collection, which newly documents and tracks specimens without the time burden of prior accession protocols. Minimum-data EMu catalogue records are generated

from a handheld MVWISE scanner (based on Apple mobile hardware), with photographs that include the specimen along with any existing metadata or context. These records are immediately linked to trackable barcodes associated with storage locations. Subsequently, relevant taxonomic, stratigraphic or historical information can be cross-referenced to catalogue records *en masse*, either directly or using import functions. This metadata is accessed efficiently from within Axiell EMu via the specimen photographs, rather than requiring a subsequent physical search. The risks mitigable by this project are discussed, as are reasons commonly cited for not accessioning specimens, and dilemmas and consequences arising from the new approach. We also provide guidance on the rates of data generation, the required and recommended resources to be used, and forecast practical benefits in discovery and use for the collection.

Keywords

Palaeontology, Digitisation, Efficiency, Metadata

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