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Conference Abstract

Establishing a New Framework for Paleontological Data Through an Evaluation of Current Data Sharing Practices

Holly Little ‡

‡ Smithsonian National Museum of Natural History, Washington, DC, United States of America

Corresponding author: Holly Little (littleh@si.edu)

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Abstract

The long-term lifecycle management of natural history data requires careful planning. Elements that have a significant impact on this planning include data quality, domain-specific requirements, and data interoperability. Standards like Darwin Core Wieczorek et al. 2012 are built to be flexible, allowing institutions to share data quickly without extensive modification of internal information management processes. However, there is often limited consensus on the exact meanings and use of key terms by various domains. If we want to increase the quality, interoperability, and long-term health of collections data, we must reassess how we record specimen data, paying special attention to the terms we use and how we use them.

Here we share results from efforts to evaluate current data sharing practices for data from paleontology collections. By analysing the use of terms in Darwin Core, we are constructing a framework for how paleontological data is shared, how terms are used across many institutions, and where there are inconsistencies or lack of terms to support a fully robust record. We have also used data quality assessment and validation tools developed by organizations like the Global Biodiversity Information Facility (GBIF) to provide insight and testing for term-specific requirements addressing quality on a more global scale than might be the focus of any more locally driven data quality assessment.

These assessments can guide the development of a new framework for sharing paleontological data, enabling the community to collaborate and find solutions to increase quality and interoperability. Additionally, individual institutions can utilize the framework to enhance long-term care of digital assets with global participation in mind.

Keywords

data standards, lifecycle management, interoperability, data quality, paleontology, Darwin Core

Presenting author

Holly Little

References

- Wieczorek J, Bloom D, Guralnick R, Blum S, Döring M, Giovanni R, Robertson T, Vieglais D (2012) Darwin Core: An Evolving Community-Developed Biodiversity Data Standard. PLoS ONE 7 (1): e29715. https://doi.org/10.1371/journal.pone.0029715