Identifiers as Mechanisms for Linking Archaeological Data across Repositories

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Abstract

Zooarchaeological specimens are the remains of animals, including vertebrate and invertebrate taxa, recovered from, or in association with, archaeological contexts of deposition or surrounding landscapes. The physical scope of zooarchaeological specimens is diverse and includes macro- and micro-zooarchaeological specimens composed of archaeologically preserved bone, shell, exoskeletons, teeth, hair or fur, scales, horns or antlers, as well as geochemical (e.g., isotopes) and biochemical (e.g., ancient DNA) signatures derived from faunal remains. Artifacts and objects created from animal remains, such as bone pins, shell beads, preserved animal hides, are also zooarchaeological specimens. Here we present recent work to utilize identifiers for archaeological samples in new data publishing routines, focusing on key challenges. One critical challenge is that archaeological samples are often composited into different units depending on managers of collections and analysts. Thus, in some cases, when migrating datasets for publication, identifiers can refer to different sets of units, even within the same dataset. Another key challenge is assuring that different repositories can share sample identifiers. We show how Open Context, a site-based archaeology-focused repository that also manages objects

such as zooarchaeological material, and [VertNet](#), a specimen-oriented biodiversity repository, have collaborated to share sample identifiers.

While this illustrates a success story of linking data across repositories, we discuss the complexity of how "occurrence identifiers," but not true sample identifiers, in VertNet are propagated to another system where the identifiers point to a similar record called "Animal Bone" in Open Context.

Keywords

linked open data, zooarchaeology, object identifiers

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