A Case Study for Connecting Collections and Ecological Research

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Abstract

Integration of ecological research and specimen collection has recently been a topic of focus in the literature (i.e. Morrison et al. 2017) and within organizing groups such as Integrated Digitized Biocollections (iDigBio). Pairing these two fields only stands to benefit biodiversity science, as one’s weakness is the other’s strength. For example, ecological studies often lack the verifiable proof of the taxonomy of its subjects, which is offered by voucher specimens. Conversely, museum collections are often lacking detailed site descriptions or are completely disjointed from plot sampling datasets. Researchers at the Denver Botanic Gardens are addressing this disconnect by conducting a case study that melds ecological plot sampling and floristic documentation. We center our study design and methods around the objective of producing a deliverable data package in the form of a Darwin Core Archive. Moreover, our aim is to use the Darwin Core to its full potential, ultimately publishing a package on the Global Biodiversity Information Facility (GBIF) that includes extensive metadata, voucher specimens, genomic quality tissue samples, plot sampling data, in-situ, ex-situ, and habitat level images. Here I present an update on the ongoing field work, our intentions, any evaluation, and the overall workflow of the process.

Keywords

collections, ecology, darwin core, digitisation, taxonomy

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