

Biodiversity collections enable foundational and data skills

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The task of training an effective cadre of biodiversity scientists has grown more challenging in recent years, as foundational skills and knowledge in organismal biology have increasingly required

complementary data skills and knowledge. Writing in *BioScience*, Dr. Anna K. Monfils, of Central Michigan University, and colleagues identify one way to address this training conundrum: biodiversity collections. Biodiversity collections operate at the nexus of foundational biological practice and contemporary data science, a product of their role as curator of not only specimens themselves but also the specimens' associated data and network of data resources (referred to as the "extended specimen").

The authors describe a module that leverages this feature of biodiversity collections to produce a holistic student learning experience. The module "Connecting [students](#) to citizen science and curated collections" was designed by the authors with six learning goals in mind, ranging from plant specimen [collection](#) in the field to the deposition of data in national or international databases. Students also learned about the value of large data sets and the role of community members' contributions to them.

The authors reported strong learning results, stating that according to a postmodule assessment, "the students felt well prepared, very well prepared, or totally prepared to use foundational and emerging plant collecting skills including maintaining a field notebook (89%), collecting specimens in the field (94%), and depositing specimens (89%) and digital data (92%) into national and international data repositories."

More information: Anna K Monfils et al, Collections Education: The Extended Specimen and Data Acumen, *BioScience* (2021). [DOI: 10.1093/biosci/biab109](https://doi.org/10.1093/biosci/biab109)

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