Incorporating Digitized Natural History Collections Data into the Classroom
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Why Natural History Collections
Natural history collections (NHCs) and associated digital data provide significant opportunities for authentic undergraduate research experiences and provide valuable resources to teach about:
- Quantitative biological methods
- The iterative and integrative process of science
- Data literacy
- Verification and replication
- Timely scientific issues
- Critical thinking
- Biodiversity informatics

NHCs offer opportunities to create learning experiences that are:
- Inquiry-driven
- Experimental
- Realistic
- Place-based

Increased Access
Some instructors have long utilized NHC specimens and associated data in their courses, but many colleges and universities do not have collections. Now NHC data are accessible online (through data portals, such as iDigBio, GBIF, and VertNet), so barriers to NHC data and associated media have been reduced significantly. Not only can all instructors use NHC data, but faculty with university collections can readily access worldwide biodiversity data to complement their local materials.

AIM-UP!
In 2010, the United States National Science Foundation funded a Research Coordination Network (RCN), Advancing Integration of Museums into Undergraduate Education: AIM-UP! (AIMUP.unm.edu).

AIM-UP! produced a thriving national network of undergraduate educators, curators, collection managers, database managers, and scientists, who identified and developed novel ways to use natural history collections in undergraduate education.

AIM-UP! Undergraduate Education Modules
As part of AIM-UP!, a set of pilot of modules that incorporate museum specimens and their data were published on the project websites. The modules can be found here: http://aimup.unm.edu/for_educators

Island Biogeography Module Example

Creating a Faculty Mentoring Network
To extend that work, further refine existing modules, and broaden the visibility and utility of AIM-UP! resources, a collaborative effort among AIM-UP! participants, iDigBio, Kurator, via a QUBES supported Faculty Mentoring Network.

The Faculty Mentoring Network's goals are to:
- To extend and transform existing AIM-UP! education modules to make them more accessible and effective.
- Create new collections-based modules and module development workflows.
- Increase the adoption of these modules in undergraduate classrooms.

How Can You Get Involved?
- Join the Faculty Mentoring Network discussion at this workshop.
- Apply to participate in the May 2017 iDigBio Workshop for this project.
- Visit https://qubeshub.org/groups/summer2016/schedule/sessions
- Contact Molly Phillips mphillips@fmmnh.si.edu, Anna Monfils, monfils.1@cmich.edu, and/or Joe Cook eurooed@gmail.com for more information.