



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:

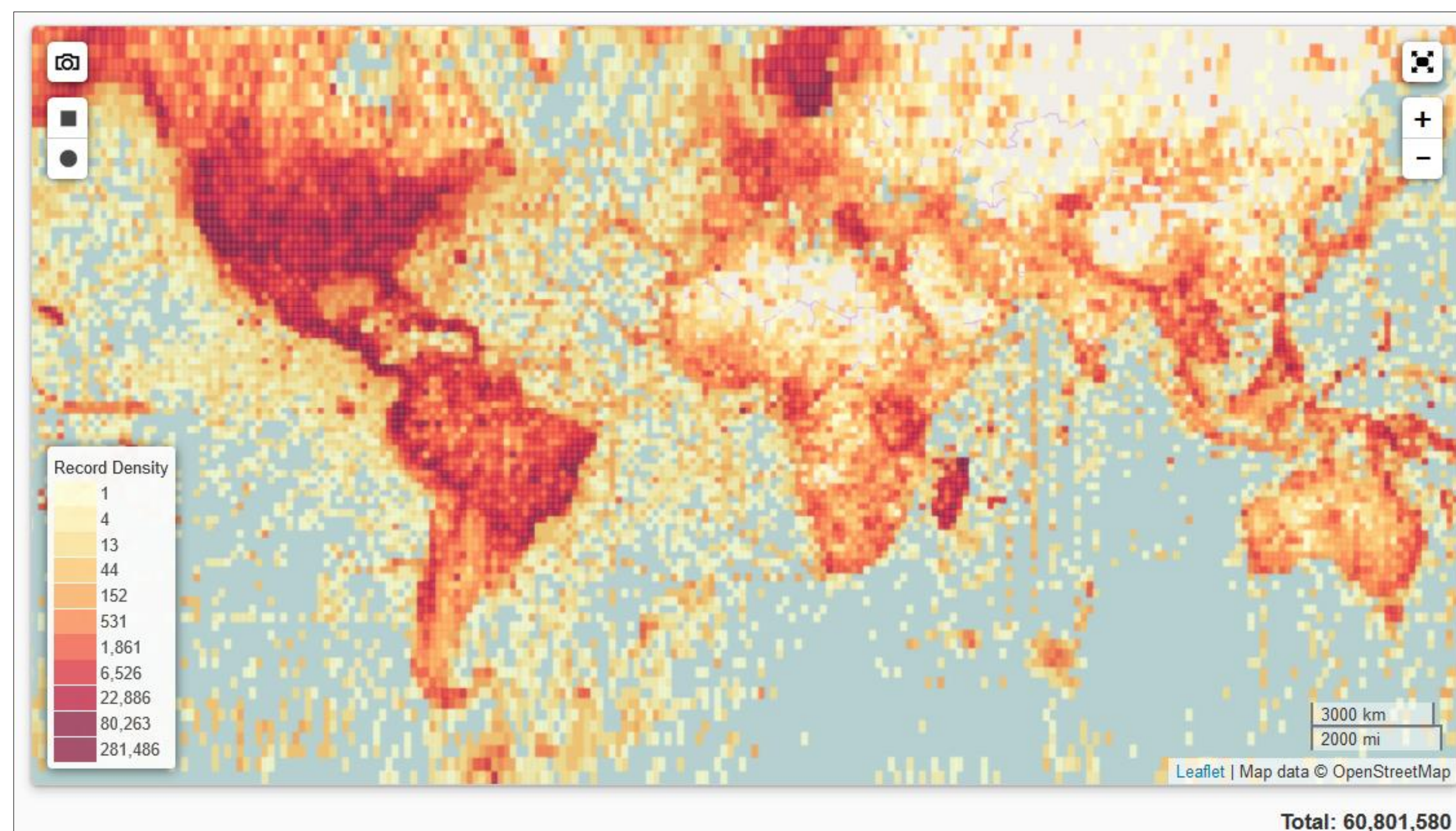
- Inquiry-driven
- Experimental
- Realistic
- Place-based



Photo courtesy of the Florida Museum of Natural History Photo Department

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.



Screen shot of the iDigBio Portal mapping feature displaying their over 60 million specimen records

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 website. The modules can be found here:

<http://aimup.unm.edu/for-educators>

Island Biogeography Module Example

Arctos Collaborative Collection Management Solution

ID	Abbrev	Authority	Accession Number	Quantity	Locality	Collection Date	Original Locality	Sex	Age	Prepared Date
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13	USNM	USNM	110000002	1	Alaska	1900				
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