

Field Stations Collection Digitization Meeting

7 Jan, 2014 via Adobe Connect

Attending:

Ian Billick - *Executive Director, Rocky Mountain Biological Lab*
Jeff Brown - *Manager, Sagehen Creek Field Station (UCNRS)*
Kevin Browne - *Information Manager, UCNRS*
Faerthen Felix - *Assistant Manager, Sagehen Creek Field Station (UCNRS)*
Becca Fenwick - *Director, Yosemite Field Station (UCNRS)*
Peggy Fiedler - *Director, UCNRS*
Erica Krimmel - *Collections Manager, Sagehen Creek Field Station (UCNRS)*
Erin Marnocha - *Program Coordinator, UCNRS*
Lynn McLaren - *Reserve Assistant, Santa Cruz Island Reserve (UCNRS)*
Gil Nelson - *Research Fellow, Tall Timbers Research Station/ iDigBio*
Hilary Swain - *Executive Director, Archbold Biological Station*
Rick Williams - *Curator, Rocky Mountain Biological Lab*

Past Grantmaking Attempts

PEGGY - The University of California Natural Reserve System (UCNRS) submitted an ADBC proposal in 2013 for a Thematic Collections Network (TCN) to digitize collections at UC reserves and make data available through a web-based platform which could help users understand and utilize data for climate change research. Proposal included many regional partners, including California State Parks and the Los Angeles Natural History Museum, but was not funded in part because it was too California-centric. Peggy thinks Charles Marshall may be leading a second submission of similar proposal in this next funding cycle.

GIL - Several years ago Tall Timbers applied for and unexpectedly received a similar grant to digitize regional collections. NSF liked that the proposal involved small collections at other institutions.

HILARY - Archbold submitted a proposal to NSF five years ago that was not funded because 1) not enough undergraduates were involved, 2) the scope was too local, and 3) the techniques for digitization were uncertain. This year, they submitted a CSBR proposal to deal with a subset of Archbold's natural history collection that has rich ecological data associated with specimens.

Scope of Field Station Collections

IAN - Who should be involved in this conversation?

GIL - Any field station with specimens, regardless of whether or not they are currently digitized, if they are large or small, etc. There should be multiple levels to engage at, e.g. a

collection that is already digitized may be able to add more precise georeferencing to its specimens.

RICK - RMBL has an herbarium with 6,000 specimens. Is this in the size scope of other field sites?

GIL - Yes. For field stations, the largest collections may be around 10,000 to 12,000 specimens in the herbarium, with many being much smaller. The small size is why bringing these collections together is so important; this idea is what brought about the [Small Collections Network](#) (SCNet).

IAN - Collaborative network where expertise and equipment are involved would greatly benefit smaller collections.

How can field stations fit into the existing Small Collections Network?

HILARY - Many of Archbold's specimen records are from the 1940s, but the collections are lacking in recent specimens. This seems to be true for many field stations (RICK, ERICA, and BECCA agree for their respective reserves). Maybe we need to push for building new collections, as well as digitizing existing ones? NSF seems to not like that field station biological collections often lack curators, and don't have staff dedicated to adding new specimens.

How can we engage curators, collection managers, and scientists with field station collections so that our collections become living resources?

ERICA - At Sagehen, we found that having the herbarium digitized inspired new collecting when we realized that the flora list for our reserve is not reflected with specimen records. Adding these new specimens is creating a historical dataset for future research.

RICK - At RMBL the collections originated as a reference collection, rather than one for research. Perhaps field station collections are well-suited to education and outreach, not just research. Maybe we can tie into [AIM-UP](#), which strives to incorporate natural history museum collections in undergraduate education.

HILARY - Some of Archbold's PIs are wary of undergraduates accessing and adding to the physical collections because of the time it takes to train students properly. Digital collections seem like an excellent compromise between providing access and protecting specimens.

FAERTHEN - We need to incorporate broader impacts from digitization projects, rather than only focusing on research value. Leveraging our collective collections to find and create outreach resources would be a good use of this group.

How we can use collections for education and outreach with field station visitors? How can we use visitors to enhance and expand collections?

RICK - RMBL herbarium has been collaborating with Western Colorado State University, CU Boulder, and SEINet. This has enabled them to network with other small collections, as well as make use of larger network resources, such as SEINet's interactive keys.

HILARY - Archbold has tissue collections spread worldwide, as well as a wealth of data tied to individual specimens. Linking this data is difficult.

GIL - There is an existing project at Cornell with a similar goal of linking derivative data. Ideally this is where digitization is heading, and it is possibly a viable angle for grantmaking.

How can we keep track of specimens and derivative data that are not held at the field station?

Potential Value of Digitized Collections

HILARY - We need an interesting research idea that validates the effort of digitizing these collections. Has anyone done a review of literature to answer the question of "what questions could we answer?" If we always focus on those people who are managing the collections, then we aren't interacting with the scientists who are going to use the data. We need to bridge this gap.

GIL - Currently working on gathering up papers of scientists who are using digitized specimens for research. FAERTHEN agrees that this would be useful for making the case to digitize.

ERICA - Kip Will, the PI on the grant Peggy mentioned in the beginning of this conversation, has a funded project to digitize UC Berkeley field station collections for research on the changing ecological landscape of California. Brief project description at <http://globalchange.berkeley.edu/funding-partners>

IAN - We need a data framework that connects all this data together structurally. At RMBL we have pollinator webs that match data collected from individual specimens. Do such collections exist at other field stations? Could this be a good basis for research? HILARY responds that Archbold also has such data.

BECCA - Through the resurvey of Joseph Grinnell's transects by the Berkeley Natural History Museums and the San Diego Natural History Museum, we have existing hundred year scale projects based on specimens.

Further Discussion

KEVIN - Maybe we need to discuss this topic further in person, as tied to a meeting many of us would be at, e.g. ESA or [ESIP](#).

GIL - What about a workshop at OBFS next September?

FAERTHEN - A workshop could help narrow the focus of this group.

IAN - Field stations may have herbaria, but are likely not to have curators. Curators and scientists don't generally come to OBFS. How could we bring the right group together? What kind of people do we need to move this conversation forward?

HILARY - Having a workshop *before* OBFS might be an interesting idea. We could bring in inspirational speakers from the collections community, but more so the science community. We need the inspirational scientists who are thinking about this, and who would use the resulting data.

RICK - Perhaps some of the people involved with AIM-UP would be good candidates.

GIL - iDigBio could potentially pay to bring speakers to such a workshop. In addition, iDigBio can host a wiki to share documents related to this conversation, such as the UCNRS ADBC proposal. In addition, if there is interest within this group, iDigBio has the analysis and technical tools to assist with a survey for the field station community re collections.

RICK - Let's continue this conversation by sharing documents and over email, then follow up with another video conference. GIL - Perhaps in March.