

# Student Involvement in Small Herbaria

## Participant suggestions generated during an iDigBio Workshop

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We all agree that small herbaria collection managers can magnify their time through student involvement, but how? Sometimes students seem like more of an effort than a gain, and whenever good ones come around they eventually graduate and leave. Recruitment, retention, and support for students in herbaria are important topics, particularly for small collections with limited staff and resources. In a small herbarium digitization workshop hosted by [iDigBio](#) and the [North American Network of Small Herbaria](#) on July 31, 2014, participants discussed these issues in roundtable format. This document is a short synthesis of the thoughts generated there.

- I. **Recruitment** of students for small herbaria:
  - A. Small collections can provide educational opportunities better than larger ones.
  - B. Collections must be visible; negotiate display space in department halls or library for posters and/or a few specimens on exhibit.
  - C. Promote the herbarium in department courses.
  - D. Host a “demo day” or open house.
- II. **Retention** suggestions for students for small herbaria (see *Chart 1 below*).
- III. **Support** for small herbaria in educating students:
  - A. AIM-UP (<http://www.aim-up.org/>)  
*An NSF-funded research coordination network to investigate practical ways to advance the integration of museums in undergraduate programs.*
    - Lesson on stomatal density and climate change using herbarium specimens
    - Lesson on plant range and distribution in Alaska using Artcos specimen data
  - B. California Phenology Project  
(<https://www.usanpn.org/cpp/education/herbarium>)
    - Primer on herbarium-based research
    - Lesson plan for an herbarium-based phenology data activity

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Workshop reference: [www.idigbio.org/content/idigbio-and-nansh-host-small-herbarium-digitization-workshop-botany-2014](http://www.idigbio.org/content/idigbio-and-nansh-host-small-herbarium-digitization-workshop-botany-2014)

Chart 1. Suggestions for encouraging student involvement in small herbaria.

<b>BENEFITS TO STUDENTS</b>	<i>If you want to encourage...</i>	<i>... then try</i>
<b>QUALITATIVE (Personal)</b>	<ul style="list-style-type: none"> <li>● Self satisfaction and motivation</li> <li>● Engagement in the herbarium community</li> <li>● Mentorship–student as mentee</li>   <li>● Mentorship–student as mentor</li> </ul>	<ul style="list-style-type: none"> <li>→ allowing student workers to set their own schedules</li> <li>→ student-run blogging</li> <li>→ long-term student involvement (e.g. student volunteers in herbarium, then moves to paid position, then is offered a lab position)</li> <li>→ opportunities for students to educate K12 or other undergrads about the herbarium</li> </ul>
<b>QUALITATIVE (Academic)</b>	<ul style="list-style-type: none"> <li>● Workplace references</li> <li>● Career pathways</li> <li>● Interaction with faculty and grad students</li> <li>● Research experience</li> </ul>	<ul style="list-style-type: none"> <li>→ encouraging students to add herbarium work to their C.V.s</li> <li>→ fostering local partnerships, e.g. with the BLM or USFS for plant field technicians</li> <li>→ forums or presentations on relevant research</li> <li>→ allowing small side projects, such as determining county records from newly digitized specimens</li> </ul>
<b>QUANTITATIVE (Financial)</b>	<ul style="list-style-type: none"> <li>● Hourly wages</li> <li>● Stipends</li> <li>● Academic credit</li> </ul>	<ul style="list-style-type: none"> <li>→ offering one paid position, which existing student volunteers compete for each semester</li> <li>→ issuing stipends per specimen processed</li> <li>→ giving different types of credits, e.g. internship, a museum studies course, or research.</li> </ul>
<b>QUANTITATIVE (Skills)</b>	<ul style="list-style-type: none"> <li>● Taxonomy and species identification</li> <li>● Database use and management</li> <li>● Herbarium digitization process</li>   <li>● Information literacy</li> </ul>	<ul style="list-style-type: none"> <li>→ focusing work on a single taxonomic group</li> <li>→ giving students technical control</li> <li>→ having students write/edit the herbarium protocol</li> <li>→ prompting students to explore where herbarium data goes once it is digital</li> </ul>