iDigBio

Integrated Digitized Biocollections

Small Collections Network
Serving, Supporting, Connecting Small Natural History Collections

Mobilizing Dark Data:
Raising the Profiles of Small Natural History Collections

Entomological Collections Network
Annual Meeting
Portland, Oregon
15 November 2014

Gil Nelson
gnelson@bio.fsu.edu
iDigBio
Florida State University

Christy Bills
Invertebrates Collection Manager
Natural History Museum of Utah
University of Utah

Advancing the Digitization of Biodiversity Collections

In an effort to make biodiversity collections universally accessible to taxonomists, ecologists, and researchers, and raise their profile for the general public, in 2011 the U.S. National Science Foundation launched the $100 million, 10-year ADBC program and named iDigBio—a collaboration between the University of Florida and Florida State University—as its national coordinating center, with the express purpose of facilitating digitization and data mobilization in public, non-federal U.S. collections.

Thirteen Thematic Collections Networks (TCNs)
plus 10 Partner to Existing Networks (PENs)

- **InvertNet: An Integrative Platform for Research on Environmental Change, Species Discovery and Identification (*Illinois Natural History Survey, University of Illinois*)**

- **Plants, Herbivores, and Parasitoids: A Model System for the Study of Tri-Trophic Associations (*American Museum of Natural History*)**

- North American Lichens and Bryophytes: Sensitive Indicators of Environmental Quality and Change (*University of Wisconsin – Madison*)

- Digitizing Fossils to Enable New Syntheses in Biogeography - Creating a PALEONICHES-TCN (*University of Kansas*)

- The Macrofungi Collection Consortium: Unlocking a Biodiversity Resource for Understanding Biotic Interactions, Nutrient Cycling and Human Affairs (*New York Botanical Garden*)

- Mobilizing New England Vascular Plant Specimen Data to Track Environmental Change (*Yale University*)

- **Southwest Collections of Anthropods Network (SCAN): A Model for Collections Digitization to Promote Taxonomic and Ecological Research (*Northern Arizona University*)**

- **iDigPaleo: Fossil Insect Collaborative: A Deep-Time Approach to Studying Diversification and Response to Environmental Change**

- Developing a Centralized Digital Archive of Vouchered Animal Communication Signals

- The Macroalgal Herbarium Consortium: Accessing 150 Years of Specimen Data to Understand Changes in the Marine/Aquatic Environment

- Collaborative: Documenting the Occurrence through Space & Time of Aquatic Non-indigenous Fish, Mollusks, Algae, & Plants Threatening North America's Great Lakes

- Collaborative Research: The Key to the Cabinets: Building and Sustaining a Research Database for a Global Biodiversity Hotspot

- **InvertEBase: reaching back to see the future: species-rich invertebrate faunas document causes and consequences of biodiversity shifts**

Advancing Digitization of Biodiversity Collections (ADBC)
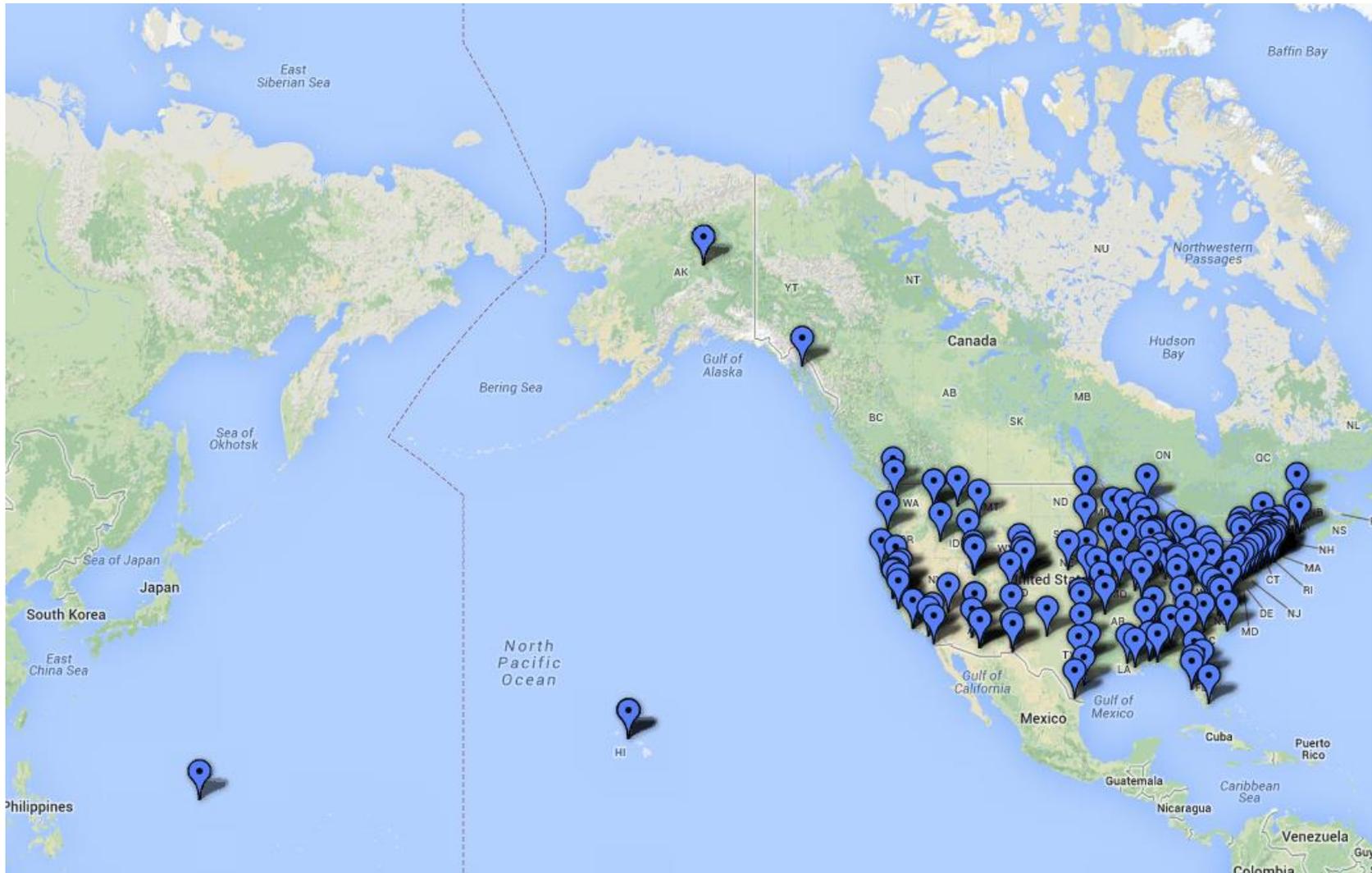
To date: 13 TCNs, 10 PENS, 203 unique institutions, 50 states

Advancing Digitization of Biodiversity Collections (ADBC)

Developing networks, enhancing communication, facilitating collaboration
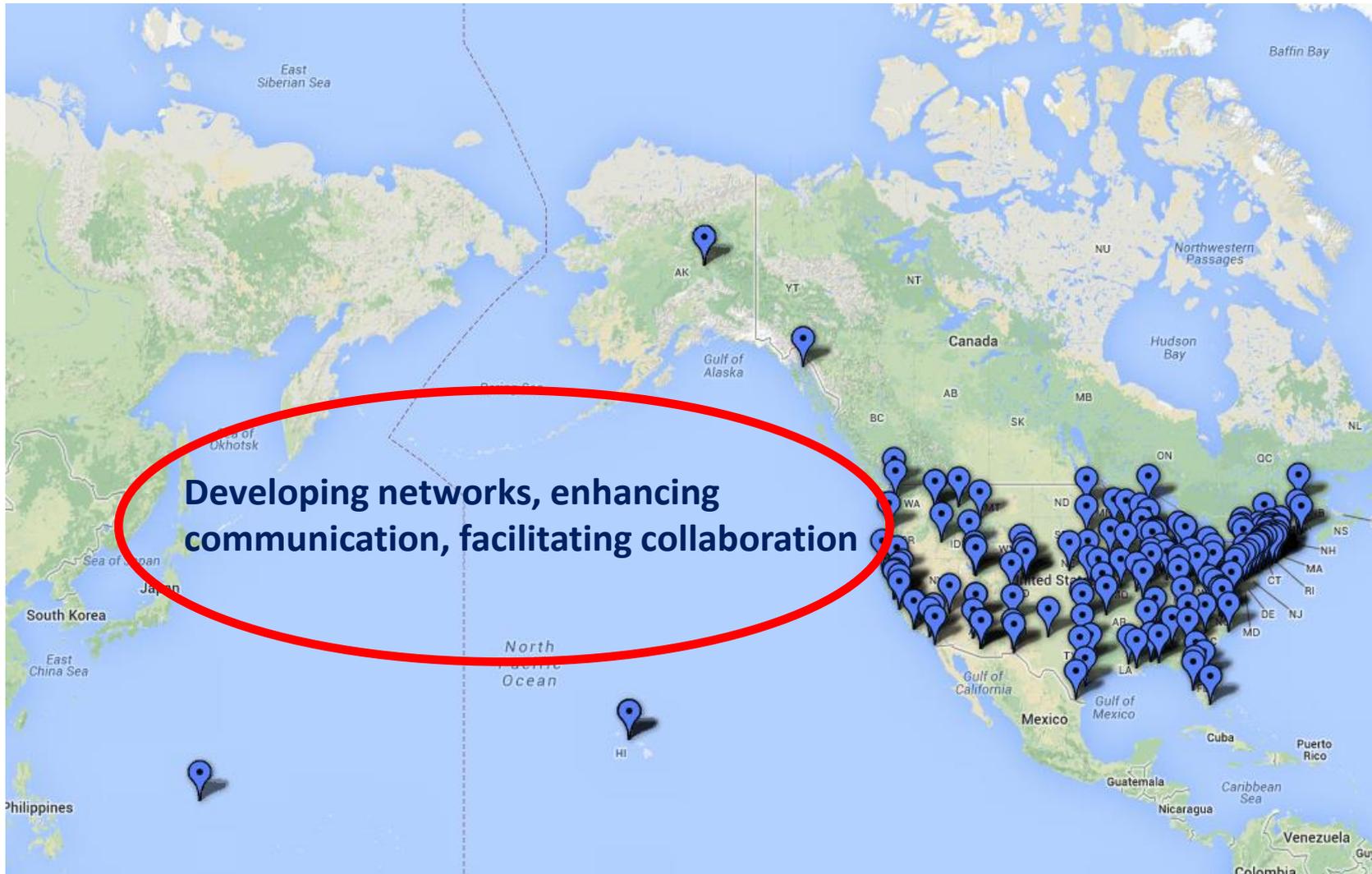
To date: 13 TCNs, 10 PENS, 203 unique institutions, 50 states

Mobilizing Dark Data

In an early press release announcing the first round of Advancing the Digitization of Biodiversity Collections (ADBC) awards (July 8, 2011), the National Science Foundation (NSF) several times referenced the importance of what it called "**dark data**"—data that are essentially inaccessible to most biologists, policy-makers, and the general public.

The darkest of these "dark data" may well be locked up in small collections that lack sufficient resources to mobilize them for broad use.

Tall Timbers Research Station
Lucien Harris
Butterflies of Georgia
Lepidoptera Collection

Small Collections Network
Serving, Supporting, Connecting Small Natural History Collections

Search 🔍

Quick Links

Add content

Blogs and News

Listserv

Webinar Series

NANSH Webinars and Meetings

Webinar Recordings

Workshops and Symposia

Working Groups

Related Wikis and Links

Relevant Papers & Publications

Introduction to SCNet's Webinar Series

SCNet and iDigBio are pleased to announce a series of webinars centered on supporting small collections and establishing SCNet as a collaborative resource for small collections and the professionals who manage them. Each webinar in this series will be held 3:00-4:00 p.m. EST on the dates shown below. Meetings are virtual and accessible online at https://idigbio.adobeconnect.com/scnet. No special software outside of an internet browser is required to access the virtual meeting room.
Read more

Increasing Capacity for Small Natural History Collections: Developing Protocol for Volunteer-Based Inventorying Programs

15 January 2015
3:00-4:00 p.m Eastern
Virtual meeting place: https://idigbio.adobeconnect.com/scnet
Increasing Capacity for Small Natural History Collections: Developing Protocol for Volunteer-Based Inventorying Programs.
Presenters: Shana Hawrylchak, Manager of Exhibits and Collections, EcoTarium; Kaleigh Pare, Collections Specialist; EcoTarium; Emma Westling, Collections Consultant.
Read more

Webinar Recording- Small Entomology Collections: How to Manage

You can access the webinar recording here:

Follow SCNet on Twitter

Tweets 🐦 Follow

CarmsMuseums 4 Oct
@CarmsMuseums
Relevance of museum collections: many speakers at #ORS2014Brecon use museum specimens in fossil research @GeolAssoc #welshmuseumsfest
🔁 Retweeted by Gil Nelson
Expand

Thomas R. Holtz, Jr. 4 Oct
@TomHoltzPaleo
17 Maps Of Australia That Will Make Your Mind Boggle buzzfeed.com/simoncrerar/mi... via @simoncrerar @buzzfeed
🔁 Retweeted by Gil Nelson
📊 Show Summary

Gil Nelson 30 Sep
@iDigGilNelson
#idigbio #FluidArthroImagingWG Webinar: Rapid thruughput scanning of microscopic slides 15 Oct 2014 tinyurl.com/ovvjb8u
Expand

Gil Nelson 29 Sep
@iDigGilNelson
#idigbio @NYBG Excellent article.

Tweet to @iDigGilNelson

Importance of Small Collections

- Repositories of unique and potentially valuable but unexposed data sets.
- Potentially taxonomically and/or geographically focused.
- Often represent the work of relatively few collectors; unduplicated elsewhere.
- Potential for augmenting and adding richness to existing data sets and geographic regions.
- Potential for exposing data currently inaccessible to the scientific community.
- Accessible to students in ways that provide opportunities for broad-scope training in collections curation.
- Opportunities for outreach and volunteer involvement.

Small Collections Network

Serving, Supporting, Connecting Small Natural History Collections

Goal

Empower small collections by:

- Reaching out and incorporating them into the collections community,
- Making digitization doable for small collections,
- Mobilizing and incorporating the "dark data" held in small collections into major data repositories (GBIF, iDigBio, BISON, etc.) and available to science,
- Encouraging large collections to assist with ensuring the sustainability of small collections,
- Providing formal and informal networks that provide forums for and training in small collections issues,
- Resurrecting or otherwise saving orphaned collections from being lost to science.

Assumptions

The success and sustainability of small collections is indicative of our success as a collections community.

Ensuring that all collections succeed is a professional responsibility.

Altruistic and selfish!

Defining Small

Collections that ARE small
Collections that FEEL small

Number of specimens/lots/collection objects

Variable by collection type

Institutional visibility

Number of staff

Budget adequacy

Integral to someone's appointment

Is management confounded by teaching load/committee assignments

Part of the professional focus

Gathering Data

In a recent survey (n=143) targeted to small collections and those interested in small collections, 57% across all domains reported collections of fewer than 200,000 specimens, 45% with collections of fewer than 100,000 specimens.

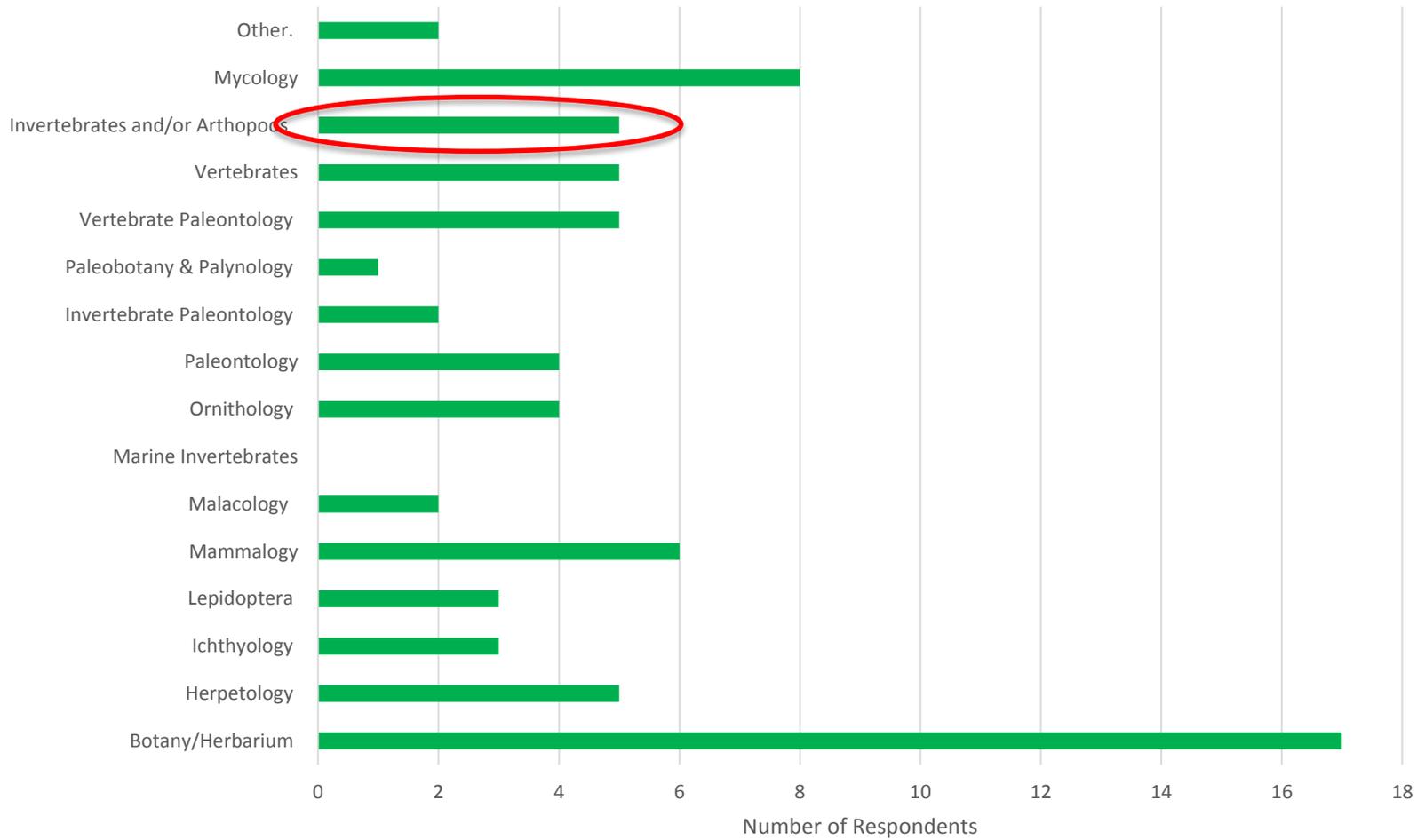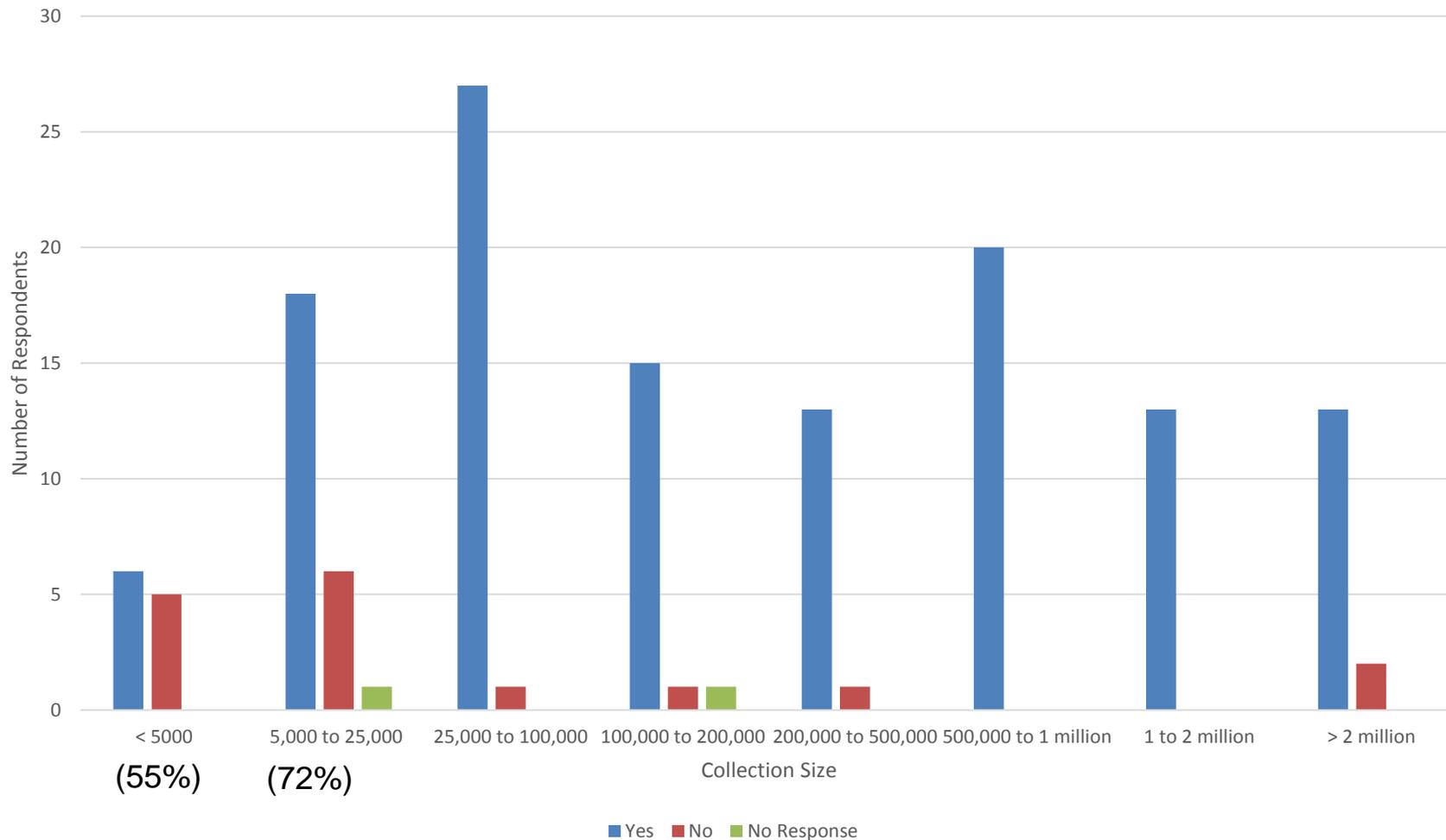|				
1	fewer than 5000 specimens	▮	11	8%
2	between 5000 and 25,000 specimens	▮▮	25	17%
3	between 25,000 and 100,000 specimens	▮▮	28	20%
4	between 100,000 and 200,000 specimens	▮	17	12%
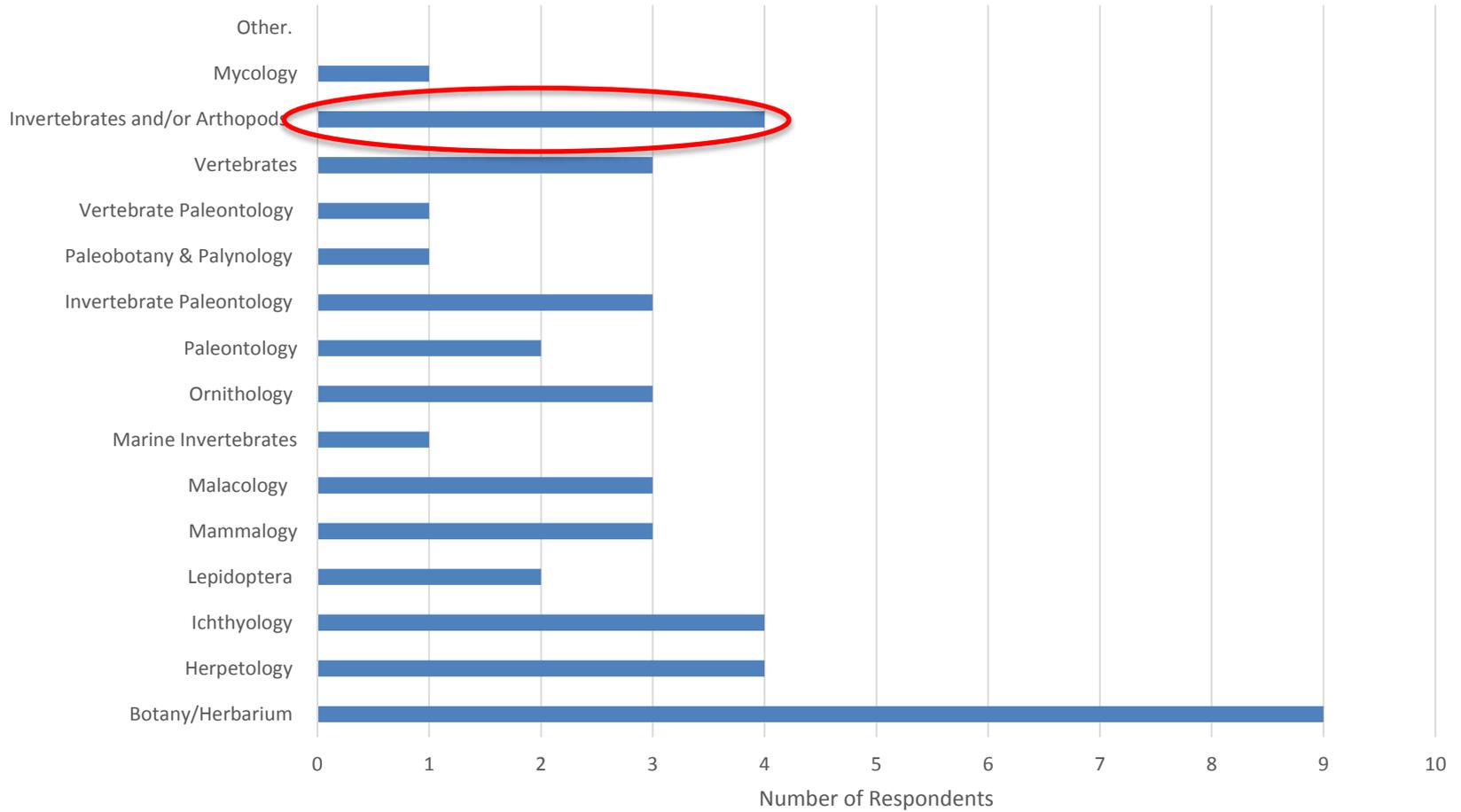
Between 5000 and 25,000 (n = 25; 17.5%)
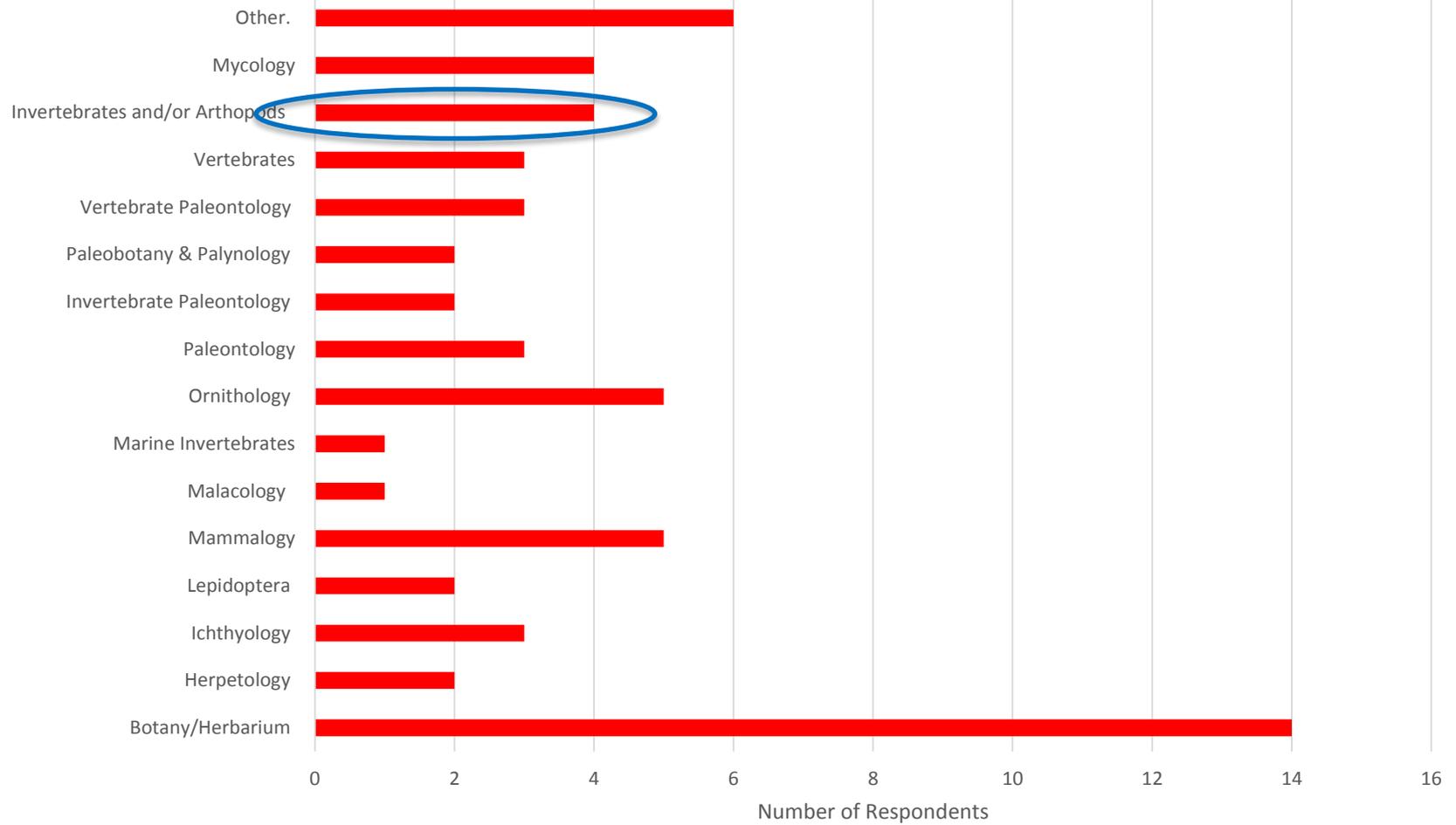
Between 25,000 and 100,000 (n = 27; 18.9%)

Currently Digitizing (or Planning to)

Why Institutions (n=16; 69% of which are small) Choose Not to Digitize*

24. Which of the following factors have contributed to the decision at your institution to not digitize the collections? Please check all that apply.

Answer		Response	%
Inadequate funding		15	94%
Lack of time		13	81%
Limited expertise		7	44%
Lack of institutional motivation		12	75%
Lack of information		5	31%
Lack of individual motivation		2	13%
Size of task is overwhelming		5	31%
Lack of resources		11	69%
I am pre-tenure		0	0%
Collection not valuable		0	0%
Not a good effort/payoff ratio		3	19%
No value to reappointment, tenure or promotion at my institution		1	6%
Other. Please explain.		2	13%
Lack of perceived need (not convinced it is necessary)		2	13%
Not sustainable		1	6%

Other. Please explain.

We donate the specimens to another institution that has better facilities for digitization.

Not wanted by administration

*These reasons may be especially apropos to small collections

New Research Survey Underway

Better define what constitutes a small collection by type and discipline.

Assess the priority and esteem with which small collections are held in their institutions.

Assess the percentage of time directors and managers of small collections are afforded to curate their collections.

Assess staffing and use of volunteers in small collections.

Assess the primary challenges to managing small collections.

Further assess the level of digitization (databasing and imaging) occurring in small collections.

Listserv and Webinar Series

15 January 2015
3:00-4:00 p.m Eastern
Virtual meeting place: https://idigbio.adobeconnect.com/scnet
Increasing Capacity for Small Natural History Collections: Developing Protocol for Volunteer-Based Inventorying Programs.
Presenters: Shana Hawrylchak, Manager of Exhibits and Collections, EcoTarium;
Kaleigh Pare, Collections Specialist; EcoTarium; Emma Westling, Collections Consultant.

15 December 2014
2:00-3:00 p.m. EST
Virtual meeting place: https://idigbio.adobeconnect.com/scnet
The Value of the Symbiota Portal and Database for Small Collections
Presenter: Ed Gilbert, Arizona State University

13 November 2014
3:00-4:00 p.m Eastern
Virtual meeting place: https://idigbio.adobeconnect.com/scnet
Small Fish in a Big Pond: Lessons Learned in Digitizing a Small Paleontology Collection
Presenter: Julie Rousseau, Collection Manager, University of Alaska Museum

16 October 2014
2:00-3:00 p.m. Eastern
Virtual meeting room: https://idigbio.adobeconnect.com/scnet
Small Entomology Collections: How to Manage
Presenter: Christy Bills, Invertebrates Collection Manager, Natural History Museum of Utah

Thank you!