NSF awards $7.5 million to UF-led effort to digitize biodiversity collections

Editors: A complete list of awards is available online at http://www.flmnh.ufl.edu/pressroom/2014/08/25/nsf/#awards

Aug. 25, 2014

GAINESVILLE, Fla. --- The National Science Foundation has awarded six grants totaling about $7.5 million to digitize biodiversity collections, a nationwide effort coordinated by the iDigBio program based at the University of Florida.

The research is critical to understanding our planet and how changes in biological diversity affect human societies. The funding will shed light on “dark data,” information that is inaccessible to most scientists, educators, policymakers and the general public, and will further the national effort to digitize biodiversity collections.

“There are specimens that have been around for 100-200 years, but they are in a drawer or on a shelf somewhere, and it’s hard to know where everything is and how to get the data you need,” said Larry Page, director of iDigBio, based at the Florida Museum of Natural History on the UF campus. “If it’s online, you can touch a button and find in seconds what it might have taken you a lifetime to know was there.”

This year’s awards focus on the impacts of the rapid temporal and regional changes taking place in species diversity of North America’s arthropods and mollusks, the biodiversity changes in the Appalachians and impacts of invasive species in the Great Lakes.

This is the fourth round of grants in the NSF Advancing Digitization of Biodiversity Collections Program, and increases the number of participating institutions to 200, in all 50 states. This year’s grants will be awarded over one to four years depending on the project.

The grants establish three new Thematic Collections Networks, groups of institutions organized to focus on a biodiversity “grand challenge” such as studying the impacts of climate change on a region, and three Partners to Existing Networks, allowing additional institutions to join existing networks and expand ongoing digitization.

“There’s more information about biodiversity in museum collections than any other place — except nature itself,” Page said. “But the problem is that the information is really difficult to get.”

The NSF is responding to the need for greater accessibility to collections data by awarding grants to institutions with collections to enable them to make the data available online. The digitized data generated from the awards will be publicly available through iDigBio’s specimen portal (idigbio.org/portal), which contains more than 20 million specimen records and over 3 million media records.

Lead principal investigators for the new grants are based at Appalachian State University, the Field Museum of Natural History, the University of Wisconsin-Madison, Brigham Young University, the University of Cincinnati and the University of Vermont & State Agricultural College.

Specimens in collections are utilized in a variety of ways. They are used by taxonomists studying variations among populations to discover and describe species, by evolutionary biologists studying the history of life on Earth, and by ecologists working to understand relationships among species and how ecosystems function.

Source: Larry Page, lpage@flmnh.ufl.edu, 352-273-1952
Media Contact: Paul Ramey, pramey@flmnh.ufl.edu, 352-273-2054
Writer: Paul Ramey, pramey@flmnh.ufl.edu

2014 National Science Foundation ADBC Awards

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

Award Page: http://www.nsf.gov/awardsearch/showAward?AWD_ID=1410683

PI (Principal Investigator): Kenneth Cameron, University of Wisconsin-Madison

Collaborating Award PIs: Andrew Simons, University of Minnesota-Twin Cities; Christine Niezgoda, Field Museum of Natural History; Loy Phillippe, University of Illinois at Urbana-Champaign; Christopher Taylor, University of Illinois at Urbana-Champaign;

David Seigler, University of Illinois at Urbana-Champaign; Kevin Cummings, University of Illinois at Urbana-Champaign; Brenda Molano-Flores, University of Illinois at Urbana-Champaign; Marymegan Daly, Ohio State University; George Watters, Ohio State University; John Freudenstein, Ohio State University; Andrew Hipp, Morton Arboretum; Meliss Tulig, New York Botanical Garden; Richard Rabeler, University of Michigan, Ann Arbor; Thomas Duda, University of Michigan, Ann Arbor.

Title: *(TCN) Collaborative Research: The Key to the Cabinets: Building and Sustaining a Research Database for a Global Biodiversity Hotspot*
Award Page: http://www.nsf.gov/awardsearch/showAward?AWD_ID=1410069
PI (Principal Investigator): Zack Murrell, Appalachian State University
Collaborating Award PIs: Nico Franz, Arizona State University; Robert Guralnick, University of Colorado - Boulder; Hank Bart, Tulane University; Laura Whyte, Adler Museum; Daniel Stanzione, iPlant, University of Texas; Ed Gilbert, Arizona State University; Nelson Rios, Tulane University; Joey Shaw, University of Tennessee - Chattanooga; L. D. Estes, Vanderbilt University; Ashley Morris, Middle Tennessee State University; Jon Evans, University of the South; Rachel Jabaily, Rhodes College; Timothy McDowell, East Tennessee State University; Shawn Krosnick, Tennessee Technological University; Mary Priestley, University of the South; Lisa Krueger, University of Tennessee - Martin; Emily Gillespie, Marshall University; Donna Ford-Werntz, West Virginia University; Wendy Zomlefer, University of Georgia; James Carter, Valdosta State University; Alan Harvey, Georgia Southern University; Brad Ruhfel, Eastern Kentucky University; Allen Risk, Morehead State University; Dayle Saar, Murray State University; Mary(Maggie) Whitson, Northern Kentucky University; Lisa Wallace, Mississippi State University; George Johnson, Arkansas Tech University; Travis Marsico, Arkansas State University - Jonesboro; Leslie Goertzen, Auburn University; John Clark, University of Alabama - Tuscaloosa; Kelly Major, University of South Alabama; Alan Weakley, University of North Carolina - Chapel Hill; Alexander Krings, North Carolina State University; Katherine Mathews, Western Carolina University; Michael Windham, Duke University; Austin Mast, Florida State University; Norris Williams, University of Florida, Florida Museum of Natural History; Andrea

Weeks, George Mason University; Erika Gonzalez, Longwood College; Dixie Damrel, Clemson University; John Nelson, University of South Carolina - Columbia; Douglas Jensen, Converse College; Gerald Long, Francis Marion University; Joe Pollard, Furman University; Charles Horn, Newberry College; Eran Kilpatrick, University of South Carolina - Salkehatchie; Ben Montgomery, University of South Carolina Upstate; Kunsiri Grubbs, Winthrop University; Thomas Sasek, University of Louisiana – Monroe.

Title: *(TCN) InvertEBase: reaching back to see the future: species-rich invertebrate faunas document causes and consequences of biodiversity shifts*
Award Page: http://www.nsf.gov/awardsearch/showAward?AWD_ID=1402667
PI (Principal Investigator): Petra Sierwald, Field Museum of Natural History
Collaborating Award PIs: Rudiger Bieler, Field Museum of Natural History; Diarmaid O'Foighil, University of Michigan, Ann Arbor; Taehwan Lee, University of Michigan, Ann Arbor; Jason Bond, Auburn University; John Feminella, Auburn University; Charles Ray, Auburn University; Andrew Deans, Pennsylvania State University - University Park; Istvan Miko, Pennsylvania State University - University Park; Elizabeth Shea, Delaware Museum of Natural History; James Hanken, Harvard University; Paul Morris, Harvard University; Gavin Svenson, Cleveland Museum of Natural History.

Title: *(PEN) Digitization of North American Bryophyte and Lichen Specimens from Two Ohio Herbaria at the University of Cincinnati (CINC)*
Award Page: http://www.nsf.gov/awardsearch/showAward?AWD_ID=1410548
PI (Principal Investigator): Eric Tepe, University of Cincinnati
Collaborating Award PIs: Steven Rogstad, McMicken College of Arts & Sciences; Corinna Gries, University of Wisconsin, Madison; Theresa Culley, University of Cincinnati.

Title: *(PEN) Partnership to Existing Macrofungi Collection Consortium--Digitization of an Important Regional Collection of Macrofungi at the Pringle Herbarium*
Award Page: http://www.nsf.gov/awardsearch/showAward?AWD_ID=1401510

PI (Principal Investigator): David Barrington, University of Vermont & State Agricultural College

Title: *(PEN) Ground-dwelling Insects in the Brigham Young University Collection, Enhancement to SCAN*
Award Page: http://www.nsf.gov/awardsearch/showAward?AWD_ID=1408607
PI (Principal Investigator): Shawn Clark, Brigham Young University
Collaborating Award PIs: Neil Cobb, Northern Arizona University; Charles Nelson, Brigham Young University; Michael Whiting, Brigham Young University.

Prior NSF ADBC Awards:
2013: http://www.nsf.gov/news/news_summ.jsp?cntn_id=128369&org=NSF&from=news
2012: http://www.nsf.gov/news/news_summ.jsp?cntn_id=124031&org=BIO&from=news
2011: http://www.nsf.gov/news/news_summ.jsp?cntn_id=121015&org=NSF&from=news

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