The Valdosta State Experience
Mobilizing Small Herbaria for Digitization
Workshop sponsored by iDigBio, Florida State University, Tallahassee
December 9-11, 2013

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Size & Scope of Collection

- Regional collection of >65,000 accessioned specimens
  - Particularly rich in plants of Georgia coastal plain
  - Extensive collections of graminoids, ferns, bryophytes

- Significant collections
  - W. R. Faircloth
  - R. K. Lampton (bryophytes, lichens)
  - R. Carter
  - R. Kral
  - C. T. Bryson
  - S. T. McDaniel
  - R. K. Godfrey
History

- Pre-1960, Dr. Beatrice Nevins accumulated a teaching collection of several hundred specimens.
- In 1961, Dr. Wayne Faircloth began to accumulate a research collection.
  - The herbarium comprised ~30,000 specimens when Dr. Faircloth stepped down in 1984 to become department head.
- In 2001, the herbarium moved into a new building providing
  - Greatly improved ventilation and air quality,
  - More than double the space.
Current Facilities

- ~1500 sq ft with climate control
  - 68°F
  - 50% RH
- Separate rooms
  - Herbarium proper
  - Specimen preparation room to isolate incoming materials
  - Curator’s office
- 2005: -40°C freezer for pest control
VALDOSTA STATE UNIVERSITY HERBARIUM [VSC]

SCALE: 1/4” = 1’-00”

- HERBARIUM CASE
- SAFETY SHOWER
- HALF SIZE HERBARIUM CASE
Valdosta State University
Herbarium (VSC)
Digitization: Getting Started

- 2005: *Deep South eFlora Workshop* hosted by Austin Mast, Florida State University
- 2006: *Herbarium Cyberinfrastructure Workshop* in Chico, California, sponsored by Yale University
- 2008: *Opportunities and Challenges of Small Collections Workshop* hosted by Alan Prather, Research Coordination Network, Michigan State University
- 2009: *Specify “How to” Workshop* hosted by Herrick Brown at University of South Carolina, sponsored by SERNEC, Zack Murrell, Appalachian State University
April 2011 the Valdosta State University Herbarium (VSC) received funding from the National Science Foundation.

Major outcomes

- Digitization of the collection
- General herbarium enhancement
Specific outcomes

- **Digitization**
  - Prepare high-resolution images of herbarium specimens
  - Build an associated database from specimen label data
  - Contribute VSC images and data to produce on-line atlas of the state’s flora, in collaboration with University of Georgia Herbarium (GA)

- **General herbarium enhancement**
  - 10 new herbarium cabinets
  - Replacement of door seals in old cabinets
  - Replacement of old genus folders with geographically color-coded archival folders
  - Processing of specimen backlog (Label Merge)
Results –

digitization

>61,000 vascular plant specimens imaged

>4,000 non-vascular specimen packets imaged
Results – digitization

<table>
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<tr>
<th>Holdings</th>
<th>Collection Statistics</th>
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<tbody>
<tr>
<td>Specimens</td>
<td>53,410</td>
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<tr>
<td>Type Specimens</td>
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<tr>
<td>Families Represented</td>
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<th>Loans</th>
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<table>
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<tr>
<th>Taxonomic Tree</th>
<th>Type Specimen Counts</th>
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<td>Classes</td>
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53,410 vascular plant specimens databased
Results – digitization

http://bryophyteportal.org/portal/index.php

Consortium of North American Bryophyte Herbaria

Valdosta State University (VSC)

The Valdosta State University Herbarium (VSC) provides a repository for the preservation of voucher specimens that document the flora of the Coastal Plain region of Georgia and specimens from a broader geographical area that might be useful in the study of the flora of this region and that enable specialized research on particular groups of plants carried out by faculty and students in residence at Valdosta State University and by taxonomic specialists at other institutions. VSC also provides specimens for use in teaching, and its staff responds to requests from the general public, natural resource managers, agricultural scientists, and others by providing information about plants and service determinations of unknown plants and, where appropriate, preserving vouchers relating to such.

Contact: J. Richard Carter, Jr. Curator (rcarter@valdosta.edu)

Home Page: http://www.valdosta.edu/~rcarter/herbintro.htm

Management: Data snapshot of central database

Last Update:

Global Unique Identifier: 8567ee0-025d-4213-a046-463051ecb406

Collection Statistics

- 4,069 specimens
- 100% georeferenced
- 100% with images
- 98 families
- 276 genera
- 856 species

Extra Statistics

Show Family Distribution
Show Geographic Distribution

Symbiota

Promoting Bio-Collaboration

4,069 specimens
100% with images
Results – general enhancement

- New herbarium cabinets enabled the secure storage of backlog specimens and provided space for growth.
Results – general enhancement

- Worn out herbarium cabinet gaskets were replaced with rubber foam weather-seal.
Results – general enhancement

- Old genus folders were replaced with geographically color-coded archival folders.
Results – general

- Protocols developed
  - Proper handling of herbarium specimens
  - Housekeeping in the herbarium
  - Pest management
  - Preparation of genus folder labels
  - Attachment of bar-code labels
  - Imaging
  - Data entry
  - Label Merge preparation of specimens labels
Results – educational outreach, etc.

- 10 undergraduate students trained in herbarium curation
- Herbarium tours for local garden clubs, VSU classes, Georgia Governor’s Honors Program, Georgia Academy of Science, etc.
- Hosted digitization workshop sponsored by iDigBio September 2012, ca. 30 participants
10 undergraduate students trained in herbarium and digitization techniques
Unanticipated outcomes

- **VSU Virtual Herbarium**
  - Internal funding from the VSU administration
  - Collaborative effort with the VSU Odum Library (Michael Holt)
  - Code generously provided by Dr. Austin Mast, Director, FSU Godfrey Herbarium
  - Dedicated server managed by VSU Odum Library
  - Local presence promotes integrity of VSC

[http://herb.valdosta.edu](http://herb.valdosta.edu)
Unanticipated outcomes
Acknowledgments

- VSU Student Assistants
  - Jessica Bartek
  - Amber Blocker
  - Zach Buning
  - Kyle Conger
  - Terrance Jenkins
  - Jordan Jones
  - Christopher Louis
  - Phillip Lowe
  - Dennis May
  - Amy Vardeman

- Gil Nelson for invaluable technical advice and assistance throughout

- Michael Holt, VSU Odum Library, for adapting the FSU code for the VSU Virtual Herbarium web interface

- National Science Foundation (DBI 1054366, J.R. Carter, PI)

- Valdosta State University