Preserving for Perpetuity in a Changing World

Barbara Thiers
William and Lynda Steere Herbarium
New York Botanical Garden
Sustaining an Herbarium

Identity
Mission
External Financial Support
Friends
Publicity
Characterize the Collection

COLLECTIONS METADATA ELEMENTS:

- What groups, regions, time periods are represented?
- What research vouchered in collection?
- How does it compare with other regional or thematic collections?

“Herbarium X has the best/largest/oldest collection of algae/bryophytes/fungi/plants in region Y”
Maintain Professional Standards:

- Specimen curation at highest possible standards; pest control, disaster recovery protocols articulated and implemented workspace clean,
- well-lit, appropriately furnished and uncluttered
  Clearly defined and enforced rules concerning use of facilities
- Professional staff
  - hired with training (preferred)
  - Professional development included as part of job
Sustaining an Herbarium

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- **External Financial Support**
- Friends
- Publicity
Basic Mission Objectives

Identification

Digitization

Mounters

Filing
Contribute to Larger Objectives

Maximize use by researchers

Support Undergraduate Education

Provide job training for Incarcerated Citizens

Inform the Public
Sustaining an Herbarium

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An Idealized, Diversified Herbarium Budget

- Institutional Funds (40%)
- Govt. grants to Herbarium (20%)
- Research Grants (10%)
- Private grants/donations (10%)
- Contracts (10%)
- In-Kind (5%)
- Endowment (5%)
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U.S. Herbaria

Herbaria: 613
Added since 1990: 60
Lost since 1990: 51

Specimens: 74,428,000
Added since 1990: 14,411,000
Lost since 1990: maybe 20,000

Herbaria digitizing: 213 (35%)
Records shared: 19,781,000 (26%)
Organizations for Collections Professionals
Research Community

**Computer vision cracks the leaf code.**
Wilf et al., PNAS 2016

**Long-term relationships among atmospheric CO₂, stomata, and intrinsic water use efficiency in individual trees.**
Miller-Rushing et al., Amer. J. Bot. 2009

**Impact of 70 years urban growth associated with heavy metal pollution.**
Rodriguez Martin, et al. 2015

**Herbarium specimens reveal the footprint of climate change on flowering trends across north-central North America.**
Calinger et al., Ecol. Let. 2013
New Friends

Other Natural History Collections

Libraries- Here, the Data Visualization Laboratory at the Rockefeller Library, Brown Univ.
Sustaining an Herbarium

- Identity
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- Publicity
Social Media

Publicity at unexpected venues – other museums

Formal presentation about the herbarium

Publicity at unexpected venues – Science Meetups
"Without plants, there is no life."
Visitors viewing *Amorphophallus titans* at NYBG, July 2016
Hello! My name is Jake Kempin and I am 11 years old (going into middle school) and I live in Katonah, New York. I am very interested in botany and study of herbs and plants and always dreamed about going into the Herbarium and studying different species of plants and herbs. I was wondering if at all possible if I could arrange an appointment to study and take notes on different plants inside the Herbarium. That would be spectacular!

Thank you very much for your consideration.

Sincerely,

Jake Kempin
Acknowledgements