

# 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?*

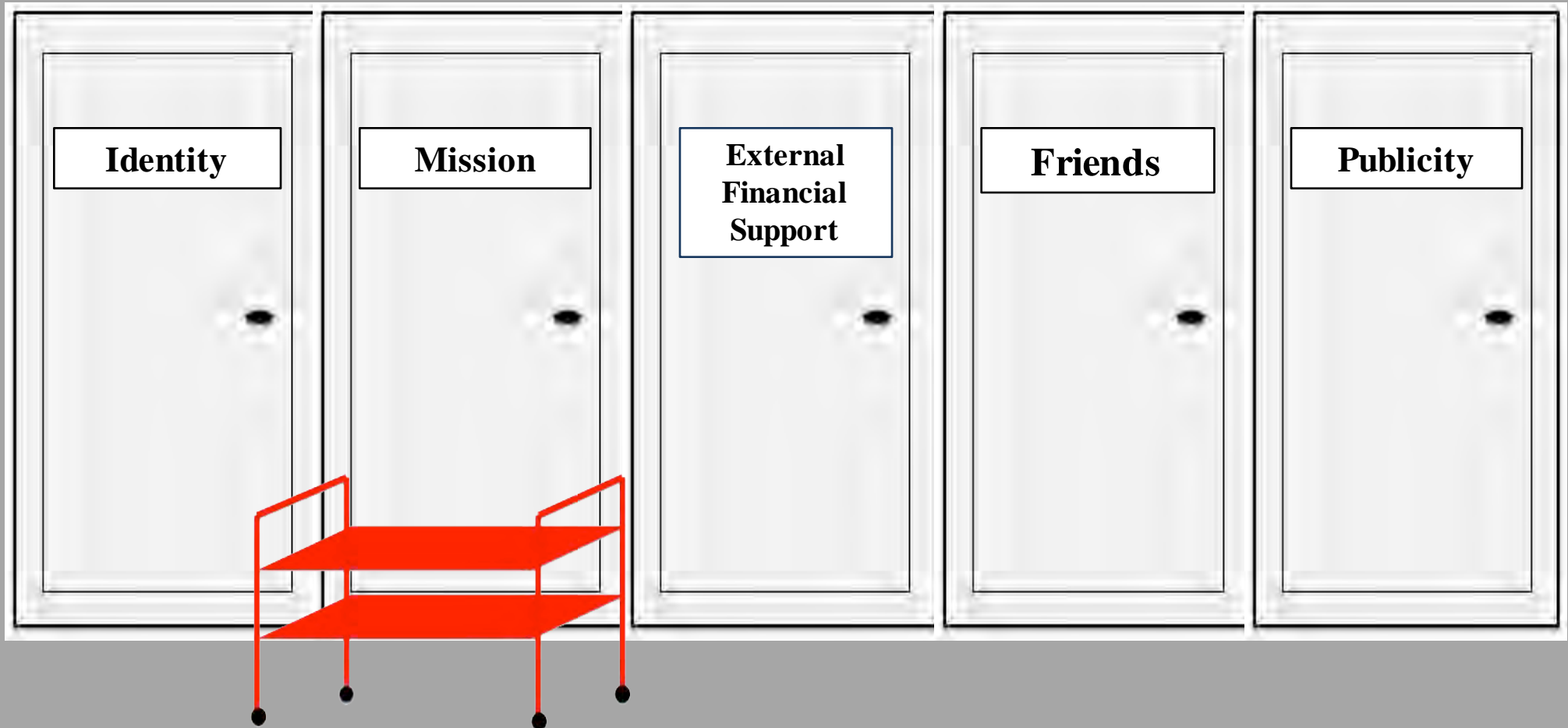
*“Herbarium X has the best/largest/oldest collection of algae/bryophytes/fungi/plants in region Y”*

# 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







Identification



Digitization



Mounters



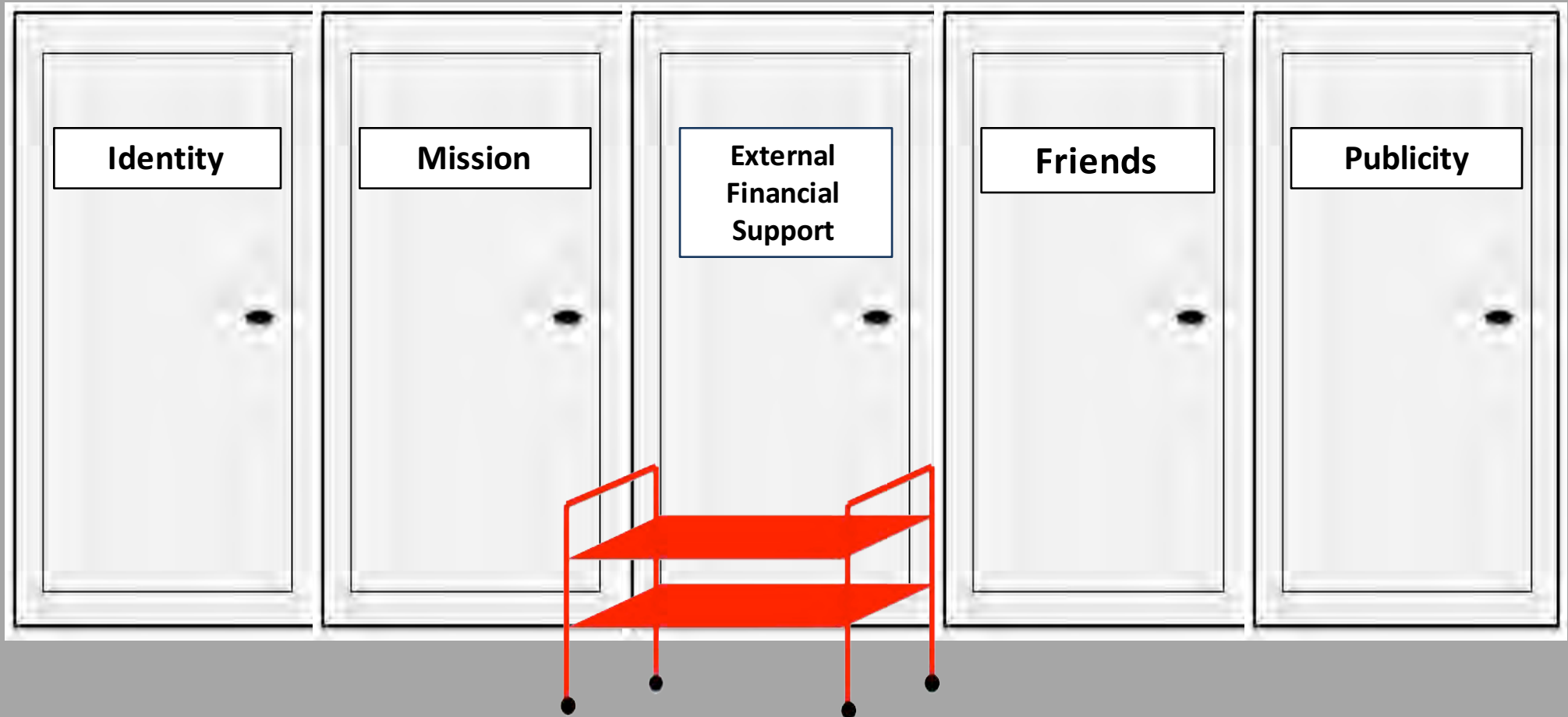
Filing



## Contribute to Larger Objectives

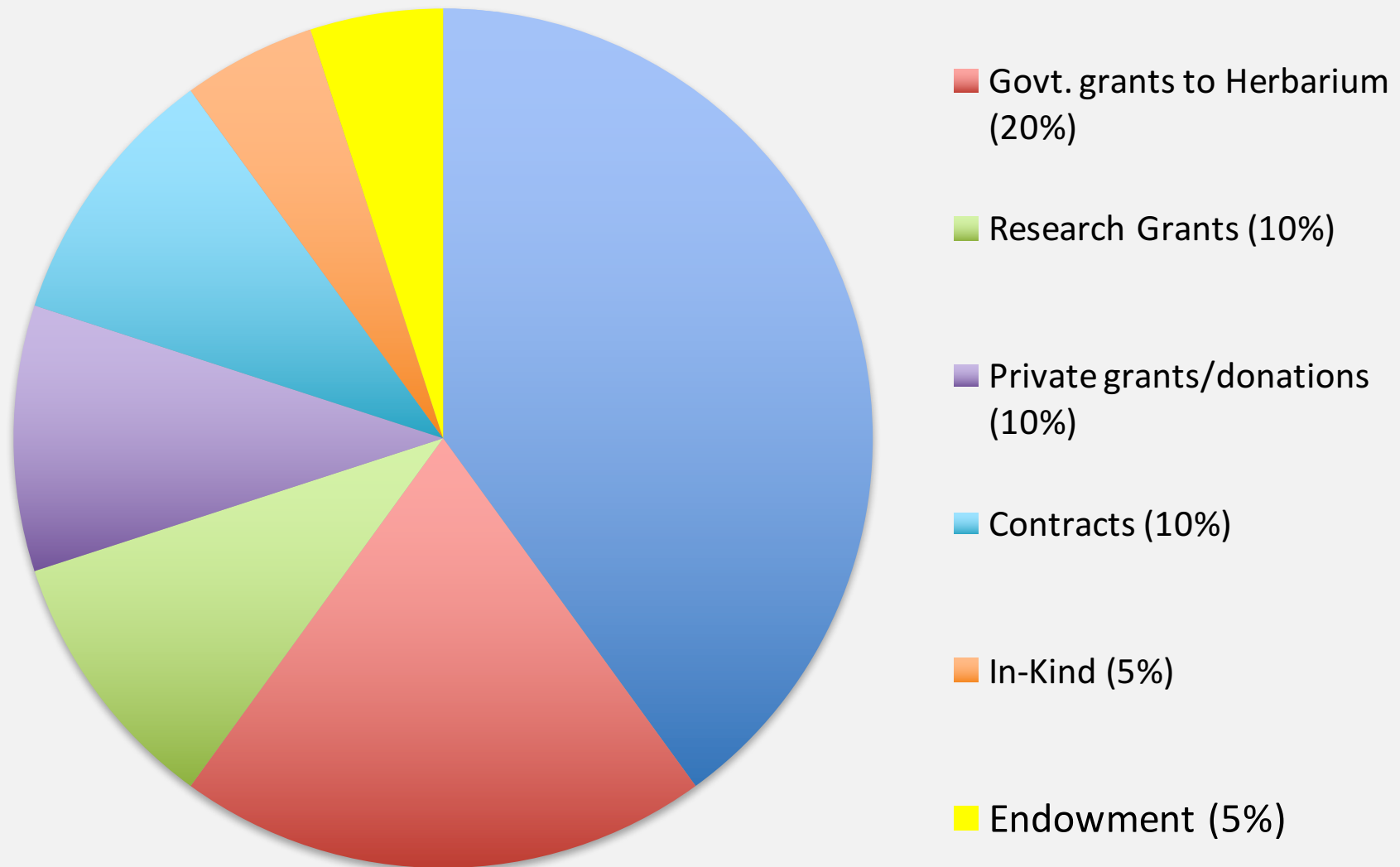


# Sustaining an Herbarium

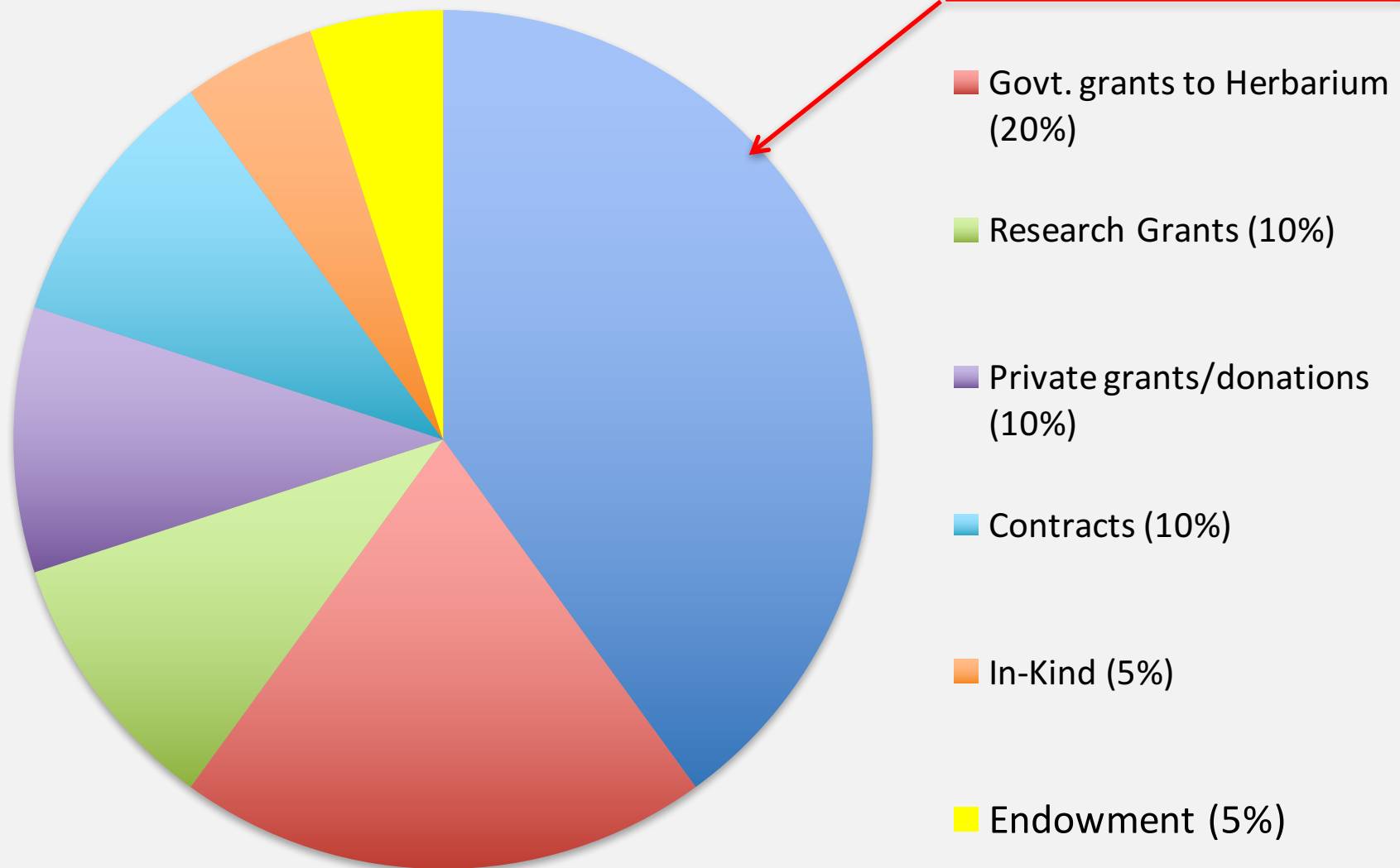




## An Idealized, Diversified Herbarium Budget

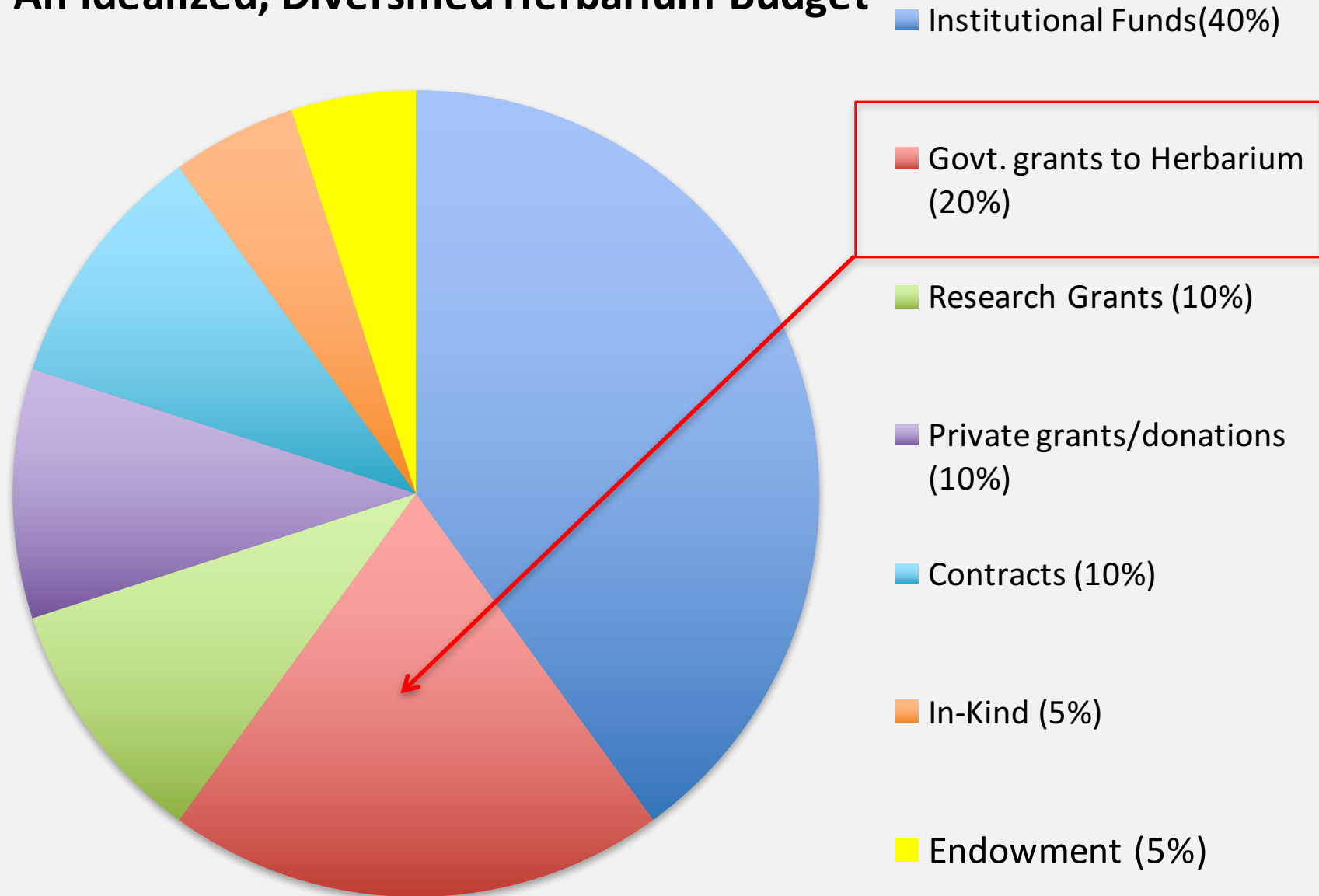


## An Idealized, Diversified Herbarium Budget

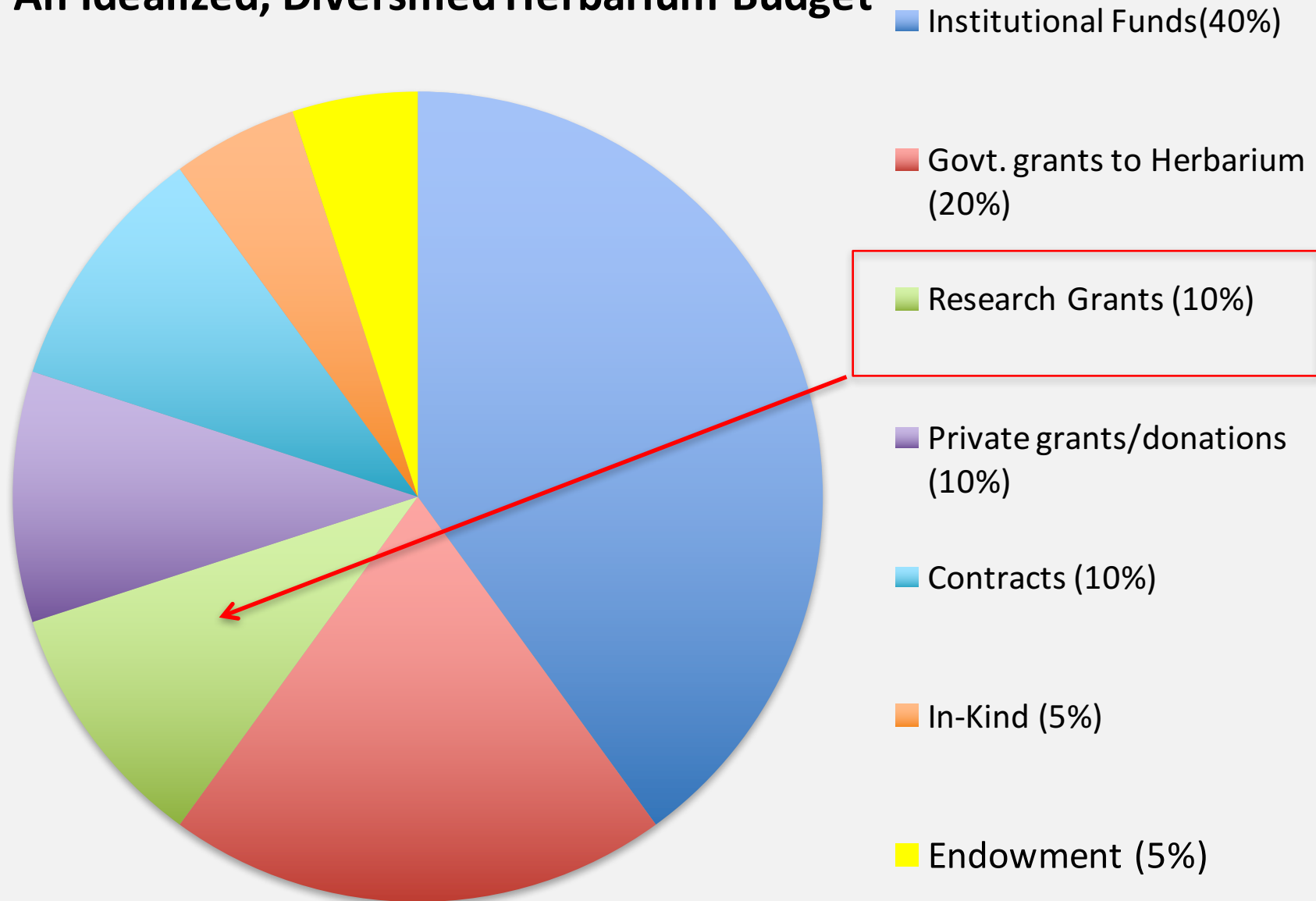




## An Idealized, Diversified Herbarium Budget

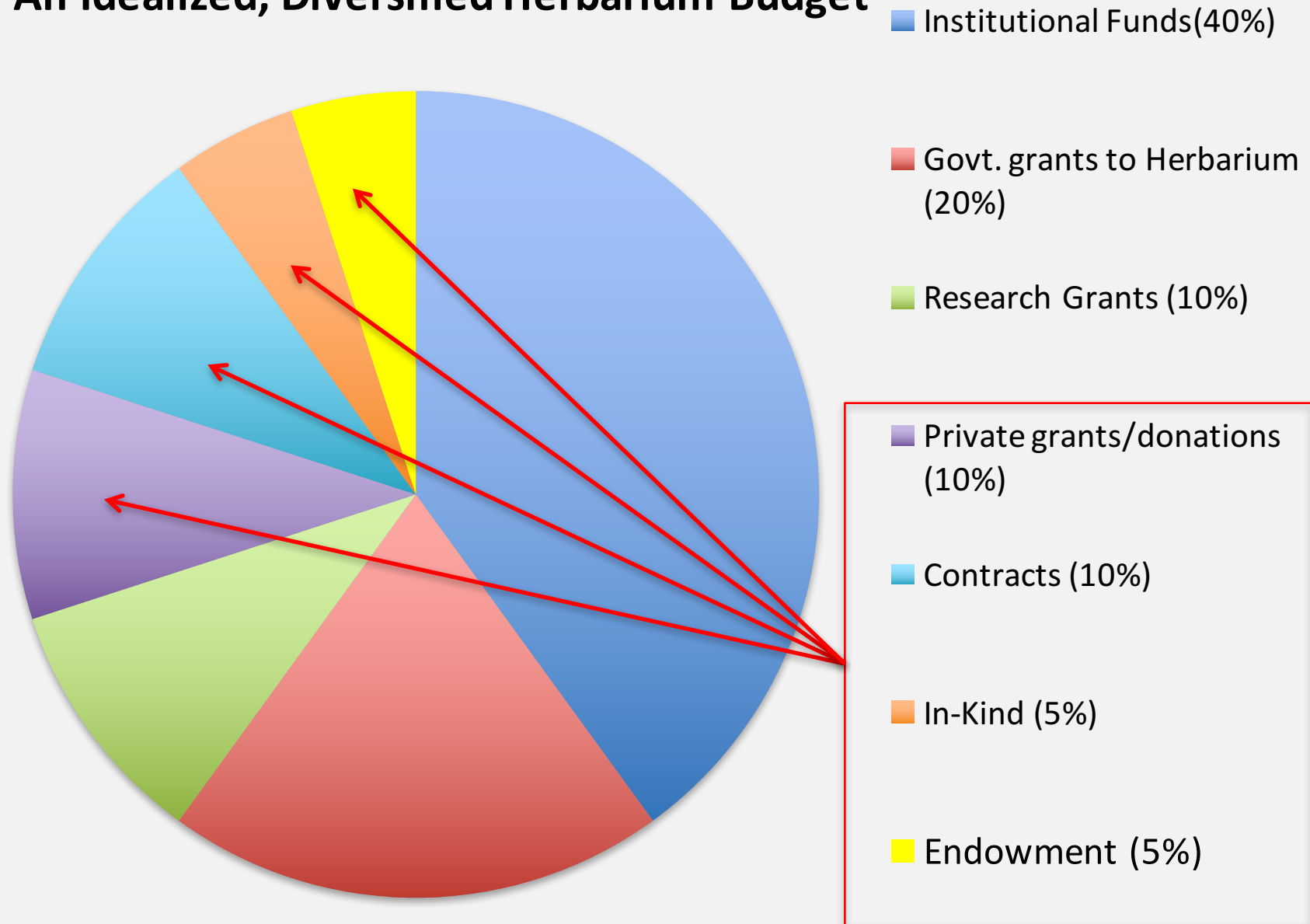


## An Idealized, Diversified Herbarium Budget

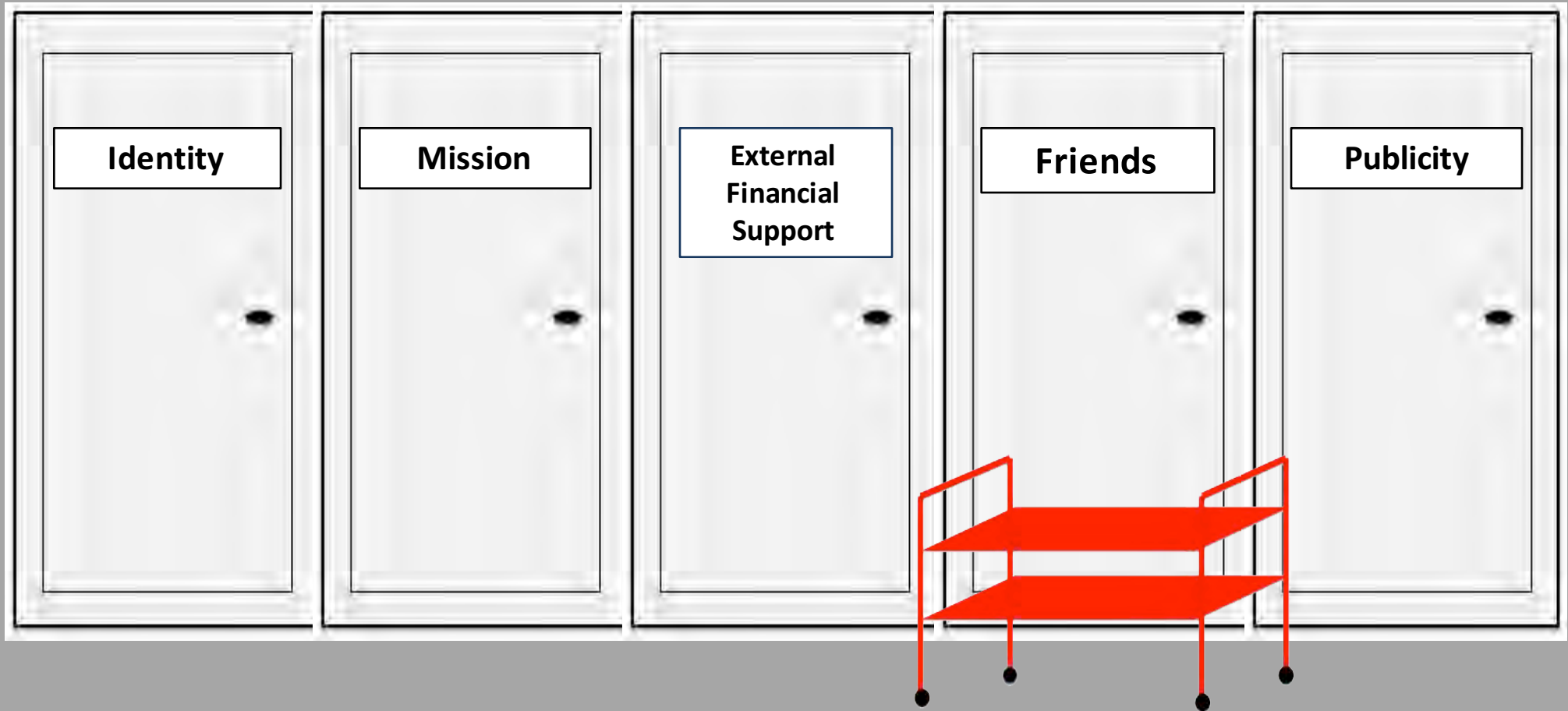




## An Idealized, Diversified Herbarium Budget



# Sustaining an Herbarium







## The World's Herbaria – by Region



- EUROPE
- NORTH AMERICA
- CENTRAL & NORTHERN ASIA
- SOUTH AMERICA AND CARIBBEAN
- SE ASIA AND PACIFIC
- AFRICA
- AUSTRALIA/ NEW ZEALAND (2%)



# 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 :

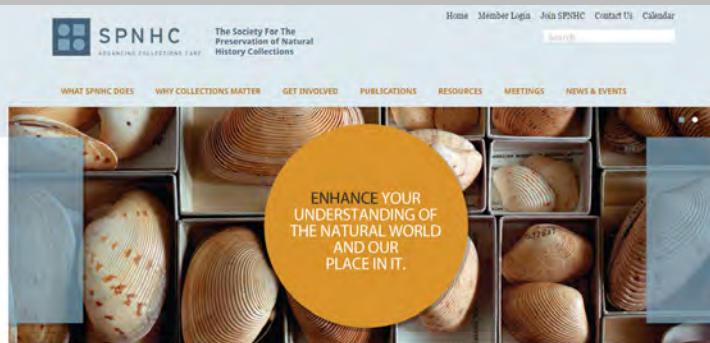
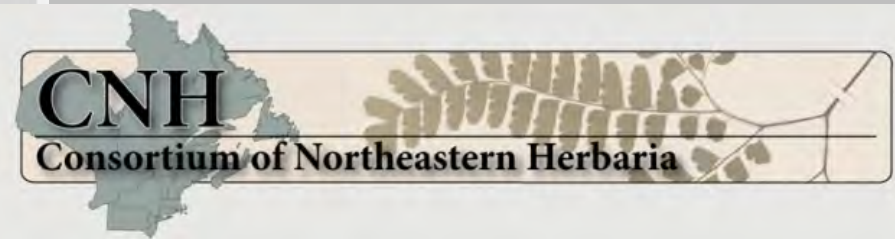
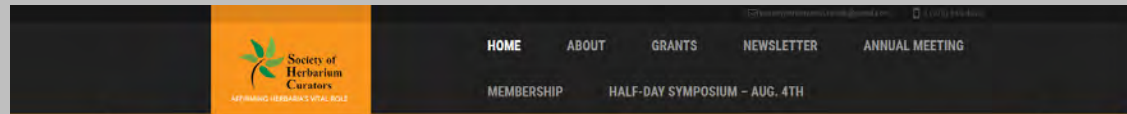
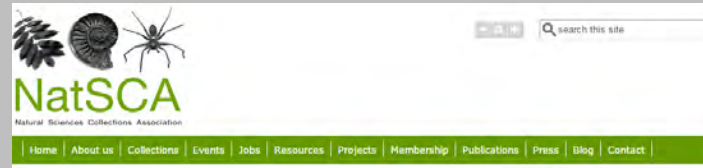
**213 (35%)**

Records  
shared:

**19,781,000  
(26%)**



# Organizations for Collections Professionals

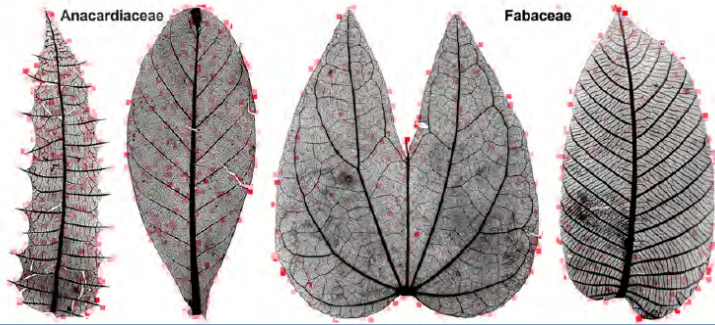


The Society for the Preservation of Natural History Collections [SPNHC] is an international society whose mission is to improve the preservation, conservation and management of natural history collections to ensure their continuing value to society.





# Research Community



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



*Long-term relationships among atmospheric CO<sub>2</sub>, 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

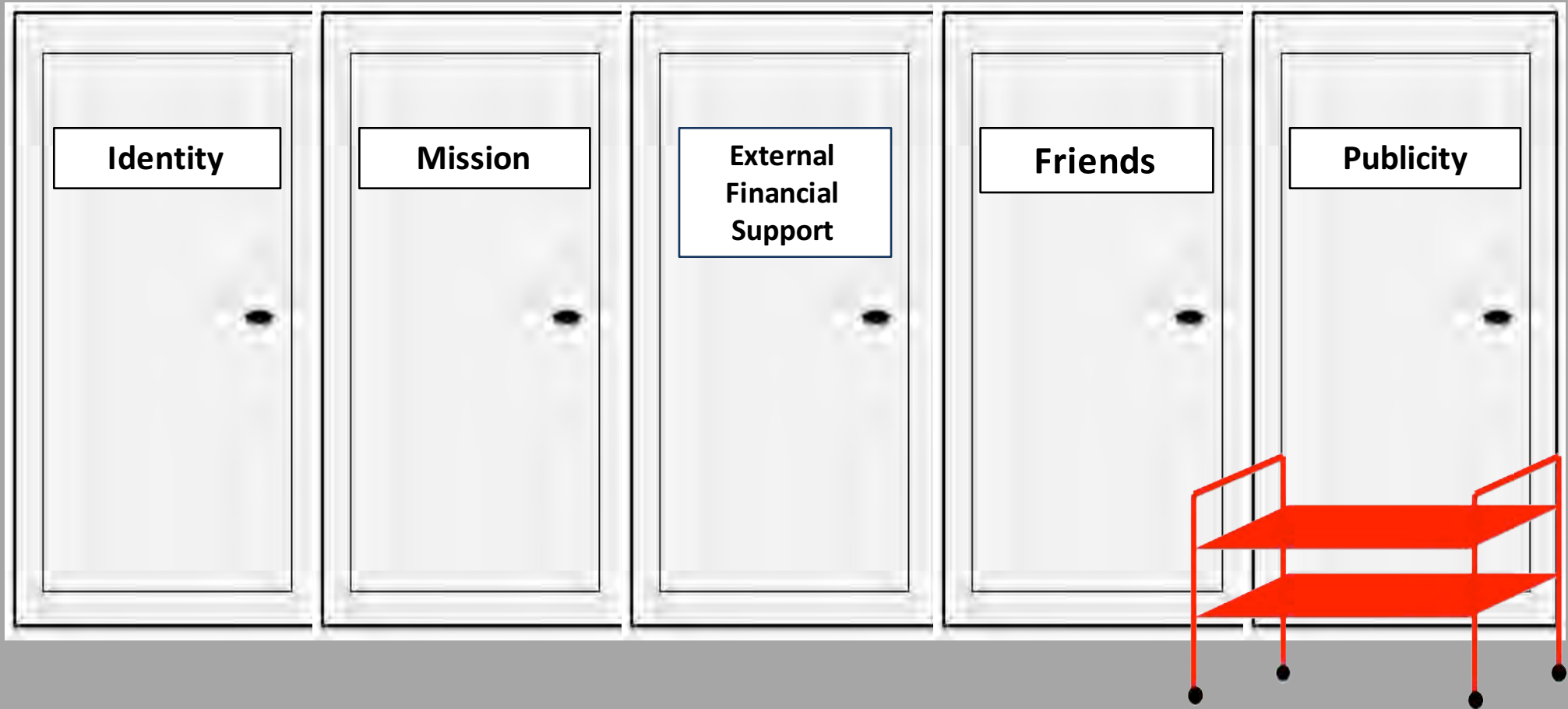


Libraries- Here, the Data Visualization Laboratory at the Rockefeller Library, Brown Univ.





# Sustaining an Herbarium

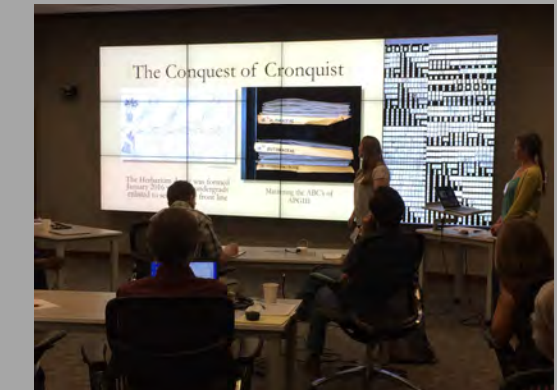




facebook

twitter

Social Media



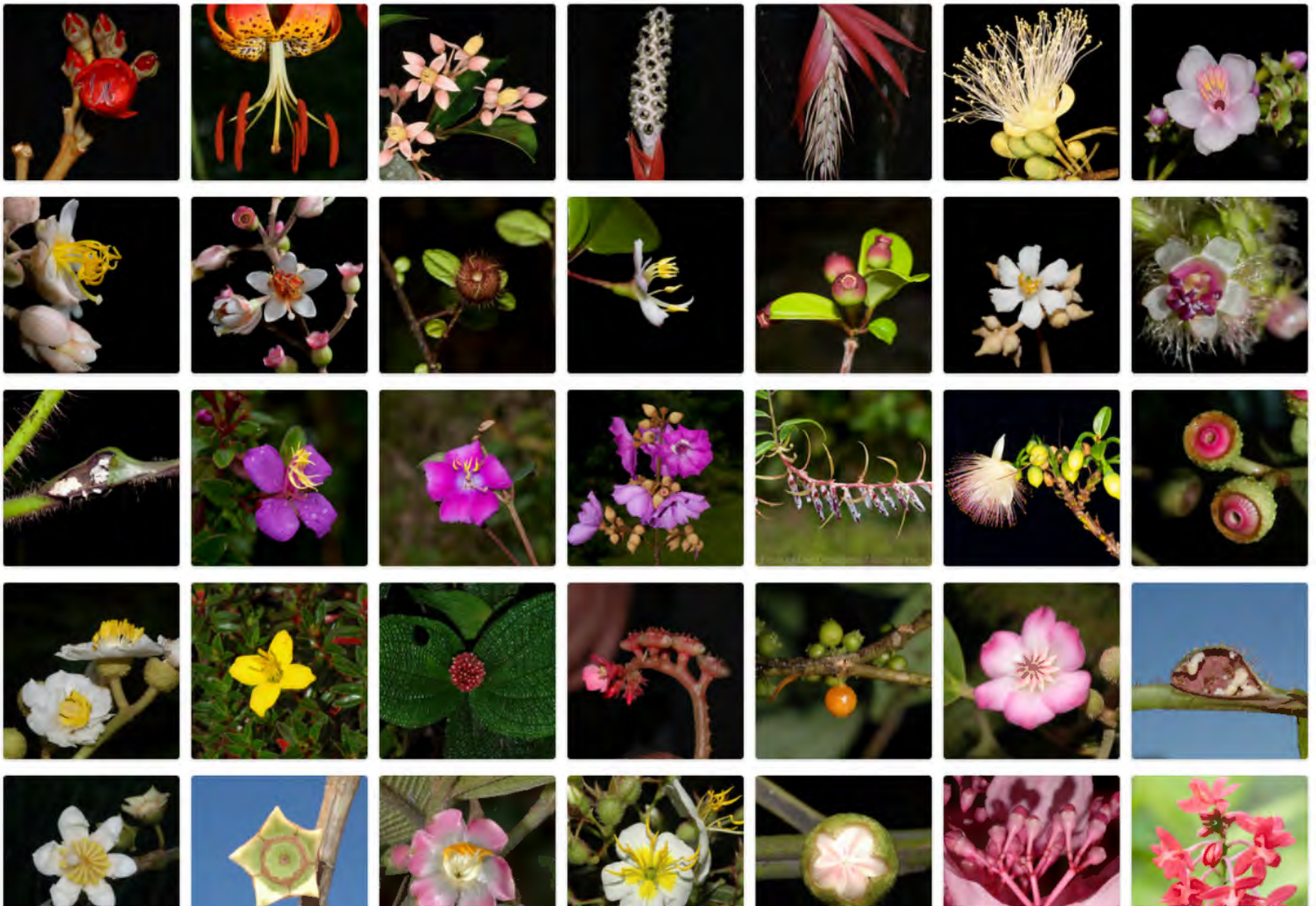
Publicity at unexpected venues – other museums

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



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-----Original Message-----

From: Jake Kempin [mailto:schmutzy4455@gmail.com]

Sent: Thursday, July 28, 2016 6:27 PM

To: Thiers, Barbara

Subject: New York Botanical Garden Herbarium Visit

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





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