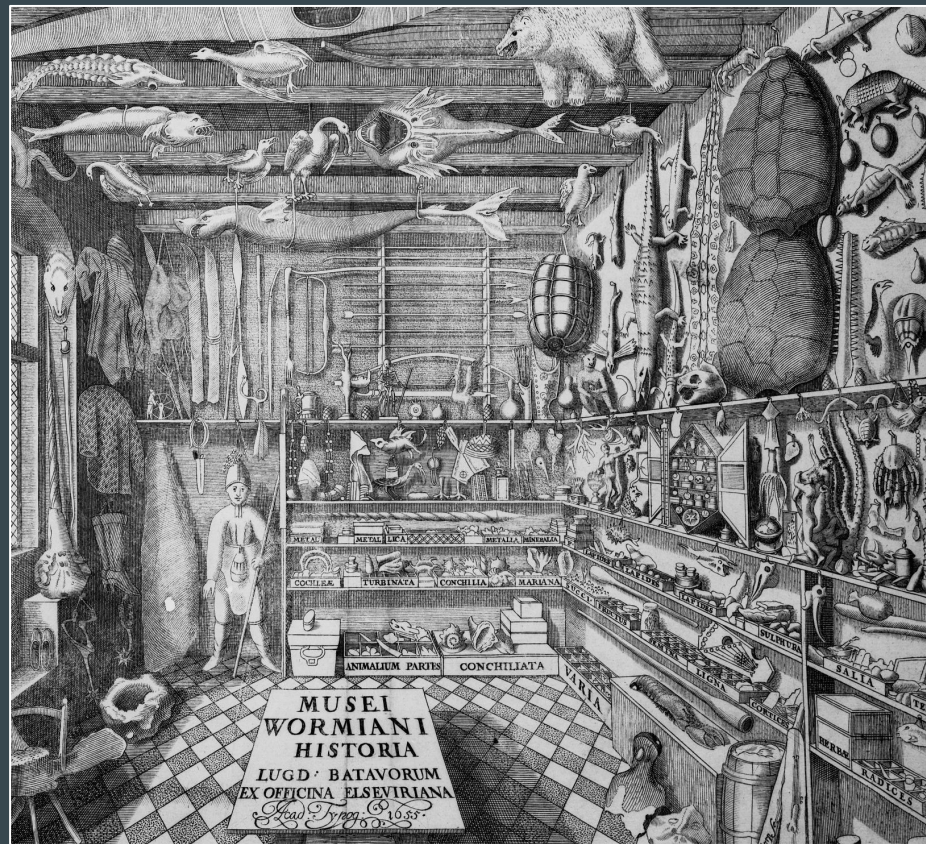


# Uncovering Hidden Figures of Natural History Collections Using Digital Data Sleuthing & Storytelling

Authored by The Hidden Figures  
Working Group

"Musei Wormiani Historia" Ole Worm's Cabinet of Curiosities, ca. 1600



<https://wellcomecollection.org/works/mzvgvzbt>

# Meet the Hidden Figures Working Group



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BioQUEST &  
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University



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Natural History

# Overview

1. Introduction to the problem
2. Making history personal through storytelling
3. Data sleuthing: brief workflow overview
4. Educational activities
5. Additional opportunities



Catesby and Edwards, 1771. *The natural history of Carolina, Florida, and the Bahama Islands*  
<https://www.biodiversitylibrary.org/page/52786375>





Credit: Chip Clark/Smithsonian National Museum of Natural History



Roxie Laybourne. Credit: Chip Clark/Smithsonian National Museum of Natural History



Credit: The Trustees of the Natural History Museum, London



Credit: Chip Clark, Kristen N. Quarles/Smithsonian National Museum of Natural History





# 1. Introduction to the problem



**TASK**

**TUTORIAL**

Collected By

NEED SOME HELP WITH THIS TASK?

Collector Number

NEED SOME HELP WITH THIS TASK?

Month

Day

Year

NEED SOME HELP WITH THIS TASK?



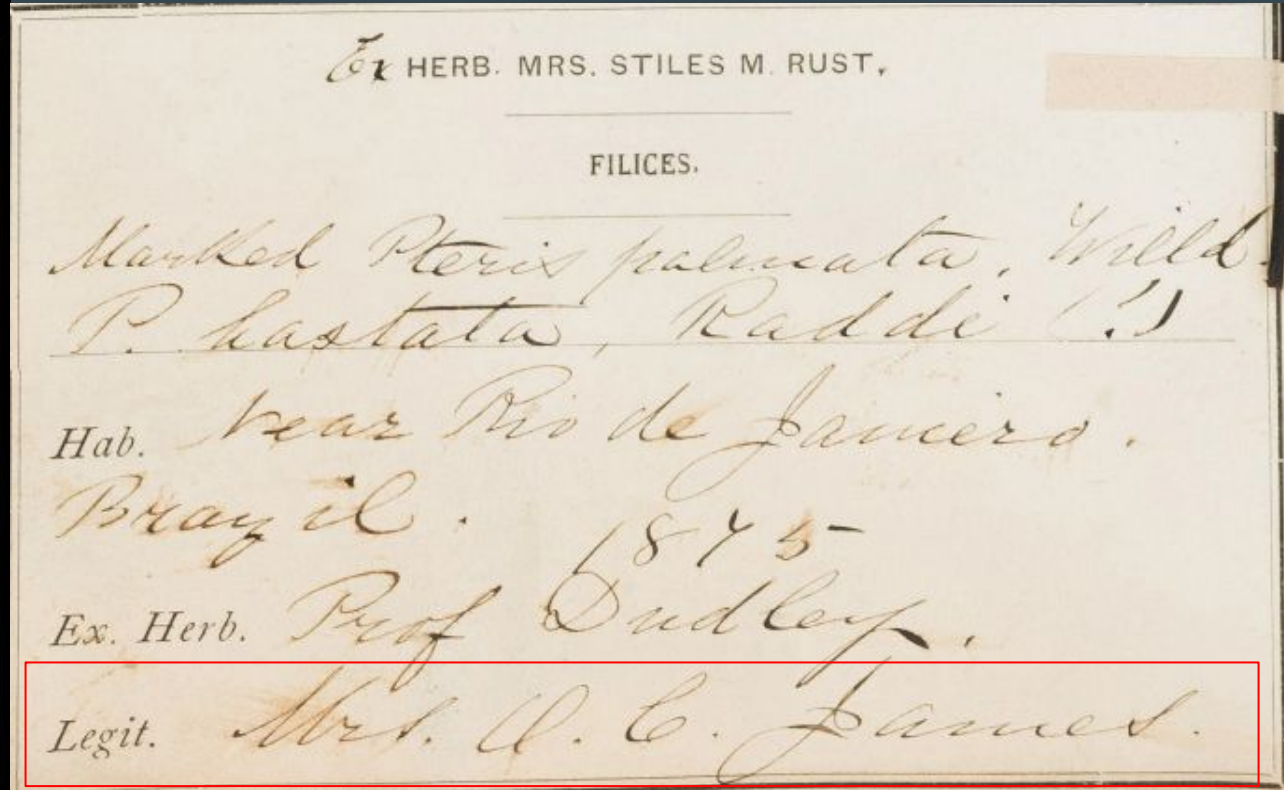
notesfromnature.org



wedigbio.org



# 1. Introduction to the problem



Who are these collectors?

# 1. Introduction to the problem



“Mrs. O. C. James”



Rosaltha Sampson James

A recent finding by Siobhan  
via data sleuthing

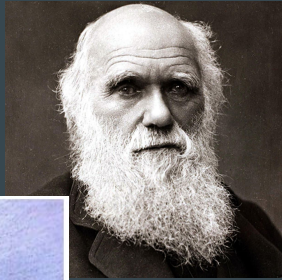


# The problem is actually much bigger...



George Forrest's team of local Naxi people, included women. In his letters he described their toughness and practicality for the task of collecting.

<https://natsca.blog/2020/07/16/collecting-with-lao-chao-zhao-chengzhang-decolonising-the-collecting-trips-of-george-forrest/>



**Figure 3. John Edmonstone, the freed Guyana slave who taught Charles Darwin how to preserve bird specimens.**

Das, S., & Lowe, M. (2018). Nature read in black and white: Decolonial approaches to interpreting natural history collections. *Journal of Natural Science Collections*, 6, 4-14.

The problem is actually much bigger...



York

Lewis and Clark

Sacagawea



## 2. What can be done?

- Countless examples similar to these
  - Heros that made understanding the natural world possible
  - Future generations need to know:
    - Who these people are
    - What their stories are
    - Why it matters
- 2-part workflow
  - Connect people to their data when possible
  - If documentation is missing focus on the story.

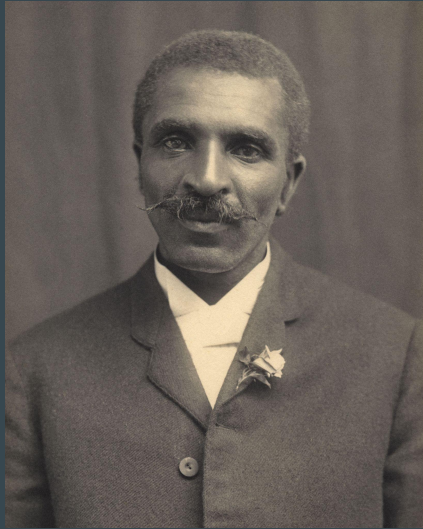


[https://s.abcnews.com/images/US/roosevelt-1-gty-er-211120\\_1637430302601\\_hpMain\\_4x5\\_992.jpg](https://s.abcnews.com/images/US/roosevelt-1-gty-er-211120_1637430302601_hpMain_4x5_992.jpg)

## 2. Storytelling

These hidden figures need their stories to be told.

Our goal is to empower students to become their storytellers.



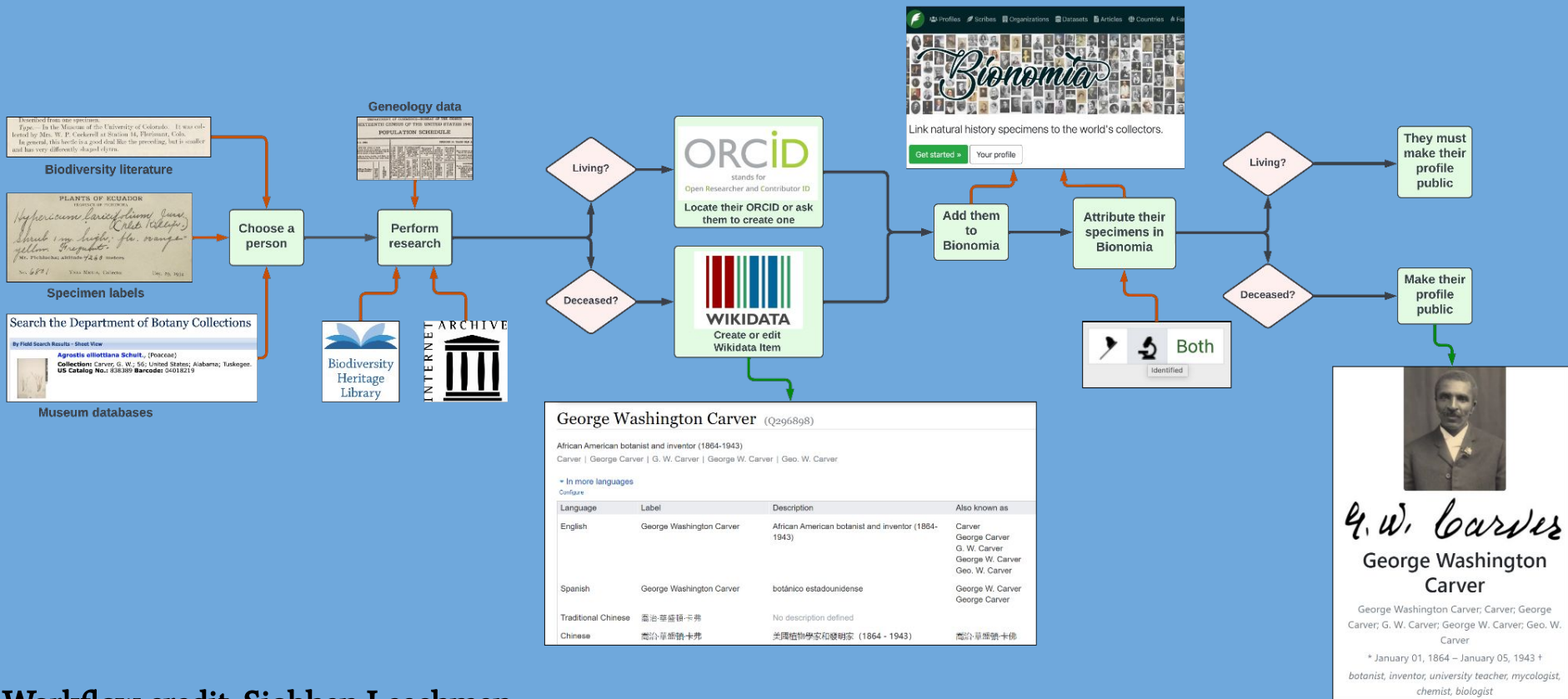
George Washington Carver,  
credit: public domain



Sophie Lutterlough, credit:  
Smithsonian Archives



# 3. Data sleuthing



Workflow credit: Siobhan Leachman

## 2. Storytelling

“Stories ... elicit an emotional response ... students can benefit from stories being used in courses ... to also increase their engagement with the material and thereby increasing their learning and retention of the information ... this engagement may even promote learning outside the classroom as students are inspired to continue their understanding of a topic.”

Csikar & Stefaniak, 2018. The Utility of Storytelling Strategies in the Biology Classroom. *Contemporary Educational Technology*, 9 (1): 42-60.

**Even more importantly: stories provide insight into the shared experiences of marginalized groups, both historically and in present day.**



## 4. Educational activities

- **BIOME** Summer Workshop 2022: Sparking IDEAS: Inclusive, Diverse, Equitable, and Accessible Communities in STEM Classrooms
- **BIOME** Fall working groups
- Continued through spring working on a CURE supported by **BCEENET**



**SPARKING IDEAS**  
**BIOME Institute 2022**



Inclusive, Diverse, Equitable, and Accessible Communities in STEM Classrooms

# 4. Educational activities

## Course-based Undergraduate Research Experience (CURE)

### • Introductory module highlights:

- What are natural history collections and why are they needed?
- Read Das & Lowe 2018
- Learn how to annotate academic literature
- Class discussion on issues including scientific racism, decolonial views of natural history collections

### • Intro to ORCID highlights:

- Why does it matter?
- Student Activity: Get yourself an ORCID!

## Nature Read in Black and White: decolonial approaches to interpreting natural history collections

Subhadra Das<sup>1\*</sup> and Miranda Lowe<sup>2</sup>

Address: <sup>1</sup>UCL Collections (Science), 223 Wilkins Building, UCL, Gower Street, London, WC1E 6BT, UK

<sup>2</sup>Natural History Museum, Dept of Life Sciences, Invertebrates Division, Cromwell Road, London, SW7 5BD, UK

\*Corresponding author: subhadra.das@ucl.ac.uk

**Citation:** Das, S. and Lowe, M., 2018. Nature Read in Black and White: decolonial approaches to interpreting natural history collections. *Journal of Natural Science Collections*, 6, pp.4-14.



Received: 28/08/2018

Accepted: 21/11/2018

### WORKING LIFE

By Johana Goyes Vallejos

## What's in a name?

“I think it is ready to submit,” one of my Ph.D. committee members said. I was incredulous; the manuscript overflowed with red ink. But she was my biggest fan and my harshest critic; if she said it was ready, then it must be true. Now I needed to ask the question that had been nagging me since I began to work on the manuscript: “How should I publish my name?” “However you want,” she replied. “It is time for people to understand that Latin American scientists have two last names.”

Since I moved to the United States to pursue my Ph.D., my colleagues have had trouble pronouncing my first name, let alone my two very Hispanic-sounding surnames—my father's first and then my mother's, as is standard in most Spanish-speaking countries. And English-language publishing systems are often not designed for two last names. Using just one surname or connecting them with a hyphen, as many Hispanic scientists publishing their work in English do, would certainly make matters “easier.” But easier for whom? Growing up, I never met anyone whose last name was hyphenated. I have always been proud to use my two surnames, honoring both of my parents and my cultural heritage.



“I worried that I would face a career-long battle to publish my name as I want it.”

for not following my advice.” An editor-in-chief made a similar comment, stating, “You decide how your name should be spelled, but the options are your two surnames with a hyphen or just one of them.” I refused and ultimately published without the hyphen. Still, in the journal's table of contents, my name appears incorrectly as “Vallejos, J.G.” And because other researchers sometimes cite my name incorrectly, my metrics—for example on Web of Science, Scopus, and Google Scholar—vary greatly, which could affect future job prospects and promotions.

Two last names are too much for them to handle, and they will butcher them anyway,” my Latin American friends say when explaining why they hyphenate or use a single last name for their



Goyes Vallejos, J. (2021, May 14). What's in a name?

Science.

<https://doi.org/10.1126/science.372.6543.754>



# 4. Educational activities

## Course-based Undergraduate Research Experience (CURE)

- **On the horizon:**
  - The Importance of Stories In Science
  - Becoming An Internet Sleuth
  - An Introduction To BIONOMIA
  - Editing or Creating a Wikidata item
- **Another related educational resource (just out!):**

**Natural Sciences Education**



ORIGINAL ARTICLE

 Open Access

Student-focused, career-driven exploration in natural history museums through experiential education and mentorship: A model to intentionally increase the racial and ethnic diversity of students

Adania D. C. Flemming



First published: 12 December 2022

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<https://doi.org/10.1002/nse2.20097>

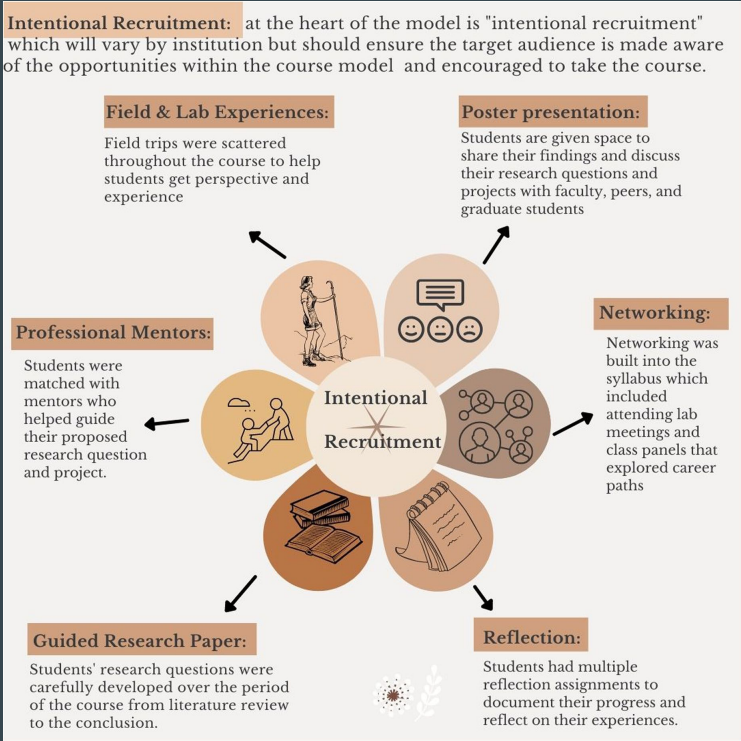
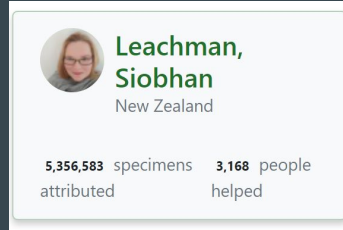
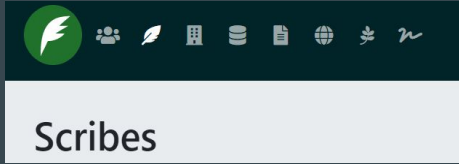


Figure 1: Introduction to Natural History course model components. Credit: A. Blackwell, CC BY-NC A. Flemming and A. Blackwell.

# 5. Additional opportunities

Become a scribe with Bionomia



## Black in Natural History Museums

Get involved with BiNHMs by suggesting people to feature or by writing a profile  
Email: [blackinnhm@gmail.com](mailto:blackinnhm@gmail.com)

Contact us if you would like to be kept updated on module releases and other opportunities! Email: [molly.phillips@bioquest.org](mailto:molly.phillips@bioquest.org)

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- Scan the QR code or visit <https://tinyurl.com/s3zp8em7>
- Find Molly Phillips (BioQUEST Communications Lead) @ LDC to ask questions or get a quick demo.
- Drop by the ongoing BQ Office Hours (Weds @noon; Thurs @2 ET) <https://t.co/747FGhRhD7>
- Email [info@bioquest.org](mailto:info@bioquest.org) with questions - we check it every day.



I am happy to help,  
or to talk about  
animals!



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  - Deb Rook, and the rest of the BioQUEST team
  - Anna Monfils, Central Michigan University



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