

# Broadening Diversity in the Biological Sciences: The Role of Small Collections



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Small Collections Workshop  
9-10 April 2014  
Central Michigan University  
Mt. Pleasant, MI

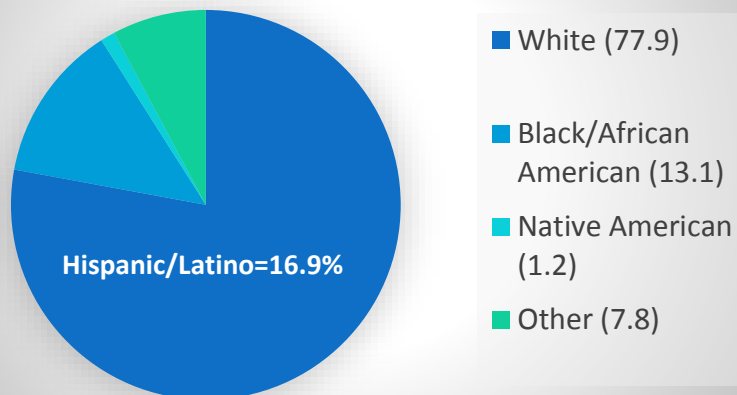


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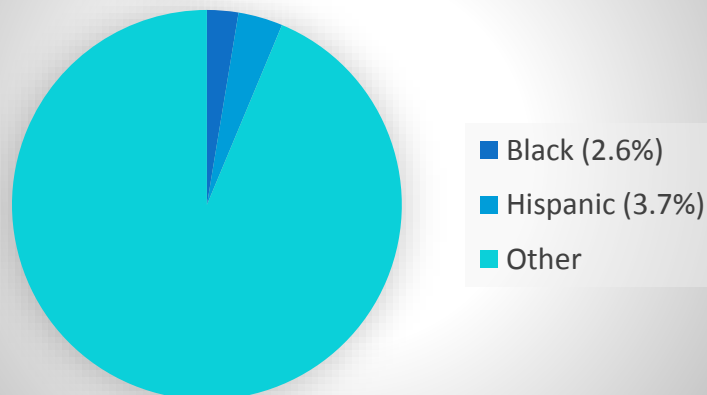
# A Few Numbers

## Population 2012 (%)



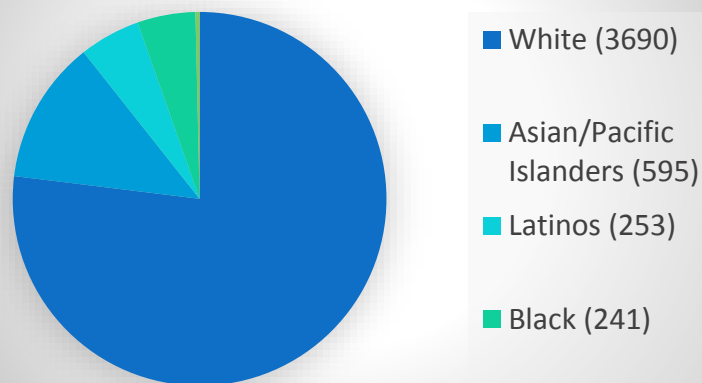
US Census Bureau: Quick Facts (<http://quickfacts.census.gov/qfd/states/00000.html>)

## New PHDs 1993-2002



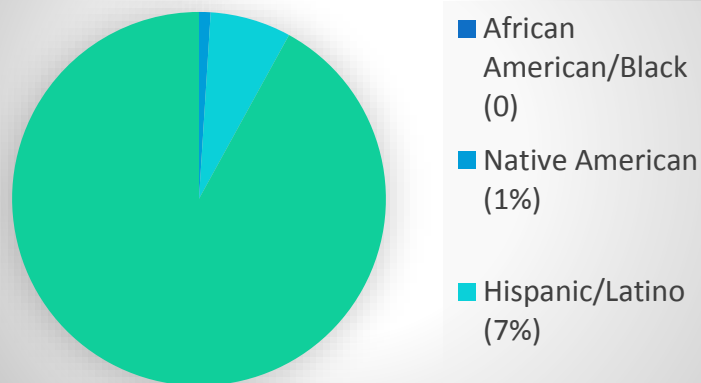
National Center for Education Statistics (<http://ccv.med.harvard.edu/diversity.htm>)

## PHDs 2008

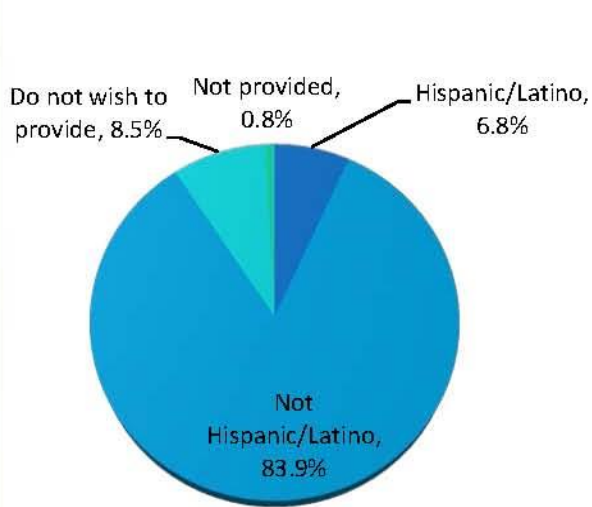


National Center for Education Statistics (<http://ccv.med.harvard.edu/diversity.htm>)

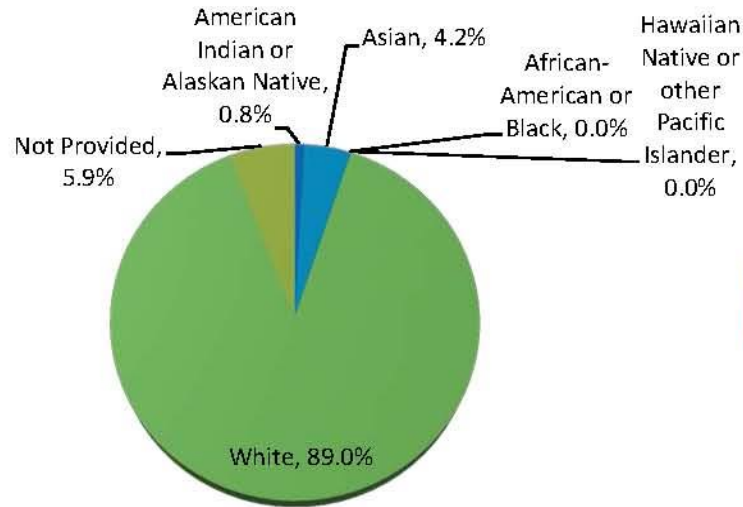
## 528 iDigBio Attendees



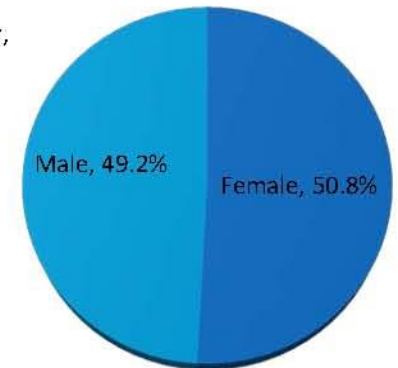
# Workshop Demographics (since 9/12)



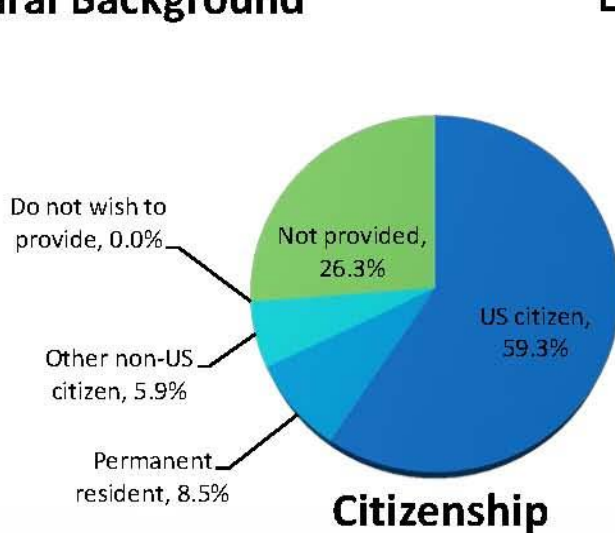
**Cultural Background**



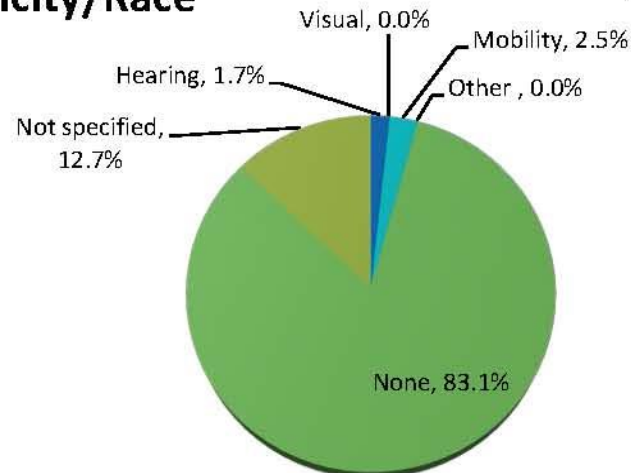
**Ethnicity/Race**



**Gender**



**Citizenship**



**Disability**

## Broadening Minority Participation in the Biological Sciences: A Workshop Focused on Careers and Graduate Study Opportunities in Biology

Space for this workshop is limited. To register, complete the [online registration form](#). Please visit the [workshop agenda](#) for more information on the day's activities. See the [workshop flyer/announcement](#).

The [University of Central Florida](#), [University of Florida](#), [Florida Museum of Natural History](#), and [iDigBio](#) are pleased to announce a free 1-day workshop for undergraduate students focusing on opportunities for careers and



graduate study in field and environmental biology, biodiversity, ecology, and evolution. The workshop is open to anyone. A primary goal is increasing minority participation in the biological sciences within such groups as African and Black Americans, Native Americans, and individuals of Hispanic ethnicity. Registration is open to freshmen, sophomores, juniors, seniors, and recent graduates. [Click here for the agenda](#).

The workshop will be held at the University of Central Florida's [Live Oak Center](#) Saturday, February 1, 2014. Activities will begin at 10:00 a.m. with a keynote address by [Dr. Scott Edwards](#), professor of organismic and evolutionary biology at Harvard University and division director at the National Science Foundation.



Lunch will be provided and will include a special opportunity to interact with undergraduate and graduate students, post-doctoral fellows, workshop speakers, and biology faculty from several universities. Following lunch, attendees will have the chance to explore several hands-on stations featuring a variety of scientific specimens.



The end of the day will feature a reception and mixer with heavy hors d'oeuvres and the opportunity to win one of ten \$25.00 Amazon gift cards as well as allow further opportunities for individualized conversation, personal attention, and networking.

### Researchers

Browse our specimen portal



### Collections Staff

Learn how your collection can benefit from our work



### Teachers & Students

Learning resources & opportunities to engage





**What:** Free career shadowing opportunity.

**Who:** Undergraduate students interested in a career in the biological sciences.

**Where:** Florida Museum of Natural History, University of Florida, Gainesville.

**When:** April 17-19, 2014.

## Benefits

- Shadow biologists and museum scientists in their daily work.
- Learn about biological collections and their importance to biodiversity science.
- Spend time behind the scenes of a major museum.
- Get hands-on experience in the biological sciences.
- Experience first hand an array of career opportunities in the biological sciences.
- Meet and interact with working scientists.
- Begin establishing your professional network.

**Scholarship includes 2 nights' lodging, meals, assistance with transportation.  
Competitive. Limited to 10 students.**

**Apply by March 1: <http://tinyurl.com/flmnhshadowing>**

To learn more, e-mail Dr. Gil Nelson ([gnelson.idigbio@gmail.com](mailto:gnelson.idigbio@gmail.com))



Fifteen students accepted for this opportunity.

## Where do we begin?



Research shows that kids that have developed an interest in science by the end of elementary school are more likely to pursue advanced science courses in high school or college.



## How do we nurture that love of science?



## Ways to Engage

### Elementary school students

- Career days
- Shadowing
- Summer day camps
- Providing programs that showcase the collections

### High school students

- Internships
- Community service projects
- Shadowing
- Junior curator programs

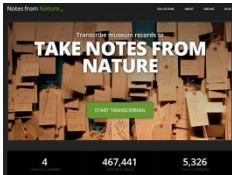
### College students

- Internships
- Volunteer opportunities



# How do we involve the younger generations?

- Get the parents involved via citizen science projects
  - Notes from Nature ([notesfromnature.org](http://notesfromnature.org))
  - Your Wild Life ([yourwildlife.org](http://yourwildlife.org))



- Provide programs for educators
  - Summer educator institutes or educator-in-residence
  - One day workshops – for teachers or at the schools
  - Fieldtrips
  - Resources on the web





## Where do we start?

- Begin with your local educators
  - Provide web-based resources
    - Handouts (ex. what's in my backyard)
    - Videos (short)
      - Basics of your specialty
      - Tour of the collection
      - Novel new approach to your research
      - A day in the life
    - Skype with the classroom
      - Q&A
  - Present at career day
  - Create a simple in-school program
  - Video contest
- Encourage educators to bring the students to the museum
  - Behind the scenes tours
  - Short presentation
  - Simple interactive programs
  - Send students home with citizen science information & how to get more involved



## Let's talk....

- Is your institution reaching out to elementary and middle schools?
  - What approach have you found works best?
- How can museums foster credit-based internships for high school students?
- What methods have been successful at your institution in opening collections to underrepresented populations?
- What are your biggest road blocks to reaching out to your local schools and underrepresented populations?
- Are smaller institutions more closely tied to their communities, and hence more likely to recruit from local sources?