

"At this point, I wish to emphasize what I believe will ultimately prove to be the greatest value to our museum—and that is that the student of the future will have access to the original record of faunal conditions .... Right now are probably beginning changes to be wrought in the next few years vastly more conspicuous than those that have occurred in ten times that length of time preceding."

-J. Grinnell (1912)



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### AIM-UP!

We are an NSF-funded research coordinating network (RCN) that aims to increase the integration of natural history collections into undergraduate education. Our goals are to:

1. Train undergraduates in museum-based research
2. Develop instructional tools that utilize museum specimens or databases
3. Introduce educators to the instructional power of museum collections and databases
4. Increase public awareness of the importance of natural history collections.



### The Challenge

Few educators that are not affiliated with museums are aware of the educational potential of collections and associated databases. But this unfamiliarity also includes students and instructors at institutions with large museums: a recent survey of ~ 100 beginning undergraduates at UC Berkeley revealed that > 70% were unaware of the Museum of Vertebrate Zoology and that < 10% had visited it. The same survey of ~100 undergraduates at UNM revealed that about 50% were unaware of UNM's Museum of Southwestern Biology and only about 15% had visited. Clearly, a significant challenge is to inform students and instructors about the potential role of collections in undergraduate teaching and research at all universities.



### Target Audiences

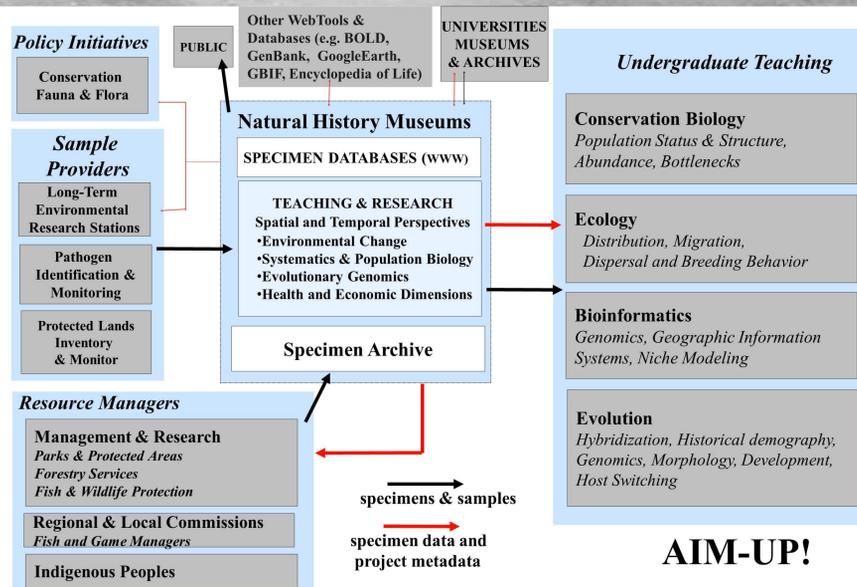
- Natural history collections (academic and free-standing)
- Educators with or without collections



### Interested?

We are recruiting people to join the network and participate in one of our working groups.

- Bioinformatics and Web Presence
- Outreach, Development and Design
- Education
- Network Evaluation



### What do collections-based approaches offer undergraduate education?

- Scale
  - time and space
- Integration of Data
  - biotic and abiotic
  - genomic and organismal
- Complexity
- Web-based Discovery
- Educational Process
  - Experiential versus passive
  - Actual data



### Annual Themes

- Year 1 – Integrative Inventories
- Year 2 – Geographic Variation
- Year 3 – Evolutionary Dynamics of Genomes
- Year 4 – Biotic Response to Climate Change
- Year 5 – Co-evolving Communities of Pathogens & Hosts, relating to Emerging Disease

Museums are essentially archival observatories that provide one of our best windows on historic conditions by establishing the baselines necessary to assess change and predict future impacts, BUT their value depends on our ability to train the next generation of scientists to creatively explore, utilize and integrate these vast resources across disciplines and into critical science initiatives.



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