

Strategies for Vertebrate Digitization

Workshop Agenda



iDigBio, the [Cornell Laboratory of Ornithology](#), [Bishop Museum](#), and [University of Michigan Museum of Zoology](#) are pleased to offer this 3-day workshop focused on the digitization of vertebrate collections, to include the value of live audio and video phenotypic recordings, media metadata standards, media recording techniques (including equipment setup, configuration, and use), methods for linking media to physical specimens, the value of specimen still images, issues in launching a digitization program, digitization workflows, and digital asset management and archiving. Topics to be considered include but are not limited to pre-digitization curation, data acquisition, 2D and 3D imaging, public participation and citizen science, and the use of specimen data in research. This is an all vertebrate taxa workshop, including marine and terrestrial mammals, birds, fishes, reptiles, and amphibians.

What: Vertebrate Digitization Workshop.

When: 3-7 May 2015 (3 and 7 are travel days).

Where: Cornell Laboratory of Ornithology, Ithaca, NY.

Who: Vertebrate collections directors, curators, collections managers, domain scientists, and other collections professionals in U.S museums, biological research stations, and academic institutions.

Planning team: Molly Hagemann (Bishop Museum), Gil Nelson (iDigBio/Florida State University), Cody Thompson (University of Michigan Museum of Zoology), Mike Webster (Cornell Laboratory of Ornithology, Cornell University).

May 4, 2015 (Monday)

| Time | Topic/Activity | Responsible |
|-----------------------------------|---|--|
| 6:30-7:30 a.m. | Breakfast | |
| 7:45 a.m. | Depart hotels | |
| 8:00-8:20 a.m. | Workshop welcome/logistics | Gil Nelson iDigBio/Florida State Mike Webster Cornell Lab |
| 8:20-8:40 a.m. | Introduction to iDigBio | Gil Nelson iDigBio Florida State University |
| 8:40-9:00 a.m. | Mechanisms of community input and the future of digitization at NSF | Scott Edwards Harvard National Science Foundation |
| 9:00-12:00 p.m. | Field and lab tours and demonstrations (by pre-selection) | Cornell staff |
| 12:00-1:00 p.m. | Lunch (Catered, on-site) | |
| Getting started with digitization | | |
| 1:00-1:20 p.m. | Why digitize vertebrate collections? | Cody Thompson University of Michigan |
| 1:20-1:40 p.m. | Introduction to "media specimens" | Mike Webster Cornell Lab of Ornithology |
| 1:40-2:00 p.m. | Challenges facing small museums with moderate collections and minimal resources | Curtis Schmidt Sternberg Museum of Natural History Fort Hays State U |
| 2:00-2:20 p.m. | Resource challenges for small institutions | Luis Ruedas Portland State U |

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| 2:20-2:40 p.m. | Using digital specimens for research | Greg Dietle Paleontology Research Institute Cornell U |
| 2:40-3:00 p.m. | Coffee break | |
| 3:00-3:20 p.m. | Getting started with digitization | Molly Hagemann Bishop Museum |
| 3:20-3:40 p.m. | Data standards | Greg Riccardi iDigBio Florida State U |
| 3:40-4:00 p.m. | Digitizing catalog and ledger data for scientific research | Norma Salcedo Grice Marine Laboratory |
| 4:00-4:20 p.m. | Arctos as a database management system for vertebrate specimens and images | Aren Gunderson U Alaska Museum |
| 4:20-4:40 p.m. | Specify as a database management system for vertebrate specimens and images | Andy Bentley U. Kansas, Biodiversity Institute |
| 4:40-5:00 p.m. | Symbiota as a database management system for vertebrate specimens and images | Ed Gilbert (Remote) Symbiota Arizona State University |
| 5:00-5:30 p.m. | Q&A, Discussion | Gil Nelson/Cody Thompson, moderators |

May 5, 2015 (Tuesday)

| Time | Topic/activity | Responsible |
|----------------------------|--|--|
| 6:30-7:30 a.m. | Breakfast | |
| 7:45 a.m. | Depart hotels | |
| 8:00-11:00 a.m. | Field and lab tours and demonstrations (by pre-selection) | Cornell staff |
| 11:00-11:20 a.m. | Is specimen imaging important in vertebrate digitization? | Molly Hagemann |
| 11:20 a.m.-12:00 p.m. | Q&A; Discussion regarding specimen imaging | Molly Hagemann, moderator |
| 12:00-1:00 p.m. | Lunch (Catered, on-site) | |
| Acquiring and using images | | |
| 1:00-1:20 p.m. | What to database and image? | Molly Hagemann, moderator |
| 1:20-1:40 p.m. | Online measuring | Kevin Nixon Cornell |
| 1:40-2:00 p.m. | Imaging wet collections | Andy Bentley |
| 2:00-2:20 p.m. | Imaging wet collections | Andy Williston Museum of Comparative Zoology, Harvard U |
| 2:20-2:40 p.m. | Imaging birds and mammals | Gil Nelson |
| 2:40-3:00 p.m. | Coffee break | |
| 3:00-3:20 p.m. | Explore your world: Non-invasive high resolution CT in research, outreach, and teaching | Mark Riccio, Cornell U |
| 3:20-3:40 p.m. | CT Scanning of museum specimens in research: a case study | Amy McCune Cornell Museum of Vertebrates Ecology and Evolutionary Biology, Cornell |

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| 3:40-4:00 p.m. | Specimen CT imaging/3D modeling at MCZ | Andy Williston |
| 4:00-4:20 p.m. | Vertnet/GBIF | Carla Cicero UC Berkeley Lead PI, Vertnet |
| 4:20-4:40 p.m. | Getting Your Data Out There: Data Publishing & Data Standards with iDigBio | Molly Phillips iDigBio Florida Museum Nat His U Florida |
| 4:40-5:00 p.m. | Global Genomic Biorepositories Network | Jon Coddington Smithsonian |
| 5:00-5:20 p.m. | Daily Q&A, wrap up, and discussion | |

May 6, 2015 (Wednesday)

| Time | Topic/activity | Responsible |
|-------------------------------|---|---|
| 6:30-7:30 a.m. | Breakfast | |
| 7:45 a.m. | Depart hotels | |
| 8:00-11:00 a.m. | Field and lab demonstrations, tours | Cornell staff |
| Incorporating citizen science | | |
| 11:00-11:20 p.m. | Integration of citizen science activities with research collection databases | Andres Lopez U. Alaska, Fairbanks |
| 11:20-11:40 p.m. | Creative methods for utilizing collections for education and outreach. | Randy Singer UF, Florida Museum of Natural History |
| 11:40-12:00 p.m. | eBird | Steve Kelling Cornell Lab of Ornithology |
| 12:00-12:20 p.m. | Restoring Natural History Collections of Native Amphibians and Reptiles in South Dakota | Gabrielle Maltaverne South Dakota State University |

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| 12:20-1:20 p.m. | Lunch (Catered, on-site) | |
| Acquiring and managing media | | |
| 1:20-1:40 p.m. | Introduction to media | Ed Scholes, Cornell U |
| 1:40-2:00 p.m. | Leveraging library resources for storing and curating media (images primarily) associated with specimens | Heather Prestridge Texas A&M University |
| 2:00-2:30 p.m. | Digitizing, managing and future proofing media yourself | Greg Budney Matt Medler Cornell U. |
| 2:30-2:50 p.m. | Co-collection of physical and media specimens: getting it right with frog love songs | Rafe Brown U Kansas |
| 2:50-3:10 p.m. | Coffee break | |
| 3:10-3:30 p.m. | Co-collection of physical and media specimens: why bother? (Fish) | John Sullivan Cornell U. |
| 3:30-3:50 p.m. | Co-collection of physical and multimedia bird specimens: opportunities and challenges in the field | Brett Benz, AMNH |
| 3:50-4:10 p.m. | Round up on media specimens: Q&A, discussion | Ed Scholes |
| 4:10-4:30 p.m. | Workshop wrap up | Molly Hagemann |
| 7:00-9:00 p.m. | Reception Museum of the Earth | |