openVertebrate (oVert)
Thematic Collection Network

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#oVertTCN
openVertebrate Thematic Collection Network
$2.5M from NSF’s Advancing Digitization of Biodiversity Collections program
18 funded institutions, including 16 museums and 6 imaging centers

2017–2021
CT-scan >20,000 fluid-preserved vertebrate specimens
Scan >80% extant genera; “soft tissue” scan >60% extant families
Make both raw and processed data freely available on-line
Scanning To Date:
>7,700 fluid-preserved specimens from >42 US institutions represent >2,900 genera (of ~10,500)
~90% of amphibians
~60% of reptiles
~30% of fishes
~25% of mammals
~10% of birds
Scanning To Date:
>8,400 media files representing >4,900 specimens to MorphoSource
image stacks (.zip of TIFF) and 3D mesh files (.stl)
most scans: 20–60 μm resolution; ~250 MB – 1 GB
Tracking usage of digital data

oVert-generated media on MorphoSource
viewed >204,000 times
downloaded >7,000 times

Downloads

- Research
- 3D Printing
- Art
- Personal
- Outreach
- Education

nearly 50% for “non-research”
On-going PEN

oMEGA (online Metrology of Extant Giant Animals)
PI Leif Tapanila, Idaho State University
Surface scans of bones of vertebrates >250 kg

Imaging at Museum of Vertebrate Zoology Summer 2019
Recently Funded PENs

**oUTCT: Outwardly Mobilizing the UTCT Vertebrate Archive for Research and Training**

PI: Jessie Maisano, University of Texas - Austin

share UTCT data for ~1,500 specimens via MorphoSource

hands-on training of more users of CT data

**FuncQEE: Functional Quantitative Characters for Ecology and Evolution**

PI: Noé de la Sancha, Chicago State University

CT-scan fluid and partial skeletons of ~500 rodents
Significant time invested in unpacking & repacking

estimated 3.5 min/specimen
Creating new workflows for specimen loans

estimated 32.5 sec/specimen

< 30 mL/bag