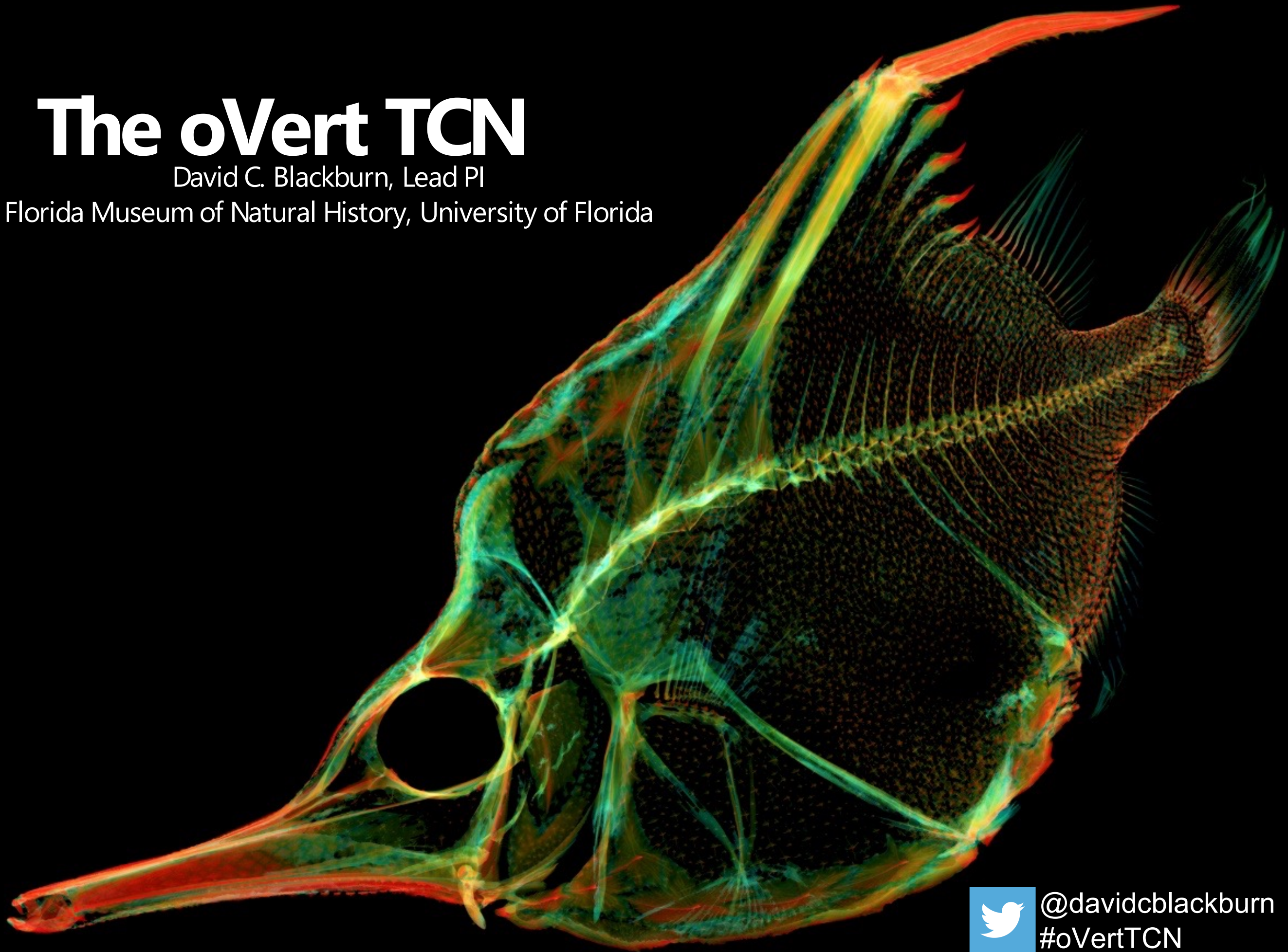


# The oVert TCN

David C. Blackburn, Lead PI

Florida Museum of Natural History, University of Florida



@davidcblackburn  
#oVertTCN



## openVertebrate Thematic Collections Network



2017–2021

CT-scan fluid-preserved vertebrate specimens

18 funded institutions, including 16 museums and 6 imaging centers

grown to ~124 participating faculty, staff, and students in Year 3

trained >100 faculty, scientists, and students in use of CT data



# overt

*Partner to Existing Networks, previously funded*

*oMEGA (online Metrology of Extant Giant Animals)*

PI Leif Tapanila, Idaho State University; 2018–2020



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

PI Jessie Maisano, University of Texas - Austin; 2019–2021



*FuncQEE: Functional Quantitative Characters for Ecology and Evolution*

PI Noé de la Sancha, Chicago State University; 2019–2022





*Partner to Existing Networks, funded in 2020*

*CryptoVert: Digitizing small-bodied cryptobenthic fishes for the oVertTCN*

PI Bill Ludt, Natural History Museum of Los Angeles County; 2020–2022



*GalapaGateway: Unlocking Model Evolutionary Systems for Research and Educa*

PI Lauren Scheinberg, California Academy of Sciences; 2020–2022



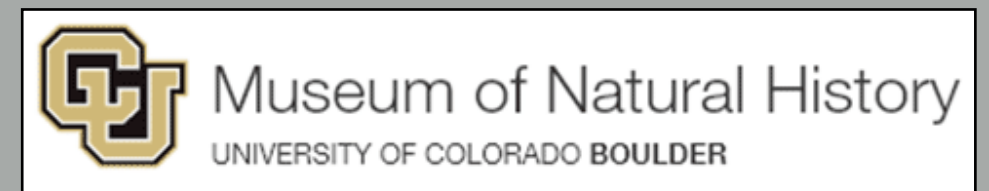
*oBird: 3D Photogrammetry of Specimens for Phenomics across the Avian Tree o*

PI John McCormack, Occidental College; 2020–2022



*oMeso: Opening Mesoamerican Herpetofaunal Diversity to 2D and 3D Imaging*

PI Emily Braker, University of Colorado at Boulder; 2020–2022



# overt

~3 years into project:

>25,000 media files of >8,300 specimens from >50 institutions available on MorphoSource

image stacks (.zip of TIFF) and 3D mesh files (.stl)

viewed >740,000 times, downloaded >31,000 times

most scans: 20–60  $\mu\text{m}$  resolution



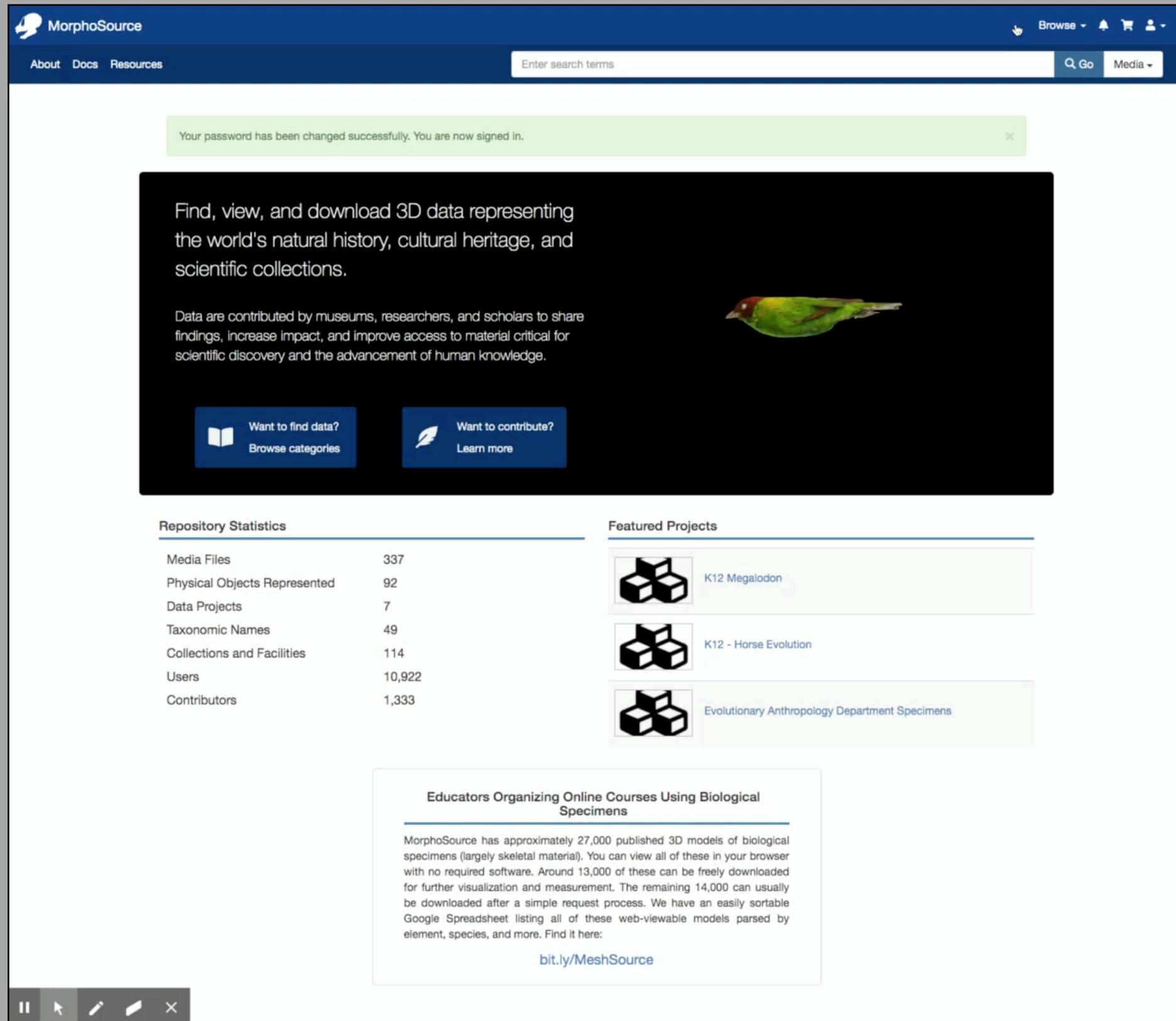
## Downloads



# overt



Morphosource  
2.0  
*available in October  
2020!*



The screenshot shows the MorphoSource website interface. At the top, there is a navigation bar with the MorphoSource logo, links for 'About', 'Docs', and 'Resources', a search bar with the placeholder 'Enter search terms', and a 'Media' dropdown menu. A green notification banner states: 'Your password has been changed successfully. You are now signed in.' Below this is a large black hero section with white text: 'Find, view, and download 3D data representing the world's natural history, cultural heritage, and scientific collections.' It also includes a sub-headline: 'Data are contributed by museums, researchers, and scholars to share findings, increase impact, and improve access to material critical for scientific discovery and the advancement of human knowledge.' To the right of the text is a small image of a green parrot. At the bottom of the hero section are two blue buttons: 'Want to find data? Browse categories' and 'Want to contribute? Learn more'. Below the hero section are two columns: 'Repository Statistics' and 'Featured Projects'. The 'Repository Statistics' table lists: Media Files (337), Physical Objects Represented (92), Data Projects (7), Taxonomic Names (49), Collections and Facilities (114), Users (10,922), and Contributors (1,333). The 'Featured Projects' section lists three projects: 'K12 Megalodon', 'K12 - Horse Evolution', and 'Evolutionary Anthropology Department Specimens'. At the bottom, there is a white box titled 'Educators Organizing Online Courses Using Biological Specimens' with text describing the repository's resources and a link to [bit.ly/MeshSource](https://bit.ly/MeshSource). A video player control bar is visible at the very bottom of the screenshot.

MorphoSource  
About Docs Resources

Enter search terms

Q Go Media

Your password has been changed successfully. You are now signed in.

Find, view, and download 3D data representing the world's natural history, cultural heritage, and scientific collections.

Data are contributed by museums, researchers, and scholars to share findings, increase impact, and improve access to material critical for scientific discovery and the advancement of human knowledge.

Want to find data?  
Browse categories

Want to contribute?  
Learn more

### Repository Statistics

Media Files	337
Physical Objects Represented	92
Data Projects	7
Taxonomic Names	49
Collections and Facilities	114
Users	10,922
Contributors	1,333

### Featured Projects

- K12 Megalodon
- K12 - Horse Evolution
- Evolutionary Anthropology Department Specimens

### Educators Organizing Online Courses Using Biological Specimens

MorphoSource has approximately 27,000 published 3D models of biological specimens (largely skeletal material). You can view all of these in your browser with no required software. Around 13,000 of these can be freely downloaded for further visualization and measurement. The remaining 14,000 can usually be downloaded after a simple request process. We have an easily sortable Google Spreadsheet listing all of these web-viewable models parsed by element, species, and more. Find it here:

[bit.ly/MeshSource](https://bit.ly/MeshSource)

## Skull [CTImageSeries] [Etc]

Represents: [Biological Specimen](#) [In Collection](#) [DU:EA:469](#)

[Request Download](#)

[Add to Cart](#)

### FILE OBJECT DETAILS

Media ID	000064768
Short description	Zipped Tiff Stack
Media type	CTImageSeries
File format(s)	image/tiff
File size	1,866,127,317 bytes
Full description	Migrated MorphoSource 1 Media File Title: Zipped Tiff Stack Migrated MorphoSource 1 Media Group Title: microCT Volume File and Derivative Mesh Files Migrated MorphoSource 1 Media File Description: Correct chirality Migrated MorphoSource 1 Media Group Description: Correct chirality
Date created	--
Date uploaded	November 28, 2018
Creator	--

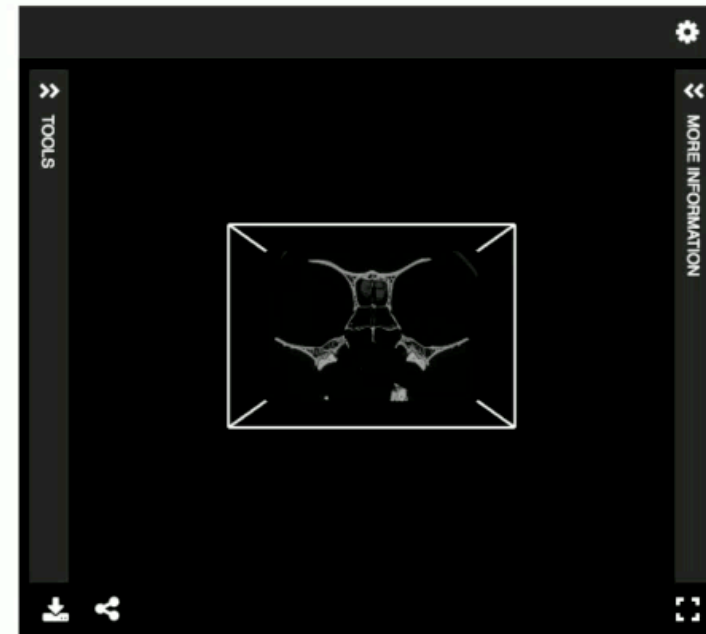
[Show more](#)

### IMAGE ACQUISITION AND PROCESSING AT A GLANCE

Number of parent media	0
Number of processing events	1 (0 steps)
Derived directly from	<a href="#">Skull [CTImageSeries] [Etc]</a>
Modality	MicroNanoXRyComputedTomography
Device	XTH 225 ST, Duke University

### OWNERSHIP AND PERMISSIONS

Data managed by	<a href="#">Mackenzie A. Shepard</a>
Download permission	Publish with Restricted Download
Download reviewer	--
Rights statement	--
Creative Common licenses	--
Morphosource use agreement type	--
Permits commercial use	--
Permits 3d use	--



### 2 MEDIA RELATED TO SAME ACQUISITION EVENT



[Skull \[CTImageSeries\] \[Etc\]](#)



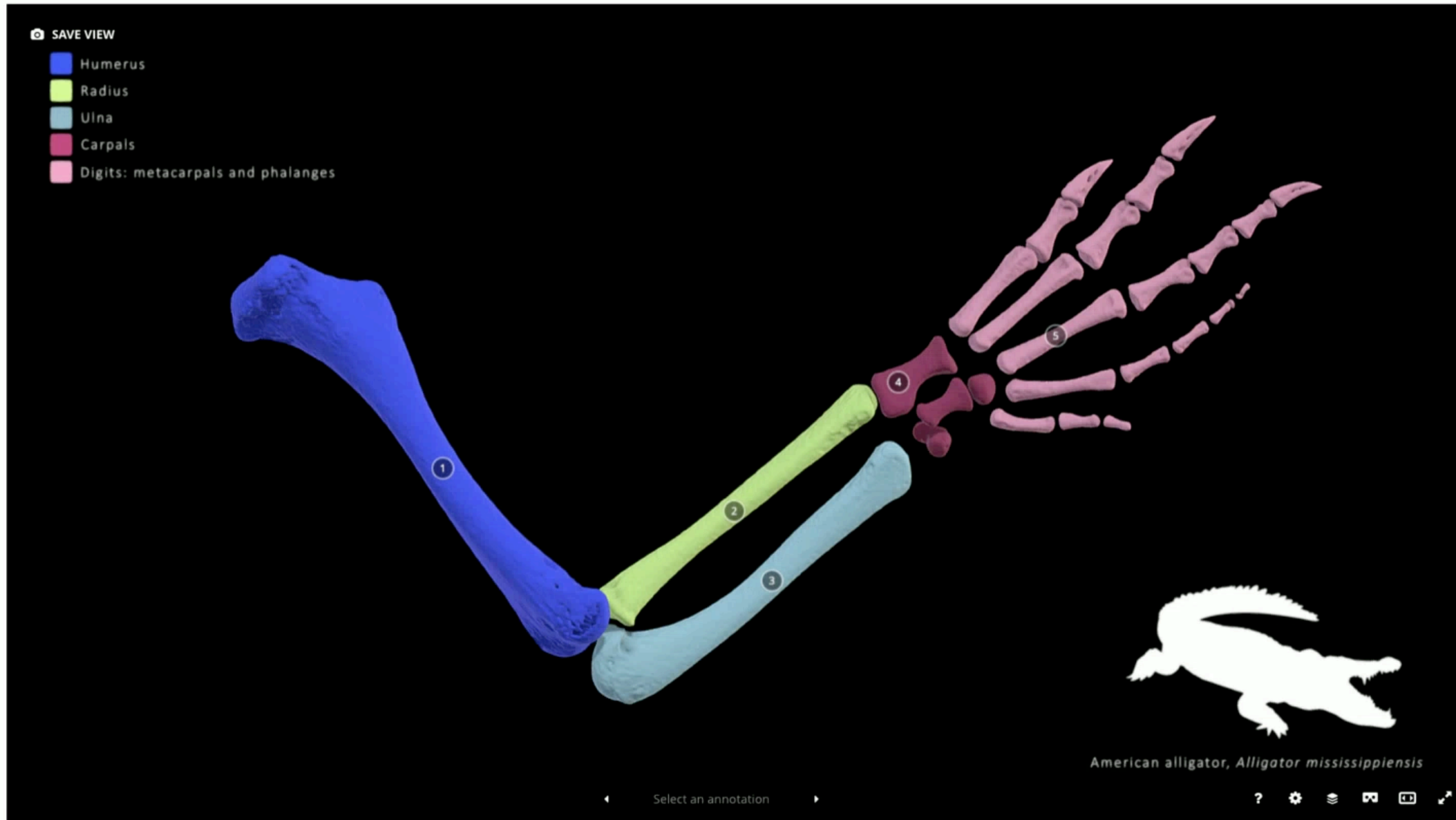
[Skull \[Mesh\] \[Etc\]](#)

### COLLECTIONS PHYSICAL OBJECT BELONGS TO

- [Evolutionary Anthropology Department Specimens](#)

### MEDIA TAGS





- SAVE VIEW
- Humerus
  - Radius
  - Ulna
  - Carpals
  - Digits: metacarpals and phalanges

EDIT PROPERTIES EDIT 3D SETTINGS

IN COLLECTIONS

**Vertebrados 2020**  
Raul Orenco Gomez  
132 5

**Reptilian anatomy**  
UFCVA  
4 0

SUGGESTED 3D MODELS

**#RTJ4D: oVert Remix of ...**  
Blackburn Lab  
1 524 12

**Alligator sinensis UF-He...**  
Blackburn Lab  
0 188 8

**Alligator Mississippiensi...**  
Blackburn Lab  
0 234 7

**Heloderma horridum U...**  
Blackburn Lab  
3 1.2k 37

**Coppery grass lizard**  
Blackburn Lab  
0 900 30

**Sungazer lizard**  
Blackburn Lab  
0 588 18

LOAD MORE

## Alligator forelimb (UF Herp 21461)

3D Model

Blackburn Lab PREMIUM

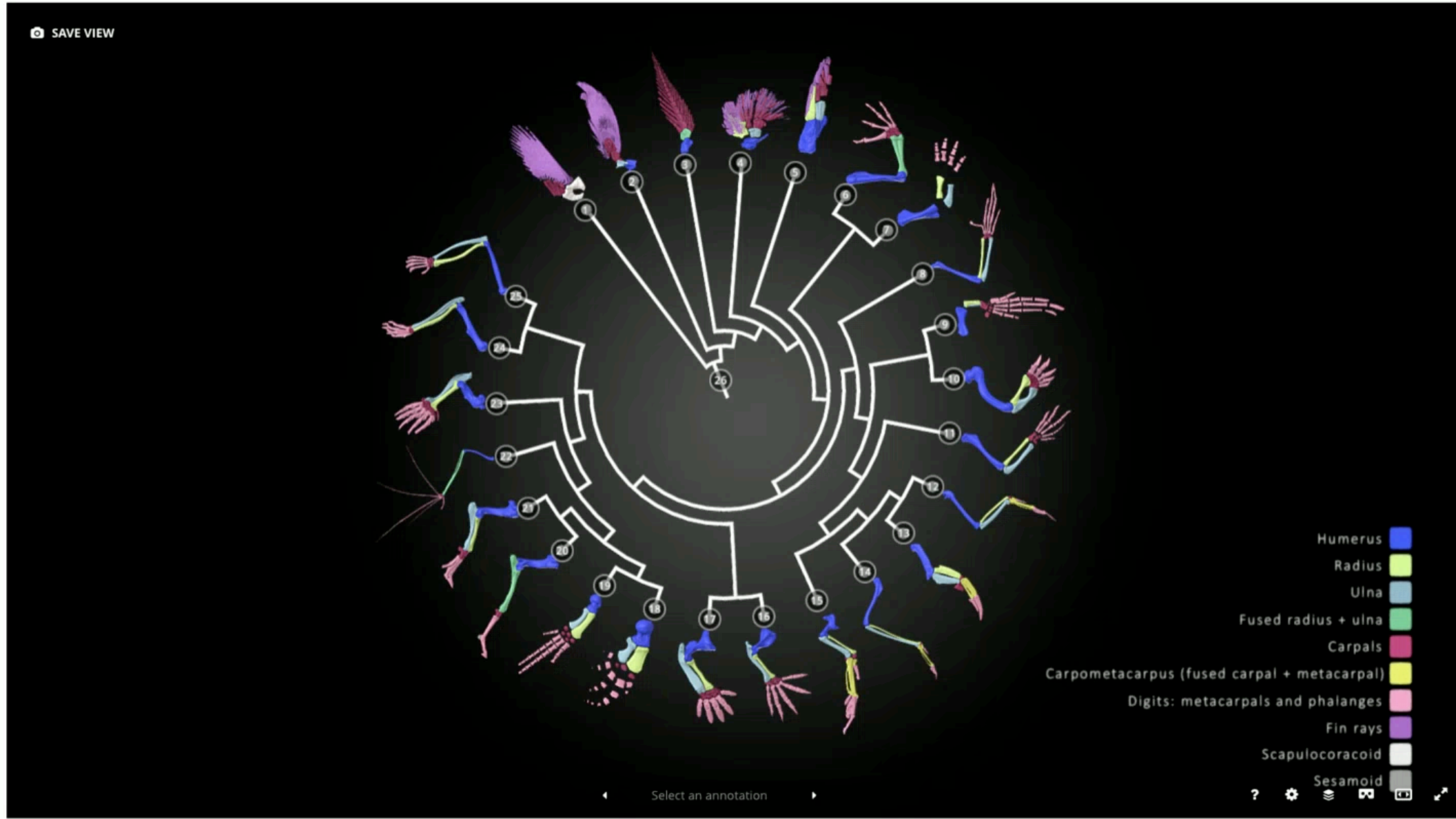
63 1



Share

538k More model information





Wheel of Homology: From A to Chimpanzee

3D Model

Blackburn Lab PREMIUM

485 4

EDIT PROPERTIES EDIT 3D SETTINGS

IN COLLECTIONS

- Limb evolution**  
UFCVA  
6 0

- SUGGESTED 3D MODELS
- Coppery grass lizard**  
Blackburn Lab  
0 900 30
  - Sungazer lizard**  
Blackburn Lab  
0 588 18
  - Heloderma horridum U...**  
Blackburn Lab  
3 1.2k 37
  - Swazi dragon lizard**  
Blackburn Lab  
0 350 14
  - The 4 Fish-keteers: Lobe...**  
Blackburn Lab  
0 829 3
  - Vampire bat wing (UF M...**  
Blackburn Lab  
0 142 3

LOAD MORE

Navigation controls: Home, Search, Share, Play/Pause, Rotate, Zoom, Close

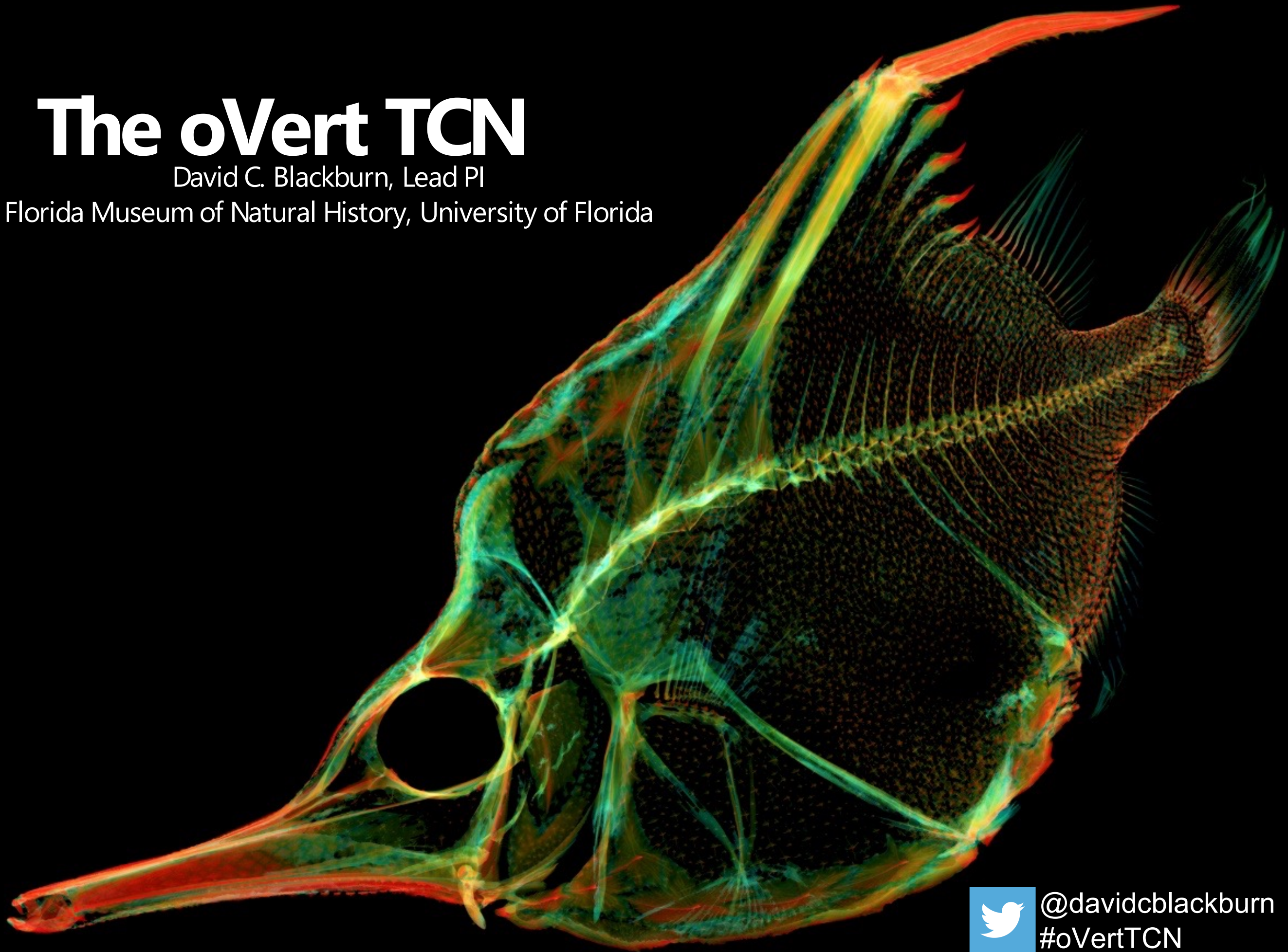
Share  
1.7M More model information



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