

Information Gaps in Digital Databases as Identified by a Multi-Institution Initiative to Digitize Avian Specimens

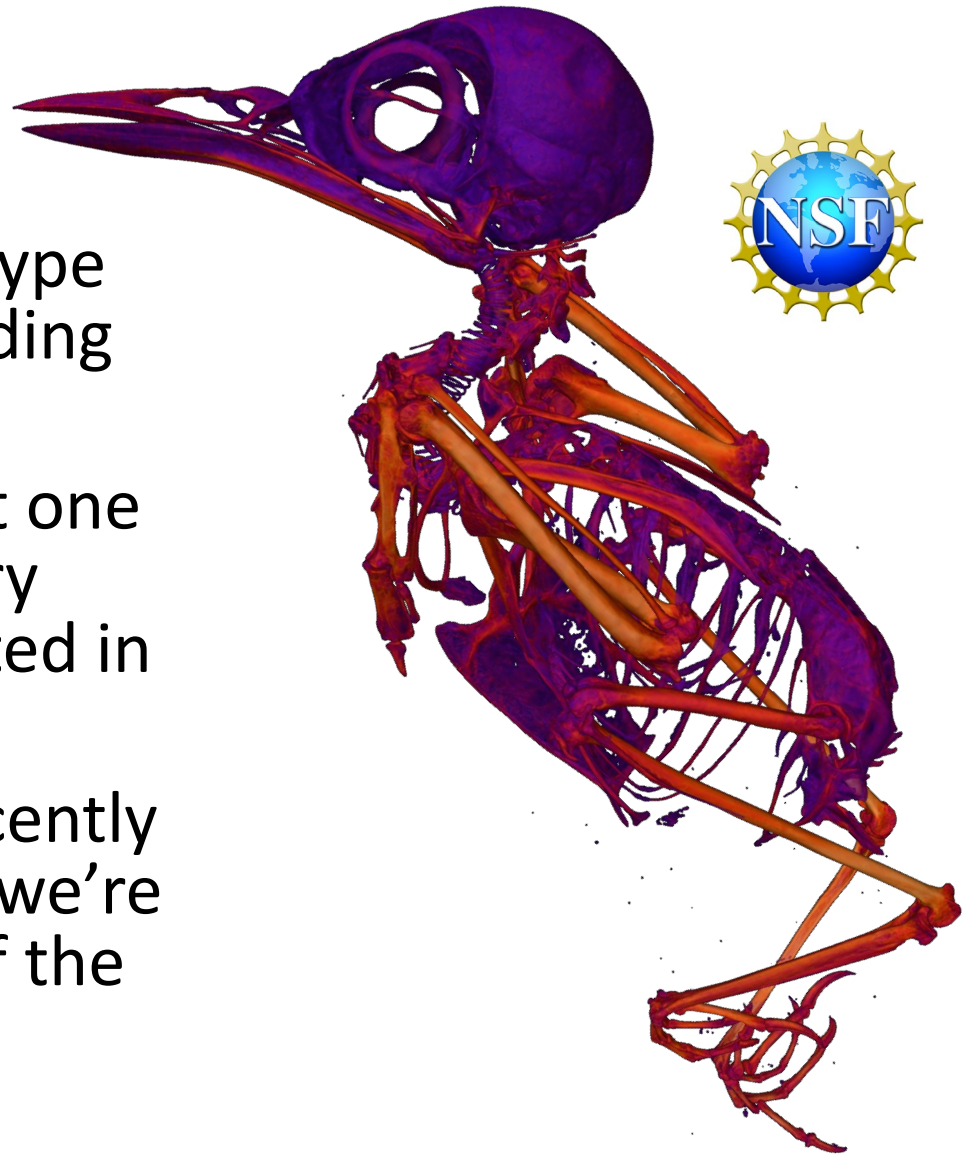
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overt and birds

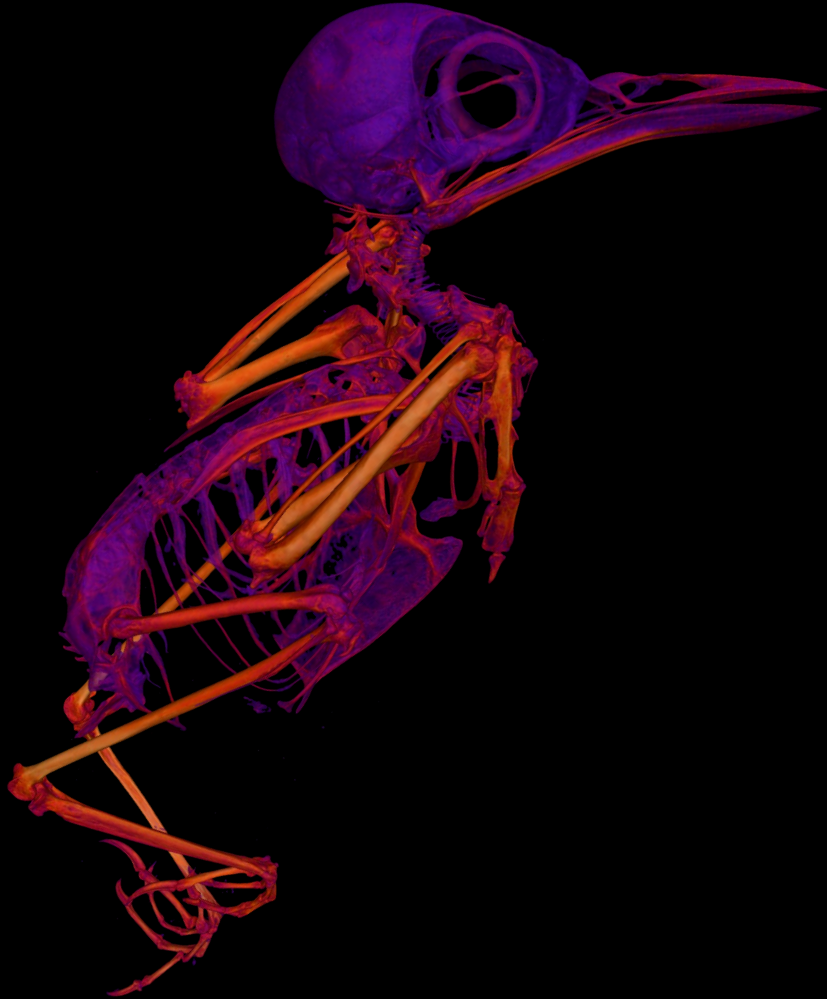
- Targeting over 2,200 type species of birds according to the Peters checklist
- Goal is to scan at least one representative of every avian genus represented in US collections
- Scanning birds has recently begun in earnest and we're already almost 10% of the way to our goal



Where are the fluid-preserved birds?

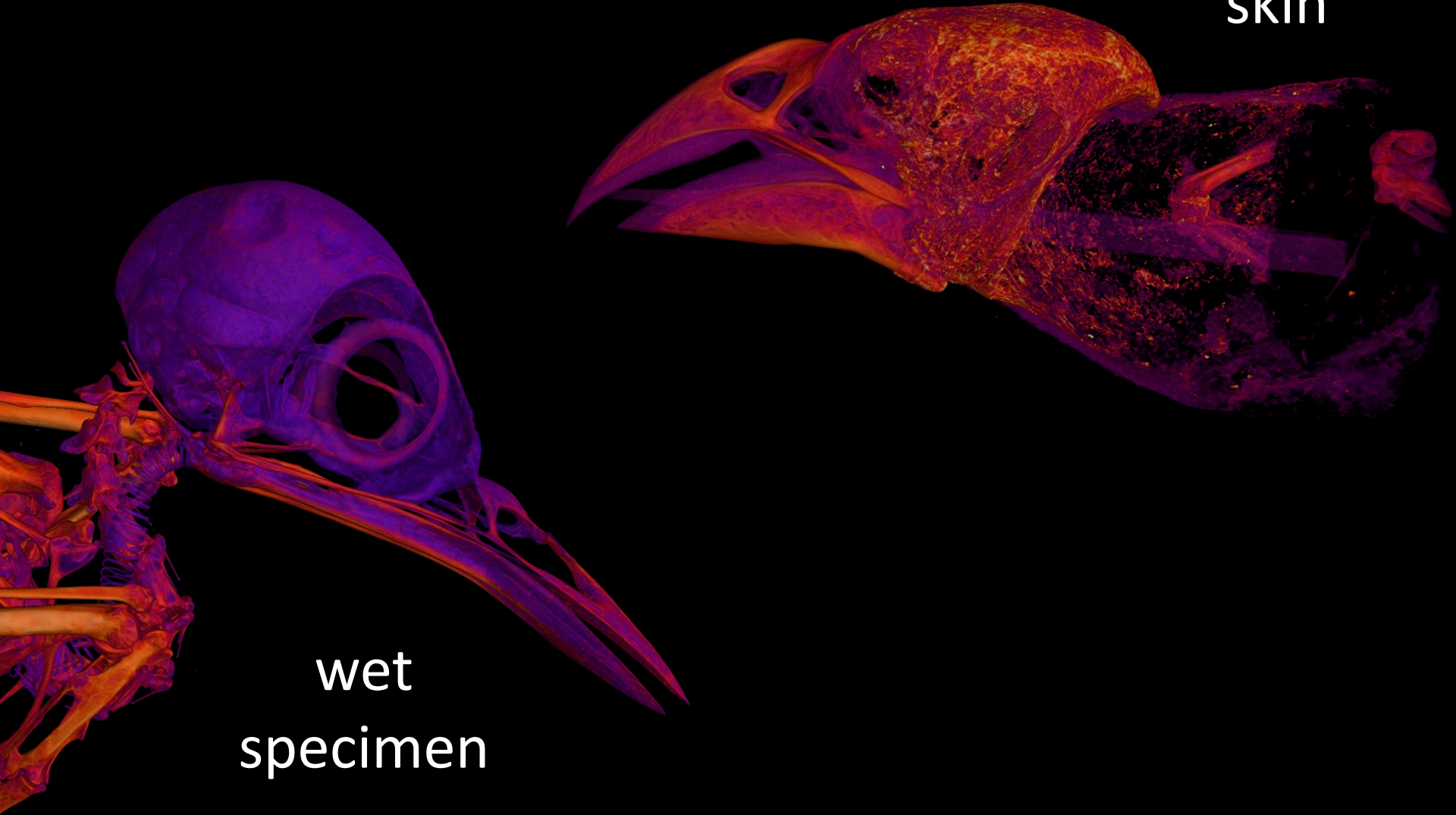


Why fluid-preserved birds?



Why fluid-preserved birds?

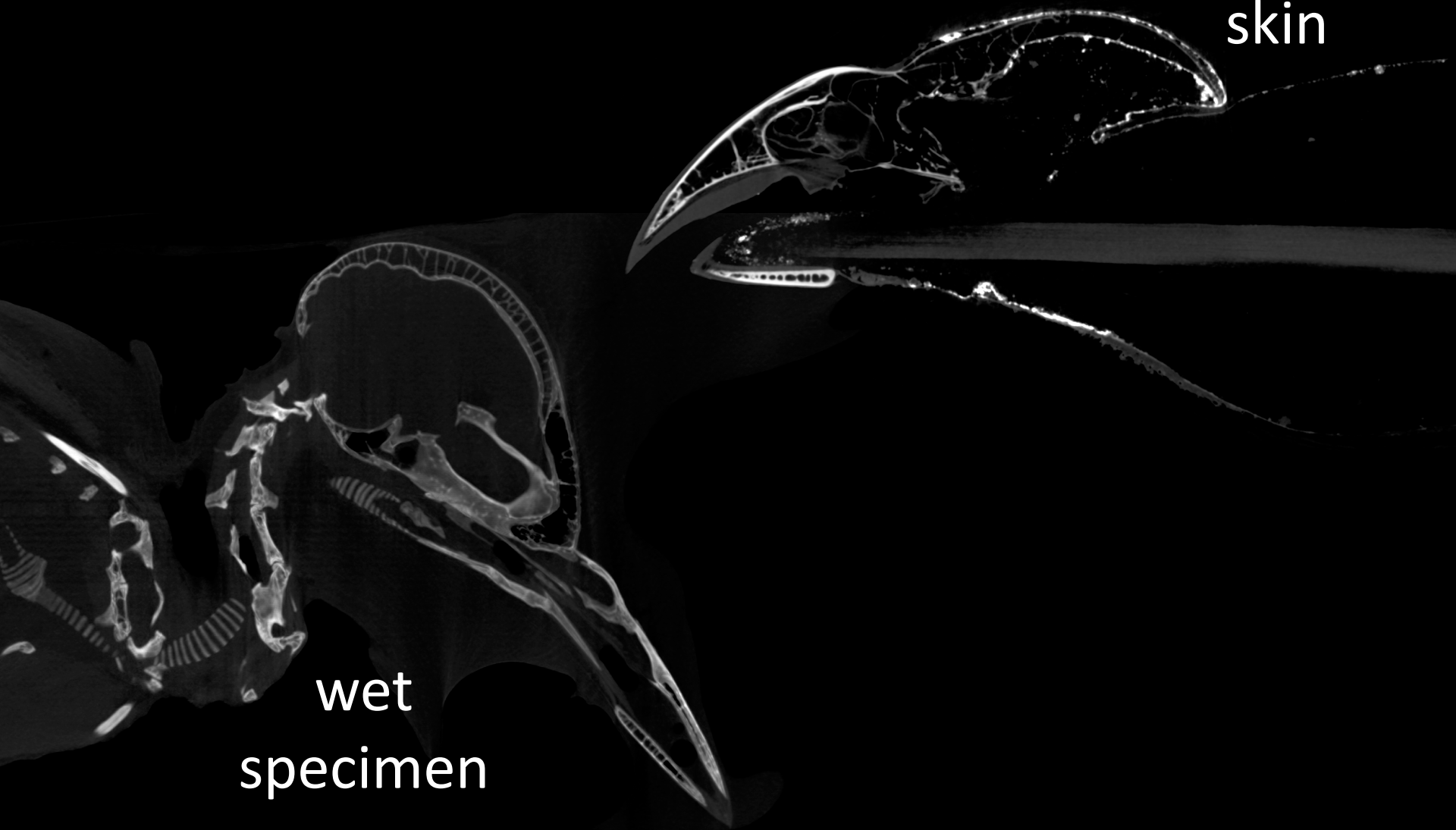
dry study
skin



wet
specimen

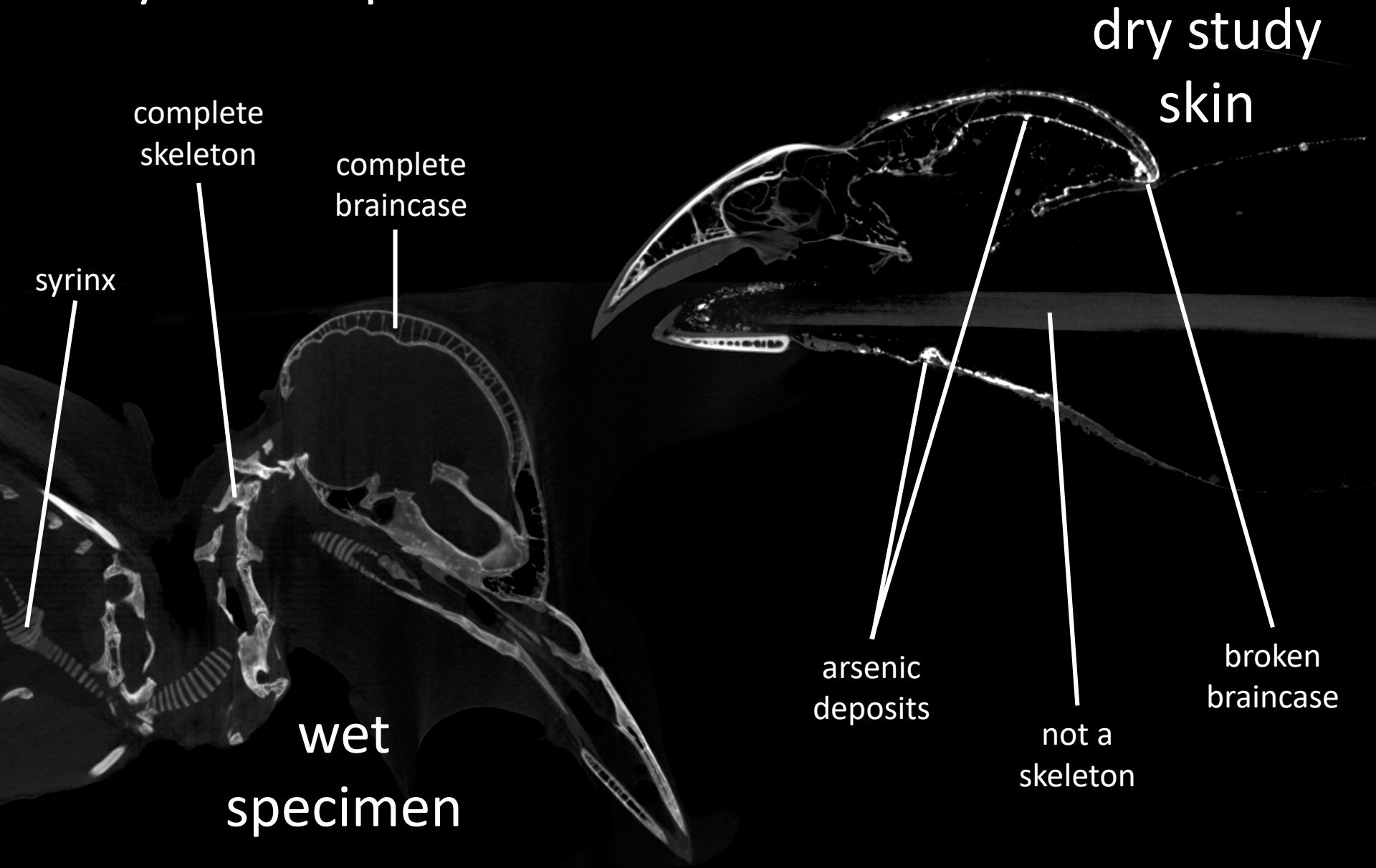
Why fluid-preserved birds?

dry study
skin



wet
specimen

Why fluid-preserved birds?



complete skeleton

complete braincase

syrinx

wet specimen

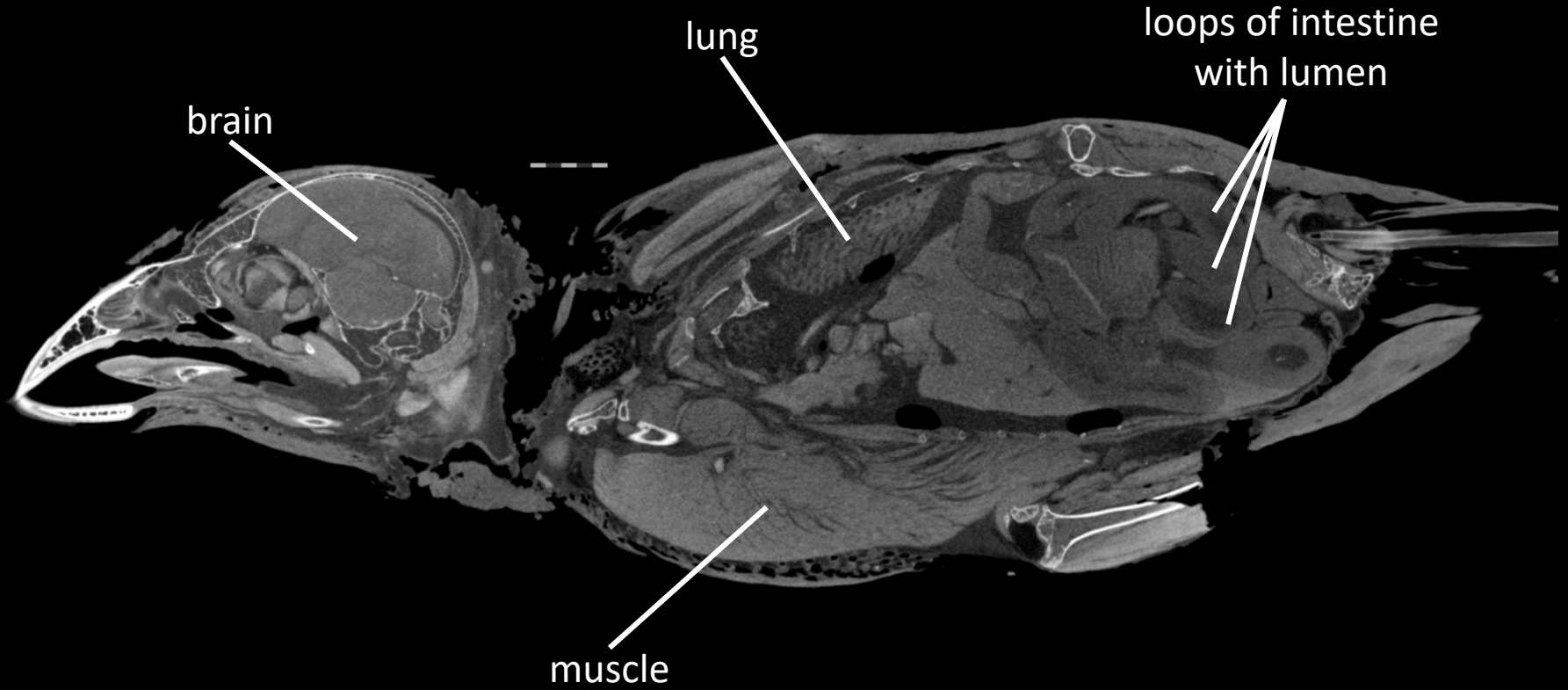
dry study skin

arsenic deposits

not a skeleton

broken braincase


Why fluid-preserved birds?



How can we find fluid-preserved birds?

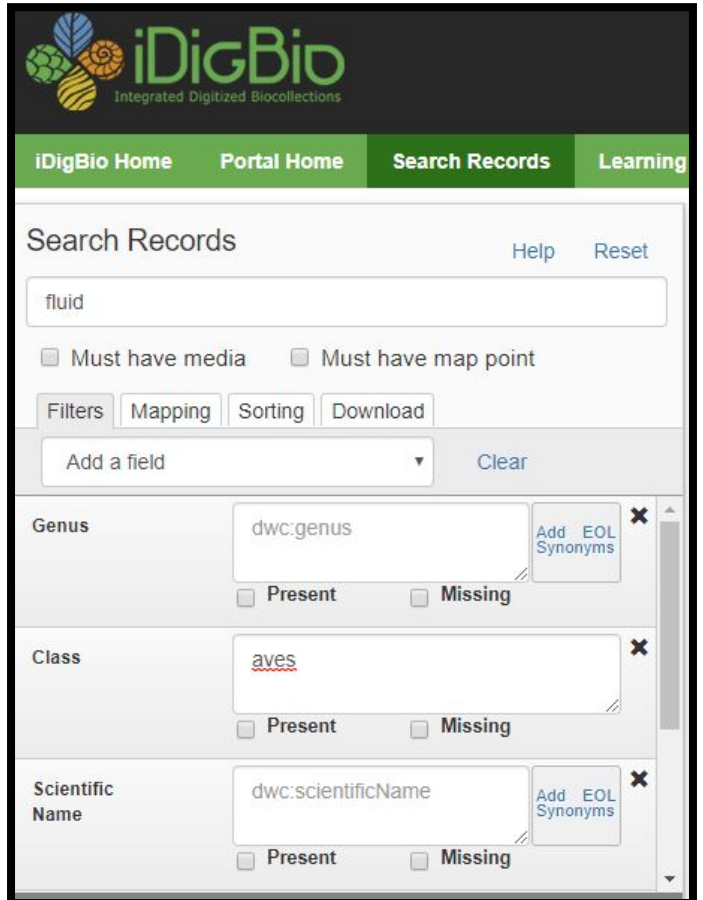
Then...

World Inventory of Avian Spirit Specimens, 1982



D. Scott Wood, Richard L. Zusi, and Marion Anne Jenkinson

Now...



iDigBio Integrated Digitized Biocollections

iDigBio Home Portal Home Search Records Learning

Search Records Help Reset

fluid

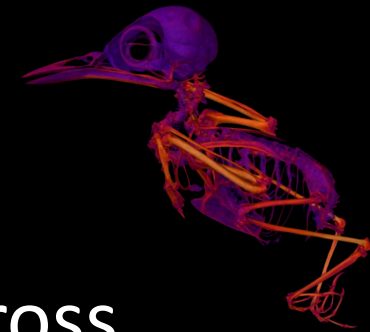
Must have media Must have map point

Filters Mapping Sorting Download

Add a field Clear

Genus	dwc:genus	Add EOL Synonyms
	<input type="checkbox"/> Present <input type="checkbox"/> Missing	
Class	aves	
	<input type="checkbox"/> Present <input type="checkbox"/> Missing	
Scientific Name	dwc:scientificName	Add EOL Synonyms
	<input type="checkbox"/> Present <input type="checkbox"/> Missing	

Challenges with collections

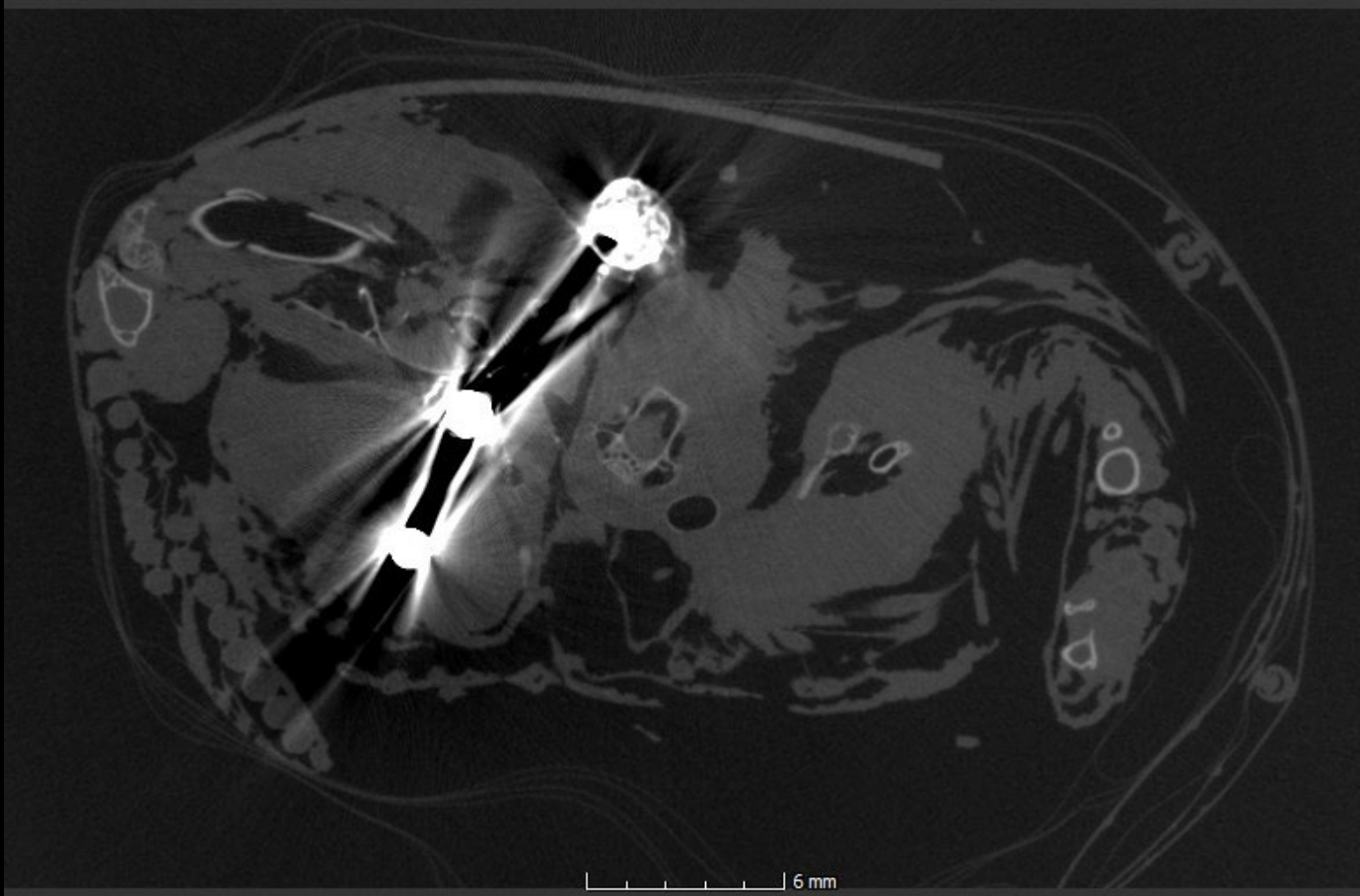


- Inconsistent terminology within and across institutions
 - 10,778 unique values for “Preparations” in iDigBio for 2,200+ type species of birds
 - 454 unique values for fluid-preserved specimens
- Inaccurate or unclear descriptions of preparation types
 - “Alcoholic: Whole; Alcoholic: Partial” (58)
 - “alc,tiss” (426)
- Lack of information about collecting protocols

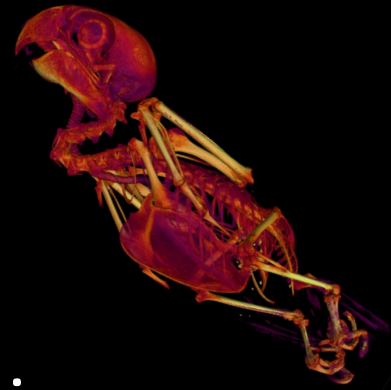
Challenge: lack of information on collecting protocols



Challenge: locating information on collection methods



Challenges with iDigBio



- Searching for preparation types
 - Inclusive terms in “search all fields” option mysteriously exclude terms
- Combines all preparation type information into one entry
 - “whole organism (ethanol); tissue (95% ethanol); spread wing”
- Identifying whole specimens
- Determining ontogenetic stage of specimen
- Selecting wild individuals

Proposed solutions for bird collections



- Use a standardized vocabulary for preparation types
 - Workshop to develop this vocabulary planned for the 2020 American Ornithological Society meeting
- Maintain and make available notes about collecting protocols
- Avoid shooting bird specimens whenever possible

Proposed solutions for iDigBio



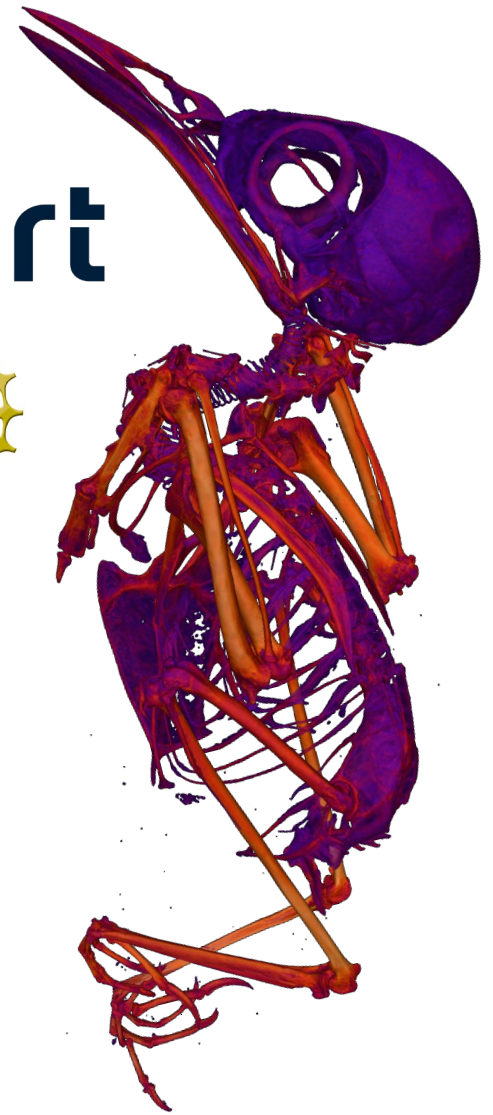
- Add “Preparations” and “Life Stage” as options in the drop-down Add a Field menu
- Make an option to exclude captive individuals from searches
- Work with collections to harmonize data and standardize vocabulary on preparation type and ontogenetic stage

Acknowledgments

- NSF DBI 1701714
- oVert Taxon Team Birds
- Helen James, Smithsonian National Museum of Natural History
- Steve Rogers, Carnegie Museum of Natural History

Check out our data at morphosource.org!

oVert



#oVertTCN

@CatherineMEarly