

Audubon Core

(... & the magic of)
iDigBio data aggregation

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What is Audubon Core?

- Audubon Core Multimedia Resources Metadata schema (“AC schema”, or “AC”) – extension of Darwin Core (adopted 2013)
- A set of metadata vocabularies representing biodiversity multimedia resources and collections
- Information includes:
 - Identifiers
 - Attribution
 - Agents (creator, publisher)
 - Description
 - Taxonomy
 - Geography
 - EXIF data
- http://terms.tdwg.org/wiki/Audubon_Core



Audubon Core Term List

Index By Term Name

(See also [Index By Label](#))

Management Vocabulary

| [dcterms:identifier](#) || [dc:type](#) || [dcterms:type](#) || [ac:subtypeLiteral](#) || [ac:subtype](#) || [dcterms:title](#) || [dcterms:modified](#) || [xmp:MetadataDate](#) || [ac:metadataLanguageLiteral](#) || [ac:metadataLanguage](#) || [ac:providerManagedID](#) || [xmp:Rating](#) || [ac:commenter](#) || [ac:commenterLiteral](#) || [ac:comments](#) || [ac:reviewer](#) || [ac:reviewerLiteral](#) || [ac:reviewerComments](#) || [dcterms:available](#) || [ac:hasServiceAccessPoint](#) |

Attribution Vocabulary

| [dc:rights](#) || [dcterms:rights](#) || [xmpRights:Owner](#) || [xmpRights:UsageTerms](#) || [xmpRights:WebStatement](#) || [ac:licenseLogoURL](#) || [photoshop:Credit](#) || [ac:attributionLogoURL](#) || [ac:attributionLinkURL](#) || [ac:fundingAttribution](#) || [dc:source](#) || [dcterms:source](#) |

Agents Vocabulary

| [dc:creator](#) || [dcterms:creator](#) || [ac:providerLiteral](#) || [ac:provider](#) || [ac:metadataProviderLiteral](#) || [ac:metadataProvider](#) || [ac:metadataCreatorLiteral](#) || [ac:metadataCreator](#) |

Content Coverage Vocabulary

| [dcterms:description](#) || [ac:caption](#) || [dc:language](#) || [dcterms:language](#) || [ac:physicalSetting](#) || [lptc4xmpExt:CVterm](#) || [ac:subjectCategoryVocabulary](#) || [ac:tag](#) |

Geography Vocabulary

| [lptc4xmpExt:LocationShown](#) || [lptc4xmpExt:WorldRegion](#) || [lptc4xmpExt:CountryCode](#) || [lptc4xmpExt:CountryName](#) || [lptc4xmpExt:ProvinceState](#) || [lptc4xmpExt:City](#) || [lptc4xmpExt:Sublocation](#) |

Temporal Coverage Vocabulary

| [dcterms:temporal](#) || [xmp:CreateDate](#) || [ac:timeOfDay](#) |

Taxonomic Coverage Vocabulary

| [ac:taxonCoverage](#) || [dwc:scientificName](#) || [dwc:identificationQualifier](#) || [dwc:vernacularName](#) || [dwc:nameAccordingTo](#) || [dwc:scientificNameID](#) || [ac:otherScientificName](#) || [dwc:identifiedBy](#) || [dwc:dateIdentified](#) || [ac:taxonCount](#) || [ac:subjectPart](#) || [dwc:sex](#) || [dwc:lifeStage](#) || [ac:subjectOrientation](#) |

Resource Creation Vocabulary

| [lptc4xmpExt:LocationCreated](#) || [ac:digitizationDate](#) || [ac:captureDevice](#) || [ac:resourceCreationTechnique](#) |

Related Resources Vocabulary

| [ac:IDofContainingCollection](#) || [ac:relatedResourceID](#) || [ac:providerID](#) || [ac:derivedFrom](#) || [ac:associatedSpecimenReference](#) || [ac:associatedObservationReference](#) |

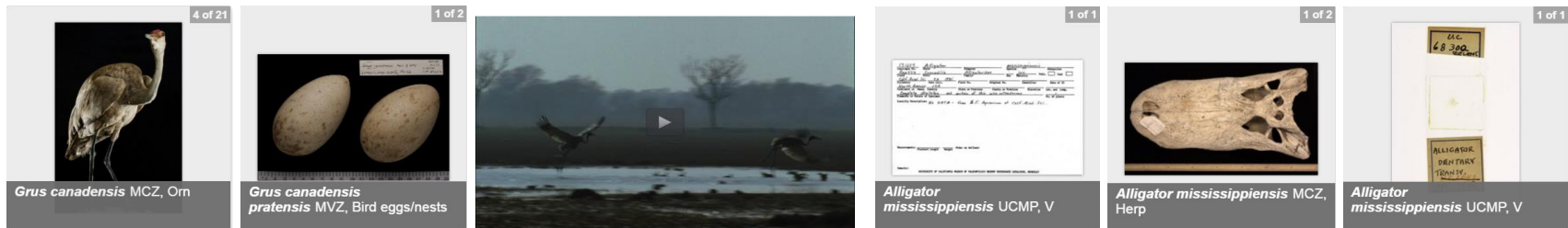
Service Access Point Vocabulary

| [ac:accessURI](#) || [dc:format](#) || [dcterms:format](#) || [ac:variantLiteral](#) || [ac:variant](#) || [ac:variantDescription](#) || [ac:furtherInformationURL](#) || [ac:licensingException](#) || [ac:serviceExpectation](#) || [ac:hashFunction](#) || [ac:hashValue](#) || [exif:PixelXDimension](#) || [exif:PixelYDimension](#) |

What media does it apply to?

- *Images* - JPEG, JPEG 2000, PNG
- *Video* - MP4 (H.264 encoding), MPEG
- *Audio* - MP3 (MPEG-1 or MPEG-2 audio), MP4 (AAC audio)
- *3D models* - StereoLithograph (STL, binary), Polygon File Format (PLY, binary)
- *Documents* - Portable Document Format (PDF)

Image Unavailable



How is it generated?

- Automatically – if you use *Symbiota*
- *Audubon Media Description* - extension to Integrated Publishing Toolkit (IPT)



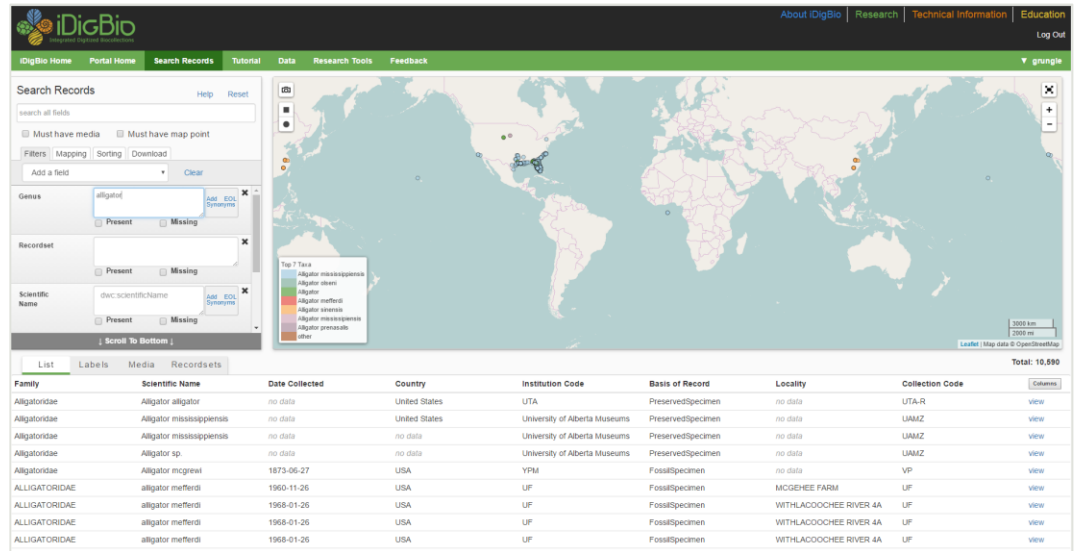
- iDigBio's media ingestion appliance



iDigBio: data aggregator

Our scope:

- Specimen data
- Media
- Global; all taxa



The screenshot shows the iDigBio search results page. On the left, there are search filters for Genus (set to 'alligator'), Recordset, and Scientific Name (set to 'dwc:scientificname'). A world map on the right shows the distribution of records. Below the map is a table of search results for Alligatoridae.

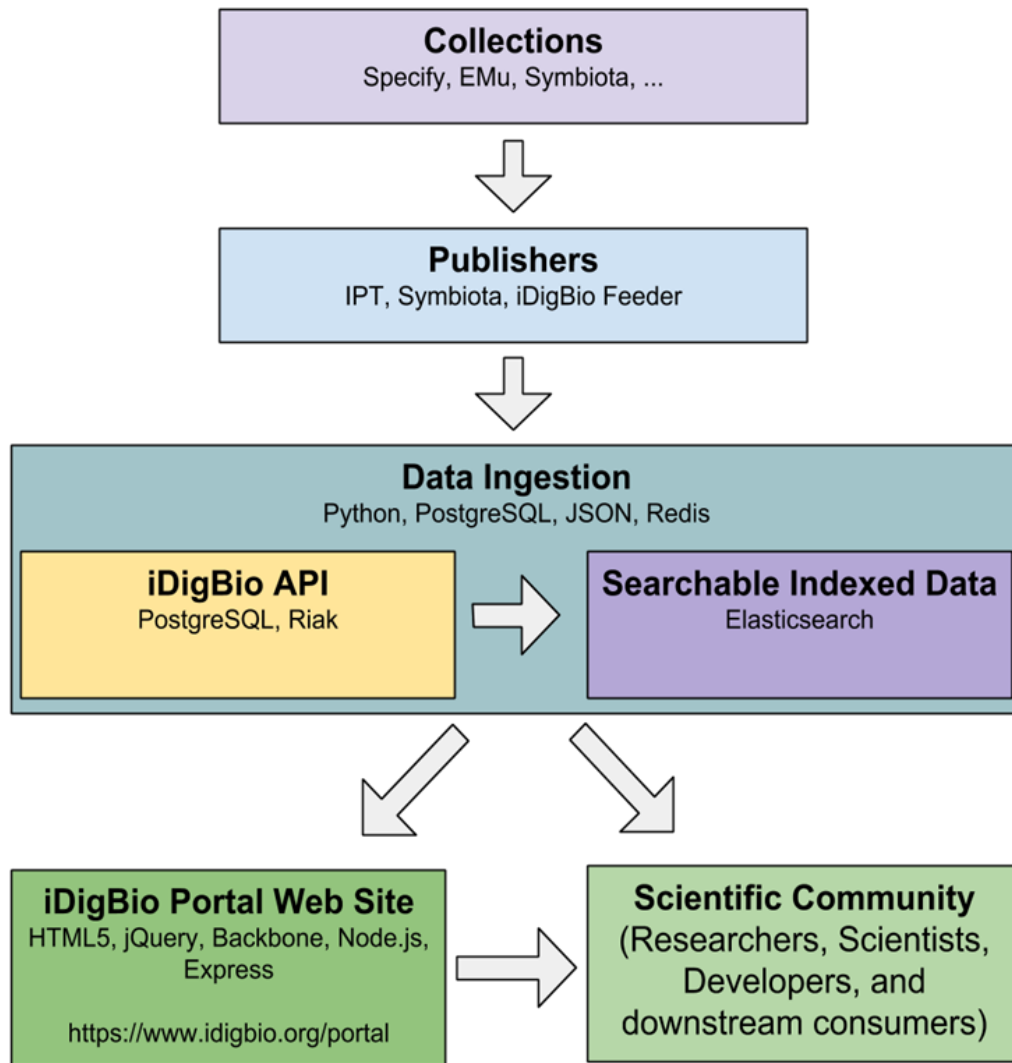
Family	Scientific Name	Date Collected	Country	Institution Code	Basis of Record	Locality	Collection Code
Alligatoridae	Alligator alligator	no data	United States	UTA	PreservedSpecimen	no data	UTA-R
Alligatoridae	Alligator mississippiensis	no data	United States	University of Alberta Museums	PreservedSpecimen	no data	UAMAZ
Alligatoridae	Alligator mississippiensis	no data	no data	University of Alberta Museums	PreservedSpecimen	no data	UAMAZ
Alligatoridae	Alligator sp.	no data	no data	University of Alberta Museums	PreservedSpecimen	no data	UAMAZ
Alligatoridae	Alligator mcgregrei	1873-06-27	USA	YPM	FossilSpecimen	no data	VP
ALLIGATORIDAE	alligator mefferdi	1960-11-26	USA	UF	FossilSpecimen	MCGHEE FARM	UF
ALLIGATORIDAE	alligator mefferdi	1968-01-26	USA	UF	FossilSpecimen	WITHLACOOCHEE RIVER 4A	UF
ALLIGATORIDAE	alligator mefferdi	1968-01-26	USA	UF	FossilSpecimen	WITHLACOOCHEE RIVER 4A	UF
ALLIGATORIDAE	alligator mefferdi	1968-01-26	USA	UF	FossilSpecimen	WITHLACOOCHEE RIVER 4A	UF

Why publish and share data with iDigBio?




- Discovery and use
- Data quality, improvement
- Attribution, credit, collection value metrics

Type	Description
scientificname_added	
geopoint_low_precision	Geographic Coordinate has Low Precision.
dwc_phylum_added	Darwin Core Phylum Added.
dwc_country_replaced	Darwin Core Country Corrected.
idigbio_isocountrycode_added	iDigBio ISO 3166-1 alpha-3 Country Code Added.
dwc_kingdom_added	Darwin Core Kingdom Added.

iDigBio Data Flow Diagram



Getting data to iDigBio (in order of preference)

- RSS (Rich Site Summary) feed produced by IPT 
- Use *Symbiota*
- DwC-A to  or 
- CSV or TXT with field names from Darwin Core (e.g. dwc:catalogNumber)
- If all else fails...ask for help!



What are the *minimum* data fields?

Darwin Core

- recordId
- occurrenceID
- scientificName
- eventDate
- recordedBy
- Locality information
- catalogNumber
- institutionID
- collectionID

- Geological Context fields



Audubon Core

- recordId
- occurrenceID of specimen
- URL
- Camera EXIF
- photographer



Metadata

- Institution
- Collection
- Contact & info
- Description
- URL



http://ipt.idigbio.org/

GBIF INTEGRATED PUBLISHING TOOLKIT (IPT)
free and open access to biodiversity data

email login ENGLISH

Home About

Hosted resources available through this IPT

Logo	Name	Organisation	Type	Subtype	Records	Last modified	Last publication	Next publication
	AMNH Invertebrate Paleontology Collection	AMNH	Occurrence	Specimen	976	2015-12-10	2015-12-10	--
	BUT Friesner Herbarium	BUT	Occurrence	Specimen	42,753	2016-03-29	2016-03-29	2016-04-05 15:20:22
	FSUCML Zoological Collections	FSUCML	Occurrence	Specimen	1,015	2016-03-21	2016-03-08	--
	SDSM Botany and Paleobotany Collections	SDSM	Occurrence	Specimen	1	2016-03-23	2016-03-23	--
	SDSM Invertebrate Collections	SDSM	Occurrence	Specimen	1,692	2016-03-22	2016-03-22	--
	SDSM Vertebrate Paleontology Collection	SDSM	Occurrence	Specimen	514	2016-03-23	2016-03-23	--
	USF Herbarium	Not registered	Occurrence	Specimen	121,378	2016-03-29	2016-03-29	2016-04-05 09:35:10
	UTEX Culture Collection of Algae at The University of Texas Living Algae Holdings	UTEX	Occurrence	Specimen	2,813	2016-03-25	2016-01-13	--

Showing 1 to 8 of 8

The most recently updated resources are also available as an [RSS feed](#)

IPT Version 2.3.2-rea67259 [About the IPT](#) [User manual](#) [Report a bug](#) [Request new feature](#)

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Media retrieved from:
<http://www.florida.plantatlas.usf.edu/img/specimens/USF1.jpg>
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From Recordset

USF Herbarium
<http://biology.usf.edu/research/herbarium/>

The USF Herbarium was established as a research and teaching collection in 1956 by George R. Cooley, two years after the founding of the University of South Florida. The USF Herbarium is the second largest collection in Florida, the seventh largest in the southeastern United States, and ranks in the upper third of the world's herbaria in size. The herbarium contains approximately 280,000 specimens, consisting of about 200,000 specimens of vascular plants, 14,000 algae, 2,800 bryophytes, 1,300 lichens, and 500 macrofungi. The collection contains approximately 400 type specimens. The herbarium is richest in specimens from Florida (~40%), with additional holdings from North America north of Mexico (~25%), Latin America and the West Indies (~15%), and the Eastern Hemisphere (~10%). Specific groups well represented in the herbarium include Acanthaceae, Apocynaceae, Begoniaceae, Bromeliaceae, Fabaceae, Orchidaceae, and plantiophytes (ferns).

Contacts

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Phone	none	Phone	none

Data Raw

Identifier	http://www.florida.plantatlas.usf.edu/img/specimens/USF1.jpg
Title	Specimen: urn:catalog:USF:Herb:1, USF Herbarium
Type of Resource	StillImage
Format	image/jpeg

- eml
- meta
- multimedia
- occurrence

id	type	format	identifier	title	license	rightsHolder
urn:catalog:USF:Herb:1	StillImage	image/jpeg	http://www.florida.plantatlas.usf.edu/img/specimens/USF1.jpg	Specimen: urn:catalog:USF:Herb:1, USF Herbarium	http://creativecommons.org/licenses/by-nc-sa/4.0/	University of South Florida Herbarium
urn:catalog:USF:Herb:9	StillImage	image/jpeg	http://www.florida.plantatlas.usf.edu/img/specimens/USF9.jpg	Specimen: urn:catalog:USF:Herb:9, USF Herbarium	http://creativecommons.org/licenses/by-nc-sa/4.0/	University of South Florida Herbarium

HELP! Desk

- Data Ingestion Guidance:
https://www.idigbio.org/wiki/index.php/Data_Ingestion_Guidance
- For all questions, concerns, comments:
data@idigbio.org
- Ensure your data has unique identifiers for:
 - each specimen
 - institution/collection



iDigBio
Integrated Digitized Biocollections