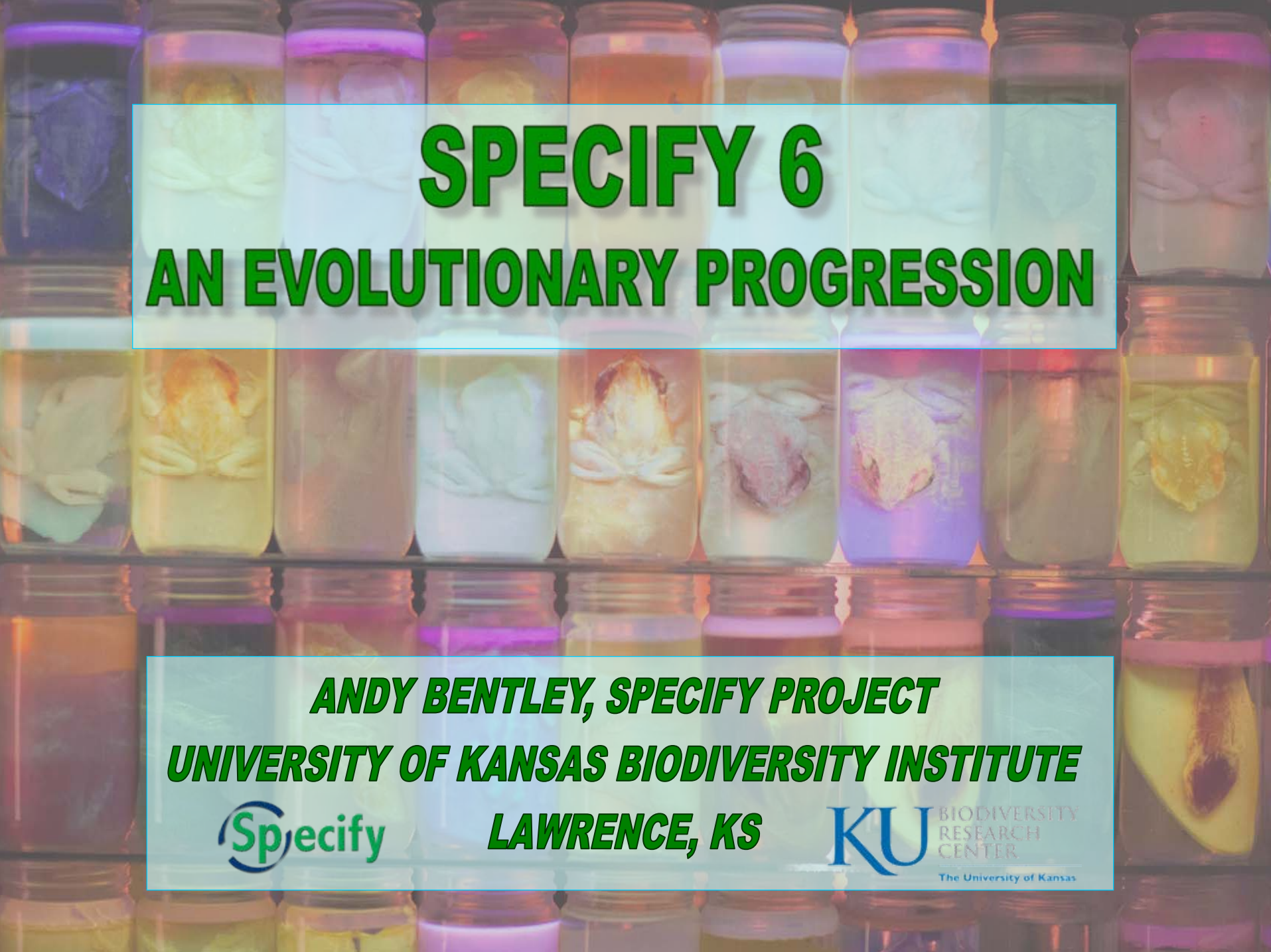


SPECIFY 6

AN EVOLUTIONARY PROGRESSION

ANDY BENTLEY, SPECIFY PROJECT

UNIVERSITY OF KANSAS BIODIVERSITY INSTITUTE

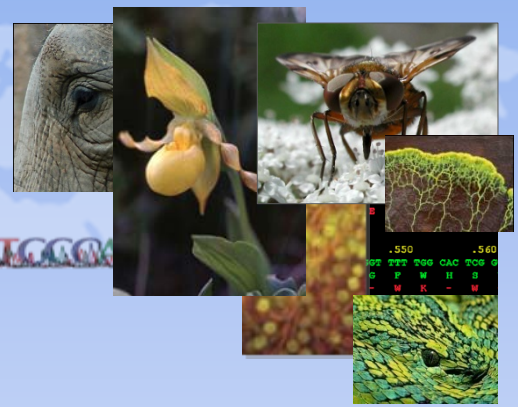
LAWRENCE, KS

What is Specify?

- ALLOWS FOR efficient computerization and management of biological collections and mobilization of specimen information onto the Internet.
- CONSISTS OF a highly customizable, forms-based interface, powerful querying tools and robust report designer for printed output.
- AIMS TO advance biological collections computing, communication, and collaboration through software and services.
- FREE - Distributed and licensed at no charge for non-profit collections. Open source.

http://www.specifysoftware.org

What is Specify?



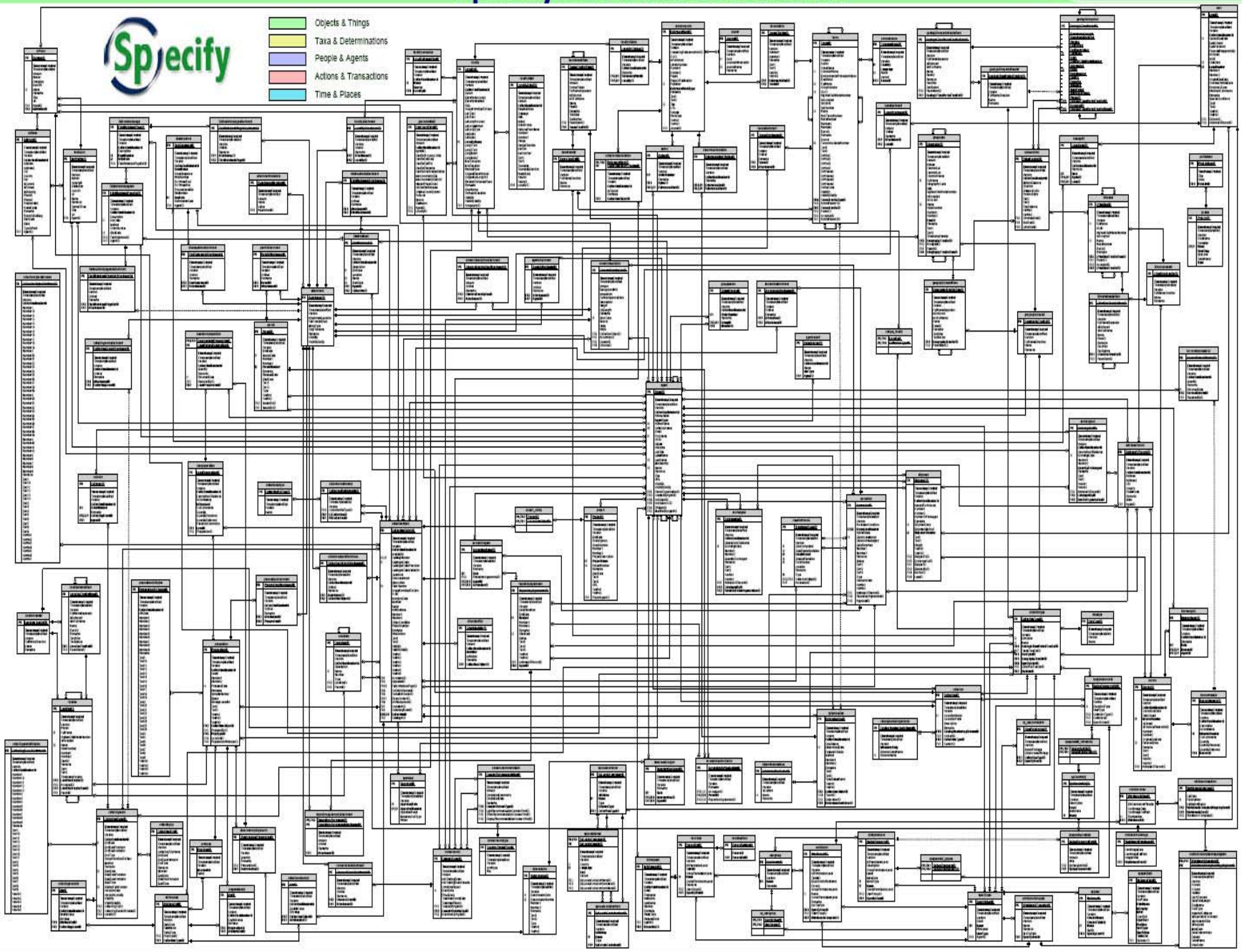
- Over 10 major releases in 15 years with extensive upgrades and new features.

- Supported by the U.S. National Science Foundation since 1987.

- Staff of 12 people attending to programming, development, conversions, web, DiGIR and user issues.

- Representation of all Natural History disciplines
- Over 300 collections in 23 countries
- Over 120 US institutions in 41 states
- Over 20 million specimens cataloged
- Increasing all the time

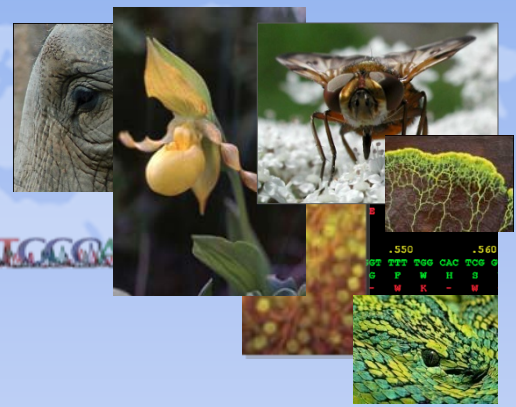
Specify 6 Database Schema



Specify Software Project: http://specifysoftware.org

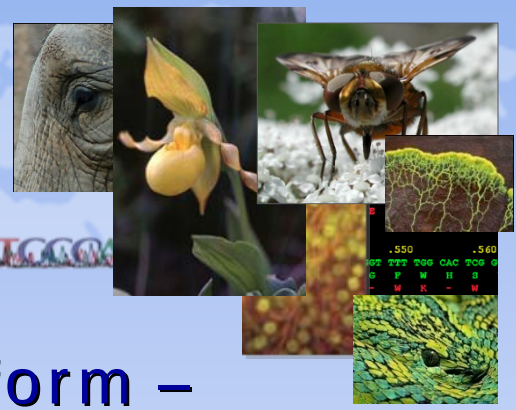
Supported by U.S. National Science Foundation, Award BIO/BDI 0446544 and earlier grants.

Specify 6



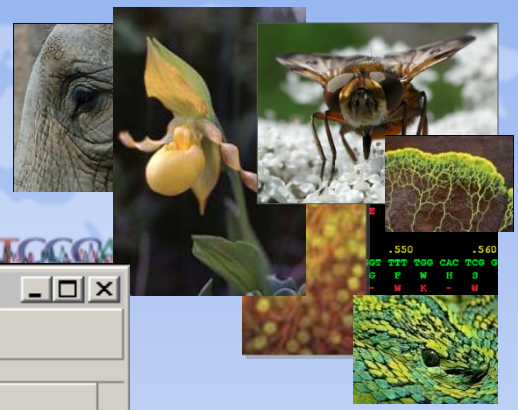
- Written in Java
- PC, Mac and LINUX compatible
- Database agnostic – MySQL
- Open source – all source code available under FOSS (GPL2)

Specify 6

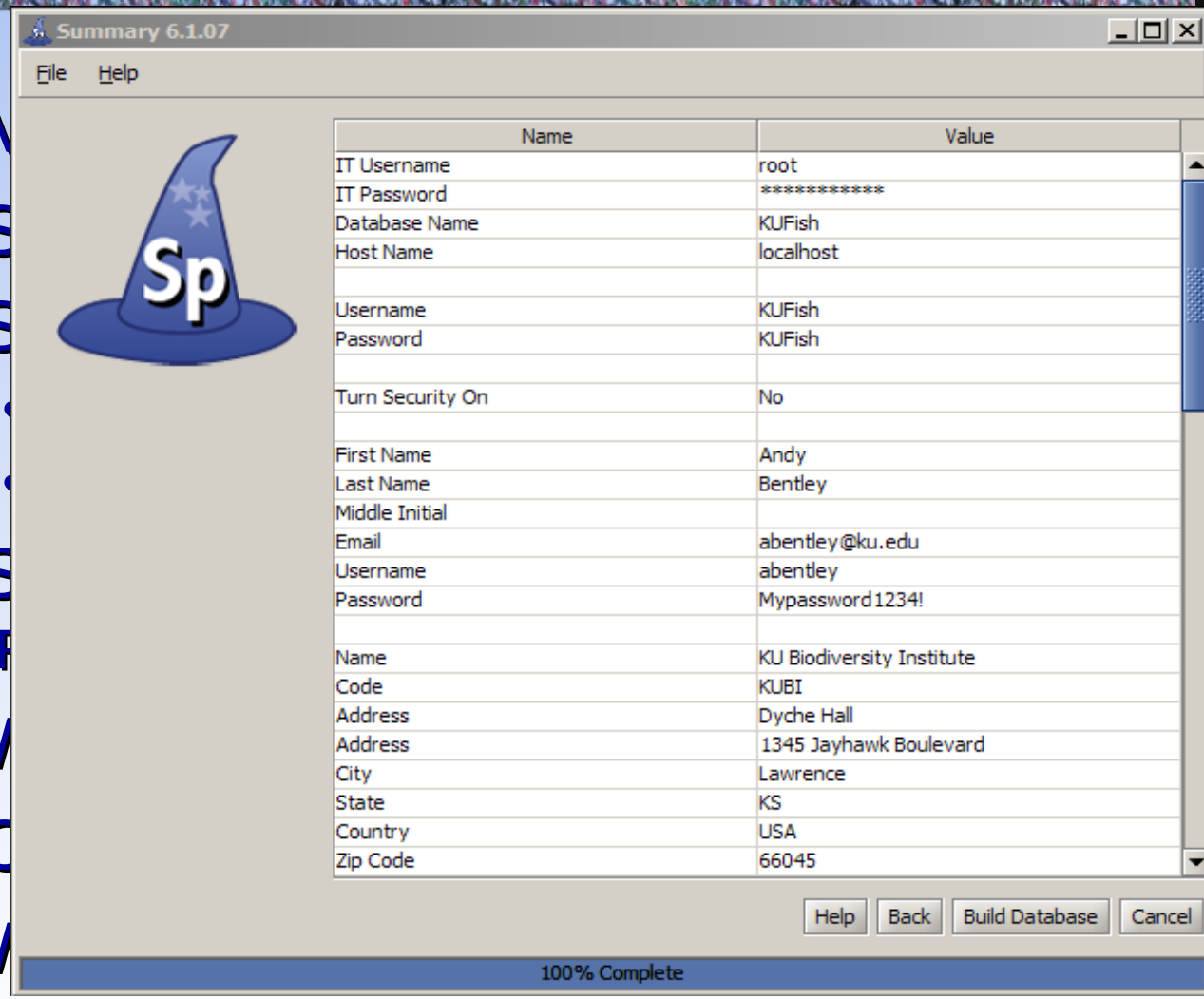


- Collections management platform – pluggable components
- Multi-collection/discipline capable
- 3rd party applications - GEOLocate, Google Earth
- Web services and online providers – ITIS, Fishbase, Lifemapper
- Strategic Partnerships – Filtered push (Harvard), botanical image OCR (Michigan), image bank (MorphBank) and DNA (BCoL)
- Staged, frequent releases with added functionality – smart update

Installation and Setup

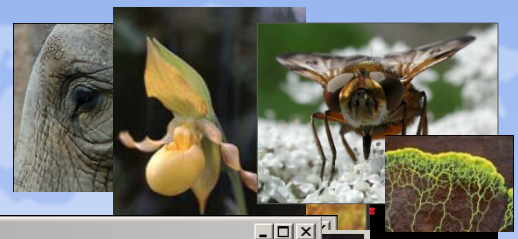


- M
- S
- S ation
- S ard, iF orter
- V
- C s
- V



Name	Value
IT Username	root
IT Password	**********
Database Name	KUFish
Host Name	localhost
Username	KUFish
Password	KUFish
Turn Security On	No
First Name	Andy
Last Name	Bentley
Middle Initial	
Email	abentley@ku.edu
Username	abentley
Password	Mypassword1234!
Name	KU Biodiversity Institute
Code	KUBI
Address	Dyche Hall
Address	1345 Jayhawk Boulevard
City	Lawrence
State	KS
Country	USA
Zip Code	66045

THE WORKBENCH



Specify 6.0

File Edit Tabs Help

Actions
- Import Data
- Import Images
- New Data Set
- Export Data Set
- Export MS Excel Template

Reports
- Data Set Summary
- Basic Label
- Chart
- Top 10

Data Sets
- Botany
- Botany2
- ento
- ichthy1
- Ichthyology

Trash

Fauna of Seychelles
University of Kansas Biodiversity Institute

Acanthuridae
Ctenochaetus truncatus

Baie Ternay - left hand side of bay

-4.639 55.371 m

, ACB 05-07 04/18/2005

Bentley 2008

Fauna of Seychelles
University of Kansas Biodiversity Institute

Acanthuridae
Acanthurus lineatus

Port Launay - North rocks

-4.65 55.378 m

, ACB 05-12 04/21/2005

Bentley 2008

Fauna of Seychelles
University of Kansas Biodiversity Institute

Acanthuridae
Acanthurus nigricauda

Baie Ternay - right hand side of bay

-4.637 55.375 m

, ACB 05-08 04/19/2005

Bentley 2008

Fauna of Seychelles
University of Kansas Biodiversity Institute

Acanthuridae
Acanthurus nigrofuscus

South of Pointe L'Escalier

-4.661 55.48 m

, ACB 05-14 04/22/2005

Bentley 2008

Fauna of Seychelles
University of Kansas Biodiversity Institute

Acanthuridae
Zebrasoma scopas

Baie Ternay - right hand side of bay

-4.637 55.375 m

, ACB 05-08 04/19/2005

Fauna of Seychelles
University of Kansas Biodiversity Institute

Acanthuridae
Acanthurus nigrofuscus

South of Pointe L'Escalier

-4.661 55.48 m

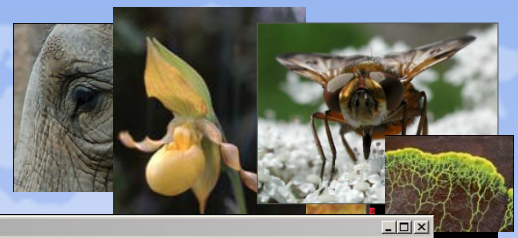
, ACB 05-14 04/22/2005

Page 1 of 26

WorkBench Labels

guest WorkBench

Workbench - upload



Specify Beta 6.2.30

File Edit Data System Tabs Debug Help

Welcome | Data Entry | Trees | Reports | Interactions | Statistics | Query | WorkBench

2007 Search

Actions
- Import Data
- Import Images
- New Data Set
- Export Data Set
- Export MS Excel Template

Reports
- Data Set Summary
- Basic Label
- Chart
- Top 10

Data Sets
- Ichthyology

	Catalog number	Family	Genus	Species	FieldNumber	Date	LocalityName	Country	State	County	Latitude	Longitude
1	6803	Acanthuridae	Ctenochaetus	truncatus	ACB 05-07	04/18/2005	Baie Ternay - left hand side of bay	Seychelles	Mahe	Cap Ternay	-4.6392	55.371
2	6811	Acanthuridae	Acanthurus	nigricauda	ACB 05-08	04/19/2005	Baie Ternay - right hand side of bay	Seychelles	Mahe	Cap Ternay	-4.6367	55.3752
3	6814	Acanthuridae	Zebrasoma	scopas	ACB 05-08	04/19/2005	Baie Ternay - right hand side of bay	Seychelles	Mahe	Cap Ternay	-4.6367	55.3752
4	6864	Acanthuridae	Acanthurus	leucosternon	ACB 05-12	04/21/2005	Port Launay - North rocks	Seychelles	Mahe	Port Launay	-4.6505	55.3785
5	6865	Acanthuridae	Acanthurus	lineatus	ACB 05-12	04/21/2005	Port Launay - North rocks	Seychelles	Mahe	Port Launay	-4.6505	55.3785
6	6893	Acanthuridae	Acanthurus	nigrofuscus	ACB 05-14	04/22/2005	South of Pointe L'Escalier	Seychelles	Mahe		-4.661	55.4803
7	6894	Acanthuridae	Acanthurus	nigrofuscus	ACB 05-14	04/22/2005	South of Pointe L'Escalier	Seychelles	Mahe		-4.661	55.4803
8	6896	Acanthuridae	Ctenochaetus	truncatus	ACB 05-14	04/22/2005	South of Pointe L'Escalier	Seychelles	Mahe		-4.661	55.4803
9	6930	Acanthuridae	Zebrasoma	scopas	ACB 05-15	04/23/2005	North Point of Cenception Island	Seychelles	Mahe	Conception Island	-4.6597	55.3608
10	7007	Acanthuridae	Acanthurus	leucosternon	ACB 05-18	04/27/2005	Les Trois Dames off Port Glaud	Seychelles	Mahe	Port Glaud	-4.6792	55.4193
11	7011	Acanthuridae	Ctenochaetus	striatus	ACB 05-18	04/27/2005	Les Trois Dames off Port Glaud	Seychelles	Mahe	Port Glaud	-4.6792	55.4193
12	7012	Acanthuridae	Ctenochaetus	striatus	ACB 05-18	04/27/2005	Les Trois Dames off Port Glaud	Seychelles	Mahe	Port Glaud	-4.6792	55.4193
13	7037	Acanthuridae	Acanthurus	lineatus	ACB 05-19	04/28/2005	Baie Ternay - left hand side of bay	Seychelles	Mahe	Cap Ternay	-4.6392	55.371
14	7157	Acanthuridae	Naso	brevirostris	PCH 2005-37	05/05/2005	Denis Island - northern side	Seychelles	Denis Island		-3.7628	55.6807
15	7162	Acanthuridae	Naso	brevirostris	PCH 2005-37	05/05/2005	Denis Island - northern side	Seychelles	Denis Island		-3.7628	55.6807
16	7186	Acanthuridae	Zebrasoma	desjardinii	PCH 2005-39	05/06/2005	Ile du Nord	Seychelles	Ile du Nord		-4.3822	55.2418
17	7198	Acanthuridae	Acanthurus	leucochilus	PCH 2005-37	05/05/2005	Denis Island - northern side	Seychelles	Denis Island		-3.7628	55.6807
18	7218	Acanthuridae	Acanthurus	mata	PCH 2005-39a	05/07/2005	Victoria Fish Market	Seychelles	Mahe	Victoria		
19	7226	Acanthuridae	Ctenochaetus	binotatus	PCH 2005-40	05/07/2005	Baie Aux Chagrins	Seychelles	Mahe	Cap Ternay	-4.629	55.3768
20	7227	Acanthuridae	Ctenochaetus	binotatus	PCH 2005-40	05/07/2005	Baie Aux Chagrins	Seychelles	Mahe	Cap Ternay	-4.629	55.3768
21	7260	Ambassidae	Ambassis	interrupta	PCH 2005-46	05/10/2005	Pont Connal Mangrove	Seychelles	Mahe		-4.6548	55.4048
22	6821	Apogonidae	Cheilodipterus	macrodon	ACB 05-10	04/19/2005	Port Launay - South beach	Seychelles	Mahe	Port Launay	-4.6537	55.3997
23	6822	Apogonidae	Cheilodipterus	macrodon	ACB 05-10	04/19/2005	Port Launay - South beach	Seychelles	Mahe	Port Launay	-4.6537	55.3997
24	6848	Apogonidae	Apogon	holotaenia	ACB 05-10	04/19/2005	Port Launay - South beach	Seychelles	Mahe	Port Launay	-4.6537	55.3997
25	6849	Apogonidae	Apogon	holotaenia	ACB 05-10	04/19/2005	Port Launay - South beach	Seychelles	Mahe	Port Launay	-4.6537	55.3997
26	6876	Apogonidae	Apogon	angustatus	ACB 05-14	04/22/2005	South of Pointe L'Escalier	Seychelles	Mahe		-4.661	55.4803
27	6877	Apogonidae	Apogon	angustatus	ACB 05-14	04/22/2005	South of Pointe L'Escalier	Seychelles	Mahe		-4.661	55.4803
28	6878	Apogonidae	Apogon	savayensis	ACB 05-14	04/22/2005	South of Pointe L'Escalier	Seychelles	Mahe		-4.661	55.4803
29	6879	Apogonidae	Apogon	savayensis	ACB 05-14	04/22/2005	South of Pointe L'Escalier	Seychelles	Mahe		-4.661	55.4803
30	6905	Apogonidae	Apogon	campbelli	ACB 05-14	04/22/2005	South of Pointe L'Escalier	Seychelles	Mahe		-4.661	55.4803
31	6906	Apogonidae	Apogon	campbelli	ACB 05-14	04/22/2005	South of Pointe L'Escalier	Seychelles	Mahe		-4.661	55.4803
32	6939	Apogonidae	Apogon	holotaenia	ACB 05-15	04/23/2005	North Point of Cenception Island	Seychelles	Mahe	Conception Island	-4.6597	55.3608
33	6949	Apogonidae	Apogon	semiornatus	ACB 05-15	04/23/2005	North Point of Cenception Island	Seychelles	Mahe	Conception Island	-4.6597	55.3608
34	6950	Apogonidae	Apogon	semiornatus	ACB 05-15	04/23/2005	North Point of Cenception Island	Seychelles	Mahe	Conception Island	-4.6597	55.3608

WorkBench Uploader

Uploading Row 1 of 201 Pause

Affected Tables

Table	Records Added
Collecting Event	0
Collection Object	0
Determination	0
Geography	0
Locality	0
Taxon	0

Messages

Dataset structure verified. Click 'Validate' to continue.
Dataset validated for upload
Ready to upload.
Uploading...

Validate | Upload | Settings... | Close

Trash

Save | Form

Welcome | Reports | Ichthyology

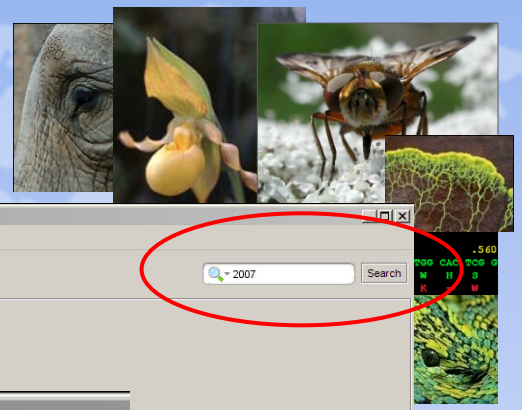
Uploading

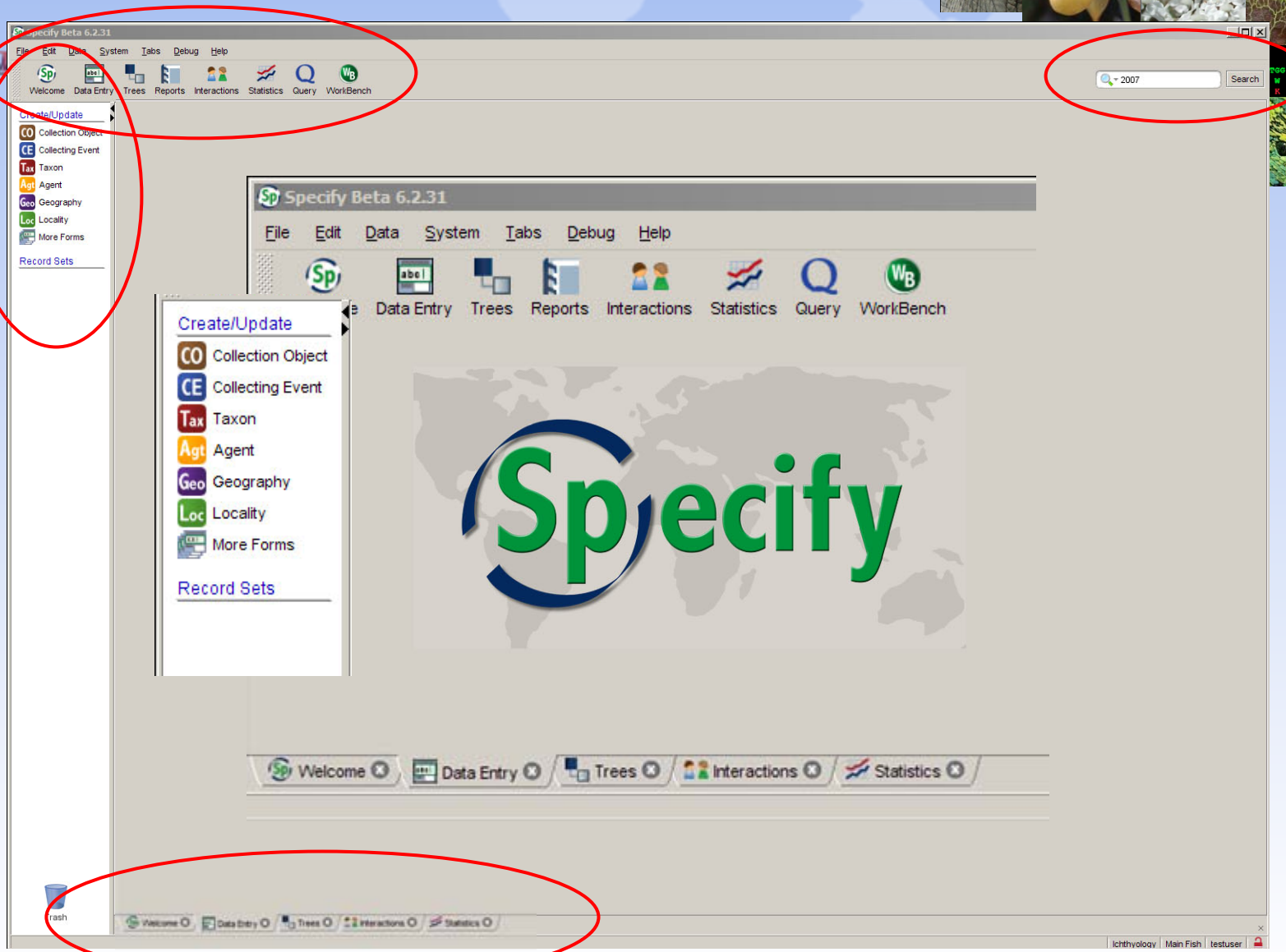
Ichthyology | Main Fish | testuser

Mobile Workbench

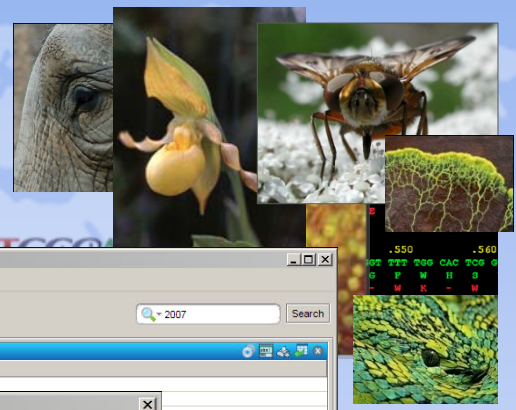
- SPMobile – mobile WorkBench
  - Separate download
  - Full WorkBench capabilities
  - Compatible with internal version
  - USB capable field application

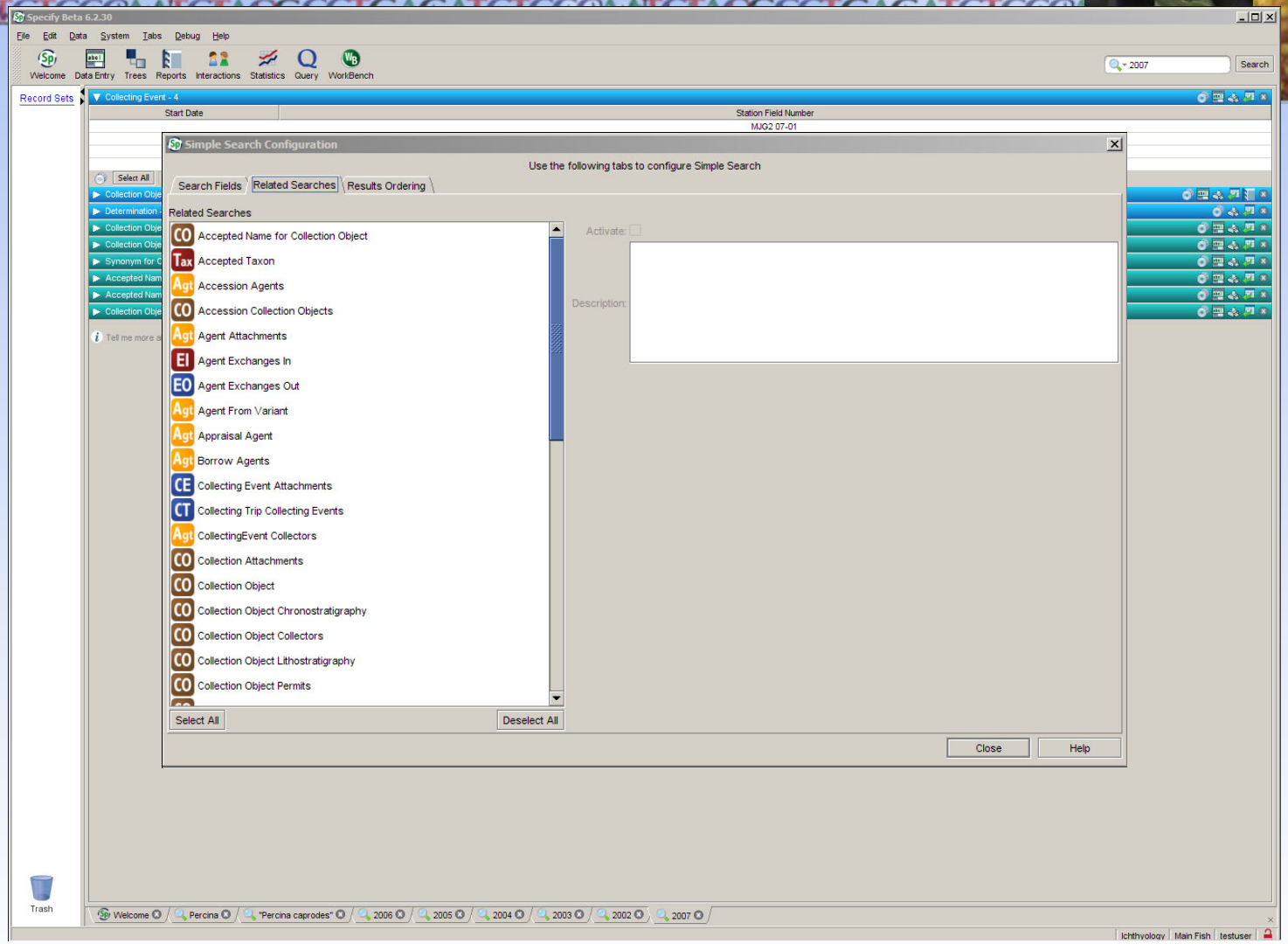
Opening screen



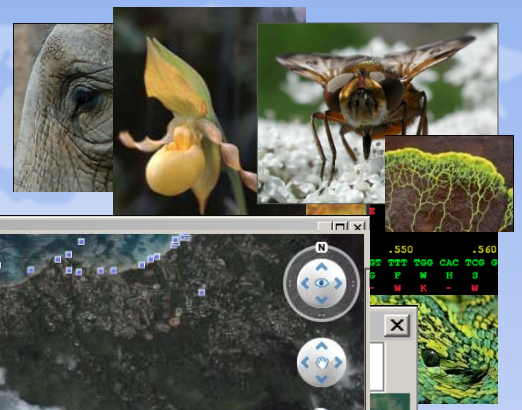


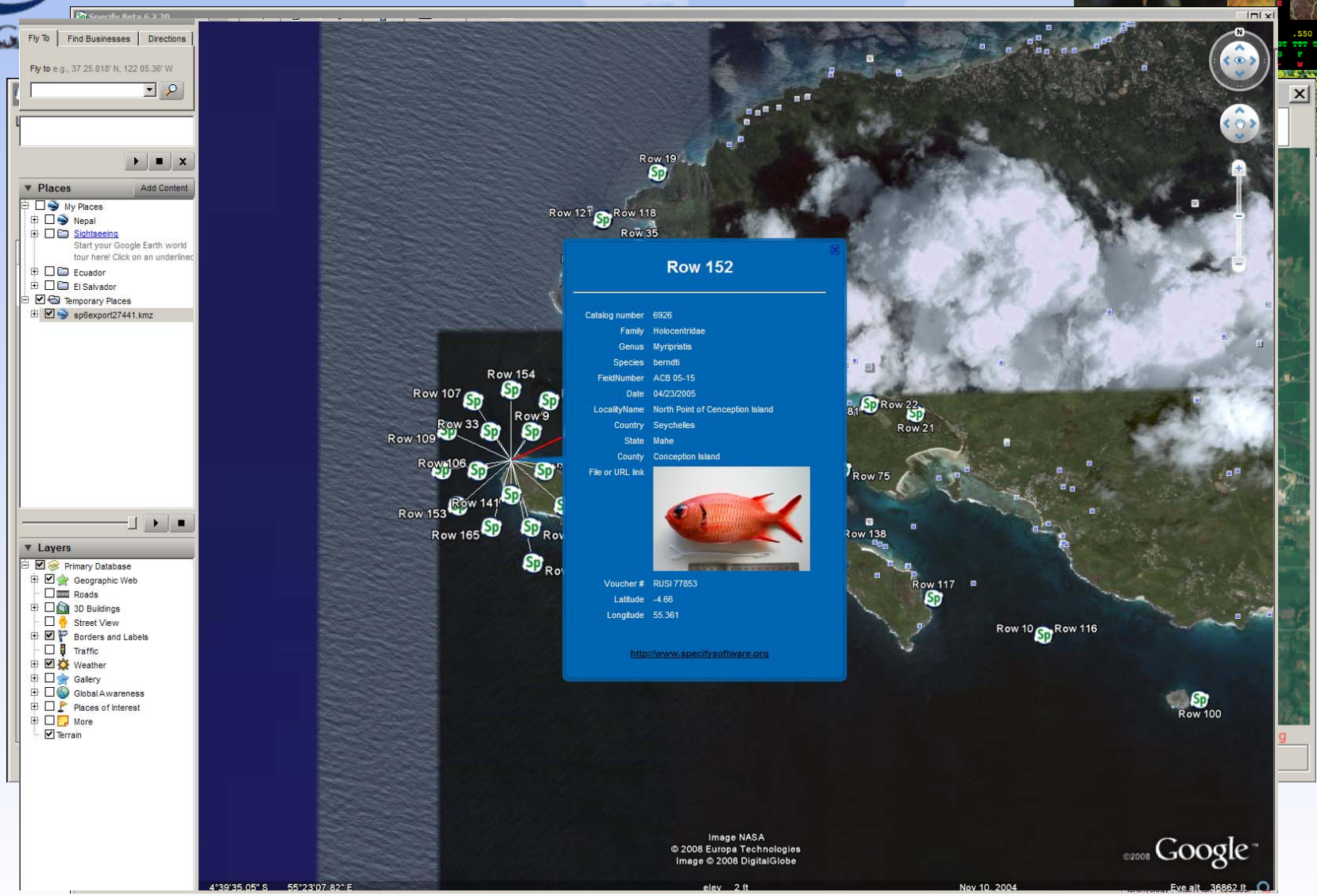
Simple search





Data entry




Fly To
Find Businesses
Directions
Places
Add Content
My Places
Nepal
Sightseeing
Ecuador
El Salvador
Temporary Places
sp6export27441.kmz
Layers
Primary Database
Geographic Web
Roads
3D Buildings
Street View
Borders and Labels
Traffic
Weather
Gallery
Global Awareness
Places of Interest
More
Terrain
Row 19
Row 121
Row 118
Row 35
Row 154
Row 107
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Row 153
Row 165
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Row 75
Row 138
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Row 10
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Row 152
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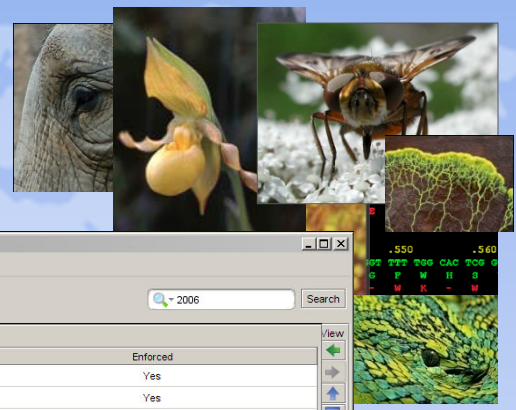
Family Holocentridae
Genus Myripristis
Species berndti
FieldNumber ACB 05-15
Date 04/23/2005
LocalityName North Point of Conception Island
Country Seychelles
State Mahe
County Conception Island
File or URL link
Voucher # RUSI 77853
Latitude -4.66
Longitude 55.361
http://www.specifysoftware.org
Image NASA
© 2008 Europa Technologies
Image © 2008 DigitalGlobe
©2008 Google
Nov 10, 2004

Trees



Specify Beta 6.2.30

File Edit Data System Tabs Debug Help

Welcome | Data Entry | Trees | Reports | Interactions | Statistics | Query | WorkBench

Search: 2006 — Search

Edit Trees
- Geography
- Storage
- Taxon

Edit Tree Definitions
- Geography
- Storage
- Taxon

Unlock a Tree
- Geography
- Storage
- Taxon

Trash

Fish

Name	Remarks	In Full Name	Enforced
Taxonomy Root		No	Yes
Kingdom		No	Yes
Subkingdom		No	No
Phylum		No	Yes
Subphylum		No	No
Superclass		No	No
Class		No	Yes
Subclass		No	No
Infraclass		No	No
Superorder		No	No
Order		No	Yes
Suborder		No	No
Infraorder		No	No
Superfamily		No	No
Family		No	Yes
Subfamily		No	No
Tribe		No	No
Subtribe		No	No
Genus		Yes	Yes
Subgenus		No	No
Species		Yes	No
Subspecies		Yes	No

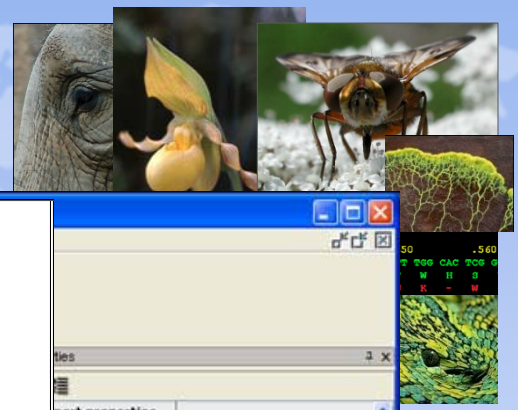
View | Edit

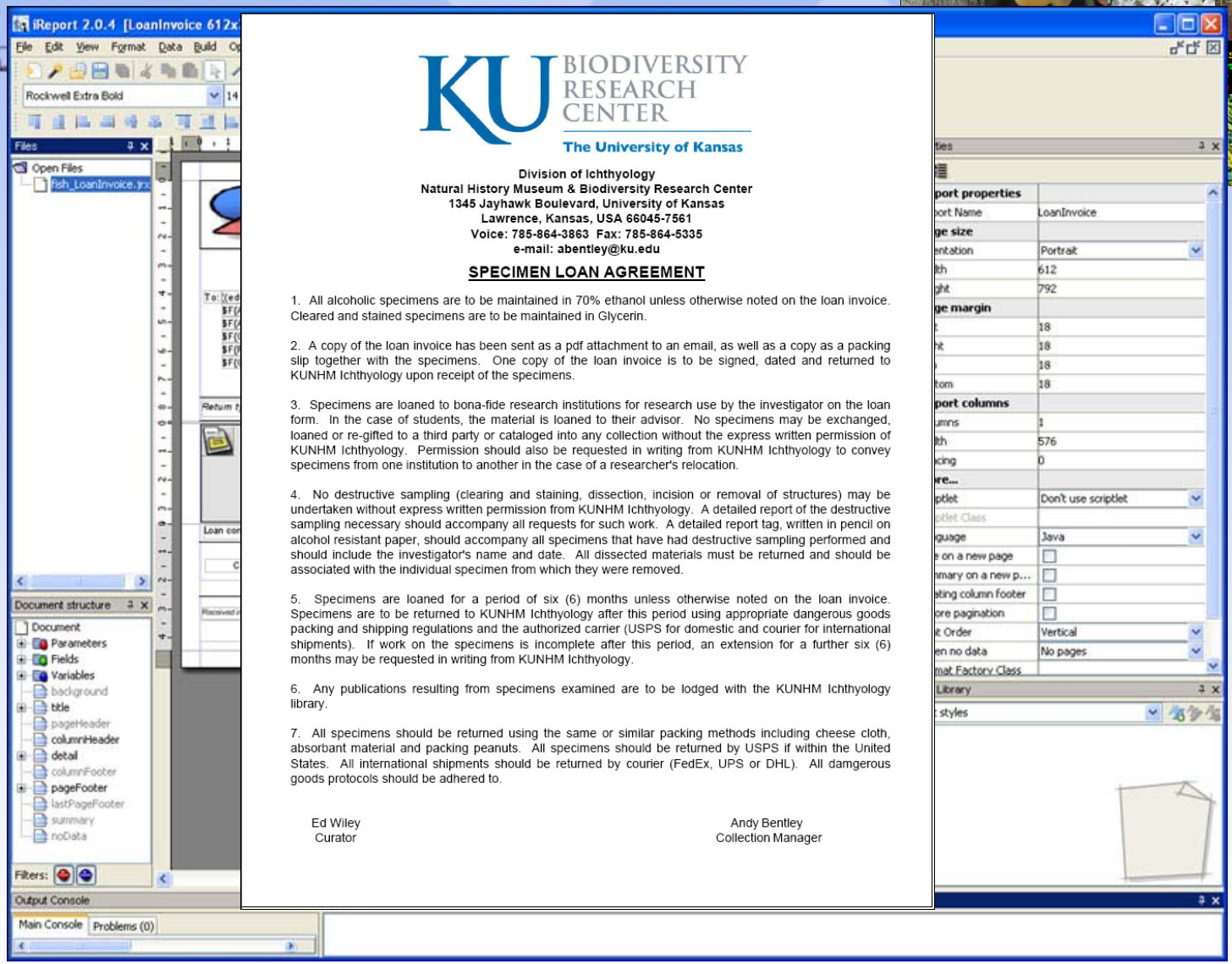
Find: | Find | Next

Welcome | Taxon | Geography

Ichthyology | Main Fish | testuser

Reports





KU BIODIVERSITY RESEARCH CENTER
The University of Kansas

Division of Ichthyology
Natural History Museum & Biodiversity Research Center
1345 Jayhawk Boulevard, University of Kansas
Lawrence, Kansas, USA 66045-7561
Voice: 785-864-3863 Fax: 785-864-5335
e-mail: abentley@ku.edu

SPECIMEN LOAN AGREEMENT

1. All alcoholic specimens are to be maintained in 70% ethanol unless otherwise noted on the loan invoice. Cleared and stained specimens are to be maintained in Glycerin.

2. A copy of the loan invoice has been sent as a pdf attachment to an email, as well as a copy as a packing slip together with the specimens. One copy of the loan invoice is to be signed, dated and returned to KUNHM Ichthyology upon receipt of the specimens.

3. Specimens are loaned to bona-fide research institutions for research use by the investigator on the loan form. In the case of students, the material is loaned to their advisor. No specimens may be exchanged, loaned or re-gifted to a third party or cataloged into any collection without the express written permission of KUNHM Ichthyology. Permission should also be requested in writing from KUNHM Ichthyology to convey specimens from one institution to another in the case of a researcher's relocation.

4. No destructive sampling (clearing and staining, dissection, incision or removal of structures) may be undertaken without express written permission from KUNHM Ichthyology. A detailed report of the destructive sampling necessary should accompany all requests for such work. A detailed report tag, written in pencil on alcohol resistant paper, should accompany all specimens that have had destructive sampling performed and should include the investigator's name and date. All dissected materials must be returned and should be associated with the individual specimen from which they were removed.

5. Specimens are loaned for a period of six (6) months unless otherwise noted on the loan invoice. Specimens are to be returned to KUNHM Ichthyology after this period using appropriate dangerous goods packing and shipping regulations and the authorized carrier (USPS for domestic and courier for international shipments). If work on the specimens is incomplete after this period, an extension for a further six (6) months may be requested in writing from KUNHM Ichthyology.

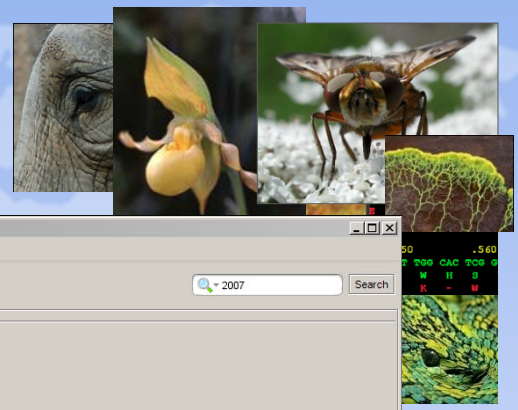
6. Any publications resulting from specimens examined are to be lodged with the KUNHM Ichthyology library.

7. All specimens should be returned using the same or similar packing methods including cheese cloth, absorbant material and packing peanuts. All specimens should be returned by USPS if within the United States. All international shipments should be returned by courier (FedEx, UPS or DHL). All damgerous goods protocols should be adhered to.

Ed Wiley
Curator

Andy Bentley
Collection Manager

Interactions



Specify Beta 6.2.30

File Edit Data System Tabs Debug Help

Welcome | Data Entry | Trees | Reports | Interactions | Statistics | Query | WorkBench

2007 Search

Create/Update
- Accession
- Permit
- Loan
- Gift
- Exchange In
- Exchange Out
- Borrow
- Information Request
- Print Invoice

Information Request

Record Sets
- Record set

Trash

Information Request

Info Req Number: 2009 - ### Agent: Bentley, Andy

Request Date: 03/16/2009 Reply Date: MM/DD/YYYY

Remarks:

Items

Cataloged Date	Catalog Number	Field Number	Determinations	Locality Name	Latitude1	Longitude1	Preparations
06/26/2007	39946		Notropis stramineus (current)	Yellowstone Creek	36.9995300000	-98.8509800000	EtOH - 2
05/02/2007	39703		Cyprinella lutrensis (current)	Tributary of Waterfall Creek, 5 mi. ...	33.8132209778	-94.8271636963	EtOH - 4
03/12/2007	39392		Dorosoma cepedianum (current)	Walnut Creek, 1 mi. E of Prue	36.2407455444	-96.2954483032	EtOH - 1
01/18/2007	39015		Campostoma anomalum (current)	Pole Creek	39.9769200000	-96.2245100000	EtOH - 2
06/27/2007	40040				39.0194800000	-101.3509400000	EtOH - 61
04/10/2007	39646				38.7671800000	-94.9884600000	EtOH - 1
06/27/2007	40036				39.1097800000	-101.4530900000	EtOH - 2
02/09/2007	39194				38.5785400000	-96.0188200000	EtOH - 2
06/26/2007	39934				39.0571600000	-101.3925700000	EtOH - 15
03/14/2007	39519				38.9320259094	-95.3304519653	EtOH - 1

Send Email on Save

Save

Welcome | Information Request

Ichthyology | Main Fish | testuser

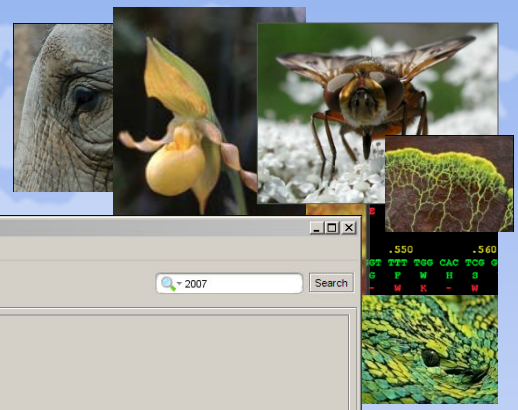
Create Loan from Preparations

38 Preparation(s) selected

- 38700 - Etheostoma spectabile
  - EtOH 1 of 2
- 40080 - Micropterus salmoides
  - EtOH 3 of 12
- 40130 - Notropis stramineus
  - EtOH 7 of 40
- 40229 - Pomoxis annularis
  - EtOH 27 of 77

OK | Cancel | Select All | Help

Query builder



Specify Beta 6.2.31

File Edit Data System Tabs Debug Help

Welcome | Data Entry | Trees | Reports | Interactions | Statistics | Query | WorkBench

2007 Search

Create Query

- Agent
- Collecting Event
- Collection Object
- Loan
- Locality
- Taxon
- More Tables

Saved Queries

- Accession
- Agent
- Collecting Event
- Collection Object
- Geography
- Gift
- Label
- Loan
- Locality
- Taxon

Trash

Collection Object	Collecting Event	Locality	Geography
✓ Catalog Number	End Date	Datum	Abbreviation
Cataloged Date	End Date Precision	Elevation Accuracy	Centroid Latitude
Cataloged Date Precision	End Date Verbatim	Elevation Method	Centroid Longitude
Cataloged Date Verbatim	End Time	GML	Common Name
Cataloger	Locality	GUID	Continent
Collecting Event	Method	Geography	✓ Country
Collection	Remarks	Lat1text	✓ County
Collection Object Attachments	✓ Start Date	Lat2text	Full Name

	Not	Operator	Criteria	Sort	Show	Prompt	Always
Catalog Number		<	200		✓	✓	
Accession Number		Contains			✓	✓	
Family		=			✓	✓	
Full Name		Contains			✓	✓	
Current					✓	✓	
Station Field Number		Contains			✓	✓	
Start Date		=			✓	✓	
Collectors [Aggregated]							
Last Name		Contains				✓	
Locality Name		Contains			✓	✓	
Latitude1		=			✓	✓	
Latitude2		=			✓	✓	
Country		=			✓	✓	
State		=			✓	✓	
County		=			✓	✓	
Name		Contains				✓	
Preparations [Aggregated]							

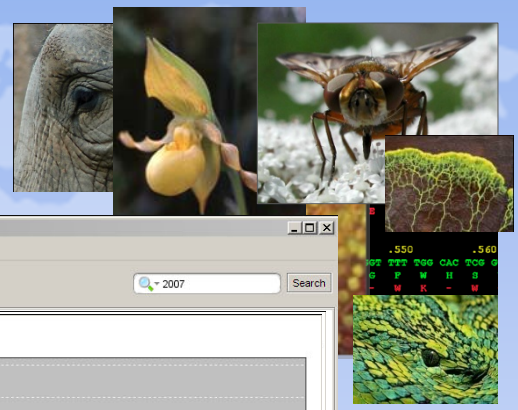
Help

✓ Search Synonyms ☐ Distinct ☐ Count Search Save

Welcome | Collection Object

Ichthyology | Main Fish | testuser

Statistics



Specify Beta 6.2.31

File Edit Data System Tabs Debug Help

Welcome | Data Entry | Trees | Reports | Interactions | Statistics | Query | WorkBench

2007 Search

Statistics
- Top Five Species
- Cataloged Last 10 Years
- Specimens by Country

Trash

Items Cataloged Last 10 Years

Number of Specimens: 0, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1,000, 1,100, 1,200, 1,300, 1,400, 1,500, 1,600, 1,700, 1,800, 1,900, 2,000, 2,100, 2,200, 2,300, 2,400, 2,500

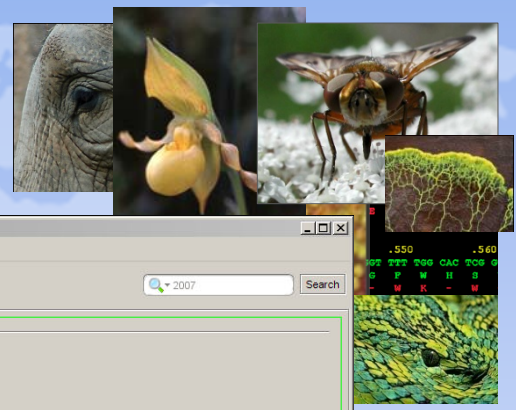
Years

1999 2000 2001 2002 2003 2004 2005 2006 2007 2008

Welcome | Statistics

Ichthyology | Main Fish | testuser

Security



Specify Beta 6.2.30

File Edit Data System Tabs Debug Help

Welcome | Data Entry | Trees | Reports | Interactions | Statistics | Query | WorkBench

Search

Natural History Museum
- Ichthyology
  - Main Fish
    - Full Access Users
    - Guests
    - Limited Access Users
    - Managers
      - testuser
- Administrator
  - testuser

To add a user to a group, right-click on the group and choose 'add new user...' or 'add existing user...'.

Legend
- Group of Users
- User
- Collection

User

User Group: Manager
Name: testuser
Password: ••••••••
Password Strength: Needs to be mixed case
Email: testuser@ku.edu
Agent: User, Test
Key:
Generate New Key

Permissions

General | Objects

Preferences

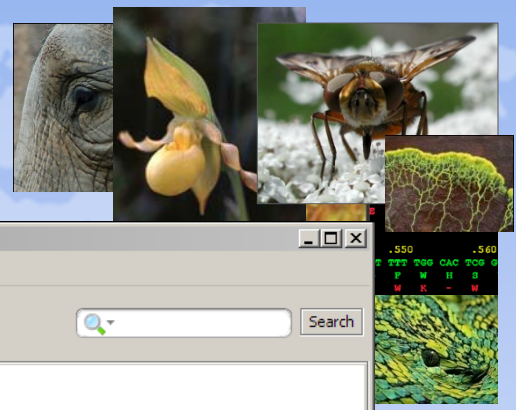
Name	Enable Preference
Email	☐
Formatting	☐
Google Earth	☐
Login Dialog	☐
MySQL	☐
System	☐

Save

Welcome | Data Entry | Security Tools

Ichthyology | Main Fish | testuser

Schema configuration



Specify Alpha 6.1.41

File Edit Data System Tabs Debug Help

Data Entry | Reports | Interactions | Statistics | Query | WorkBench | Search

Schema Configuration... - English

Tables

accession
accessionagent
accessionauthorization
address
addressofrecord
agent
agentgeography
agentspecialty
agentvariant
appraisal
author
borrow
borrowagent
borrowmaterial

Label: Accession

Hide Table

Desc: Also called an acquisition. A consignment of specimens acquired either by field collecting of staff members, gifts, purchases, or exchange with another institution.

Display Format: Accession

Aggregation:

Web Links:

Fields

accessionAgents
accessionAttachments
accessionAuthorizations
accessionCondition
accessionNumber
addressOfRecord
appraisals
collectionObjects
createdByAgent
dateAccessioned
dateAcknowledged

Label: Accession Number

Hide Field

Desc: Usually an integer or alphanumeric value that is assigned to material when it enters the collection. The format of accession numbers varies among collections, but all refer to the acquisition of specimens, observations, or other collection objects.

Type: String Is Required

Length: 60

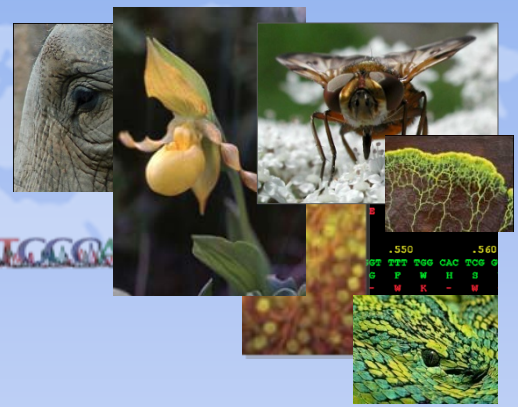
Format Type: Formatting AccessionNumber [YEAR-AA-###] (Default)

OK | Cancel | Change Locale | Help

Welcome

testuser | testfish : Fish

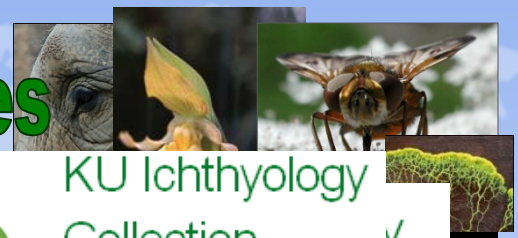
Web and TAPIR access



- Leveraging GBIF IPT client

  http://ipt.gbif.org/index.html
- Auto mapping of Darwin Core concepts
- Mobilization of data through IPT provider
- Generation of TAPIR address for portal/provider interaction

SPECIFY 6.1 - new features



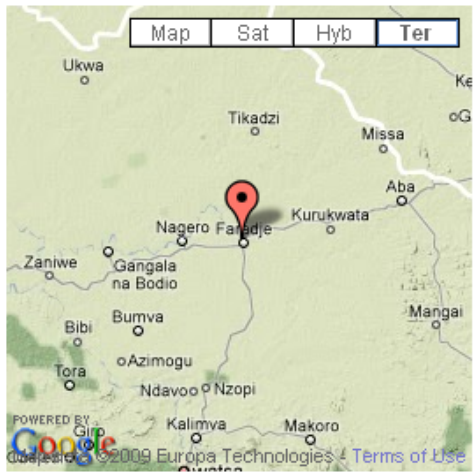
KUI - Unknown catalogue number

Polypterus ornatipinnis

GUID	e2373dee-7427-4c8c-85bf-06163b7699bd
SourceID	23858
Data	XML
Annotations	0 notes

DarwinCore

InstitutionCode	KU
CollectionCode	KUI
CatalogNumberNumeric	17512
Sex	---
Preparations	C&S - 1; EtOH - 3
Collector	Lang, H; Chapin, J
FieldNumber	AMNH 6159
IslandGroup	---
Island	---
Country	Congo
StateProvince	Faradje
County	Orientale
Locality	Dungu River
MinimumDepthInMeters	---
MaximumDepthInMeters	---
DecimalLatitude	3.7500000000
DecimalLongitude	29.7000007629
VerbatimLatitude	03:45 N
VerbatimLongitude	29:42 E
IdentifiedBy	---
TypeStatus	---
ScientificName	Polypterus ornatipinnis
Kingdom	Animalia
Phylum	Chordata
Class	Actinopterygii
Order	Polypteriformes
Family	Polypteridae
Genus	Polypterus



GBIF

KU Ichthyology Collection

Navigate Taxonomy

- Load error!

Navigate Geography

- Bermuda
- Honduras
- Thailand
- Bulgaria
- Germany
- Romania
- Mongolia
- Kazakhistan
- Lagos
- Italy
- Ecuador?
- Uruguay
- Portugal
- Micronesia
- Congo
  - Faradje
    - Orientale
      - Dungu River
- San Juan
- Comoro Islands
- Argentina
- Bolivia
- Liberia
- Lebanon
- China
- Sri Lanka
- Chile
- Netherlands
- Equatorial Guinea
- Florida Keys
- USA

SPECIFY 6 - future directions

- Addition o w and Specify 5 tch editing, series pro
- Additional QL server
- Additional es and partnershi
- Specify Ar rt phone based Spe entation
  - Android ba cation for offsite data accum