



Introduction to Morpho

Early Career Faculty Workshop

Samantha Romanello

Long Term Ecological Research

University of New Mexico





Introduction to Morpho

What it is, What it does, and How it
works





Morpho



Is a data management software tool for ecologists.

<http://knb.ecoinformatics.org/software/morpho/>





<http://knb.ecoinformatics.org/morphoportal.jsp>

KNB Data :: Morpho - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://knb.ecoinformatics.org/morphoportal.jsp

Firefox Help Firefox Support Plugin FAQ Google Search: Calvin and Hobbes ... In Memoriam - Calvin ...

Morpho Information and Downloads

Home


Morpho Data Management Software

Morpho allows you to create and manage your data, and to share it with others. It was created to provide an easy-to-use, cross-platform application for accessing and manipulating metadata and data (both locally and on the network).

Morpho allows ecologists to create metadata, (i.e. describe their data in a standardized format), and create a catalog of data & metadata upon which to query, edit and view data collections. In addition, It also provides the means to access network servers, in order to query, view and retrieve all relevant, public ecological data!

The basic operations that can be carried out using Morpho are:

- ❖ Create and Edit Metadata
- ❖ Search and Query Metadata Collections
- ❖ View Data and Data Collections
- ❖ Verify/Edit Data
- ❖ Provide Access Control
- ❖ Share Data via the KNB



Download Morpho





Morpho

Download Morpho

Download the Morpho data management application. An easy-to-use installer is available for various platforms (the preferred method), or you can download a compressed archive (zip, gzip).

To run Morpho, you must have Java installed on your computer. If you already have Java 1.3 or later you should download the "Morpho only" distribution.

If you need Java (or if you have no idea what Java is, or whether you already have it installed), you can choose to download the "Morpho with Java" distribution, but note that it is much larger.



- ❖ Read the **README** for a change log
- ❖ **If you already have Java 1.3 or later, download a Morpho installer:**
Windows :: **Linux** :: **Mac OSX** (Java already part of OSX)
- ❖ **If you need Java (or don't know), download a Morpho installer with Java (larger downloads):**
Windows :: **Linux** :: (Mac OSX already has Java - see above)
- ❖ **Download zip or gzip binaries if your platform is not listed above (must have Java 1.3 or later):**
ZIP file (no installer) :: **GZIP file (no installer)**
- ❖ **Download the last version compatible with Mac OS 8 and 9**
(No new versions of Morpho are available for Mac OS 8 and 9. Upgrade to Macintosh OSX is highly advised)
Mac OS 8 or 9 :: **Mac OS 8 or 9 (includes Java)**

is a cross-platform, desktop application that allows the ecologist to create and organize metadata and data and to store that information either locally or on a shared network server.





- provides a way for ecologists to share data by defining a common structure to document their data
- uses an XML format to create the common structure.



So basically, Morpho is an xml editor...But what is xml?

- ❑ Like html, xml uses a system of coded tags `<xxx>.....</xxx>`
- ❑ Whereas html defines the look and feel of text,
`<h1>This is a heading</h1>`
`<p>This is a paragraph</p>`
- ❑ xml defines the content.

```
<address scope="document">  
  <deliveryPoint>Dept. of Marine Sciences</deliveryPoint>  
  <deliveryPoint>University of Georgia</deliveryPoint>  
  <city>Athens</city>  
  <administrativeArea>Georgia</administrativeArea>  
  <postalCode>30602-3636</postalCode>  
  <country>USA</country>  
</address>
```





XML: eXtensible Markup Language

- ❑ Development influenced by SGML and HTML – Version 1.0 in early 1998 [W3C](#)
- ❑ A semantic language that lets you more meaningful annotate text (where HTML lets you define how text can be displayed, XML provides it with meaning).
- ❑ Important for presentation, exchange, and management of information
- ❑ Tools include DTD, Schema, XSL, and more...





XML vs. Eml

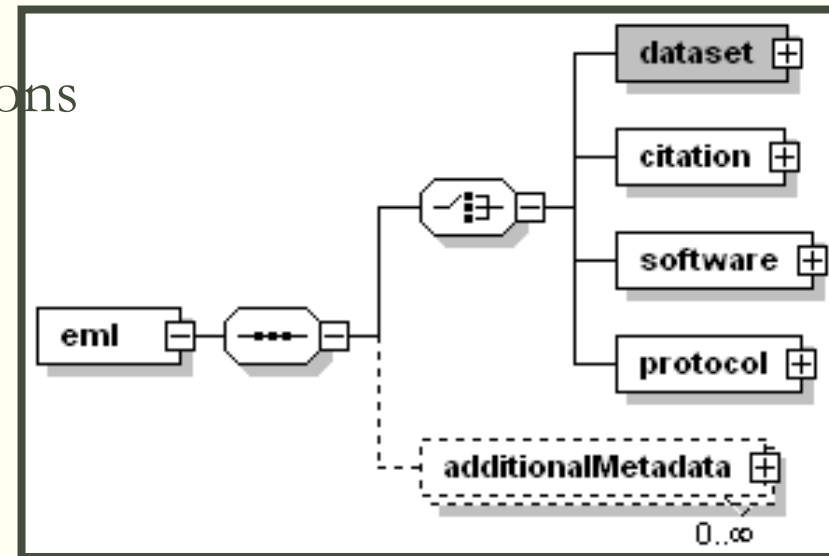
- ❑ xml can define any content
- ❑ Morpho is designed for ecologists
- ❑ this xml format has been structured for ecological data and is called EML or Ecological Metadata Language.





Ecological Metadata Language

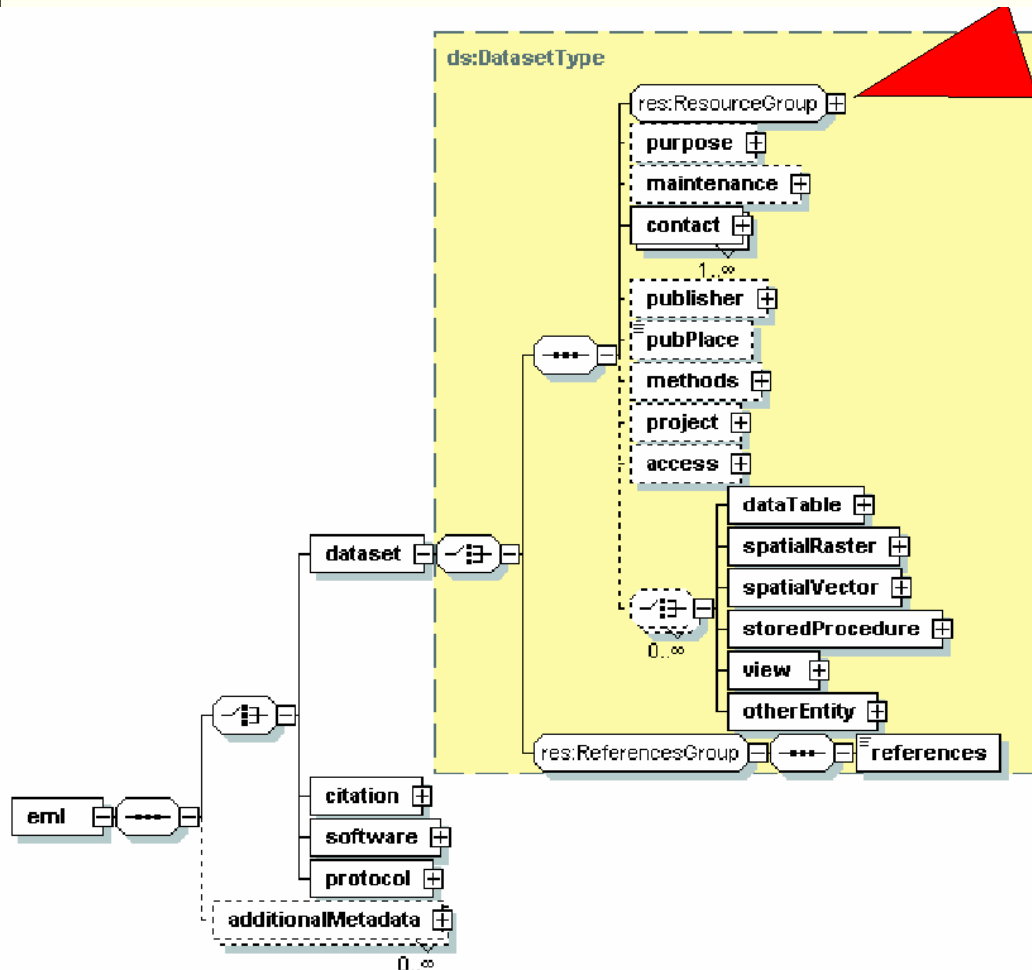
- ❑ Adopted by the LTER Information Management
- ❑ Metadata specification developed by the ecology discipline for the ecology discipline
- ❑ Based on prior work of Ecological Society of America and others (Michener et. al., 1997)
- ❑ Seven years in development – 14 versions
 - EML 2.0.1
- ❑ Implemented as an XML Schema
- ❑ Supports four separate modules
 - Dataset
 - Citation
 - Software
 - Protocol





Morpho allows you to create & edit metadata

```
<title>Rodents of the Southwest</title>  
<title>xml:lang="de">Rodents des Südwestens</title>
```



without writing EML codes or remembering the structure of EML and the five classes of Metadata descriptors





5 Classes of Metadata Descriptors

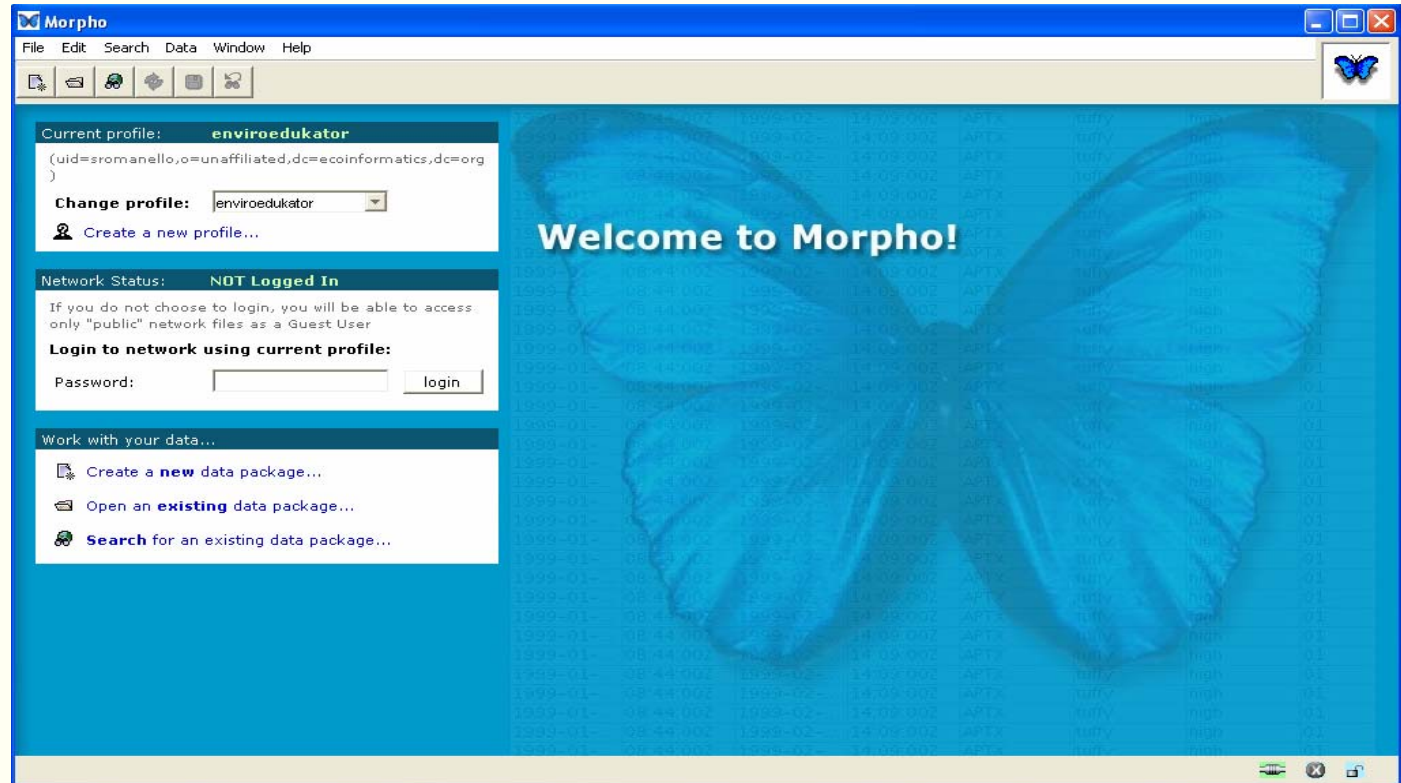
- I. Data set descriptors
- II. Research origin descriptors
- III. Data set status and accessibility
- IV. Data structural descriptors
- V. Supplemental descriptors





Additionally Morpho allows you to

- ❑ Search & query metadata collections
- ❑ View data & data collections
- ❑ Edit data
- ❑ Provide access control



Through the Metacat server





Metacat

- is a XML database that allows storage, query, and retrieval documents





Basic Features of Morpho

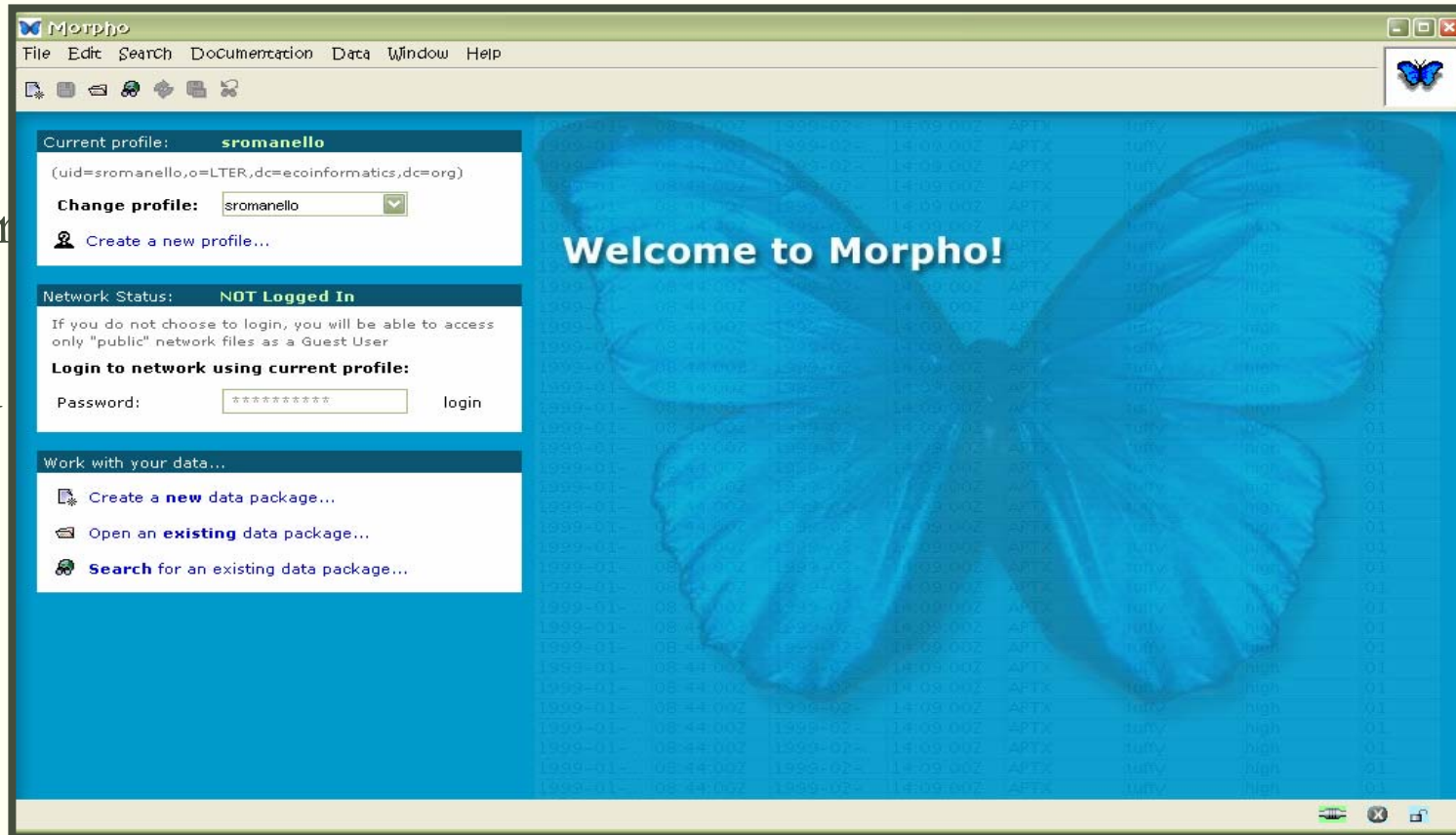
Importing and documenting data





Basic Features

- ❑ 3 wizards
- ❑ Searching
- ❑ Tree editor
- ❑ Locally or networked





Wizards within Morpho

- Profile Wizard
- Data Package Wizard
- Data Table Wizard

The screenshot shows the Morpho web application interface. At the top is a menu bar with 'File', 'Edit', 'Search', 'Documentation', 'Data', 'Window', and 'Help'. Below the menu is a toolbar with icons for file operations. The main content area is divided into several sections:

- Current profile:** sromanello
(uid=sromanello,o=LTER,dc=ecoinformatics,dc=org)
Change profile: sromanello (dropdown menu)
[Create a new profile...](#)
- Network Status:** NOT Logged In
If you do not choose to login, you will be able to access only "public" network files as a Guest User
Login to network using current profile:
Password: login
- Work with your data...**
 - Create a **new** data package...
 - Open an **existing** data package...
 - Search** for an existing data package...

On the right side, there is a 'Welcome' section with a butterfly icon and a 'New Profile' section with a butterfly icon and the text: 'Enter the name for this profile and your first and last name.'





Profile Wizard

Morpho
File Edit Search Documentation Data Window Help

Current profile: **sromanello**
(uid=sromanello,o=LTER,dc=ecoinformatics,dc=org)

Change profile:

[Create a new profile...](#)

Network Status: **NOT Logged In**
If you do not choose to login, you will be able to access only "public" network files as a Guest User

Login to network using current profile:
Password: login

Work with your data...

- Create a **new** data package...
- Open an **existing** data package...
- Search** for an existing data package...

Welcome
New Profile

Enter the name for this profile and your first and last name.





Profile Wizard

Morpho File Edit Search Documentation Data Window Help

Current profile: **enviroeducator**
(uid=sromanello,o=unaffiliated,dc=ecoinformatics,dc=org)

Change profile: enviroeducator
[Create a new profile...](#)

Network Status: **NOT Logged**
If you do not choose to login, you will only see "public" network files as a Guest.
Login to network using current profile
Password:

Work with your data...
[Create a new data package...](#)
[Open an existing data package...](#)
[Search for an existing data package...](#)

New Profile

Enter the name for this profile and your first and last name.

Basic Information

Name of profile:
First name:
Last name:







Data Package Wizard

Morpho

File Edit Search Documentation Data Window Help

Current profile: **sromanello**
(uid=sromanello,o=LTER,dc=ecoinformatics,dc=org)

Change profile: 

 [Create a new profile...](#)




Network Status: **NOT Logged In**

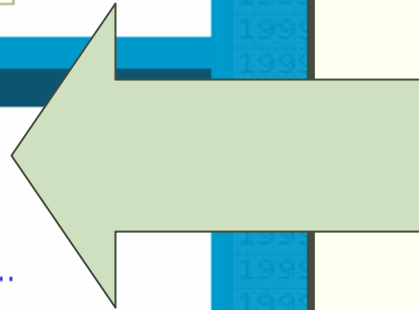
If you do not choose to login, you will be able to access only "public" network files as a Guest User

Login to network using current profile:

Password: [login](#)

Work with your data...

-  [Create a new data package...](#)
-  [Open an existing data package...](#)
-  [Search for an existing data package...](#)





Importing Metadata

New Data Package Wizard

Welcome to the Data Package Wizard

This wizard creates a *Data Package*, consisting of the structured documentation that describes your data, and the data itself.

If you wish to improve your understanding of data documentation (metadata) and related concepts, you should start by reading the:

[Introduction to Ecological Metadata](#)

which provides background information and examples of data documentation. The wizard uses a subset of EML to describe your data. If additional documentation is needed to adequately document your data, use *Morpho's EML Editor* (after you finish this wizard, choose "Add/Edit Documentation" from the Documentation menu in the main Morpho screen).

Before beginning you should have your data (electronic or hardcopy format) available. You can provide the following types of information using this wizard:

- ◆ **Title and abstract**
- ◆ **Keywords**
- ◆ **People and Organizations**
- ◆ **Data Usage Rights**
- ◆ **Project Information**
- ◆ **Coverage Details**
- ◆ **Methods**
- ◆ **Access Control**

Note: Required information includes the title and personell information for your dataset. The rest of the information collected here is optional, however it is highly recommended that you fill in as much as possible.

Step 1 of 15

Cancel < Back Next > Finish

ER





Data Package Screen

Data Package: enviroeducator.5.10

File Edit Search Documentation Data Window Help

Dr. Samantha Romanello: RCN training example using Allison and Cicchetti 1976 data
Accession Number: enviroeducator.5.10 Keywords: sleep, mammals
[more](#)

test.txt

string	float	float	float	float	float	float	float
species	body weight	brain weight	slow wave	paradoxical sleep	total sleep	maximum life span	gestation length
African elephant...	6654.000	5712.000	-999.0	-999.0	3.3	38.6	645.0
African giant ...	1.000	6.600	6.3	2.0	8.3	4.5	42.0
Arctic Fox	3.385	44.500	-999.0	-999.0	12.5	14.0	60.0
Arctic ground ...	.920	5.700	-999.0	-999.0	16.5	-999.0	25.0
Asian elephant	2547.000	4603.000	2.1	1.8	3.9	69.0	624.0
Baboon	10.550	179.500	9.1	.7	9.8	27.0	180.0
Big brown bat	.023	.300	15.8	3.9	19.7	19.0	35.0
Brazilian tapir	160.000	169.000	5.2	1.0	6.2	30.4	392.0
Cat	3.300	25.600	10.9	3.6	14.5	28.0	63.0
Chimpanzee	52.160	440.000	8.3	1.4	9.7	50.0	230.0
Chinchilla	.425	6.400	11.0	1.5	12.5	7.0	112.0
Cow	465.000	423.000	3.2	.7	3.9	30.0	281.0
Desert hedge...	.550	2.400	7.6	2.7	10.3	-999.0	-999.0
Donkey	187.100	419.000	-999.0	-999.0	3.1	40.0	365.0
Eastern Ameri...	.075	1.200	6.3	2.1	8.4	3.5	42.0
Echidna	3.000	25.000	8.6	.0	8.6	50.0	28.0
European hed...	.785	3.500	6.6	4.1	10.7	6.0	42.0
Galago	.200	5.000	9.5	1.2	10.7	10.4	120.0
Genet	1.410	17.500	4.8	1.3	6.1	34.0	-999.0
Giant armadillo	60.000	81.000	12.0	6.1	18.1	7.0	-999.0
Giraffe	529.000	680.000	-999.0	.3	-999.0	28.0	400.0
Goat	27.660	115.000	3.3	.5	3.8	20.0	148.0
Golden hamster	.120	1.000	11.0	3.4	14.4	3.9	16.0
Guinea pig	207.000	406.000	999.0	999.0	12.0	39.3	252.0

test.txt

Entity/Attribute

Entity Description

Identifier: enviroeducator.5.10
Catalog: knb
System: test.txt
Name: test.txt
Physical Structure Description:
Object: enviroeducator.9.4
Name: 4130 bytes
Size: 1
Number of Header Lines: 1
Record Delimiter: #x0A
Text Format: Maximum Record Length: column
Simple Field Delimited Delimiter:





Data Table Wizard

New DataTable Wizard

Data Location

Describe and optionally include a data table in your data package. You may create a table from scratch and populate it using Morpho's spreadsheet-style data editor, or you can import certain types of existing data files and use the wizard to automatically extract much of the documentation from the data file itself. If you choose the second option, you will be prompted to review the information that is extracted and provide any required fields that can not be generated automatically.

You can also choose to manually enter all of the required fields (rather than using the metadata extractor), which is useful for proprietary file types like Excel, or other file types that are not yet supported.

What do you want to do?

☒ CREATE - Create a new, empty data table.

☐ IMPORT - Import a data file into the package.

☐ DESCRIBE - Include only the data file documentation (but not the data file itself) in the package.

Cancel < Back Next > Finish





Searching for data and metadata

The screenshot shows a web-based search interface titled "Search". At the top, there is a "Query Title" field containing "Untitled-Search-1". To the right of this field are two checked checkboxes: "Catalog Search" and "Local Search". Below the title field are four tabs: "Subject", "Taxonomic", "Spatial", and "Options". The "Subject" tab is currently selected. Below the tabs, a message states: "Check boxes determine which metadata fields are searched." There are three checked checkboxes: "Title", "All", and "Keywords". The "Abstract" checkbox is unchecked. To the right of these checkboxes is a dropdown menu set to "contains" and an empty text input field. At the bottom left, there are radio buttons for "And" (selected) and "Or", followed by "More" and "Fewer" buttons. At the bottom right, there is a checkbox for "Combine constraints from all tabs" (unchecked) and two buttons: "Search" and "Cancel".

Morpho allows several types of queries including: boolean, Subject, taxonomic, spatial





Search results

Untitled-Search-1

File Edit Search Documentation Data Window Help

Icons: [New] [Open] [Save] [Print] [Find] [Help] [About]

	Title	Document ID	Surname	Keywords	Last Modified ▾	Local	Net
[Icon]	RCN training example using Allison and Cicchetti 1976 data	enviroeducator.5.10	Romanello	sleep mammals	2003-10-20 10:10:37.0		[Icon]

1 data sets found

Icons: [Status Bar Icons]





Editing Documentation Metadata


Two ways to edit documentation metadata in morpho

- ❑ Pull down documentation menu
- ❑ Tree editor










Editing Metadata through the pull down menu

 **Data Package: stromanello.3.2**

File Edit Search Documentation Data Window Help

Sarah Hobbie: **Tis**
Accession Number
[more](#)

date	text
Date	Site

- Add/Edit Documentation...
- View Documentation...
- Research Project...
- Usage Rights...
- Geographic Coverage...
- Temporal Coverage...
- Taxonomic Coverage...
- Methods...
- Access Permissions...


Field Station, N
Biomass, Prod

Issue Mass Data





Research Project



Is your project part of a larger umbrella research project? Data may be collected as part of a large research program with many sub-projects or they may be associated with a single, independent investigation. For example, a large NSF grant may provide funds for several primary investigators to collect data at various locations.

☒ This project is part of a larger umbrella research project.

Enter Project Information

Enter the title of the project.

Title

Enter the funding sources that support this project. This may include agency names and grant or contract numbers.

Funding Source

Enter the personnel information. The full name of the people or organizations responsible for the project.

One or more Personnel must be defined:

Party	Role	Address
<div><div></div></div>		

Add

Edit

Delete

Move Up

Move Down





Rights and Usage



Enter a paragraph that describes the intended usage rights of the data package. Specifically, include any restrictions (scientific, technical, ethical) to sharing your data within the public scientific domain.

The above data set can be freely used for non-commercial purposes and can be freely distributed (permission in writing obtained from Dr. Truett Allison).


Usage Rights:







Temporal Coverage

Define Temporal Coverage:

Choose date type:

☒ Single Point in Time

☐ Range of Date/Time

Enter date:

☐ Enter Year Only

☐ Enter Month and Year

☒ Enter Day, Month and Year

September 28, 2004

September 2004

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

OK Cancel



Methods



Enter method step description. Method steps describe a single step in the implementation of a methodology for an experiment.

Method Step Title	Method Step Description	Instrumentation
-------------------	-------------------------	-----------------



Add

Edit

Delete

Move Up

Move Down

Study extent description. Describe the temporal, spatial and taxonomic extent of the study. This information supplements the coverage information you may have provided in a previous step.

Study Extent

Sampling description. Describe the sampling design of the study. For example, you might describe the way in which treatments were assigned to sampling units.

Sampling



Taxonomic Information



Enter information about the Taxonomic Coverage. By default, you may enter information on Genus and Species. If you would like to enter information at another classification rank or would like to change the default classification rank, click the edit button. Note that the field 'Higher Level Taxa' is dynamically generated from your entries and is not manually editable.

[Import Taxon Information from Data table...](#)

Higher Level Taxa	Rank	Name	Rank	Name	Common Name(s)
	Genus		Species		

Add

Edit

Delete

Classification System If the list of taxa belong to one or more different classification systems, list the citations for those systems.

Citation Title	Creator	Citation Type
----------------	---------	---------------

Add

Edit

Delete





Tree editor

Morpho Editor

Show All Trim + -

Find: eml

eml

- scope
- packageId
- system
- dataset
- id
- system
- scope
- shortName
- title
- creator
- associatedParty
- abstract
- keywordSet
- intellectualRights
- contact
- access
- (CHOICE)
- dataTable
- id
- system
- scope
- (SEQUENCE)
- entityName
- physical
- attributeList
- id
- attribute-species**
- attribute-body we
- attribute-brain we
- attribute-slow we
- attribute-paradoxi
- attribute-total slee
- attribute-maximum
- attribute-gestator
- attribute-predator
- attribute-sleep ex
- attribute-overall d
- caseSensitive
- numberOfRecords

attribute-species

Type definition for the content of an attribute (variable) that can be part of an entity.

id

system

scope

document

attributeName

Attribute name is official name of the attribute. This is usually a short, sometimes cryptic name that is used to refer to the attribute. Many systems have restrictions on the length of attribute names, and on the use of special characters like spaces in the name, so the attribute name is often not particularly useful for display (use attributeLabel for display). The attributeName is usually the name of the variable that is found in the header of a

species

attributeLabel

A descriptive label that can be used to display the name of an attribute. This is often a longer, possibly multiple word name for the attribute than the attributeName. It is not constrained by system limitations on length or special characters. For example, an attribute with a name of 'spode' might have an attributeLabel of 'Species Code'.

species

attributeDefinition

This element gives a precise definition of attribute in the data entity (dataTable, spatialRaster, spatialVector, storedProcedure, view or otherEntity) being documented. It explains the contents of the attribute fully so that a data user could interpret the attribute accurately. Some additional information may also be found in the methods element as well.

The species of mammal

storageType

This element describes the storage type, for data in a RDBMS (or other data management system) field. As many systems do not provide for fine-grained restrictions on types, this type will often be a superset of the allowed domain defined in attributeDomain. Values for this field are by default drawn from the XML Schema Datatypes standard values, such as: integer, double, string, etc. If the XML Schema Datatypes are not used.

string

measurementScale

The measurementScale element indicates the type of scale from which values are drawn for the attribute. This provides information about the scale in which the data was collected.

required; repeatable (ONE to MANY) required (ONE)





Work locally or networked

Morpho

File Edit Search Documentation Data Window Help

Current profile: **sromanello**

(uid=sromanello,o=LTER,dc=ecoinformatics,dc=org)

Change profile:

[Create a new profile...](#)

Network Status: **NOT Logged In**

If you do not choose to login, you will be able to access only "public" network files as a Guest User

Login to network using current profile:

Password:

Work with your data...

- [Create a **new** data package...](#)
- [Open an **existing** data package...](#)
- [Search for an existing data package...](#)

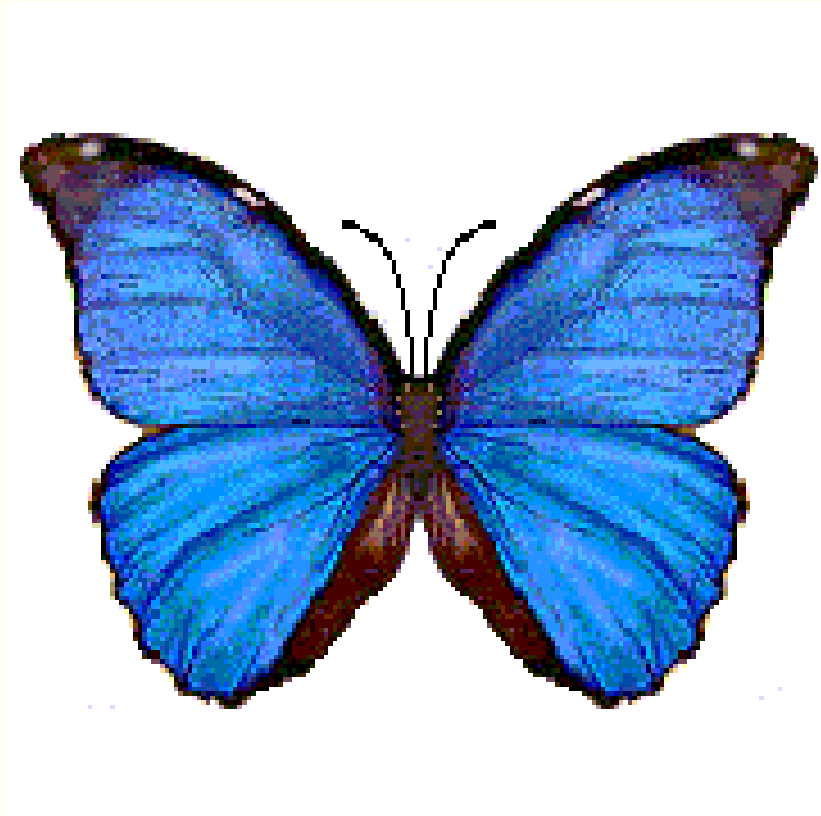
Welcome to Morpho!





So as you now have a basic understanding of Morpho

- What it is
- What it does
- How it works



You will now have an opportunity to explore some of Morpho's Basic Features





Hands on Activity with Morpho





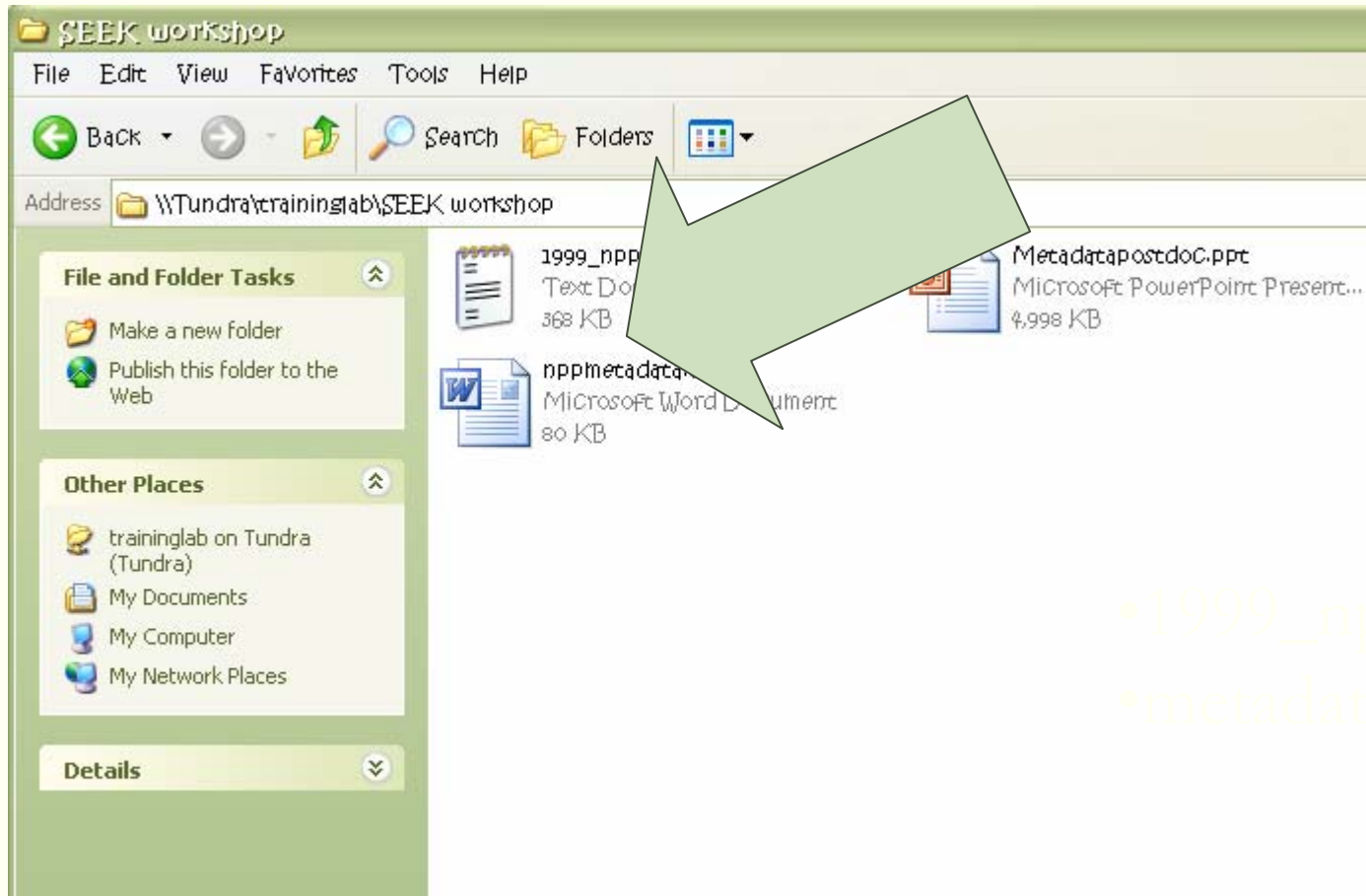
In this session we will...

1. We will begin by using Morpho to create a data package from scratch.
2. We will then use Morpho to add a data sets to these packages.





Locate Metadata & Data

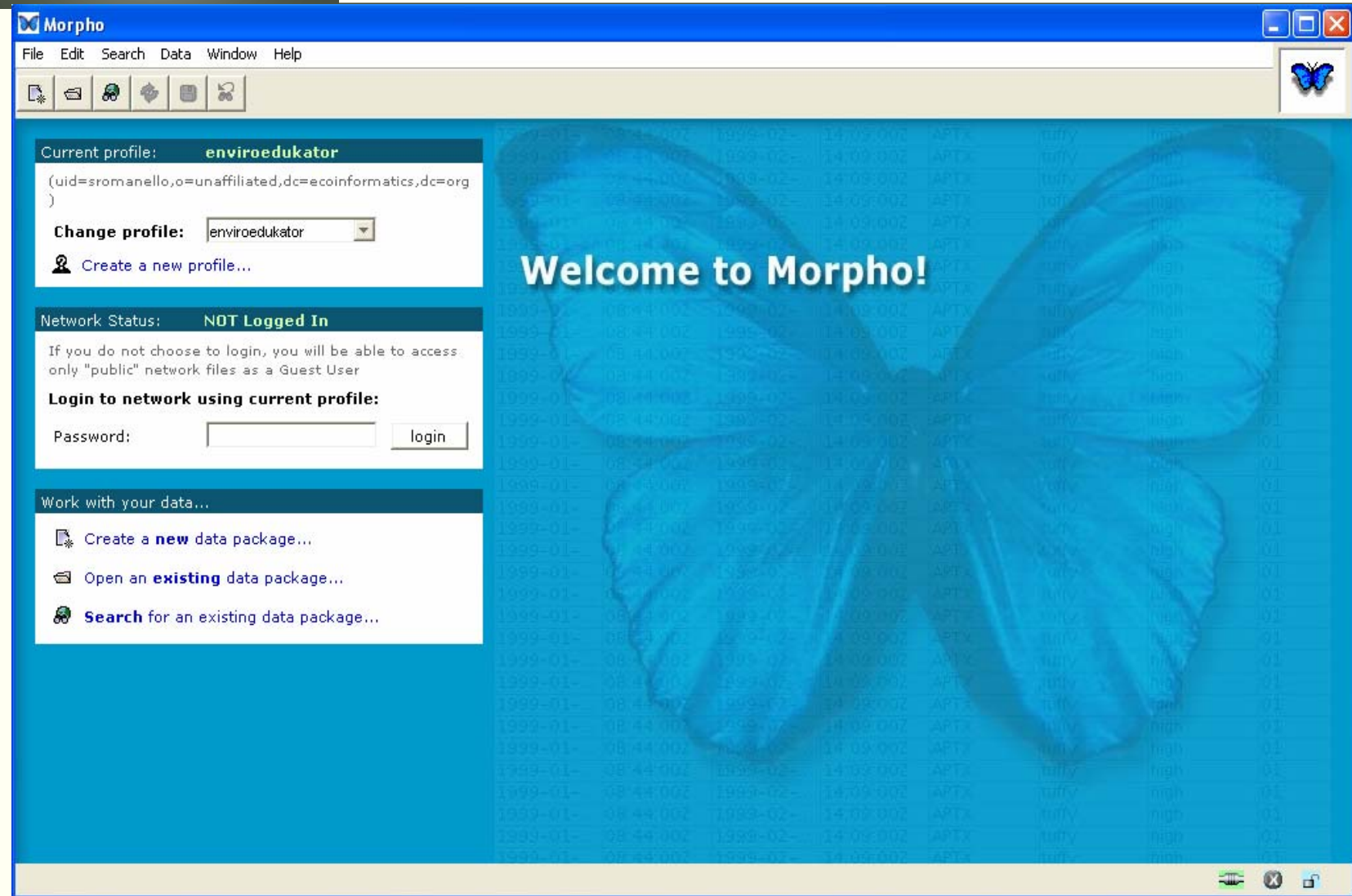


Locate the metadata and data on your computer



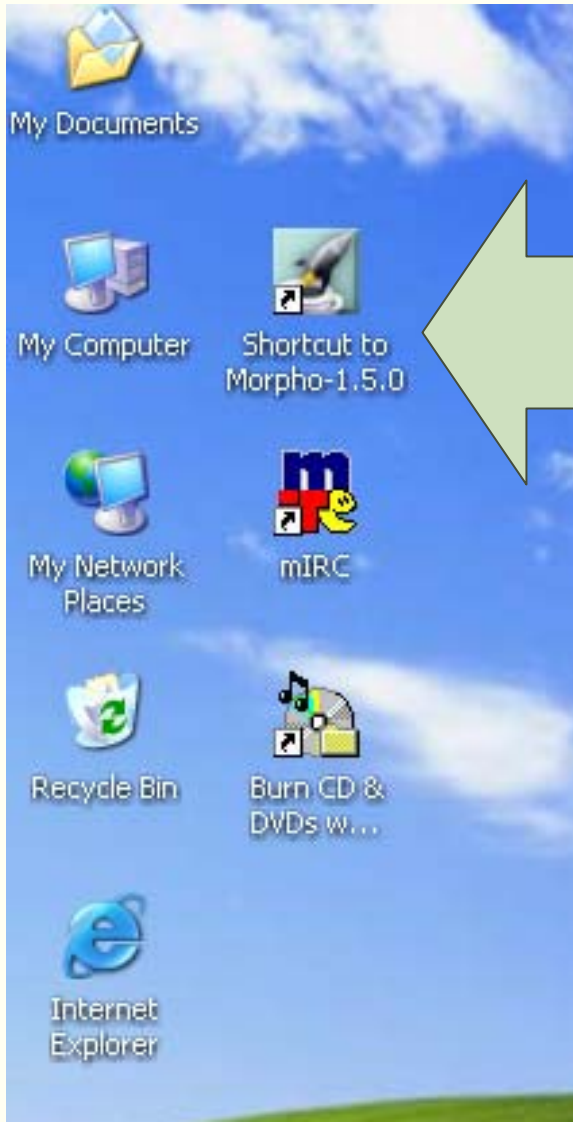


Log on to Morpho





Open Morpho

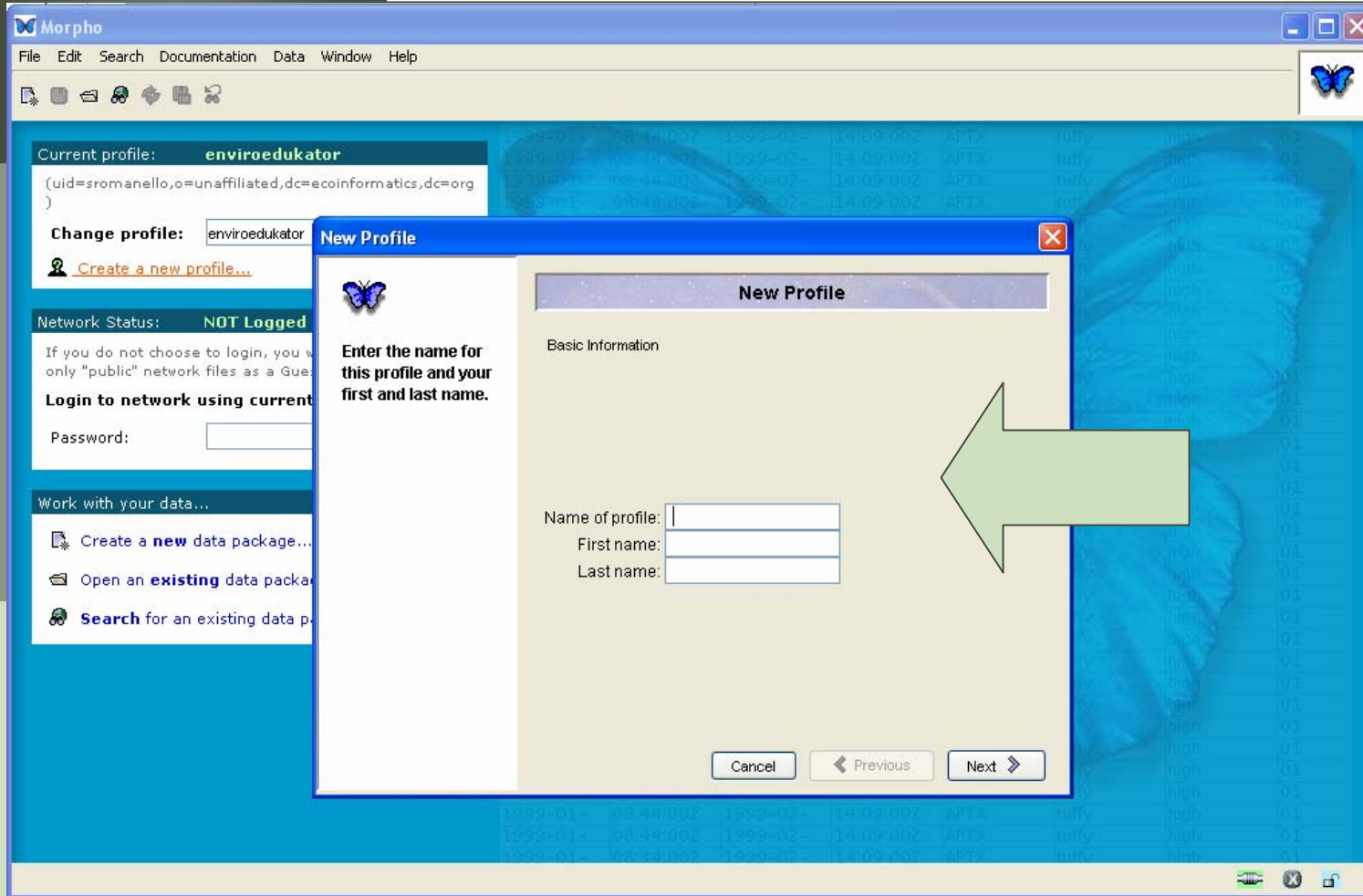


Locate the morpho software
on your computer





Open Morpho

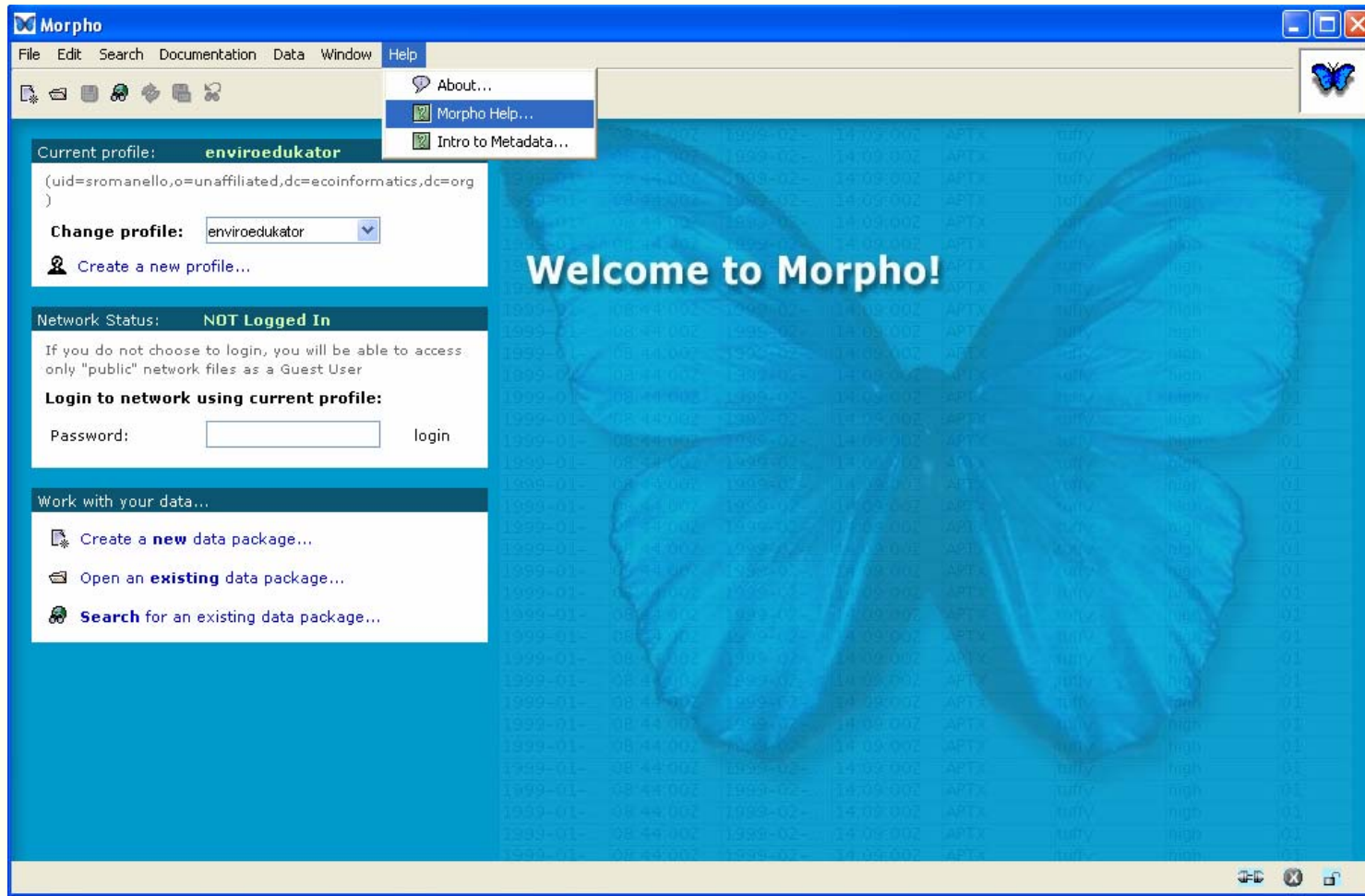


- This is the screen that will open on your computer
- As a new user you will need to create a new profile





Help in Morpho

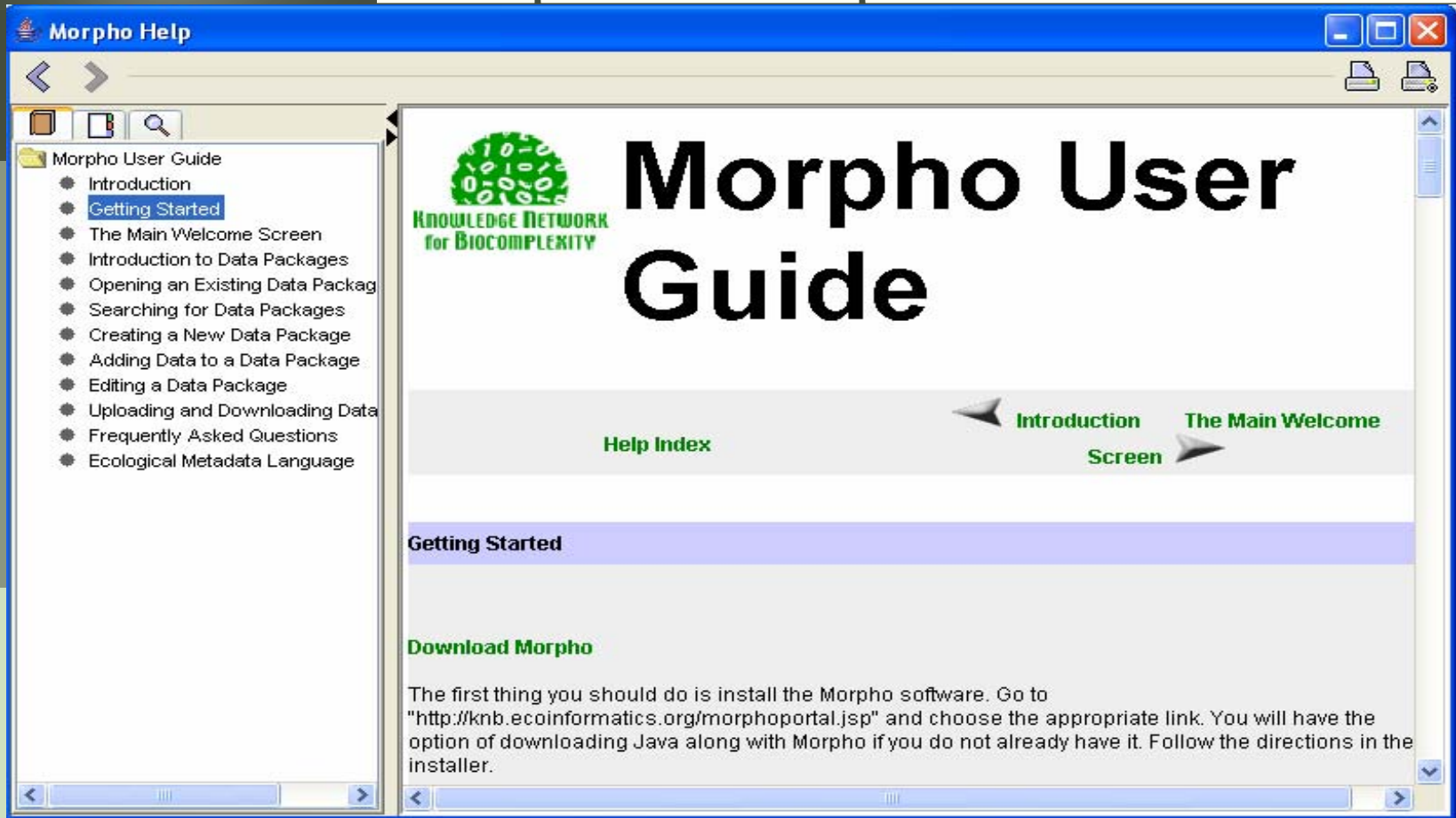


Morpho comes with complete instructions located in Morpho Help...





Help in Morpho



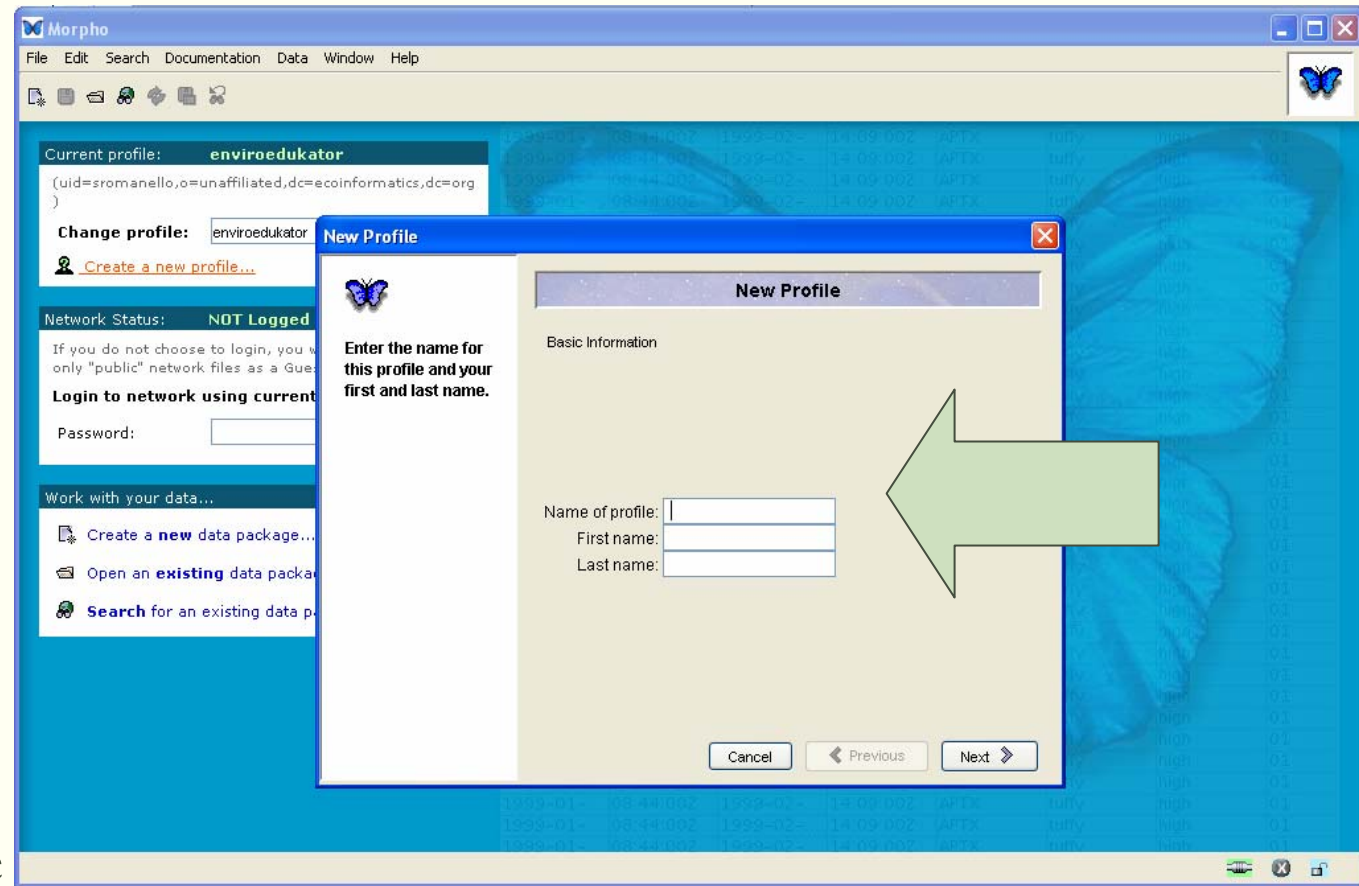
The User Guide, will guide you step by step through all of the functions Morpho provides






Creating a new profile in Morpho

Follow the instructions in the wizard pop up window that opens by creating a profile name and adding your first and last name in the open dialogue boxes and click next.



New Profile



Enter your Network account information. This will allow you to log in to Network and collaborate with other researchers through the KNB. To register for a new Network account, go to "<http://knb.ecoinformat ics.org>".

Metacat Account Information

Network Username:

Organization:
NCEAS
LTER

Other organization:

Cancel Previous


At this point you will notice that you have to register for a new metacat account at the [KNB site](http://knb.ecoinformat ics.org) so if you do not have a KNB account you must stop with Morpho and go to the KNB website. Keep this window open.





Creating a profile in Morpho

New Profile



Enter your Network account information. This will allow you to log in to Network and collaborate with other researchers through the KNB. To register for a new Network account, go to "<http://knb.ecoinformatics.org>".

New Profile

Metacat Account Information

Network Username:

Organization:

Other organization:


Once you have registered at the KNB site and have established your metacat account you can return to the Morpho window and finish creating your profile in Morpho....





Creating a profile in Morpho

New Profile



Enter your Network account information. This will allow you to log in to Network and collaborate with other researchers through the KNB. To register for a new Network account, go to "<http://knb.ecoinformatics.org>".

New Profile

Metacat Account Information

Network Username:

Organization:
NCEAS
LTER

Other organization:

Cancel Previous Next


Enter the Metacat username and the organization name you registered on the knb.ecoinformatics.org site.





Creating a profile in Morpho

New Profile



Enter miscellaneous profile options. This includes the prefix you wish to use to construct data identifiers for your data.

Miscellaneous Information

Identifier prefix:

Cancel Previous Finished

- Add an identifier prefix
- This identifier will become the prefix of your stored metadata file names for all the data set you enter under this profile.
- This identifier prefix can be anything





Creating a profile in Morpho



A screenshot of a 'Metacat Login' dialog box. The title bar is blue with a small icon and the text 'Metacat Login' and a close button. The main area has a light gray background. It contains the text 'Enter your Metacat password in order to log in.' followed by a 'Name' label and a text field containing 'uid=jdoe,o=NCEAS,dc=ecoinformatics,dc=org'. Below this is a 'Password' label and an empty password field. At the bottom right is a small blue butterfly icon. At the bottom are three buttons: 'Login', 'Logout', and 'Skip Login'.

Metacat Login

Enter your Metacat password in order to log in.

Name `uid=jdoe,o=NCEAS,dc=ecoinformatics,dc=org`

Password



Login Logout Skip Login

- ❑ The last step is to login into the metacat server.
- ❑ Enter your Metacat password.
- ❑ This is the password you created on the KNB website





Using Morpho to upload data

- ❑ We will begin to use Morph to create a data package using a data and metadata from your unregistered dataset.
- ❑ The software has a wizard package that walks you through step by step to create the data package and to upload the data set.





Adding a new data package with Package Wizard

☒ New Data Package Wizard

Welcome to the Data Package Wizard

This wizard creates a *Data Package*, consisting of the structured documentation that describes your data, and the data itself.

If you wish to improve your understanding of data documentation (metadata) and related concepts, you should start by reading the:

[Introduction to Ecological Metadata](#)

which provides background information and examples of data documentation. The wizard uses a subset of EML to describe your data. If additional documentation is needed to adequately document your data, use *Morpho's EML Editor* (after you finish this wizard, choose "Add/Edit Documentation" from the Documentation menu in the main Morpho screen).

Before beginning you should have your data (electronic or hardcopy format) available. You can provide the following types of information using this wizard:

- ◆ Title and abstract
- ◆ Keywords
- ◆ People and Organizations
- ◆ Data Usage Rights
- ◆ Project Information
- ◆ Coverage Details
- ◆ Methods
- ◆ Access Control

Note: Required information includes the title and personell information for your dataset. The rest of the information collected here is optional, however it is highly recommended that you fill in as much as possible.

Step 1 of 15

Cancel

< Back

Next >

Finish

- ❑ There are 15 steps to upload data.
- ❑ Information in red is required.





Adding a title

Begin by adding the title and an abstract.

New Data Package Wizard

Title and Abstract

Enter the title of the data package. The title field provides a description of the data that is long enough to differentiate it from other similar data.
e.g. Vernal Pool Amphibian Density Data, Isla Vista, CA USA, 1990-1996

Title:

Enter an abstract that describes the data package. This abstract is a paragraph or more that describes the particular data that are being documented. You may want to describe the objectives, key aspects, design or methods of the study.

Abstract:

Step 2 of 15

Cancel < Back Next > Finish





Adding keywords

Define Keyword Set:

Keyword

Keywords:

Add

Delete

Move Up

Move Down

☐ These keywords are not chosen from a predefined list:

☒ These keywords are chosen from a predefined list:

Thesaurus name:

OK Cancel

Click on add to enter keywords



Adding keywords

Define Keyword Set:

Keyword
brain weight

Keywords:

☐ These keywords are not chosen from a predefined list:
☒ These keywords are chosen from a predefined list:

Thesaurus name:

OK Cancel

- ❑ This window will open
- ❑ Click add to enter more keywords
- ❑ Once all keywords are added press OK





Adding keywords

You will
return to
this
window

New Data Package Wizard

Keywords

Enter the keywords. A data package may have multiple keywords associated with it to enable easy searching and categorization. In addition, one or more keywords may be associated with a "keyword thesaurus", which allows the association of a data package with an authoritative definition. Thesauri may also be used for internal categorization.

Keywords	Thesaurus
brain weight	

Buttons: Add, Edit, Delete, Move Up, Move Down

Step 3 of 15

Buttons: Cancel, < Back, Next >, Finish





Adding people & organizations

Add information about the people and organization responsible for the data

New Data Package Wizard

People and Organizations

Identify the people and organizations responsible for the data. In the next few screens you will need to provide the following information:

- ◆ **Owner:** The person or organization who is credited with creating the data.
- ◆ **Contact:** The primary person or organization to contact with questions regarding the use or interpretation of the data package.
- ◆ **Associated parties:** These are people or organizations that are in some way responsible for the data. They may have assisted in collection of or maintenance of the data or they may have created documentation for the data.

Step 4 of 15

Cancel < Back Next > Finish





Adding owners

☒ New Data Package Wizard

People or Organizations Associated With This Data Package

Owners

Enter information about the Owners: This is information about the persons or organizations certified as data owners (e.g. the principal investigator(s) of the project). The list of data owners should include all people and organizations who should be cited for the data. Select Add to add an owner.

One or more Owners must be defined:

Party	Role	Address
-------	------	---------

Buttons: Add, Edit, Delete, Move Up, Move Do...

Step 5 of 15

Buttons: Cancel, < Back, Next >, Finish

- Enter information about the data owners
- To add owners click add button





Adding owners

Owner Details

You can pick from one of the earlier entries that you have made.

Salutation:

First Name:

Last Name:

Organization:

Position Name:

Address 1:

Address 2:

City: State:

Postal Code: Country:

Phone: Fax:

Email: Online URL:

One of the three required { Last Name, Organization, Position Name }

OK Cancel

- ❑ This window will open
- ❑ Either choose information previously entered data package
- ❑ Information in red is required
- ❑ Click ok to enter





Adding owners

New Data Package Wizard

People or Organizations Associated With This Data Package

Owners

Enter information about the Owners: This is information about the persons or organizations certified as data owners (e.g. the principal investigator(s) of the project). The list of data owners should include all people and organizations who should be cited for the data. Select Add to add an owner.

One or more Owners must be defined:

Party	Role	Address
Romanello, LTER	Owner	

Buttons: Add, Edit, Delete, Move Up, Move Do...

Step 5 of 15

Buttons: Cancel, < Back, Next >, Finish

After you submit that information you will return to this page.





Adding contact metadata

New Data Package Wizard

People or Organizations Associated With This Data Package

Contacts

Enter information about contacts. This is information about the people or organizations who would be contacted with questions about the use or interpretation of a data package.

One or more Contacts must be defined:

Party	Role	Address
-------	------	---------

Add
Edit
Delete
Move Up
Move Do...

Step 6 of 15

Cancel < Back Next > Finish

Add information about whom to contact for questions about use





Adding contact metadata

Contact Details

You can pick from one of the earlier entries that you have made.

Salutation:

First Name:

Last Name:

Organization:

Position Name:

Address 1:

Address 2:

City:

State:

Postal Code:

Country:

Phone:

Fax:

Email:

Online URL:

One of the three required

OK Cancel

- Again, a new window will appear
- Information in red is required





Adding contact metadata

Contact Details

You can pick from one of the earlier entries that you have made.

Salutation:

First Name:

Last Name:

Organization:

Position Name:

Address 1:

Address 2:

City: State:

Postal Code: Country:

Phone: Fax:

Email: Online URL:

One of the three required { Last Name, Organization, Position Name

Select from a different data package

Romanello LTER

Romanello LTER

OK Cancel

- Either metadata previously entered from a different data package
- Click ok to enter metadata





Adding contact metadata

New Data Package Wizard

People or Organizations Associated With This Data Package

Contacts

Enter information about contacts. This is information about the people or organizations who would be contacted with questions about the use or interpretation of a data package.

One or more Contacts must be defined:

Party	Role	Address
Romanello, LTER	Contact	

Buttons: Add, Edit, Delete, Move Up, Move Do...

Step 6 of 15

Buttons: Cancel, < Back, Next >, Finish

After you submit that Metadata you will return to this page.





Adding administration metadata

Enter
metadata on
people who
administer the
dataset

New Data Package Wizard

People or Organizations Associated With This Data Package

Associated Parties

Enter associated parties information. These are persons or organizations functionally associated with the dataset. Enter the nature of the relationship in the role field. For example, the person who maintains the database is an associated party with the role of 'custodian'.

Party	Role	Address
-------	------	---------

Buttons: Add, Edit, Delete, Move Up, Move Do...

Step 7 of 15

Navigation: Cancel, < Back, Next >, Finish





Adding administration metadata

Associated Party Details

You can pick from one of the earlier entries that you have made.

Role:

Salutation:

First Name:

Last Name:

Organization:

Position Name:

Address 1:

Address 2:

City: State:

Postal Code: Country:

Phone: Fax:

Email: Online URL:

One of the three required {

Originator
Content Provider
Principal Investigator
Editor
Publisher
Processor
Custodian/Steward
Author

OK Cancel

Again, chose from the earlier entries, another, data package or enter new information





Adding administration metadata

New Data Package Wizard

People or Organizations Associated With This Data Package

Associated Parties

Enter associated parties information. These are persons or organizations functionally associated with the dataset. Enter the nature of the relationship in the role field. For example, the person who maintains the database is an associated party with the role of 'custodian'.

Party	Role	Address
Romanello, LTER	Associated Party (custodian)	

Buttons: Add, Edit, Delete, Move Up, Move Do...

Step 7 of 15

Buttons: Cancel, < Back, Next >, Finish

After you submit that information you will return to this page.





Adding research project metadata

☒ New Data Package Wizard

Research Project Information

Is your project part of a larger umbrella research project? Data may be collected as part of a large research program with many sub-projects or they may be associated with a single, independent investigation. For example, a large NSF grant may provide funds for several primary investigators to collect data at various locations.

☐ This project is part of a larger umbrella research project.

Step 8 of 15

Cancel < Back Next > Finish

Link data to other projects.





Adding research project metadata

A box to
enter
project
Metadata
will open

New Data Package Wizard

Research Project Information

Is your project part of a larger umbrella research project? Data may be collected as part of a large research program with many sub-projects or they may be associated with a single, independent investigation. For example, a large NSF grant may provide funds for several primary investigators to collect data at various locations.

☒ This project is part of a larger umbrella research project

Enter Project Information

Enter the title of the project.

Title

Enter the funding sources that support this project. This may include agency names and grant or contract numbers.

Funding Source

Enter the personnel information. The full name of the people or organizations responsible for the project.


One or more Personnel must be defined:

Party	Role	Address
<div></div>		

Step 8 of 15



Adding research project metadata

 Personnel Details

You can pick from one of the earlier entries that you have made.

Role:

Salutation:

First Name:

Last Name:

Organization:

Position Name:

Address 1:

Address 2:

City: State:


Postal Code: Country:

Phone: Fax:

Email: Online URL:

One of the three required {

OK Cancel



Select from a different data package

Romanello LTER

Romanello LTER

Again, chose from the earlier entries, another, data package or enter new information





Adding research project metadata

1) Select a data package

Title	Document ID
RCN training example using Allison and Cicchetti 1976 data	enviroeducator.5.10
Population sampling data for zooplankton in the Great Lakes, 2000 (...)	jscientist.2.1
	enviroeducator.33.1
	enviroeducator.18.1
	enviroeducator.28.1

2) Select a previous entry from this data package

OK Cancel

If you select from a different data package a new window will open





Adding research project metadata

After you submit that information you will return to this page.

New Data Package Wizard

Research Project Information

Is your project part of a larger umbrella research project? Data may be collected as part of a large research program with many sub-projects or they may be associated with a single, independent investigation. For example, a large NSF grant may provide funds for several primary investigators to collect data at various locations.

☒ This project is part of a larger umbrella research project.

Enter Project Information

Enter the title of the project.

Title

Enter the funding sources that support this project. This may include agency names and grant or contract numbers.

Funding Source

Enter the personnel information. The full name of the people or organizations responsible for the project.

One or more Personnel must be defined:

Party	Role	Address
Michener	Personnel (Principal Investigator)	

Step 8 of 15





Adding usage rights metadata

New Data Package Wizard

Usage Rights

Enter a paragraph that describes the intended usage rights of the data package. Specifically, include any restrictions (scientific, technical, ethical) to sharing your data within the public scientific domain.

Usage Rights:

Step 9 of 15

Cancel < Back Next > Finish

Describe the intended usage rights of the data including restrictions





Adding geographic metadata

New Data Package Wizard

Geographic Coverage

Describe the geographic region covered by your data. Use the following screen to provide a complete description or assign one of the existing descriptions.

Description	Geographic Coverage

Add
Edit
Delete
Move Up
Move Do...

Step 10 of 15

Cancel **< Back** **Next >** **Finish**

Describe the geographic region covered by your data





Adding geographic metadata

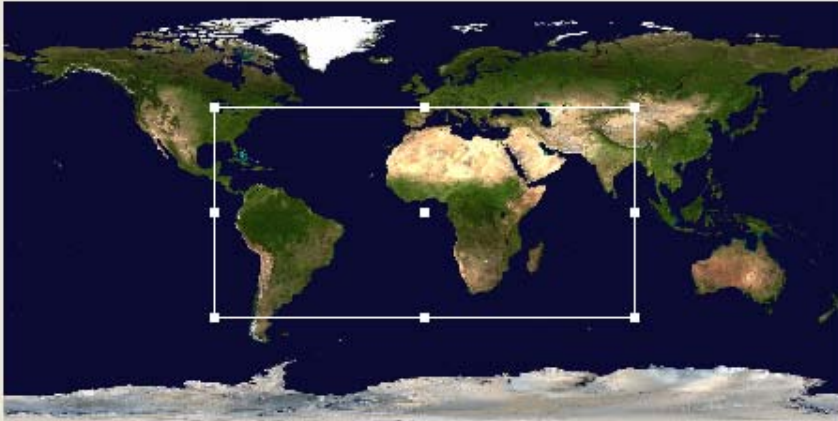
A new window will open to add metadata

Enter a description of the geographic coverage. Enter a general description of the geographic area in which the data were collected. This can be a simple place name (e.g., Santa Barbara) or a fuller description.

Description:

Set the geographic coordinates which bound the coverage: Latitude and longitude values are used to create a 'bounding box' containing the region of interest. Drag or click on the map and then edit the text boxes if necessary. [Default entries are in fractional degrees. To enter in degrees/minutes/seconds, simply type a space between the degrees, minutes, and seconds values]

Bounding Box:



45.0 N
90.0 W 90.0 E
45.0 S

Zoom In Zoom Out

☒ Box Tool ☐ Point Tool

Named Regions:

- ACM Wilderness Field Station
- Adirondack Ecological Center
- Alice L. Kibbe Life Science Station
- Angelo Coast Range Reserve UCNRS
- Anheuser Busch Coastal Research Center
- Ano Nuevo Island Reserve UCNRS

Add Click to add current selection to list.

Delete Click to remove selected region from list.

Sort Click to sort the list of locations.

OK Cancel





Adding geographic metadata

☒ New Data Package Wizard

Geographic Coverage

Describe the geographic region covered by your data. Use the following screen to provide a complete description or assign one of the existing descriptions.

Description	Geographic Coverage
-------------	---------------------

Buttons: Add, Edit, Delete, Move Up, Move Do...

Step 10 of 15

Buttons: Cancel, < Back, Next >, Finish

You will return to this screen after you add information





Adding temporal metadata

☒ New Data Package Wizard

Temporal Coverage

Enter information about temporal coverage. Temporal coverage can be specified as a single point in time, multiple points in time, or a range thereof.

Time Coverages

Add

Edit

Delete

Move Up

Move Do...

Cancel < Back Next > Finish

Step 11 of 15

Add Metadata
about
temporal
coverage





Adding temporal metadata

Define Temporal Coverage:

Choose date type:

☒ Single Point in Time
☐ Range of Date/Time

Enter date:

☐ Enter Year Only
☐ Enter Month and Year
☒ Enter Day, Month and Year

July 9, 2004

July 2004

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

OK Cancel

A new window will open to add Metadata



Adding temporal metadata

New Data Package Wizard

Temporal Coverage

Enter information about temporal coverage. Temporal coverage can be specified as a single point in time, multiple points in time, or a range thereof.

Time Coverages

1979

Add

Edit

Delete

Move Up

Move Down

Step 11 of 15

Cancel < Back Next > Finish

You will return to this screen after you add information





Adding taxonomic metadata

Enter
taxonomic
Metadata

New Data Package Wizard

Taxonomic Coverage

Enter information about the Taxonomic Coverage. By default, you may enter information on Genus and Species. If you would like to enter information at another classification rank or would like to change the default classification rank, click the edit button. Note that the field 'Higher Level Taxa' is dynamically generated from your entries and is not manually editable.

[Import Taxon Information from Data table...](#)

Higher Level Taxa	Rank	Name	Rank	Name	Common Name(s)
	Genus		Species	African elephant	

Classification System If the list of taxa belong to one or more different classification systems, list the citations for those systems.

Citation Title	Creator	Citation Type

Step 12 of 15

Cancel < Back Next > Finish





Adding taxonomic metadata

Define the Citation Details:

Title:

Author(s):

Party	Role	Address

Publication Date:
Use the YYYY-MM-DD format - (e.g. 1989-02-24)

Category:

☐ Book
☐ Article
☐ Report

With the
citation
information





Adding methods and sampling metadata

New Data Package Wizard

Methods and Sampling

Enter method step description. Method steps describe a single step in the implementation of a methodology for an experiment.

Method Step Title	Method Step Description	Instrumentation

Add
Edit
Delete
Move Up
Move Down

Study extent description. Describe the temporal, spatial and taxonomic extent of the study. This information supplements the coverage information you may have provided in a previous step.

Study Extent

Sampling description. Describe the sampling design of the study. For example, you might describe the way in which treatments were assigned to sampling units.

Sampling

Step 13 of 15

Cancel **< Back** **Next >** **Finish**

Enter metadata on the methods and sampling techniques used





Adding methods and sampling metadata

Enter Method Step Information:

Enter title
Title

Enter description
Description:

Enter Instrumentation Details
Instrumentation:

OK Cancel

A new window will open





Adding Access metadata

Decide on
public access

New Data Package Wizard

Access Information

Would you like to allow the public to read your dataset?

☒ Yes, give read-only access to public.

☐ No, don't give read-only access to public.

Would you like to give special access rights to other people? You can specify access for other members of your team or any other person. Use the table below to add, edit and delete access rights to your data package.

Name	Organization	Email/Description	Permissions
------	--------------	-------------------	-------------

Buttons: Add, Edit, Delete, Move Up, Move Down

Step 14 of 15

Buttons: Cancel, < Back, Next >, Finish





Adding access metadata

Special access can be given to particular groups

Define Access:

Select a user or group from the list below:

Name	Email / Description / Distinguished Name
Access Tree	
SDSC	
OBFS	
UCNRS	
PISCO	
NCEAS	
KU	
LTER	
unaffiliated	

Refresh the user list...

Allow selected user(s) Read access

Description of access levels:

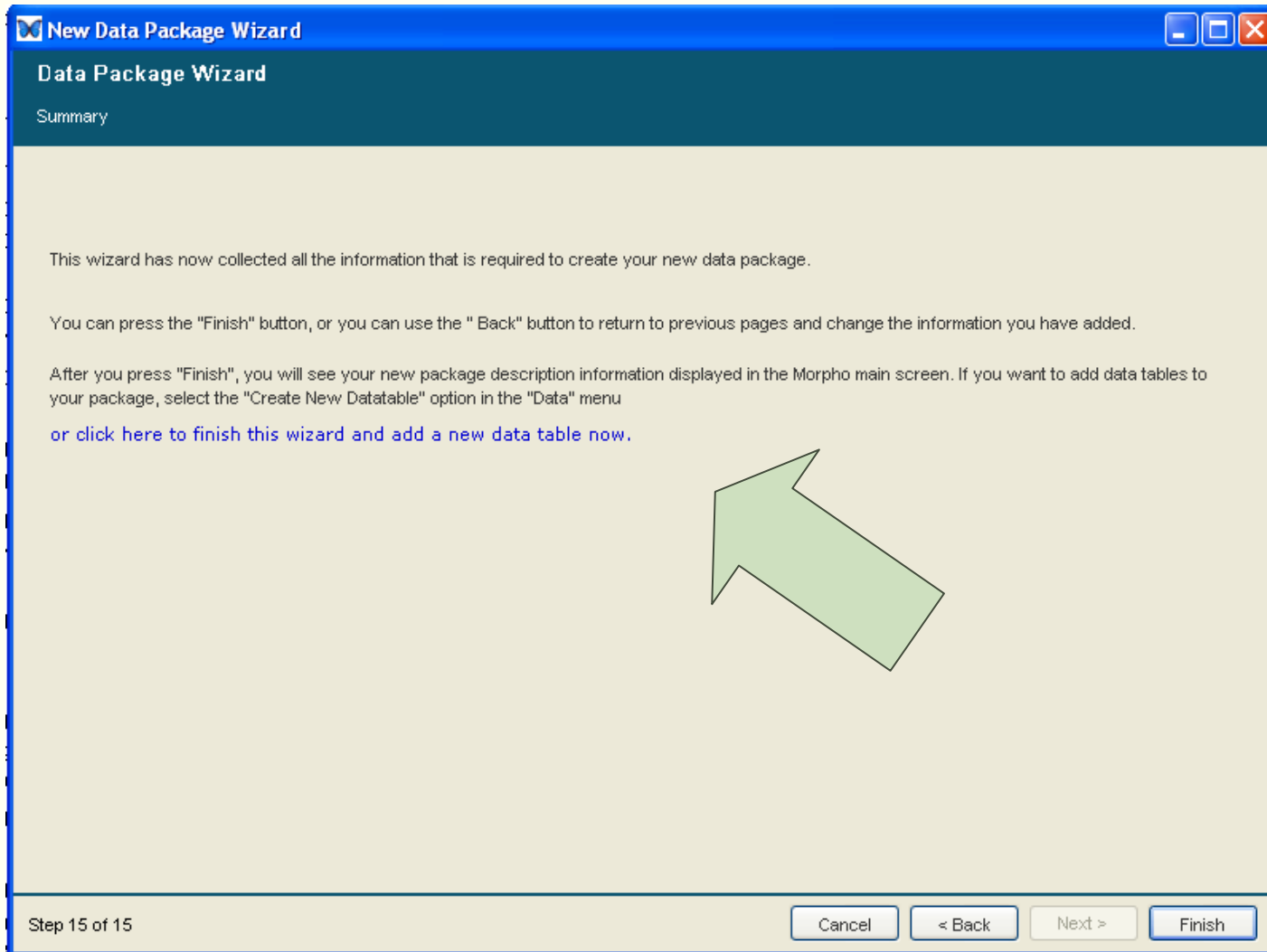
- Read: Able to view data package.
- Read & Write: Able to view and modify data package.
- Read, Write & Change Permissions: Able to view and modify datapackage, and modify access permissions.
- All: Able to do everything (this is the same as Read, Write & Change Permissions)

OK Cancel





Adding a data table



At this point you have completed adding the required metadata. You can either finish and save the metadata, or you can add a new data table. We will add the table.





Adding a data table

You can import the data table and add the documentation automatically

New Datatable Wizard

New DataTable Wizard

Data Location

Describe and optionally include a data table in your data package. You may create a table from scratch and populate it using Morpho's spreadsheet-style data editor, or you can import certain types of existing data files and use the wizard to automatically extract much of the documentation from the data file itself. If you choose the second option, you will be prompted to review the information that is extracted and provide any required fields that can not be generated automatically.

You can also choose to manually enter all of the required fields (rather than using the metadata extractor), which is useful for proprietary file types like Excel, or other file types that are not yet supported.

What do you want to do?

- ☐ CREATE - Create a new, empty data table.
- ☒ IMPORT - Import a data file into the package.
- ☐ DESCRIBE - Include only the data file documentation (but not the data file itself) in the package.

How do you want to enter the documentation for the data?

- ☒ AUTOMATIC - Import the data file and extract the documentation for review.
- ☐ MANUAL - Import the data file but enter the documentation manually.

File Location:

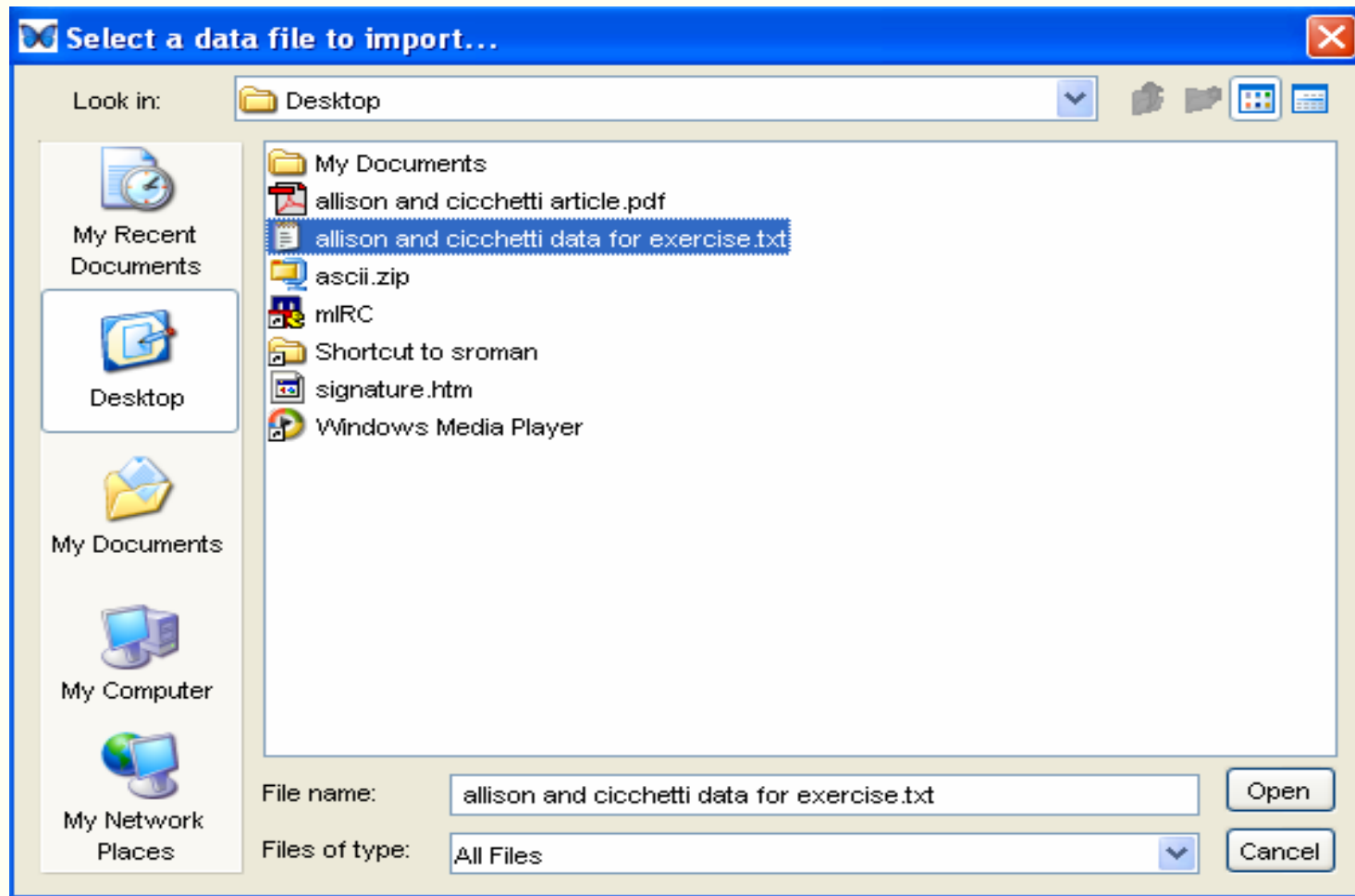
Use the "locate" button to locate the data file on your computer:

File Name:





Adding a data table



Locate the data set



Start DataTable Wizard

Text Import Wizard

New DataTable Wizard

This set of screens will create metadata based on the content of the specified data file

Table Name:

Description:

Start import at row: ☒ Column Labels are in starting row

#	Lines in allison and cicchetti data for exercise.txt
1	species of animal,body weight in kg,brain weight in g,slow wave ("nondreaming") sleep (h...
2	African elephant,6654.000,5712.000,-999.0,-999.0,3.3,38.6,645.0,3,5,3
3	African giant pouched rat,1.000,6.600,6.3,2.0,8.3,4.5,42.0,3,1,3
4	Arctic Fox,3.385,44.500,-999.0,-999.0,12.5,14.0,60.0,1,1,1
5	Arctic ground squirrel,.920,5.700,-999.0,-999.0,16.5,-999.0,25.0,5,2,3
6	Asian elephant,2547.000,4603.000,2.1,1.8,3.9,69.0,624.0,3,5,4
7	Baboon,10.550,179.500,9.1,.7,9.8,27.0,180.0,4,4,4
8	Big brown bat,.023,.300,15.8,3.9,19.7,19.0,35.0,1,1,1
9	Brazilian tapir,160.000,169.000,5.2,1.0,6.2,30.4,392.0,4,5,4
10	Cat,3.300,25.600,10.9,3.6,14.5,28.0,63.0,1,2,1
11	Chimpanzee,52.160,440.000,8.3,1.4,9.7,50.0,230.0,1,1,1
12	Chinchilla,.425,6.400,11.0,1.5,12.5,7.0,112.0,5,4,4
13	Cow,465.000,423.000,3.2,.7,3.9,30.0,281.0,5,5,5
14	Desert hedgehog,.550,2.400,7.6,2.7,10.3,-999.0,-999.0,2,1,2
15	Donkey,187.100,419.000,-999.0,-999.0,3.1,40.0,365.0,5,5,5
16	...

Step #1 of 13

To add metadata automatically for the data set, import at the appropriate rows and click column labels. The number of steps is determined by the data set.





View and check data table

Text Import Wizard

If the columns indicated in the table are incorrect, try changing the assumed delimiter(s)

Delimiters: ☐ tab ☒ comma ☐ space ☐ semicolon ☐ other ☐

☐ Treat consecutive delimiters as one

species of ...	body weigh...	brain weigh...	slow wave ...	paradoxical ...	total sleep (...)	maximum lif...	gestation ti...	predation in...	sleep expos
African elep...	6654.000	5712.000	-999.0	-999.0	3.3	38.6	645.0	3	5
African giant...	1.000	6.600	6.3	2.0	8.3	4.5	42.0	3	1
Arctic Fox	3.385	44.500	-999.0	-999.0	12.5	14.0	60.0	1	1
Arctic groun...	.920	5.700	-999.0	-999.0	16.5	-999.0	25.0	5	2
Asian elephant	2547.000	4603.000	2.1	1.8	3.9	69.0	624.0	3	5
Baboon	10.550	179.500	9.1	.7	9.8	27.0	180.0	4	4
Big brown bat	.023	.300	15.8	3.9	19.7	19.0	35.0	1	1
Brazilian tapir	160.000	169.000	5.2	1.0	6.2	30.4	392.0	4	5
Cat	3.300	25.600	10.9	3.6	14.5	28.0	63.0	1	2
Chimpanzee	52.160	440.000	8.3	1.4	9.7	50.0	230.0	1	1
Chinchilla	.425	6.400	11.0	1.5	12.5	7.0	112.0	5	4
Cow	465.000	423.000	3.2	.7	3.9	30.0	281.0	5	5
Deer	550	2.400	7.6	2.7	10.2	100.0	100.0	2	1

Show Results of Data Scan

Step #2 Cancel < Back Next > Finish

If the ascii file was saved with delimiters Morpho will format data table according to delimiters



Add/edit metadata to each column of data

Text Import Wizard

species of animal

Define Attribute or Column:

Name: species of animal Name of the attribute as it appears in the data file

Label: A more readable label for the attribute

Definition: species name Define the contents of the attribute (or column) precisely, so that a data user could interpret the attribute accurately.
e.g. "spden" is the number of individuals of all macro invertebrate species found in the plot

Category:

- ☒ **Unordered:** unordered categories or text (statistically **nominal**) e.g. Male, Female
- ☐ **Ordered:** ordered categories (statistically **ordinal**) e.g. Low, High
- ☐ **Relative:** values from a scale with equidistant points (statistically **interval**) e.g. 12.2 meters
- ☐ **Absolute:** measurement scale with a meaningful zero point (statistically **ratio**) e.g. 273 Kelvin
- ☐ **Date-Time:** date or time values from the Gregorian calendar e.g. 2002-10-24

Unordered

Choose: Text values (free-form or matching a pattern) Describe a free text domain for the attribute.

Definition: species name e.g. U.S. telephone numbers in the format (999) 888-7777

Source: e.g. FIPS standard for postal abbreviations for U.S. states

Pattern(s) (optional):

Pattern(s): Patterns are interpreted as regular expressions constraining allowable character sequences. e.g. [0-9]{3}-[0-9]{3}-[0-9]{4} allows only numeric digits in the pattern of US phone numbers

Buttons: Add, Delete

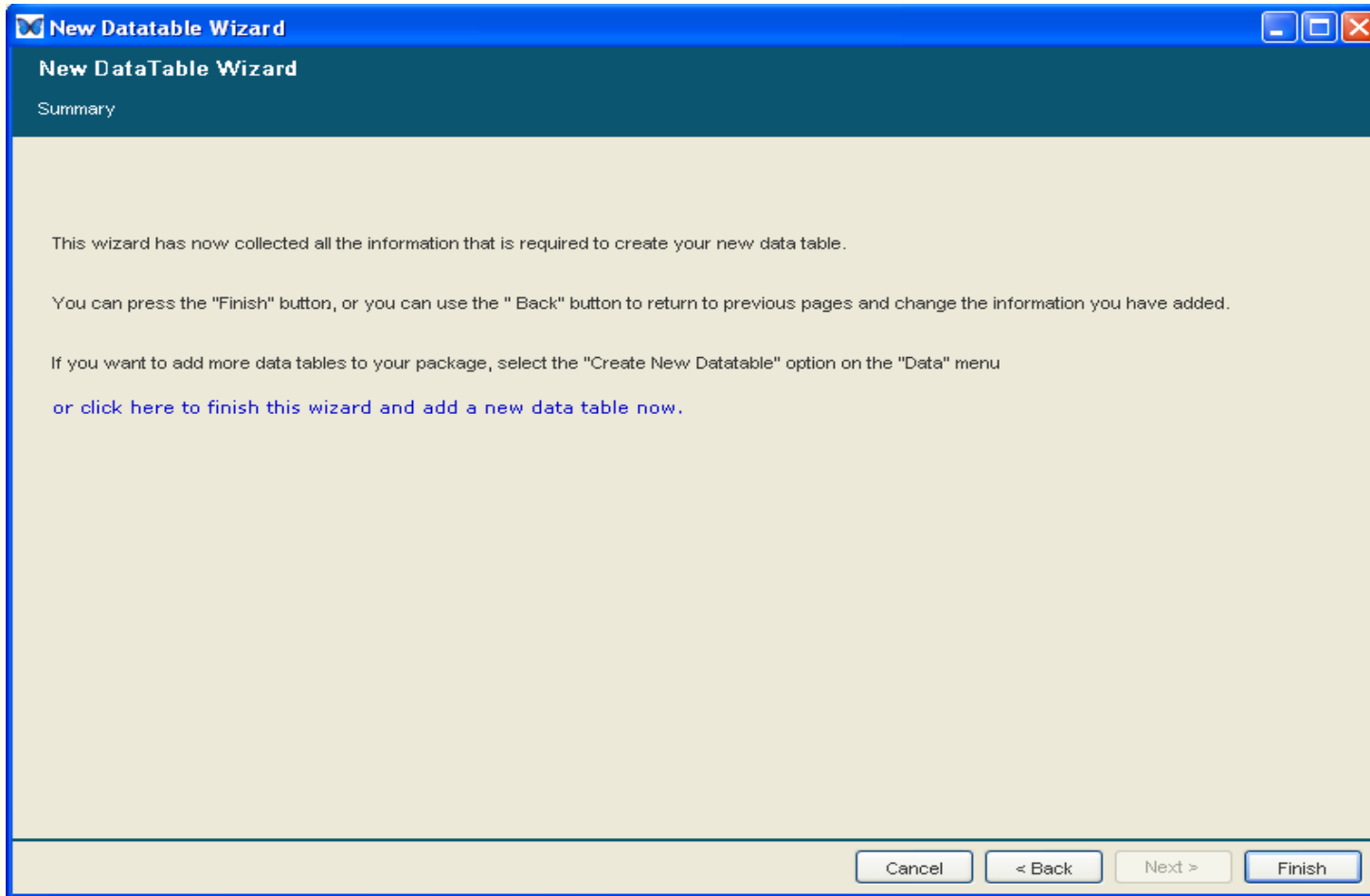
Step #3 of 13 **Cancel** **< Back** **Next >** **Import**

Define each column





Entering Data Table



Once you have entered all the column metadata you can click on finish to enter





Using Morpho to edit metadata

Data Package: temporary.1.1

File Edit Search Documentation Data Window Help

romanello: **Allison and Cicchetti**
Accession Number: temporary.1.1 Keywords:
[more](#)

allison and cicchetti data for exercise.txt

text	real gram	real gram	real hour	real hour	real hour	real nominalYear	real nominalID
species of anir	body weight	brain weight	slow wave	paradoxical	total sleep	maximum life	gestation t
African eleph...	6654.000	5712.000	-999.0	-999.0	3.3	38.6	645.0
African giant ...	1.000	6.600	6.3	2.0	8.3	4.5	42.0
Arctic Fox	3.385	44.500	-999.0	-999.0	12.5	14.0	60.0
Arctic ground ...	.920	5.700	-999.0	-999.0	16.5	-999.0	25.0
Asian elephant	2547.000	4603.000	2.1	1.8	3.9	69.0	624.0
Baboon	10.550	179.500	9.1	.7	9.8	27.0	180.0
Big brown bat	.023	.300	15.8	3.9	19.7	19.0	35.0
Brazilian tapir	160.000	169.000	5.2	1.0	6.2	30.4	392.0
Cat	3.300	25.600	10.9	3.6	14.5	28.0	63.0
Chimpanzee	52.160	440.000	8.3	1.4	9.7	50.0	230.0
Chinchilla	.425	6.400	11.0	1.5	12.5	7.0	112.0
Cow	465.000	423.000	3.2	.7	3.9	30.0	281.0
Desert hedge...	.550	2.400	7.6	2.7	10.3	-999.0	-999.0
Donkey	187.100	419.000	-999.0	-999.0	3.1	40.0	365.0
Eastern Ameri...	.075	1.200	6.3	2.1	8.4	3.5	42.0
Echidna	3.000	25.000	8.6	.0	8.6	50.0	28.0
European hed...	.785	3.500	6.6	4.1	10.7	6.0	42.0
Galago	.200	5.000	9.5	1.2	10.7	10.4	120.0
Genet	1.410	17.500	4.8	1.3	6.1	34.0	-999.0
Giant armadillo	60.000	81.000	12.0	6.1	18.1	7.0	-999.0
Giraffe	529.000	680.000	-999.0	.3	-999.0	28.0	400.0
Goat	27.660	115.000	3.3	.5	3.8	20.0	148.0
Golden hamster	.120	1.000	11.0	3.4	14.4	3.9	16.0

Entity/Attribute

Entity Description

Identifier: temporary.1.1
Catalog: knb
System: knb
Name: allison and cicchetti data for exercise.txt

Physical Structure Description:

Object Name: allison and cicchetti data for exercise.txt
Size: 4130 byte
Number of Header Lines: 1
Record Delimiter: #x0A
Text Format: Maximum Record column Length: Simple Field Delimited Delimiter,

Once data is up loaded to Morpho you can edit data or metadata. This is the window that opens after you press finish in the morpho wizard.





Either click on documentation in the data package window

Data Package: enviroeducator.5.10

File Edit Search Documentation Data Window Help

Dr. Samantha Ro
Accession Num
[more](#)

test.txt

low wave paradoxical sle total sleep maximum life s gestation t

string	float	float	float	float	float
species					
African eleph...	6654.000	5712.000	-999.0	-999.0	3.3
African giant ...	1.000	6.600	6.3	2.0	8.3
Arctic Fox	3.385	44.500	-999.0	-999.0	12.5
Arctic ground ...	.920	5.700	-999.0	-999.0	16.5
Asian elephant	2547.000	4603.000	2.1	1.8	3.9
Baboon	10.550	179.500	9.1	.7	9.8
Big brown bat	.023	.300	15.8	3.9	19.7
Brazilian tapir	160.000	169.000	5.2	1.0	6.2
Cat	3.300	25.600	10.9	3.6	14.5
Chimpanzee	52.160	440.000	8.3	1.4	9.7
Chinchilla	.425	6.400	11.0	1.5	12.5
Cow	465.000	423.000	3.2	.7	3.9
Desert hedge...	.550	2.400	7.6	2.7	10.3
Donkey	187.100	419.000	-999.0	-999.0	3.1
Eastern Ameri...	.075	1.200	6.3	2.1	8.4
Echidna	3.000	25.000	8.6	.0	8.6
European hed...	.785	3.500	6.6	4.1	10.7
Galago	.200	5.000	9.5	1.2	10.7
Genet	1.410	17.500	4.8	1.3	6.1
Giant armadillo	60.000	81.000	12.0	6.1	18.1
Giraffe	529.000	680.000	-999.0	.3	-999.0
Goat	27.660	115.000	3.3	.5	3.8
Golden hamster	.120	1.000	11.0	3.4	14.4

Entity/Attribute

Entity Description

Identifier: enviroeducator.5.10

Catalog: knb

System: test.txt

Name: test.txt

Physical Structure Description:

Object: enviroeducator.9.4

Name:

Size: 4130 bytes

Number of Header Lines: 1

Record Delimiter: #x0A

Text Format: Maximum Record Length: Simple Field Delimited Delimiter,





Or click on edit in the Entity/attribute window

Data Package: enviroeducator.5.10

File Edit Search Documentation Data Window Help

Dr. Samantha Romanello: RCN training example using Allison and Cicchetti 1976 data
Accession Number: enviroeducator.5.10 Keywords: sleep, mammals
[more](#)

string	float	float	float	float	float	float	float
species	body weight	brain weight	slow wave	paradoxical sle	total sleep	maximum life	gestation 1
African eleph...	6654.000	5712.000	-999.0	-999.0	3.3	38.6	645.0
African giant ...	1.000	6.600	6.3	2.0	8.3	4.5	42.0
Arctic Fox	3.385	44.500	-999.0	-999.0	12.5	14.0	60.0
Arctic ground ...	.920	5.700	-999.0	-999.0	16.5	-999.0	25.0
Asian elephant	2547.000	4603.000	2.1	1.8	3.9	69.0	624.0
Baboon	10.550	179.500	9.1	.7	9.8	27.0	180.0
Big brown bat	.023	.300	15.8	3.9	19.7	19.0	35.0
Brazilian tapir	160.000	169.000	5.2	1.0	6.2	30.4	392.0
Cat	3.300	25.600	10.9	3.6	14.5	28.0	63.0
Chimpanzee	52.160	440.000	8.3	1.4	9.7	50.0	230.0
Chinchilla	.425	6.400	11.0	1.5	12.5	7.0	112.0
Cow	465.000	423.000	3.2	.7	3.9	30.0	281.0
Desert hedge...	.550	2.400	7.6	2.7	10.3	-999.0	-999.0
Donkey	187.100	419.000	-999.0	-999.0	3.1	40.0	365.0
Eastern Ameri...	.075	1.200	6.3	2.1	8.4	3.5	42.0
Echidna	3.000	25.000	8.6	.0	8.6	50.0	28.0
European hed...	.785	3.500	6.6	4.1	10.7	6.0	42.0
Galago	.200	5.000	9.5	1.2	10.7	10.4	120.0
Genet	1.410	17.500	4.8	1.3	6.1	34.0	-999.0
Giant armadillo	60.000	81.000	12.0	6.1	18.1	7.0	-999.0
Giraffe	529.000	680.000	-999.0	.3	-999.0	28.0	400.0
Goat	27.660	115.000	3.3	.5	3.8	20.0	148.0
Golden hamster	.120	1.000	11.0	3.4	14.4	3.9	16.0

test.txt

Entity/Attribute

Entity Description

Identifier: enviroeducator.5.10

Catalog: knb

System: knb

Name: test.txt

Physical Structure Description:

Object: enviroeducator.9.4

Name: enviroeducator.9.4

Size: 4130 bytes

Number of Header Lines: 1

Record Delimiter: #x0A

Text Format: Maximum Record Length: column

Simple Field Delimited Delimiter:





A new window the Morpho editor will open

Information with red dots is required
Multiple editor windows can be opened at each metadata level





Click on the pull down screen to jump to information

Morpho Editor

Show All Trim + -

Find: eml

- eml
- dataset
- access
- creator
- contact
- keywordSet
- dataTable
- attributeList
- shortName
- title
- creator
- associatedParty
- abstract
- keywordSet
- intellectualRights
- contact
- access
- (CHOICE)

dataset

DatasetType is the base type for the dataset element. The dataset field encompasses all information about a single dataset. A dataset is defined as all of the information describing a data collection event. This event may take place over some period of time and include many actual collections (a time series or remote sensing application) or it could be just one actual collection (a day in the field).

id

system

scope

document

shortName

The 'shortName' field provides a concise name that describes the resource that is being documented. It is the appropriate place to store a filename associated with other storage systems.

RCN training example

title

The 'title' field provides a description of the resource that is being documented that is long enough to differentiate it from other similar resources. Multiple titles may be provided, particularly when trying to express the title in more than one language (use the 'xml:lang' attribute to indicate the language if not English/en).

RCN training example using Allison and Cicchetti 1976 data

creator

The responsible party field contains multiple subfields that are used to describe the person, organization, or position within an organization that is associated in some way with a resource. It is intended to be used to fully document contact information for many types of associations, such as owner, manager, steward, curator, etc.

id

system

scope

document

individualName

required; repeatable (ONE to MANY) required (ONE) optional; repeatable (ZERO to MANY) optional (ZERO to ONE)

OK Cancel





Saving a data package in Morpho

Data Package: temporary.1.1

File Edit Search Documentation Data Window Help

romanello: Allison and Cicchetti
Accession Number: temporary.1.1 Keywords:
[more](#)

allison and cicchetti data for exercise.txt

text	real gram	real gram	real hour	real	real	real	real
species of animal	body weight	brain weight	slow weight				
African elephant	6654.000	5712.000	-999.0				
African giant ...	1.000	6.600	6.3				
Arctic Fox	3.385	44.500	-999.0				
Arctic ground ...	.920	5.700	-999.0				
Asian elephant	2547.000	4603.000	2.1				
Baboon	10.550	179.500	9.1				
Big brown bat	.023	.300	15.8				
Brazilian tapir	160.000	169.000	5.2				
Cat	3.300	25.600	10.9				
Chimpanzee	52.160	440.000	8.3				
Chinchilla	.425	6.400	11.0				
Cow	465.000	423.000	3.2				
Desert hedge...	.550	2.400	7.6				
Donkey	187.100	419.000	-999.0				
Eastern Ameri...	.075	1.200	6.3				
Echidna	3.000	25.000	8.6				
European hed...	.785	3.500	6.6	4.1	10.7	6.0	42.0
Galago	.200	5.000	9.5	1.2	10.7	10.4	120.0
Genet	1.410	17.500	4.8	1.3	6.1	34.0	-999.0
Giant armadillo	60.000	81.000	12.0	6.1	18.1	7.0	-999.0
Giraffe	529.000	680.000	-999.0	.3	-999.0	28.0	400.0
Goat	27.660	115.000	3.3	.5	3.8	20.0	148.0
Golden hamster	.120	1.000	11.0	3.4	14.4	3.9	16.0

Save Current DataPackage

Please choose where you would like to save the data package.

☒ Save Locally
☐ Save to Network.

Save Cancel

Entity/Attribute

Entity Description

Identifier: temporary.1.1
Catalog: knb
System: allison and cicchetti data for exercise.txt
Physical Structure Description:
Object: allison and cicchetti data for exercise.txt
Name: 4130 byte
Number of Header: 1
Lines: Record
Record Delimiter: #x0A
Text Format: Maximum
Record column
Length: Simple Field
Delimited Delimiter,

At this point you can choose to save the data locally.

■ When you have finished working in Morpho we are finished for the day.

■ See you tomorrow at 8:30.

