



# Morpho

Will Tyburczy

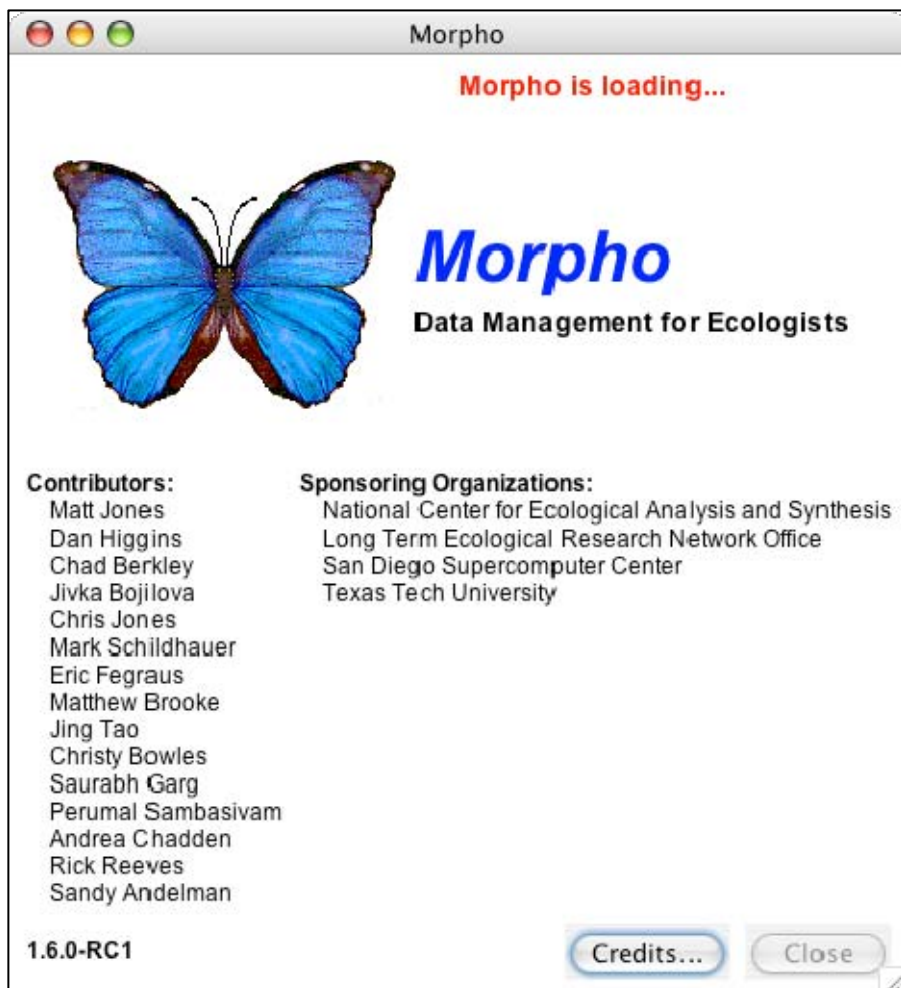
National Center for Ecological Analysis and  
Synthesis

UC Santa Barbara

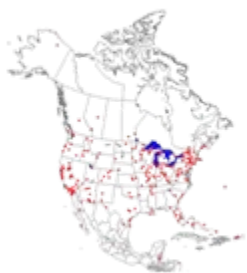




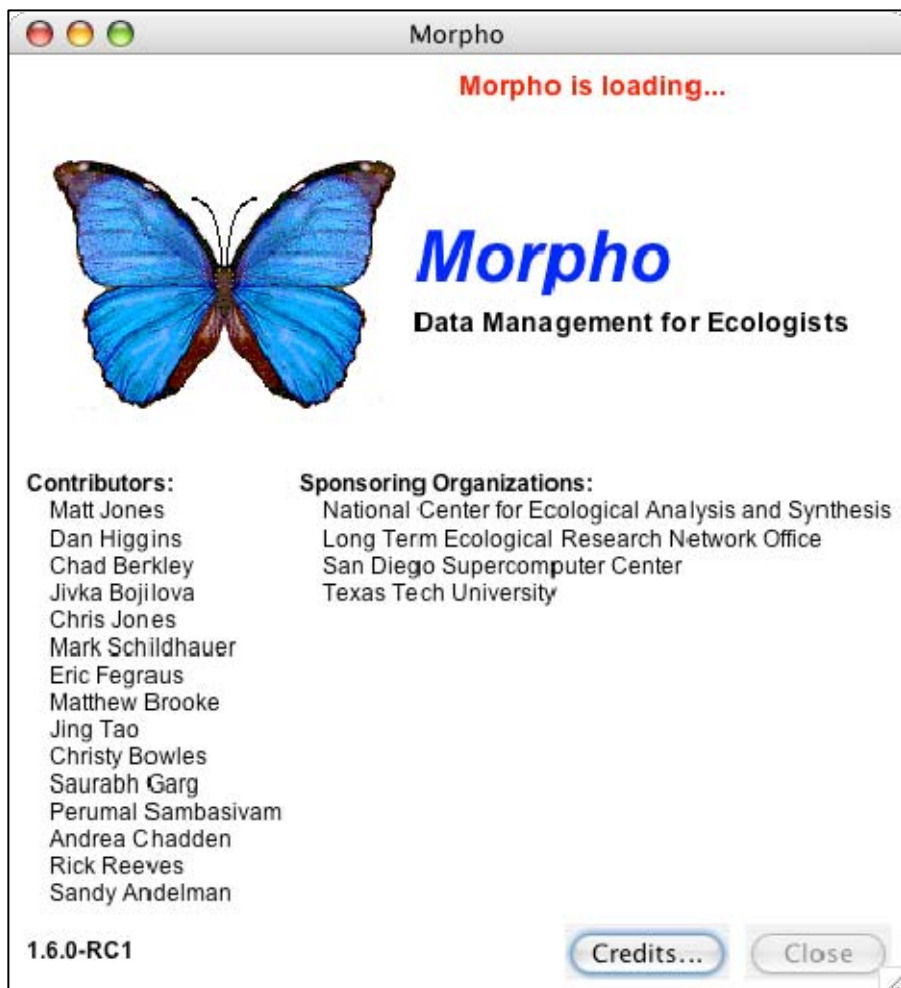
# What is Morpho?



- Graphical application for creating and editing EML
- Metacat client
- Part of the KNB
- Cross platform (java based)



# Morpho's Audience



- Targeted at individual researchers
  - Have data in ad hoc formats
  - Data sets are generally discrete and static
  - Interested in data archival



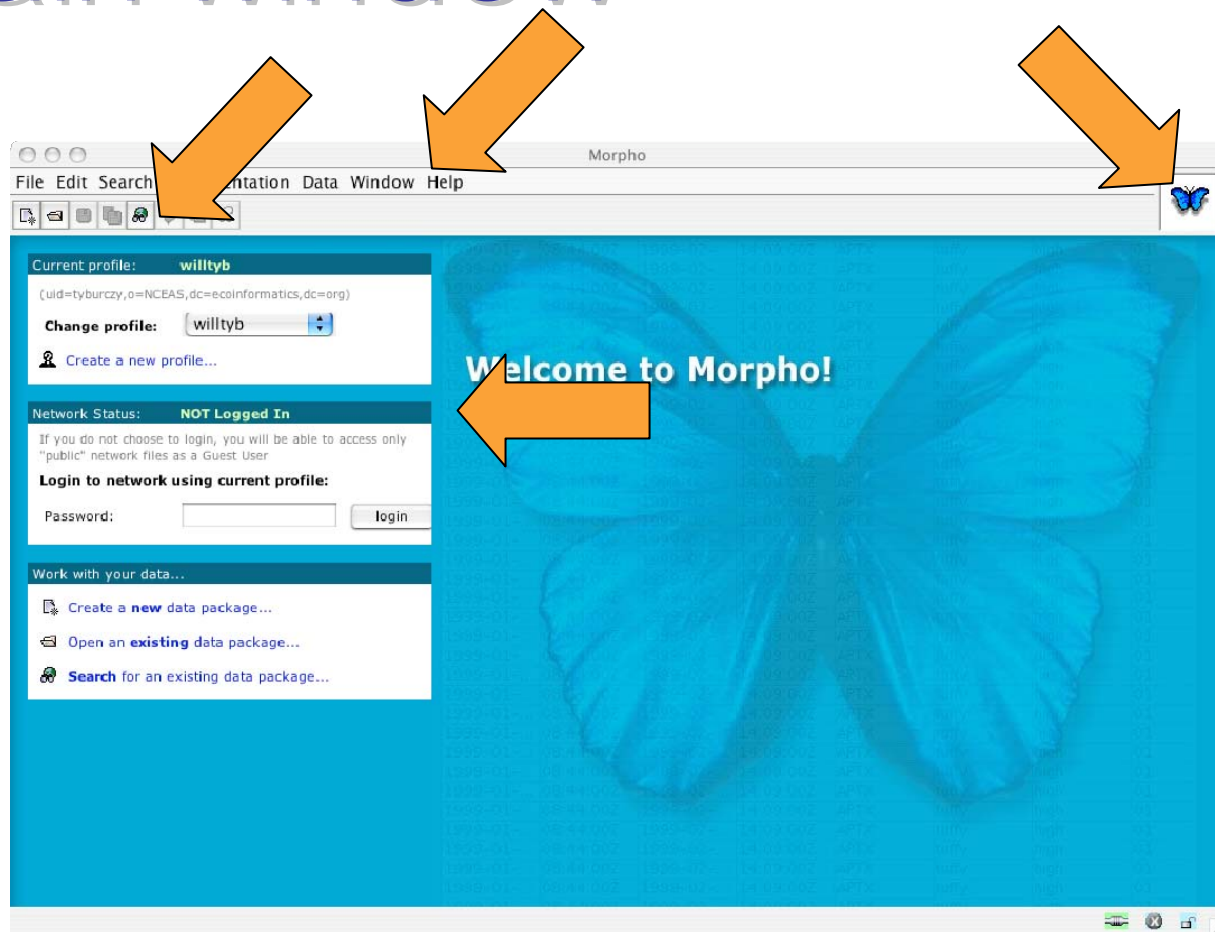
# Advantages of Morpho

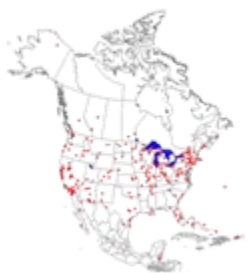
- Keeps data and metadata organized (compare with files on your hard drive)
- Advanced search functionality
  - Taxonomic, spatial search options
- More complete support for EML specification
- Ability to archive data alongside metadata
- Can reuse information from prior data packages



# The main window

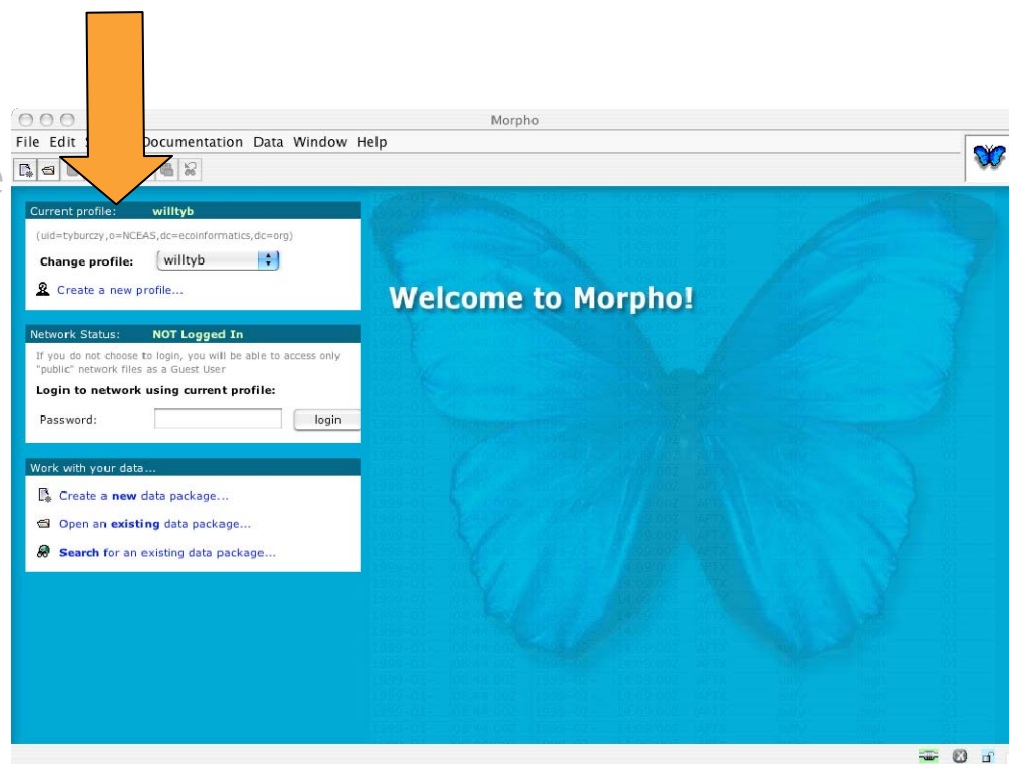
- All controls accessible via the menu bar
- Common tasks also in graphics toolbar
- Center window provides access to main functions
- Butterfly icon indicates that program is processing



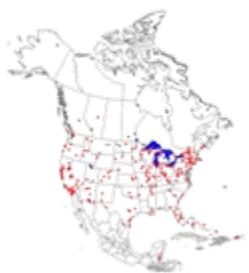


# Profiles in Morpho

- Allows multiple users on the same machine to keep their data separate
  - Profiles are NOT password protected on the local machine
- A profile generally corresponds to an associated KNB account
- Can also be useful to separate work done for different projects/organizations

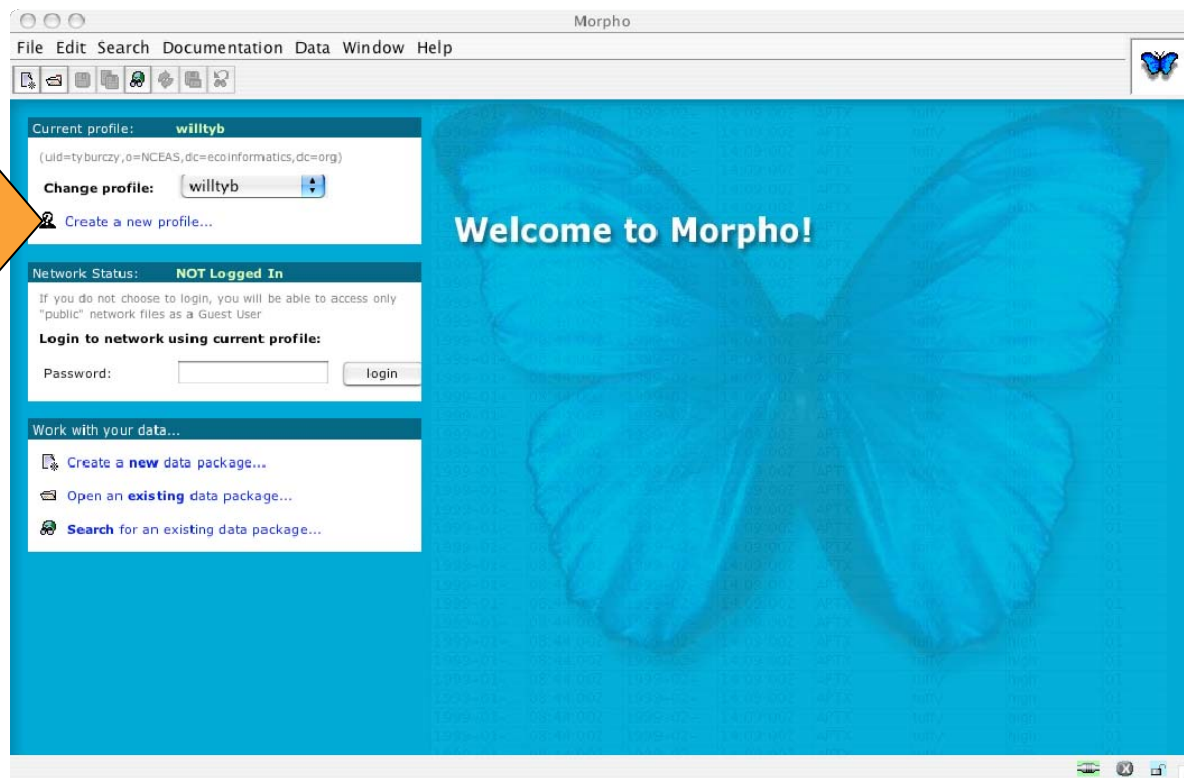
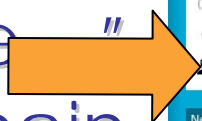






# Creating a profile

- Select  
"Create a  
new profile  
from the main  
window






# Creating a profile

- Enter a name for the profile
  - Suggested: first initial and last name (wtyburczy)
- Enter your name
- Hit "Next"

New Profile



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

Basic Information

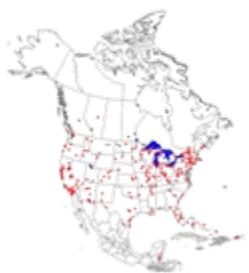
Name of profile:

First name:

Last name:


Cancel Previous Next





# Creating a profile

- Enter the username and affiliation of your KNB account
- Hit "Next"



Enter the information you submitted when you registered for the Knowledge Network for Biocomplexity (KNB). If you have not registered for the KNB yet, go to "<http://ldap.ecoinformatics.org/cgi-bin/ldapweb.cgi?cfg=knb>". This will allow you to login to the network and collaborate with other researchers through the KNB.

**New Profile**

Network Account Information

Username:

Organization:   
NCEAS  
LTER  
OBFS



# Creating a profile

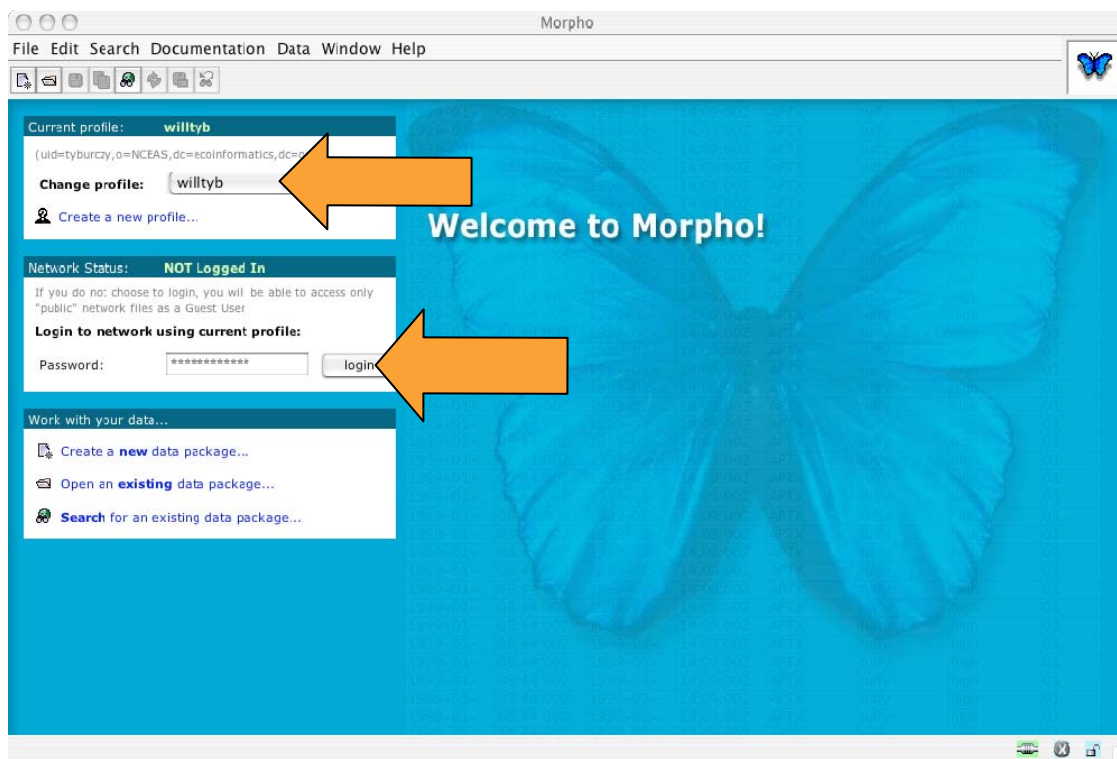
- Select an identifier prefix
  - Usually the same as your account username
  - Used as the first part of the name of your data packages
- Hit "Next"

The screenshot shows a window titled "New Profile". On the left, there is a blue butterfly icon and a text box that reads: "Enter a short identifier prefix for this profile. All data packages you create under this profile will bear this identifier prefix. For example, using the prefix 'jane\_doe', data packages will have names like jane\_doe.1.1, jane\_doe.2.1, etc." On the right, under the heading "Data Package Identification", there is a text input field labeled "Identifier prefix:" containing the text "wtyburczy". At the bottom right, there are three buttons: "Cancel", "< Previous", and "Finished".



# Logging in

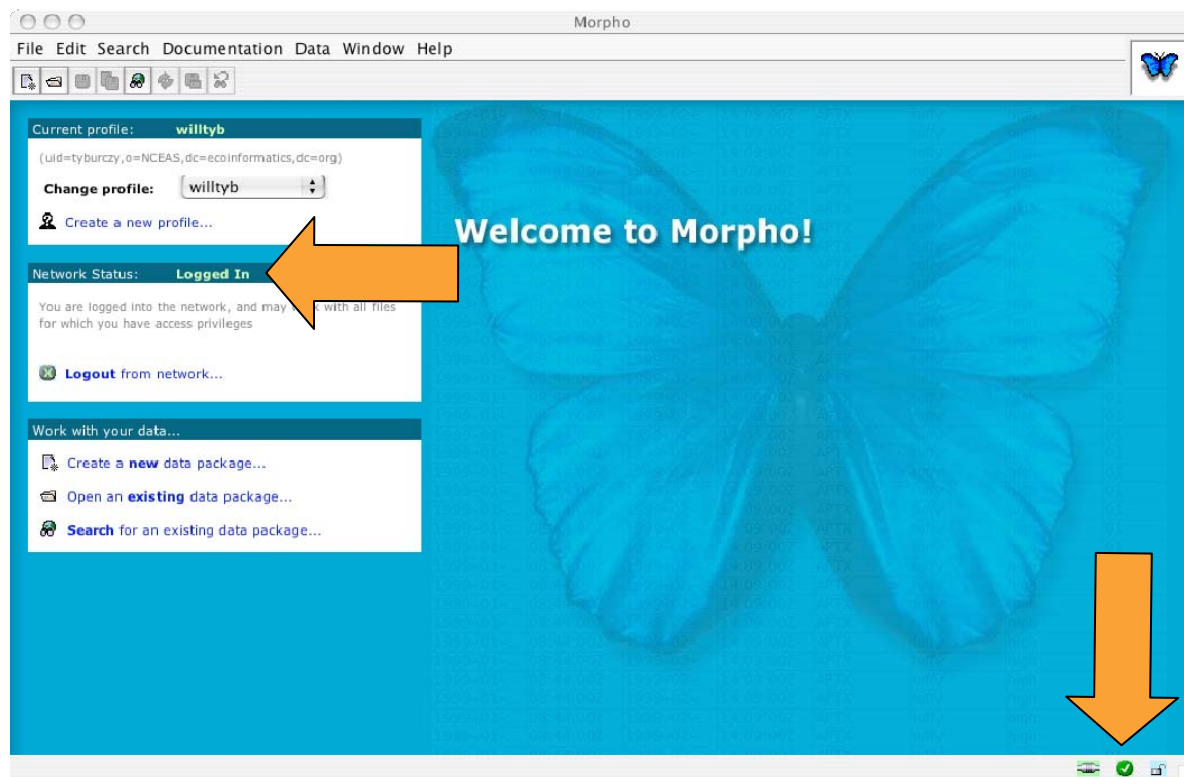
- Required to save or edit data packages on the network
- Allows viewing of data packages that may not be publicly readable
- Select your profile from the drop-down box
- Enter the password for your account
- Hit "Login"





# Logging in

- You can see your network status in two places
  - The main window
  - The login status icon on the lower right



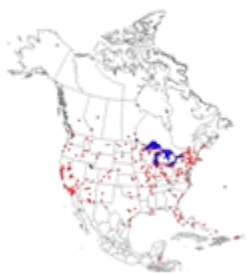


# Searching for data packages

The screenshot shows a 'Search' window with the following elements:

- Query Title:** Untitled-Search-1
- Search Scope:** ☒ Network Search, ☒ Local Search (indicated by an orange arrow)
- Tabs:** Subject, Taxonomic, Spatial, Options
- Search Criteria:** A box titled 'Check boxes determine which metadata fields are searched.' containing:
  - ☒ Title
  - ☒ All
  - ☒ Abstract
  - ☒ Keywords
  - Operator:** contains (dropdown menu)
  - Term:** Organization of Biological Field Station
- Logic:** ☐ And, ☒ Or, **More** (indicated by an orange arrow), **Fewer**
- Advanced Search:** ☐ Combine constraints from all tabs (indicated by an orange arrow)
- Buttons:** Search, Cancel

- Search on local disks or network
- Search multiple terms using "More"
- Combine subject search with taxonomic and spatial constraints



# Searching for data packages

Search

Query Title:  ☐ Network Search ☒ Local Search

**Taxonomic** | Subject | Spatial | Options

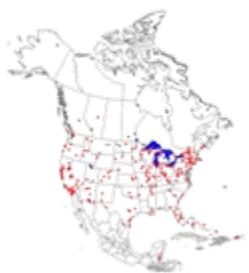
Species

☐ And ☒ Or

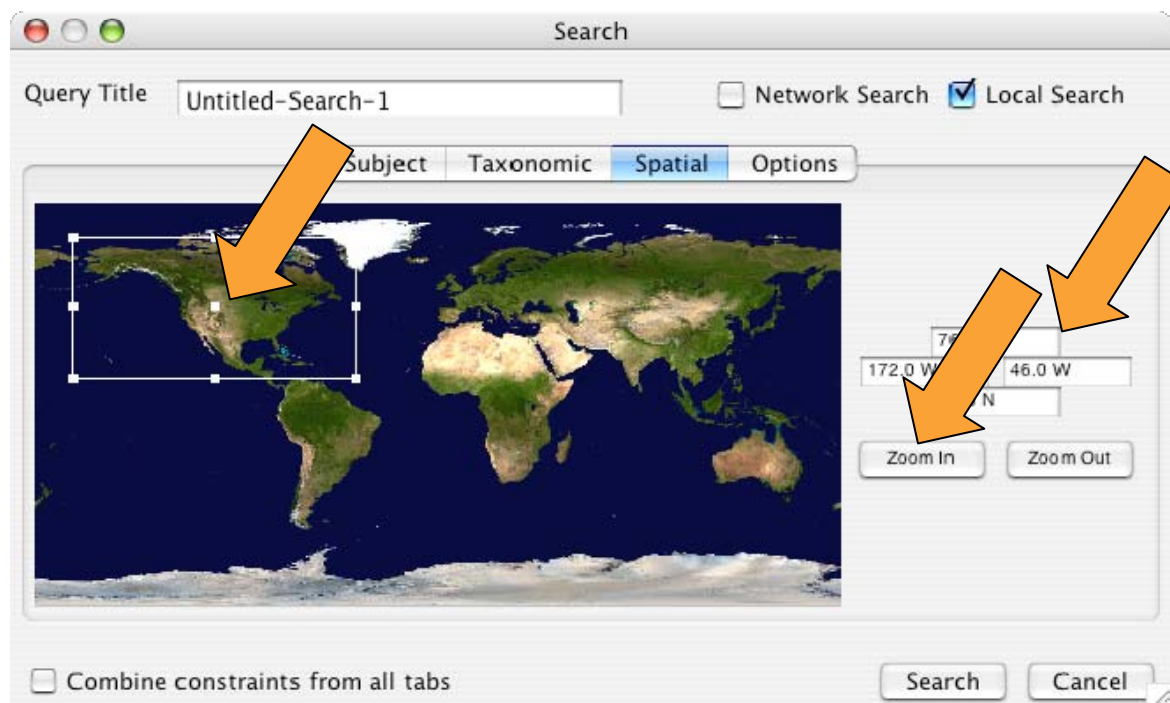
☐ Combine constraints from all tabs

- Select taxonomic rank and enter name
- Can search multiple taxa using "More"





# Searching for datasets

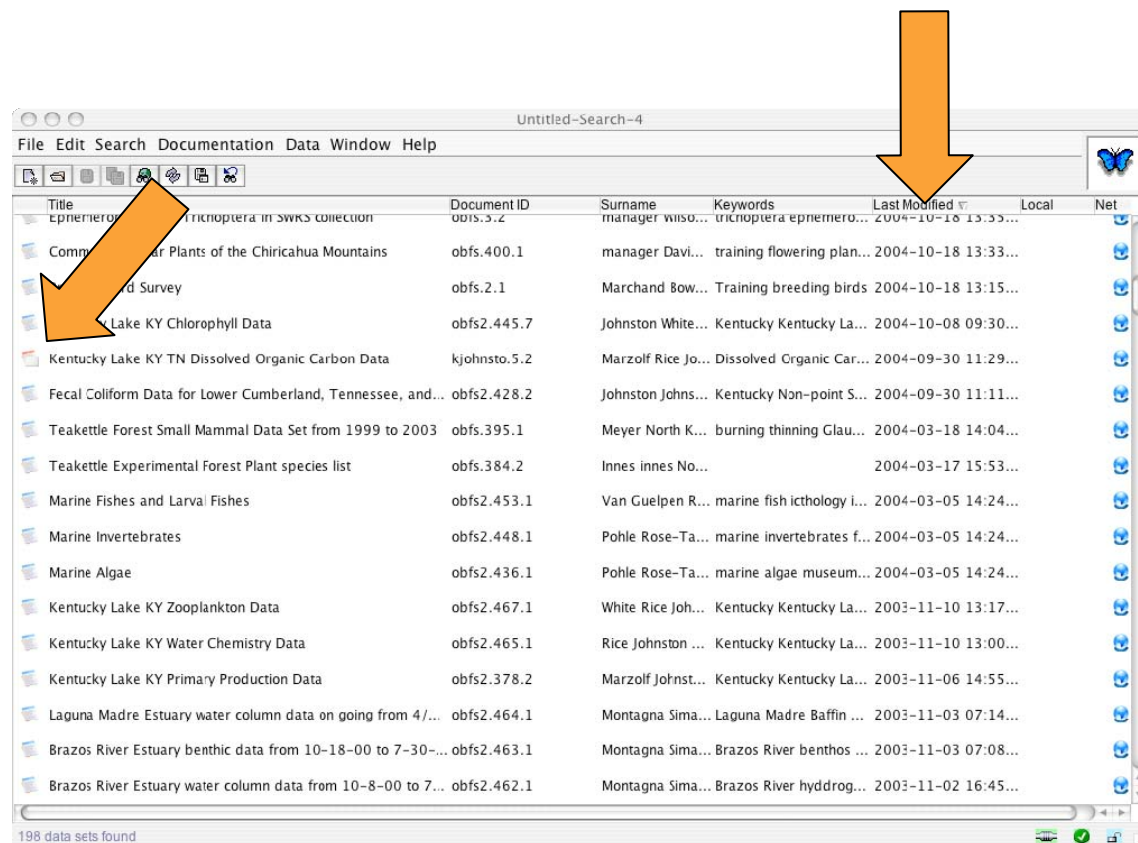


- Select area of interest by moving box or enter coordinates by hand
- Zoom in to allow greater precision using the graphical box



# Searching for datasets

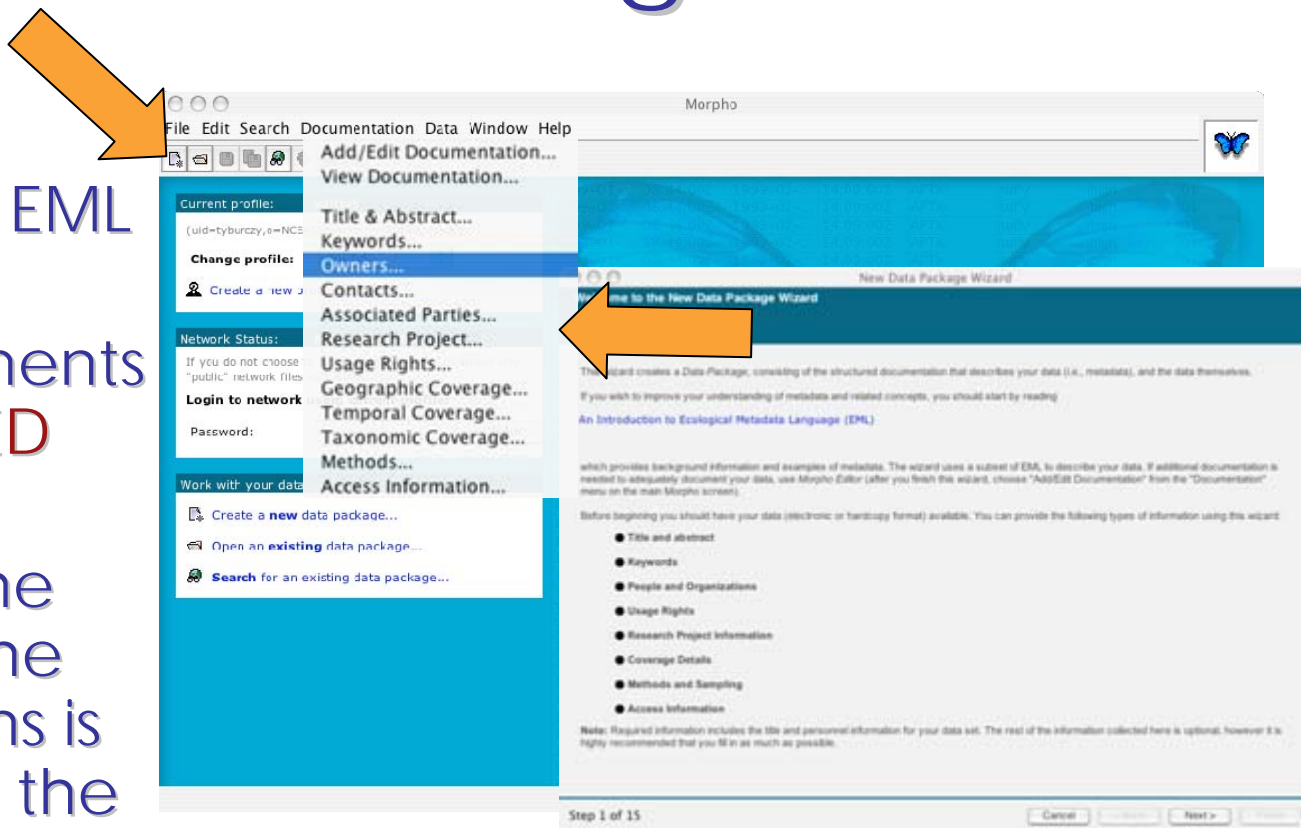
- Data packages matching criteria are listed by last modification date
- Red icon indicates the package includes data table level EML
- Double click a package to open it





# Creating a data package: The Data Package Wizard

- Step-by-step interface for creating valid EML documents
- Required elements are listed in **RED**
- After creating documents, the interface for the various sections is reachable via the "Documentation" menu



There are 12 steps, similar to the sections of the web registry form



# Editing Data Packages: Title and Abstract

- Enter a descriptive title
- Briefly describe the content and purpose of the data in the 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.

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



# Editing Data Packages: Keywords

- Hit “Add” to enter more keywords
- To edit or delete existing keywords, select them and hit the appropriate button

New Data Package Wizard

## Keywords

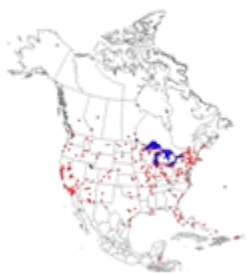
Enter the keywords. A data package may have multiple keywords associated with it to enable easy searching and categorization. In addition, one or more keywords may be associated with a "keyword thesaurus", which allows the association of a data package with an authoritative definition. Thesauri may also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

| Keywords          | Thesaurus                      |
|-------------------|--------------------------------|
| estuarine habitat | Global Change Master Directory |

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

Step 3 of 15

Buttons: Cancel, < Back, Next >, Finish



# Editing Data Packages: Keywords

- To add a keyword, hit "Add"
- Enter keyword in designated space

Define Keyword Set:

| Keyword           |
|-------------------|
| estuarine habitat |

Keywords:

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

OK Cancel





# Editing Data Packages: Keywords

- To designate a source for the keywords (GCMD, for instance), select the appropriate radio button at the bottom and type in the name of the source

Define Keyword Set:

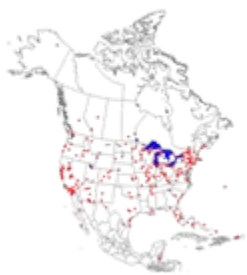
| Keyword           |
|-------------------|
| estuarine habitat |

Keywords:

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

Thesaurus name: Global Change Master Directory

OK Cancel



# Editing Data Packages: Data Set Owner

- To add an owner, hit "Add"
- To edit or delete an owner, select the listing, then hit the appropriate button

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 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                              |
|-------------------------------------|-------|--------------------------------------|
| Will Tyburczy, Metadata Coordina... | Owner | 735 State St Ste. 300, Santa Barb... |

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

Step 5 of 15

Buttons: Cancel, < Back, Next >, Finish



# Editing Data Packages: Data Set Owner

- Enter in the information for the owner, then hit "OK"

**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 {

OK Cancel



# Editing Data Packages: Contact Person

- Works similarly to data set owners
- To add a contact, hit "Add"

New Data Package Wizard

People or Organizations Associated With This Data Package

Contact's

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                              |
|-------------------------------------|---------|--------------------------------------|
| Will Tyburczy, Metadata Coordina... | Contact | 735 State St Ste. 300, Santa Barb... |

Add  
Edit  
Delete  
Move Up  
Move Down

Step 6 of 15

Cancel < Back Next > Finish



# Editing Data Packages: Contact Person

- Can select a previous entry in the data package to specify the same person
- Can also specify a person from another data package

**Contact Details**

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

✓ Select from a different data package  
Will Tyburczy NCEAS Metadata Coordinator

One of the three required {

Salutation:

First Name:

Last Name:

Organization:

Position Name:

Address 1:

Address 2:

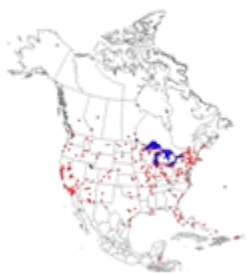
City:  State:

Postal Code:  Country:

Phone:  Fax:

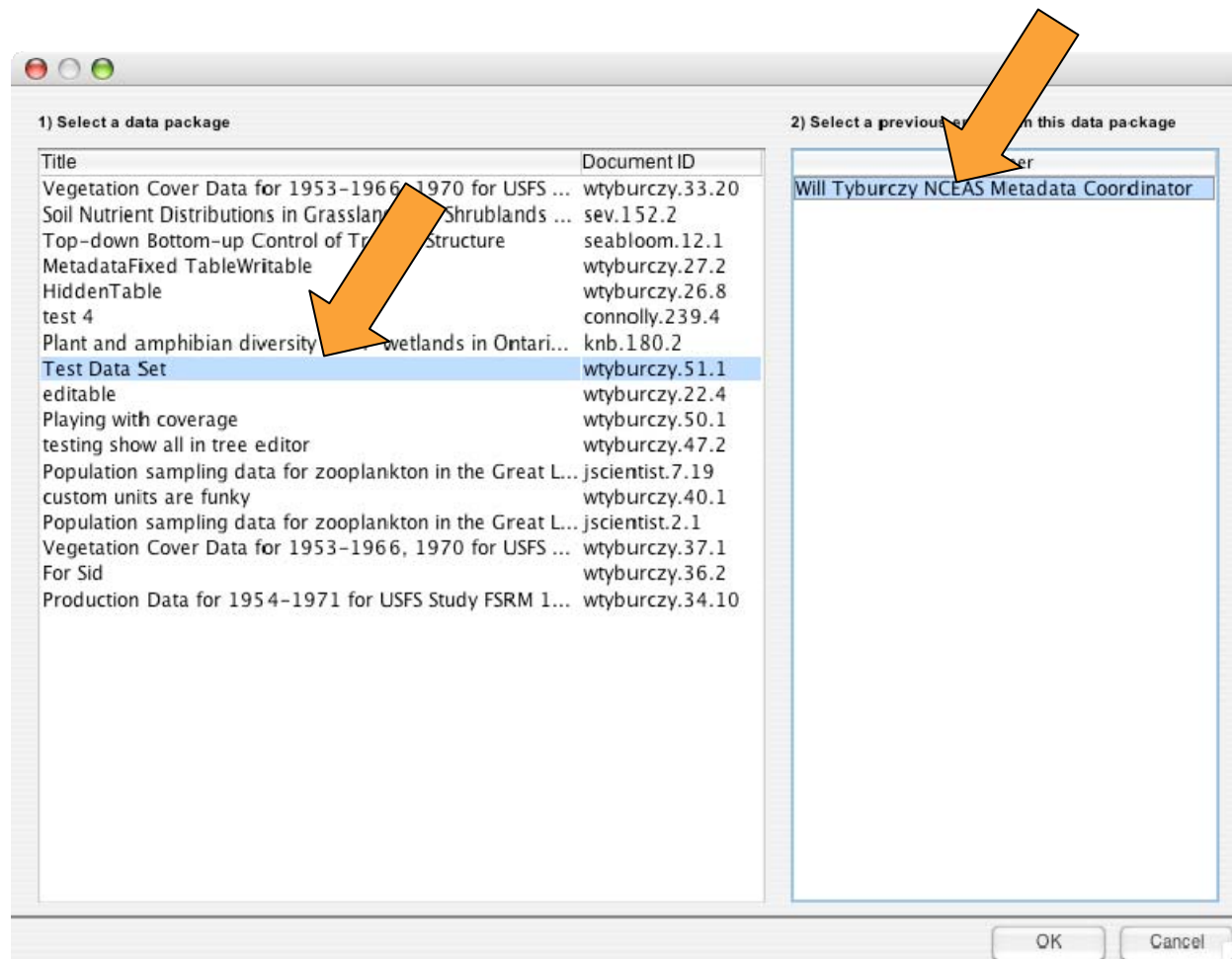
Email:  Online URL:

OK Cancel



# Editing Data Packages: Contact Person

- To select an entry from another data package:
  - select the package on the left
  - then the contact on the right







# Editing Data Packages: Associated Parties

- Works similarly to entering owners and contacts

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 |
|-------|------|---------|
|-------|------|---------|

**Add**  
**Edit**  
**Delete**  
**Move Up**  
**Move Down**

Step 7 of 15

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



# Editing Data Packages: Associated Parties

- Works similarly to entering owners and contacts
- Can enter “Role” by hand or select from the drop down list

**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:**

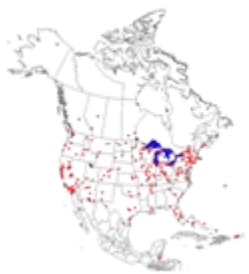
**Postal Code:**  **Country:**

**Phone:**  **Fax:**

**Email:**  **Online URI:**

One of the three required {

OK Cancel



# Editing Data Packages: Research Project

- Check the box if the dataset is part of a larger research project
- This is a subjective call, use when you feel it is appropriate

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



# Editing Data Packages: Research Project

- Enter the information about the research project

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 |
|-------|------|---------|
|       |      |         |

Add  
Edit  
Delete  
Move Up  
Move Down

Step 8 of 15

Cancel < Back Next > Finish



# Editing Data Packages: Usage Rights

- Describe usage restrictions for the dataset, if any

New Data Package Wizard

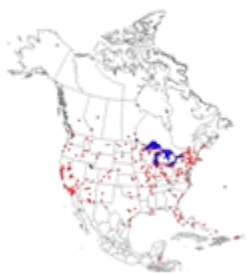
## Usage Rights

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



# Editing Data Packages: Spatial Coverage

- To add an area of spatial coverage to the data, hit “Add”

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 Down

Step 10 of 15

Buttons: Cancel, < Back, Next >, Finish



# Editing Data Packages: Spatial Coverage

- Enter a description for the area
- Many ways to select the area
  - Enter coordinates manually
  - Select from list
  - Box Tool
  - Point Tool

Enter a description of geographic coverage. Enter a general description of the geographic area in which the data were collected. This can be a 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. [Degrees are in fractional degrees. To enter in degrees/minutes/seconds, simply type a space between the degrees, minutes, and seconds values]

Bounding Box:

0.0 N  
0.0 E 0.0 E  
0.0 N

Zoom In Zoom Out

☐ Box Tool ☒ Point Tool

Named Regions:

- Black Rock Forest
- Blackwater Ecological Preserve
- Blakely Island Field Station
- Blandy Experimental Farm
- Blodgett Forest Research Station
- Bodega Bay Marine Laboratory
- Bodega Marine Reserve UCNRS
- Bonanza Creek LTER (BNZ)
- Bowdoin Scientific Station
- Brazos River 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





# Editing Data Packages: Temporal Coverage

- To add a new temporal coverage, hit "Add"



# Editing Data Packages: Temporal Coverage

- Enter in the date and hit “OK”
- Alternatively, you can enter a range of coverage

**Define Temporal Coverage:**

Choose date type:

- ☐ Single Point in Time
- ☒ Range of Date/Time

**Enter starting date:**

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

October 15, 2005

October 2005

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

**Enter ending date:**

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

October 15, 2005

October 2005

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



# Editing Data Packages: Taxonomic Coverage

- To enter additional taxonomic information, hit “Add” beside the top frame
- To enter information above genus level, select the appropriate entry and hit “Edit”

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.

If your information about the taxonomic coverage is extensive (e.g., an extensive list of species), you can import this information in the form of a table. See the Frequently Asked Questions section of the Morpho User Guide to find out how to do this.

| 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

Step 12 of 15

Cancel < Back Next > Finish



# Editing Data Packages: Taxonomic Coverage

- Enter in the names and common names for each rank
- Ranks can be added, deleted, or modified as appropriate

Enter the Taxonomic Hierarchy (in descending order):

| Rank    | Name | Common Name(s) |
|---------|------|----------------|
| Kingdom |      |                |
| Phylum  |      |                |
| Class   |      |                |
| Order   |      |                |
| Family  |      |                |
| Genus   |      |                |
| Species |      |                |

Buttons: Add, Delete, Move Up, Move Down, OK, Cancel



# Editing Data Packages: Taxonomic Coverage

- To enter a classification reference (e.g. Lights Manual), hit "Add" under "Classification System"

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.

If your information about the taxonomic coverage is extensive (e.g., an extensive list of species), you can import this information in the form of a table. See the Frequently Asked Questions section of the Morpho User Guide to find out how to do this.

| 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

Step 12 of 15

Cancel < Back Next > Finish





- Fill in the information for the reference

**Define the Citation Details:**

**Title:**

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

**Author(s):**

**Publication Date:**

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

**Category:**

☐ Book  
☐ Article  
☐ Report



# Editing Data Packages: Methods

- Enter a description for the method of sampling and the extent of the study
- To enter a new step in the methods, hit "Add"

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





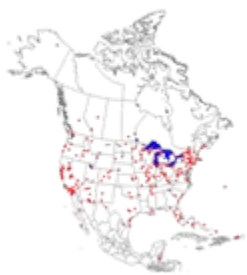
# Editing Data Packages: Methods

- Fill in the description of the method

The screenshot shows a web form with the following sections and fields:

- Enter Method Step Information:**
  - Enter title**  
Title:
  - Enter description**  
Description:
- Enter Instrumentation Details**  
Instrumentation:

At the bottom right, there are two buttons: **OK** and **Cancel**.



# Editing Data Packages: Access Rights

- Control who is allowed to view, edit, delete, and change access rights to your data package
- Only apply to copies saved on the network
  - anyone can view and edit data packages saved on the local machine

New Data Package Wizard

### Access Information

Would you like to allow the public to read your data package?

☒ Yes, give read-only access to public.  
☐ No.

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 |
|------|--------------|-------------------|-------------|
|------|--------------|-------------------|-------------|

Step 14 of 15



# Editing Data Packages: Access Rights

- Select whether to give read access to the public
- To add an additional access privilege or restriction, hit "Add"

The screenshot shows a window titled "New Data Package Wizard" with a sub-header "Access Information". It contains two questions with radio button options. An orange arrow points to the "Yes" option for the first question. Below the second question is a table with four columns: "Name", "Organization", "Email/Description", and "Permissions". To the right of the table is a vertical stack of buttons: "Add", "Edit", "Delete", "Move Up", and "Move Down". Another orange arrow points to the "Add" button. At the bottom of the window, it says "Step 14 of 15" and has navigation buttons: "Cancel", "< Back", "Next >", and "Finish".

Would you like to give the public to read your data package?

☒ Yes ☐ No

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



# Editing Data Packages: Access Rights

- Click "Refresh the user list..."
- Select the user or group to give special access rules
- Select "Allow" or "Deny"
- Select the type of access

Define Access:

Select a user or group from the list below:

| Name                                | Email / Description / Distinguished Name |
|-------------------------------------|--|
| ▶ NAPIER                            |  |
| ▶ LTER                              |  |
| ▶ UVM                               |  |
| ▶ unaffiliated                      |  |
| ▶ UCNRS                             |  |
| ▶ SDSC                              |  |
| ▶ PISCO                             |  |
| ▶ OBFS                              |  |
| ● Amanda Nelson (aquaticentomology) | aquaticentomology@yahoo.com              |
| ● Audrey Kropp (akropp)             | akkool218@aol.com                        |
| ● Celeste Prussia (cep575t)         | cep575t@smsu.edu                         |
| ● Dan Jones (danincb)               | djones@rmbi.org                          |
| ● Daniel Pritchett (wmrs)           | skypilots@wmrs.edu                       |
| ● David Kuntz (dkuntz)              | dkuntz@amnh.org                          |
| ● Dawn Wilson (dwilson)             | dwilson@amnh.org                         |
| ● Deborah Bowker (debbowker)        | bowker@catamountinstitute.org            |

Refresh the user list...

Allow selected user(s) Read & Write access

Description of access levels:

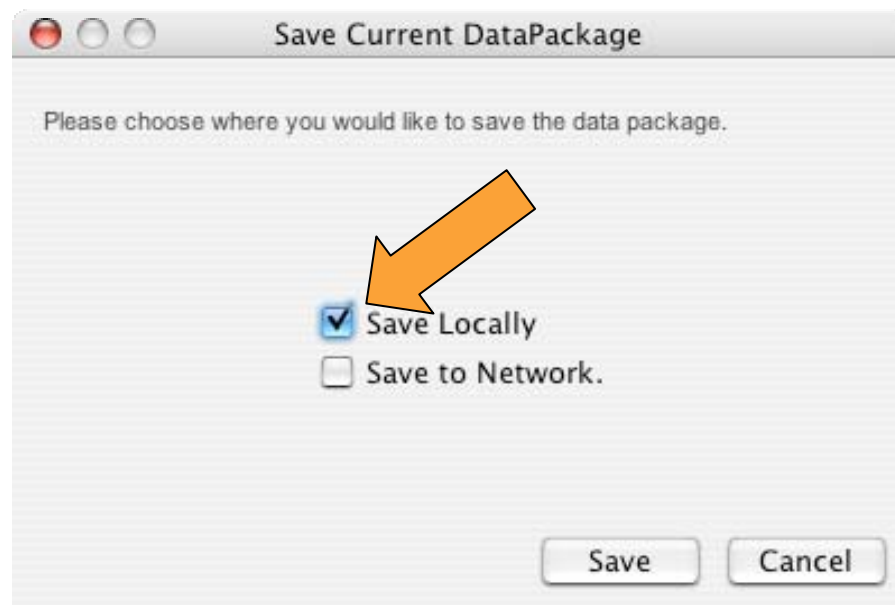
- Read: Able to view data package.
- Read & Write: Able to view and modify data package.
- Read, Write & Change Permissions: Able to view and modify datapackage, and modify access permissions.
- All: Able to do everything (this is the same as Read, Write & Change Permissions)

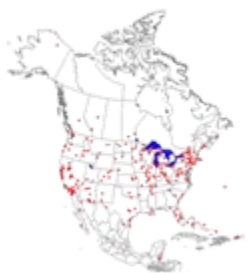
OK Cancel



# Saving Data: Local

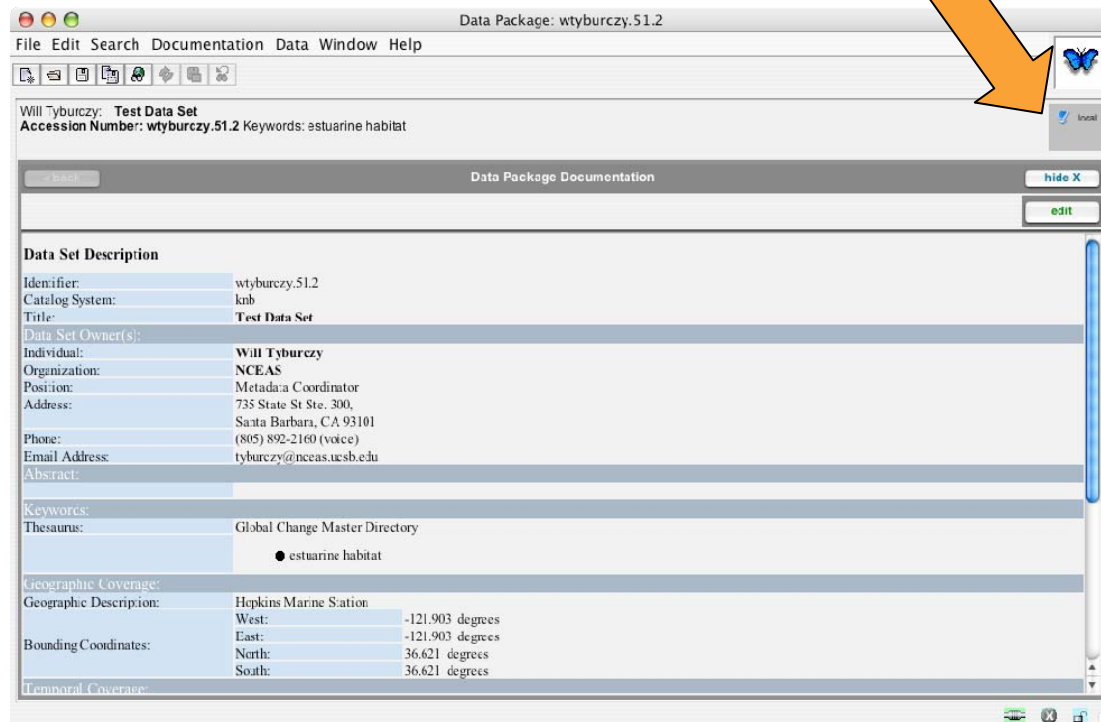
- Select “Save...” from the “File” Menu
- Select “Save Locally” from the pop-up window, then deselect “Save Network” if necessary





# Saving Data: Local

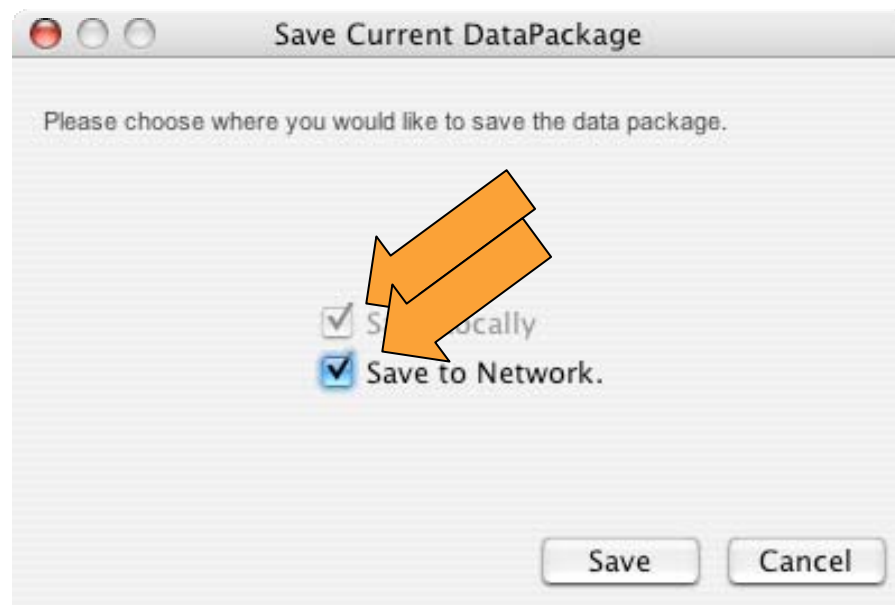
- You should see “local” and a computer icon in the upper right hand corner below the butterfly



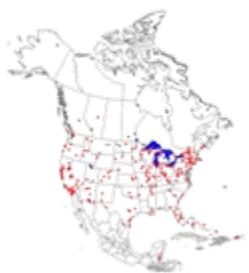


# Saving Data: Network

- Select “Save...” from the “File” menu
- Notice “Save Locally” is grayed out because the local version is the current working copy
- Select “Save to Network”








# Saving Data: Network

- You should see "net" and a globe icon in the upper right below the butterfly



Data Package: wtyburczy.52.1

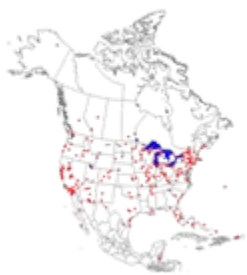
File Edit Search Documentation Data Window Help

Will Tyburczy: **Test Data Set**  
Accession Number: wtyburczy.52.1 Keywords: estuarine habitat

Data Package Documentation [hide X](#) [edit](#)

**Data Set Description**

|                    |  |
|--------------------|--|
| Identifier:        | wtyburczy.52.1                           |
| Catalog System:    | knb                                      |
| Title:             | <b>Test Data Set</b>                     |
| Data Set Owner(s): |  |
| Individual:        | Will Tyburczy                            |
| Organization:      | NCEAS                                    |
| Position:          | Metadata Coordinator                     |
| Address:           | 735 State St,<br>Santa Barbara, CA 93101 |
| Email Address:     | knb-help@nceas.ucsb.edu                  |
| Keywords:          |  |
| Thesaurus:         | GCMD                                     |
|                    | ● estuarine habitat                      |
| Access Control:    |  |
| Auth System:       | knb                                      |
| Order:             | denyFirst                                |
| Access Rules:      |  |
| ALLOW:             | [read] public                            |
| Contact:           |  |
| Individual:        | Will Tyburczy                            |
| Organization:      | NCEAS                                    |
| Position:          | Metadata Coordinator                     |



# Importing Raw Data: The New Data Table Wizard

- Data should be in ASCII, character-delimited format
- Select “Create/Import New Data Table” from the “Data” menu

Data Package: obfs2.448.1

File Edit Search Documentation Data Window Help

Create/Import New Data Table... ←

Delete Current Data Table

Gerhard Pohle: **Marine Invertebrates**  
Accession Number: obfs2.448.1 Keyword: marine invertebrates, freshwater, per... tes, crustaceans, molluscs, mollusks, ce...

< Back

hide X

edit

**Data Set Description**

Identifier: obfs2.448.1  
Catalog System: knb  
Title: **Marine Invertebrates**

**Data Set Owner(s):**

Individual: **Gerhard Pohle**  
Organization: **Atlantic Reference Centre**  
Address: 1 Lower Campus Rd,  
St. Andrews, New Brunswick E5B 2L7 Canada  
Phone: (506)529-1203 (voice)  
Phone: (506)529-1212 (Fax)  
Email Address: arc@mar.dfo-mpo.gc.ca  
Organization: **[Canada] Huntsman Marine Science Centre**  
Organization: **Organization of Biological Field Stations**

**Metadata Provider(s):**

Individual: **Candace Rose-Taylor**

**Associated Party:**

Individual: **Lou Van Guelpen**  
Individual: **Angela Martin**  
Individual: **Mary Greenlaw**  
Individual: **Karen Ross**  
Individual: **Mark Costello**  
Individual: **Bill Hogan**

**Abstract:**

The Atlantic Reference Center (ARC) is a research museum of Canadian Atlantic marine biota containing an archive of biodiversity information in the form of preserved specimens, and paper and computerized museum catalogs. This includes a collection of approximately 1500 lots of annelids, 3000 lots of crustaceans (shallow water and deep water specimens), 4000 lots of molluscs as well as freshwater insects and fish parasites.



# New Data Table Wizard: Import Type

- Select “Import” for what you want to do
- Select “Automatic” for how to enter the documentation
- Select the location of the file

**New Data Table 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 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:**



# New Data Table Wizard: Table Information

- Enter a name and description for the table
- Enter line to start importing
- Select whether the first row is a column label

New Data Table Wizard

Text Import Wizard

The following 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 nceas.227.4.txt

| #  | Contact        | Contact info   | Code | Reserve name  | Source | Notes  | 1: Dot on map? Y or N | 1: Specify pl |
|----|----------------|--|------|---|--------|--|-----------------------|---------------|
| 1  | Mark Albert    | Presidio   | 11   | SF peninsula/ Bay area  | SFWD   | - serpentine grasslands/ Nicasio Ridge             |                       |               |
| 2  | Cini Brown     | 161  |      | Regional Distribution - This is my general evaluation for the relic |        |  |                       |               |
| 3  | Sarah Chaney   | "Restoration Ecologist, Channel Islands National Park, ph.(805) 658-5778, sa.. |      |   |        |  |                       |               |
| 4  | Peter Connors  | Bodega Marine Lab 251  |      |   |        | Question 3: I don't know. / Question 4: Don't know |                       |               |
| 5  | Sandy DeSimone | 291 Starr Ranch  |      |   | Y x x  | 2 4 3 4 2 3 4 4                                    | "Agricultural         |               |
| 6  | John Gerlach   | 431  |      | Y "dot crossed out, though?"  | x      |  | 4 4 3 3 3 4 2 3 4     |               |
| 7  | Fred Hrusa     | 591 Santa Rosa Island  |      | Y Santa Rosa Island - N side  | x      |  | x 4 2 1               |               |
| 8  | Cort Johnson   | "Permanent address:johnson_cort@hotmail.com, 10995 Guadalimar Way, San Diego.. |      |   |        |  |                       |               |
| 9  | Cort Johnson   | "Permanent address:johnson_cort@hotmail.com, 10995 Guadalimar Way, San Diego.. |      |   |        |  |                       |               |
| 10 | Cort Johnson   | "Permanent address:johnson_cort@hotmail.com, 10995 Guadalimar Way, San Diego.. |      |   |        |  |                       |               |
| 11 | Cort Johnson   | "Permanent address:johnson_cort@hotmail.com, 10995 Guadalimar Way, San Diego.. |      |   |        |  |                       |               |
| 12 | Cort Johnson   | "Permanent address:johnson_cort@hotmail.com, 10995 Guadalimar Way, San Diego.. |      |   |        |  |                       |               |
| 13 | Cort Johnson   | "Permanent address:johnson_cort@hotmail.com, 10995 Guadalimar Way, San Diego.. |      |   |        |  |                       |               |
| 14 | Cort Johnson   | "Permanent address:johnson_cort@hotmail.com, 10995 Guadalimar Way, San Diego.. |      |   |        |  |                       |               |
| 15 | Cort Johnson   | "Permanent address:johnson_cort@hotmail.com, 10995 Guadalimar Way, San Diego.. |      |   |        |  |                       |               |
| 16 | Cort Johnson   | "Permanent address:johnson_cort@hotmail.com, 10995 Guadalimar Way, San Diego.. |      |   |        |  |                       |               |

Step #1



# New Data Table Wizard: Table Information

- Select the characters that separate values
- Check in window to ensure the table looks correct

New Data Table Wizard

Text Import Wizard

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

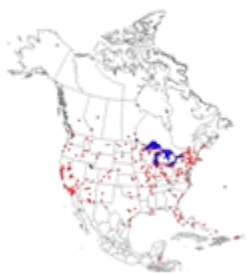
Delimiters: ☒ tab ☐ comma ☐ space ☐ semicolon ☐ other

☐ Treat consecutive delimiters as one

| Contact       | Contact info  | Code   | Reserve name  | Source        | 1: Dot on m | 1: Specify pl | 2a: 0-5% | 2b: 6-25% | 2c |
|---------------|---------------|--------|---------------|---------------|-------------|---------------|----------|-----------|----|
| Mark Albert   | Presidio      | 11     | SF penins...  |               | Y           | SF penins...  |          |           |    |
| Cini Brown    |               | 161    |               |               |             |               |          |           |    |
| Sarah Cha...  | "Restorati... | 221    | Channel Is... |               | Y           | Santa Ros...  |          |           |    |
| Peter Con...  | Bodega M...   | 251    |               | Question ...  | Y           | Sonoma a...   | x        |           |    |
| Sandy DeS...  |               | 291    | Starr Ranch   |               | Y           |               |          | x         |    |
| John Gerla... |               | 431    |               |               | Y           | "dot cross... |          | x         |    |
| Fred Hrusa    |               | 591    | Santa Ros...  |               | Y           | Santa Ros...  |          |           | x  |
| Cort Johns... | "Permane...   | 0641-1 | "Ano Nuev...  | "My study ... | Y           | Santa Cru...  | x        |           |    |
| Cort Johns... | "Permane...   | 0641-2 | "Ano Nuev...  | Bromus ca...  | Y           | Santa Cru...  | x        |           |    |
| Cort Johns... | "Permane...   | 0641-3 | "Ano Nuev...  | Calamagr...   | Y           | Santa Cru...  | x        |           |    |
| Cort Johns... | "Permane...   | 0641-4 | "Ano Nuev...  | Danthonia...  | Y           | Santa Cru...  | x        |           |    |
| Cort Johns... | "Permane...   | 0641-5 | "Ano Nuev...  | Desclamp...   | Y           | Santa Cru...  | x        |           |    |
| Cort Johns... | "Permane...   | 0641-6 | "Ano Nuev...  | Elymus gl...  | Y           | Santa Cru...  | x        |           |    |
| Cort Johns... | "Permane...   | 0641-7 | "Ano Nuev...  | Erultisetu... | Y           | Santa Cru...  | x        |           |    |
| Cort Johns... | "Permane...   | 0641-8 | "Ano Nuev...  | Festuca id... | Y           | Santa Cru...  | x        |           |    |

Step #2 of 46

Cancel < Back Next > Import



# New Data Table Wizard: Columns

- Enter a name and description
- Select the type of data in the column
- For more information on column types, hit "Help"

**Define Attribute or Column:**

**Name:**  Name of the attribute as it appears in the data file

**Label:**  A more readable label for the attribute

**Definition:**  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

**Storage:**  Storage type for this field e.g.: integer, float

**Storage System:**  The system used to define the storage types e.g.: C, Java, Oracle

**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





# New Data Table Wizard: Column Types

- Categories were derived from a Stevens 1951 paper on levels of measurement
  - Unordered - categorical labels with no inherent ranking (male and female)
  - Ordered - ranked data (low to high)
  - Relative - numerical data where values are evenly spaced (degrees Fahrenheit)
  - Absolute - numerical data with a meaningful zero point (degrees Kelvin)
  - Date-Time - used for temporal measurement (2005-10-31 14:15:00)





# Column Types: Unordered and Ordered

- Hit “Add” to enter a new code
- Enter the code and its definition in the space provided
- Select whether columns have values other than the codes listed

**Define Attribute or Column:**

**Name:**  Name of the attribute as it appears in the data file

**Label:**  A more readable label for the attribute

**Definition:**  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

**Storage:**  Storage type for this field e.g.: integer, float

**Storage System:**  The system used to define the storage types e.g.: C, Java, Oracle

**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**

**Chose:**  Enumerated values (belong to predefined)

**Location:**  Codes are defined here

| Code | Definition |
|------|------------|
|      |            |

**Define:** ☐ Attribute contains free-text in addition to those values listed above



# Column Types: Unordered and Ordered

- Can also specify that columns contain text according to a certain format
- Enter the description of the format

**Define Attribute or Column:**

**Name:**  Name of the attribute as it appears in the data file

**Label:**  A more readable label for the attribute

**Definition:**  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

**Storage:**  Storage type for this field e.g.: Integer, float

**Storage System:**  The system used to define the storage types e.g.: C, Java, Oracle

**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 distant points (statistically **interval**) e.g.: 12.2 meters
- ☐ **Absolute:** measures on a scale with a meaningful zero point (statistically **ratio**) e.g.: 273 Kelvin
- ☐ **Date-Time:** values on the Gregorian calendar e.g.: 2002-10-24

**Unordered:**

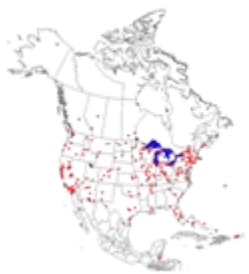
**Choose:**  Describe a free text domain for the attribute

**Definition:**  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



# Column Types: Relative and Absolute

- Select the units of measurement (can define new unit if necessary)
- Enter the precision of measurement
- Select the number type
- Enter bounds

**Define Attribute or Column:**

**Name:**  Name of the attribute as it appears in the data file

**Label:**  A more readable label for the attribute

**Definition:**  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

**Storage:**  Storage type for this field e.g.: integer, float

**Storage System:**  The system used to define the storage types e.g.: C, Java, Oracle

**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 meaningful points (statistically **interval**) e.g.: 12.2 meters
- ☐ Absolute: values from a scale with a meaningful zero point (statistically **ratio**) e.g.: 273 K
- ☐ Date-Time: for time values using the Gregorian calendar e.g.: 2002-10-24

**Relative**

**Standard Unit:**  Type:

**Precision:**  e.g.: for an attribute with unit "meter", a precision of "0.1" would be interpreted as to the nearest 1/10th of a meter

**Number Type:**  REAL (+/- fractions & no fractions: -1/2, 3.1...)

**Bounds:** Min.  Max.



# Column Types: Date/Time

- Enter the date-time format
- Enter the precision of measurement
- Enter the bounds of measurement

**Define Attribute or Column:**

**Name:**  Name of the attribute as it appears in the data file

**Label:**  A more readable label for the attribute

**Definition:**  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

**Storage:**  Storage type for this field e.g: integer, float

**Storage System:**  The system used to define the storage types e.g: C, Java, Oracle

**Category:**

- ☐ Unordered: unordered categories or text (statistically **nominal**) e.g: Male, Female
- ☐ Ordered: ordered categories (statistically **ordinal**) e.g: Low, High
- ☐ Relative: value on 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: for time values in the Gregorian calendar e.g: 2002-10-24

**Datetime**

**Format:**  e.g: YYYY-MM-DD, hh:mm:ss, YYYY-MM-DD, hh:mm:ss.sss

**Precision:**  Precision of date or time measurement, interpreted in the smallest units represented by the datetime format. e.g: 1 day, 1 hour, 1 minute

**Bounds:**

| Min.                 |                      |                      |                      | Max.                 |
|----------------------|----------------------|----------------------|----------------------|----------------------|
| <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

Range of permitted values, in same date-time format as used in the format description above. e.g if format is "YYYY-MM-DD", a valid minimum would be "2001-05-29"





- 
- Morpho Editor**
- Show All Trim + -
- Find: eml
- eml
    - packageId
    - system
    - scope
    - dataset
      - id
      - system
      - scope
      - title
 

DatasetType is the base type for the dataset element. This 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
      - 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).

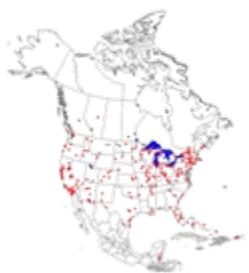
Test Data Set
      - creator
 

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
 

1129592697481
      - system
      - scope
 

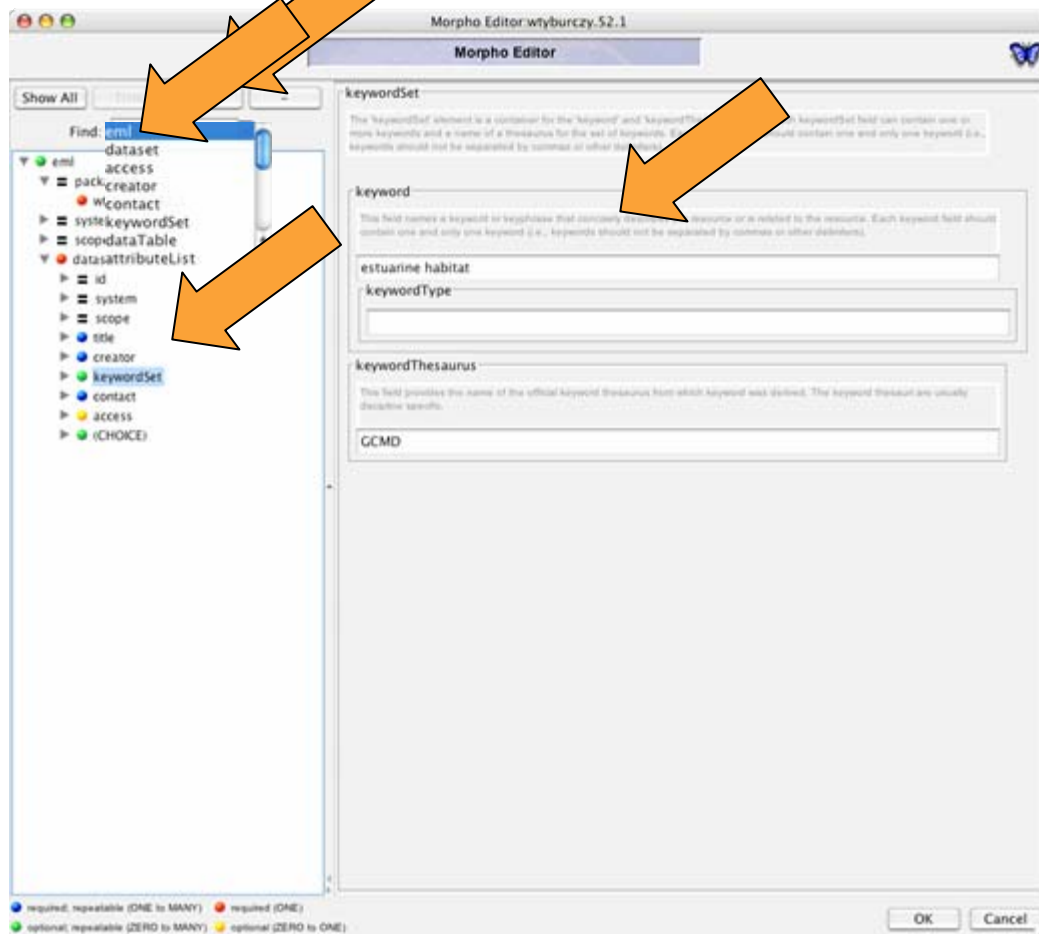
document
- Legend:
- required; repeatable (ONE to MANY)
  - required (ONE)
  - optional; repeatable (ZERO to MANY)
  - optional (ZERO to ONE)
- OK Cancel





# Advanced Editing: Navigating the document

- Select an element to see it's sub-elements and values on the right
- Double-click to see its sub-elements on the left
- "+" and "-" buttons expand and collapse all elements at the bottom level
- Shortcuts to some nodes available from the drop-down menu

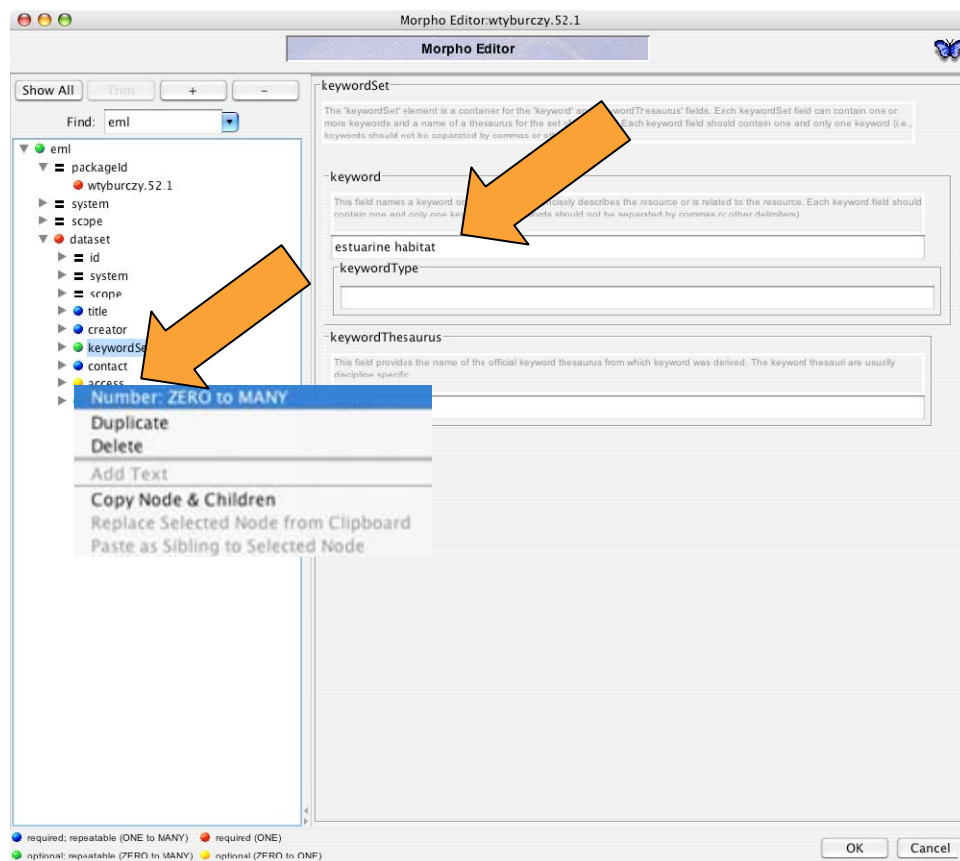






# Advanced Editing: Editing Elements

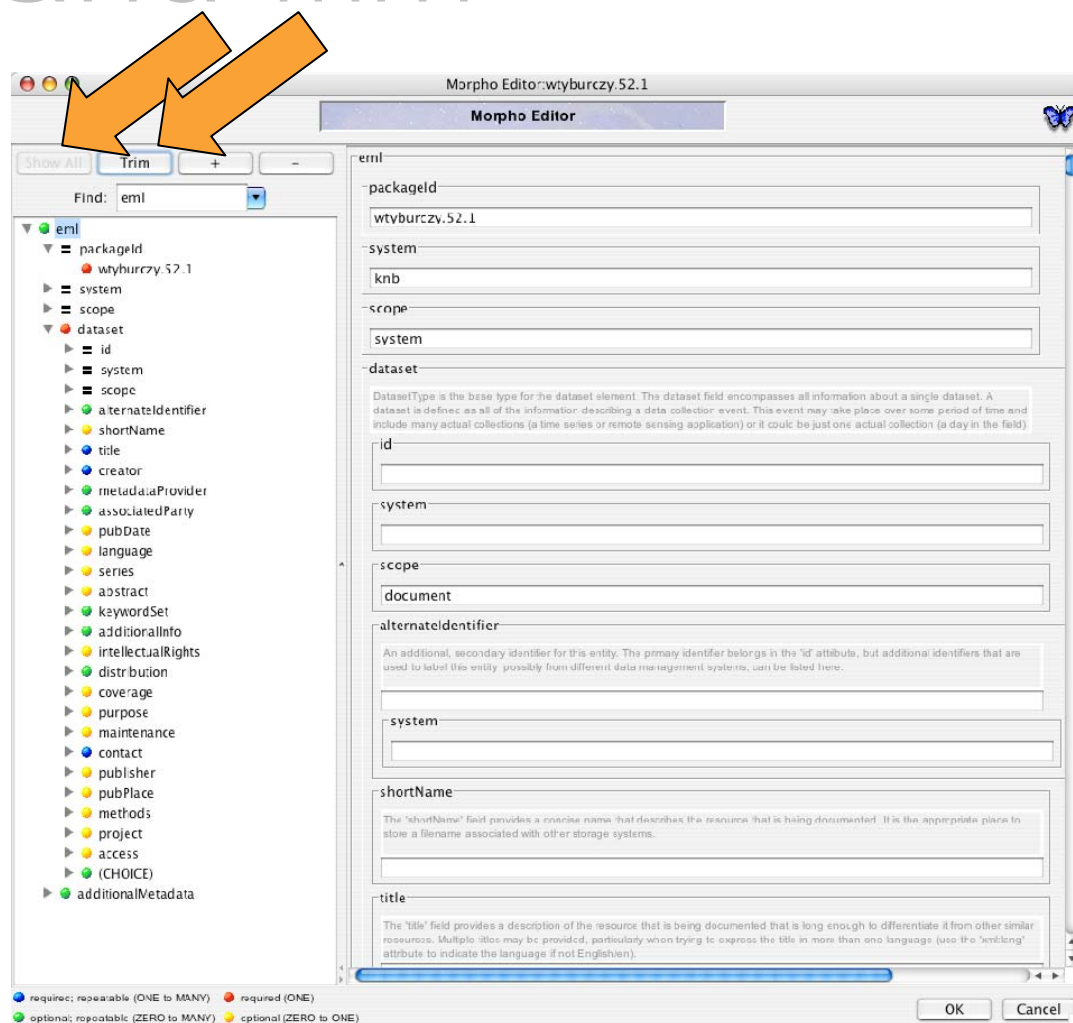
- Edit the value of an element by changing the text on the right
- Right-click an element on the left to delete, copy, or paste it





# Advanced Editing: Show All and Trim

- To see available elements not currently in the data package, hit "Show All"
- After entering information for desired additional elements, hit "Trim"





# Be a Team Player!

- Morpho is an open collaboration to benefit the community
- Contributions, feedback and feature requests are welcome
- Most commonly requested features to be included in next major release are:
  - Save state during wizard entry so it can be done over several sessions
  - Import and export improvements
  - separate access rules for metadata and data



# Morpho Help

- The Morpho User Guide
- EML Specification
- Metadata Coordinators
  - Callie Bowdish
  - Veronique Connolly
  - Will Tyburczy
  - 805-892-2160
- [knb-help@nceas.ucsb.edu](mailto:knb-help@nceas.ucsb.edu)

