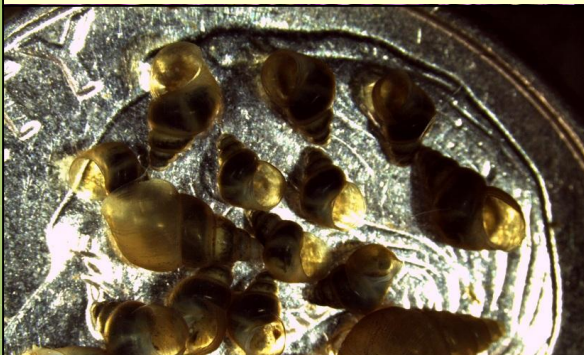




Red-Eared Slider



Purple Loosestrife



New Zealand Mudsnail



*i*MapInvasives

Tracking Invasive Species with Pennsylvania *i*MapInvasives

Mary Walsh and Amy Jewitt
Western Pennsylvania
Conservancy
March 14, 2015

Invasive Species – Non-native organisms that cause harm to the environment, economy, and human health

Carolina Fanwort

Photo credit: Brian Pilarcik, CCCD



Purple Loosestrife

Photo credit: Cumbria Wildflowers



Round Goby

Photo credit: Glogster.com



Common Reed

Photo credit: Wikimedia Commons



Multiflora Rose

Photo credit: depauw.edu



Quagga Mussel

Photo credit: Amy Benson, USGS



Didymo

Photo credit: Tim Daley, PA DEP

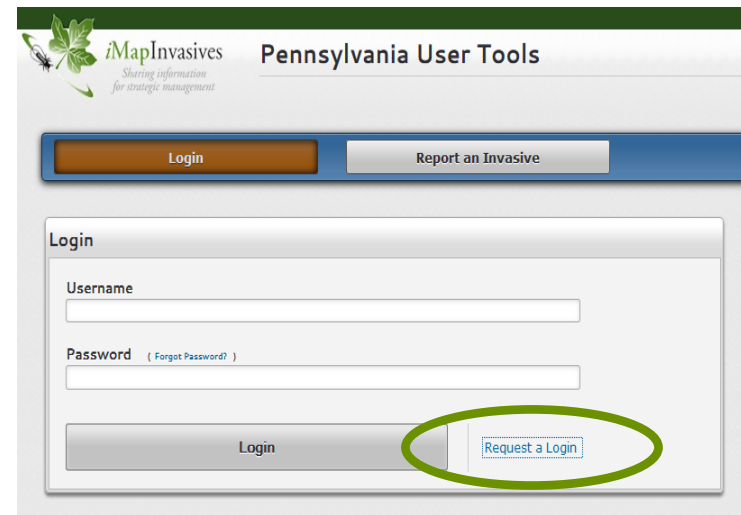


Japanese Barberry

Photo Credit: FNA Nature Search

What is *iMapInvasives*?

- An on-line mapping database used for tracking **location information** on invasive species
- Used as a resource to **visualize** where invasive species are located
- Tool for natural resource professionals working to **manage invasive species**
- Available to **anyone** by signing up for a free user account



The screenshot shows the iMapInvasives Pennsylvania User Tools interface. At the top, there is a green header with the iMapInvasives logo and the text 'Pennsylvania User Tools'. Below the header, there are two buttons: 'Login' and 'Report an Invasive'. The 'Login' button is highlighted with a green oval. Below these buttons is a 'Login' form with fields for 'Username' and 'Password' (with a 'Forgot Password?' link). A 'Login' button is at the bottom of the form, and a 'Request a Login' link is circled in green.

<http://www.imapinvasives.org/paimi/login>

What is iMapInvasives?

- Currently being utilized in PA as well as the following states/province:
 - NY, OR, AZ, FL, VA, VT, WV, NH and Saskatchewan
- Facilitates early detection and rapid response
- Used to store and retrieve your data (points & polygons; presence and absence)
- Download as “csv” or geodatabase

Who is it for?

- Natural resource professionals
- Citizen scientists
- Land trusts
- Watershed associations
- State agencies
- Schools and volunteer groups
- *Anyone with an interest in invasive species*

Tools for Natural Resource Professionals

Assessments provide detailed information about an observation

Surveys are a planned search of an area to determine the presence or absence of specific invasive species

Treatments are actions taken to control an invasive species population



Tools for Natural Resource Professionals – Treatment Records

Treatments are actions taken to control an invasive species population

Steps to create a Treatment record

1. **Draw polygon around treated area**
2. **Fill in information fields, some of which are highlighted below:**

- Treatment types
Barrier, Bioagent, Chemical Fire, Mechanical/Manual, etc.
- Targeted Species
Single or multiple species
- Treatment goals
Eradication, Containment, Suppression, Experiment, etc.
- Who
Lead contact, paid/volunteer crew, crew size
- Observations Affected
- Treatment Start/End Date

Pennsylvania Invasive Species Management Plan Goals (PISC 2009)

- ◉ *Early Detection and Rapid Response:*
Detect new introductions of nonnative invasive species and control or contain target species before they can become permanently established in the Commonwealth or move into areas in which they previously did not exist.
- ◉ *Survey and Monitoring:*
Expand **survey and monitoring efforts** of nonnative invasive species in Pennsylvania.
- ◉ *Data Management:*
Develop a **statewide invasive species database clearinghouse or information sharing system** linking data from various state, federal, and non- governmental entities.

Pennsylvania Aquatic Invasive Species Plan (PISC 2006)

- *Priority strategy:*
 - Establish a **simple, coordinated reporting system(s)** for AIS detection and monitoring in Pennsylvania (Strategy 3D and Strategy 5B).
 - Establish a comprehensive process to **identify the aquatic invasive species of greatest concern** that are not yet present in Pennsylvania waters (Strategy 2A).
- *Priority action:*
 - **Engage those conducting field work to be aware of key invasive species** that they may come across. Conduct training for field staff to ensure that they can easily identify aquatic invasive species. **Implement a statewide monitoring network** to assist in the early detection and monitoring of aquatic invasive species (Action 3B1).
 - Partner with AIS management programs in nearby states **to share data and coordinate management activities**. Pay special attention to “upstream” and “downstream” neighboring states to prevent AIS introduction and spread (Action 1C1).

What are the Benefits of iMap?



European Frog-bit
Photo credit: Christian Fischer, Wikipedia



Japanese Mysterysnail
Photo credit: B. Lathrop, DEP

- Invasive plant and animal data for Pennsylvania
- Quality controlled
- Data sharing (online accessible)
- Publicize invasive species & tracking
- Bring together agencies and organizations w/ invasive species interests
- Inform policy, planning and control efforts
- Work with regional and national tracking efforts by collating PA data

Benefits – Early Detection & Rapid Response

- Serves as a source of invaluable EDRR info
- Info on EDRR species can come from both professional and public sources, all captured in iMap
- Email alerts serve as a tool to notify interested individuals of EDRR species present in the state/county/specific area



New Zealand Mudsnail

Photo credit: Robyn Draheim, Center for Lakes and Reservoirs

Benefits – Data Sharing

- Invasive species clearinghouse for data across all of Pennsylvania
- Place to organize and share data with others, both internally and externally
- Alleviates the issue of data being captured only in handwritten notes, individual computers, spreadsheets, etc.



Common Reed

Photo credit: Michael St. Jean,
Flickr photographer

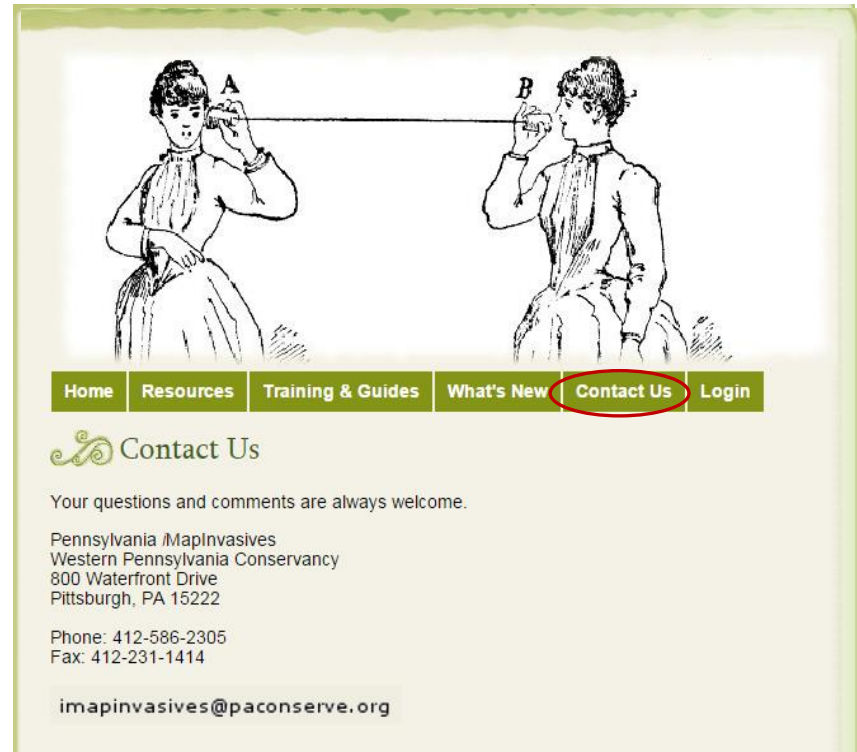
iMapInvasives Partners



Funding for PA iMapInvasives is provided by the USFWS Great Lakes Restoration Initiative

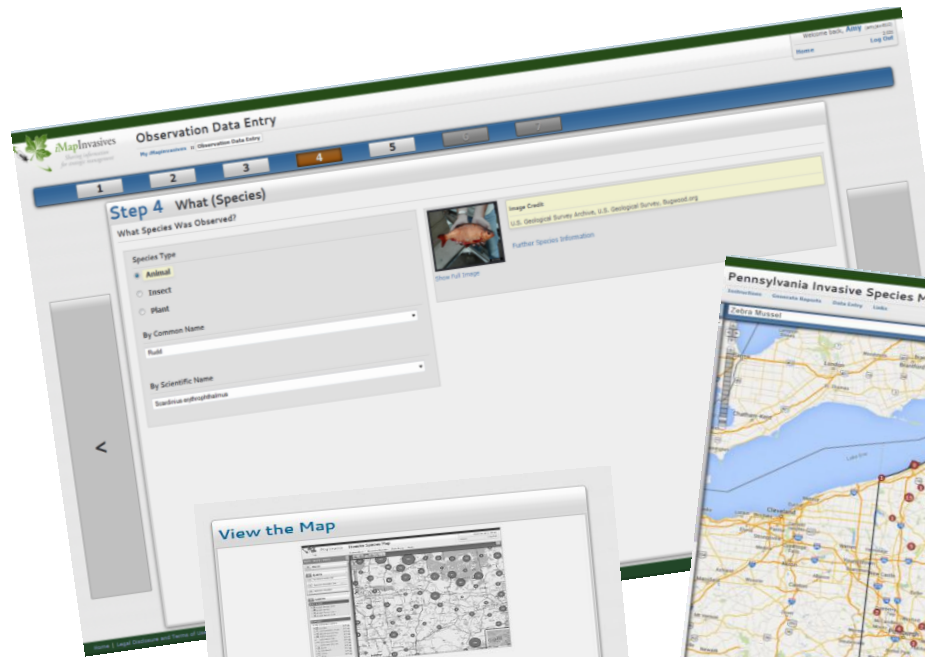
Brand new PA iMapInvasives Homepage

- Contains info about iMapInvasives as well as invasive species
- Highlights include a Gallery of Invaders, Invasive Species in the News, Reference Guides, and more!
- Questions or comments about iMap? Click on the “Contact Us” tab to email or call us.



<http://www.naturalheritage.state.pa.us/paimap.aspx>

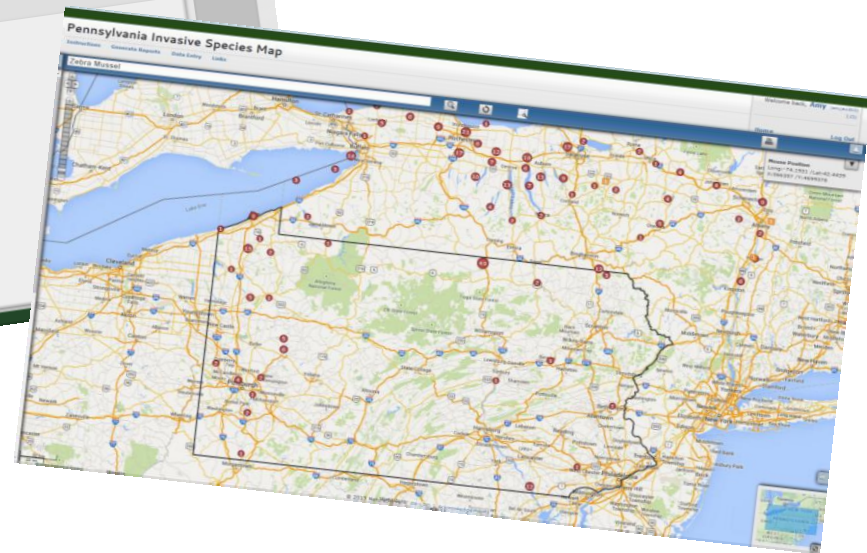
Overview: Entering and Querying for Data



The screenshot shows the 'Observation Data Entry' form for MapInvasives. It is at 'Step 4: What (Species)'. The form asks 'What Species Was Observed?' and provides options for 'Species Type' (Animal, Insect, Plant) and input fields for 'By Common Name' and 'By Scientific Name'. A small image of a crab is shown with a link to 'Image Credit' and 'Further Species Information'.

View the Map

- View the Map
- Not using a high-speed internet connection?



iMapInvasives Login Page

iMapInvasives
Sharing information
for strategic management

Pennsylvania User Tools [Log In](#)

[Login](#) [Report an Invasive](#)

Login

Username

Password [\(Forgot Password?\)](#)

[Login](#) [Request a Login](#)

iMapInvasives Information

Related Links

- [More Information on iMapInvasives](#)
- [Report an Invasive](#)

By entering the site you agree to the [Legal Disclosure and Terms of Use](#) and [Privacy Policy](#)

Additional Information

Technical Requirements
iMapInvasives is designed to operate using a high-speed internet connection using a modern, standards based browser such as [Firefox](#), [Google Chrome](#), or [Safari](#). Please also be sure to use a recently released version of the browser.

Important Note
Among other terms found under [Legal Disclosure and Terms of Use](#) and [Privacy Policy](#) permission to use, copy and distribute maps, tables, reports, and other visualizations from the iMapInvasives website is hereby granted under the following conditions:

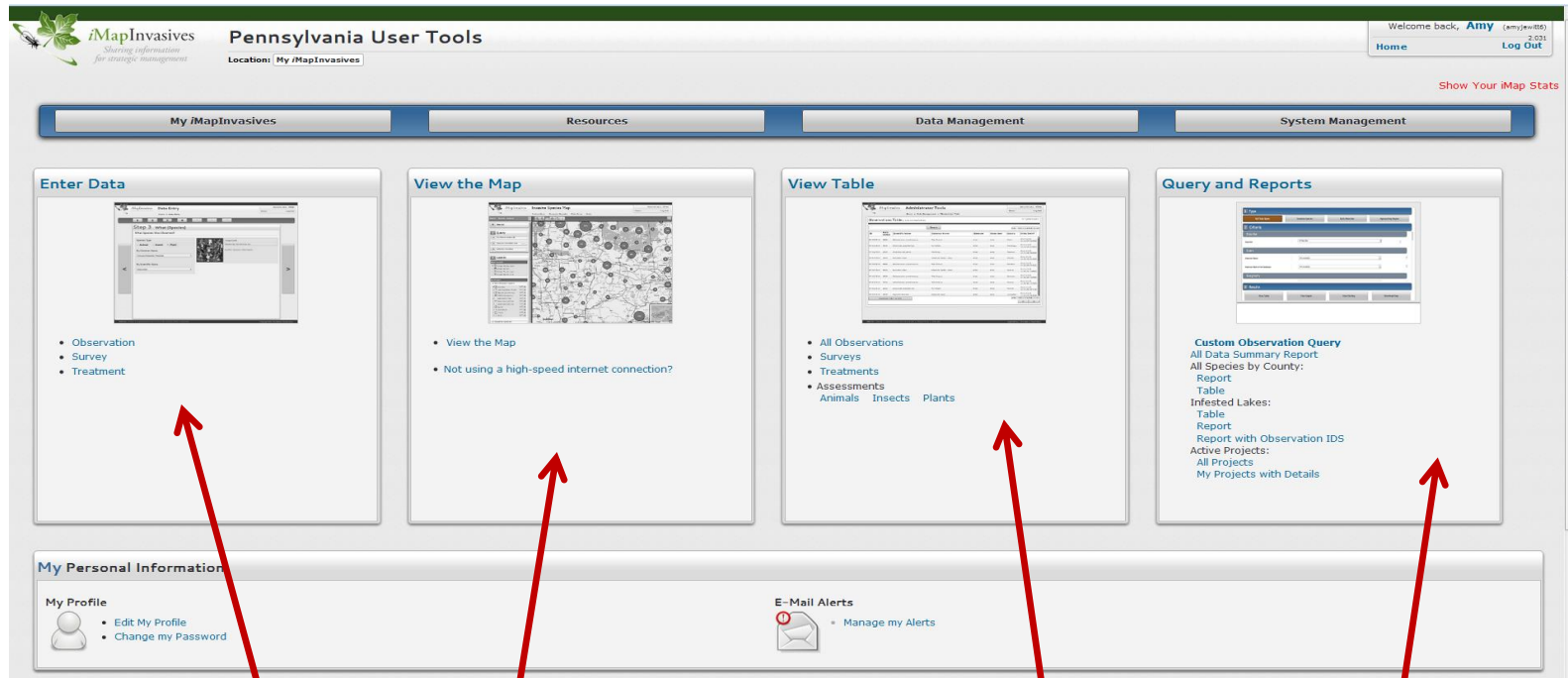
1. The copyright notice, © 2015 NatureServe, and any other copyright notice of Contributors as applicable, must appear in all copies;
2. Any use of the Content available from iMapInvasives must be for informational and educational purposes only and not for commercial use;
3. No graphics, photographs or other visual elements from the iMapInvasives may be used, copied or distributed separate from the accompanying text without the prior express written consent of the NatureServe;
4. The following citation must be used in any published materials which reference this web site or the Content found within:
iMapInvasives: an online data system supporting strategic invasive species management. © 2015, NatureServe. Available at <http://www.imapinvasives.org>. (Date accessed: Mar 05, 2015.)

Funding
Funding for the PA iMapInvasives Project is provided by the [Great Lakes Restoration Initiative](#) through the US Fish and Wildlife Service and the PA Fish and Boat Commission

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Enter Username & Password or
Request Login if accessing for first time

Main Navigation Page

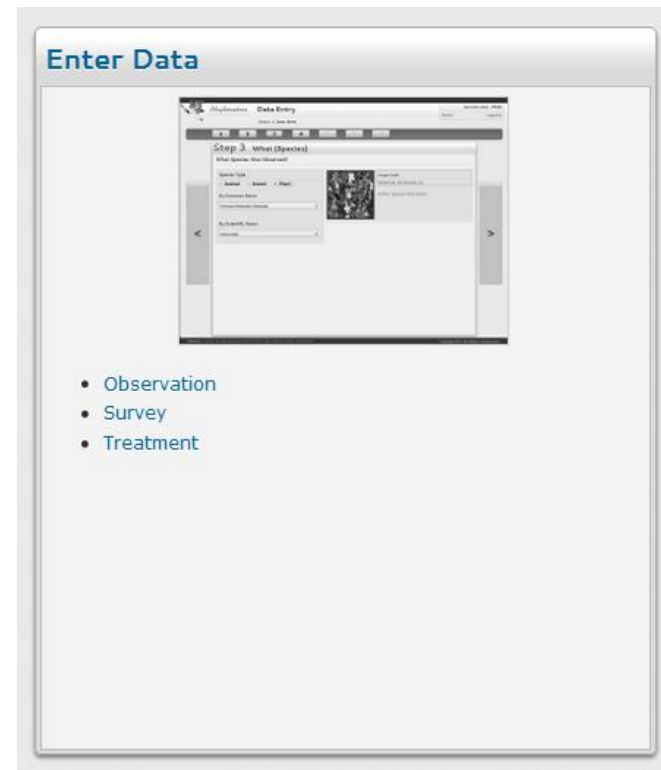


5 Different Record Types Available

- **Observation** – report of a specific species, at a certain place, on a specific date.
- **Assessment** – provides detailed information about an observation. This can include the intensity of infestation, damage caused by the organism, and details about the surrounding area.
- **Survey** – a planned search of an area to determine the presence *or absence* of specific invasive species.
- **Treatment** – an action taken to control an invasive species population.
- **Infestation Management** – ties together all the info about a managed population over time.

Entering an Observation

- 7-step process
- Simple and easy to use
- Good for entering small amounts of data (1-50 records)
- Bulk datasets can be sent to the state administrator for loading (50+)



Step 1: Adding Photos and Photo Credits

The screenshot displays the iMapInvasives Observation Data Entry web application. The interface features a top navigation bar with the iMapInvasives logo and the title "Observation Data Entry". A user login area in the top right corner shows "Welcome back, Amy" and a "Log Out" button. Below the navigation bar is a series of numbered tabs (1-7), with tab 1 being the active tab. The main content area is titled "Step 1 Photos (jpg files only. Do not drag from an open document like Word or Powerpoint)". It contains four sections for adding photos: "Closeup Photo", "Infestation Photo", "Scale Photo", and "Other Photo". Each section includes a "Browse..." button, a "Drop New Photo Here" area, and a "Photo Credits" input field. The "Closeup Photo" and "Infestation Photo" sections show a green progress bar labeled "Upload Complete" and a "Photo Credits" field containing "Amy Jewitt". The "Scale Photo" and "Other Photo" sections show a "No image" placeholder and a "No file selected" message. The footer of the page contains links for "Home", "Legal Disclosure and Terms of Use", "Privacy Policy", "Financials", and "Contact your iMap Administrator", along with a copyright notice for 2015 NatureServe.

Five categories of photos: Close-up, Infestation, Scale, and Other (2)

Step 2: Who is the Observer?

The screenshot shows the iMapInvasives Observation Data Entry interface. At the top, the iMapInvasives logo is on the left, and the title "Observation Data Entry" is in the center. On the right, a user is logged in as "Amy" with the email "amy@i-maps.org" and the number "2,031". Below the title, there is a navigation bar with seven tabs numbered 1 through 7. Tab 2 is selected and highlighted in orange. The main content area is titled "Step 2 Who" and asks "Are you entering data you observed?". There are three radio button options: "Yes, I am the observer" (selected), "No, I am entering data for" (with a dropdown menu labeled "Select User"), and "No, but the observer is not listed". On the left and right sides of the main content area, there are vertical grey bars with left and right arrow icons respectively. At the bottom, there is a footer with links: "Home | Legal Disclosure and Terms of Use | Privacy Policy | Financials | Contact your iMap Administrator" and a copyright notice: "Copyright © 2015 NatureServe."

1 2 3 4 5 6 7

Step 2 Who

Are you entering data you observed?

☒ Yes, I am the observer

☐ No, I am entering data for Select User

☐ No, but the observer is not listed

< >

1. I am the observer
2. Someone else is the observer
3. Observer is not a registered iMap user – send follow-up info

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Step 3: Is this Data part of a Project?

The screenshot shows the iMapInvasives Observation Data Entry interface. At the top, there's a navigation bar with tabs 1 through 7, where tab 3 is selected. The main heading is "Step 3 Project". Below it, a link says "Click here to see the iMapInvasives Projects Guide". The question "Are you entering data for a project?" is followed by two radio buttons: "No, I am not." and "Yes, I am entering it for". The "Yes" option is selected, and a dropdown menu is open showing a list of projects. The first project in the list is "Presque Isle State Park Invasive Treatment", which is highlighted. To the right of the dropdown, there's a text field labeled "Leader to get added to the project list." with a yellow background. On the left and right sides of the main content area, there are vertical grey bars with "<" and ">" symbols respectively. At the bottom, there's a footer with links: "Home | Legal Disclosure and Terms of Use | Privacy Policy | Financials | Contact your iMap Administrator" and "Copyright © 2015 NatureServe."

1. No
2. Yes – select project
2a. Contact administrator to create a new project

Projects provide a way to group data for faster and easier querying

Step 4: What Species was Observed?

The screenshot shows the 'iMapInvasives' web application interface. At the top, there's a navigation bar with tabs 1 through 7, where tab 4 is selected. The main heading is 'Step 4 What (Species)'. Below this, the form is titled 'What Species Was Observed?'. It contains three sections: 'Species Type' with radio buttons for 'Animal', 'Insect', and 'Plant' (the 'Plant' option is selected); 'By Common Name' with a dropdown menu labeled 'Select A Species'; and 'By Scientific Name' with a dropdown menu labeled 'Select A Species'. Two red arrows point from a green text box on the right to the 'Plant' radio button and the 'By Scientific Name' dropdown. The green text box contains two instructions: '1. Select from animals, insects, and plants' and '2. Ensure that common and scientific names match up'. The footer of the page includes links for 'Home', 'Legal Disclosure and Terms of Use', 'Privacy Policy', 'Financials', and 'Contact your iMap Administrator', along with a copyright notice for 2015 NatureServe.

Step 4 What (Species)

What Species Was Observed?

Species Type

☐ Animal

☐ Insect

☒ Plant

By Common Name

Select A Species

By Scientific Name

Select A Species

1. Select from animals, insects, and plants

2. Ensure that common and scientific names match up

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Step 5: What is the Observation Date?

The screenshot shows the iMapInvasives Observation Data Entry interface. At the top, there is a navigation bar with steps 1 through 7. Step 5 is highlighted. Below the navigation bar, the title "Step 5 When" is displayed. The main content area asks "When was the species observed?" and features a date selection field showing "2015-03-04". A calendar for March 2015 is open, showing the days of the month. A green instruction box is overlaid on the calendar, stating: "1. Navigate the calendar by using the left/right arrows or by clicking on the month/year title bar". The interface also includes a footer with links for Home, Legal Disclosure, Terms of Use, Privacy Policy, Financials, and Contact your iMap Administrator, and a copyright notice for 2015 NatureServe.

1 2 3 4 5 6 7

Step 5 When

When was the species observed?

Select a date
2015-03-04

4 March 2015

Mo Tu We Th Fr Sa Su

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 1 2 3 4 5


< >

1. Navigate the calendar by using the left/right arrows or by clicking on the month/year title bar

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Step 6: What is the Location?

 **iMapInvasives**
Sharing information for strategic management

Observation Data Entry

Welcome back, **Amy** (amy@natureserve.com) 2:01 PM
[Home](#) [Log Out](#)

1 2 3 4 5 6 7

Step 6 Where ~~zoom in FIRST~~ Hold shift + click and drag to zoom to a specific area

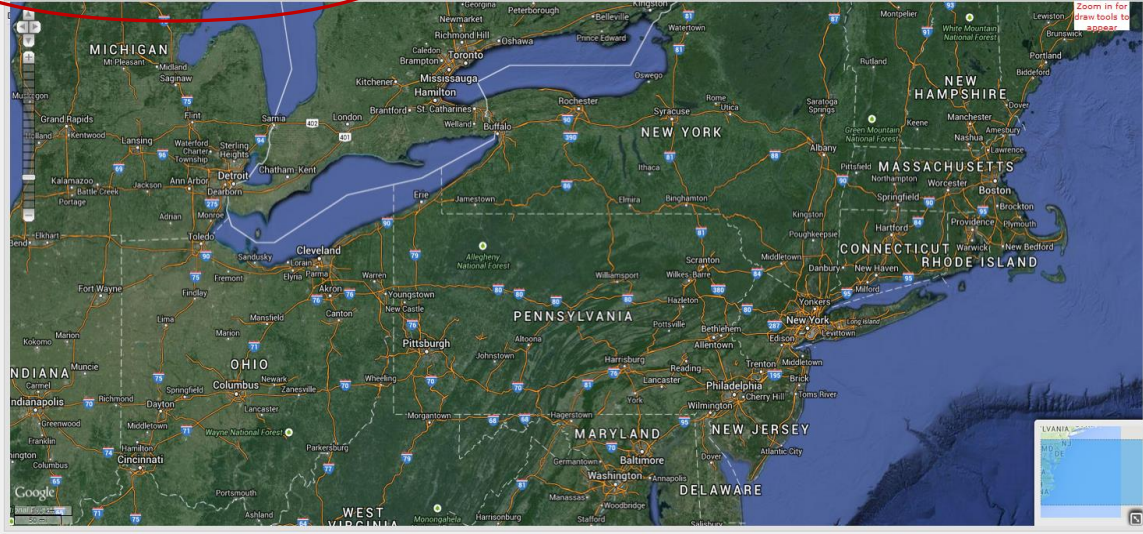
Search by Coordinate
Lat / Lon Decimal

Enter Coordinate
Longitude -77.63652 Latitude 41.43306

Search by Location

[Update Map](#)

[Go](#)



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Search by entering coordinates, a specific address, or location name

Step 7: Summary Page

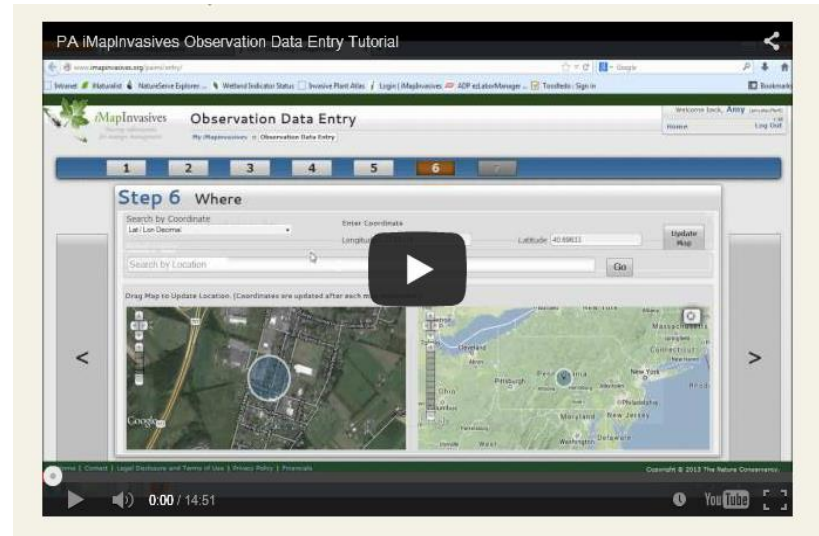
The screenshot shows the iMapInvasives Observation Data Entry interface. At the top, there's a navigation bar with steps 1 through 7, where step 7 is highlighted. The main content area is titled "Step 7 Submit Observation". Below this, there's a form with the following fields:

Observer:	I am the observer.
Species:	Amur Peppervine
Project:	Observation is not associated with a project.
Date:	2015-03-04
Location:	Lat / Lon Decimal Longitude: -79.96217 Latitude: 40.44462

Below the form is a "Submit Observation" button. At the bottom, there's a note: "*NOTE: If using 'Submit Another Observation', read the instructions PDF found at the top right of the map (Step 6) to make sure the point is correctly moved to the new location."

Check accuracy of observation data before submitting

Observation Data Entry Training Video



View PA iMap training video for additional info on how to include more details to an observation record, available on the Homepage and YouTube.

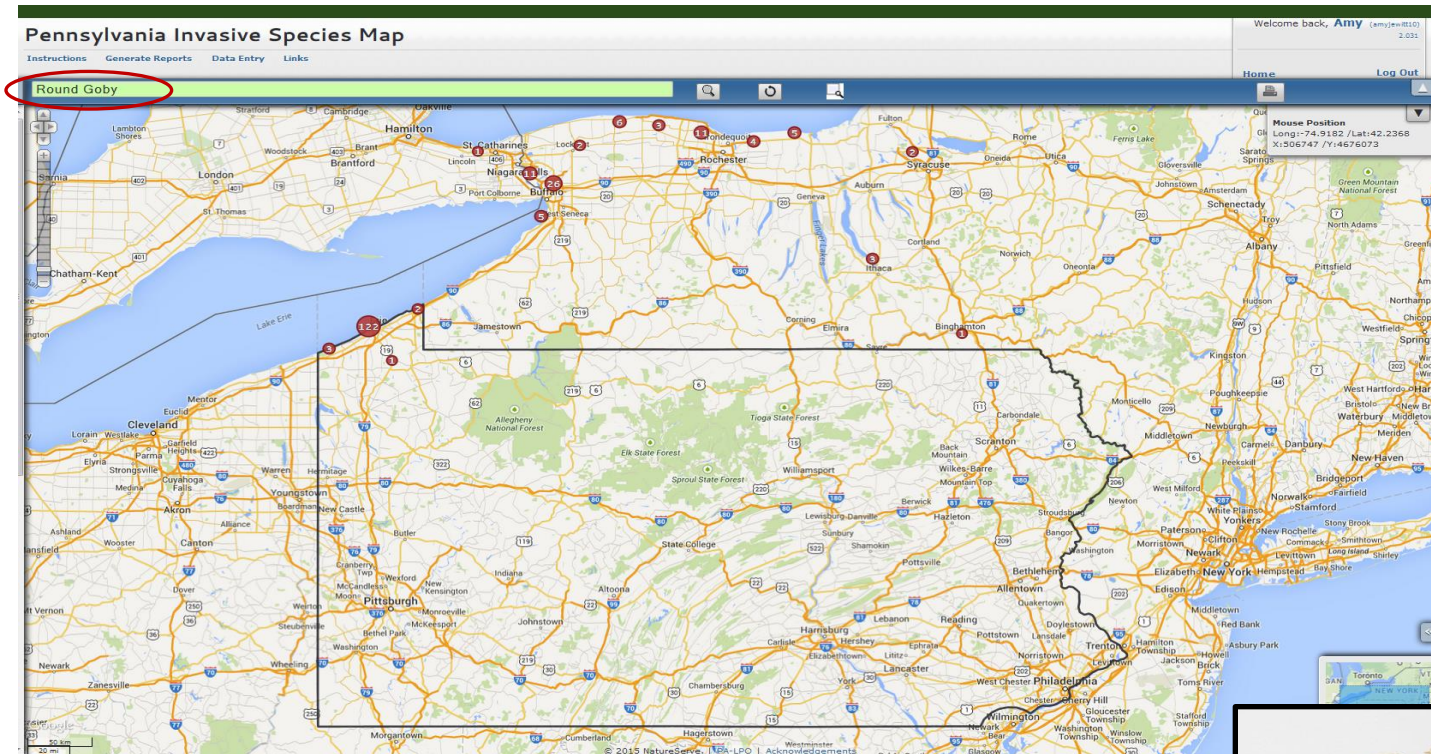
Querying for Data



Choose to query for data using the Map, the Table, or create a Custom Observation Query

Custom querying guide available on Homepage

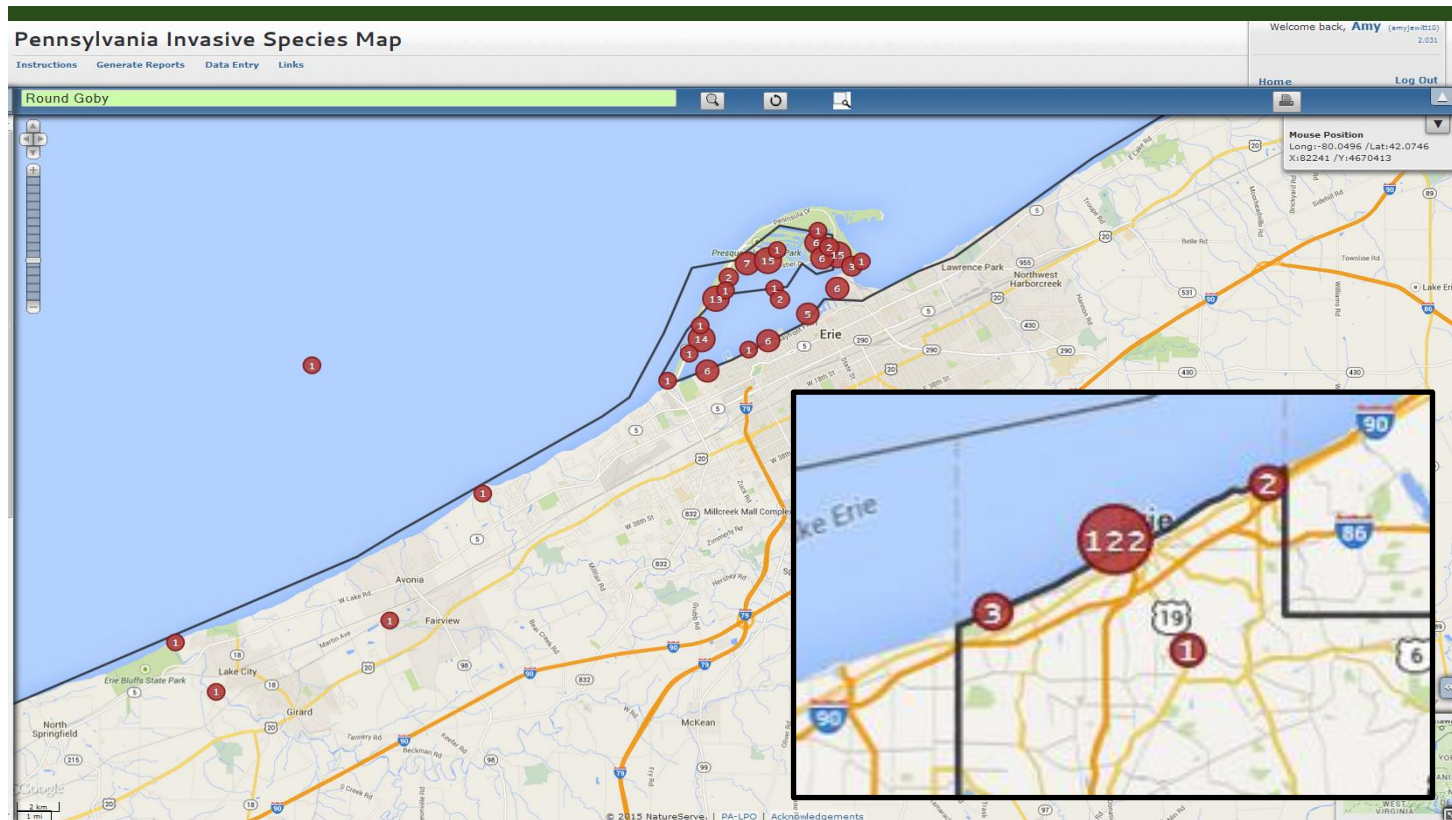
Querying with the Map



- Search by Species Name – ex. Round Goby
- Notice NY records appear too (another iMap state)



Querying with the Map



- Zoom in to see more precise locations of records
- Notice numbers in circles get smaller as you zoom in

Querying with the Map

Pennsylvania Invasive Species Map

Welcome back, Amy (amyjew@10) 2:53:11

Home Log Out

Round Goby

14 Observations

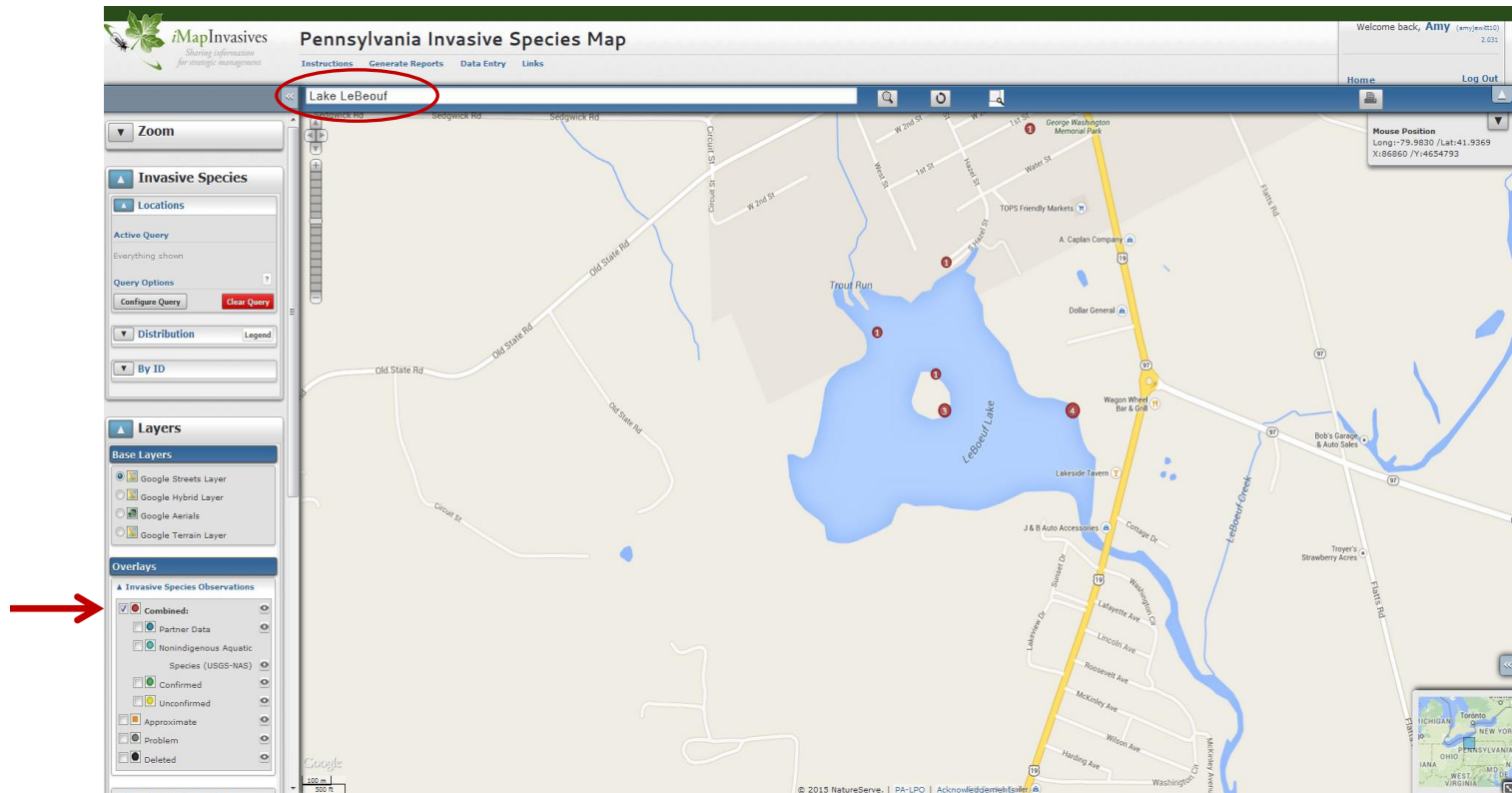
ID	Scientific Name	Common Name	Organization	County	Observed	Data Status
PA-1160	<i>Neogobius melanostomus</i>	Round Goby	Pennsylvania Fish and Boat Commission		2000-05-02	Partner Data
PA-1150	<i>Neogobius melanostomus</i>	Round Goby	Pennsylvania Fish and Boat Commission		2004-08-02	Partner Data
PA-1151	<i>Neogobius melanostomus</i>	Round Goby	Pennsylvania Fish and Boat Commission		2002-08-12	Partner Data
PA-1152	<i>Neogobius melanostomus</i>	Round Goby	Pennsylvania Fish and Boat Commission		2003-08-12	Partner Data
PA-1153	<i>Neogobius melanostomus</i>	Round Goby	Pennsylvania Fish and Boat Commission		2005-08-12	Partner Data
PA-1155	<i>Neogobius melanostomus</i>	Round Goby	Pennsylvania Fish and Boat Commission	Erie	2006-08-23	Partner Data
PA-1156	<i>Neogobius melanostomus</i>	Round Goby	Pennsylvania Fish and Boat Commission	Erie	2005-08-12	Partner Data
PA-1154	<i>Neogobius melanostomus</i>	Round Goby	Pennsylvania Fish and Boat Commission		2006-08-23	Partner Data
PA-305U	<i>Neogobius melanostomus</i>	Round Goby	Pennsylvania Fish and Boat Commission		2001-08-08	Partner Data
PA-306U	<i>Neogobius melanostomus</i>	Round Goby	Pennsylvania Fish and Boat Commission		2001-08-08	Partner Data

Mouse Position
Long:-80.1423 / Lat:42.1271
X:74921 / Y:4676701

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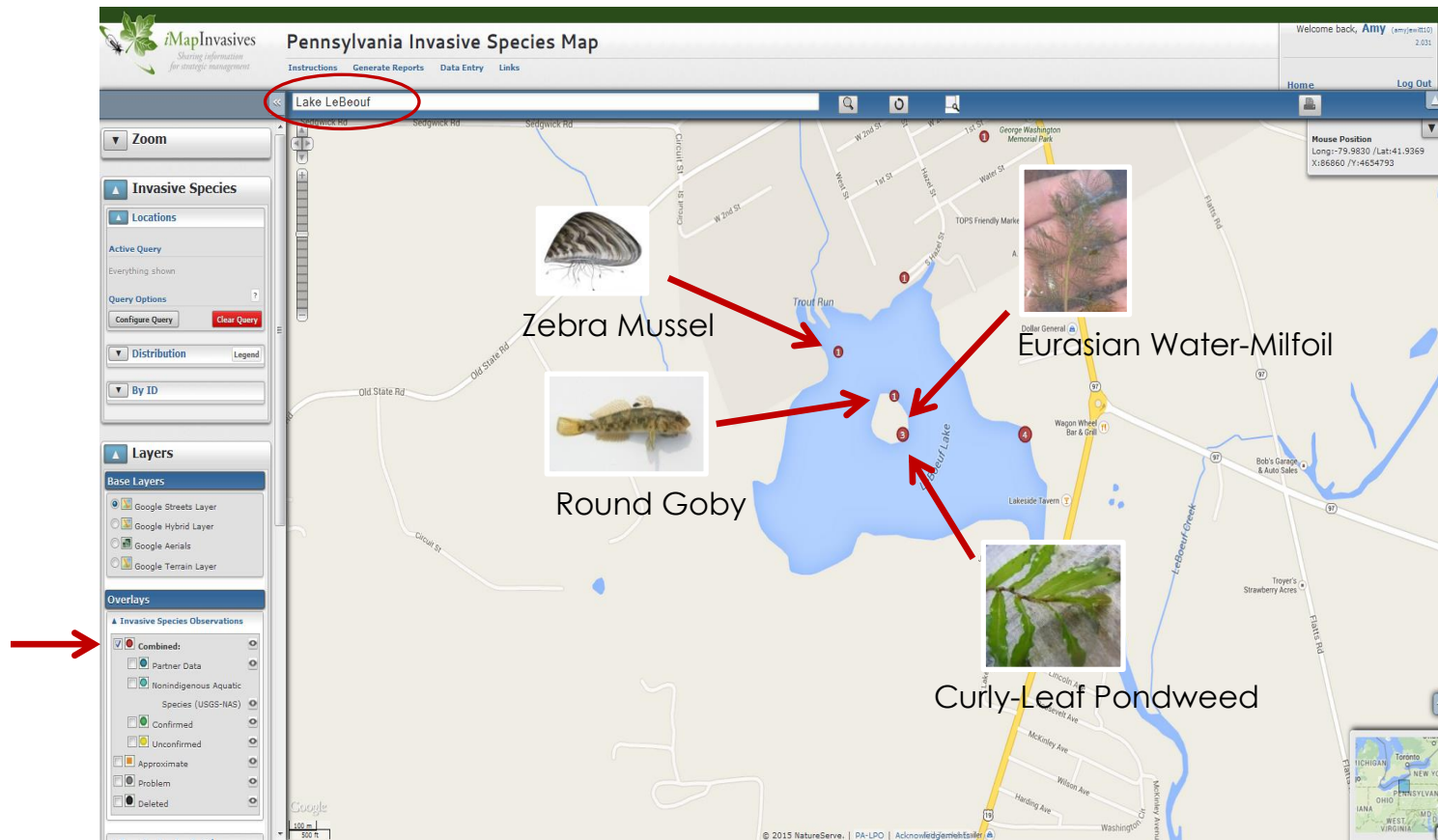
- Click red circles to view associated observations
- ID #s link directly to specific record and related details

Querying with the Map



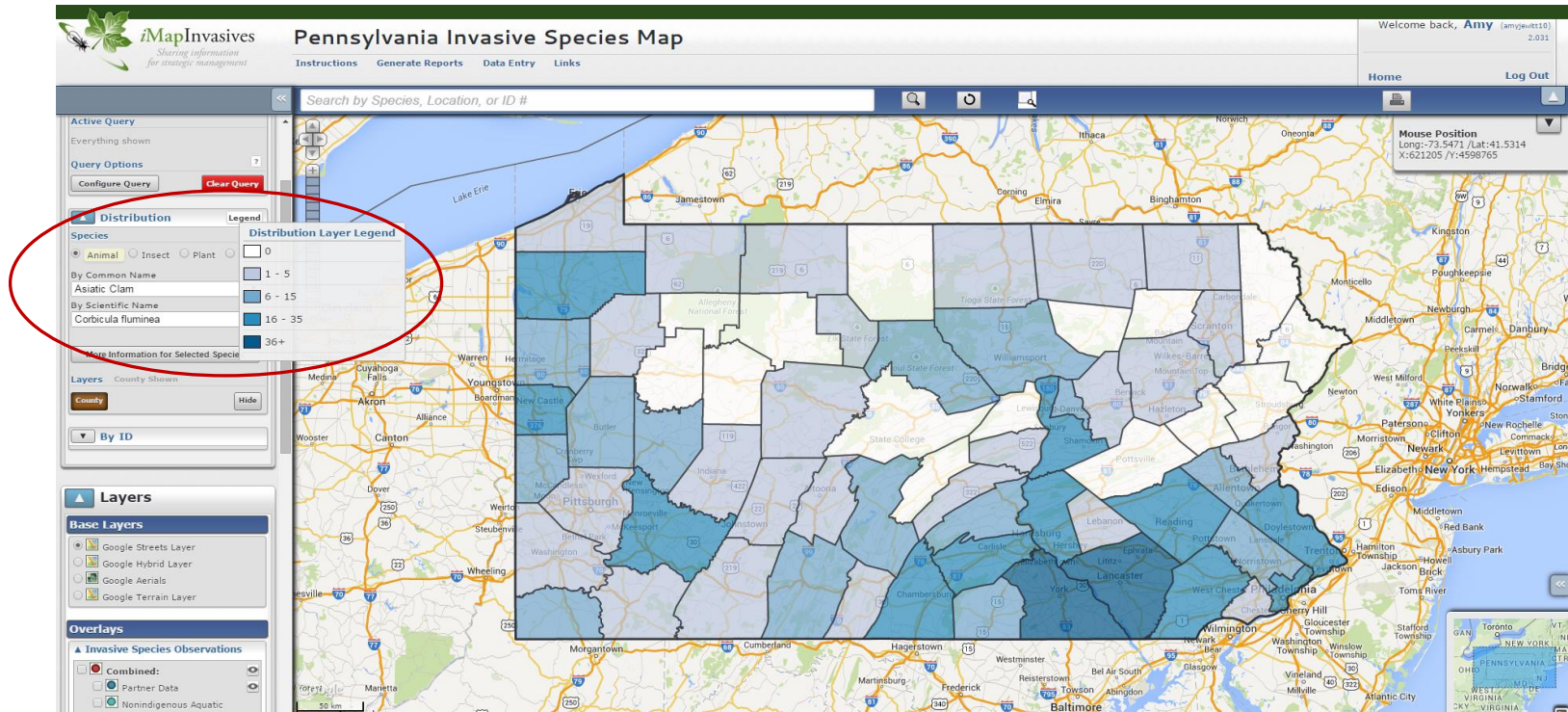
- Search by location – Ex. Lake LeBeouf

Querying with the Map



- Find out what species have been reported in Lake LeBeauf

Querying with the Map for County Distribution Info



- View species distribution in PA counties
- Distribution density is shown as color goes from light to dark
- Ex. Asian clam distribution across state (based on current data)

Querying with the Table

The screenshot shows the 'Observations Table' interface of the iMapInvasives Pennsylvania Administrator Tools. The header includes the iMapInvasives logo, the title 'Pennsylvania Administrator Tools', and a user welcome message 'Welcome back, Amy' with a 'Log Out' link. Below the header, there are navigation links: 'My iMapInvasives', 'Custom Query', and 'Observations Table'. The main section is titled 'Observations Table' and features a 'Custom Data Query' button. A search bar is present with a 'Search' button. Below the search bar, a table displays observation data. The table has columns for ID, Status, Scientific Name, Common Name, Observer, Obs Date, County, Entry Date, and Photo. The data is filtered to show 0 to 25 of 4,697 results. A 'Download Table as CSV' button is located at the bottom of the table. The footer contains links for Home, Legal Disclosure and Terms of Use, Privacy Policy, Financials, and Contact your iMap Administrator, along with a copyright notice for 2015 NatureServe.

Observations Table

Active Custom Query

Data Set = all_data [Clear Query](#)

[Search](#) 0 - 25 of 4,697 results

ID	Status	Scientific Name	Common Name	Observer	Obs Date	County	Entry Date▼	Photo
PA-3904U	Confirmed	Dreissena polymorpha	Zebra Mussel	steadams	2014-09-24	Lancaster	2015-02-27 12:48:06	1
PA-3901U	Confirmed	Trapa natans	Water Chestnut	ronkeeney	2014-07-13	Warren	2015-02-13 11:17:16	1
PA-3902U	Unconfirmed	Frangula alnus	Glossy False Buckthorn	tanmeyer	2011-08-05	Elk	2015-02-09 15:45:15	0
PA-3892U	Unconfirmed	Berberis thunbergii	Japanese Barberry	zacgoodrich	2014-09-24	Monroe	2015-01-21 16:56:00	1
PA-3891U	Unconfirmed	Phragmites australis ssp. australis	Common Reed	zacgoodrich	2014-09-16	Luzerne	2015-01-21 16:43:25	1
PA-3890U	Unconfirmed	Phragmites australis ssp. australis	Common Reed	zacgoodrich	2014-09-16	Luzerne	2015-01-21 16:38:06	1
PA-3889U	Unconfirmed	Phragmites australis ssp. australis	Common Reed	zacgoodrich	2014-09-16	Luzerne	2015-01-21 16:28:28	1
PA-3888U	Unconfirmed	Berberis thunbergii	Japanese Barberry	zacgoodrich	2014-09-16	Luzerne	2015-01-21 16:19:19	1
PA-3887U	Unconfirmed	Berberis thunbergii	Japanese Barberry	zacgoodrich	2014-09-16	Luzerne	2015-01-21 16:09:45	1
PA-3886U	Unconfirmed	Centaurea biebersteinii; Centaurea stoebe ssp. micranthos	Spotted Starthistle	zacgoodrich	2014-08-13	Luzerne	2015-01-21 15:51:20	1
PA-3885U	Unconfirmed	Berberis thunbergii	Japanese Barberry	zacgoodrich	2014-09-16	Luzerne	2015-01-21 15:37:55	1
PA-3884U	Unconfirmed	Berberis thunbergii	Japanese Barberry	zacgoodrich	2014-09-22	Carbon	2015-01-21 12:18:56	1
PA-3883U	Confirmed	Polygonum cuspidatum, Fallopia japonica var. japonica	Japanese Knotweed	zacgoodrich	2014-07-29	Lackawanna	2015-01-20 17:07:37	1
PA-3882U	Confirmed	Hydrilla verticillata	Hydrilla	briplarcik	2014-07-21	Crawford	2015-01-08 10:55:27	1

[Download Table as CSV](#) 0 - 25 of 4,697 results

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Search all observations

Querying with the Table - Search by Species

The screenshot shows the iMapInvasives Pennsylvania Administrator Tools interface. At the top, there is a navigation bar with the iMapInvasives logo, the title "Pennsylvania Administrator Tools", and a user welcome message "Welcome back, Amy". Below the navigation bar, the "Observations Table" section is active. A red circle highlights the "Data Set" dropdown menu, which is currently set to "all_data". A red arrow points down from the "Data Set" dropdown to the search input field. The search input field contains the text "rudd" and a "Search" button. Below the search input, there is a "Showing:" label and a "Clear" button. The main content area displays a table of observations. The table has columns for ID, Status, Scientific Name, Common Name, Observer, Obs Date, County, Entry Date, and Photo. The table shows 14 results for the search "rudd". At the bottom of the table, there is a "Download Table as CSV" button. The footer of the page contains links for Home, Legal Disclosure and Terms of Use, Privacy Policy, Financials, and Contact your iMap Administrator, along with a copyright notice for 2015 NatureServe.

Observations Table

Active Custom Query

Data Set: **all_data** [Clear Query](#)

Search: [Search](#)

Showing: [rudd](#) [Clear](#) 0 - 14 of 14 results

ID	Status	Scientific Name	Common Name	Observer	Obs Date	County	Entry Date	Photo
PA-2684U	Confirmed	Scardinius erythrophthalmus	Rudd	jimgrazio	2004-05-24		2014-06-06 09:56:36	0
PA-2683U	Confirmed	Scardinius erythrophthalmus	Rudd	jimgrazio	2010-10-08		2014-06-06 09:42:28	0
PA-2679U	Confirmed	Scardinius erythrophthalmus	Rudd	marlethaby	2003-05-01		2014-06-06 09:00:12	0
PA-271U	Partner Data	Scardinius erythrophthalmus	Rudd	bobmorgan	2012-05-04		2013-05-30 13:05:50	0
PA-270U	Partner Data	Scardinius erythrophthalmus	Rudd	bobmorgan	2012-05-03		2013-05-30 13:02:36	0
PA-269U	Partner Data	Scardinius erythrophthalmus	Rudd	bobmorgan	2012-05-01		2013-05-30 12:57:18	0
PA-268U	Partner Data	Scardinius erythrophthalmus	Rudd	bobmorgan	2012-05-01	Erie	2013-05-30 11:43:12	0
PA-267U	Partner Data	Scardinius erythrophthalmus	Rudd	bobmorgan	2012-04-06		2013-05-30 11:12:28	0
PA-266U	Partner Data	Scardinius erythrophthalmus	Rudd	bobmorgan	2012-04-06		2013-05-30 11:08:51	0
PA-265U	Partner Data	Scardinius erythrophthalmus	Rudd	bobmorgan	2012-04-04		2013-05-30 11:04:35	0
PA-264U	Partner Data	Scardinius erythrophthalmus	Rudd	bobmorgan	2012-04-04		2013-05-30 11:00:59	0
PA-263U	Partner Data	Scardinius erythrophthalmus	Rudd	bobmorgan	2012-04-03		2013-05-30 10:51:26	0
PA-1221	Partner Data	Scardinius erythrophthalmus	Rudd	bobmorgan	1991-04-29	Wyoming	2012-12-21 00:00:00	
PA-1220	Partner Data	Scardinius erythrophthalmus	Rudd	bobmorgan	1991-05-01	Wyoming	2012-12-21 00:00:00	

[Download Table as CSV](#) 0 - 14 of 14 results

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Search by species – Ex. Rudd
(Search by common name or scientific name)

Querying with the Table – Search by Observer Name

The screenshot displays the iMapInvasives Pennsylvania Administrator Tools interface. At the top, the iMapInvasives logo is on the left, and the user 'Amy' is logged in on the right. The main heading is 'Observations Table'. Below this, there's a section for 'Active Custom Query' with a dropdown set to 'all_data'. A search bar contains the text 'bobmorgan', which is circled in red. A red arrow points from the search bar to the 'Observer' column in the table below. The table lists various observations with columns for ID, Status, Scientific Name, Common Name, Observer, Obs Date, County, Entry Date, and Photo. The results show 0 to 25 of 296 results. At the bottom, there's a footer with links to Home, Legal Disclosure, Privacy Policy, Financials, and Contact your iMap Administrator, along with a copyright notice for 2015 NatureServe.

Observations Table

Active Custom Query

Data Set = all_data [Clear Query](#)


Showing: **bobmorgan** [Clear](#) [Search](#) 0 - 25 of 296 results

ID	Status	Scientific Name	Common Name	Observer	Obs Date	County	Entry Date	Photo
PA-2437U	Partner Data	Channa argus	Northern Snakehead	bobmorgan	2014-05-12	Bucks	2014-05-16 15:37:23	1
PA-321U	Partner Data	Channa argus	Northern Snakehead	bobmorgan	2004-07-21	Philadelphia	2013-06-04 09:51:30	0
PA-320U	Partner Data	Channa argus	Northern Snakehead	bobmorgan	2004-07-20	Philadelphia	2013-06-04 09:47:14	0
PA-319U	Partner Data	Channa argus	Northern Snakehead	bobmorgan	2005-08-11	Philadelphia	2013-06-04 09:41:35	0
PA-318U	Partner Data	Neogobius melanostomus	Round Gobies	bobmorgan	2012-05-03		2013-06-03 16:56:15	0
PA-317U	Partner Data	Neogobius melanostomus	Round Gobies	bobmorgan	2012-04-06		2013-06-03 16:53:31	0
PA-316U	Partner Data	Neogobius melanostomus	Round Gobies	bobmorgan	2012-04-06		2013-06-03 16:49:37	0
PA-315U	Partner Data	Neogobius melanostomus	Round Gobies	bobmorgan	2012-04-06		2013-06-03 16:46:48	0
PA-314U	Partner Data	Neogobius melanostomus	Round Gobies	bobmorgan	2012-04-05		2013-06-03 16:44:03	0
PA-313U	Partner Data	Neogobius melanostomus	Round Gobies	bobmorgan	2012-04-03	Erie	2013-06-03 16:41:13	0
PA-312U	Partner Data	Neogobius melanostomus	Round Gobies	bobmorgan	2012-04-03		2013-06-03 16:37:56	0
PA-311U	Partner Data	Neogobius melanostomus	Round Gobies	bobmorgan	2001-08-08	Erie	2013-06-03 16:35:29	0
PA-310U	Partner Data	Neogobius melanostomus	Round Gobies	bobmorgan	2001-08-08		2013-06-03 16:33:02	0
PA-309U	Partner Data	Neogobius melanostomus	Round Gobies	bobmorgan	2001-08-08	Erie	2013-06-03 16:29:52	0

[Download Table as CSV](#) 0 - 25 of 296 results

- Search by Observer Name (i.e. User Name) – Ex. “bobmorgan”

Querying with the Table – Search by County

 **iMapInvasives**
Sharing information for strategic management

Pennsylvania Administrator Tools

Welcome back, **Amy** (amyje@mt10)
2,021
[Home](#) [Log Out](#)

[My iMapInvasives](#) :: [Custom Query](#) :: [Observations Table](#)

Observations Table

Active Custom Query

Data Set = all_data [Clear Query](#)

[Search](#)

Showing: [York](#) [Clear](#) 0 - 25 of 90 results

ID	Status	Scientific Name	Common Name	Observer	Obs Date	County	Entry Date▼	Photo
PA-3528U	Approximate	Adelges tsugae	Hemlock Woolly Adelgid	forest_pest_mgmt	1980-01-01	York	2014-12-03 14:12:00	0
PA-1920	Partner Data	Corbicula fluminea	Asiatic Clam	amywilliams	2013-05-17	York	2014-06-30 00:00:00	
PA-1981	Partner Data	Pylodictis olivaris	Flathead Catfish	srbc	2012-09-05	York	2014-06-30 00:00:00	
PA-1972	Partner Data	Orconectes obscurus	Allegheny Crayfish	srbc	2011-08-08	York	2014-06-30 00:00:00	
PA-1349	Partner Data	Corbicula fluminea	Asiatic Clam	amywilliams	1996-09-23	York	2014-06-30 00:00:00	
PA-1940	Partner Data	Corbicula fluminea	Asiatic Clam	amywilliams	2013-08-22	York	2014-06-30 00:00:00	
PA-1946	Partner Data	Corbicula fluminea	Asiatic Clam	amywilliams	2013-08-22	York	2014-06-30 00:00:00	
PA-1928	Partner Data	Corbicula fluminea	Asiatic Clam	amywilliams	2013-06-19	York	2014-06-30 00:00:00	
PA-1959	Partner Data	Corbicula fluminea	Asiatic Clam	amywilliams	2013-10-21	York	2014-06-30 00:00:00	
PA-1932	Partner Data	Corbicula fluminea	Asiatic Clam	amywilliams	2013-07-25	York	2014-06-30 00:00:00	
PA-1547	Partner Data	Corbicula fluminea	Asiatic Clam	amywilliams	2005-08-30	York	2014-06-30 00:00:00	
PA-1347	Partner Data	Corbicula fluminea	Asiatic Clam	amywilliams	1996-09-23	York	2014-06-30 00:00:00	
PA-1594	Partner Data	Corbicula fluminea	Asiatic Clam	amywilliams	2006-08-17	York	2014-06-30 00:00:00	
PA-1978	Partner Data	Cyprinus carpio	Common Carp	srbc	2012-09-05	York	2014-06-30 00:00:00	
PA-1923	Partner Data	Corbicula fluminea	Asiatic Clam	amywilliams	2013-06-19	York	2014-06-30 00:00:00	

[Download Table as CSV](#) 0 - 25 of 90 results [<](#) [>](#)

- Search by County – Ex. York County

Create a Custom Observation Query

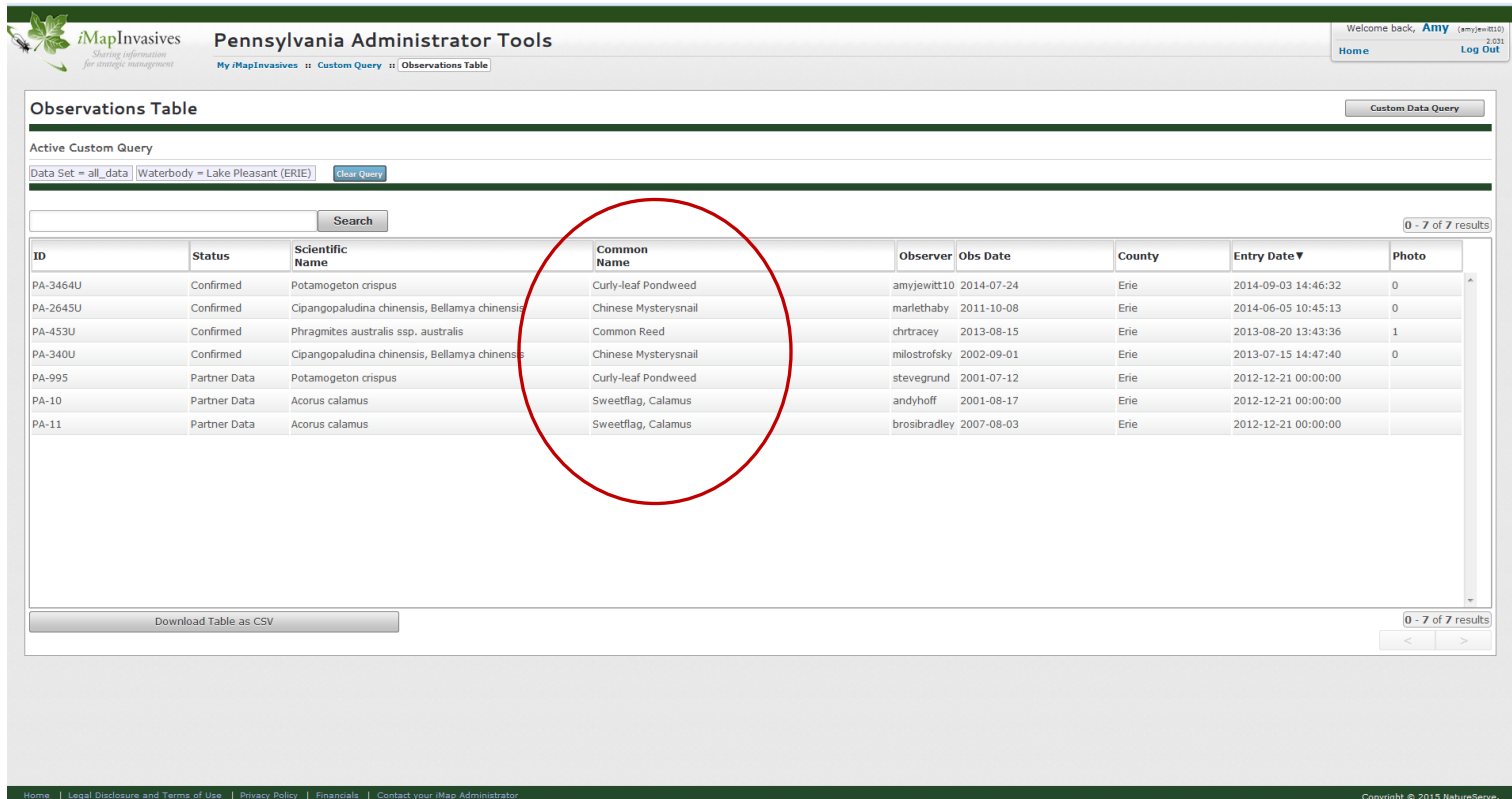
The screenshot displays the 'iMapInvasives Pennsylvania User Tools' interface. The top navigation bar includes the iMapInvasives logo, the title 'Pennsylvania User Tools', and a user welcome message for 'Amy'. The main content area is divided into three sections: 1. Type, 2. Criteria, and 3. Results. In the 'Type' section, 'Full Data Query' is selected. The 'Criteria' section contains several filters: 'Data Set' (set to 'All iMap Data - My State Only'), 'Geography' (set to 'All'), 'Species' (with radio buttons for 'Animal', 'Insect', and 'Plant', and dropdowns for 'By Common Name' and 'By Scientific Name'), 'Genus Name' (set to 'All'), and a 'Use this to select MULTIPLE species' field. The 'Results' section at the bottom features four buttons: 'View Table', 'View Report', 'View On Map', and 'Clear All Queries'. The 'View Table', 'View Report', and 'View On Map' buttons are circled in red. The footer includes a copyright notice for 2015 NatureServe.

- Choose to filter by any number of categories – many available!
- View query results in a table, report, or on the map.

The screenshot shows a web application interface for 'Query and Reports'. On the left is a sidebar with a 'Type' section containing links for 'All Data Summary Report', 'All Species by County: Report Table', 'Infested Lakes: Report Table', 'Report with Observation IDs', 'Active Projects: All Projects', 'My Projects with Details', and 'Admin: Summary Report'. The main content area is titled 'Type' and contains several filter sections: 'County' (set to 'All Counties'), 'Lake' (set to 'All Lakes'), 'Date of Spec' (set to 'All Dates'), and 'Geography' (set to 'All Geographies'). Below these filters is a 'Results' section with a table showing columns for 'Species', 'Count', and 'Date of Spec'.

Create a Custom Query

*View Results in a Table



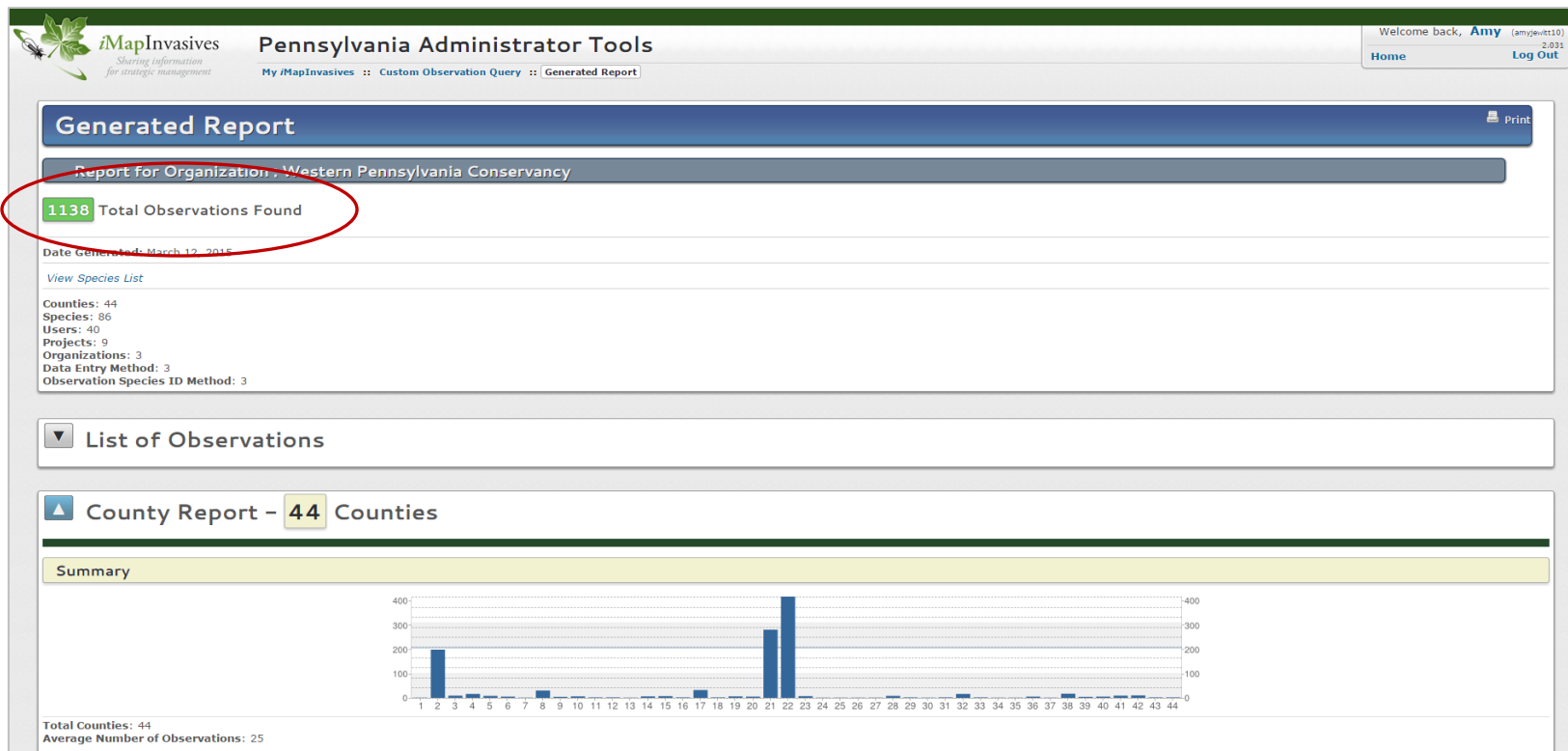
The screenshot shows the 'Pennsylvania Administrator Tools' interface. The 'Observations Table' section displays a table of results for a custom query. The query is set to 'Data Set = all_data' and 'Waterbody = Lake Pleasant (ERIE)'. The table has 10 columns: ID, Status, Scientific Name, Common Name, Observer, Obs Date, County, Entry Date, and Photo. A red circle highlights the 'Common Name' column. The table shows 7 results, with the first four rows having a 'Photo' value of 0 and the last two rows having a 'Photo' value of 1. A 'Download Table as CSV' button is visible at the bottom left of the table area.

ID	Status	Scientific Name	Common Name	Observer	Obs Date	County	Entry Date	Photo
PA-3464U	Confirmed	Potamogeton crispus	Curly-leaf Pondweed	amyjewitt10	2014-07-24	Erie	2014-09-03 14:46:32	0
PA-2645U	Confirmed	Cipangopaludina chinensis, Bellamya chinensis	Chinese Mysterysnail	marlethaby	2011-10-08	Erie	2014-06-05 10:45:13	0
PA-453U	Confirmed	Phragmites australis ssp. australis	Common Reed	chrtracey	2013-08-15	Erie	2013-08-20 13:43:36	1
PA-340U	Confirmed	Cipangopaludina chinensis, Bellamya chinensis	Chinese Mysterysnail	milostrofsky	2002-09-01	Erie	2013-07-15 14:47:40	0
PA-995	Partner Data	Potamogeton crispus	Curly-leaf Pondweed	stevegrund	2001-07-12	Erie	2012-12-21 00:00:00	
PA-10	Partner Data	Acorus calamus	Sweetflag, Calamus	andyhoff	2001-08-17	Erie	2012-12-21 00:00:00	
PA-11	Partner Data	Acorus calamus	Sweetflag, Calamus	brosibradley	2007-08-03	Erie	2012-12-21 00:00:00	

- Ex. What invasive species have been found in Lake Pleasant (Erie County)?
- Answer: Curly-leaf pondweed, Chinese Mysterysnail, Common Reed, and Sweetflag (according to present data)

Create a Custom Query

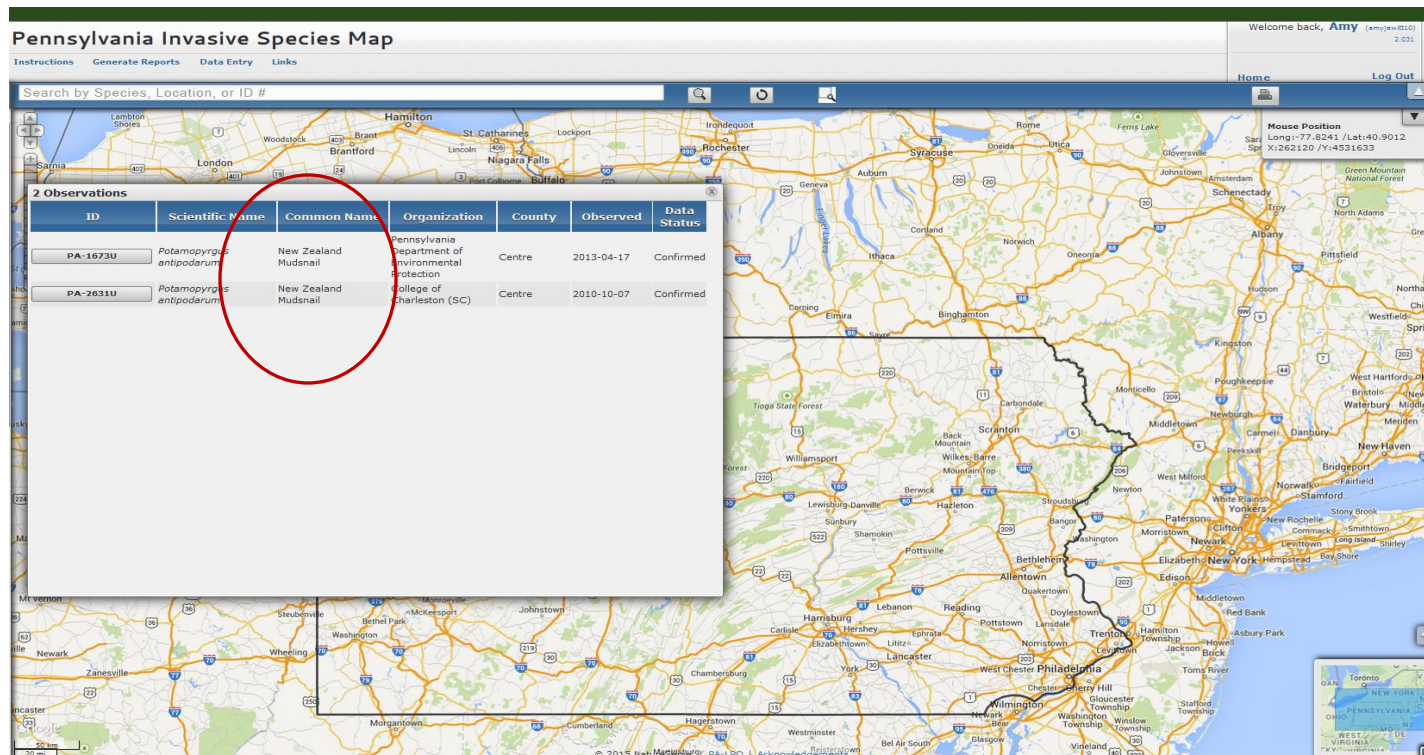
*View Results in a Report



- Ex. What data is currently in iMap from my organization? (Western PA Conservancy)
- Answer: 1138 observation records (MUCH more info available in report!)

Create a Custom Query

*View Results on the Map



- Ex. What aquatic animals are located in Centre County?
- Answer: New Zealand Mudsail (according to present data)

Infested Lake Report

Infested Lake Report

Species reported in (or bordering) lakes and ponds.
Lakes covering multiple counties may have species listed more than once.
Please use the search function (Ctrl-F) to find a particular waterbody.

Lake Name	Species
Beaver Run Reservoir (WESTMORELAND) - (Westmoreland):	1 - Myriophyllum spicatum (Eurasian Water-milfoil) 1 - Potamogeton crispus (Curly-leaf Pondweed)
Big Bass Lake (LACKAWANNA) - (Lackawanna):	1 - Cabomba caroliniana (Carolina Fanwort, Fanwort)
Blue Marsh Lake (BERKS) - (Berks):	6 - Pylodictis olivaris (Flathead Catfish)
Canoe Creek Lake (BLAIR) - (Blair):	1 - Myriophyllum spicatum (Eurasian Water-milfoil) 3 - Najas minor (Brittle Naiad) 2 - Potamogeton crispus (Curly-leaf Pondweed)
Cherry Run Lake (INDIANA) - (Indiana):	1 - Potamogeton crispus (Curly-leaf Pondweed)
Clear Lake (CRAWFORD) - (Crawford):	1 - Myriophyllum spicatum (Eurasian Water-milfoil) 1 - Potamogeton crispus (Curly-leaf Pondweed)
Colver Reservoir (CAMBRIA) - (Cambria):	1 - Viviparus georgianus (Banded Mysterysnail)
Concourse Lake (PHILADELPHIA) - (Philadelphia):	1 - Cipangopaludina chinensis, Bellamya chinensis (Chinese Mysterysnail)
Conneaut Lake (CRAWFORD) - (Crawford):	6 - Cabomba caroliniana (Carolina Fanwort, Fanwort) 1 - Corbicula fluminea (Asiatic Clam) 1 - Dreissena polymorpha (Zebra Mussel) 3 - Myriophyllum spicatum (Eurasian Water-milfoil) 1 - Najas minor (Brittle Naiad) 3 - Potamogeton crispus (Curly-leaf Pondweed)
Eagles Mere Lake (SULLIVAN) - (Sullivan):	1 - Cipangopaludina japonica (Japanese Mysterysnail)
Edinboro Lake (ERIE) - (Erie):	6 - Dreissena polymorpha (Zebra Mussel) 5 - Myriophyllum spicatum (Eurasian Water-milfoil) 2 - Najas minor (Brittle Naiad) 5 - Potamogeton crispus (Curly-leaf Pondweed)

Query and Reports

Custom Observation Query
All Data Summary Report
All Species by County:
Report
Table
Infested Lakes:
Table
Report
Report with Observation IDs
Active Projects:
All Projects
My Projects with Details

Great tool for natural resource professionals!

- This report is a quick and easy way to view a list of infested lakes and their associated invasive species. Available Under the Query and Reports section on the Main Navigation page.

Email Alerts

- Access email alerts from the Main Navigation page
- 3 types of alerts available
- Keeps you informed of latest info reported to iMapInvasives
- Invaluable EDRR tool
- Reference guide available on the Homepage



Zebra Mussels

Photo credit: Becky Bochaty, Flickr user



Black Swallow-Wort

Photo credit: www.fws.gov

Continual Alert

- Most basic type of email alert available
- This alert will send you an email whenever its conditions are met, until the alert is deactivated



Water Chestnut
Photo credit: eattheweeds.com



Water Chestnut (Nutlet)
Photo credit: Dave Donachy, PA Game Commission

Example of a Continual Alert

Alert type = Continual

Geography Type = State

Geography Name = PA

Species Name = Trapa natans

The screenshot shows the 'Alert Information' form in the 'iMapInvasives Pennsylvania Administrator Tools' interface. The form is titled 'Alert Information' and includes a note: 'Note: Once an alert is created, it cannot be edited (but it can be deactivated). Note: As a level 9 and above user, your email alerts will trigger on unconfirmed observations.' The form is divided into a 'Basic' section and an 'Advanced' section. The 'Basic' section contains the following fields: 'Alert type' (set to 'Continual'), 'Geography Type' (set to 'State'), 'Geography Name' (set to 'Pennsylvania'), 'Buffer Distance (meters)' (empty), 'Species By' (set to 'Species Name'), 'Species Name' (set to 'Trapa natans', which is circled in red), 'Alerts requested' (set to '∞'), '# of Observations' (set to '0'), 'Additional Email Contact' (set to 'additional_email@gmail.com'), and 'Active' (set to 'True'). The 'Advanced' section is currently collapsed.

- For this continual alert, I will be notified whenever Water Chestnut (*Trapa natans*) is reported anywhere in Pennsylvania.

Early Detection Alert

- This type of alert is only active for the first few confirmed reports in your area of interest as a way to notify you of a new species coming into your area.
- Once there are many confirmed reports, you will stop getting notices as this species would now be considered **established** rather than an **early detection** species.

Example of an Early Detection Alert

The screenshot displays the 'Alert Information' form in the 'Pennsylvania Administrator Tools' application. The form is titled 'Basic' and contains the following fields:

- Alert type:** Early Detection
- Geography Type:** Waterbody
- Geography Name:** Ice Pond (MONROE)
- Buffer Distance (meters):** (empty field)
- Species By:** Species Name
- Species Name:** Dreissena polymorpha
- Alerts requested:** 3 (highlighted with a red circle)
- # of Observations:** 0
- Additional Email Contact:** additional_email@gmail.com
- Active:** True

Notes at the top of the form:

- Note: Once an alert is created, it cannot be edited (but it can be deactivated).
- Note: As a level 9 and above user, your email alerts will trigger on unconfirmed observations.

Alert type =
Early Detection

Geography Type =
Waterbody

Geography Name =
Ice Pond (Monroe)

Species Name =
Dreissena polymorpha

Alerts requested = 3

- For this Early Detection alert, I will be notified the first three times that Zebra Mussel (*Dreissena polymorpha*) is reported in Ice Pond in Monroe County. The fourth and subsequent observations will not generate an alert.

New to Geography Alert

- This type of alert will notify you when an area of interest you specify receives a report for a new species never reported there before.
This can be for any species, not necessarily an early detection species.
- From this alert, EVERY new record for the specified geography is automatically sent to the user, though only one alert per species is sent.
- This alert is tailored around many species, not just a single species (Continual and Early Detection alerts are better for that purpose).

Example of a New to Geography Alert

Alert Type = New to Geography

Geography Type = Conservation Lands

Geography Name = Rothrock State Forest

Species by = Assessment Type

Assessment Type = Plant Terrestrial

The screenshot displays the 'Alert Information' form within the 'Pennsylvania Administrator Tools' interface. The form is titled 'Alert Information' and includes a 'New Record' button. It contains several fields for configuring an alert:

- Alert type:** Set to 'New to Geography'.
- Geography Type:** Set to 'Conservation Lands'.
- Geography Name:** Set to 'ROTHROCK STATE FOREST'.
- Buffer Distance (meters):** An empty text field.
- Species By:** Set to 'Assessment Type'.
- Assessment type:** Set to 'Plant Terrestrial' (this field is circled in red).
- Alerts requested:** A checkbox labeled 'm' with the text '(You must manually deactivate the alert to stop receiving emails)'.
- Additional Email Contact:** A text field containing 'additional_email@gmail.com'.
- Active:** A checkbox labeled 'True'.

At the bottom of the form is a 'Create Alert' button. A note at the very bottom states: 'Note: Once created, you will receive an initial email listing observations that match your alert criteria. After that, you will only receive emails when the alert is triggered.'

- For this New to Geography alert, I will be notified whenever a new terrestrial plant is reported in Rothrock State Forest, until I deactivate the alert.

Test Your *i*MapInvasives Knowledge!

Correct answers will be rewarded with candy 😊



Question 1

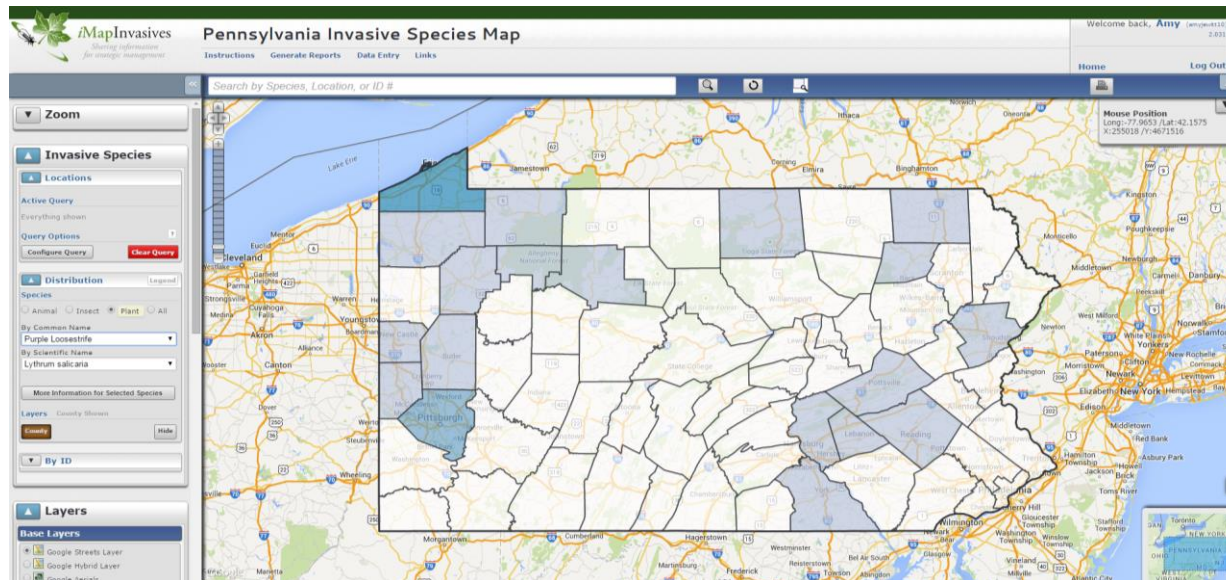
- What are the 5 different types of records you can create in iMapInvasives?
- Answer: Observation, Assessment, Survey, Treatment, and Infestation Management.

Question 2

- When entering an observation record, what are 3 ways you can select the observation location?
- Answer: GPS coordinates, specific address, and location name.

Question 3

- In general, what is this map depicting?



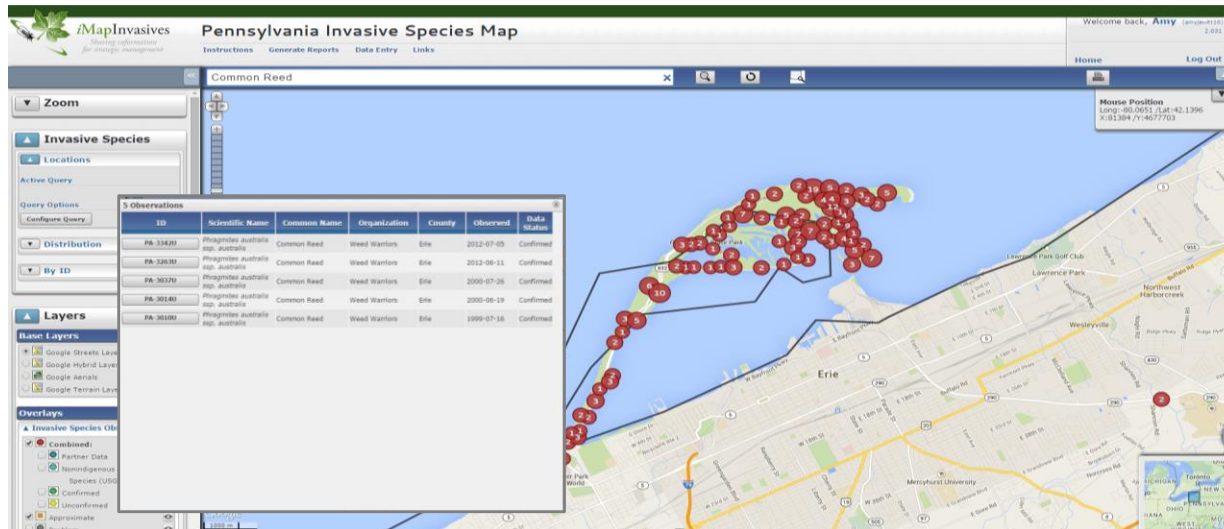
- Answer: County distribution of a species across the state (based on current data in iMapInvasives)

Question 4

- When entering an observation record that was observed by someone else, how do I record that person's name as the observer if they don't have a iMap login account?
- Answer: You can't. Even though you can enter an observation record for someone else, that person must first have an iMap login account to properly record him/her as the observer. A login account can be created by sending the person's name and email address to the iMap administrator.

Question 5

- What happens when I click on a red “observation” circle on the map?



Answer: A concise list of all associated observations appears and provides a link to each individual observation record found in the list.

Question 6

- What is the function of an early detection email alert?
- Answer: An early detection alert provides a way to notify you of a new species coming into your area. Once there are many confirmed reports for a certain species, you will stop getting alerts as this species would now be considered **established** rather than an **early detection** species.

Question 7

- What is an iMapInvasives project?
- Answer: A project in iMap is a way to group certain data together for easier and more efficient querying later on.

Question 8

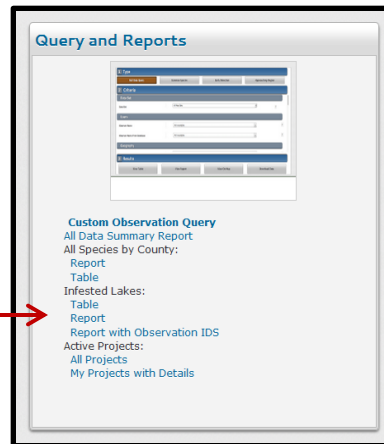
- If I wanted to set a customized filter to view only aquatic invasive animals found in Montgomery County, what tool would I use?
- Answer: The Custom Observation Query tool found on the Main Navigation page under the Query and Reports section.

Question 9

- True or False: When entering a survey record, only presence data can be entered.
- Answer: False; surveys in iMapInvasives allow users to record both presence and absence data.

Question 10

- What is the name of the tool which allows you to view a specific report about invasive species infesting Pennsylvania's lakes?



- Answer: The Infested Lakes Report located on the Main Navigation page under the Query and Reports section.

Bonus Question!

- What should I do when I have a question on how to use the iMapInvasives database (and where can this info be found)?
- Answer: Send an email to imapinvasives@paconserve.org or call 412-586-2305. You can find this info on the new PA iMapInvasives Homepage.



Please be in touch with any questions or comments...

Mary Walsh

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