



Milwaukee Riverkeeper's iNaturalist Training Manual

Project Partners:



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Introduction

What is iNaturalist?

iNaturalist is a community of citizen scientists recording field observations, observers can record any species that they find and add it to the iNaturalist database. iNaturalist is a powerful learning tool and the community can help you identify an observation you are unsure of or you can share your expertise by helping to identify unknown observations.



Why use iNaturalist?

Milwaukee Riverkeeper plans to utilize iNaturalist for two major projects. Firstly, if you are a water quality monitor and complete the biotic index, you can photograph the critters that you have collected during your survey. From there, you can submit your observation to iNaturalist, and Milwaukee Riverkeeper staff will have the opportunity to verify your identification.



A damselfly larvae photographed following a biotic index. This photo can be uploaded to iNaturalist and identified by the community.

The second way we are using iNaturalist is to report observations of native mussels. Wisconsin has 51 native species of mussels. Sadly, mussels are a threatened group of species and there is not a lot known about their population in the Milwaukee River Basin. If you find a mussel, either alive or an empty shell, you can snap a quick photo. Like with macroinvertebrates, you can upload your mussel photos to iNaturalist and the community can help you identify them. This information will be shared with the Wisconsin Department of Natural Resources to help them better understand the distribution of these threatened group of species.

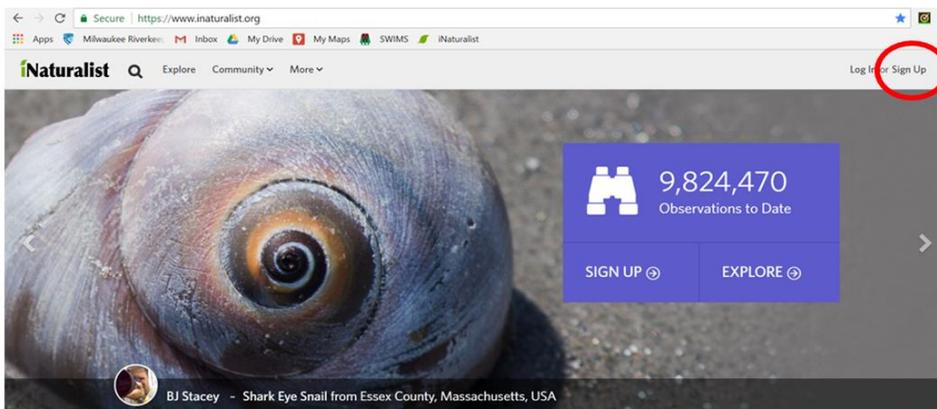


A wabash pigtoe mussel collected from a river station. This photo could be uploaded to iNaturalist and WDNR Biologist and Milwaukee Riverkeeper Staff could help in identification.

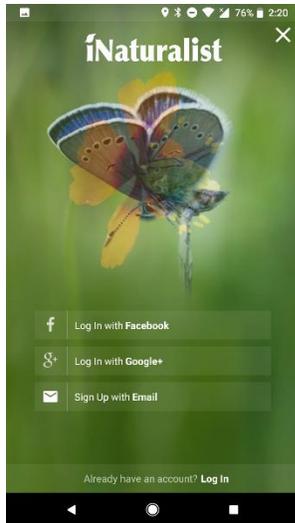
Setting up your iNaturalist Account

Creating an iNaturalist Account

To use iNaturalist you will need to create an account. iNaturalist is available for download in the app store for both Android and Apple products. iNaturalist can also be accessed through the iNaturalist webpage. Keep in mind having this app on your phone will allow for observations to be easily upload and posted from the field. To create an account visit www.inaturalist.org or open the app on your smartphone.



On your web browser, click the "Sign Up" button in the top right corner to create an account.



You can also sign up using the smartphone app on your phone.

iNaturalist gives several options on how to create your own account using your email address or signing in with different accounts you may already be associated with (ex Facebook, Google or Yahoo). It is up to the you on how you would like to create and access your account. Below is an example of the information you will need in order to create an account. This includes a username, email and password.

Web browser



- Or you can...
- Sign in with Facebook
 - Sign in with Twitter
 - Sign in with Flickr
 - Sign in with Google
 - Sign in with Yahoo
 - Sign in with SoundCloud

Login / username
Katie_MKERiverkeeper

Email
katie@milwaukeeiverkeeper.org

Password
.....

Password confirmation
.....

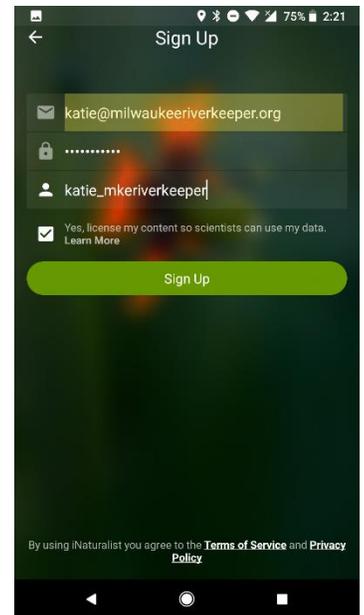
Your default time zone
All your observations will default to this time zone unless you specify otherwise.
(GMT-06:00) Central Time

Yes, license my photos, sounds & observations so scientists can use my data!
Check this box if you want to apply a *Creative Commons Attribution-NonCommercial license* to your photos. You can choose a different license or remove the license later, but this is the best license for sharing with researchers.

I'm not a robot 

Sign Up

Smartphone App



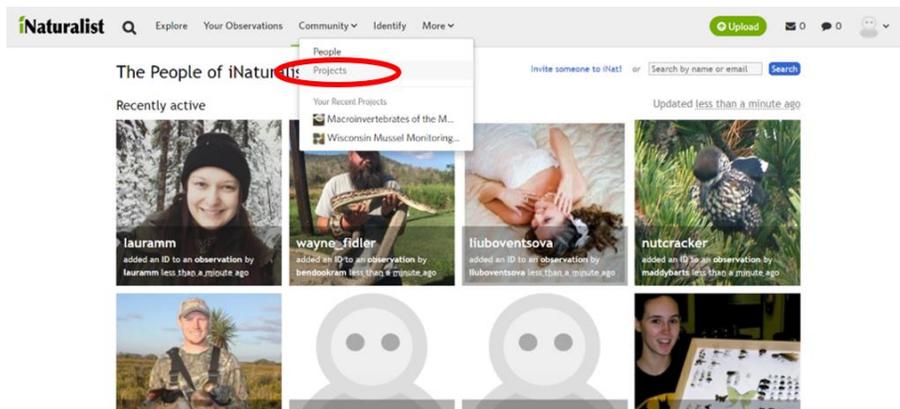
To view or edit your completed profile click on the icon in the right hand corner of the web browser. Things that can be added to your profile include a brief personal description, profile image and favorites.

The screenshot displays the iNaturalist website interface. At the top, the navigation bar includes the iNaturalist logo, a search icon, and links for Explore, Your Observations, Community, Identify, and More. A green 'Upload' button is visible on the right. A notification banner asks, 'Would you prefer to view common names used in the United States?' with 'Yes' and 'No' buttons. The user's profile for 'katie_mkeriverkeeper' is shown, with a navigation bar containing Home, Profile, Observations, Calendar, IDs, Lists, Journal, Favorites, and Projects. A blue button labeled 'Edit account settings & profile' is prominent. Below this, a list of account statistics is shown: Observations (0), Species (1), Identifications (0), Journal Posts (0), Lists (1), and Followers (0). The main profile area features the name 'Katie Rademacher' and a 'Tell us about yourself!' section with a text prompt: 'Do you study nematodes? Are you the world's foremost expert on barnacle taxonomy? Do you just like looking at pretty flowers? Filling out your profile adds some personality and helps establish your credibility when helping people out with identifications.' Below this, it indicates 'Following 1 Person' and shows a partial profile for a user named 'jessew'.

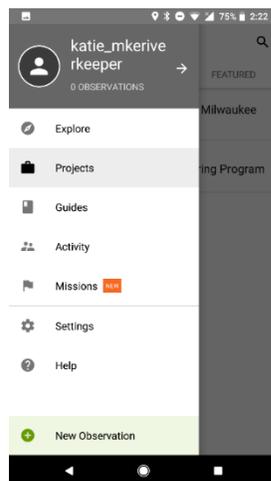
Connecting with a Project on iNaturalist

Milwaukee Riverkeeper is asking macroinvertebrate monitors to link their observations to specific projects within iNaturalist. Projects are a place where a collection of observations can be grouped together, this collected data can be used to help answer a particular research question or contribute to management decisions. These projects are Macroinvertebrates of the Milwaukee River Basin which focuses on macroinvertebrates present in the Milwaukee River Basin. Macroinvertebrates are indicators of the long-term health of a water body. The second project is the Wisconsin Mussel Monitoring Program, this is a state wide data set for freshwater mussels. Mussels are invertebrates and their observations should be recorded in both projects. Mussels are a threatened species with not a lot of recorded data, this data set will be used to protect and promote future research.

To connect with a project on your web browser select the “community” tab on the main banner and then select the “projects”.

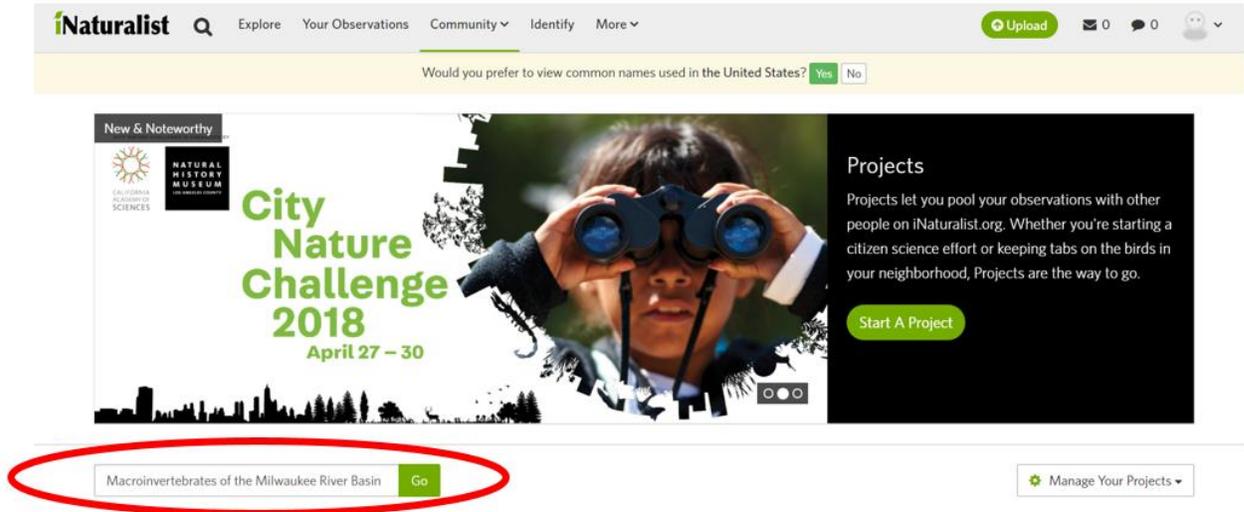


On your smartphone “projects” is one of the categories to choose from under the main menu.

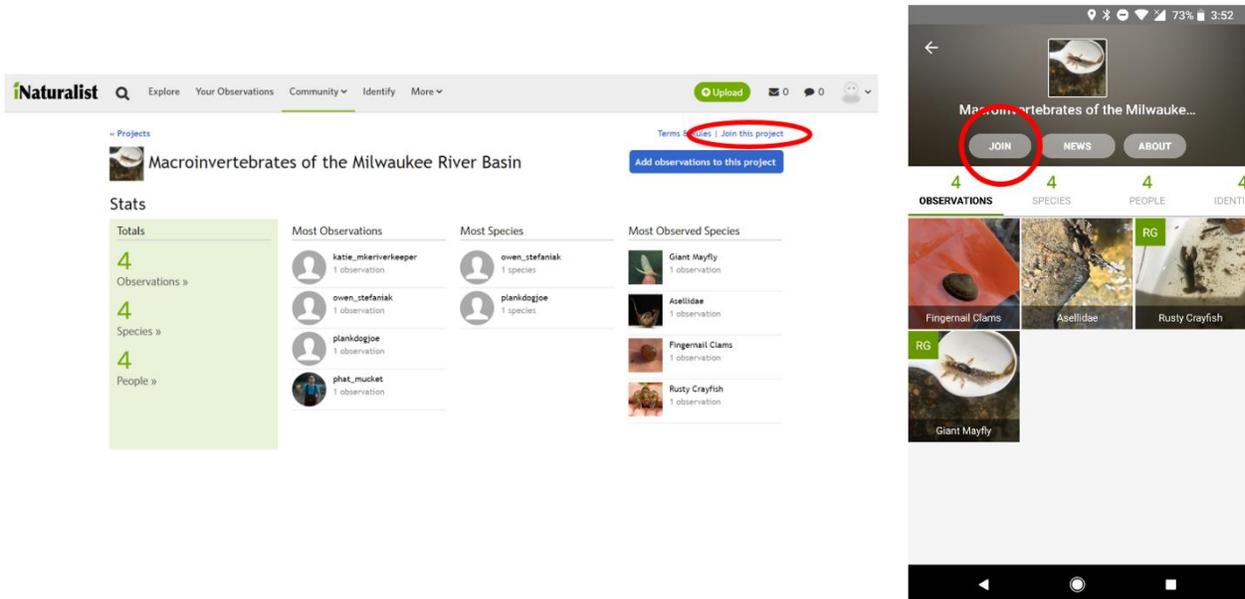


Once on the project page, search for the projects in the search bar. The projects we are linking to are:

Macroinvertebrates of the Milwaukee River Basin Wisconsin Mussel Monitoring Program



iNaturalist will populate the project you are looking for, once this appears click on the link of the project you are trying to join. Once on the projects homepage, select “Join this project” in the right hand corner or the “Join” button on smartphones.



Now that your profile is connected to these projects when uploading an observation, they can easily be added to the appropriate project.

Making and Submitting Observations to iNaturalist

Taking photos for iNaturalist

Taking photos of mussels

To help aid in the identification of your mussel, take photos of your mussel or mussel shell in these specific views:

1. Lateral exterior view



Photograph the outside of the mussel or shell by placing it in your palm to add size perspective.

1a. Lateral interior view



Use this view only if you're photographing single shells or dead mussels. **Never pry open a live mussel!**

Photograph the inside of the mussel shell by placing it in your palm to add size perspective.

2. Dorsal view



Turn the mussel or shell on its side so the hinge side is facing the camera lens.

3. Anterior View



Turn the mussel or shell on its side so the hinge side is facing upwards in the camera frame.

Taking photos of macroinvertebrates

Taking photos of macroinvertebrates can be tricky as many are small, quick and in water!

Using the provided ice cube tray and plastic spoons can be very helpful to isolate a single critter to be photographed. It is important to photograph any distinguishing characteristics this can include shells, tentacles, legs, wings and tails.



Giant Mayfly larvae observed by a volunteer



Damselfly larvae in an ice cube tray observed by a volunteer

Adding an Observation to iNaturalist

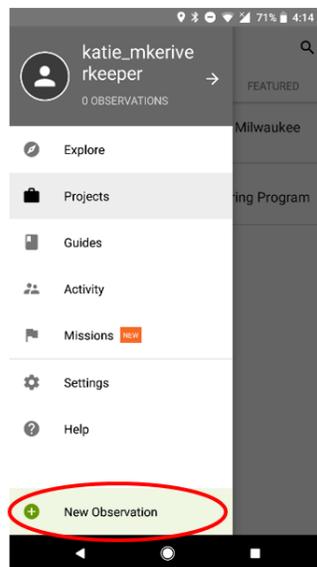
Uploading and identifying an image

Once you take a photo of mussel or macroinvertebrate you can upload it to iNaturalist. To add an observation to iNaturalist click the green “Upload” tab on your browser or the “New Observation” tab on your smart phone app.

Web Browser



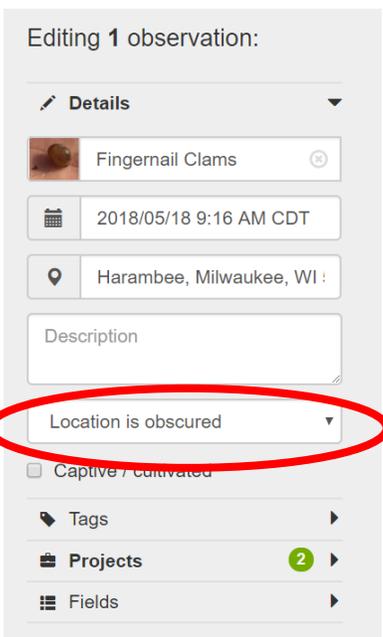
Smart phone app



Here you will be prompted to add the photo you have taken of your specimen. Photos can be dragged and dropped or uploaded from documents on your computer. When making observations with your smart phone you will be prompted to take a picture or upload an image from your gallery. Most phones will populate the information about the location, date and time into the iNaturalist program for you. Keep in mind this information may not be populated for you if you are uploading images from a camera to your computer. Please enter this information in manually if it is not populated for you.

From here you can begin to enter your observation data. Under “details” you can add the species name and add location information if needed. If you are unsure of the species name, it can be left unknown or you can use the iNaturalist guides to try to correctly identify your findings. Do not worry about incorrectly identifying something, the iNaturalist community will pitch in to make sure observations are correctly identified.

When making mussel observations make sure the geo-privacy is set as “obscured” as mussels are of special concern in Wisconsin. Setting the geo-privacy as obscured will mark your observation location as a larger geographic area and will not post the specific coordinates of your observation. Feel free to share the exact location of all other macroinvertebrates observed.



Changing the location is important for mussel preservation, mark mussel observations as “Location is obscured”.

After completing these details, if you are uploading your observation on your computer you can **submit** your observations and follow the directions in the following section to add to projects. For smartphone app users see the below directions to add to a project prior to submitting your observation.

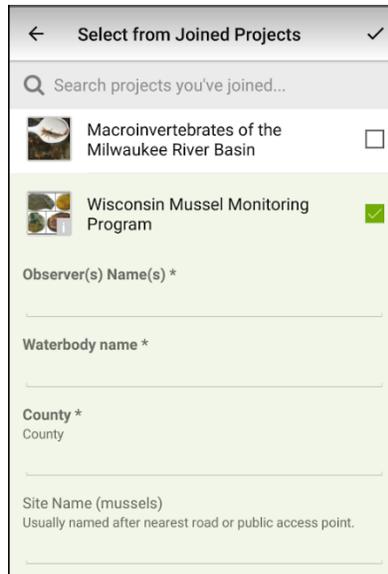
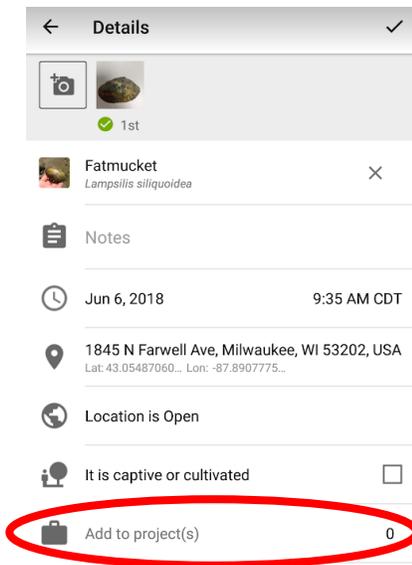
Adding an image to an iNaturalist project

The projects Milwaukee Riverkeeper are interested in are **Macroinvertebrates of the Milwaukee River Basin** and **Wisconsin Mussel Monitoring Program**.

If submitting a mussel observation to the Wisconsin Mussel Monitoring Program of Wisconsin, you will be required to fill out some additional information about your observation. See below for a description of how to fill out this form.

Smart phone app

Prior to submitting your observation smartphone users can add projects during your initial observation upload. Under the projects tab you can select the project you would like to add to. If you are adding to the Wisconsin Mussel Monitoring Program you will be immediately prompted to add additional required information before being able to add to the project.



Required Additional Mussel Info:

Observers Name

Waterbody Name

County

Number of Living Adults

After adding your observation to a project on the iNaturalist app you can submit your observations.

Web Browser

Adding to a project through the web browser requires a few additional steps. After submitting your observation, you will be taken to a list of your observations it will look similar to the image below. Click on the most recent submitted observation to add to projects.

Your observations

Home Observations Calendar Favorites Lists Journal IDs Projects Profile

Add Observations Batch edit Search

Photos / Sounds	Species / Taxon Name	Date observed	Place	Date added	
	Fatmucket <i>Lampsilis siliquoidea</i>	May 22, 2018 07:18 PM CDT	Shorewood, WI, USA (Google, OSM)	May 25, 2018 11:23 AM CDT	3 IDs Research Grade Edit View »
	Spike <i>Elliptio dilatata</i>	May 22, 2018 07:39 PM CDT	3565 N Morris Blvd, Shorewood, WI 53211, USA (Google, OSM)	May 22, 2018 07:43 PM CDT	3 IDs Research Grade Edit View »
	Fingernail Clams Genus <i>Sphaerium</i>	May 16, 2018 10:42 AM CDT	2642 Middle Rd, Campbellsport, WI 53010, USA (Google, OSM)	May 17, 2018 10:08 AM CDT	1 ID Needs ID Edit View »

Once in the observation on the right hand side there is a place to add projects. Search for the project you are looking to add to. If you are submitting a mussel observation you will be prompted to add the additional information.

✓ Projects

Add to a project

- Macroinvertebrates of the Milwaukee River Basin
- Wisconsin Mussel Monitoring Program

Wisconsin Mussel Monitoring Program

Please complete the following to add this observation to the project:

Observer(s) Name(s) *

Waterbody name *

County *

County

Site Name (mussels)

Cancel Add to project

Using Milwaukee Riverkeeper's Guides to Aid in Identification

iNaturalist holds many resources to help identify your observations, one useful tool is the guides section. The guide section holds specific guides created by users to aid with particular species identification. Milwaukee Riverkeeper has created two guide to help you identify invertebrates in the Milwaukee River Basin. Firstly, we have created a guide to freshwater mussels in our area to help monitors identify their observations without being overwhelmed with species that are not likely found in our area. The guide name is **Freshwater Mussels of the Milwaukee River Basin**. The guide has images and helpful identification characteristics of species likely to be found in the Milwaukee River Basin.

The second guide was created to help volunteers identify groups of macroinvertebrates while completing a Biotic Index. Photos of the most common species of invertebrates found in the Milwaukee River Basin were taken from the internet and the guide was assembled. This guides name is **Macroinvertebrates of the Milwaukee River Basin**.

For smartphone user's, guides can be found under the main options tool bar. Those looking for the guides on your web browser will need to select the "More" tab and then select guides. Search for the guide by searching "Freshwater Mussels", looking through the results select "**Freshwater Mussels in the Milwaukee River Basin**". Likewise, you can search for "Macroinvertebrates" to find the second guide. Once in the guide explore the information and use it as a helpful tool while in the field! Stay tuned for more guides created by Milwaukee Riverkeeper.

Guides / Freshwater Mussels of the Milwaukee River Basin

Freshwater Mussels of the Milwaukee River Basin

Enable offline access PDF / Print Edit

This guide is meant to help individuals identify the major species of freshwater mussels that are present in the Milwaukee River Basin. Species were chosen to be included in this guide based off of data collected from a study completed in 2017 by Milwaukee Riverkeeper. Other species may be [...more](#)

All 14

Search Search

Sort Grid Card

TAGS

- common 2

TAXONOMY

- Subclass Heterodonta 1
- Subclass Palaeoheterodonta 13



Flutedshell¹
Lasmigona costata



White Heelsplitter¹
Lasmigona complanata



Giant Floater¹
Pyganodon grandis



Elktoe¹
Alasmidonta marginata