Using iNaturalist to assess invasive plants around Squam Lake

What is iNaturalist?

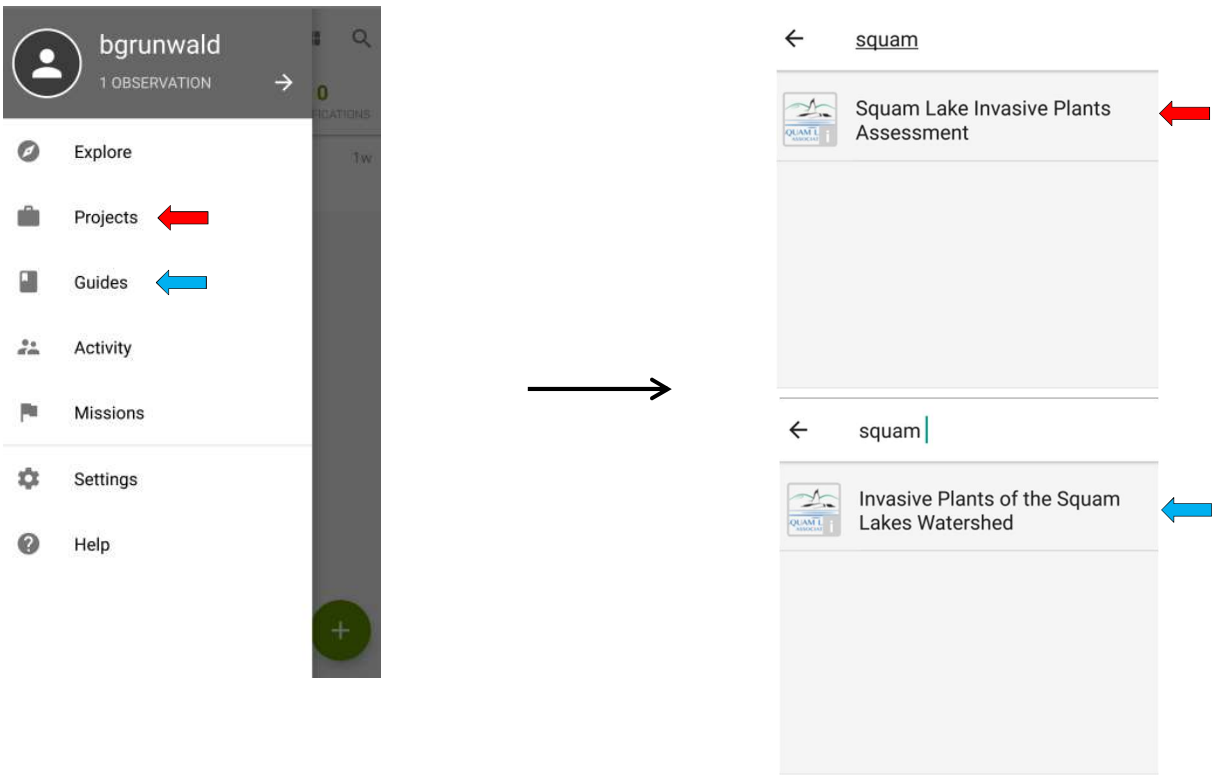
iNaturalist is one of many smartphone apps that allows users to upload georeferenced observations (usually accompanied by photos) of organisms they encounter. This app can be an excellent way for individuals to appreciate the biodiversity around them, by looking at other users' observations, or receiving community input to help identify the organisms they encounter. Additionally, users can participate in a project by contributing their own observations to help achieve some conservation related goal. The SLA has created a project called the "Squam Lake Invasive Plants Assessment" to help map out the presence of terrestrial invasive plants in the Squam Lake watershed, using observations made in iNaturalist by community members.

How can I use this app to help the SLA assess invasive plants?

Step 1: Download the free iNaturalist app and create an account. If you prefer to not use your smart phone to upload your observations, iNaturalist can also be accessed on a web browser on a computer (inaturalist.org).

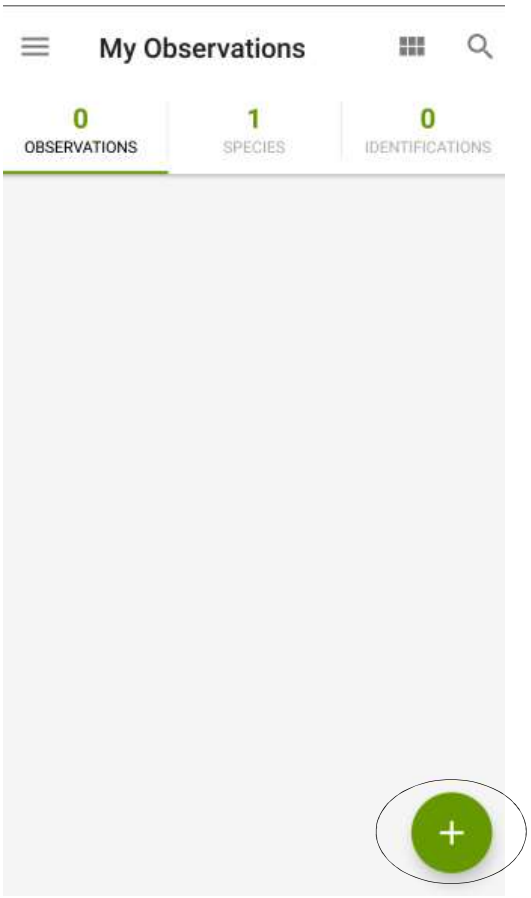
Step 2: **Join the SLA's project**

Select the menu at the top left of the app and find the SLA's "Squam Lake Invasive Plants Assessment" under projects. We recommend downloading the "Invasive Plants of the Squam Lakes Watershed" guide as well.



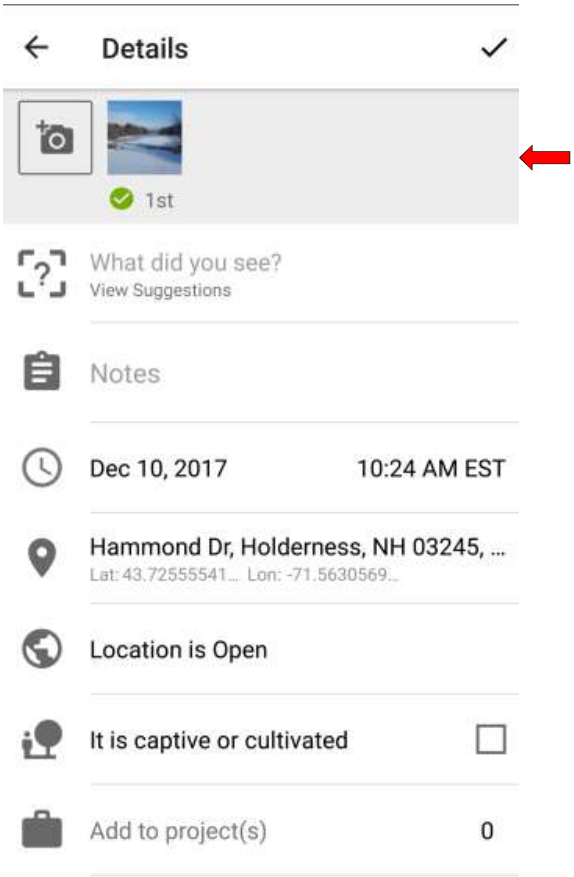
Step 3: Add an observation

After you have joined the project, add an observation to the project. Select the green “+” under “My Observations” to create a new field observation.



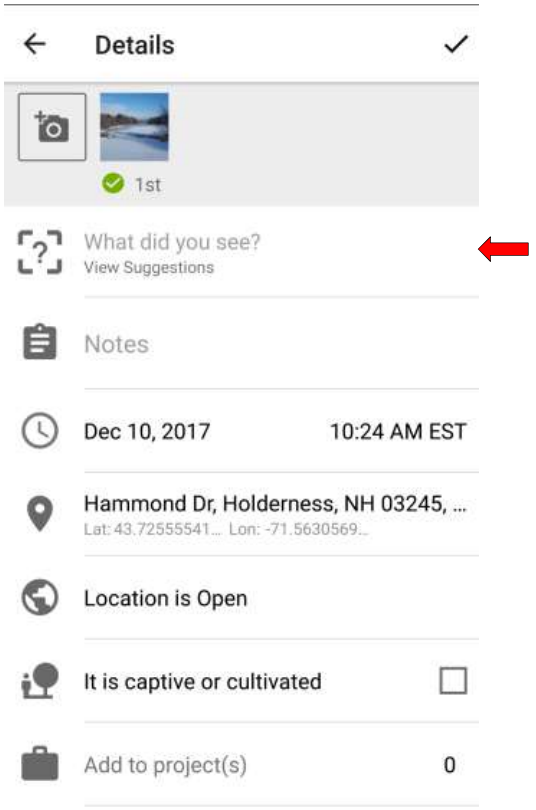
Step 4: Add a picture

You will be prompted to take a photo (if you are entering the observation in the field) or choose an existing image. At least one picture of the plant is required for the project, but additional pictures can be selected in the next screen.



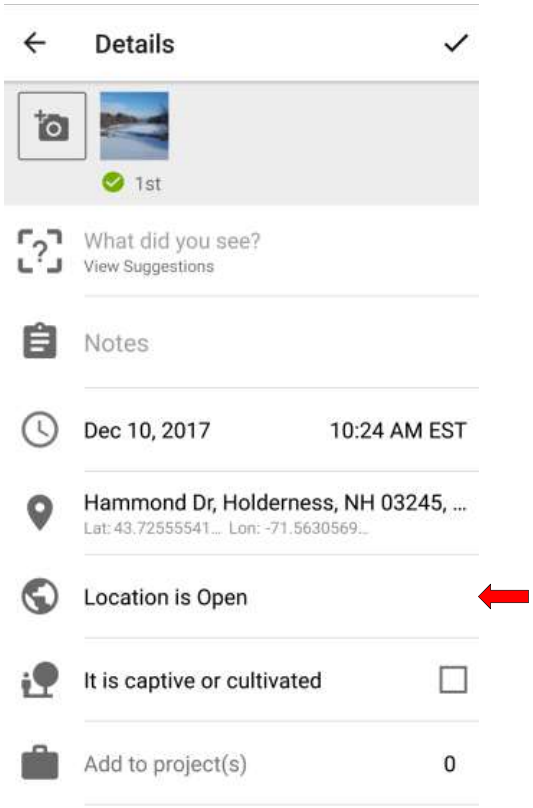
Step 5: Species identification

Select “What did you see?” and search for the species of invasive plant you are observing. This is just an initial observation that does not have to be correct, so make your identification to the best of your ability at the time. More information about identifying the invasive species of concern in Squam can be found in the FAQ below.

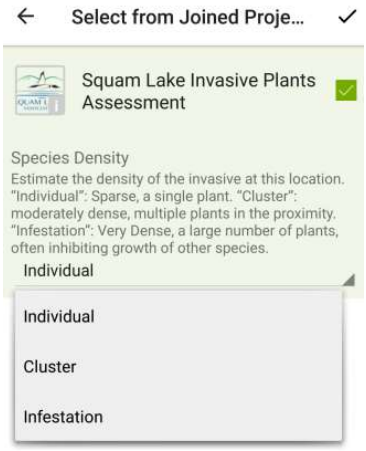


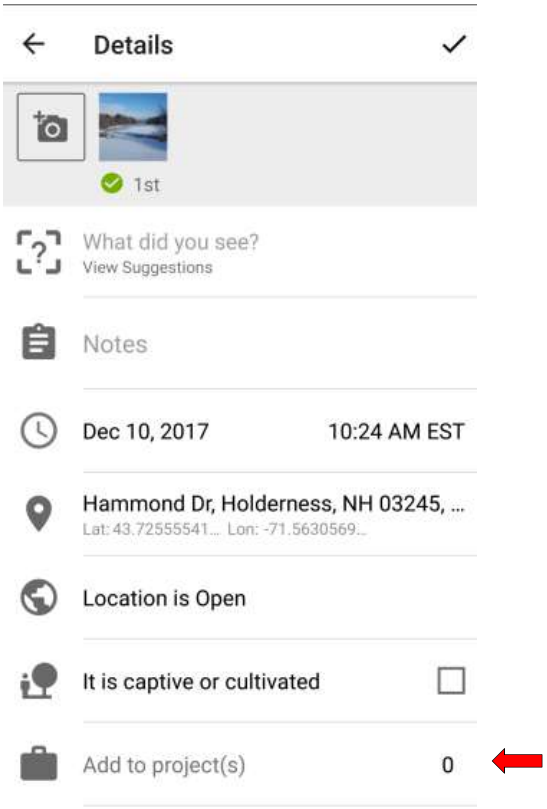
Step 6: Geoprivacy selection

The geoprivacy selection determines how visible the location of your observation is to other users. iNaturalist automatically selects “Location is Open”, however we recommend making this selection “Location is Obscured” if you are unsure of which setting is the best choice for your observation. More information about the geoprivacy selections in iNaturalist can be found in the FAQ below.



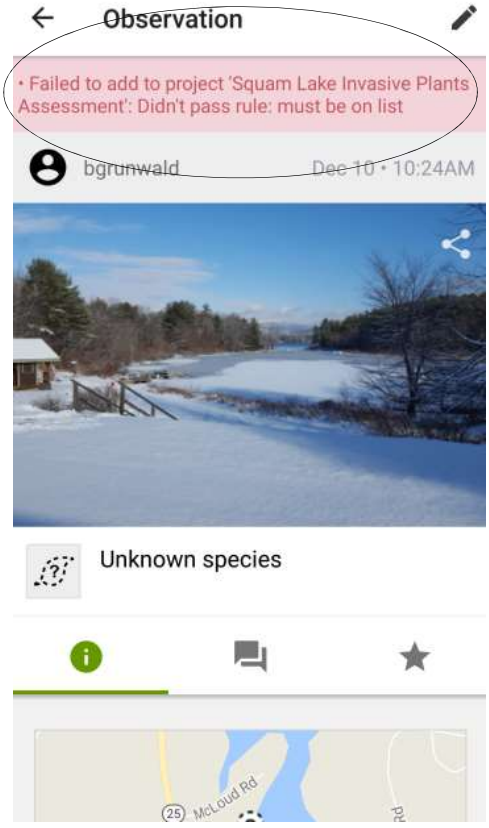
Step 7: Finally, select the SLA's project which should appear if you have joined the project from step 1. There is also an option to choose the species density of the invasive you are observing (below). This is not a required piece of information but is useful for the accuracy of the project and you are encouraged to include this assessment of species density.





Troubleshooting:

Entries to the project are required to (1) have a picture and (2) be a species on the project list (found in the "about" section in the project or the guide). If you receive an error after submitting your observation to the project, please ensure that these two fields are completed.



SLA's iNaturalist FAQ

How do I know if a plant is an invasive species?

The SLA is primarily tracking the presence of seven plants that are known to be established invasive species in the watershed. A pamphlet to these species is available on the SLA webpage that can be printed out and used as a basic field guide. There is also a species list on the iNaturalist project "about" page and a guide (see instructions above) on iNaturalist can be saved for field IDs. Additionally, if you are simply unsure that the plant you are observing is an invasive species, you can post your observation with adequate photos on iNaturalist and receive help with the identification from other users.

What if I find a terrestrial invasive plant that is not on the SLA's project list?

Even though the seven species listed on the guide are our primary concern, please make an independent observation on iNaturalist of, and inform the SLA about, any other potential invasives in the watershed. Invasive species that are not well established are often the species of highest conservation concern because their smaller populations maybe easier to control and their ecological impact on the region may not be as well understood. Also, observations made in iNaturalist may be incorporated into the project at a later date if the plant is added to the project list.

If I find an invasive plant, what should I do with it?

Do not remove invasive plants you encounter unless you have explicit approval from a land owner or are participating in an organized invasive species removal effort. Although invasive species are often harmful to the ecosystem, and a long-term goal of this project is to help reduce the populations of invasives in the region, the primary purpose of participating in the project is to better understand the presence and distribution of these species. However, if you do identify invasive plants on your own property feel free to remove them (after adding your observation to the project) using the appropriate methods if you are comfortable doing so.

What is geoprivacy and what setting should I use?

Geoprivacy settings control who can see the location of your observation on the map. Your photos can either be open (the public can see the exact location of your photo), obscured (the public can see the approximate location of the observation), or private (the public cannot see the location of the observation).

The SLA encourages participants to obscure their observations that are located on property not affiliated with the participant. When an observation is added to the SLA project, the SLA project curators will be able to see the exact location regardless of the geoprivacy setting. Therefore, obscured observations will still allow the SLA to accurately assess the presence of invasive plants while discouraging the removal of plants outside of organized removal efforts.

How else can I use iNaturalist to contribute to conservation related projects?

The SLA also has a general project, “Squam Lakes Watershed Bioinventory”, that encompasses all species you might encounter in the Watershed. Feel free to add observations to it and help us better understand the diversity and distribution of organisms in the region.

There are many other citizen science initiatives on iNaturalist driven by contributions from ordinary users, so don’t be surprised if your observations get picked up by one of the many other projects out there.