

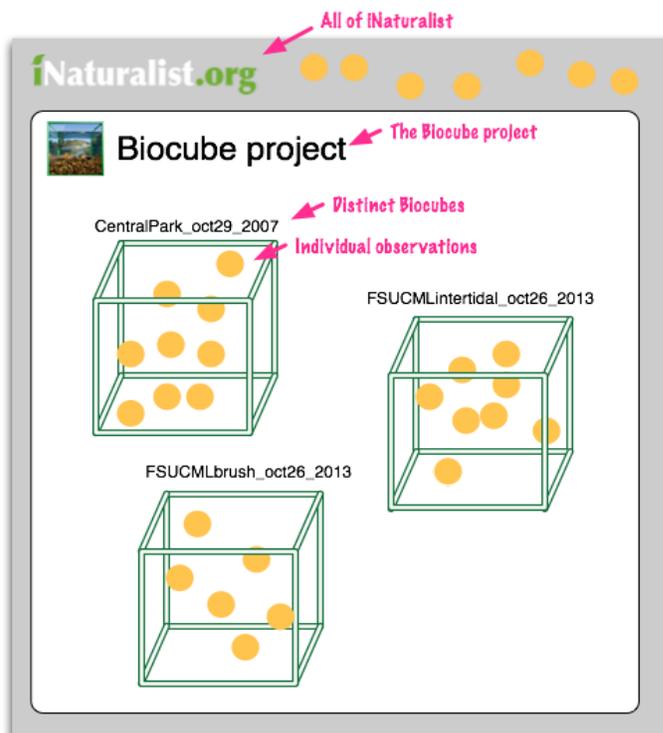


How to record your biocube data using iNaturalist

This document will explain how to record your Biocube data using [iNaturalist](#). iNaturalist is a social network where participants share observations of living things from nature in order to help identify them and to create high quality data for science. Please follow these linked tutorials to learn how to create an iNaturalist account and understand the basics of how to [post](#) and [identify](#) observations.

We have two suggestions to make your iNaturalist experience as smooth as possible. (1) We recommend that you use the desktop interface to enter your data. You can find the iNaturalist app for free at [iTunes](#) and on [Google Play](#), but for several reasons, we think that the desktop interface is easier to use and more appropriate for this project. (2) Although multiple students may be photographing and documenting organisms from the cube, we suggest that one user compile and upload all of your biocube data to iNaturalist at the end of the exercise. This will allow you to easily find all of your observations, view the summary statistics and manage privacy concerns. If multiple users are contributing images, these tasks become much more difficult or impossible.

A Biocube is an effort to document all living things found within a single cubic foot. Using iNaturalist, you'll strive to record an separate observation for each kind of living thing observed. Each observation will be accompanied by a photo as evidence, a location, date, an identification, and a count for the number of specimens of that kind observed. If you take good photos, the iNaturalist community will be able to help you refine your identifications.



Within iNaturalist, all observations from Biocubes are first grouped within a single umbrella 'Biocubes project'. Within this project, observations from the same distinct Biocube are further grouped using a unique 'Biocube ID' (e.g. CentralPark_oct29_2007). Each distinct Biocube has an accompanying 'Journal post' describing the sampling event with the Biocube ID as its title.

This document is organized into 4 parts:

[Part 1: Join the Biocubes project](#)

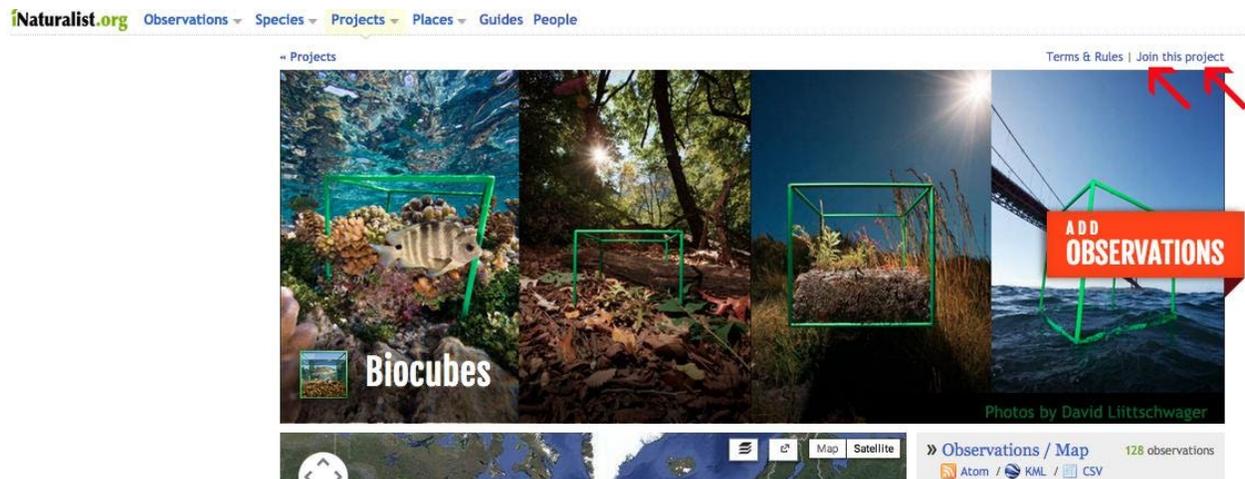
[Part 2: Add observations from computer](#)

[Part 3: Create a Journal Post for your Biocube](#)

[Part 4: Review your Biocube data](#)

Part 1: Join the Biocubes project

Once you've created an iNaturalist account and are familiar with basics of posting and identifying observations, join the [Biocubes project](#).



Next, send our biocubes admin, [Jen](#), a message to let her know you'll be executing a biocube. Tell her a bit about your biocube team and your planned location. She'll create a biocube ID for your project, which you'll need when you enter your data. If you have any trouble setting up, you can also message her for that.

When you've selected your biocube site, start entering information about the location, habitat and conditions in the online [biocube description](#) form. Check out the [master list of biocube descriptions](#); yours will be added there.

Now you're ready to post your biocube observations, either from your computer (see part 2) or from your phone or tablet (see part 3)

Part 2: Add observations from your computer

From the [Biocubes project](#), click 'Add observations to this project'

iNaturalist.org Observations Species Projects Places Guides People

Projects Terms & Rules | Edit project

Biocubes

Photos by David Liittschwager

ADD OBSERVATIONS

» Observations / Map 127 observations
Atom / KML / CSV / All CSV

» Checklist 55 taxa observed

» Journal

» Members 7 members
View all members -

» Stats

Create one observation for each kind of organism observed. You can have an observation for your six big black ants, and another one for your 11 little red ants, for instance. Upload a photo (or several) for your first observation (your first kind of organism) from your computer using the “choose file” button. Add your initial identification in the “What did you see” box.

iNaturalist.org Observations Species Projects Places Guides People

Add an observation to **Biocubes** Add: Batch · From list · Import · From photos

What did you see? ID Please? [Lookup](#)

Species unknown ↗

Was it captive / cultivated? ↗

When did you see it? ↗

(GMT-05:00) Eastern Time (US & C.) ↕
e.g. "2015-01-20 14:14:35", yesterday at 4pm

Description

Where were you? Name of the place you made the observation ↗

Lat: Lon: [Edit](#)
Acc (m): Src:

 Map Satellite

Google Imagery ©2015 NASA, TerraMetrics Terms of Use

Add media Add photos Add sounds

Source: ↕

Select one or more photos

No file chosen

Sync observations with photo metadata? [clear](#)

[Add taxonomic tags to selected Flickr photos](#)

Tags *Comma-separated, please* ↗

Change geoprivacy ↕ ↗

Add an observation to  Biocubes

Add: Batch · From list · Import · From photos

What did you see? ID Please? [Lookup](#)

Species unknown

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(GMT-05:00) Eastern Time (US & C.
e.g. "2015-01-20 14:14:35", yesterday at 4pm

Description

Tags Comma-separated, please

Where were you? [Edit](#)

Lat: Lon:
Acc (m): Src:



Change geoprivacy

Add media

Source:

Select one or more photos No file chosen

Sync obs. w/ photo metadata?

Add taxonomic tags to selected Flickr photos -

If you have dates and locations on your photos as metadata already (this is likely if you took them with a mobile device), the Photo Uploader should detect and properly fill in the fields. But double check to make sure you upload the location for your cube collection and **not** for the room where you processed your samples. You can also add that information in this form directly.

If there is important information you would like to add (eg: this worm was 4 cm long) do that in the Description field. You can enter or edit your biocube location by clicking on the provided map. Pinpoint your location as precisely as possible by zooming in and adjusting the diameter of the circle, by clicking on it and dragging the handles that pop up; use the finish time of collection of your biocube in the date/time box.

Scroll down. There are two more fields to consider. “Number of specimens” should be included if your specimens are countable. You can estimate it, if you had about a hundred and fifty tiny spider mites in your biocube. If you had a patch of lichen, or part of a plant, like a leaf, then number of specimens is less appropriate.

Biocube ID is a required field. Find the name Jen assigned to your biocube in the dropdown menu.

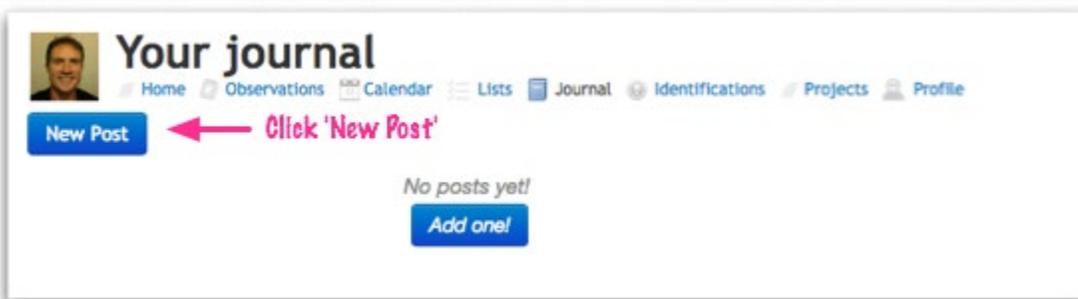
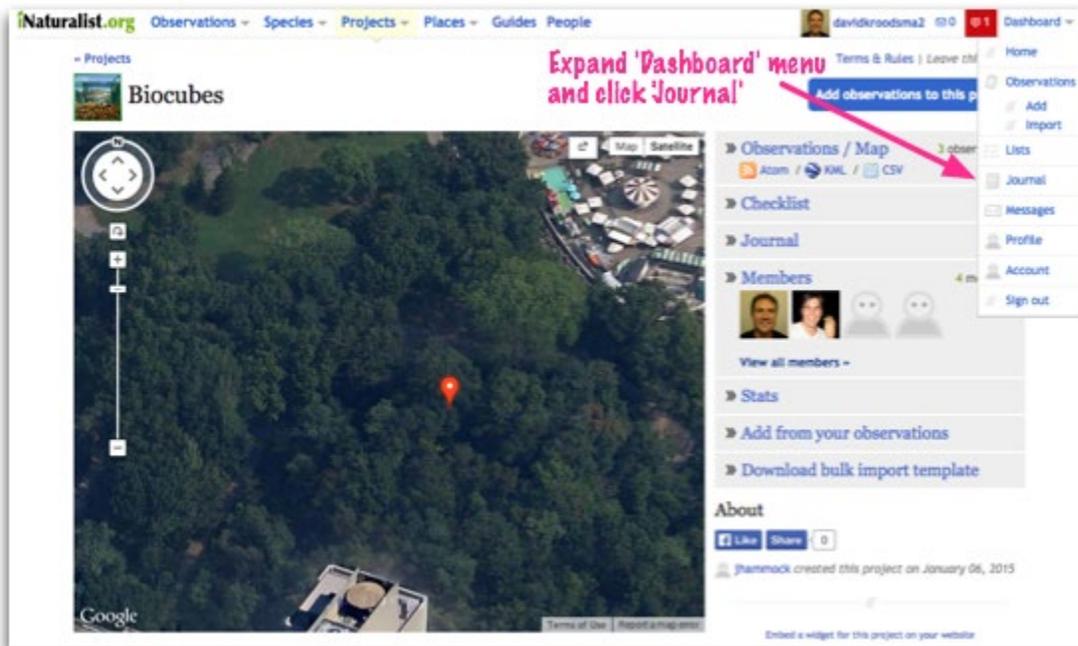
You’re done! Select “Save”, or “Save and add another” if you have another observation ready to go. Using “Save and add another” is recommended, as it will re-populate most of your fields, so it preserves the precision and accuracy of your biocube location and also saves you from re-entering some information.

The image shows a screenshot of the iNaturalist observation form. At the top left is a large empty box for photos. To its right is a map of South America with a red location pin. Below the map is a 'Change geoprivacy' dropdown set to 'open'. Underneath is a 'Tags' field with the instruction 'Comma-separated, please'. The main section is titled 'Fields for Biocubes' and contains a 'Number of Specimens' input field with a red arrow pointing to it, and a 'Biocube ID' dropdown menu with 'Practice_biocube' selected and a red arrow pointing to it. Below these fields is a red asterisk and the word 'required'. At the bottom of the form is a 'More fields' section with an 'Add a field' dropdown, a 'Create a new field' button, and a 'View all fields' link. At the very bottom are three buttons: 'Save observation' (highlighted in blue with a red arrow), 'Save and add another', and 'Cancel'. On the right side, there is a 'Share on' section with icons for Twitter and Facebook, and a '(beta)' label.

You should make sure that each observation has the proper location, date, and at least a coarse identification. If your photos are high quality enough, it is okay to use coarse identifications like ‘Spiders (Order Araneae)’ and rely on the iNaturalist community for help refining these IDs.

Part 3: Create a Journal Post for your Biocube

You can also use the Biocube ID to create a Journal post where you can describe the distinct Biocube in more detail and group the relevant observations onto a single page.



Feel free to write anything you'd like in the post about particular Biocube. You can embed photos posted elsewhere on the internet using HTML tags. It is a good idea to include a photo of the Biocube itself here. Make sure you associate all the relevant Biocube observations with the journal post by checking them on the right hand side. When you are ready, publish your journal post.

[← Back to post](#)

Editing "CentralPark_oct29_2007"

Post from your Journal

Use Biocube ID as the Title

Title
CentralPark_oct29_2007

Body

The first one cubic foot was done in Central Park...

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Write a description of the particular Biocube. You can link to photos posted on the internet by embedding their URLs in 'img' tags

Observations

You can choose observations to associate with this journal post.

[← Prev](#) [Select all](#) [Select none](#) [Next →](#)

<input checked="" type="checkbox"/>	 Leopard Slug <i>Limax maximus</i>	October 29, 2007 08:57 PM UTC	Central Park, New York, New York, United States (Google, OSM)
<input checked="" type="checkbox"/>	 Tufted Titmouse <i>Baeolophus bicolor</i>	October 29, 2007	Central Park, New York, United States (Google, OSM)
<input checked="" type="checkbox"/>	 Sciurus carolinensis	October 29, 2007	Central Park, New York, United States (Google, OSM)

Select the relevant observations from the Biocube

Allowed HTML: a, abbr, acronym, b, blockquote, br, cite, code, dl, dt, em, embed, h1, h2, h3, h4, h5, h6, hr, i, iframe, img, li, object, ol, p, param, pre, small, strong, sub, sup, table, ul

[Save](#) [Unpublish](#) [Preview](#) [Delete](#) **← Publish the post**

You might receive comments on the journal post from the iNaturalist community, feel free to email a link to the post to all of the participants so they can explore what was found.

Post published!

Your Journal / CentralPark_oct29_2007

CentralPark_oct29_2007

The first one cubic foot was done in Central Park...



Posted by [DavidBroodman2](#), January 08, 2015 01:11 AM

Observations

Grid List Map



Part 4: Review your Biocube data

Once you've finished uploading your Biocube data, you should be able to see your observations on the Biocube project page. Here you can export your observations alongside observations from other Biocubes for analysis. You can also drill down to explore individual observations.

The screenshot displays the Biocubes project interface. At the top left is the Biocubes logo. A blue button at the top right says "Add observations to this project". The main area features a satellite map of Central Park with a red location pin and a blue location pin. A pink arrow points from the text "Click on specific observations" to the red pin. To the right of the map is a sidebar menu with options: "Observations / Map" (3 observations), "Checklist", "Journal", "Members", "Stats", "Invite observations", "Add from your observations", and "Download bulk import template". A pink arrow points from the text "Export Biocube data as a CSV" to the "Checklist" option. Below the map, the "Recent observations" section shows a single entry: "Something..." by "davidkroodma2" on "January 11, 2009 08:07 AM UTC" at "Central Park, New York, New York, United States (Google, OSM)". A pink arrow points from the text "Click on specific observations" to this entry. The "About" section at the bottom right indicates the project was created on January 06, 2015.

If you've followed the steps in this document, each observation should include a taxon name (i.e. identification), a date, a location, and additional fields for the Biocube ID and the Number of Specimens (How many individuals of that species did you find?) as well as membership in the umbrella Biocube project, and membership in your Journal Post for the distinct Biocube.

The screenshot shows an iNaturalist observation page for *Sciurus carolinensis*. Red arrows point to several key elements:

- Taxon name:** Points to *Sciurus carolinensis* in the title.
- Date:** Points to "October 29, 2007" in the title.
- Photo:** Points to the image of the squirrel.
- Location:** Points to the map showing Central Park, New York.
- Added to the 'Biocubes' project:** Points to the "Biocubes" project tag in the "Projects" section.
- Fields for 'Biocube ID' and 'Number of Specimens' properly filled out:** Points to the "Biocube ID: CentralPark_oct29_2007" and "Number of Specimens: 1" fields in the description.
- Added to the proper Journal post:** Points to the "Journal post" link in the "Comments & Identifications" section.

The page content includes:

- Title:** *Sciurus carolinensis* observed by davidkroodisma2 on October 29, 2007
- Photo:** A photograph of an Eastern Gray Squirrel.
- Map:** A map of Central Park, New York, with a location pin.
- Identification Summary:** Shows the user's ID as "Eastern Gray Squirrel (*Sciurus carolinensis*) Aarex?".
- Description:**
 - Size: 7.09" (18 cm) body length
 - Added: Jan. 08, 2015 00:47:02 +0000
 - Biocube ID: CentralPark_oct29_2007
 - Number of Specimens: 1
- Projects:** Includes the "Biocubes" project.
- Comments & Identifications:**
 - Comment by davidkroodisma2: "Ok, how the heck did you get that shot?"
 - Identification by davidkroodisma2: "Eastern Gray Squirrel (*Sciurus carolinensis*) Aarex?"

You're likely to get feedback from the iNaturalist community in the form of comments and identifications on your observations. This community feedback is an important part of teaching other naturalists about what you found and creating high quality, independently vetted scientific data. Please be responsive, polite, and a good steward of your Biocube data!