


# MOBILE APP USER MANUAL *Caterpillars Count!*


## GETTING STARTED

To get started with *Caterpillars Count!* on a mobile device, install the web app on your home screen based on the relevant instructions below.

### SAFARI ON APPLE IOS

- Launch Safari.
- Open [our website](#), if you're not already here.
- Tap the Action or Share icon  at the bottom of the screen.
- Select "Add to Home Screen" - you may need to swipe up from the bottom of the screen with two fingers to reveal additional options.
- Tap on "Add" at the top right corner of the screen to finish and add the icon to your home screen.

### CHROME ON GOOGLE AND ANDROID

- Launch Chrome.
- Open [our website](#), if you're not already here.
- Tap the 3 dots menu  by the address bar.
- Select "Add to Home Screen".
- Tap "Install" to finish and add the icon to your home screen.

These instructions simply add the web app icon to your home screen. You can now use this icon as if it were any other installed app. Note that this browser-based web app is meant to replace the iOS and Android mobile apps available from the Apple App Store and Google Play, respectively. The experience of the web app should be basically the same. Those apps will not be maintained further starting in 2026, and new functionality will only be added to this mobile web app. If you install this new mobile web app, we suggest deleting the old iOS or Android app (if you had installed it) to avoid mixing them up.



## SIGN IN

**SIGN IN!**

[CREATE NEW ACCOUNT](#) | [FORGOT](#)

## Create Account

If you have not already created an account through the website, you can tap the "Create new account" button. You'll then need to confirm a registration email sent to that account. Once you've registered, log in with your username and password. From that point on, you can open the app and get started without having to enter your user information.

caterpillarscount.unc.edu

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## CONDUCTING A SURVEY

### Site information

**SURVEY CODE AND PASSWORD.** To conduct a survey, you first need to enter the unique 3-letter code specifying the survey branch you are at. Confirm that the site name, circle, and tree species is correct. The first time at a new site, you will need to enter the **site password** (not your personal password) which should have been provided to you by the local site coordinator. You only need to enter the password one time for a site and from then on the app will remember that you have permissions.

### CONDUCTING A SURVEY WITHOUT CELL SERVICE OR WIFI

Even if you have no cell service at your site, you can still use the web app to conduct surveys. However, there are a few differences to be aware of when using the app without cell service.

- First, you will not be able to log in to the mobile app in the field, so **be sure to log in while you have an internet connection at home** or in the office beforehand.
- Second, the app will not be able to automatically check whether you have previously entered the appropriate **Site Password** before (whereas with internet, it would remember if you had, and wouldn't bother asking for the Site Password again). **You will have to enter the Site Password for the first survey** of the day, but for each subsequent survey you should be able to check the box labeled "*Same as last submission*". (You might need to uncheck and recheck this box if the password is not being filled.)

**DATE AND TIME.** Date and Time will autofill with the current time and date, and unless you are entering data that was collected on some other occasion, you will not need to adjust them.

**SURVEY TYPE.** Specify whether you will conduct a **Visual Survey** (in which you inspect a set of 50 leaves and associated petioles and twigs), or a **Beat Sheet Survey** (which requires that you beat a branch over a "beat sheet" [assembly instructions [here](#)]).

**NOTES.** This is a space to enter notes about potentially relevant observations that might

The screenshot shows the 'Caterpillars Count!' app interface. At the top is a dark header with the app name in yellow script and a menu icon. Below the header is a green location pin icon. The main content area is titled 'Step 1: Site Information'. It contains several input fields: 'Branch survey code' with a red box around it containing 'EJR' and a red label 'Example Site, Circle 1, American beech'; 'Site password' with an empty white box; 'Date of survey' with '3/11/2025'; 'Time of survey' with '9:44 pm'; 'Observation method' with two buttons, 'VISUAL' (dark grey) and 'BEAT SHEET' (light grey); 'Notes' with an empty white box; and a checkbox labeled 'wet leaves'. At the bottom is a large yellow button labeled 'CONTINUE'.

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apply to the entire survey as a whole. For example, perhaps the branch was bent or disturbed since the last time it was surveyed, or there was an unusual weather event.

**WET LEAVES.** Tick this box if the foliage you are surveying is wet from dew or recent rain, which might impact arthropod activity.

## Arthropod information

Specify whether you observed any arthropods during your survey, and then tap **Continue**.

The first screenshot shows the 'SUBMIT OBSERVATIONS' screen with the question 'Did you find any arthropods?' and two buttons: 'YES' and 'NO'. A yellow 'CONTINUE' button is at the bottom.

The second screenshot shows the 'SUBMIT OBSERVATIONS' screen with the question 'Arthropod group:' and a dropdown menu. The menu is open, showing options: 'Not selected', 'Ants', 'Aphids and Psyllids', 'Bees, Wasps, Sawflies', 'Beetles', and 'Caterpillars'. A yellow 'CONTINUE' button is at the bottom.

The third screenshot shows the 'SUBMIT OBSERVATIONS' screen with the question 'Arthropod group:' and a list of three entries: '4 Ants (3mm)', '1 Ants (10mm)', and '1 Caterpillars (35mm)'. Each entry has a trash icon to its right. Below the list is a grey button labeled 'ADD MORE ARTHROPODS'. A yellow 'CONTINUE' button is at the bottom.

If you selected **Yes**, then you can now select the arthropod you observed from the dropdown menu. If the arthropod type is not listed and you know what it is, you may select "**Other**" and describe/name it in the Arthropod Notes field. If you are not sure what type of arthropod you observed, you may select "**Unidentified**," and describe any relevant aspects of its appearance in the Notes. Also record the length of the arthropod(s) you observed in *millimeters*, and the number of arthropods observed of this type and size. You may optionally take a photo of the arthropod. Click **Save** to add this observation record to your survey, and you will see a record of this observation displayed in the **Arthropod information** section. For every new arthropod you see within this survey, fill out a new record by tapping **Add more arthropods**.

Note that if you conducted a survey and saw 5 ants, four of which were 3 mm and one of which was 10 mm, and 1 caterpillar of 35 mm, that would require 3 separate records to fill out: 1 for the ants of size 3 mm, 1 for the ant of size 10 mm, and 1 for the caterpillar.

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You can optionally take a **photo** of any arthropod you observe. **We highly encourage taking photos of caterpillars!**

Any photos you take with the app will get submitted automatically to the project's iNaturalist account under a Creative Commons CC0 (no rights reserved, public domain) license. To find the observations only submitted by you, paste in this URL

[www.inaturalist.org/observations/caterpillarscount/?field:user=<username>](http://www.inaturalist.org/observations/caterpillarscount/?field:user=<username>) but replace "<username>" with your own Caterpillars Count! username (the first part of the email address you used to register with our project).



## Plant information

**PLANT SPECIES.** Plant species names should autofill assuming your site coordinator has entered them in the database and you have cell/wifi service. (Site coordinators do this by clicking **Manage My Sites** and then **Edit Survey Plants**.)

**Amount of Branch Surveyed.** Depending on whether the branch is *broad-leaved* or *coniferous*, you will characterize the amount of branch surveyed differently.

For broad-leaved branches you will be asked for:

**LEAF COUNT.** If you conduct a Visual Survey, this count will be 50 and cannot be edited. If you conduct a Beat Sheet Survey, please estimate the number of leaves that were hanging directly over the beat sheet when you beat the branch. Note that for plants with compound leaves like hickories and ashes, a survey "leaf" refers to an individual leaflet.

**AVERAGE LEAF LENGTH.** Record the length of an average leaf from your survey branch from the tip to the base (not counting the petiole/stem) in centimeters (2 inches = 5 cm, 4 inches = 10 cm, 6 inches = 15 cm). Knowing the dimensions of your phone in centimeters can be a handy reference point!

*Caterpillars Count!*

**SUBMIT OBSERVATIONS**

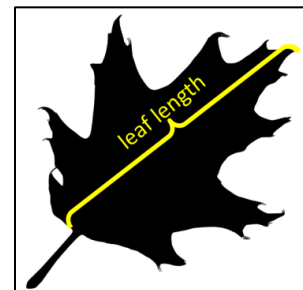
Step 3: Plant Information

Plant species:  
American beech

Avg. leaf length (cm): 12      Number of leaves: 50

Herbivory score:  
Moderate (11-25%)

**FINISH**



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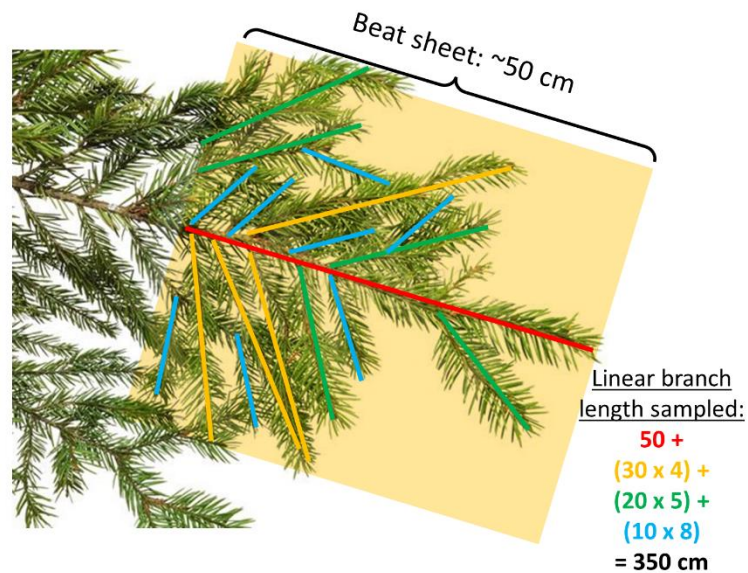
For coniferous branches you will be asked for:

**AVERAGE NEEDLE LENGTH.** Record the length of an average needle from your survey branch in centimeters.

**LINEAR BRANCH LENGTH.** Linear branch length sampled is the sum of the lengths of all of the branches and twigs examined. For a visual survey, we suggest examining between 100-300 cm of branch and twigs, including all of the component needles.

Whichever total length works well for you, we ask you to be consistent and use it for all of your visual surveys on conifers, if possible.

For a beat sheet survey, after beating the branch and entering your arthropod observations, you will estimate the sum of the linear branch length sampled as in the animated figure below. Read more about surveying conifers [here](#).



**HERBIVORY.** Give your survey branch an herbivory score based on how much leaf damage there is on average over the leaves you examined. Herbivory scores are as follows: 0 - none, 1 - trace (<5%), 2 - light (5-10%), 3 - moderate (10-25%), 4 - heavy (>25%). If you summed all of the observed leaf holes together over a 50-leaf survey and were able to cover 5 average leaves, that would be 10%. If leaf holes collectively sum to about 2 average leaves worth, that would be 4%, etc.

Herbivory score:

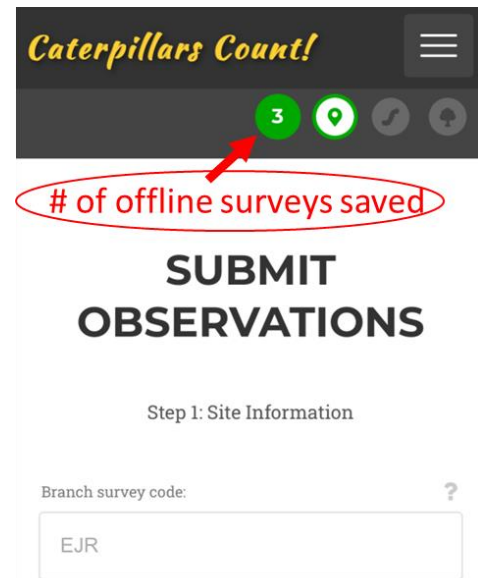
Not selected	
None	
Trace (1-5%)	
Light (6-10%)	
Moderate (11-25%)	
Heavy (> 25%)	

Once you've recorded all arthropods observed, and the plant information for the tree you surveyed, tap **FINISH** and move on to the next survey!

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## SUBMITTING A SURVEY WITHOUT CELL SERVICE OR WIFI

If you do not have a cell/wifi connection, once you hit *FINISH*, the survey will be stored locally on your device, and an icon will show up in the top banner indicating how many stored surveys there are. **These stored surveys will get submitted automatically the next time you get a cell or wifi signal.** If you have closed the app, the surveys will get submitted the next time you open the app with an internet connection.



## MANAGING SITES AND SURVEYS, ETC.

You can access all the other functionality of the website by tapping the menu icon (3 horizontal lines) at the top right, and then selecting **My Account**. This additional functionality includes:

- **Create New Site**
- **Manage My Sites**, where you can
  - Edit your site information (Name, site password)
  - Edit the name and location of individual survey branches
  - Oversee (e.g. add or remove) Site Managers
  - Print branch tags
- **Manage My Surveys**, where you can view and/or edit previously submitted
- **My Stats**, where you can view a summary of your quiz scores, surveys submitted, and identification accuracy
- **Settings**, where you can
  - Change your personal account password
  - Change the name and email associated with your account
  - Edit your privacy setting

Check out all of our related help documents on the [Resources page!](#)