

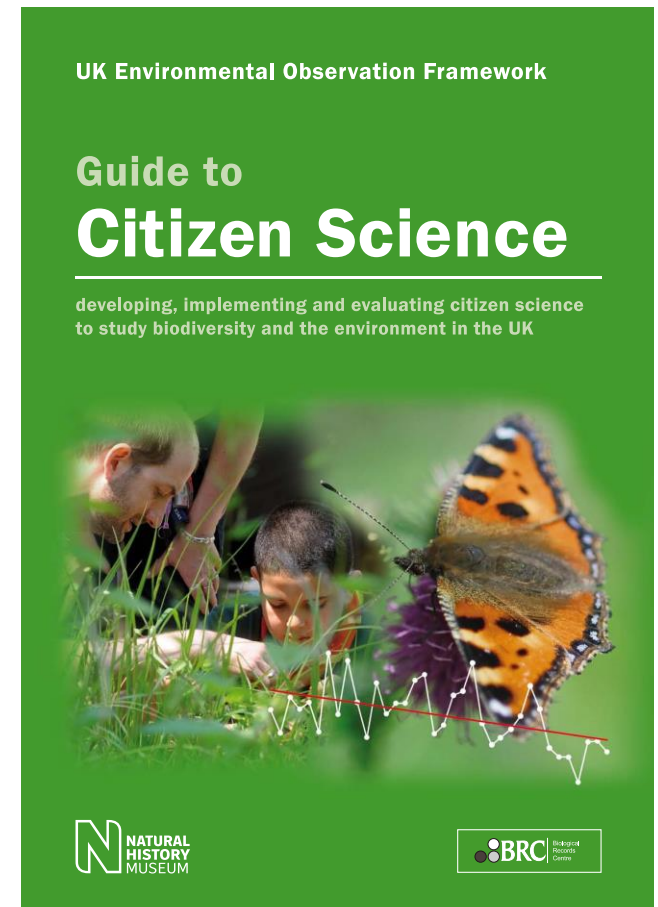


So, you want to start a citizen science project. What next?

ROB BLAIR, BRITT FORSBERG, LUCY FORTSON

INTRODUCTION

Guide to Citizen Science – UK Environmental Observation Framework



TYPES OF PROJECTS

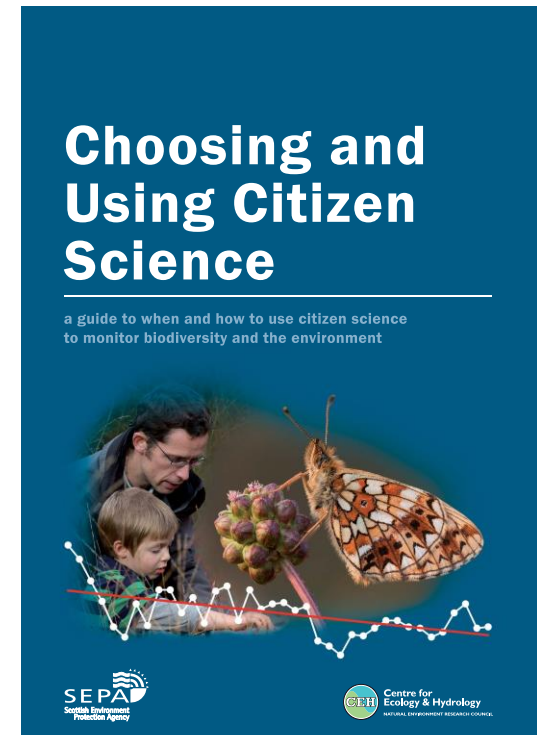
- Contributory
- Collaborative
- Co-Created

- Active Collection
- Crowd Sourcing

IS CIT SCI RIGHT FOR YOU?

Choosing and Using Science

Centre for Ecology
and Hydrology



IS CIT SCI RIGHT FOR YOU?

Should you consider a citizen science approach?

↑ Increasing suitability for a citizen science approach

Clarity of aim/question	Importance of engagement	Resources available	Scale of sampling	Complexity of protocol	Motivation of participants
Clear aim/question	Engagement is important	Plenty of resources	Large-scale sampling	Simple protocol	Good reasons to participate
Vague aim/question	No engagement or only one-way communication	No resources	Small-scale sampling	Complex protocol	Reasons to participate are not clear

The Beginning

THE MINNESOTA BEE ATLAS



ESTABLISH PROJECT TEAM



DEFINE PROJECT AIMS

The Minnesota Wild Bee Atlas engages citizens in documenting distribution and phenology of wild Minnesota bees.

Complements other pollinator surveys by sampling extensively throughout Minnesota; focusing on specific bees that citizen scientists can sample accurately.

IDENTIFY FUNDING & OTHER RESOURCES

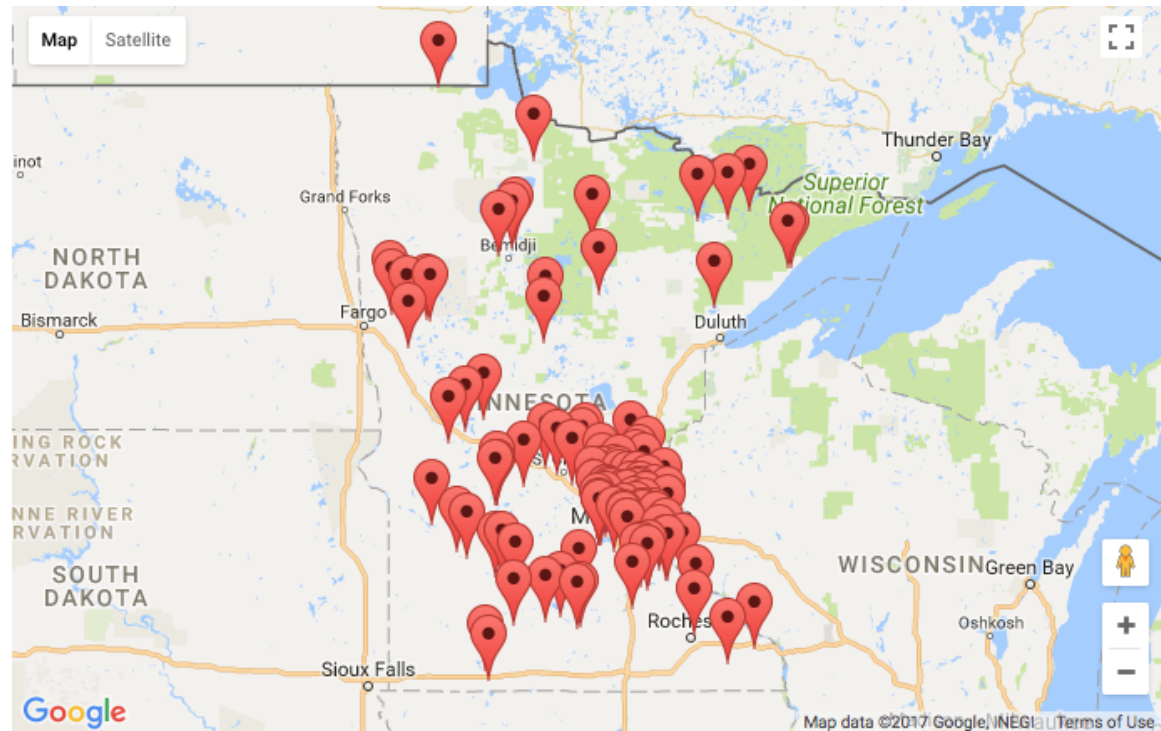


IDENTIFY PARTICIPANTS



Development

DESIGN THE SURVEY OR PROJECT



Block #: _____ Date: _____ Observer: _____ Weather: sunny / cloudy / rainy

Comments:

CONSIDER DATA REQUIREMENTS



	1	2	3
A	Plug: No / Mat/ Part /Full Material:	Plug: No / Mat/ Part /Full Material:	Plug: No / Mat/ Part/Full Material:
B	Plug: No / Mat/ Part /Full Material:	Plug: No / Mat/ Part /Full Material:	Plug: No / Mat/ Part /Full Material:
C	Plug: No / Mat/ Part /Full Material:	Plug: No / Mat/ Part /Full Material:	Plug: No / Mat/ Part /Full Material:
D	Plug: No / Mat/ Part /Full Material:	Plug: No / Mat/ Part /Full Material:	Plug: No / Mat/ Part /Full Material:
E	Plug: No / Mat/ Part /Full Material:	Plug: No / Mat/ Part /Full Material:	Plug: No / Mat/ Part /Full Material:
F	Plug: No / Mat/ Part /Full Material:	Plug: No / Mat/ Part /Full Material:	Plug: No / Mat/ Part /Full Material:
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H	Plug: No / Mat/ Part /Full Material:	Plug: No / Mat/ Part /Full Material:	Plug: No / Mat/ Part /Full Material:
I	Plug: No / Mat/ Part /Full Material:	Plug: No / Mat/ Part /Full Material:	Plug: No / Mat/ Part /Full Material:
J	Plug: No / Mat/ Part /Full Material:	Plug: No / Mat/ Part /Full Material:	Plug: No / Mat/ Part /Full Material:

Plug: "No"= no plug. "Mat"= material including debris, pollen, or other small amounts of material that is not a plug. "Part" = partial plug that partly covers the entire hole diameter, eg a rim around the edge or a hole in a previously full plug. "Full"=plug material fully covering the hole, including chewed vegetation plugs that have dried slightly away from the sides.

Material: Options are "Mud/sand", "Resin", "Cellophane"; "Spider webs", "Chewed vegetation"; "Whole leaf pieces"; "Grass"; "Cotton"; "Loose debris"; "Wood"; "Unknown". Most plug types can have debris in them.

CONSIDER TECHNOLOGY

- CitSci
- iNaturalist
- Zooniverse

DEVELOP MATERIALS

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MINNESOTA BEE ATLAS 2017 VOLUNTEER MANUAL

MINNESOTA BEE ATLAS

Bee Blocks

2017 Volunteer Handbook

Block number _____

Block location _____



TEST AND MODIFY PROTOCOLS



Taking It Live

PROMOTE PROJECT

facebook.com

Minnesota Native Bee Atlas

Robert Home

M
Extension
Minnesota
Native Bee Atlas

Minnesota Native Bee Atlas
@MNBeeAtlas

Home

About

Photos

Videos

Events

Posts

Community

Instagram

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Liked Following Share ...

Send Message

Status Photo/Video

Write something on this Page...

Photos

College & University
Always Open

Community See All

Invite your friends to like this Page

294 people like this

303 people follow this

Jeffrey Couillard and 13 other friends like this

About See All

135 Skok Hall, 2003 Upper Buford Circle
St. Paul 55108

612-626-2690

Typically replies within a day
Send Message

www.z.umn.edu/beeatlas

College & University

Hours
Always Open

People Also Like


Three Rivers Park Dis...
Government Organization

TRAIN PARTICIPANTS



ACCEPT DATA AND PROVIDE RAPID FEEDBACK

Campuses: [Twin Cities](#) [Crookston](#) [Duluth](#) [Morris](#) [Rochester](#) [Other Locations](#)

 UNIVERSITY OF MINNESOTA EXTENSION

AGRICULTURE COMMUNITY ENVIRONMENT FAMILY FOOD GARDEN YOUTH ABOUT

Minnesota Bee Atlas

[Extension](#) > [Environment](#) > [Citizen science](#) > [Minnesota Bee Atlas](#) > [Bee blocks](#) > [Add a new observation](#)

[Minnesota Bee Atlas home](#)

[Bee blocks](#)

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Profile
**** TEST ACCOUNT ****

Hello, testuser!

Test User
Minnesota Bee Atlas
beeatlas@umn.edu

[Edit Profile](#)
[Change Password](#)

Add a new observation

Date observed*
 (mm/dd/yyyy)

Observed by*
Select

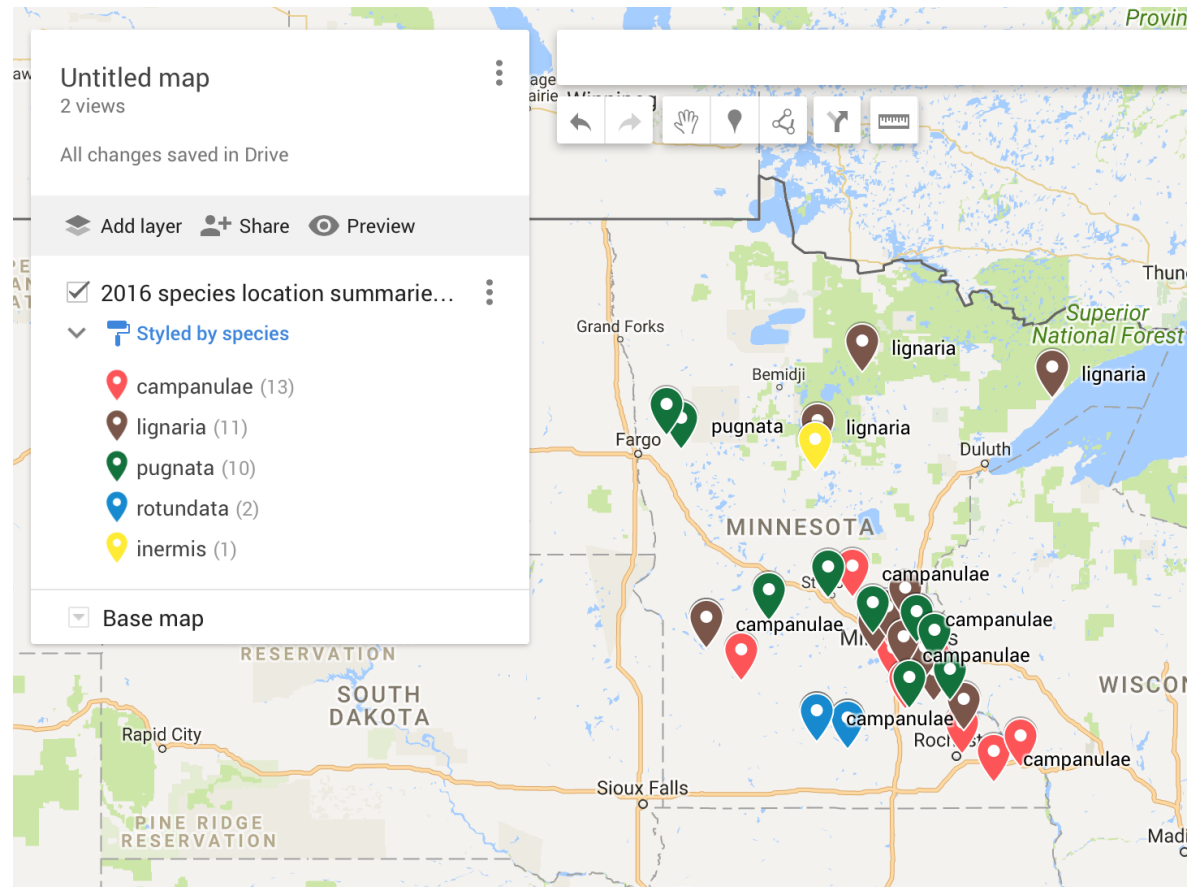
Block*
 998 (2017 Test Block)

Weather*
 Mostly sunny
 Mostly cloudy
 Rainy

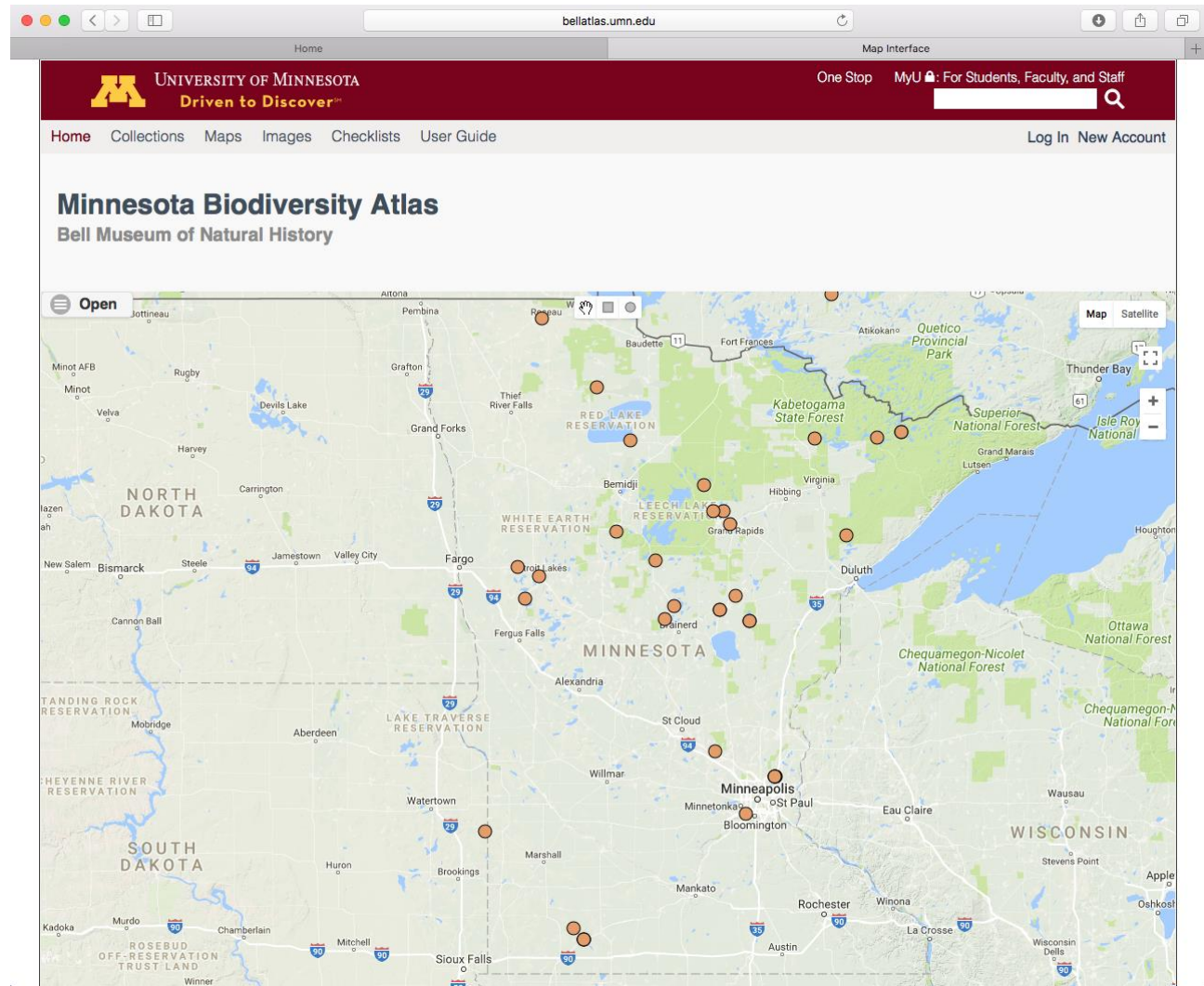
Comments
Questions entered here will not be answered by Bee Atlas staff. Please direct specific questions to us via email or post a question on our Facebook page (use the Contact link at left). Remember to include a picture!

Analyze and report

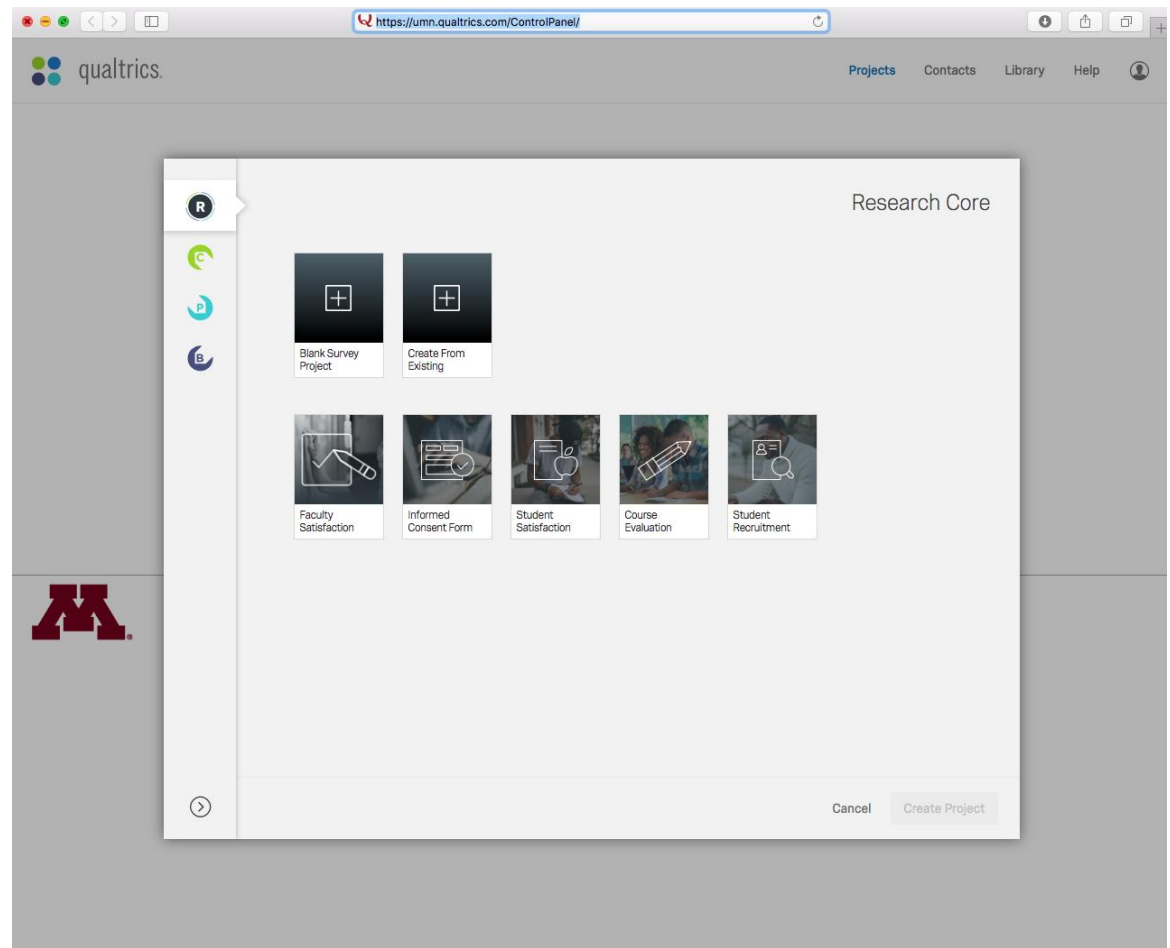
COMPLETE DATA ANALYSIS



REPORT RESULTS & SHARE DATA



EVALUATE



WHAT DO YOU WANT TO DO?



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Driven to DiscoverSM

Thank you.

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