

SURVEY PROTOCOL

GENERAL VOLUNTEER COLLECTION METHODS

What to Bring:

1. KBB data sheets
2. Clipboard & pencils
3. Smartphone (highly recommended, or you can bring a camera and GPS unit)
4. KBB identification materials
5. Water, sunscreen, hiking shoes, maps, hat, bug spray, cell phone

Safety:

Use common sense and judgment for your own personal safety. It's always recommended to survey with a partner, but if you do go out by yourself be sure to tell someone at home your plans before you leave. Remind those with you to keep safety in mind and report any potential unsafe conditions or practices to avoid accidents and injuries. If possible, bring a cell phone with you and have the number of the local county sheriff's department on hand, these can be found on each county's website.

Ticks are also a safety concern in these types of habitats. Please be sure to protect yourself by wearing tall boots, tucking your pants into your socks, and/or using deet. Always check yourself for ticks when you return home from the field.

Data Collection Guidelines:

Please use the most up to date data form (see end of protocol) when collecting data in the field. This will help if you run into a site with multiple Karner individuals. After you become proficient with surveys you may stop using data forms and switch to using iNaturalist, only, if you prefer.

Tracking Volunteer Hours:

It is **EXTREMELY** important that you track your volunteer hours when doing anything Karner related. That includes surveys, prep work, adding observations to iNaturalist, drive time, habitat restoration, planting lupine/nectar plants, etc. Please be sure to fill out the "Donated Labor Match Summary" sheet (see end of protocol) after you're done with your Karner work for the day. The only fields you need fill out are, Date, Name of Volunteer, Description of Work Performed, Hours, and Signature of Volunteer. Scan and email a copy of this sheet to the KBB Recovery Coordinator after the end of the second flight. If you have any questions about this please contact the KBB Recovery Coordinator.

Survey Locations:

You may survey on public lands or private lands (with permission). Karners prefer habitat with sandy soils where it's host plant, wild lupine, can grow. These areas can range from oak and pine barrens, prairie, savanna, and even right of way corridors. Please contact the Recovery Coordinator if you have questions on where you should be surveying.

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Incidental Survey:

This refers to an observation of a Karner while you're out doing something else (aka, surveying for a different species, out hiking with family, in your backyard, etc.). These observations most likely will not have a start/end time, which is ok. We still want to collect that information. Take a photo of the underside of the butterfly and submit this observation on iNaturalist and be sure to select 'incidental' under the "Search Type" category.

Timed Survey Procedure:

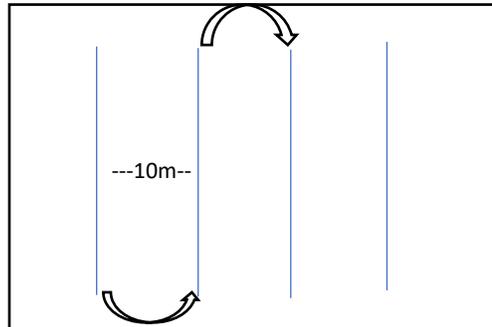
This refers to conducting a timed survey at a site of your choice. These are the steps you will take after you've taken the training and want to conduct surveys.

1. Determine where you will survey
2. Look at the [emergence model](#) (updated weekly) to determine when second flight will start in your area
3. Once Karners have been confirmed to be flying (KBB Recovery Coordinator will send email) plan a day to go out to your site, be sure weather conditions are appropriate (see below)
 - a. Required Weather Conditions
 - i. Sunny or partly cloudy
 - ii. 65°F minimum survey temperature
 - iii. 90°F maximum survey temperature
 - iv. <10mph wind speed (see wind speed scale on data sheet for estimates)
 - v. NO rain or drizzle
 - b. If the weather deteriorates during your survey, come back the next appropriate day to resurvey the area.
 - i. Note: if you must come back to finish a survey, then the last day you surveyed becomes the start of your 7-day minimum between surveys. For example, you start a survey July 10th, get half way through and it starts to rain. You come back July 12th to finish the survey. So, the soonest you can conduct your second survey is July 19th
4. You are required to conduct a minimum of 2 surveys at each site (3 is recommended).
Surveys must be a minimum of 7 days apart.
5. After arriving at your site, start filling out your data sheet. **Don't forget to turn location services on your phone!!!!**

<i>START SURVEY DATA (Fill out before you begin survey)</i>	
Site Name: _____	Date: _____
Visit: (circle) <u>1</u> <u>2</u> _____	Observer: _____
Start Time: _____	Cloud Cover (%): _____
Temperature (°F): _____	Wind Speed (mph): _____

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6. Now that you've filled out your start survey data, you may now begin your survey. As you walk through your site, serpentine to cover the entire area. Be sure to stay a minimum of 10 meter in front of where you previously walked (see below).



7. As you're walking through your site be sure to keep an eye out for Karners and lupine plants (step a minimum of 12 inches away from lupine plants). If you're also able to keep track of invasives and nectar species, please do, but do not focus on them, as the Karners and lupine and the most important data.
8. Once you are able to identify a Karner on a site, be sure to get a photo of the underside so we are able to confirm the identification. Be sure to record individual Karners using tally marks on the Karner data sheet

KARNER DATA

Note: each **Karner** observation should have a corresponding photo EXCEPTION: if too many **Karners** to photograph are seen, only one photo is necessary for data submission

Karner individuals seen: (tally)

- a. If you see more than one Karner, focus on getting a positive identification. You only need to have one photo of a Karner per site, to add your observations to iNaturalist. There is a field you will fill out to determine how many Karners were seen. You do not have to get a photo of every individual Karner, but if you are able to do so, it is encouraged.
- b. If you do not find any Karners, take a picture of a lupine plant and record the survey information with the number of Karners seen as zero.
9. After you've walked through your entire site (minimum of 15 minutes per acre) be sure to fill out the end survey and optional data. **Don't forget to take a photo of the site**

END SURVEY DATA (Fill out once survey is complete)

End Time: _____ Latitude: _____
 Total Lupine on site (%): _____ Longitude: _____
 Site Photo Taken (circle): Yes No

Optional

Total invasive species on site (%): _____
 Total nectar species on site (%): _____
 Total canopy cover, including both shrubs & trees (%): _____

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Submitting Data:

1. After you've finished collecting data from the field you will need to add your observations to iNaturalist, www.inaturalist.org, this can be done on a computer or through their app on your smartphone.
2. Sign up for an account on iNaturalist. It's free! Use the web address above or the app
3. Join the Wisconsin Karner Blue Butterfly Citizen-Based Monitoring (KBB CBM) group

Join Project 'Wisconsin Karner Blue Butterfly Citizen Based Monitoring'

App

1. Click 'More'
2. Click 'Projects'
3. In the search box type 'Wisconsin Karner blue butterfly citizen based monitoring'

Website

1. Click 'Projects'
2. In the search box type 'Wisconsin Karner blue butterfly citizen based monitoring'

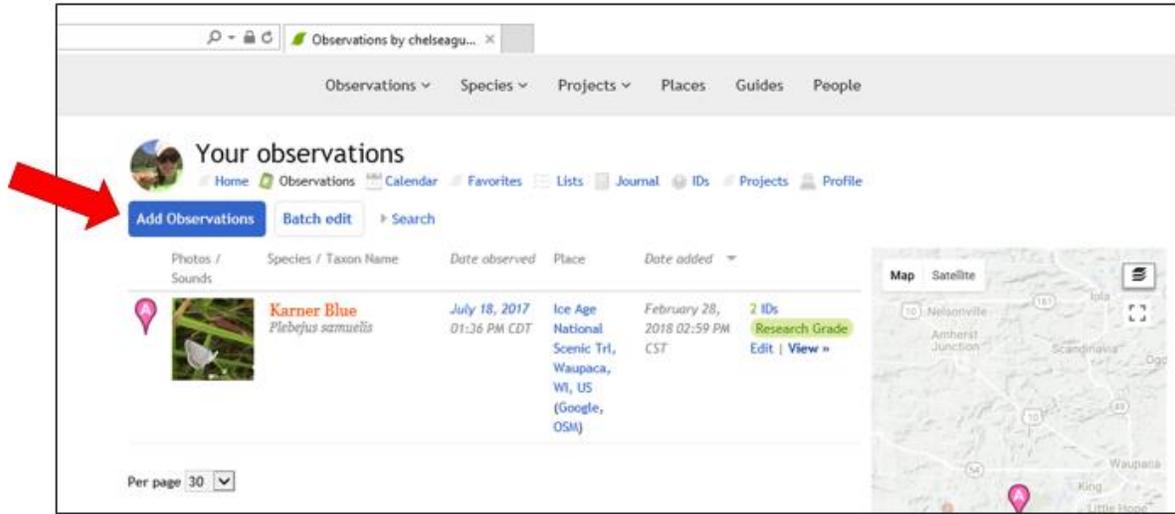
Turn location data 'ON' when taking pictures with cell phone

4. Add your observation via computer or app to the KBB CBM project
 - a. Computer
 - i. Click observation

The screenshot shows the iNaturalist website interface. The user's profile is visible, and the 'Observations' link in the sidebar is highlighted with a red arrow. The main content area shows a list of observations and a 'Getting Started Guide' section.

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ii. Click Add Observation



iii. Add photo – if your location services were on your phone when you took the photo the location/date/time data should auto populate. If it doesn't then you'll have to enter those manually. **Be sure to change the geoprivacy to obscured or private**

Drag & drop some photos or sounds

or

Choose New

View import options

→

iNaturalist

Editing 1 observation:

Details

Species name

2017/07/28 2:24 PM CDT

Wood County, WI, USA

Description

Location is public

Captive / cultivated

Tags

Projects

Fields

→

iNaturalist

Editing 1 observation:

Details

Species name

2017/07/28 2:24 PM CDT

Wood County, WI, USA

Description

Location is obscured

Captive / cultivated

Tags

Projects

Fields

Add species name

Click on 'Projects' to add to KBB CBM
Click on 'Fields' to add survey data

**Change location to obscured/private!!!
Very important!
Confidential!**

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iv. Once you click 'Fields' you can enter your survey data

Fill out project observation fields

Did you set geoprivacy to obscured or private? yes no
Please set geoprivacy as the exact location of these sensitive species are not shared with the general public.

Observation Type:

Karner:
Total number of Karner areas at searched area (1 photo per search area)

Visit 1 or 2:
First or second visit to site

Weather - Temperature (F):

Weather - Cloud Cover (%):
Percent clouds in sky

Weather - Wind Speed (mph):

Search Type:

Survey Start Time:

Survey End Time:

Total Lupine % cover:
Total Lupine percent cover on site

Total Invasive % cover:
Total Invasive percent cover on site

Total nectar species % cover:
Total nectar species percent cover on site

Total Lupine percent cover on site

Total Invasive % cover:
Total Invasive percent cover on site

Total nectar species % cover:
Total nectar species percent cover on site

Total Canopy % cover:
Percent cover of total canopy cover, including trees and shrubs

Additional observation notes:

Latitude*:
Only required if location services not available through photo

Longitude*:
Only required if location services not available through photo

* required

More fields

Add a field:

v. Once you've added all your data you may submit your observation

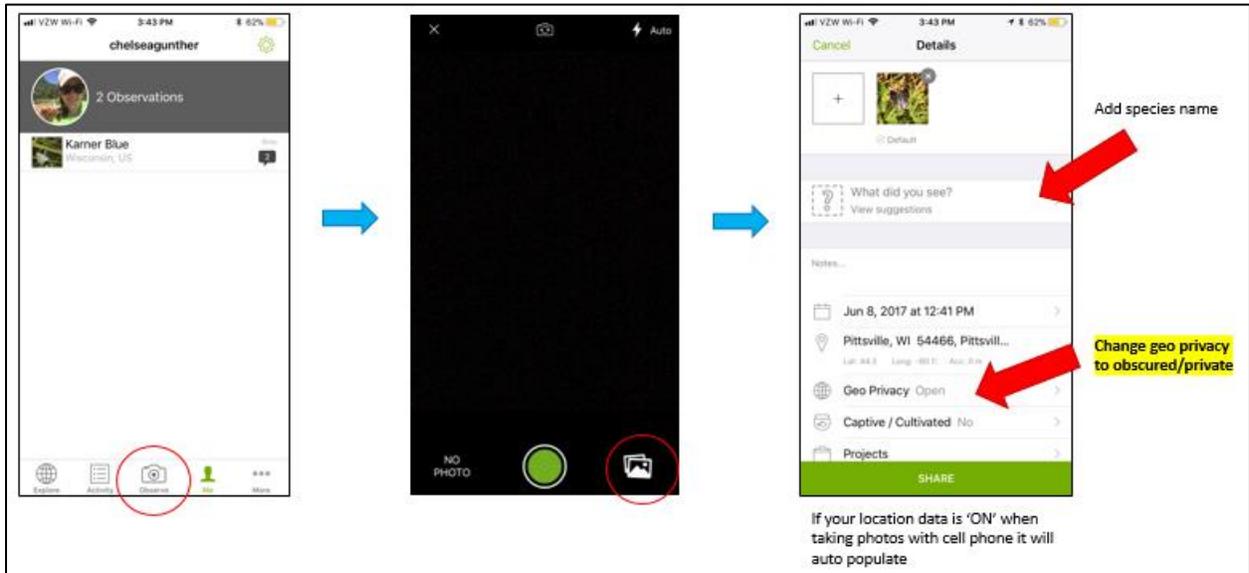
The screenshot shows the iNaturalist web interface. At the top, the URL is <https://www.inaturalist.org/observations/upload>. The page title is "Add Observations - iNaturalist". The user's profile name "chelsagunther" is visible in the top right corner. Below the navigation bar, there are buttons for "Add", "Remove", "Combine", and "Select all". The main content area is titled "Editing 1 observation:". On the left, there is a "Details" section with fields for "Karner Blue", "2017/07/28 2:24 PM CDT", "Wood County, WI, USA", "Description", and "Location is obscured". There is also a checkbox for "Captive / cultivated" and sections for "Tags", "Projects", and "Fields". In the center, there is a photo of yellow flowers with a green border. Below the photo, there is a smaller version of the "Details" section. In the top right corner, the "Submit 1 observation" button is circled in red.

vi. Great job, you've entered your observation into iNaturalist! Repeat these steps for each survey and each site

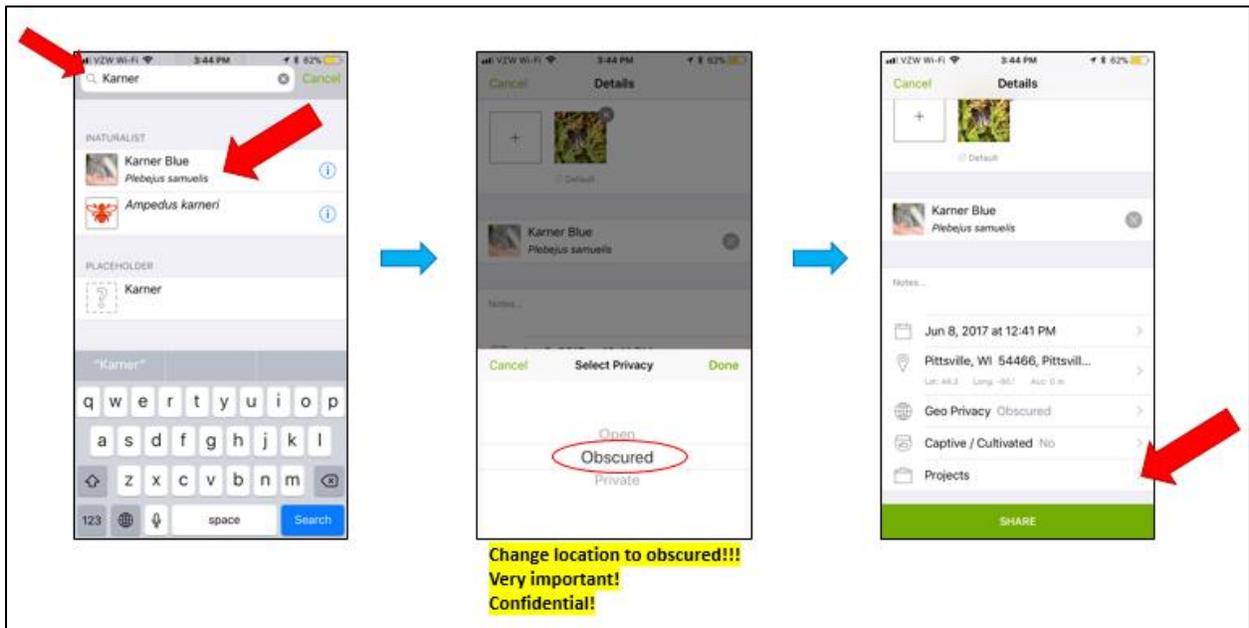
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b. App

- i. Open the iNaturalist, log in, and select the camera icon to enter your observation. Click the photo icon to add a photo from your camera roll



- ii. Add the species name and be sure to **change your location services to obscured/private**

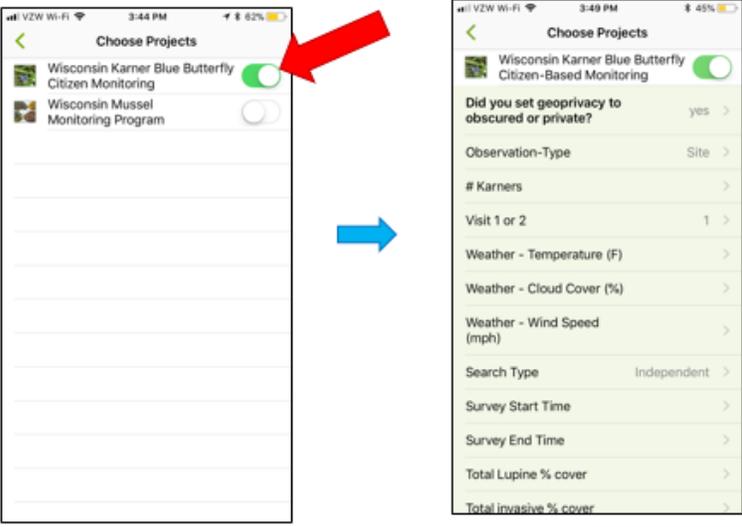


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- iii. Don't forget to add your observation to the KBB CBM project and enter your survey data into the 'Fields' category

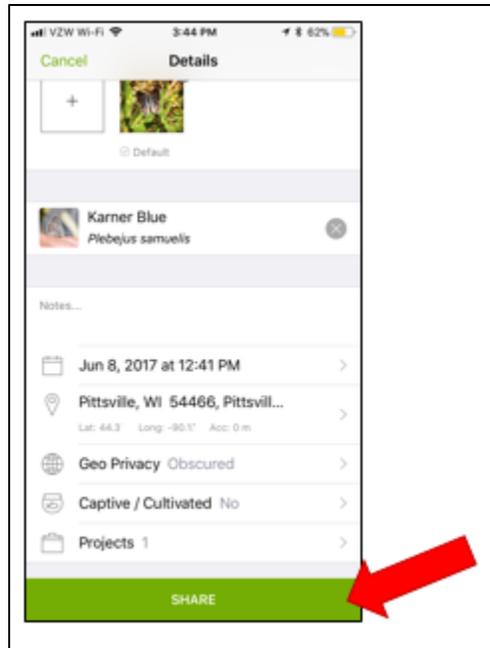
Don't forget to add your observation to our project!

Learn more about [geoprivacy here](#)



Enter your survey data into the 'Fields' section

- iv. Once you've added all your data you may submit your observation



- v. Great job, you've entered your observation into iNaturalist! Repeat these steps for each survey and each site

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Note on obscuring data:

Obscuring the location of your observation is very important! This is found under the geoprivacy section when entering an observation. Obscuring the location of your observation means that you and the program coordinator can see the exact location but everyone else will only be able to see to within 10km of its true location. Any observation you upload to iNaturalist can be viewed by the public. Because the Karner blue butterfly is endangered it is imperative that we log each observation's geoprivacy as obscured or private for the safety of the species.

Questions/Comments:

Chelsea Gunther

Karner Blue Butterfly Recovery Coordinator

(608)397-0631

Chelsea.Gunther@wisconsin.gov

Karner Volunteer Monitoring Program

Wisconsin Karner Blue Butterfly Citizen-Based Monitoring – DATASHEET 2019

START SURVEY DATA (Fill out before you begin survey)

Site Name: _____

Date: _____

Visit: (circle) 1 2

Observer: _____

Start Time: _____

Cloud Cover (%): _____

Temperature (°F): _____

Wind Speed (mph): _____

KARNER DATA

Note: each Karner observation should have a corresponding photo EXCEPTION: if too many Karners to photograph are seen, only one photo is necessary for data submission

Karner individuals seen: (tally)

END SURVEY DATA (Fill out once survey is complete)

End Time: _____

Latitude: _____

Total Lupine on site (%): _____

Longitude: _____

Site Photo Taken (circle): Yes No

Optional

Total invasive species on site (%): _____

Total nectar species on site (%): _____

Total canopy cover, including both shrubs & trees (%): _____

NOTES

Wind Speed Estimation

MPH	Indication
<1	Smoke rises vertically
1-3	Wind direction shown by smoke drift
4-7	Wind felt on face, leaves rustle
8-12	Leaves and small twigs in constant motion; small branches sway
13-18	Wind raises dust and loose paper; small branches sway

Date entered into iNaturalist: / /2019

