Introduction to iNaturalist

I. Brief Background

I would like to introduce a program (iNaturalist) that you will use for Field Botany in Michigan and connect you to the rest of the world in a massive citizen science project.

Citizen science (CS; also known as community science, crowd science, crowd-sourced science, civic science, volunteer monitoring or networked science) is scientific research conducted, in whole or in part, by amateur (or nonprofessional) scientists. Citizen science is sometimes described as "public participation in scientific research", participatory monitoring and participatory action research.

iNaturalist is a program designed as a citizen science project that works hand in hand with serious research and projects all over the world. By gathering data about the biodiversity you encounter in your community, you will be creating a storehouse of information about the current state of the local ecosystem. Scientists can then use the data you gather for their own research projects. As members of the iNaturalist community, you can also assist other members by helping to identify their observations. In this process you will also have a lot of fun looking a bit closer at the biodiversity that surrounds and sustains you.

II. iNaturalist Project for Field Botany

Each student must make **40 observations** using the iNaturalist app on a smart phone or computer and **identified to species**. (Note that iNaturalist might use different species names than the *Field Manual of Michigan Flora*). Please set up an account in your name, downloading the iNaturalist app if using a smartphone. More details and demonstrations will be provided by your lab instructor. We will be using a Bot401 group project in iNaturalist [https://www.inaturalist.org/projects/field-botany-au-sable-institute] in which to place these observations.

These observations can come from the As Sable campus, or from any location in Michigan while on field trips in this or other classes. Observations must be on **native or introduced wild plants** – do NOT make observations on planted trees or shrubs (e.g, city parks, city streets) or on cultivated plants (gardens, yards, fields). The latter are considered not "research" caliber and will be designated "casual" by the iNaturalist community (or instructors!) and will not show up in the class iNaturalist project and thus will not count towards your 40 observations.

II. Tasks to Get Started in iNaturalist

• Task 1: Become familiar with what is iNaturalist

Check out the videos that describe what is iNaturalist and the various steps in using iNaturalist.

https://www.inaturalist.org/pages/getting+started https://www.inaturalist.org/pages/video+tutorials • Task 2: Make an account in iNaturalist (unless you have done so already)

Go to <u>https://www.inaturalist.org</u> and click on "Sign Up" (either located up in the right upper hand corner or on the banner)

- a. You have several different sign-up options. You can create a login/username, or you can sign up using various social media accounts (facebook, twitter, flickr, google, yahoo or soundcloud).
- b. Read the options carefully because it will determine how your photos and data can be used by others.
- c. Record the information below for your records.

Your account Username: _____

Your account Password: _____

After creating an account, sign in to iNaturalist. Using your mouse pointer, hover over your account icon in the upper right hand of the screen and select "Account Settings" from the dropdown menu.

- a. In account settings make sure to put your name in the "Name" box (this will help us find you when we are grading your observations).
- b. (Optional) Add a description and profile picture.
- c. Make sure to check your email notifications that you want to appear in your email.
- d. Under "Licensing" make sure to check the appropriate licensing options you want for your photos. It is recommended that you check "Attribution-NonCommercial" for the options. This will allow others to use your photos and observations if it is not for commercial purposes, and they give you credit for the information.

Send me your username at kjsytsma@wisc.edu. This will allow me to add you to the Field Botany class project in iNaturalist.

Go to the project link:

<u>https://www.inaturalist.org/projects/field-botany-au-sable-institute</u> and "follow" this project. This is the class project that keeps track of all observations made by the class. You can also come here to see all your classmate's observations and help identify them. Bookmark the page for quick access in the future.

• Task 3: Download the iNaturalist app onto your smart device

iNaturalist's (free) app is available for iPhone and android. This will be the easiest way to use iNaturalist but some of you may decide that it is easier to use it on a computer. Please note that this program is run by the California Academy of Science and as a result there is nothing to buy and there are no advertisements. It is completely grant funded.

• Task 4: Use the iNaturalist app

Using the "Observe" button on the smartphone app (or with your camera), Take photographs of each (NOT PLANTED, CULTIVATED, or CAPTIVE) species being careful to highlight the characteristics of the specimen (there is a button to push if the species is planted, captive, etc., but these are discouraged by the iNaturalist community). This often means taking multiple images of the whole plant, flowers, leaves (top and bottom), stem, etc. Judge the number of images necessary by what characteristics may be important in identifying this organism. You may be unfamiliar with this organism so please ask your instructor for guidance (you will get some instruction in class on this).

If you are using a camera, you will need to upload the images on a computer into your account in iNaturalist.

Once observations are in iNaturalist, you can use the program to make an identification to species, or to genus, or possibly to higher taxonomic group (if the images are not specific enough). Be very careful here! While the app's AI is improving, iNaturalist's suggestions are not always correct. Do not simply choose what it recommends or choose the first identification in the list – it is better to be conservative. You can quickly check different options listed by (1) clicking the Information icon next to alternative species to get images and information and (2) referring to other web based resources on your smart device such as <u>Michigan Flora</u> or <u>Minnesota Wildflowers</u>. PLEASE try to get to species – part of your grade is how close to the correct species you get the first time, and not relying on other iNaturalist observers to suggest the right identification.

Once you have settled on an identification (species) save the observation to the iNaturalist program in your device or computer by clicking the Save button. You can set iNaturalist to upload the observation to the web only after you click the Upload button (recommended).

If your account is configured to the Field Botany group project, the observations uploaded to iNaturalist will be visible to all your classmates and instructors. Others can see your observations, "Agree" with the identification (at whatever taxonomic level), make a "Comment" on the observation, or "Suggest ID" with alternative identification (another species, genus, etc.). An iNaturalist observation is considered "Research" grade if two or more members of the iNaturalist community agree on an identification.