***Exploring how climate will impact plant-insect distributions***

***and interactions using open data and informatics***

**- Pre-Class Assignment for Class 1 -**

Ecoinformatics, biodiversity, citizen science, and plant-insect interactions!

This week will kick off our group projects concerning climate change effects on butterfly-plant distributions in North America. In class, we will discuss some of the documented ways in which climate change has impacted species distributions, and then, we will discuss the role of citizen science data in scientific research.

To prepare for our discussion on the effect of climate change and species distributions please complete the following:

1. Read and take notes on: Kolbert, Elizabeth. 2006. Chapter 4 from: Field notes from a catastrophe: man, nature, and climate change. Bloomsburg Publishing.
2. Read and take notes on: Silvertown, J. 2009. A new dawn for citizen science. Trends in Ecology and Evolution. 24(9): 467-471.
3. Explore iNaturalist. Please complete the **iNaturalist Assignment** (see below) to help familiarize you with this important resource we will use throughout our project.

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**iNaturalist Assignment**

This week you'll be introduced to iNaturalist, described as "... a citizen science project and online social network of naturalists, citizen scientists, and biologists built on the concept of mapping and sharing observations of biodiversity across the globe." This has become an incredible resource for biodiversity science, and one we will use to support our projects studying butterfly-host plant interactions in the face of changing climate. To get started, this assignment will help you get acquainted with the resources of iNaturalist. Follow the instructions to learn about iNaturalist and complete the assignment:

1. Go to inaturalist.org
2. In the upper right hand corner, click Log in or Sign Up. Choose to either register an account or login using Google, Facebook etc. (You'll need an account in class this week)
3. Check out the Getting Started page: <https://www.inaturalist.org/pages/getting+started> or click 'Getting Started Guide' a bit down the page.
4. On the Getting Started Guide you'll see a page about posting observations - please scan this page. Now that you have an account you are welcome to post your observations from around campus - this is how folks contribute data to the website.
5. While on the Getting Started Guide, click on the tab for "Exploring Observations." This is the main way we will interact with this website - please read through this carefully. The remaining tabs cover other basic aspects of the website for users - feel free to scan them through.
6. Now try this on your own! At the top of the page click the 'observations' link. Here you can search for species or by location, or both. Think of a species you would like to search for (this can be absolutely anything) and enter it in the search bar. The map will appear with dots representing all the places that species has been recorded. You can click on each dot for more information, or view the list generated on the right hand side of the screen.
7. Play around with searching for some species and applying filters. Once you have gotten the hang of it, take a screenshot of your map and then upload it to the discussion board with a 1-2 sentence caption of your search parameters.

***To make a screen capture on a mac:***

1. Press Shift-Command-4.
2. Move the crosshair to where you want to start the screenshot, then drag to select an area.
3. When you've selected the area you want, release your mouse or trackpad button.
4. Find the screenshot as a .png file on your desktop.

***To make a screen capture on a PC:***

1. Click on the window you would like to capture.
2. Press Ctrl + Print Screen (Print Scrn) by holding down the Ctrl key and then pressing the Print Screen key.
3. Click the Start button, located on the lower left-hand side of your desktop.
4. Click on All Programs.
5. Click on Accessories.
6. Click on Paint.