# iNaturalist Assignment

## White snakeroot

According to Nelson, (2017) there is a lot of poison contained in White snake root if devoured directly or in a second-hand fashion. It is common in the cattle industry whereby if any cow takes the plant by accident, all the milk and the meat products will be contaminated too and as such could cause milk sickness. One of the influential people to have suffered from the lethal nature of this plant is the mother of Abraham Lincoln, Nancy Hanks. Generally this plant is about 1and ½ to 3 meters tall and branches occasionally. It is characteristic of green leaves but the upper stems end up in compound corymbs. Every flower head spans 2-6 inches across (Kuo, 2015). It has branches that have a containment of 10-30 disks of florets that have style and are of a brilliant white color. The florets are each 3-5mm and fully open. It is evident that it is one of the currently existing wildflowers that blooms fully in the fall. In autumn, there is a replacement of the flower head by an achene laced by white hairs. They are normally distributed by wind.

## Biodiversity

 It is characteristic of the plant to spread vegetatively by utilizing its rhizomes which can even enable it to reseed itself in different areas. The arability of the plant is in loamy soil and slightly dry conditions though in a very dry environment, the leaves could wither and turn to yellow despite the fact that it can grow very easily under normal situations. The distribution of the plant in the US is even in the sense that it can grow in almost every county especially Illinois. The plant can grow in thickets, bluffs, woodland meadows along rivers, shady corners of pasture and even overgrown vacant lots. It is a common species in degraded and disturbed areas notwithstanding quality sites. With regard to its association to fauna, it is frequented by bees (megachile spp), wasps, and different varieties of flies, moths and butterflies. The bees are known to collect pollen from the plant with the caterpillars feeding on the foliage which include other parts of *Eupatorium spp* which also includes the ruby Tiger moth. Form the chives, this species is known to have worked well with snakebites as the settlers have to say.

It is largely hairless but can be easily distinguished from the leaves’ appearance. This plant is known to be poisonous and as such it is not a threat to humans. It is not currently under any threat of extinction unless it could be due to human activity but not consumption. It is known to thrive in a good weather and as such has more prospects for survival under normal weather conditions which means it is not facing threats from its direct environment.

### *Chlorociboria aeruginascens* (fungi)

This kind of fungi is common on other growing plants that it is easily available for someone’s common eye. It has a characteristic of turning the color of the wood to match its color. It looks very simple to the eye but distinctly, it has longer and larger spores on the outside. It is widely distributed in North America and its major appearance is in fall and summer. It does not have a distinctive taste and odor though it is found on properly decayed logs. It can be easily identified as a green colored material that grows on others and known to impair the natural color of their recipients. The microscopic features of this mushroom include spores 6-8 x 1-2 µ; smooth, Paraphyses filiform; 70-80 x 1 µ; hyaline and subacute apices. It is not under any threat of extinction and it is evenly distributed worldwide especially on the debris of hardwood. It color makes it very to distinguish in the forest cover (Robinson, 2007). Recently, studies in New Zealand have discovered 15 species of the Mushroom. On the worldwide scale, 19 species have so far been unearthed depending on the size of the spores and the shape that they exhibit.

This species grows majorly on decayed wood and as such has a likelihood to survive in most of the weather conditions because it thrives on other sources of livelihood. It usually 2-5mm in diameter and are dish-like in shape. They have a long history and can be found almost everywhere in the world. The name is very categorical and symbolic too. *Chlor*: stands for green, greenish yellow, or greenish; *cibor* stands for drinking vessel or a cup; *ium* stands for resembling or characteristic of *aerug* stands for deep green and finally, *ascens* stands for somewhat or becoming. About the coexistence of this species, not much has been documented though it happens to be a hardy species of sorts. There are no potential threats to its survival unless there is a proper forest cover that provides a good environment for their growth. There are no known conservation efforts for the species even though enough research has been done on the species (Tudor, Margartescu, Ramirez, Robinson, Cooper, & Moncalvo, 2014).

### Chinook salmon

Chinook salmon, scientifically known as *Oncorhynchus tshawytscha*, is one of the largest species of Pacific salmon, and some of these fishes can weigh up to 100 pounds. Chinook salmon are rare species of fish and they mostly inhabit large rivers but they can also be found in smaller rivers where there is sufficient flow of water (Fink & Scott, 2017). As a result of their large size, they have the ability of spawning in bigger gravel compared to other salmons. Historically, Chinook are considered as anadromous fish whose native habitat is in the North Pacific Ocean. This also includes river streams located in North America such as Alaska and California and rivers in Asia.

Chinook salmon have been declining at a rapid rate with studies showing that some of the populations are considered as endangered although most of them still have a healthy status. The greatest threat facing these species is human practices and processes (Tomelleri, 2017). For instance, NOAA published a report showing that the population of Chinook salmon has declined significantly along the California coast as a result of numerous factors. This includes overfishing, hydropower development, loss of estuarine habitat and fresh water, hatchery practices, and declining ocean conditions. In addition, larger Chinook species were a sought-after and prized catch for sporting events.

According to fisheries in North Pacific, close to 1.4 million Chinook salmon were harvested in 2010, which is equal to 7,000 tons of fish in the U.S., Russia and Canada. Regulations have been implemented in numerous countries to ensure that salmon are monitored and harvested in a responsible manner (Fink & Scott, 2017). For instance, the Humane Slaughter Association in Britain and the Global Aquaculture performance Index reported that standards have been put in place to enhance responsible fishing. Nine species of Chinook salmon are currently listed under the Endangered Species in the U.S. as either endangered or threatened.

### 4. Community Interaction

iNaturalist is a community of scientists, naturalists, and other individuals who have a passion of sharing wildlife sightings that teaches people about the significance of the natural world, conservation and science. Its main role is to utilize technology infrastructure with the aim of exploring, sustaining life, and examining how different kinds of species exist on earth (inaturalist.org, 2017). iNaturalist community played a critical role in enhancing the success of this project since it was possible to interact with various scientists and other professions, especially when it comes to analyzing the natural species. Interaction with the iNaturalists and other environmentalists was done on a face to face basis and this was instrumental in enhancing observations of the natural environment.

 Observations of the three species, which include White snakeroot, Chlorociboria, and Chinook salmon was made possible with the assistance of iNaturalists professionals who made the natural world more accessible. Studies have shown that iNaturalist play a huge role in enhancing the presence of sensitive biodiversity data, particularly for regional conservation and science (Ceccaroni & Piera, 2017). The network of professionals allows participating members to operate from a regional scale and also collaborate with other professionals who are spread in different parts of the country. This is because all participants are able to easily access nature science and also experience localized data that is critical for conducting research studies. This information was essential for enhancing the success of this project, implying that data would have been difficult to analyze without the assistances of these environmentalists.

## Personal reflection

As usual, a research of technical nature is bound to be challenging. The toughest part was memorizing the botanical name which were not very friendly. This notwithstanding, it was indeed interesting to learning something new and additionally issues on biodiversity and its relatedness to nature. My contribution to iNaturalist will help many in this field to understand what is expected of them whenever thy come across the discussed species. Whatever I have done could be improved further by promoting interactive sessions so that much could be uncovered over the internet.

## References

Ceccaroni, L., & Piera, J. (2017). *Analyzing the role of citizen science in modern research.* Hershey PA : Information Science Reference

Fink, W., & Scott, C. (2017). *Oncorhynchus tshawytscha Blackmouth*. Retrieved from http://animaldiversity.org/accounts/Oncorhynchus\_tshawytscha/

inaturalist.org. (2017). *iNaturalist Network*. Retrieved from https://www.inaturalist.org/pages/network

Kuo, M., (2015). *Chlorociboria aeruginascens*. Retrieved from: http://www.mushroomexpert.com/chlorociboria\_aeruginascens.html

Nelson, B. (2017). *17 plants that could kill you*. Retrieved 10th October, 2017, from: https://www.mnn.com/your-home/organic-farming-gardening/photos/13-plants-that-could-kill-you/white-snakeroot

Robinson, R., (2007). *Chlorociboria aeruginascens — green stain fungus*. Retrieved from: https://www.dpaw.wa.gov.au/images/documents/about/science/fungus/14\_2007-08\_Chlorociboria\_aeruginascens\_DEC\_FF.pdf

Tomelleri, J. (2017). *Chinook Salmon, Oncorhynchus tshawytscha.* Retrieved from http://www.michigan.gov/dnr/0,4570,7-153-10364\_18958-45663--,00.html

Tudor, D., Margartescu, S., Ramirez, S., S., Robinson, S., C., Cooper, P., A., & Moncalvo, J., M., (2014). *Morphological and molecular characterization of the two known North American Chlorociboria species and their anamorphs*. https://www.researchgate.net/profile/Santiago\_Sanchez-Ramirez/publication/262768039\_Morphological\_and\_molecular\_characterization\_of\_the\_two\_known\_North\_American\_Chlorociboria\_species\_and\_their\_anamorphs/links/53e9488a0cf2fb1b9b670976/Morphological-and-molecular-characterization-of-the-two-known-North-American-Chlorociboria-species-and-their-anamorphs.pdf