Craig Allen

Physics

Lonsdale

6/3/2013

Environmental Engineering Project

Invasive species:

1. Scotch broom
2. Himalayan Blackberry
3. English Ivy

Each of these invasive species was identified during observation. These species in specific grow at rapid rates and act as blankets suffocating others from growing. In our community there is a Salmon restoration project that has been in effect for many years. Their habitat is engineered for each fish to develop naturally. A habitat restoration for the “burn” area is in progress.

Problem: 53,000 sq M of burned area. The burn stretches across most of the border of school property. It runs along the baseball and softball fields up through the tennis courts Habitat destroyed. Cigarette butt started the fire, was contained in 4 days. The fire vanquished mostly the invasive scotch broom species. But it gave a chance for new habitat to be planted and maintained.

If new species are incorporated and maintained then the invasive species will decrease because keeping a well maintained area of new growth will limit invasive species from taking back over.

Soot trays were put in certain sit spots in the burned area. These trays would in theory capture tracks and prints of animals living in this habitat. Hector and I separated our trays along previous tracks of coyotes on day 1. When we checked on them we had fresh prints and claw marks running down our trays. Unfortunately this was the only luck we and the rest of the class experienced in testing for these prints. We then took to the skies with our eyes and worked to identify and hear animals in the area. We observed over 10 robin, 3 hummingbirds, 3 American crows, 1 dark eyed junco, 5 barn, cliff and tree swallow, and a great blue heron, along with hearing 3 song sparrow and an owl. The class in a more infected spot of the burned area reported a mourning dove and a copious amount new life including but not limited to: alder trees, sword fern, strawberries, grass. The deeper into the woods; we observed more life and prosperity. GIS map @ <http://www.arcgis.com/home/webmap/viewer.html?webmap=4d0e6dc5e6024046a4f3cc31178b1530&extent=-122.8448,47.41,-122.8207,47.4179> Data collected: <https://docs.google.com/spreadsheet/ccc?key=0AlRjRu8L4VvrdG1NekhtWXV3MHdDSl8xQ1F1R2FONEE#gid=0>

Habitat reconstruction is no easy task the best ways to be involved is by visiting your neighboring habitat conservation efforts. Although you may want to help going out and planting everything you see will through the ecosystem off balance and cause an even greater problem. This information was pulled from a PNW ecosystem page (link below) “***Identifying and Understanding Critical Processes***

We will produce a set of conceptual, quantitative, and evaluative models to identify and analyze critical anthropogenic and non-anthropogenic processes related to ecosystems. This phase of the research will:

* Identify critical ecological (biotic), environmental (physical and chemical) and socio-economic (individual, household, and institutional) influences on ecosystem structure and function
* Select indicators in each process category that quantify the magnitude of response to these influences on ecosystems
* Integrate quantitative tools, information systems, and qualitative understanding to describe system responses both within and across process categories”

1. [http://www.habitatmasonwa.org/#](http://www.habitatmasonwa.org/)
2. <http://library.thinkquest.org/08aug/00473/habitatdestruction.html>
3. <http://en.wikipedia.org/wiki/Habitat_destruction>
4. <http://oregonstate.edu/dept/pnw-erc/html/quest.htm>

Based on the environment these animals are living in, plants such as ferns and grasses to the specifics of dogwood trees need to be planted.. the invasive scotch broom can be maintained by continual cut back on its annual reproductive stages. The benefits of this cut back will help the rest of the wildlife to flourish where it couldn’t before.

In conclusion the observed data proves that the native wildlife thrive greatly in the denser populated area of growth. The area where the invasive species was not was where the greatest amount of life flourished. The hypothesis is correct; if the scotch broom is cut back on, the amount of natural activity will increase.

Works Cited

"Burn site." *ArcGIS Online*. N.p., n.d. Web. 6 June 2013. <http://www.arcgis.com/home/webmap/viewer.html?webmap=4d0e6dc5e6024046a4f3cc31178b1530&extent=-122.8448,47.41,-122.8207,47.4179>.

"Habitat Destruction." *ThinkQuest : Library*. N.p., n.d. Web. 6 June 2013. <http://library.thinkquest.org/08aug/00473/habitatdestruction.html>.

"Habitat for Humanity of Mason County." *Habitat for Humanity of Mason County*. N.p., n.d. Web. 6 June 2013. <http://www.habitatmasonwa.org/#>.

"The Pacific Northwest Ecosystem Research Consortium." *Oregon State University*. N.p., n.d. Web. 6 June 2013. <http://oregonstate.edu/dept/pnw-erc/html/quest.htm>.

country. "Habitat destruction - Wikipedia, the free encyclopedia." *Wikipedia, the free encyclopedia*. N.p., n.d. Web. 6 June 2013. <http://en.wikipedia.org/wiki/Habitat\_destruction>.

"spreadsheet." *Google docs*. N.p., n.d. Web. 6 June 2013. <docs.google.com/spreadsheet/ccc?key=0AlRjRu8L4VvrdG1NekhtWXV3MHdDSl8xQ1F1R2FONEE#gid=0>.