Building Brush Piles at the Essex Land Trust

By Aleah Querns

Natural Resources Conservation Academy

ABSTRACT

After completing the NRCA program at UCONN, I spent the past few months working with the Essex Land Trust to improve wildlife habitat. My project involves the process of constructing brush piles. Its purpose was to show their overall impact on biodiversity and the health of the environment. This was completed by creating a brush pile out of invasive and dying trees that would otherwise be cut down and using a wildlife camera to see if the animals utilize the piles. The results showed that various animal and tree species could benefit from the production of brush piles.

INTRODUCTION

This summer, I attended a week long program at UCONN called NRCA, or the Natural resources Conservation Academy. It opened my eyes to a whole world of ways to enjoy and conserve the nature. Using these newly acquired skills, I went out into the community to help out.

I have always been partial to animals, so when I was presented with the opportunity to build habitats for wildlife I jumped at the chance. Brush piles, as I was soon to find out, are artificial hideaways for animals constructed of tree trunks, branches, and, of course, brush. The purpose behind them is to create shelter and an escape route for birds and small mammals in areas where natural hiding spots are lacking (like birdhouses, but for larger animals).

At first this seemed counterproductive: why cut down trees (natural cover) to make way for artificial cover? However, I soon came to realize that the area was an invasive species hotspot. Not only would removing these invasive species help the ecosystem by allowing native species a better chance- it would also help by providing materials for the brush piles.

Tree of heaven, a common invasive at the Essex Land Trust.

MATERIALS AND METHODS

To get started, we had to gather sufficient amounts of differently sized logs and brush. Most of the brush pile consisted of Trees of Heaven, being the most common invasive in the area, and plenty of sugar maple, which, though not an invasive, is overly common. Black locust, another invasive, was an important part of the bottom layer because it is rot-resistant. Any dying trees were also added to our supplies. The trunks of the trees were used for the first two layers, and the branches were used for the upper layers.

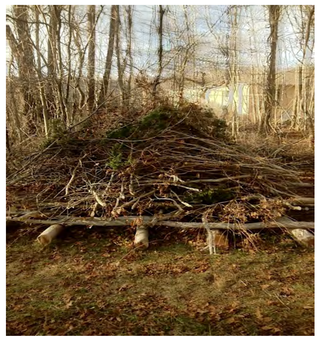
The first step in constructing the brush pile was to lay the largest trunks in a line horizontally, with their ends facing away from each other and about a foot to two feet of space between them. I used 5 trunks for this, about 6 inches in diameter. It's important for this to be the most sturdy layer so the brush pile doesn't topple over, but there must also be enough space for the animals to get through. Then, repeat that step by creating another layer of logs over the first, but this time use slightly smaller trunks and lay them perpendicular to the first ones. Let the gaps between the trunks be slightly smaller than the first layer

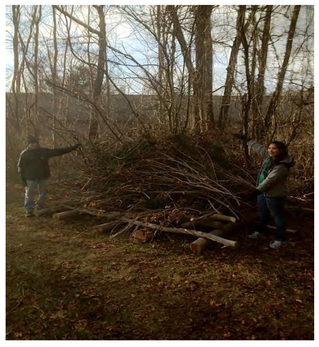
Once I had the base established, I moved on to the upper layers. For this, we started with creating another layer (again, perpendicular to the previous) out of the largest branches that we had. They could be closer together than the previous two layers, because there would be no animals going through it- the upper layers are for any birds that choose to perch there. From there on, we continued making the pile by making layer after layer of progressively smaller branches until we could no longer reach the top.

After creating the brush pile, we decided on installing a wildlife camera. It is important to have this to record any animal sightings at the pile. The camera was attached to a post and pointed at a slight angle towards the pile. It is able to detect motion, and was set to take 3 images every time it is triggered.

RESULTS

By installing the wildlife camera, I was able to observe the outcomes of my project without actually having to be there at all times. Since its installment in December, the wildlife camera has been triggered several times. Unfortunately, most of those instances have been curious dogs and humans. Most of the local wildlife has migrated or been in hibernation, however, so hopefully we'll get better results once spring comes.
Theoretically my brush pile should last 6 to 8 years. I'm extremely proud of it and hope that it continues to provide shelter for all kinds of animals over the years. Even once it begins to decompose, it will provide nutrients for future (hopefully non-invasive) plants.





CONCLUSIONS

In conclusion, building brush piles was a worthwhile project that cam impact the local environment in the following ways:

- ❑Contributing to biodiversity by cutting back on invasives
  - ➢By removing these invasives, there is a greater chance that native trees, plants, or shrubs will be able to flourish.
- ❑Contributing to biodiversity by providing a habitat for animals
  - ➢Small animals will be drawn to this habitat which will allow for them to be shielded from predators. Brush piles could even provide habitat for endangered bsts or rabbits.
- ❑Allowing failing or invasive trees to be recycled
  - ➢Trees that would otherwise be a nuisance will decompose faster than they might otherwise because (in the case of invasive species) their life span is cut short or (in the case of already fallen dead trees) trees that are cut up decompose faster. This will contribute to the overall health of the forest.

REFERENCES

Special thanks to Bob Nussbaum, Al Macgregor, and Tom Rutherford of the Essex Land Trust. You were all a great help and I couldn't have done this project without you.

Image of the Tree of Heaven obtained from:
http://extension.entm.purdue.edu/CAPS/pestInfo/treeHeaven.htm

Guides for building brush piles:
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