Distribution of Plants at Mer Bleue
&
Incidence of Prunus Serotina

By:

BIO1130 Section

Demonstrators:

Date:

Department of Biology

University of Ottawa

1. Based on the observations plotted on the graph, the plant *Prunus serotina*, commonly known as the black cherry tree, is mostly adapted to habitats with medium to low moisture gradients. This is supported in Figure 1, which shows the highest incidence of the *Prunus serotina* is located at the ecotone and the old field. The ecotone is a sandy area and is located between the bog and marsh; it is a transition zone, meaning it is neither too wet nor too dry and has an intermediate moisture level. The old field is a dry area located on top of a sand dune. Therefore, the plant is better adapted to a partially dry, and sandy environment, which on the graph shows that both environments have a overall higher incidence in drier environments rather than wet environments such as the bog or marsh.

2.

a) The preferred habitat of *Prunus serotina*, which is the old field, would not be affected if there is a partial water drainage of the Mer Bleue marsh. The effect the drainage would have on its preferred habitat would not be significant enough to stop this plant from growing entirely, it would result in a minimal change. This is because the old field has a higher ground elevation than the marsh, so its inhabitants will continue to rely on rainfall as its water supply and does not need to rely on the water from the marsh. This is a result due to the Prunus serotina being able to grow and strive in drier and sandy environments; therefore, this plant does not need much water in order to grow and survive and will not be affected significantly from the water drainage.

b) The consequence of the water drainage on the *Prunus serotina* regarding its abundance in its preferred habitat, the old field, as well as its distribution in the Mer Bleue site, is that the abundance would result in remaining the same in the old field and high forest as there would still be a source of water/rain that would also remain the same. However, the ecotone, bog and low forest would become very dry due to this drainage, though the Prunus serotina would not be affected from a result of this drainage. Therefore, the Prunus serotina will be able to survive and grow even with the water drainage at the marsh, as this plant can grow in drier environments and does not depend on the water from the marsh.