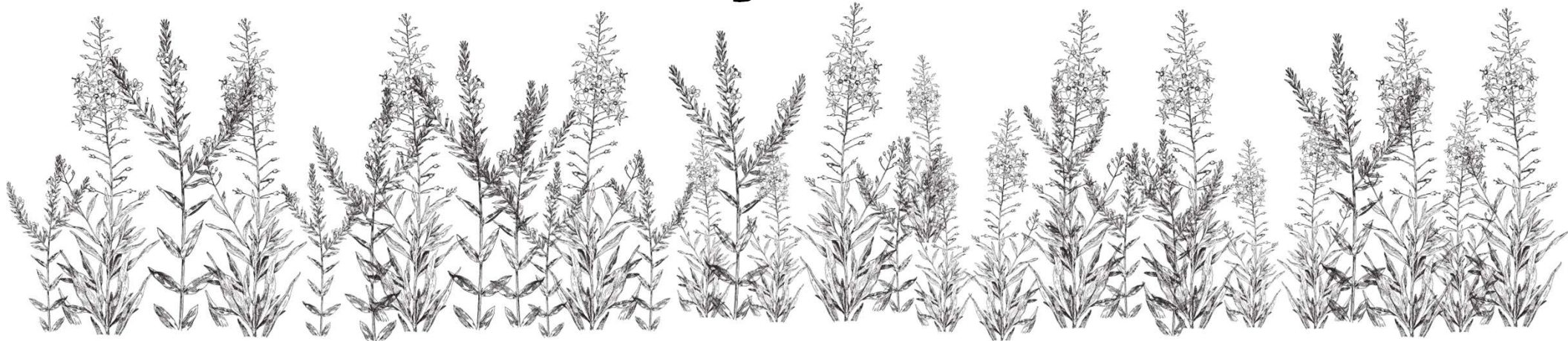




QUILLS

Queen's University Indigenous Land-Based Learning STEM
Queen's University Biological Station

Invasive Species Impact on Ecosystems





1 The Impact of Hydrilla



- More oxygen and sunlight reaching aquatic wildlife
- More efficient water movement and circulation
- Less entanglement while swimming
- Less mosquitoes
- Balanced Ecosystem

With Hydrilla

Without Hydrilla

Image from Mark Heilman, found from <https://www.greenhousemag.com/article/rise-promotes-integrated-approach-to-manage-invasive-species/>



2 The Impact of Woody Invasive Species (including buckthorn and honeysuckle)



- More sunlight reaches the ground, which allows for the growth of native seedlings and other vegetation/ground cover
- Balanced soil ecosystem and nutrient cycling

Image from <https://www.lcfd.org/what-we-do/projects/woody-invasive-species-clearing-project/>

3 The Impact of Woody Invasive Species (buckthorn)



- Using other species (ex. goats) to eradicate invasives is more sustainable
- Less herbicide use
- More sunlight reaching the ground for native seedlings
- Balanced soil ecosystem and nutrient cycling



Image from <https://fmr.org/conservation-updates/invasives-got-your-goat-bucking-buckthorn-hampton-woods>

The Impact of the Emerald Ash Borer

4

- Ash Trees provide protection of smaller vegetation in forests
- Provides a home for many species (birds, insects, lichen, fungi)
- Seeds are also a source of food
- Supports biodiversity



Image by Stephen Luk found from https://entnemdept.ufl.edu/creatures/TREES/BEETLES/emerald_ash_borer.htm



5 The Impact of Purple Loosestrife



With Purple Loosestrife



Without Purple Loosestrife

- More space for native plants (less crowding)
- More food, nutrients and shelter for species in the ecosystem
- More shallow water areas for fish
- More efficient nutrient decomposition and cycling, leading to a balanced food web

Image from Wilson, L., Schwarzlaender, M., Blossey, B., and Randall, C. B. (2004). Biology and biological control of purple loosestrife. USDA Forest Service/UNL Faculty Publications.

<https://www.researchgate.net/publication/228884676> Biology and Biological Control of Purple Loosestrife