

## Habitat Islands

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KPW is a fantastic place to live thanks to good local schools, a safe neighborhood, active community programs, and parks within walking distance. Families reside along quiet, meandering roads or cul-de-sacs. Many of these properties abut forests. Folks on a street-surrounded block might be grateful that the developer preserved tall, mature hardwoods along the backyards. These trees extend cooling shade during hot summers, buffer against frigid winter winds, and offer a privacy screen. Wooded areas protect the soil integrity from erosion and reduce basement flooding by catching precipitation both in the leafy layers (tall canopy trees, understory trees, shrubs, and finally forbs) and through water-absorbing roots. Grand trees and natural understories bolster the aesthetics and increase property values. Compare this landscaping to other Northern Virginia communities, born from bulldozer-blitzed acreage and smothered in impervious surfaces and exotic lawns.

For an added bonus, forested plots attract beneficial wildlife. Before going further, let's introduce an ecological concept. The hospitable area—containing proper food, water, terrain, and any other necessities—in which a given organism can live is called a “habitat island.” The area type and size depend on the given species. A lichen's habitat island may be a small rock whereas territorial carnivores may require several acres or even many square miles of suitable land. Uninhabitable regions surrounding this island can be either natural (a creek, ocean, or mountain range) or artificial (a wall, small footpath, or highway). Habitat islands may be aquatic, leaving stream inhabitants especially vulnerable; a minnow needing cold, fast-moving freshwater may be confined by shorelines, dams, stagnant ponds, or salty water.



**Figure 1. This old tree stump provides a moist habitat island for several plant species. The mosses and grasses could live out their lives here, whereas the maple seedling (at left) will perish with insufficient space to grow. A metaphor for the non-native invasive species plight, the tall, broad-leaved beefsteak plants (*Perilla frutescens*) dominating this island are Asian.**

To better understand how factors impact habitat islands, look at the eastern box turtle (*Terrapene carolina carolina*): a forest dweller feeding on various plants and invertebrates. Despite a lifespan exceeding 100 years, these slow-maturing reptiles now suffer declining populations. Part of the problem comes from over-browsing deer which clear many native plant species. The result: a simplified, low-quality habitat. Inedible non-native invasive plants, such as [Japanese stiltgrass](#) (*Microstegium vimineum*), displace the flora essential to box turtles. Furthermore, dense stiltgrass carpets hinder turtle mobility. Turtles find their islands shrinking as more urbanization invades the woodlands. Stepping outside of their habitat island, box turtles are crushed on streets—many deliberately hit by apathetic drivers.

In addition to the nearby parks, KPW has habitat islands, too! Mature oaks, hickories, and beeches in individual yards function together as miniature, interconnected forests. Native plant gardens further unfurl welcoming mats to creatures like box turtles. Small changes, such as purchasing an endemic plant over an exotic one, carry a huge impact. As people and wildlife benefit from KPW's semi-natural backyard

retreats, everyone wants healthy trees, lest they fall and damage property or injure residents. Here are some helpful tree tips and things to look out for:

- Keeping native woodland gardens around the trunks is the easiest way to help trees. Covering with *light* leaf mulch provides nutrients to the roots, balances soil moisture, protects the bark from accidental weed-eater damage, and adds another layer to the habitat island.
- Do not create “mulch volcanoes” around tree trunks! The slight bulge at the base of a newly planted tree or bush should disappear into flat ground within a year or two, once the soil settles.
- Check for leaning trees, and remove ones that tilt towards the house.
- Inspect for sawdust around trunks, which could indicate a bad insect infestation.
- Heavy ant traffic may be drawn to aphids (a normal occurrence) or to sap from tree wounds (a possible problem).
- Look for rot, fungus, or even mushrooms emerging on the trunk—all potential signs of illness.
- To avoid wind-inflicted damage, have the tree professionally thinned so that air blows through the limbs instead of allowing dense branches to act like giant sails. When contracting a certified, licensed arborist, make sure the company is insured and workers climb with ropes only (no crampons or spikes) unless they are felling the tree.
- Ask the arborist to answer any further questions about a tree’s health and safety.

Keep habitat islands in mind when planning the yard’s landscaping. We will revisit this concept in future articles [it directly ties into the article, [Wildlife Corridors](#) (October 2013)]. As for box turtles, never keep them as pets or put them into Royal Lake. They are best left alone in the woody outdoors.



**Figure 2.** Despite their frequent practice, “mulch volcanoes” (A) damage trees by promoting tree rot, diminishing nutrients as microbes decomposing the mulch draw nitrogen from the soil, and encouraging secondary “sucker” root growth into the pile. Turning towards Nature’s time-tested example (B), light leaf litter is all that a tree needs around it. Illustrating natural mulch’s thinness, a foreground section (1) exposes the soil. This mulch benefits native plants, such as the pictured (2) club moss (*Lycopodium obscurum*) and (3) striped wintergreen (*Chimaphila maculate*) while keeping weeds at bay.

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