

Beavers Beyond the Pond: Standing Dead Wood and Light Gaps

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Beavers are well known for shaping wetlands, but their activities also support insects rarely seen in the surrounding shaded woods. A study of “Beavers, Boles and Beetles” carried out at Patuxent Research Refuge near Laurel, Maryland, 2010 to 2015, showed that beavers created a patchwork of habitats different from the surrounding forest areas as a result of girdling and killing some of the larger canopy trees.

During over one hundred total visits, 10-15 beaver-girdled, standing dead trees—primarily American Beech (*Fagus grandifolia*), but also Swamp White Oak (*Quercus bicolor*), Sweetgum (*Liquidambar styraciflua*), and Black Gum (*Nyssa sylvatica*), were examined for beetles on the bark and exposed dead wood. More than 85 species of beetles in 30 families were documented, mostly species known to feed on dead wood and fungi. Some were species rarely seen or known from very few museum collections, including the colorful Six-banded Longhorn Beetle



The author at a beaver-girdled dead trunk of American Beech (*Fagus grandifolia*) showing search and sampling technique for insects on bark and exposed wood. Photo by J. Swearingen.



A beaver-girdled dead trunk of Black Gum (*Nyssa sylvatica*).



American Beech (*Fagus grandifolia*) trunks girdled by beaver with open sunlit ground and herbaceous cover.

(*Dryobius sexnotatus*) listed as endangered in Maryland.

While the dead standing wood provided food and habitat that differs



A male Six-banded Longhorn Beetle (*Dryobius sexnotatus*) on beech bark.

from fallen wood, the sunlit grounds around beaver-killed trees featured unique islands of different plants not found in shaded areas nearby. Some of these “light gaps” were scattered widely across the floodplain and into upland slopes above the main stem of the Little Patuxent River.

As the dead trunks lost bark and eventually fell, a dynamic succession of fungi, insects, and surrounding plants was observed. Beavers can be problematic to residents and land managers but in a natural forest situation, they boost biodiversity like few other animals can.