



Terrestrial Characteristics: Down Woody Debris

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Description

Down woody debris refers to large woody material lying on the ground. This usually refers to tree trunks, boles, or large limbs lying on the forest floor. Down woody debris tends to be more prevalent in mature forests that do not regularly experience understory fire.

General Condition of Feature

The status of down woody debris as a landscape feature characteristic in the Northern Lower Peninsula is considered to be degraded or very degraded over most of the region (~70%) due to a predominance of early successional forests within the region. Only about 30% of the region contains enough down woody debris to be considered in fair or good condition.

Associated Natural Communities

N/A – No defined natural communities

Associated Species of Greatest Conservation Need

SNAILS

spike-lip crater (*Appalachina sayana*)

INSECTS

zigzag darner (*Aeshna sitchensis*)

arrowhead spiketail (*Cordulegaster obliqua*)

AMPHIBIANS

blue-spotted salamander (*Ambystoma laterale*)

spotted salamander (*Ambystoma maculatum*)

four-toed salamander (*Hemidactylium scutatum*)

western chorus frog (*Pseudacris triseriata triseriata*)

pickerel frog (*Rana palustris*)

REPTILES

blue racer (*Coluber constrictor foxii*)

northern ringneck snake (*Diadophis punctatus edwardsii*)

eastern fox snake (*Elaphe gloydi*)

black rat snake (*Elaphe obsoleta obsoleta*)

eastern hognose snake (*Heterodon platirhinos*)

smooth green snake (*Liochlorophis vernalis*)

queen snake (*Regina septemvittata*)

REPTILES cont.

eastern massasauga (*Sistrurus catenatus catenatus*)

wood turtle (*Glyptemys insculpta*)

eastern box turtle (*Terrapene carolina carolina*)

BIRDS

Spruce Grouse (*Falcapennis canadensis*)

American Woodcock (*Scolopax minor*)

MAMMALS

pygmy shrew (*Sorex hoyi*)

water shrew (*Sorex palustris*)

American marten (*Martes americana*)

northern flying squirrel (*Glaucomys sabrinus*)

woodland jumping mouse (*Napaeozapus insignis*)

southern red-backed vole (*Clethrionomys gapperi*)

woodland vole (*Microtus pinetorum*)

southern bog lemming (*Synaptomys cooperi*)

deer mouse (*Peromyscus maniculatus gracilis*)

snowshoe hare (*Lepus americanus*)

Associated Threats

MODIFICATION OF NATURAL PROCESSES

- Altered fire regime

HABITAT CONVERSION

- Industrial, residential, and recreational development
- Incompatible natural resource management: Short rotation management doesn't allow trees to mature to the point where they naturally generate down woody debris.

CONSUMPTIVE BIOLOGICAL RESOURCE USE

- Forestry practices: Whole tree harvesting eliminates the possibility of a harvest generating any woody debris.
- Removal of non-timber flora: Firewood collection reduces the amount of available woody debris and the amount of standing dead wood which is potential down woody debris.

EDUCATION

- Social attitudes: There is a lack of understanding and appreciation of the importance of woody debris, especially among loggers and private landowners.

Conservation Actions Needed [Threats addressed]

LAND, WATER & SPECIES MANAGEMENT

- Manage to approximate natural disturbance regimes using prescribed fire.[Altered fire regime]
- Develop and implement forestry best management practices which address the value of down woody debris to wildlife. [Incompatible natural resource management; Forestry practices; Removal of non-timber flora]

LAW & POLICY

- Work with municipalities to promote planning and zoning insuring adequate protection for forests which contain down woody debris. [Industrial, residential, and recreational development]

EDUCATION & AWARENESS

- Create awareness in the commercial logging industry and the general public of the value of down woody debris to wildlife. Educate the public on the use of fire for prescribed burns. [Altered fire regime; Removal of non-timber flora; Social attitudes]

Research and Survey Needs

- Document the historic and current range of variation of down woody debris. This includes variables such as species composition and size.
- Develop a methodology for quantifying down woody debris.
- Identify the characteristics of down woody debris that contribute to its wildlife value and which species may be affected by changes in these characteristics.

Monitoring

- Track the abundance and distribution and wildlife use of down woody debris across the landscape with attention to individual characteristics such as woody plant species and structural components.