

General Habitat Description for the American Ginseng (*Panax quinquefolius*)

A general habitat description is a technical document that provides greater clarity on the area of habitat protected for a species based on the general habitat definition found in the Endangered Species Act, 2007. General habitat protection does not include an area where the species formerly occurred or has the potential to be reintroduced unless existing members of the species depend on that area to carry out their life processes. A general habitat description also indicates how the species' habitat has been categorized, as per the policy "Categorizing and Protecting Habitat Under the Endangered Species Act", and is based on the best scientific information available.

HABITAT CATEGORIZATION

1	The area occupied by American Ginseng and the area of forest or treed swamp ELC community classes within 100 m of the occupied area
2	The area of forest or treed swamp ELC community classes between 100 m and 150 m of the occupied area, and contiguous with Category 1
3	Not applicable to this species

Category 1

The area occupied by American Ginseng and the area of forest or treed swamp Ecological Land Classification (ELC) community classes (Lee et al. 1998) within 100 m of the occupied area will be considered to have the lowest level of tolerance to alteration. American Ginseng is a rare, shade-tolerant, plant that depends on its surrounding area to maintain conditions to support life processes such as reproduction and dispersal (Charron and Gagnon 1991, Nault et al. 1998). This species is physiologically adapted to low light levels. Light saturation is reached at levels as low as 10% of full sunlight (Protor 1980). American Ginseng is sensitive to light and experiences leaf chlorosis, early senescence, and depressed growth if exposed to too much sunlight (Gagnon 1999).

In Ontario, suitable habitat for American Ginseng is found in relatively undisturbed, mature Sugar Maple-dominated deciduous forests under low light conditions (Nault et White 1999). Hydrological features within this area, such as seeps and intermittent streams, are equally important. American Ginseng is restricted to areas that have moist but well drained conditions and therefore has a strong dependence on ground or surface water. This type of mature, interior forest habitat requires a long time to return to its original state when disturbed, and is sensitive to habitat alterations. Studies have shown an approximate distance of edge influence on the structure and composition of mature eastern North American forests is approximately 90 m (Harper et al. 2005). The area within 100 m of the occupied area includes the approximate distance of edge influence on the structure and composition of the forest. The area in Category 1 also supports short-distance seed dispersal which is the most prevalent type of dispersal for this species (Cruse-Sanders and Hamrick 2004).

Category 2

The area of forest or treed swamp ELC community classes between 100 m and 150 m of the area occupied by American Ginseng, and contiguous with Category 1 is included in Category 2 and will be considered to have a moderate level of tolerance to alteration. This area is adjacent to, and also helps maintain the function of, Category 1 habitat, including the moisture conditions. It also helps reduce the impact of edge effects and the probability of invasion by non-native species into Category 1 (Harper *et al.* 2005).

This area also supports longer-distance dispersal which helps maintain genetic connectivity which is important for the species. Although long-distance dispersal is not as prevalent as short-term dispersal, even occasional long-distance dispersal between established populations could markedly affect out-crossing rates, increase genetic diversity and adaptive ability (Anderson *et al.* 2002, Cruse-Sanders and Hamrick 2004, Hill and Frise 2011).

Category 3

Not applicable to this species.

Activities in American Ginseng habitat

Activities in general habitat can continue as long as the *function of these areas for the species is maintained and individuals of the species are not killed, harmed, or harassed.*

Generally compatible:

- Hiking and non-motorized vehicle use on existing recreational trails.
- Maintenance or repair to an existing residence or structure.
- Removal of invasive plant species in accordance with best management practices.

Generally not compatible*:

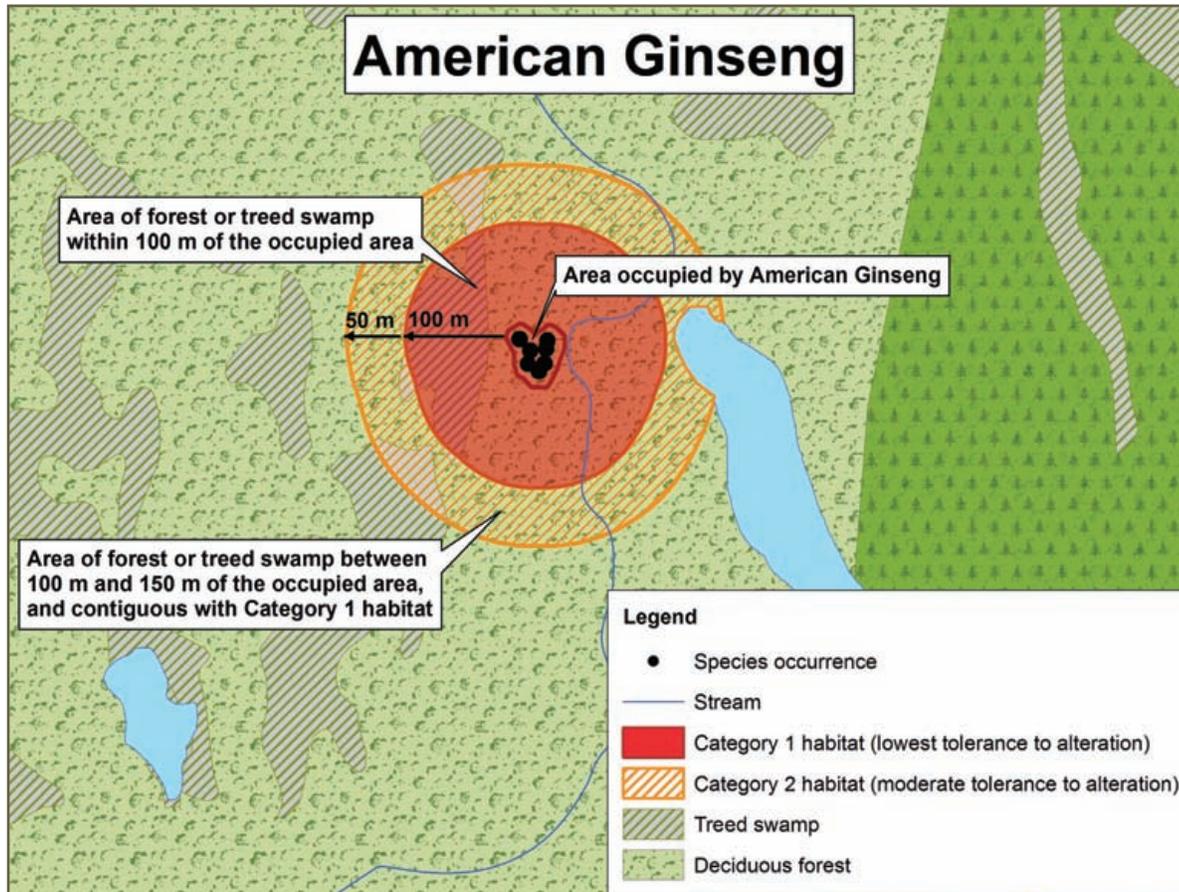
- Activities that reduce canopy cover or understory vegetation, resulting in altered light levels, soil moisture, or soil compaction.
- Alterations to drainage that result in long-term or permanent alteration of soil moisture within habitat.

* If you are considering an activity that may not be compatible with general habitat, please contact your local MNR office for more information.

Key terms:

- **Community Class:** Ecological Land Classification (ELC) Community Classes are groups of similar community series that share common ecological patterns and processes, as described in the document entitled Ecological Land Classification for Southern Ontario: First Approximation and its Application, dated September, 1998 and published by the Ontario Ministry of Natural Resources

Sample application of the general habitat protection for American Ginseng



References

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