



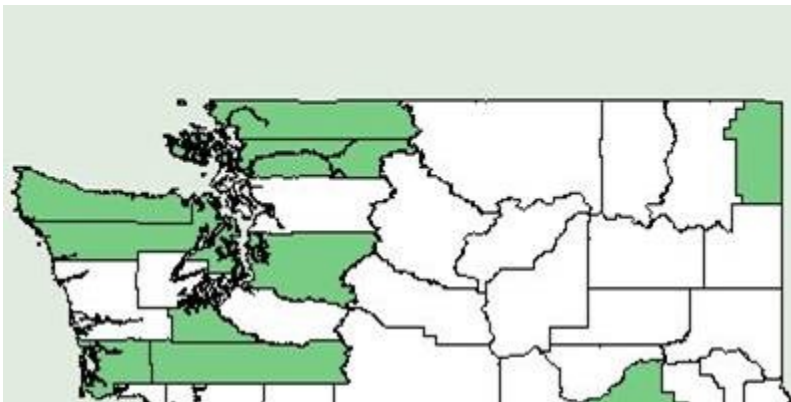
(USDA)

## Plant Data Sheet

**Species:** Indian Pipe( *Monotropa uniflora*), also ghost plant, corpse plant

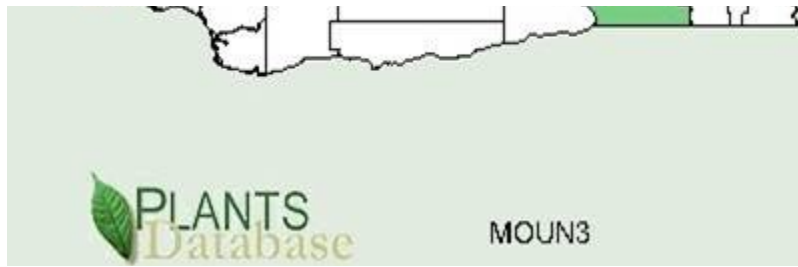
**Range:** Northern states and southern provinces of Canada, Zones 6A- 8B

**Climate, elevation:** Higher elevations, moist



**Local Occurrence:** North Baker Lake, Lake Wenatchee, Alpine Wilderness Area

**Habitat preferences:** Grows in rich moist woods, in Washington Douglas-fir is a frequent cosymbiont. This species lacks chlorophyll and is



considered to be a saprophytic plant. It obtains nutrients through symbiotic relationships with certain soil fungi that are found in decaying plant roots,

**Plant strategy type/successional stage:** Lacking chlorophyll, *Monotropa uniflora* cannot photosynthesize. It instead acquires carbon-rich photosynthates in another way: from a nearby tree, via a shared fungal root-association.

**Associated species:** *Hypopitys monotropa*, Pinesap, Ericaceae(Heath Family)

**May be collected as:** seed

**Collection restrictions or guidelines:** Allow pods to dry on plant; break open to collect seeds.

**Seed germination :** Fungal-induced seed germination is a phenomenon characteristic of mycorrhizal plants that produce dust-like seeds with only minimal nutritional reserves. In such systems, fungi trigger germination and/or subsidize development.

**Seed life:** Seeds have short shelf life planted in Autumn-Spring

**Recommended seed storage conditions:** dry

:

**Propagation recommendations:** From seed winter sow in vented containers, coldframe or unheated greenhouse. Sow the seed in leaf litter under trees where host plant occurs. *Monotropa uniflora* has delicate root systems that resist transplanting.

**Soil or medium requirements:** Moist soil

**pH requirements:**

5.1 to 5.5 (strongly acidic)

5.6 to 6.0 (acidic)

6.1 to 6.5 (mildly acidic)

**Installation form (form, potential for successful outcomes, cost):** The plant roots also have a symbiotic relationship with a particular species of soil fungi (pH dependant) to supplement its diet. It is difficult to grow these outside the natural environment in which they were found.

**Recommended planting density:** 3-6 “

**Care requirements after installed:** Requires consistently moist soil, do not let dry out

between waterings

**Normal rate of growth or spread; lifespan:** Grows to 12", perennial

**Sources cited:**

1. Washington Native Plant Society Plant List
2. Mathews, D. (1990). Cascade-Olympic Natural History. Raven Editions.
3. Armstrong, M. (1915). Field Book of Western Flowers. C.P. Putman's Sons
4. <http://www.horticopia.com/hortpix/index.html>,
5. <http://plants.usda.gov/>
6. Molecular Ecology  
Volume 14 Page 1549 – April 2005  
Volume 14 Issue 5

Data Compiled by Maura Shelton April 13, 2006