

Scientific Name: *Hudsonia tomentosa* Nutt.

Family: *Cistaceae*

Common Names: beach heather, woolly beach-heather, sand golden-heather

Plant Description

Low, under 20 cm tall, branched, perennial shrub forming mats or mounds from taproot; branches under scale like leaves, haired and grey-green, old branches red-brown to grey; Leaves evergreen, alternate, simple scale-like, overlapping, close to branches, glabrous; flowers perfect, conspicuous, golden yellow, 5 petals, 5 sepals, calyx hairy (Johnson et al. 1995).

Fruit: Smooth, egg shaped, loculed capsule enclosed by persistent calyx (Johnson et al. 1994).

Seed: Minute.



Hudsonia tomentosa in flower

Habitat and Distribution

Habitat: Sand hills and sand dunes, often under *Pinus banksiana*.

Seral Stage: Pioneer species.

Soil: Coarse textured (Lady Bird Johnson Wildflower Center 2007).

Distribution: In northern Alberta. Southwestern District of Mackenzie, Alberta to southern Labrador, New Brunswick south to North Dakota, Minnesota,

Great Lakes, West Virginia, North Carolina (Johnson et al. 1994, Moss 1983).

Phenology

Late spring bloom, fruit and seeding through summer to fall (USDA NRCS n.d.).

Pollination

Many members of *Cistaceae* are insect pollinated (Bosch 1992).

Genetics

$2n=32$ (Moss 1983).

Symbiosis

Buried phyllosphere (leaves) and rhizosphere (roots) associated with Green Sand or blue-green algae (Nelson et al. 1986).

H. tomentosa forms ectomycorrhizal associations with *Cenococcum geophilum* (Smreciu et al. 1997) and a white rhizomorphic mycorrhiza (Massicotte et al. 2010).

Seed Processing

Collection: Shattered material is easily collected from surroundings, seed removal from plant is challenging (Skaradek 2001).

Seed Weight: 2.4 g/1,000 seeds (Skaradek 2001).

Harvest Dates: August to September (Skaradek 2001).

Cleaning: Light use of hammermill or screen and separate mechanically (Skaradek 2001).

Storage Behaviour: Likely orthodox.

Storage: Store cold after drying to low relative humidity.

Longevity: No literature found.

Propagation

Natural Regeneration: From seed and rhizomes.

Germination: Smreciu et al. (1997) reported little germination 2 months following seeding.

Pre-treatment: Requires cold stratification (Skaradek 2001, USDA NRCS n.d.).

Direct Seeding: In greenhouse peat-sand mix, 215 g per square metre.

Planting Density: No literature found.

Seed Rate: No literature found.

Vegetative Propagation: Root, cuttings and container (USDA NRCS n.d.).

Micro-propagation: No literature found.



Aboriginal/Food Uses

Food: No literature found.

Medicinal: No literature found.

Other: No literature found.

Wildlife/Forage Usage

Wildlife: No literature found.

Livestock: Low palatability (USDA NRCS n.d.).

Grazing Response: No literature found.

Reclamation Potential

Capable of N-fixing and reducing acetylene via mycorrhizal associations; it is capable of colonizing sand blowouts (Nelson et al. 1986).

Commercial Resources

Availability: General retail, online and garden centers but no large scale commercial retailer (Skaradek and Miller 2009).

Cultivars: None known (Skaradek and Miller 2009).

Uses: No literature found.

Notes

May produce allelopathic compounds to reduce competition (Skaradek and Miller 2009).

Photo Credits

Photo 1: Christopher Miller USDA NRCS via Wikimedia Commons 2012.

Photo 2: Fungus Guy, Wikimedia Commons 2004.

References

Bosch, J. 1992. Floral biology and pollinators of three co-occurring *Cistus* species (Cistaceae). *Botanical Journal of the Linnean Society* 109: 39-55.

Johnson, D., L. Kershaw, A. MacKinnon and J. Pojar, 1995. *Plants of the Western Boreal Forest and Aspen Parkland*. Lone Pine Publishing and the Canadian Forest Service. Edmonton, Alberta. 392 pp.

Lady Bird Johnson Wildflower Center, 2007. *Hudsonia tomentosa* Nutt. Beach Heath, Woolly beachheather. IN: Native Plant Database. University of Texas at Austin, Austin, Texas. http://www.wildflower.org/plants/result.php?id_plant=HUTO [Last accessed October 10, 2013].

Massicotte, H.B., R.L. Peterson, L.H. Melville and L.E. Tackaberry, 2010. *Hudsonia ericoides* and *Hudsonia tomentosa*: Anatomy of mycorrhizas of two members in the Cistaceae from Eastern Canada. *Botany* 88: 607-616.

Moss, E.H., 1983. *H. tomentosa* Nutt. Sand heather. IN: *Flora of Alberta. A manual of flowering plants, conifers, ferns, and fern allies found growing without cultivation in the province of Alberta, Canada*. 2nd edition. University of Toronto Press, Toronto, Ontario. pp. 404-405.

Nelson, S.D., L.C. Bliss and J.M. Mayo, 1986. Nitrogen fixation in relation to *Hudsonia tomentosa*; a pioneer species in sand dunes, northeastern Alberta. *Canadian Journal of Botany* 64: 2495-2501.

Skaradek, W., 2001. Propagation protocol for production of *Hudsonia tomentosa* seeds; USDA NRCS - Cape May Plant Materials Center, Cape May Court House, New Jersey. IN: Native Plant Network, University of Idaho, College of Natural Resources, Forest Research Nursery, Moscow, Idaho. <http://www.nativeplantnetwork.org/Network/ViewProtocols.aspx?ProtocolID=1307> [Last accessed October 8, 2013].

Skaradek, W. and C. Miller, 2009. Beach Heather *Hudsonia tomentosa* Nutt. USDA, NRCS Plant Fact Sheet. 2 pp. http://plants.usda.gov/factsheet/pdf/fs_huto.pdf [Last accessed October 8, 2013].

Smreciu, A., R. Yakimchuk and R.S. Currah, 1997. A preliminary evaluation of native psammophilous plants for revegetating oil sand tailings at Syncrude Canada (Fort McMurray, Alberta). IN: Proceedings of the 21st Annual British Columbia Mine Reclamation Symposium in Cranbrook, British Columbia, 1997. The Technical and Research Committee on Reclamation, Victoria, British Columbia.

USDA NRCS, n.d. *Hudsonia tomentosa* Nutt. woolly beachheather. IN: The PLANTS Database. National Plant Data Center, Baton Rouge, Louisiana. <http://plants.usda.gov/core/profile?symbol=HUTO> [Last accessed October 8, 2013].