

## SPECIES FACT SHEET

**Common Name:** seaside centipede

**Scientific Name:** *Heterodermia sitchensis*

Division: Ascomycota

Class: Ascomycetes

Order: Lecanorales

Family: Physciaceae

**Technical Description:** Thallus foliose, semi-erect, to about 2 cm in diameter. Lobes narrow, 0.5-2.0 mm wide, short to elongate, sparsely irregularly branched, appressed. Upper surface (cortex) pale greenish white, but discoloring to bluish black, matte, smooth to occasionally bearing scattered lumps (verruculae) or irregular whitish spots (maculae), strongly convex, 15-20  $\mu\text{m}$  thick. Soredia pale whitish green, confined to ring-shaped patches (soralia) originating from within an urnlike outgrowth of the apothecial rim (excipulum) of aborted apothecia, and becoming exposed as the walls of this urn break down or widen. Interior of thallus (medulla) 2 – 3  $\mu\text{m}$  thick. Lower surface without cortex (ecorticate), cottony (under 10X) but frequently having veinlike extensions of the upper cortex. Marginal cilia short, 0.5-2.0 mm, white becoming black, sparsely to abundantly irregularly branched. Apothecia standing on short stalk (stipe) near the ends of lobes, spores not maturing.

Chemistry: Cortex K<sup>+</sup> yellow; medulla K<sup>+</sup> yellow, C<sup>-</sup>, KC<sup>-</sup>, P<sup>+</sup> orange. Contains atranorin, zeorin, and unknown substances.

**Distinctive characters:** Soralia ring-shaped within urn-like aborted apothecia, no lower cortex, irregularly branched marginal cilia. **Similar species:** *Physcia adscendens* is similar in size, shape and color, has marginal cilia, can grow in the same habitat, and has soralia that are similar in shape, but (1) its marginal cilia are not branched, (2) its lower surface is corticate, and (3) its soralia are formed on the lower surface below the lobe tips, while those of *H. sitchensis* are formed within immature apothecia on the upper surface of the tips. **Other descriptions and illustrations:** Droker 2007; Goward 1984; Goward et al. 1994: 55; Goward and Wright 2006; McCune & Geiser 1997: 115.

**Life History:** Details for *Heterodermia sitchensis* are not documented. Spores do not mature, and dispersal is restricted to vegetative propagation via soredia, litterfall, and fragmentation. Because soredia are relatively heavy, dispersal over long distances may be aided by birds, mammals, or invertebrates.

**Range, Distribution, and Abundance:** Southern Alaska to Oregon (but not yet confirmed from Washington). Oregon: Cape Lookout in Tillamook County; Umpqua Lighthouse State Park in Douglas County. Not abundant. In British

Columbia, restricted to low elevations along the outer coast. Type locality is in Pacific Rim National Park, Vancouver Island, B. C.

National Forests: none documented. Suspected from the Siuslaw National Forest. BLM Districts: none documented. Suspected from the Salem, Eugene and Coos Bay Districts.

**Habitat:** Restricted to the immediate coast. In Oregon, at one site found on twigs of *Picea sitchensis* on ridgetop exposed to ocean winds in old-growth temperate rainforest with *Tsuga heterophylla*. The lichen community includes *Cavernularia hultenii*, *Gyalideopsis anastomosans*, *Heterodermia leucomela*, *Heterodermia speciosa*, *Hypotrachyna revoluta*, *Parmotrema crinitum*, *Pertusaria glaucomela*, *Ramalina roesleri*, *Teloschistes flavicans* and *Usnea rubicunda*. The other Oregon site is a *Picea sitchensis*-*Pinus contorta* tree island in open dunes with an understory of *Cytisus scoparius*, *Arctostaphylos uva-ursi* and *Vaccinium ovatum*, and associated lichens *Ramalina thrausta* and *Usnea* spp (Glavich 2008). In British Columbia, sheltered localities at low elevations along the outer coast. The north-facing, foreshore exposure in Oregon seems to indicate a requirement for high humidity as suggested by Goward (1984), and the occurrence on windfall suggests that it is able to grow on twigs/branches subjected to strong winds (McHenry & Tønsberg 2002). This habitat is one of those listed by McCune et al. (1997) as harboring concentrations of rare species.

**Threats:** Air pollution, trail work, logging of old-growth coastal forests, and overcollecting may be the primary threats to *Heterodermia sitchensis*. Lichens of dune woodlands and forests are at risk from air pollution because of fog penetration and patterns of prevailing winds, even on the outer coast (Klopatek et al. 2006). Trail maintenance by workers unfamiliar with lichen habitat requirements can be very destructive to rare species. Edges of dense thickets and dead lower branches are prime habitat for a group of uncommon to rare lichens and are easily destroyed.

**Conservation Considerations:** Consider revisiting known sites and monitoring populations. Survey similar habitats along the Oregon and Washington coasts in order to locate new populations. When maintaining trails in appropriate habitat for *Heterodermia sitchensis*, avoid edges of dense thickets and live or dead lower branches of *Picea sitchensis*. Critical features of this habitat include microsite moisture and light. Thinning or pruning of branches could alter the microhabitat necessary for the survival of this species.

**Conservation Rankings:** Global: G2G3; National: NNR; Oregon Natural Heritage Information Center: List 2 (S1)

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**Date Completed: 18 May 2008; updated March 2009 with addition of Attachment 2 (Map of Oregon and Washington locations).**

**ATTACHMENTS:**

- (1) List of References**
- (2) Map of locations of *Heterodermia sitchensis* in Oregon and Washington**

**Attachment 1 – List of References**

Links are provided below to guide you to additional information that may be helpful in understanding this species. Included are links to illustrations, photographs, maps and ranking information used to determine threats and status by State Heritage Programs.

Droker, R. 2007. Unpublished photograph of *Heterodermia sitchensis* specimen collected by Gayle McHenry #91100.10

Glavich, D. 2008. pers. comm. on location of Umpqua Lighthouse State Park collection.

Goward, T. 1984. *Heterodermia sitchensis*, a new lichen from the Pacific Northwest of North America. *Bryologist* 87: 366-368.

Goward, T., B. McCune, & D. Meidinger. 1994. The Lichens of British Columbia, Illustrated Keys. Part 1. Foliose and Squamulose species. British Columbia Ministry of Forests. 181 pp.

Goward, T. & K.G. Wright. 2006. COSEWIC assessment and update status report on the seaside centipede lichen *Heterodermia sitchensis* in Canada. Committee on the Status of Endangered Wildlife in Canada, Ottawa. 28 pp.  
[http://www.sararegistry.gc.ca/virtual\\_sara/files/cosewic/sr%5Fseaside%5Fcentipede%5Flichen%5Fe%2Epdf](http://www.sararegistry.gc.ca/virtual_sara/files/cosewic/sr%5Fseaside%5Fcentipede%5Flichen%5Fe%2Epdf)

Klopatek, J.M., M.J. Barry & D.W. Johnson. 2006. Potential canopy interception of nitrogen in the Pacific Northwest, USA. *Forest Ecology and Management* 234: 344-354.

Oregon Natural Heritage Information Center. 2007. Rare, threatened and endangered species of Oregon. Oregon Natural Heritage Information Center, Oregon State University. Portland. 100 pp. Accessed 30 December 2007.  
[http://oregonstate.edu/ornhic/2007\\_t&e\\_book.pdf](http://oregonstate.edu/ornhic/2007_t&e_book.pdf)

McCune, B. & L. Geiser. 1997. *Macrolichens of the Pacific Northwest*. Oregon State University Press, Corvallis. 386 pp.

McCune, B., Rosentreter, R., & DeBolt, A. 1997. Biogeography of rare lichens from the coast of Oregon. Pp. 234-241 in T. N. Kaye, A. Liston, R. Love, D. Luoma, R. Meinke, and M. Wilson, eds. *Conservation and management of native plants and fungi*. Native Plant Society of Oregon, Corvallis, OR.

McHenry, G. & T. Tønsberg. 2002. *Heterodermia sitchensis* found in Oregon, U.S.A. *Evansia* 19: 158-160.

# Attachment 2 - Map of locations of *Heterodermia sitchensis* in Oregon and Washington

