

SPECIES FACT SHEET

Common Name: Dusty cartilage lichen, powdery twig lichen, chalk bush, dusty gristle, dusty ramalina, chalky ramalina

Scientific Name: *Ramalina pollinaria*

Division: Ascomycota

Class: Lecanoromycetes

Order: Lecanorales

Family: Ramalinaceae

Technical Description: Thalli fruticose, without differentiated upper and lower surfaces. Photosynthetic partner (photobiont, phycobiont) is a green alga. Thallus 1-3 (6) cm long, pale greenish-yellow to pale yellow; lobes (branches) attached basally, numerous, irregularly and coarsely palmately branched, erect or pendant, solid, 0.5-2 (3) mm wide, mostly flat or channeled but the narrower branches rounded, irregularly incised along the margins, narrowing toward the apices but torn open and expanded ("burst") at the tips; branch surfaces cartilaginous and shiny, smooth or wrinkled, with white powdery or granular soredia scattered on the upper surface (laminal) near the tips, along the margins, or in rounded to elongate soralia at the burst tips. Apothecia rare, near the tips of branches.

Chemistry: spot tests negative; medulla UV+ bluish-white. With evernic, obtusatic, and usnic acids.

Distinctive characters: Fruticose thallus with (1) solid branches, (2) soralia on the lamina, lobe margins, or at the expanded branch tips, and (3) evernic acid. **Similar species:** *Ramalina obtusata* has (1) translucent, perforated, or partially hollow branches, and (2) soredia partially obscured beneath hooded branch tips. *R. farinacea* (1) never has expanded or lip-like terminal soralia, although smaller terminal soralia are sometimes present, and (2) the medulla is UV-. **Other descriptions and illustrations:** Brodo et al. 2001: 629; Galun 1970: 69; Goward & Kashiwadani 1999: 212; Hale & Cole 1988: 164; Howard 1950: 157; Krog & James 1977: 35; McCune & Goward 1995: 157; McCune & Geiser 1997: 260; Mikulin (no date); Thomson 1984: 379.

Life History: Details for *Ramalina pollinaria* are not documented. Apothecia are rare and dispersal is mostly restricted to vegetative propagation via soredia, litterfall, and fragmentation.

Range, Distribution, and Abundance: Interruptedly circumboreal. In the Pacific Northwest, Alaska south to California and east to the Rocky

Mountains. Arizona, New Mexico, Texas, eastern North America, Scandinavia, UK, Europe, Israel.

National Forests: documented on the Willamette NF, suspected on the Siuslaw National Forest, and by the Umpqua, Mt. Hood, Rogue River-Siskiyou National Forests. BLM Districts: documented from Arcata and Coos Bay Districts, suspected on Salem District, and by the Eugene District.

Widespread globally but rare in the Pacific Northwest, where probably undercollected.

Habitat: In the Pacific Northwest, on bark, twigs, and wood of conifers, hardwoods, shrubs, and rarely rock along the immediate coast. Forest types are *Picea sitchensis* and *Tsuga heterophylla* associations.

Threats: Probably sensitive to air pollution (McCune and Geiser 1997) but persisting in Europe and there evidently not highly susceptible (Stone 2003). Coastal forests as well as those in the Cascade Range are at risk from air pollution because of fog penetration and patterns of prevailing winds (McCune 2003; Klopatek et al. 2006; Geiser and Neitlich 2007).

Conservation Considerations: Consider revisiting known localities and monitoring the status of populations. Search for new populations on federal and state lands. Surveys in suitable habitat and protection of known sites should be a priority. The best opportunity for conservation would be on federal land and in state parks.

Conservation rankings: Global: G4; National: NNR. Oregon Natural Heritage Information Center: List 2 (S1S2).

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Date Completed: 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 *Ramalina pollinaria* 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.

Brodo, I. M., S. D. Sharnoff and S. Sharnoff. 2001. Lichens of North America. Yale University Press, New Haven and London. 795 pp.

Galun, M. 1970. The lichens of Israel. Israel Academy of Sciences and Humanities, Jerusalem. 116 pp + plates and maps.

Geiser, L.H. & P.N. Neitlich. 2007. Air pollution and climate gradients in western Oregon and Washington indicated by epiphytic macrolichens. *Environmental Pollution* 145: 203-218.

_____, D.A. Glavich, A.G. Mikulin, A.R. Ingersoll & M. Hutten. 2004. New records of rare and unusual coastal lichens from the US Pacific Northwest. *Evansia* 21: 104-110.

Goward, T. & H. Kashiwadani. 1999. *Ramalina*. Pp. 207-214. In: Goward, T. 1999. The lichens of British Columbia. Part 2. Fruticose species. British Columbia Ministry of Forests. 319 pp.

Glavich, D. A. , L. H. Geiser, and A. G. Mikulin. 2005. The distributions of some rare coastal lichens in the Pacific Northwest and their association with the late-seral and federally-protected forests. *The Bryologist* 108(2): 241-254.

Hale, M.E. & M. Cole. 1988. Lichens of California. California Natural History Guides 54: 1-254.

Howard, G.E. 1950. Lichens of the state of Washington. University of Washington Press, Seattle. 191 pp.

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.

Krog, H. & P.W. James. 1977. The genus *Ramalina* in Fennoscandia and the British Isles. *Norwegian Journal of Botany* 24: 15-43.

McCune, B. 2003. An unusual ammonia-affected lichen community on the Oregon coast. *Evansia* 20: 132-137.

_____ & T. Goward. 1995. Macrolichens of the Northern Rocky Mountains. Mad River Press, Arcata, California. 208 pp.

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

Mikulin, A. (no date). Illustration of *Ramalina pollinaria*. USDA Forest Service National Lichens and Air Quality Database and Clearinghouse.

<http://gis.nacse.org/lichenair/index.php?page=illustrations>

Oregon Natural Heritage Information Center. 2007. Rare, threatened and endangered species of Oregon. Oregon Natural Heritage Information Center, Oregon State University. Portland. 100 pp.

http://oregonstate.edu/ornhic/2007_t&e_book.pdf

Stone, D. 2003. Heritage rank status factors for *Ramalina pollinaria*: global, California, Oregon, Washington.

http://oregonstate.edu/ornhic/survey_manage_ranks.html

Thomson, J.W. 1984. American Arctic Lichens. 1. The Macrolichens. Columbia University Press, New York. 504 pp.

USDA Forest Service National Lichens and Air Quality Database and Clearinghouse.

<http://gis.nacse.org/lichenair/index.php?page=query&type=community>

