

SPECIES FACT SHEET

Common Name: disc lichen

Scientific Name: *Buellia oidalea* (Tuck.) Tuck.

Division: *Ascomycota*

Class: *Ascomycetes*

Order: *Lecanorales*

Family: *Physciaceae*

Technical Description: **Thallus** shiny, cream colored to greenish cream colored to grey, thin to thick, with cracks in thallus making polygons that are 3-dimensional in thick thalli, bumpy or flat, without soredia; often with a black outline (prothallus). **Apothecia** black, with a black rim (proper margin) apparent when young, disappearing as apothecium matures. Apothecia flat when young, soon convex, to 2mm diameter. Surface of spore-bearing layer of disc (epihymenium) brown; spore-bearing layer of disc (hymenium) hyaline and strongly interspersed with oil droplets. **Spores** large and cross-walls patterned like a brick wall (muriform) with 13-40 cells in optical section, 35-45 x 13-18µm, young spores with conspicuous cross-wall (septal) and apical thickenings, unpigmented when young, becoming olive then brown, with tips that often remain unpigmented (Nordin 1999; Nash et al. 2007). Photosynthetic partner (photosymbiont) a green alga (*Trebouxia*).

Chemistry: Thallus C+ orange (best seen under microscope), UV+ bright or pale yellow to orange, K- or K+ dirty yellow, P-; medulla K-, C-, P- (Nordin 1999).

Distinctive characters: Whitish thallus with black apothecia, spores large, dark and muriform, often with unpigmented tips.

Similar species: Several *Buellia* species grow on wood and have muriform spores. *Buellia oidaliella* looks similar and has a C+ orange thallus but is limited to coastal areas in Baja California in northwest Mexico and the spores are distinctly smaller (mean 25.7 x 12.4µm). *Buellia muriformis* also looks similar and its range overlaps in southern OR and northern CA, but spores are smaller (mean 28.5 x 14.5 µm) and the thallus is C-. *Buellia alboatra* and *B. penichra* are similar but have submuriform spores (usually < 12 cells). **Other descriptions and illustrations:** Nordin (1999); Mikulin (no date); Nash et al. (2007): 156.

Life History: Details for *Buellia* spp. are not documented. Dispersal by spores; crustose lichens generally are slow growing (on the scale of 0.1 – 1.0 mm per year).

Range, Distribution, and Abundance: Endemic to Pacific coast of North America between Cape Blanco, Oregon and Baja California (Nordin 1999). The Suksdorf site in Howard (1955; Oregon, Hood River Co., Mitchell Point, along the Columbia River between Hood River and Wyeth) is too far inland and probably is *B. muriformis* (see Nordin 1999).

National Forests: not documented; suspected on Olympic and Siuslaw NFs based on proximity of sites and similar habitats. BLM Districts: documented on Eugene. Suspected on Salem and Coos Bay districts because of proximity to known coastal sites with similar habitat.

Habitat Associations: On bark or wood of trunks and twigs of coniferous trees and broad-leaved trees and shrubs along the immediate Pacific coast, in open places such as dunes and salt marshes. Forest types are coastal *Pseudotsuga menziesii*, *Picea sitchensis*, and *Pinus contorta* var. *contorta* associations.

Threats: Loss of habitat by fire or development will cause loss of local recolonization potential. As development destroys natural habitat along coastal areas, remaining habitat becomes more and more isolated, making dispersal from well-established lichen communities increasingly difficult (Bowler & Riefner, no date).

Conservation Considerations: On federal lands, consider revisiting known localities and monitoring the status of populations. Search for new populations on federal and state lands, and consider providing protection of known sites from activities that may impact sites. Based on the coastal habitat for this species, the best opportunity for conservation would be on federal land and in state parks.

Conservation rankings: Global: G3?; National: NNR; Oregon Natural Heritage Information Center: List 3 (S1). Washington Natural Heritage Program: SNR.

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Updated April 2013 by Rob Huff
Update clarified that there are no known sites on Forest Service lands.

References:

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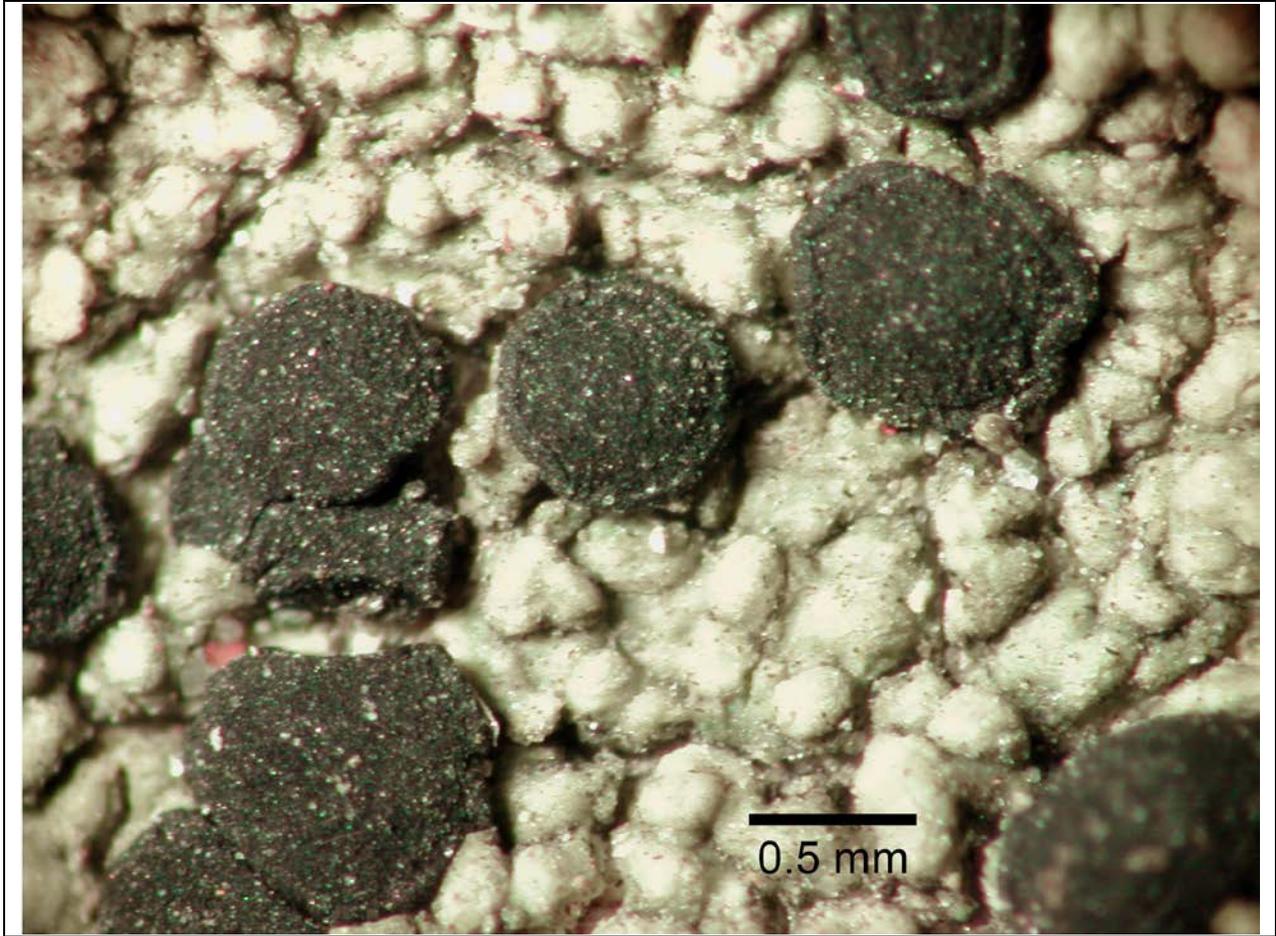


Photo of *Buellia oidalea* from Monterey County, California, by Daphne Stone 2008.