

***Porina raditicola*** P. M. McCarthy & Tønberg

Typus: United States of America, Washington, Clallam County, Olympic National Park, Lake Ozette, Swan Bay, 48°07'N, 124°36'W, alt. 10 m, on exposed, deeply shaded roots of *Alnus rubra*, 29 September 1997, T. Tønberg 25245 (Holotypus: BG [L-34448]; isotypi: CANL, US).

*Thallus* epiphloeodal on exposed roots and trunk bases, effuse to determinate (colonies to 2(–4) cm diam.), medium grey-green, smooth to minutely and irregularly uneven (depending on the microtopography of the substratum), dull, 20–40(–50) µm thick, continuous to sparingly rimose, somewhat gelatinous and translucent when wetted, K–. *Cortex* absent but thallus with an uppermost, alga-free layer 5–10 µm thick. *Algae Trentepohlia*; cells (4–)7–15(–20) × (3–)6–12(–16) µm [40]. *Mycobiont cells* rounded to elongate, c. 2–3 µm diam. *Prothallus* not apparent; basal layer absent.

*Perithecia* prominent, very numerous, hemispherical to subglobose and noticeably attenuated at the base, solitary or 2–3 contiguous, (0.21–)0.29(–0.4) mm diam. [40], concolorous with the thallus or with a 0.05–0.2 mm diam., dark pinkish grey periostolar cap. *Perithecial apex* plane, rounded or slightly flattened. *Ostiole* usually inconspicuous, occasionally slightly concave or papillate. *Perithecial wall* 30–50 µm thick near the apex, thinner to slightly thicker at the base, comprising 1) an outer, hyaline, cortex-like layer, 10–15 µm thick, of rounded 3–7 µm diam. cells; 2) an involucrellum, orange-brown in thin section, becoming rather reddish in K, of rounded, darker (when the periostolar cap is especially evident) outer cells, more thick-walled, elongate-periclinal cells within; both sublayers containing few to many algal cells towards the perithecial base, with few or none towards the apex. Space between base of perithecium and thallus often containing algae, and either bark cells or elongate, branched, 2–3 µm wide hyphae. *Centrum* depressed-globose, 0.15–0.25 mm diam. *Excipulum* uniformly hyaline to pale yellow-brown, 15–25 µm thick. *Subhymenium* 20–30 µm thick. *Paraphyses* unbranched at basal and mid-levels, sparingly branched towards the apices, 0.7–1.2 µm wide. *Periphyses* absent. *Asci* elongate-cylindrical, with a rounded or subtruncate apex and a distinct apical chitinous ring (in Congo Red), 72–115 × 7–9 µm [28]. *Ascospores* colourless, 3(–5)-septate, narrowly oblong, fusiform or elongate-fusiform, straight, slightly curved or faintly sigmoid, with rounded or acute ends, lacking a gelatinous perispore, uniseriate but overlapping to irregularly biseriate in the asci, (14–)19(–24) × (3–)4(–5.5) µm [230]; contents usually granular to guttulate, occasionally clear.

*Conidiomata* not seen.

Known only from the Pacific northwest of North America where it has been found in the coastal lowlands of Washington and British Columbia. This lichen occurs in the maritime *Picea sitchensis*-*Alnus rubra* belt bordering the ocean, in mixed deciduous-coniferous forests at a coastal lake beach, on the shore of an island in an inlet and on a north-facing slope bordering a lake. The specimens were from moderately to deeply shaded tree roots in wash outs, or from shaded trunk bases. The roots were up to a few centimetres thick and mostly ± vertical; one root was horizontal at ground level.