

Arctocetraria Krnef. & Thell

After Thomson, 1984, and others

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Thallus fruticose; lobes ± canaliculate or almost subtubular, occasionally becoming markedly expanded toward apical portions, occasionally also markedly foveolate or wrinkled; margins ± cucullate; surface pale to dark brown, blackbrown, or olivegray, usually matt near base, shiny above. Pseudocyphellae marginal or laminal on the lower surface; margins with scattered, branched or unbranched cilia. Lower cortex 1layered; upper cortex 12layered, 20130 um, composed of an external layer of pachydermatous paraplectenchymatous hyphae, rarely overlying a very thin laeyr of periclinally arranged prosoplectenchymatous hyphae.

Apothecia marginal on upper surface. Paraphyses with broad bases, usually straight, sparsely branched with swollen tips. Epihymenium K. Asci narrowly clavate to cylindrical, 3550 x 812 um, with ring structure (indistinct in A. nigricascens); axial body to 1.62 um; ocular chamber conical with narrow beak. Spores ± uniseriately arranged, ellipsoid to subglobose, ca. 68 x 3.55 um.

Medulla P, K, with norrangiformic and rangiformic acids. Pycnidia on marginal projections, wall twolayered, nonpigmented, outer layer usually thin, ca. 5 um, with cortical tissue beneath, pycnospores bifusiform, 45.5 um long. Medulla I. On soil, or bark or wood. Arctic.

Characterized mainly by the ascus type and pycnospore shape.

A. nigricascens (Nyl. in Kihlm.) Krnef.

Medulla I+ blueviolet. Epithecium K+ violet. Thallus usually large, not in dense stands; 13 cm high, dorsiventral but loose on the substratum and rising almost fruticose; lobes usually 12(3) mm broad, to 4 cm long, weakly canaliculate above; upper surface dark olive brown to blackish brown, or often grayish (blackish, olivaceous, or pale). Lower surface nearly concolorous, slightly dented in spots. Pseudocyphellae few or absent. Long simple or sparingly branched cilia present on margins, the tips of the cilia pointed, not rounded. Pycnidia nearly lacking. Apothecial rare, marginal. Medulla K, C, KC, P. With rangiformic and norrangiformic acids. On soil and the twigs of Betula, Arctic (Alaska to NE Canada, with rare disjunct southwards (Great Lakes

area).

Krnefelt, I., J.E. Mattsson and A. Thell. 1993. The lichen genera Arctocetraria, Cetraria, and Cetrariella (Parmeliaceae) and their presumed evolutionary affinities.