Anaptychia Krber em. Poelt
(LECANORALES: PYXINACEAE)

After Kurokawa, 1962, and others

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Thallus foliose to ± fruticose, dorsiventral, closely adpressed throughout or often somewhat ascending (espcially at apices), attached to substrate by rhizines; lobes usually only a few mm broad, elongate, branched, often ciliate; differentiated into upper cortex, medulla and sometimes lower cortex; upper cortex of agglutinated, thickwalled, longitudinal, ± periclinal hyphae, brownish, overlain by another, colorless, ± transparent layer also composed of mostly periclinal hyphae; medulla wooly, of thin walled hyphae; lower cortex may be almost identical to upper, or absent or less developed; lower surface with rhizines when lower cortex present; soredia and isidia absent [?may not be true for all species]. Cortex K, without atranorin.

Apothecia frequent, laminal or terminal, ± stalked; exciple thalloid, persistent, concolorous with thallus; disk dark, often pruinose; hypothecium colorless or yellowish brown; hymenium colorless; epihymenium brown; paraphyses simple, or branched towards apices, septate, little or not conglutinate, ± swollen at apices; asci Lecanoratype, clavate, unitunicate, thick walled, I+ blue; tholus I+ blue; 8 spored; spores ellipsoid, with ± rounded apices, medianly constricted, 1septate, without blastidia; uniformly rather thinwalled; surface covered with minute spines or ridges; dark brown at maturity.

Pycnidia immersed or protruding, forming small warts; fulcrum endobasidial; pycnospores bacilliform, straight, colorless, 35 x 1.5 um. Atranorin and zeorin (trace). Photobiont Trebouxia. On trees and rocks.

Separated from Physconia and other related genera by the cortex being composed of longitudinally arranged hyphae, which can be readily recognized in both transverse and longitudianl sections. Distinguished from Heterodermia by its relatively uniformly thinwalled ascospores with minutely sculptured walls; although both Rogers and Purvis state that Anaptychia contains atranorin, sterile material of Heterodermia is usually identifiable as that genus by having a whitish, K+ distinctly yellow upper surface (presumably containing a larger concentration of atranorin), whereas Anaptychia spp. are [usually?] darker gray or brown and at most K+ weakly yellow.

1. Upper surface tomentose or pubescent. 2
1. Upper surface not tomentose. 3

2. Upper surface tomentose; margins of apothecia with spinules. Margins of lobes with long cilia (visible without lens). Thallus loosely adnate to almost subfruticose, 48 cm broad; lower surface white, lacking a cortex. Apothecia not common. Cortex and medulla K, C, P (no substances). Common on sheltered rocks or among shrubs, especially along lake shores, Great Lakes area to New England and southeast Canada. ..... A. setifera
2. Upper surface very finely pubescent; margins of apothecia entire, the back spinulose. Thallus foliose to subfruticose; upper side rounded, brownish gray to brown; margins with long cilia which also at intervals attach the thallus loosely to the substratum; mainly dichotomously branched, the lobes 0.21.5 mm broad; edges rolled over to make the underside canaliculate; lower cortex absent on underside and white loose hyphae showing. Apothecia towards the tips, more or less stalked, 14 mm broad; disk dark brown, sometimes white pruinose. Spores 3042 x 1218 um; walls uniformly thin. No substances. On bark of Picea and Thuja, and on rock. Boreal (eastern), to arctic (northwestern, and Iceland). ..... A. kaspica

2. Thallus grayish to dirty white (if K+ yellow, see Heterodermia). Thallus usually forming rosettes, 38 cm wide, ± wrinkled at center; lobes plane, contiguous at the circumference; lower surface white and rugulose, with numerous concolorous rhizines which are densely branched, 35 mm long. Apothecia laminal, sessile, 13.5 mm diam.; margins entire or somewhat crenate; disc concave or plane, blackish brown, slightly pruinose but becoming naked; spores ellipsoid with rounded apices, constricted at center, 1317 x 2934 um, with 2 hemispherical locules, the wall uniformly thin. Pycnidia immeresed; pycnospores 35 x 12 um, cylindrical. No substances. ..... A. ulotrichoides
2. Thallus greenish olive to dark brown. 3

3. With isidia; laminal isidia cylindrical, often branched; marginal ones ± dorsiventral in juvenile stages, later becoming suberect and cylindrical, often branched. Apothecia sessile; margin with cylindrical isidia. Otherwise as in A. palmatula. On shaded face of sandstone cliff, Alaska. ..... A. isidiza Kurok. (not mentioned in Egan's list, but reported by Yoshimura & Sharp, 1973)
3. Without isidia. 4

4. Thallus covered with long narrow ascending to erect lacinules or lobules in the central part. With trace of zeorin. ..... A. bryorum (See Poelt, The Bryologist 74: 154 [1971]

4. Thallus without lacinules [with elongate, sometimes almost cylindrical lobules along margin and on thallus surface, according to Brodo], usually olive brown to brown, rather dark; rhizines often squarrosely branched. Lobes long, ± linear; lower surface white at margins but blackening toward center of thallus. Margins of apothecia entire or nearly entire [lobulate according to Hale's description and illustration, which may be based at least partly on A. bryorum; "if lobulate, then not radiating" according to Brodo]. Description from Hale: Thallus adnate, 48 cm across; lobes appressed, linear, crowded, 12 mm wide; upper surface light brown, rarely (in sunny habitats) white pruinose,turning deep green when wet; lower surface whitish tan, moderately rhizinate. Apothecia common, the rim lobulate. Cortex and medulla K, C, P (no substances). Common at the base of deciduous trees and on shaded, mossy rocks in mature forests, Appalachian and Great Lakes regions. ..... A. palmatula

Literature

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