Cryptothecia Stirton
(ARTHONIALES: ARTHONIACEAE)

After Thor, 1991

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Thallus crustose, effuse, ecorticate, sometimes (C. rubrotincta, which is sterile) with bright red margin, often widespreading, isidiate, without soralia, without a clearly developed pruina, heteromerous; cortex lacking; medulla whitish, with few to many calcium oxalate crystals (38 um diam.) on walls, 12 um diam. Hypothallus usually well developed, byssoid, white or brownish. Photobiont Trentepohlia, cells single or a few cells aggregated. Medulla I+ skyblue, K/I+ sky blue to deep blue; walls of photobiont becoming pale violet in ClZnI, darker violet at septa between two cells.

Ascocarps (if present; no organized ascocarps according to Awasthi) yellowish, rounded, completely or partly immersed margin thalline; exciple colorless. Paraphyses simple to dichotomously furcate at apices, the terminal cell subglobose. Asci 12(rarely 8 or 16)spored (18spored according to Awasthi), globose, sphaeroid or ovoid, bitunicate, ± evenly dispersed in thallus or aggregated and embedded in prominent, slightly elevated and differently colored fertile areas, a loose noncoherent hyphal tissue between asci. Spores colorless, 3to manyseptate (submuriform to multicelledmuriform according to Awasthi), thinwalled. Usually on bark, rarely on leaves.

Need to check Thor's articles and others, to straighten out apparent contradictions in the above description.

1. Prothallus bright red in outer part, red to whitish in inner part, distinct. Thallus greenish gray to reddish or violet, tightly to loosely attached to substrate, 0.150.30 mm thick.; medulla whitish but lower part red; photobiont cells ca. 815 x 511 um; isidia many, granular, 0.10.4 x 0.1 mm. Sexual structures and pynidia unknown. Thallus C, K+ purplered (red pigment), P, UV, containing confluentic acid, unknown substance accessory to confluentic, and chiodectonic acid; sometimes also with atranorin and various unknowns. On rough or rarely smooth bark in sheltered and shaded habits in moist and dense subtropical and tropical forests, rarely also on rocks or leaves; also found in hammocks (hardwood forests) and swamps which have standing water at least part of the year., and in oak or oakpine scrub vegetation, in eastern temperate areas. Common in Florida to

eastern Texas (and south to Central and South America), less common north along east coast to Delaware. ..... C. rubrotincta (synonyms: Chiodecton sanguineum, Herpothallon sanguineum)

1. Prothallus whitish, usually distinct. Thallus ± whitish to yellowish gray, tightly to almost loosely attached to substratum, effuse, smooth or with low, radiating ridges, entire, 0.150.30 mm thick; photobiont cells ca. 611 x 47 im; isidia many,granular, 0.10.3 mm; soralia absent. Hypothecium, excipulum and paraphysoids absent. Asci solitary in medulla or weakly aggregated in whitish areas, many, ca. 65100 x 4050 um, 1spored or very rarely 2spored, with clearly visible ocular chamber, I, K/I; spores oboboate, when old rarely pale brownish, muriform, surrounded by abundant epiplasm, (46)5570(80) x (19)2329(37) um; spore wall 12 um thick. Pycnidia few, in connection zone between two thalli, slightly elevated, solitary, black; conidiophores of ca. 1015 umlong conidiogenous cells; conidia bacilliform, (5)67(8) x 1 um. Thallus C+ red, K, P, UV+ pale graywhite, containing gyrophoric acid (major) and traces of unknown substances. On rough or rarely smooth bark in sheltered and shaded habitats in moist and dense subtropical and tropical forests, often in hammocks (hardwood forests) and swamps which have standing water at least for part of the year; also common in oak or oakpine scrub, often associated with C. rubrotincta. Florida and SE Georgia west to eastern Texas. ..... C. striata

Awasthi. 19 . Microlichens of India, etc.

Thor, 1991.