

CRYPTOTHECIA

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Cryptothecia Stirt., *Proc. Roy. Philos. Soc. Glasgow* 10: 77 (1876), *nom. cons.*; from the Greek *krypto* (to conceal) and *theke* (a container or sheath), in reference to the immersed asci.

Type: *C. subnidulans* Stirt.

Myriostigma Kremp., *Lichenes Foliicolae quos Legit. O. Beccari Annis 1866–1867 in Insula Borneo* 22 (1874). T: *M. candidum* Kremp. [= *C. candida* (Kremp.) R.Sant.]

Myxotheca Ferd. & Winge, *Bot. Tidsskr.* 30: 212 (1910). T: *M. hypocreoides* Ferd. & Winge [= *C. candida* (Kremp.) R.Sant.]

Thallus crustose, immersed in the substratum or superficial, ecorticate, white to greenish, often byssoid; globose isidia-like granules present or absent; soredia absent. Prothallus of interwoven or radiating hyphae. Photobiont layer distinct or not. Medulla usually well defined, white, at least partly amyloid, frequently studded with numerous colourless crystals of calcium oxalate. Thallus lacking well-defined ascomata. Ascigerous areas common or rare, restricted to cushions of soft white mycelium immersed in undifferentiated loose medullary tissue, \pm spreading over the whole thallus, forming small clusters near the surface of the thallus, or cushion-like structures, usually clearly differentiated from sterile areas. Asci globose to ovoid, of the *Cryptothecia*-type, bitunicate, thick-walled, often with a dome-shaped extension of the endoascus, with fissitunicate or semi-fissitunicate dehiscence, 1–8-spored, 60–160 \times 30–130 μ m, enclosed in a cocoon-like layer 5–10 μ m thick comprising richly branched and interwoven septate paraphyses c. 1 μ m thick; ocular chamber usually only present in asci with mature spores, broad, blunt and non-amyloid; ascus stipe narrow, basal, 10–20 \times 3–7 μ m. Ascospores muriform, ellipsoidal and often somewhat curved, oblong or ovoid, colourless, 40–110 \times 15–65 μ m. Conidiomata pycnidial, immersed to emergent, globose to ovoid; wall dark brown; conidiogenous cells simple, bacilliform to narrowly clavate, acrogenous or pleurogenous. Conidia colourless, simple, bacilliform, straight or slightly curved, 3–8 \times c. 1 μ m, or thread-like, filiform and multiseptate, 110–140 \times c. 1.5 μ m.

Cryptothecia is a pantropical to subtropical genus of c. 45 species, seven of which occur in Australia. These lichens grow on bark, wood or leaves.

U.Makhija & P.G.Patwardhan, A contribution towards a monograph of the lichen genus *Cryptothecia* (family Arthoniaceae), *Current Res. Pl. Sci.* 1994: 57–72 (1994); G.Thor, The genus *Cryptothecia* in Australia and New Zealand and the circumscription of the genus, *Symb. Bot. Upsal.* 32(1): 267–289 (1997); R.Lücking, G.Thor, A.Aptroot, K.Kalb & J.A.Elix, The *Cryptothecia candida* complex revisited, *Lichenologist* 38: 235–240 (2006).

1	Thallus foliicolous.....	2
1:	Thallus corticolous.....	3
2	Asci 1-spored; thallus C+ red, P–; gyrophoric acid present (1).....	5. <i>C. inexpectata</i>
2:	Asci 8-spored; thallus C–, P+ yellow; psoromic acid present.....	6. <i>C. irregularis</i>
3	Thallus C+ red, P– (1:).....	4
3:	Thallus C–, P+ yellow.....	6
4	Thallus with distinct white faveolate ascigerous areas; gyrophoric and confluent acids present (3).....	4. <i>C. faveomaculata</i>
4:	Thallus lacking white faveolate ascigerous areas; gyrophoric present; confluent acid absent.....	5
5	Thallus with a soft dull surface; gyrophoric and ovoic acids present (4:).....	7. <i>C. scripta</i>
5:	Thallus with a hard glossy surface; gyrophoric and norstictic acids present.....	2. <i>C. eungellaiae</i>
6	Thallus with a silky lustre; pycnidia numerous; psoromic and \pm confluent acids present (3:).....	1. <i>C. atropunctata</i>
6:	Thallus dull; pycnidia few or absent; psoromic acid present; confluent acid absent.....	3. <i>C. exilis</i>