



CYSTOCOLEUS ¹

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Cystocoleus Thwaites, *Ann. Mag. Nat. Hist.*, ser. 2, 3: 241 (1849).

Type: *C. ebeneus* (Dillwyn) Thwaites

Thallus filamentous, black, forming irregularly undelimited tufts or spreading, felt-like patches many 10s of cms across. Photobiont *Trentepohlia*, with cells in long chains 10–20 µm wide. Fungal hyphae rather nodulose and of uneven thickness, 1–1.5(–2) µm thick, arranged irregularly over the surface of the algal cells. Ascomata and conidiomata unknown. Chemistry: nil.

A monotypic, obligately sterile genus. It is identical morphologically to *Racodium*, which can be distinguished by having the fungal hyphae arranged in a ± regular, rectangular pattern over the length of the algal filaments. Superficially similar, filamentous lichen genera such as *Ephebe* differ by having a cyanobacterial photobiont.

Key references: Kantvilas (2002); Fletcher & Dalby (2009).

1 *Cystocoleus ebeneus* (Dillwyn) Thwaites

Ann. Mag. Nat. Hist., ser. 2, 3: 241 (1849); —*Conferva ebenea* Dillwyn, *Brit. Conferv.*: tab. 101 (1809).

Cystocoleus niger (Huds.) Har., *J. Bot. (Morot)* 4: 91 (1890); —*Byssus niger* Huds., *Fl. Angl.*: 487 (1762).

A bipolar-pantemperate species, very widespread and common in Tasmania. It is found in sheltered clefts and overhangs of outcrops and large boulders of all non-calcareous rock types, growing directly on rock or overgrowing depauperate bryophytes, species of *Lepraria* or skeletal soil. Although most frequently collected at higher elevations, this lichen has a wide ecological range and may also occur in the littoral zone. The extensive, black, felt-like thallus can only be confused with that of *Racodium rupestre*. The characteristic wiggly pattern of the fungal hyphae on the filaments of *Cystocoleus* can only be observed at high power magnification.

Kingston, 42°59'S 147°18'E, sea-level, 1912, L. Rodway s.n. (HO); summit of Tim Shea, 42°43'S, 146°28'E, 950 m, 2013, G. Kantvilas 402/13 (HO); western slopes of Tanina Bluff, 42°39'S 147°02'E, 860 m, 2019, G. Kantvilas 267/19 (HO).

REFERENCES

Fletcher A, Dalby DH (2009) *Cystocoleus* Thwaites (1849). In CW Smith, A Aptroot, BJ Coppins, A Fletcher, OL Gilbert, PW James, PA Wolseley (Eds), *The Lichens of Great Britain and Ireland*, p. 369. (British Lichen Society: London).

Kantvilas G (2002) *Agyrium* Fr., *Bryophagus* Nitchke ex Arnold and *Racodium* Fr., lichen genera previously unrecorded for Australia. *Muelleria* **16** 65–70.

1 This work can be cited as: Kantvilas G (2024). *Cystocoleus*, version 2024:1. In MF de Salas (Ed.) *Flora of Tasmania Online*. 2 pp. (Tasmanian Herbarium, Tasmanian Museum and Art Gallery: Hobart). <https://flora.tmag.tas.gov.au/lichen-genera/cystocoleus/>

2 Tasmanian Herbarium, Tasmanian Museum & Art Gallery, PO Box 5058, UTAS LPO, Sandy Bay, TAS 7005, Australia.

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