FUSCIDEA

Gintaras Kantvilas

[From *Flora of Australia* volume 56A (2004)]

Fuscidea V.Wirth & Vězda, *Beitr. Naturk. Forsch. Südwestdeutschl.* 31: 91 (1972); presumably referring to the generally brown colour of the thallus (from the Latin *fuscus*) and the traditional association of most species within the broad concept of the genus *Lecidea*.

T: *F. aggregatilis* (Flot.) V.Wirth & Vězda [= *F. austera* (Nyl.) P.James]

Thallus thin to very thick, smooth, rimose, areolate or verrucose, sorediate or esorediate, with or without a conspicuous black prothallus. Apothecia lecideine, brown to black-brown, sessile and with a well-developed persistent proper margin, or ±aspicilioid and immersed in the upper surface of the thallus, with the proper margin often reduced or excluded; disc epruinose. Excipulum hyaline with a dark brown-pigmented outer edge (in section), or entirely black-brown and opaque, composed of radiating unevenly thickened hyphae. Hypothecium hyaline. Hymenium hyaline to pale brownish, frequently inspersed with oil droplets, with an olive-brown epihymenial zone. Paraphyses simple to sparingly branched, occasionally anastomosing, with apices typically swollen and brown. Asci of the ±typical *Teloschistes*-shape, clavate but tapering at the apex and with the ascoplasm extended into a broad ocular chamber, 8-spored. Ascospores colourless or pale brown, simple or 1-septate but with the septum frequently spurious, globose or ellipsoidal, frequently bean-shaped or with a central constriction (dumb-bell-shaped). Pycnidia immersed in the thallus. Conidia bacilliform or ellipsoidal.

Chemistry: Divaricatic acid or fumarprotocetraric acid are by far the most common compounds recorded. Two Australian species contain norstictic acid, unknown for the genus elsewhere in the world.

A genus of approximately 20 corticolous or saxicolous species worldwide, occuring mainly in the temperate Northern Hemisphere, especially in areas with a moist, cool, maritime climate such as Great Britain, southern Scandinavia and the Pacific Northwest of North America. Nine taxa are known for Australia, mostly from Tasmania, representing a significant concentration of diversity. However, with the exception of the widespread *F. australis*, Australian species tend to be very sporadic in their distribution, and they do not form aggregations of taxa such as the *Fuscideetum kochianae* (V.Wirth) V.Wirth community of the Northern Hemisphere. Species of *Fuscidea* are defined mainly by the morphology of their apothecia (essentially either sessile and lecideine or immersed and ±aspicilioid), the size and shape of the ascospores, the presence or absence of soredia, and by thallus chemistry.

I.M.Brodo & V.Wirth, Lichens and lichenicolous fungi of the Queen Charlotte Islands, British Columbia, Canada. 4. The genus *Fuscidea* (Fuscideaceae), *in* M.G.Glenn, R.C.Harris, R.Dirig & M.S.Cole (eds), *Lichenographia Thomsonia*, *North American Lichenology In Honor of John W. Thomson* 149–162 (1998); M.Inoue, A taxonomic study of the Japanese species of *Fuscidea* (lichens), *Hikobia* Suppl. 1: 161–176 (1981a); M.Inoue, A preliminary revision of extra-Japanese species of *Fuscidea* (lichens), *Hikobia* Suppl. 1: 177–181 (1981b); H.Oberhollenzer & V.Wirth, Beitrage zur Revision der Flechtengattung *Fuscidea*, *Beih. Nova Hedwigia* 79: 537–595 (1984); J.Poelt & A.Buschardt, Über einige bemerkenswerte Flechten aus Norwegen, *Norweg. J. Bot.* 25: 123–135 (1978); O.W.Purvis, L.H.Skjoldahl & T.Tønsberg, *Fuscidea* V.Wirth & Vězda (1972), *in* O.W.Purvis, B.J.Coppins, D.L.Hawksworth, P.W.James & D.M.Moore (eds), *The Lichen Flora of Great Britain and Ireland* 251–256 (1992); T.Tønsberg, The sorediate and isidiate, corticolous, crustose lichens in Norway, *Sommerfeltia* 14: 1–331 (1992).

1 Apothecia broadly adnate to subimmersed 2

1: Apothecia sessile and ±constricted at the base, not immersed 4

2 Apothecia with a very thin and inconspicuous proper margin, surrounded by an incomplete and ragged thalline margin (*1*) ..... **F. mayrhoferi**

2: Apothecia with a thick prominent proper margin and lacking any semblance of a thalline margin 3

3 Thallus prominent, brown to greyish brown, containing norstictic acid (medulla K+ yellow → red); apothecia mostly 0.5–0.8 mm wide (*2:*) ..... **F. subasbolodes**

3: Thallus inconspicuous, greyish, very thin, lacking any compounds detectable by TLC or spot tests; apothecia 0.3–0.6 mm wide ..... **F. asbolodes**

4 Thallus Pd+ red or orange-yellow (containing fumarprotocetraric or alectorialic acids) (*1:*) 5

4: Thallus Pd– (containing divaricatic or sekikaic acids) 6

5 Thallus Pd+ orange-yellow to orange-red, K+ yellowish, KC+ orange, C+ orange (containing alectorialic acid) (*4*) ..... **F. elixii**

5: Thallus Pd+ red, K–, KC–, C– (containing fumarprotocetraric acid) ..... **F. australis**

6 Thallus UV– (containing sekikaic acid) (*4:*) ..... **F. maccarthyi**

6: Thallus faintly UV+ white (containing divaricatic acid) 7

7 Thallus on bark, typically sorediate; ascospores colourless, dumb-bell-shaped with a central constriction (*6:*) ..... **F. lightfootii**

7: Thallus on rock, not sorediate; ascospores often brownish at maturity, oblong-ellipsoidal or rarely bean-shaped ..... **F. ramboldioides**