

LECANORA

H. Thorsten Lumbsch & John A. Elix

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

Lecanora Ach., *Lichenogr. Universalis* 77 (1810); from the Greek *lekanon* (a small bowl) and *ora* (form, beauty), in reference to the appearance of the apothecia.

Type: *L. allophana* Nyl.

Thallus crustose, adnate, granular, areolate, placodioid or peltate, rarely immersed in the substratum. Soredia present or absent. Isidia and cephalodia absent. Prothallus blackish brown, whitish to whitish grey or not visible. Apothecia immersed, sessile or constricted at the base; disc variously coloured, epruinose or pruinose; margin usually containing algal cells, generally conspicuous and concolorous with the thallus, in some species inconspicuous, reduced or becoming excluded. Amphithecial cortex present or absent. Epihymenium usually pigmented, with or without crystals. Hymenium hyaline, strongly amyloid. Hypothecium and subhymenium hyaline or pigmented. Paraphyses simple, septate, usually branched apically, thickened or not thickened apically. Asci clavate, 8- or (in non-Australian species) multispored. Ascospores simple, narrowly to broadly ellipsoidal, smooth-walled. Conidiomata with hyaline to pale brownish walls. Conidia bacilliform, filiform or falcate.

Chemistry: Atranorin or usnic acid or xanthenes, and a wide range of depsides, depsidones, terpenoids and fatty acids.

Lecanora is characterised by asci of the *Lecanora*-type, simple, colourless ascospores, and crustose thalli; the apothecial margin usually contains algal cells. It is a heterogenous assemblage of different groups, several of which probably deserve generic rank. *Lecanora s. str.* is characterised by the presence of atranorin and oxalate crystals in the amphithecium. The genus has a worldwide distribution and comprises about 600 species; 73 are known from Australia, along with four additional infraspecific taxa. The Australian species of *Lecanora* occur on rock, soil, and on trunks and canopy branches of trees in all ecosystems.

The *L. subfusca* group, the core group of the genus, has a centre of distribution in the Southern Hemisphere, while placodioid taxa (subgen. *Placodium*) are mainly found in the Northern Hemisphere.

In taxa of *Lecanora s. str.* the presence and size of crystals in the epihymenium and amphithecium and pigments in the epihymenium are important diagnostic features. Ideally, these crystals should be observed and interpreted when thin sections of apothecia are viewed under polarised light. Four types of epihymenia and amphithecia can be distinguished among Australian species: 1. *allophana*-type with small crystals in the algal-containing and cortical part of the amphithecium; 2. *campestris*-type with small crystals only in the algal-containing part of the amphithecium; 3. *melacarpella*-type with small and large crystals; and 4. *pulicaris*-type with large crystals.

The four types of epihymenia in Australian species include: 1. *chlarotera*-type with coarse crystals in the epihymenium which are soluble in HNO₃, pigmented or not, if pigmented, pigmentation soluble in KOH; 2. *gangaleoides*-type lacking crystals, olive-green-pigmented, pigmentation changing to green in KOH; 3. *glabrata*-type lacking crystals, red-brown-pigmented, pigmentation insoluble in KOH; and 4. *pulicaris*-type with small crystals in the epihymenium insoluble in HNO₃, brownish-pigmented with the pigmentation soluble in KOH.

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1	Thallus peltate to placodioid, at least with the margin raised from the substratum	2
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3:	Thallus yellowish green to yellow, containing arthothelin and thiophanic acid; NE Qld	L. pseudodecorata
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