

LEPRARIA

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Lepraria Ach., *Methodus* 3 (1803); from the Latin *leprosus* (having a scurfy appearance).

Type: *L. incana* (L.) Ach.

Thallus usually crustose, rarely squamulose, attached to the substratum by all or part of the lower surface, usually leprose (the surface or the complete thallus), unstratified and then composed entirely of soredia, or stratified, floccose or compact, forming rosettes or spreading irregularly, without a cortex. Upper surface pale blue, grey, green, yellow, yellow-green or white, or ±orange-pigmented, dull, usually leprose. Soredia (often as consolidated consoredia) always present; marginal lobules present or absent; isidia absent. Soredia often pruinose due the presence of crystals, ±globose, fine (to 50 µm wide) or coarse (more than 50 µm wide), loose or compact, with or without projecting hyphae, forming a layer directly on the substratum or, in stratified thalli, loosely embedded. Medulla present or absent, white, composed of interwoven hyphae. Hyphae 2–7 µm wide, anastomosing, sparingly septate, colourless, encrusted with numerous minute granular crystals. Lower surface not apparent in unstratified species, sometimes visible in stratified species as the white or pale brown lower part of the medulla, or as a ±distinct web of pigmented hyphae or hypothallus, forming a greyish or brownish tomentum that may or may not extend beyond the margin. Photobiont a unicellular green alga; algal layer usually indistinct and discontinuous, or absent. Ascomata and conidiomata unknown.

Lepraria is a cosmopolitan genus of c. 40 species, 19 of which are known from Australia. It occurs in alpine, temperate and tropical regions, on soil, rock, mosses, wood, bark and overgrowing other lichens. Previously, *Lepraria* was considered to be “*incertae sedis*”, but recent molecular studies by Ekman & Tønsberg (2002) have confirmed that many species studied are referable to the Stereocaulaceae.

J.R.Laundon, The species of *Lepraria* – the name for the *Lepraria membranacea* group, *Lichenologist* 21: 1–22 (1989); C.Leuckert & H.Kümmerling, Chemotaxonomische Studien in der Gattung *Lepraria* Nyl. Crombie (Lichenes), *Nova Hedwigia* 52: 17–32 (1991); J.R.Laundon, *Lepraria* in the British Isles, *Lichenologist* 24: 315–350 (1992); T.Tønsberg, The sorediate and isidiate, corticolous, crustose lichens in Norway, *Sommerfeltia* 14: 1–331 (1992); A.Orange, Chemical variation in *Lepraria eburnea*, *Lichenologist* 29: 9–13 (1997); A.Orange, P.Wolseley, V.Karunaratne & K.Bombuwala, Two leprarioid lichens new to Sri Lanka, *Biblioth. Lichenol.* 78: 327–333 (2001); A.Orange, *Lepraria atlantica*, a new species from the British Isles, *Lichenologist* 33: 461–465 (2001); H.J.M.Sipman, Survey of *Lepraria* species with lobed thallus margins in the tropics, *Herzogia* 17: 23–35 (2004); T.Tønsberg, *Lepraria*, *Lichen Fl. Greater Sonoran Desert Region 2*: 322–329 (2004); A.Orange & P.Wolseley, Two new thamnolic acid-containing *Lepraria* species from Thailand, *Lichenologist* 37: 247–250 (2005); J.A.Elix, New species of sterile crustose lichens from Australia, *Mycotaxon* 94: 219–224 (‘2005’) [2006]; J.A.Elix, Additional lichen records from Australia 56, *Australas. Lichenol.* 58: 4–13 (2006); J.A.Elix, A new species of *Lepraria* (lichenized Ascomycota) from Australia, *Australas. Lichenol.* 58: 20–23 (2006); G.Kantvilas & M.Kukwa, A new species of *Lepraria* (lichenized Ascomycetes) from Tasmania’s wet forests, *Muelleria* 23: 3–6 (2006); J.A.Elix & K.Kalb, Additional new lichen taxa (lichenized Ascomycota) from Australia, *Australas. Lichenol.* 63: 30–36 (2008).

1	Thallus white, grey or yellow-grey; usnic acid absent	2
1:	Thallus yellow-green; usnic acid and zeorin present	18
2	Thallus C+ red; lecanoric acid or alectorialic acid present (1)	3
2:	Thallus C–; lecanoric acid and alectorialic acid absent	5
3	Lecanoric acid present (2)	5. L. cupressicola
3:	Alectorialic acid present	4

4	Thallus P+ yellow-orange; protocetraric acid present; thallus fluffy, usually stratified, with a white medulla; soredia with projecting hyphae (3:)	7. L. eburnea
4:	Thallus P+ lemon-yellow; protocetraric acid absent; thallus not stratified; soredia without projecting hyphae	13. L. neglecta
5	Thallus K+ yellow; stictic acid or thamnolic acid present (2:)	6
5:	Thallus K-; stictic acid and thamnolic acid absent	7
6	Thallus margin distinct, often sublobate; stictic acid present (5)	10. L. lobificans
6:	Thallus margin diffuse, not sublobate; thamnolic acid present	2. L. aurescens
7	Thallus UV+ purple-blue, blue or blue-white; pannaric acid 6-methyl ester, pannaric, porphyritic, divaricatic or squamatic acids present (5:)	8
7:	Thallus UV-; pannaric acid 6-methyl ester, pannaric, porphyritic, divaricatic and squamatic acids absent	12
8	Thallus yellow-grey, compact; lobes distinct or obscure (7)	9
8:	Thallus grey-white, fluffy; lobes absent	10
9	Thallus distinctly lobed; pannaric acid present (8)	11. L. membranacea
9:	Thallus obscurely lobed; pannaric acid 6-methyl ester present	18. L. vouauxii
10	Thallus UV+ blue-purple; porphyritic acid and fatty acids present (8:)	1. L. atlantica
10:	Thallus UV+ bright blue or blue-white; divaricatic or squamatic acids present	11
11	Thallus UV+ bright blue, KC-; squamatic acid present (10:)	15. L. squamatica
11:	Thallus UV+ blue-white, KC+ pink; divaricatic acid present	19. L. yunnaniana
12	Thallus P+ orange-red; malonprotocetraric and fumarprotocetraric acids present (7:)	17. L. toilenae
12:	Thallus P-; malonprotocetraric and fumarprotocetraric acids absent	13
13	Obtusatic acid present (12:)	14. L. obtusatica
13:	Obtusatic acid absent	14
14	Methyl barbatate present (13:)	12. L. methylbarbatatica
14:	Methyl barbatate absent	15
15	Rangiformic and jackinic acids absent; angardianic or roccellic acids present (14:)	3. L. caesioalba
15:	Rangiformic acid or jackinic acid present; roccellic acid present or absent	16
16	Thallus lobate at the margin; zeorin usually present (15:)	9. L. lobata
16:	Thallus not lobate at the margin; zeorin usually absent	17
17	Pigments (fragilin) present (16:)	6. L. dibenzofuranica
17:	Pigments absent	8. L. jackii
18	Thallus lobate at the margin; argopsin, caloploicin or constipatic acid present (1:)	4. L. coriensis
18:	Thallus sublobate at the margin; contortin present	17. L. usnica