LOBARIA

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Lobaria (Schreb.) Hoffm., *Deutsch. Fl.* 2: 138 (1796); from the Greek *lobos* or the Latin *lobus* (a rounded projection) and the Latin suffix *-arius* (have the nature of), in reference to the large lobate thallus of the genus.

Type: *L. pulmonaria* (L.) Hoffm.

Thallus foliose, dorsivental, loosely adnate to adnate. Lobes sublinear to irregular, 1–20 mm wide; apices rounded or truncate; margins entire or dissected. Upper surface grey, green, olive-brown or bluish black, smooth, wrinkled or foveolate, plane or with prominent depressions and ridges, with or without soredia, isidia and phyllidia. Upper cortex pseudoparenchymatous. Photobiont a green alga (*Myrmecia* or *Trebouxia*) or a cyanobacterium (*Nostoc* or *Scytonema*); in those species with a green photobiont, internal and/or external cephalodia containing a cyanobacterial photobiont normally present. Medulla white. Lower surface glabrous, pale yellow to brown-black, smooth or bullate, lacking cyphellae and pseudocyphellae, tomentose, at least in part, rhizinate; rhizines simple to squarrose, sparse to moderately dense. Ascomata apothecial, laminal, sessile to subpedicellate; disc imperforate, with a thalline exciple. Ascospores fusiform or elongate-acicular at maturity, 8 per ascus, 1–15-septate, colourless or brown, with a ±ornamented ascospore wall. Conidiomata pycnidial, immersed, laminal; ostiole punctiform, black. Conidia bacilliform or slightly swollen at both ends.

Lobaria is a cosmopolitan genus, common in temperate, subtropical and montane-tropical regions of the world. It includes approximately 90 species, with East Asia and South America being the main centres of distribution. Eight species and an additional variety are known from bark and rock in Australia.

I.Yoshimura, The genus *Lobaria* in eastern Asia, *J. Hattori Bot. Lab.* 34: 231–364 (1971); D.J.Galloway, The lichen genus *Lobaria* (Schreber) Hoffm. in New Zealand, *Nova Hedwigia* 34: 317–331 (1981); I.Yoshimura, Taxonomic studies on *Lobaria crenulata* and its allies, *J. Hattori Bot. Lab.* 57: 97–126 (1984); D.J.Galloway, *Fl. New Zealand Lichens* 256–260 (1985); T.D.V.Swinscow & H.Krog, *Macrolichens of East Africa* 142–146 (1988).

1 Photobiont blue-green (a cyanobacterium) 2
1: Photobiont green 3
  2 Thallus isidiate, grey-brown to dark brown; tomentum dark brown to black*(1)* ..... **6. L. retigera**
  2: Thallus sorediate, yellow-green to grey; tomentum pale brown to mid-brown ..... **8. L. scrobiculata**
3 Thallus isidiate, containing gyrophoric and stictic acids*(1:)* ..... **3. L. isidiophora**
3: Thallus lacking isidia; stictic acid absent 4
  4 Lobe margins lobulate*(3:)* ..... **2. L. hartmannii**
  4: Lobe margins without lobules 5
5 Tomentum pale brown, sparse and evenly distributed*(4:)* ..... **4. L. patinifera**
5: Tomentum medium to dark brown, sparse in central areas or dense and evenly distributed 6
  6 Tomentum sparse; ascospores 1–3-septate*(5:)* ..... **1. L. discolor**
  6: Tomentum dense, evenly distributed; ascospores 3–15-septate 7
7 Ascospores 3–7-septate*(6:)* ..... **7. L. rhaphispora**
7: Ascospores 12–15-septate ..... **5. L. plurimseptata**