

UMBILICARIA

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Umbilicaria Hoffm., *Descr. Pl. Cl. Crypt.* 1: 8 (1789), *nom. cons.*; from the Latin *umbilicus* (a navel), referring to the navel-like holdfast attaching the thallus to the substratum.

Type: *U. hyperborea* (Ach.) Hoffm.

Thallus dorsiventral, heteromerous, monophyllous or polyphyllous, foliose-lobate, attached to the substratum by a central umbilicus, soft, pliable and ±coriaceous when wet, hard or brittle when dry. Upper surface shades of grey-brown, greenish brown, or grey to black, wholly or partly covered by a grey or white necral layer, smooth to warted-areolate or ±eroded at the margins, with a raised central area (umbo), with or without sharp ridges radiating from the umbo; margins sinuous, entire to ragged or incised, with or without rhizinomorphs. Isidia and soredia present or absent. Lower surface black or pale brownish or pinkish buff, smooth, ±bullate or warted-areolate; rhizinomorphs present or absent (not attaching the thallus to the substratum); thalylles (minute thalli produced on rhizinomorphs, mainly on the underside of the thallus) present or absent. Medulla loose or compact, not always clearly differentiated from the lower cortex. Photobiont green, *Trebouxia*. Ascomata apothecia, lecideine, sessile or subpedicellate, discrete, plane to convex; disc black, plane, smooth or with conspicuous ridges (gyrae) or bands of sterile tissue. Paraphyses sparingly branched. Asci 8-spored, subclavate or clavate, thick-walled, with a small amyloid apical cap and an outer amyloid coating. Ascospores ellipsoidal, simple to muriform, colourless or becoming brown. Pycnidia unilocular or multilocular. Conidia short-cylindrical, bacilliform to fusiform. Thalloconidia present or absent, originating from the lower cortex or on rhizinomorphs, 1-celled and granular, or multi-celled and forming congealed clusters.

Umbilicaria is a ±cosmopolitan, saxicolous genus of c. 70–80 species. It is most diverse in the Northern Hemisphere, especially at intermediate latitudes (Hestmark, 1997). Eight species are known from Australia, mainly in alpine and subalpine habitats along the Great Dividing Range and in Tasmania, often in exposed situations. Nineteen taxa are known from Australasia; 17 occur in New Zealand, including four endemic species.

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1	Rhizinomorphs present	2
1:	Rhizinomorphs absent.....	5
2	Rhizinomorphs of 2 types: thick, squat and ball-tipped, interspersed with sparse long slender branched rhizinomorphs; lower cortex trabeculate around umbilicus (1)	1. U. cinereorufescens
2:	Rhizinomorphs uniform, thin, not ball-tipped; lower surface not trabeculate around umbilicus	3
3	Rhizinomorphs sparse to moderately dense on the lower surface only; upper surface becoming powdery-sorediate along margins (2:)	4. U. hirsuta
3:	Rhizinomorphs usually very abundant on the lower surface and/or margins and/or the upper surface of the thallus, often forming a shaggy fringe around the lobes; upper surface esorediate.....	4
4	Rhizinomorphs shrubby and densely dendroid-branched to coralloid, mostly < 1.5 mm long, sparsely to densely beset with clusters of thalloconidia and appearing uneven and lumpy (3:).....	8. U. umbilicarioides
4:	Rhizinomorphs elongate and mostly furcate, never coralloid, 1–4 mm long, mostly smooth, glossy and lacking thalloconidia	2. U. cylindrica
5	Upper surface extensively folded, wrinkled or puckered (1:)	6
5:	Upper surface predominantly smooth.....	7
6	Thallus dark brownish, very fragile and brittle, with soft folds and wrinkles, occasionally whitish and angular near centre (5)	5. U. nylanderiana
6:	Thallus pale to dark grey or brownish grey, frequently covered by a white necral layer, relatively thick and robust, with ridged and angular folds and wrinkles forming a reticulate-faveolate pattern over the entire surface.....	3. U. decussata
7	Thallus polyphyllous, black or brown, epruinose; lobes richly divided and tangled; margins undulate or ±deflexed; apothecial disc gyrose (5:)	6. U. polyphylla
7:	Thallus mostly monophyllous, whitish- or greyish-pruinose; margins undulate to upturned; apothecial disc smooth, not gyrose	7. U. subglabra