MENEGAZZIA

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[From *Flora of Australia* volume 54 (1992)]

Menegazzia A.Massal., *Neagen. Lich.* 3 (1854); named after Luigi Menegazzi, a distinguished naturalist, author of *Malacologia Veronese*, and a friend of Abramo Massalongo, the celebrated Veronese lichenologist, author of the genus.

Type: *M. terebrata* (Hoffm.) A.Massal.

Thallus foliose, dorsiventral, ±radiate, rosette-forming to irregularly spreading. Lobes ±inflated, hollow. Upper surface usually perforate, with or without soredia, isidia, or blotches. Lower surface ±uniformly attached to substratum, uneven, blackened; walls of internal cavity with or without indumentum. Ascomata apothecial, laminal, rounded, often cupuliform, sessile to pedicellate; disc convex to concave, matt, shining or pruinose, eperforate; proper exciple absent; thalline exciple well-developed; epithecium pigmented, occasionally with granular inclusions; hymenium hyaline; hypothecium chondroid, of thick-walled conglutinated cells; paraphyses anastomosing; apical cells ±capitate, ±pigmented. Ascospores 2–8 per ascus, simple, ellipsoidal, thick-walled, hyaline. Conidiomata pycnidial, immersed, laminal, with a dark apex. Conidia short. Chemistry diverse, including depsides, depsidones, fatty acids and pigments.

A mainly southern hemisphere genus (the type species is widely distributed in the northern hemisphere) of c. 60 taxa, 42 of which are currently named. The present account discusses 28 taxa (of which 8 are new), although several other undescribed entities are known. Species of *Menegazzia* in Australia occur from lowlands to subalpine areas, most commonly as epiphytes of shrubs and trees in temperate rainforests, though some taxa occur in grassland or on rocks. Many Australian taxa also occur in N.Z., and a few also in South America. A more detailed account of the genus in Australia will be published elsewhere.

In the descriptions below, the *cavity* refers to the interior of the hollow lobes of the thallus.

R.Santesson, South American Menegazziae, *Ark. Bot.* 30A(11): 1–35 (1942); P.W.James in D.J.Galloway, Menegazzia, *Fl. New Zealand Lichens* 274–291 (1985); G.Kantvilas & P.W.James, The macrolichens of Tasmanian rainforest: key and notes, *Lichenologist* 19: 1–28 (1987).

1	Thallus isidiate or sorediate; apothecia rare or absent	
2	Thallus coarsely isidiate; laminal perforations absent	
3	Medulla K+ orange, P+ orange (stictic acid complex); thallus to 5 cm wide, upper surface grey-green	**M. eperforata**
3:	Medulla K-, P- (fatty acids); thallus to 1 cm wide, upper surface chestnut-brown, to olive brown	**M. minuta**
2:	Thallus sorediate; laminal perforations present	
4	Soralia derived from ±inflated vesicles or in helmet-shaped extensions of the lobes	

5	Thallus pale yellow-green (usnic acid); medulla C+ rose-red (lecanoric acid)	**M.globulifera**
5:	Thallus pale to dark grey or grey-green (usnic acid absent); medulla C-	
6	Upper surface partly pale bluish white pruinose especially towards lobe ends and on helmet-shaped soralia	**M. caesiopruinosa**
6:	Upper surface not pruinose; soralia vesicular ±bursting at apices or flange-like	
7	Thallus to 25 cm wide; lobes spreading, pale grey-green; medulla K+ orange, P+ orange (stictic acid agg.)	**M. grandis**
7:	Thallus to 7 cm wide ; lobes often ±ascending, very pale grey or ivory; medulla K-, P- (fatty acids)	**M. inactiva**
4:	Soralia not vesicular in origin, marginal or laminal, rarely subterminal	
8	Thallus predominantly pale to dark brown or fawn, often ±mottled blackish; soralia in coarse grey-brown clusters; on rock or ground	**M. castanea**
8:	Thallus predominantly pale grey, green-grey or green, rarely in part brownish; soralia otherwise; on bark, rarely on rock or soil	
9	Lobes 0.5–0.8 mm wide; upper surface grey-green, lettuce green or brownish, with ±incomplete white-maculate reticulation; medulla K+ orange, P+ orange (stictic acid)	**M. nothofagi**
9:	Lobes wider than 1 mm; upper surface pale blue-grey or grey, without reticulation; medulla K and P various	
10	Medulla UV+ vivid ice-blue (alectoronic and α-collatolic acids)	**M. ultralucens**
10:	Medulla UV- or orange	
11	Upper side of internal cavity ±ochre or orange-yellow; UV+ orange	**M. caliginosa**
11:	Upper side of internal cavity white, or purple-black or black, never ochre-yellow; UV-	
12	Soralia predominantly associated with perforations	
13	Margins of wavy perforations and upper surface with vesicular hooded soralia	**M. kantvilasii**
13:	Margins of perforations only with simple, regular soralia	**M. neozelandica**
12:	Soralia not or only intermittently associated with perforations	

14 Lobes often crowded, unorientated, not in rosettes, elongate, attenuated at point of attachment; laterals irregularly toe-like; medulla with UV+++ vivid yellow spot visible on TLC plates after charring — **M. subbullata**

14: Lobes mostly in radiating rosettes, elongate but not attenuated at point of attachment; laterals diverging, not toe-like; medulla UV- — **M. subpertusa**

1: Thallus lacking isidia or soredia; apothecia often present and abundant

15 On rock orsecondarily on ground; lobes uniform brown or brown-black or dull grey blotched brown- black (in shade) — **M. aeneofusca**

15: On bark, rarely on rock or ground

16 Medulla notably vivid yellow or ochre (calycin) — **M. enteroxantha**

16: Medulla white or rarely pale yellow (calycin absent)

17 Lobes less than 1 mm wide

18 Lobes with numerous perforations; surface lattice-like, unspotted — **M. myriotrema**

18: Lobes with scattered to frequent perforations but surface not lattice-like, with ±distinct, incomplete white spotting — **M. prototypica**

17: Lobes more than 1 mm wide

19 Ascospores 8 per ascus; medulla K-, P- (fatty acids); lobes smooth to occasionally rugose, surface waxy, pale grey or ±brown-blotched, especially exciple of apothecia — **M. weindorferi**

19: Ascospores (1) 2 per ascus; medulla K±, P± (fatty acids usually absent); lobes smooth or ±rugose- or corrugate-roughened, uniformly coloured or partially blackened, exciple of apothecia concolorous with thallus

20 Thallus ±uniformly suffused dark brown or reddish brown, rarely ±green-brown, ±grey or dull green-grey when in shade — **M. testacea**

20: Thallus green, grey-green or grey

21 Medulla K+ orange, P+ orange

22 Lobes attenuated at point of attachment, elongate-sausage-shaped; perforations of lateral branches often near point of attachment

23 Apothecial exciple very uneven, inflated; upper surface markedly rugose- roughened; UV- — **M. corrugata**

23: Apothecial exciple even, or if uneven not inflated; upper surface smooth or minutely rugose-roughened; UV+++ vivid yellow spot visible on TLC plate after charring

22: Lobes uniform, not attenuated at point of attachment; perforations scattered

24 Apothecia ±pedicellate, exciple radiately white-fissured; upper surface shining, not rugose; laterals sometimes ±regularly toe-like; perforations with a ±conical rim — **M. fissicarpa**

24: Apothecia mostly sessile, exciple not or sparingly white-fissured; upper surface mostly matt, rugose; laterals not toe-like; perforations gaping or only slightly elevated

25 Lobes regularly radiating from the centre, rosette-forming, 1–2(–2.5) mm wide; apothecia thin, plate-like, with thin, even exciple; disc pale brown — **M. fertilis**

25: Lobes irregularly arranged, often not radiating at margins, 1–4 mm wide; apothecia thick, often ±concave with flexuose uneven exciple; disc pale to dark red-brown — **M. platytrema**

21: Medulla K- or K+ blood-red (+crystals), P- or P+ rust-red or P+ orange

26 Medulla K-, P- (caperatic acid) — **M. confusa**

26: Medulla K+ red, P+ orange or K-, P+ rust-red

27 Medulla K+ red (+crystals), P+ orange (norstictic acid); thallus loosely radiating, spreading; apothecia not elevated — **M. norstictica**

27: Medulla K-, P+ rust-red (fumarprotocetraric acid); thallus compact, rosette-forming, shortly radiating; apothecia markedly elevated, obconical — **M. conica**