

Thelomma Massal.
(CALICIALES)

After Tibell

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Thallus crustose, moderate to rather thick, warted, gray or brown, corticate. Cortex formed by anticlinal hyphae sometimes with swollen and brownish apices. Photobiont Trebouxia. Medulla I+ blueblack.

Apothecia sunken in projecting thallus warts, with mazaedium. Hypothecium dark brown to black, thick. Proper exciple reduced laterally, with very thin, uncolored margin, forming a basal collar at the edge of the hypothecium. Asci cylindrical, formed singly, with a single functional wall layer, dissolving at an early stage. Spores dark brown to black, simple and spherical or 1septate and ellipsoid, with thick, ornamented walls, forming a well developed dry black spore mass.

Pycnidia unknown. Vulpinic acid derivatives and usnic acid. On steep faces of hard limefree rock, or on wood.

Closely resembles Cyphelium, which has sessile or immersed apothecia with a dark brownblack, laterally well developed exciple forming a distinct raised rim, and 1septate or submuriform ascospores in which the secondary wall usually has concentrically arranged layers in the electron microscope.

- 1. **Spores nonseptate. On rock, maritime.2**
- 1. **Spores 1septate. On wood.3**

2. Thallus grayish, KC+ rosered; spores with a somewhat fine and irregular ornamentation, with few pits; fertile verrucae smooth and regular. Thallus areolatewarted, light gray to slightly yellowish gray or with brownish tint, often bordered ± by a blackened base, sometimes obscurely lobed. Areoles 0.50.8 mm diam.; fertile areoles 1.11.6 mm across, often constricted at the base and almost peltate; surface smooth and slightly shiny; cortex leathery, consisting of three layers, the innermost very irregular and with prosoplectenchymatous hyphae penetrating deep into the medulla and thereby almost breaking up the algal layer. Thalline margin of apothecia smooth. Disk flat to convex, black; proper exciple indistinct. Hypothecium light brown. Ripe spores (9)1317 um. On rocks, coastal, California to British Columbia.T. mammosum

2. **Thallus with a yellow to olivaceous tinge, KC.** On rocks, coastal, Baja California to southern California.T. santessonii

3. **Thallus verrucose or rimose, KC.**4

3. **Thallus placodiform (marginally lobed), KC+ rosered.** Thallus well developed, ashy to yellowish, chinky to areolate and verrucose, continuous. Apothecia 23 mm diam., immersed; disk flat to slightly convex, black; thalloid exciple thin, becoming crenate; spores 1825 x 1018 um. On old wood, California. [Fink's reports from rock, and from Florida, are based on misidentifications?]T. californicum

4. **Mature spores 2228 x 1415 um; thallus thick, verrucose, P.**5

4. **Mature spores 1317 x 89 um; thallus thin, smooth, rimose, P+ red.** Thallus well developed, gray to yellowish, continuous, becoming rough, chinky and finally areolate. Apothecia 0.51.5 mm diam., immersed in slightly raised areas; disk flat to convex, black; proper exciple indistinct. Spores ellipsoid. On logs and rails, the Carolinas and Florida.T. carolinianum

5. **Thallus with black, well delimited groups of minute isidia; medulla I+ dark blue.** Thallus coarsely warted, when well developed, with elevated, flattened, ± crenulate warts or ± areolate, gray. Isidia frequent, ± globose, forming irregular and unbordered but well delimited, blue or brown black, ± convex, sorali-like clusters. Cortex to a degree set off from the algal layer. Apothecia rare, immersed in older warts. Fertile warts 1.52(2.5) mm diam., with rough upper surface. Mazaedium commonly greenish yellow pruionse. Spores when ripe 2228 x 1215 um, somewhat constricted at the septum and with a somewhat irregular upper surface, sometimes appearing in the light microscope with a fine streaked pattern. Ascospore mass with rhizocarpic acid and epanorin; thallus with usnic acid. On nutrient enriched wood, especially fence posts, gate rails, or shingles (usually sterile); also on dry sprouting twigs and stems of Pinus or Larix in less nutrient rich sites at higher elevations (sometimes fertile).T. ocellatum

5. **Thallus without isidia; medulla I.**T. occidentale

Literature

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