

CHAPTER 16

FAMILY MEGALOSPORACEAE

Characteristics of the Family Megalosporaceae

Thallus: corticolous, pale yellowish grey, rather thin, smooth, rimose, 60.0-110.0 μm thick; epruina; Soralia and Isidia absent; Prothallus not visible; Photobiont chlorococcoid; **Apothecia**: scattered and rounded, sessile; disc plane to concave with prominent margin when young, brown to black and black at margin; epruina; with lecideine (proper exciple), paraplectenchymatic tissue Parathecium: weakly differentiated, composed of thin walled; Epihymenium: orange-brown to brown; Hymenium: hyaline to pale brown to pale yellow; Subhymenium: hyaline to pale brown to pale yellow; Hypothecium brownish; Paraphyses: branched and anastomosing, apical not conspicuously swollen; Asci: clavate, and slightly thicker at the apex, *Lecanora*-type; **Ascospores**: 1 per ascus, hyaline, bilocular-pluriseptate, straight, thick walled, transversely 5 septate, (64.5)67.8-75.8-139.5(150.5) \times (21.5)23.5-30.8-38.4(40.5) μm ; **Pycnidia** and **Conidia** not observed.

Description of the Genus *Megalospora*

Megalospora (Clauz. & Cl. Roux) Hafellner & V. Wirth, in V. Wirth,

Flechten Baden-Württembergs: 511 (1987).

Thallus: corticolous, pale yellowish grey, rather thin, smooth, rimose, 60.0-110.0 µm thick; epruina; Soralia and Isidia absent; Prothallus not visible; Photobiont chlorococcoid; **Apothecia**: scattered and rounded, sessile; disc plane to concave with prominent margin when young, brown to black and black at margin; epruina, 0.5-2.5 mm diam.; with lecideine (proper exciple), paraplectenchymatic tissue Parathecium: weakly differentiated, composed of thin walled; Epihymenium: orange-brown to brown, 12.0-15.0 µm thick; Hymenium: hyaline to pale brown to pale yellow, 120.0-155.0 µm high; Subhymenium: hyaline to pale brown to pale yellow, 10.0-20.0 µm thick; Hypothecium brownish, 30.0-60.0 µm high; Paraphyses: branched and anatomizing, apical not conspicuously swollen, 32.5-128.9 µm high; Asci: clavate, and slightly thicker at the apex, *Lecanora*-type, 30.0-50.0 µm high; **Ascospores**: 1 per ascus, hyaline, bilocular-pluriseptates, straight, thick walled, transversely 5-septate, (64.5)67.8-75.8-139.5(150.5) × (21.5)23.5-30.8-38.4(40.5) µm; **Pycnidia** and **Conidia** not observed.

Chemistry: Usnic acid and Zeorin.

Habitats: on bark

Distribution: America, Southern Brazil, Western Europe, Japan, New Guinea, Africa, and Papua New Guinea.

Description of the Species

Megalospora tuberculosa (Fée) Sipman (Sipman, 1983, pp. 156-157).

Patellaria tuberculosa (Fee) Sprengel, Syst. Veget. 4(1): 264 (1827).

Biatora tuberculosa (Fee) Montagne, Ann. Sci. Nat., Bot., sér. 3, 10: 126 (1848).

Heterothecium tuberculosa (Fee) Flotow, Bot. Zeitung 8: 555 (1850).

Bombyliospora tuberculosa (Fee) Massalongo, Ricerch. Auton. Lich., p. 116 (1852).

Bacidia tuberculosa (Fee) Trevisan, Spighe e Paglie, p. 7 (1853).

Psorothecium tuberculosa (Fee) Stizenberger, Ber. Thätigk. St. Gallischen naturwiss. Ges. 1861-62, p.160 (1862).

(see Figure 61)

Thallus: corticolous, pale yellowish grey, rather thin, smooth, rimose, 60.0-110.0 µm thick; ep ruina; Soralia and Isidia absent; Prothallus not visible; Photobiont chlorococcoid; **Apothecia**: scattered and rounded, sessile; disc plane to concave with prominent margin when young, brown to black and black at margin; ep ruina, 0.5-2.5 mm diam.; with lecideine (proper exciple), paraplectenchymatic tissue Parathecium: weakly differentiated, composed of thin walled; Epihymenium: orange-brown to brown, 12.0-15.0 µm thick; Hymenium: hyaline to pale brown to pale yellow, 120.0-155.0 µm high; Subhymenium: hyaline to pale brown to pale yellow, 10.0-20.0 µm thick; Hypothecium brownish, 30.0-60.0 µm high; Paraphyses: branched and anastomosing, apical not conspicuously swollen, 32.5-128.9 µm high; Asci: clavate, and slightly thicker at the apex, *Lecanora*-type, 30.0-50.0 µm high;

Ascospores: 1 per ascus, hyaline, bilocular-pluriseptates, straight, thick walled, transversely 5 septate, $67.8-75.8-139.5(150.5) \times (21.5)23.5-30.8-38.4(40.5) \mu\text{m}$; **Pycnidia** and **Conidia** not observed.

Chemistry: Thallus P-, K-, C-, KC+ yellow; containing usnic acid and zeorin.

Habitats: On rocks in lower montane scrub at 1,473 meter from sea level.

Distribution: America, Southern Brazil, Western Europe, Japan, Africa, Thailand, New Guinea, and Papua New Guinea.

Specimens examined: Phu Luang Wildlife Sanctuary, Loei Province. the sideway to Lan Suriyan, on trunk of an unidentified tree, 25 June 2008, Varaporn Sriprang—VC483, CP0467, CP0468, CP0469, CP0470, CP0471, CP0472, CP0473, CP0474, CP0475, CP0490, VC789-1, VC790-1, VC0078-2, VC799-1, VC908-1, CP0596, CP0597 & VC866-1(RAMK).

Observation: *Megalospora tuberculosa* is characterized by the rather thin, smooth to rugulose, pale yellowish grey thallus, sessile apothecia with brown to brown to dark brown to gray to grayish blue to black and ascospores transversely 5 septate.

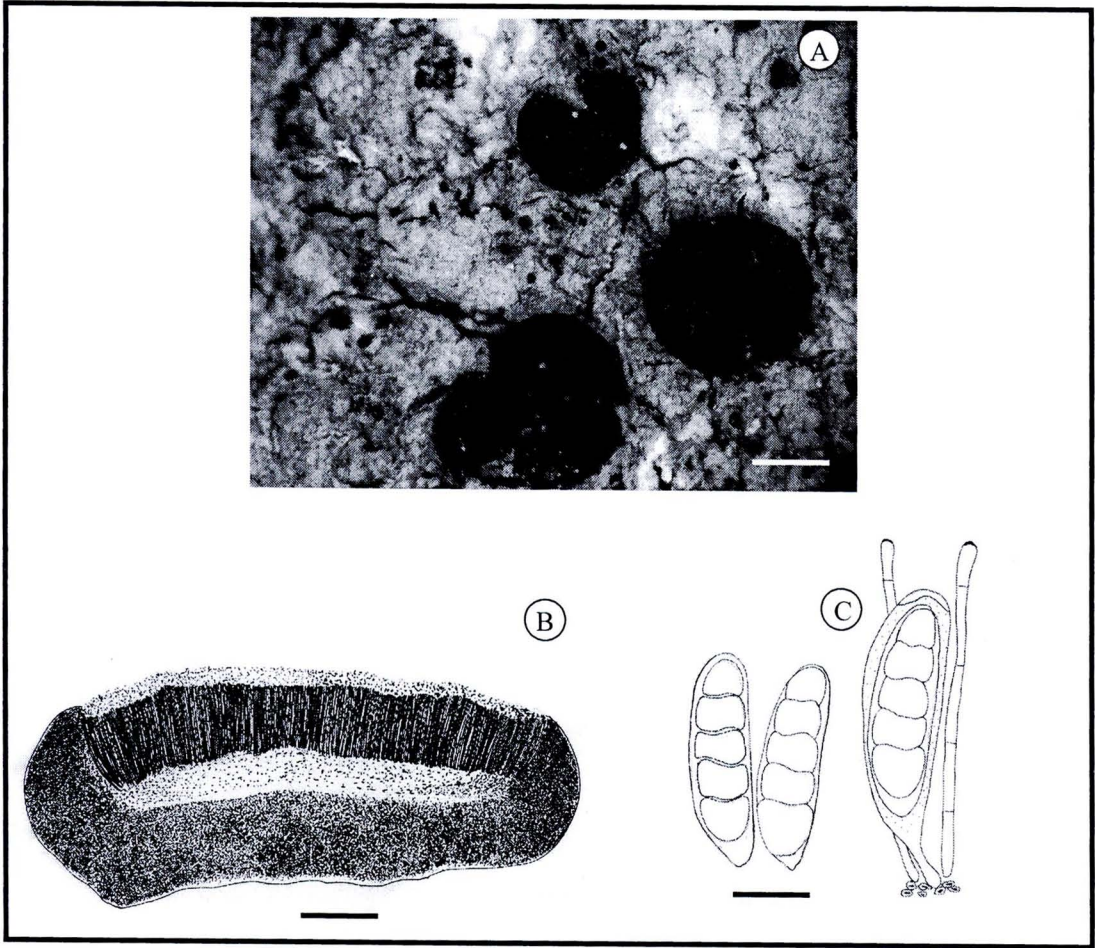


Figure 61 *Megalospora tuberculosa* (Fée) Sipman

Note. A = Apothecia lecideine, sessile, brown to black [VC483(RAMK)]

(scale = 1.31 mm)

B = Illustration of vertical section of apothecia [VC483(RAMK)]

(scale = 11.53 μm)

C = Illustration of ascus with paraphyses and ascospores

[VC483(RAMK)] (scale = 16.48 μm)