

Thelenella Nyl.
(VERRUCARIALES: VERRUCARIACEAE s. l.: THELENELLACEAE)

After Mayrhofer (1987) and Harris (1995)

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Thallus crustose, superficial to partially immersed, externally covered by an epinecral layer; prothallus absent. Photobiont chlorococcoid (trebouxioid). Perithecia \pm immersed in thallus or warts, globose to \pm top-shaped, singular or grouped. Ostiole erect, dark. Involucrellum absent. Exciple brownish to brown-black above, colorless below, globular to conical. Hamathecium or paraphysoids, richly branched and anastomosed in upper part. Periphysoids absent (present near ostiole according to Awasthi). Asci (4-)8-spored, \pm cylindrical, fissitunicate, I-, apex without an indentation, wall uniformly thick (but thicker at tip). Spores uniseriate, submuriform to muriform, colorless, rarely becoming pale yellow-brown, ellipsoid or oblong-ellipsoid, often somewhat broadened towards one end. thin-walled. No substances. On bark or rock (sandstone).

Chromatochlamys has periphysoids and the apical dome of the asci has a distinct indentation. Protothelenella has asci with an I+ blue apical apparatus and Elliptochloris as photobiont.

I. On Leaves

Ascospores colorless, 8/ascus, transversely septate, 50-90 x 12-21 μ m. A. fugiens (Mull. Arg.) R. Sant.

II. On Rock.

Ascospores colorless, muriform.

1. Ascomata with an open dark brown clypeus (involucrellum); ascospores 35-47 x 14-19 μ m. Spores long-ellipsoid to subcylindrical, 6-8 x (1-)2-3-septate. California, Baja California. T. weberi H. Mayrh.

1. Ascomata without dark brown clypeus (involucrellum). 2

2. Ascospores broadly ellipsoidal, small, to 20 x 8-11 μ m, 6-7 x 2-3-septate. New York. T. humilis R. C. Harris

2. Ascospores oblong-ellipsoidal, \pm tapered at one end, over 20 μ m long. 3

3. Ascospores 30-45 x 12-19 μ m, 7-9 x 3-septate. Georgia. T. luridella (Nyl.) H. Mayrh.

3. Ascospores smaller, 20-36 x 8-13 μ m. 4

4. Thallus thick, rimose-areolate; ascospores 24-36 x 9-13 μ m, 6-8 x (1-)2-3-septate. California. T. inductula (Nyl.) H. Mayrh.

4. Thallus thin, continuous to \pm rimose. 5

5. Ascospores 20-27 x 8-11 μ m, 6-9 x 1-2-septate. Louisiana. T. sastreana R. C. Harris

5. Ascospores 24-32 x 9-13 μ m, 5-7 x 2-3-septate. 6

6. Thallus light brown, olive brown to olive green; ascospores (24-)27-32 x 9-13 μ m, 6-7 x 2-septate. Temperate to tropical. New Jersey, Oklahoma. T. brasiliensis (Mull. Arg.) Vainio

6. Thallus pale ochre to yellow-brown; ascospores 24-30 x 9-13 um, 5-7 x 2-3-septate. Arctic. T. sordidula (Th. Fr.) H. Mayrh.

III. On bark.

1. Ascospores soon brown, 25-40 x 10-17 um, 6-8 x 2-3-septate. California. T. hassei (Zahlbr.) H. Mayrh.

1. Ascospores colorless. 2

2. Ascospores transversely 11-17-septate, 2-4/ascus, 75-100 x 17-20 um; ascomata pallid to brownish, smooth. On branches. Florida. T. geminipara (Malme) R. C. Harris

2. Ascospores muriform. 3

3. Ascospores basically 4/ascus, 11-13 x 1-2-septate, with large cells, 53-63 x 16-18 um; ascomata pallid to dark brown, \pm hemispherical, smooth. Florida. T. cinerascens (Vainio) R. C. Harris

3. Ascospores basically 8/ascus. 4

4. Ascospores 11-17 um wide. 5

4. Ascospores 7.5-11 um wide. 6

5. Asci obclavate to pyriform, broadest toward the base; ascospores 30-38 x 13-15 um, 7-9 x 2-4-septate. Florida. T. rappii R. C. Harris

5. Asci cylindrical or broadest in middle; ascospores 25-42 x 11-17 um, 7-9 x 2-3-septate. California and Minnesota. T. modesta (Nyl.) Nyl.

Descriptions of Species

T. brasiliensis

The New Jersey collection is ecologically anomalous, semiaquatic.

T. cinerascens

Florida. The North American material is somewhat anomalous in having the cells of the ascospores rather large.

T. geminipara s. lato

Florida. Ascomata may be expanded at the apex, warted or smooth. (see Santesson 1952 for full description). The Florida collections have smooth, rounded ascomata, and may be an undescribed species.

T. hassei (synonym: Microglaena hassei); this description may include T. synchogonoides, which I had previously thought was a synonym

Spores brownish when ripe, (20-)25-40 x 9-11(-17) μ m, 7-11-septate transversely and 2-5-septate longitudinally, ovoid-ellipsoid to ellipsoid, 4-8/ascus. Thallus thin, widespread, smooth to becoming minutely warty, becoming chinky or areolate or composed of small squamules, greenish gray to olive-gray or ashy. Perithecia 0.15-0.4 mm across, immersed, usually 1 in each areole; exciple dimidiate or complete; superficial portion convex or depressed, brownish gray to brown. On trees, southern California.

T. humilis

Thallus epilithic, dispersed areolate with irregular to orbicular areoles, c. 0.5-1.0 mm diam., gray green when wet, paler dry. Ascomata subglobose, immersed singly in areoles with only blackish tip visible, c. 0.25 mm diam. (fertile areoles c. 1.0 mm diam.); wall colorless except greenish around ostiole. Asci cylindrical, c. 120 x 17 μ m, with 8 uniseriate ascospores. Ascospores ellipsoidal to broadly ellipsoidal, 6-7 x 2-3-septate, 18-20 x 8-11 μ m, smoothly rounded. Conidia not found. New York.

T. inductula (synonym: Microglaena inductula, Polyblastiopsis inductula)

Thallus thick, widespread, ochre to pale reddish brown, rimose-areolate, smooth to rough, matt. Spores oblong to oblong-ellipsoid, 24-36 x 9-14 μ m, 6-10-septate transversely and 1-2-septate longitudinally, uniseriately to irregularly arranged. Perithecia 0.2-0.5 mm across, largely immersed in thallus except dark at the apex, the ostiole minute. On shale, Santa Monica Range, California. May not be distinct from T. brasiliensis.

T. modesta (synonym: Microglaena subcorallina)

Spores muriform, (20-)25-42 x (9-)11-18 μ m, ellipsoid to long-ellipsoid, 5-8-septate transversely and 1-3-septate longitudinally, 8/ascus, hyaline to pale brownish. Thallus uneven-warted to minutely squamulose, \pm smooth to deeply cracked-areolate, thick or disappearing, yellow-gray to pink- or red-brown, fading to pale gray or gray in herbarium. Ascocarps 0.3-0.5 mm diam., rounded, discrete or \pm aggregated, not immersed in hemispherical thalline warts (3/4 to fully immersed but appearing as \pm prominent warts according to Purvis & James), the superficial portion depressed to convex, dark brown to black. True exciple brownish above, pale

or colorless below; ostiole dark brown. Paraphyses 1-1.5 μ m wide. On \pm rough bark of wayside or parkland trees. In the herbarium superficially resembles Pertusaria pertusa as the original pink thallus soon fades to gray. On trees, San Gabriel Mts., Calif.

T. rappii

Thallus epiphloeodal, whitish or olivaceous, thin, continuous. Ascomata emergent, covered by thallus, subglobose, 0.25-0.4 mm diam.; wall pale or darkened above. Asci obclavate to pyriform, 85-110 x 30-35 μ m, with eight irregularly arranged spores. Ascospores ovoid, 7-9 x 2-4-septate, 30-38 x 13-15 μ m. Microconidia not found. Florida.

T. sastreana

Thallus thin, continuous, tan. Ascomatal warts \pm complanate, orbicular, 0.3-0.5 mm diam., blackish around ostiole. Ascomata subglobose, 0.2-0.3 mm diam.; wall colorless except greenish around ostiole. Asci subcylindrical, slightly widened near middle, 85-130 x 15-20 μ m, with 8 mostly biseriate spores. Ascospores colorless, with \pm pointed ends, tapered to lower end, 6-9 x 1-2-septate, 20-27 x 8-11 μ m; conidia not found. Louisiana.

T. sordidula (synonym: Microglaena sordidula)

Thallus thin, rimose to rimose-areolate, matt to weakly shiny, pale ochre to yellow-brown. Spores oblong-ellipsoid to subcylindrical, 24-30 x 9-13 μ m. Arctic.

T. sychnogonioides (syn. T. harrisii H. Mayrh.)

Spores submuriform, 20-30 x 7-11 μ m, long-ellipsoid. Thallus pale- to gray-brownish.

Literature

Awasthi. 19 . Microlichens of India, etc.

Mayrhofer, H. 19 . Thelenella [need to get more info. on some species from this].

Purvis, O. W. and P. W. James. 1992. Thelenella. In: Purvis, et al., Lichen Flora of Great Britain and Ireland.