

A new species, *Thalloloma microsporum* (Graphidaceae, Ostropales, Ascomycota)

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Abstract — A new corticolous species of *Thalloloma* from the Qinling Mountains in Shaanxi Province of China is described. The fungus is characterized by the small ascospores and cinnabarine lips.

Key words — lichen, morphology, taxonomy

Introduction

During a study of the lichen family *Graphidaceae* (*Ostropales*, *Ascomycota*) from Shaanxi Province, China, a corticolous species of *Thalloloma* was found in dry deciduous forests of the Qinling Mountains. It is new to science and described as *Thalloloma microsporum*. The genus as delimited by Staiger (2002) has not been reported from China before.

Material and methods

A dissecting microscope (TECH XTS-20) and a light microscope (OLYMPUS CHB-213) were used for the morphological and anatomical studies. Measurements and illustrations were taken from the manual cross-sections of fruitbodies in tap water. The lichen substance was detected and identified by thin-layer chromatography (TLC) (Culberson & Kristensson 1970, Culberson 1972).

Taxonomy

Thalloloma microsporum Z.F. Jia & J.C. Wei, sp. nov.

FIGURE 1

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Species nova similis *T. hypolepto*, a quo *labellis fere cinnabarinis et ascosporis minoribus*.

HOLOTYPE: CHINA. Shaanxi Province, Qinling mountains, Banqiaogou, 33°88'N, 108°01'E, alt. 1520 m, on cortices of cortice *Zelkova serrata* (Thunb.) Makino. 29-

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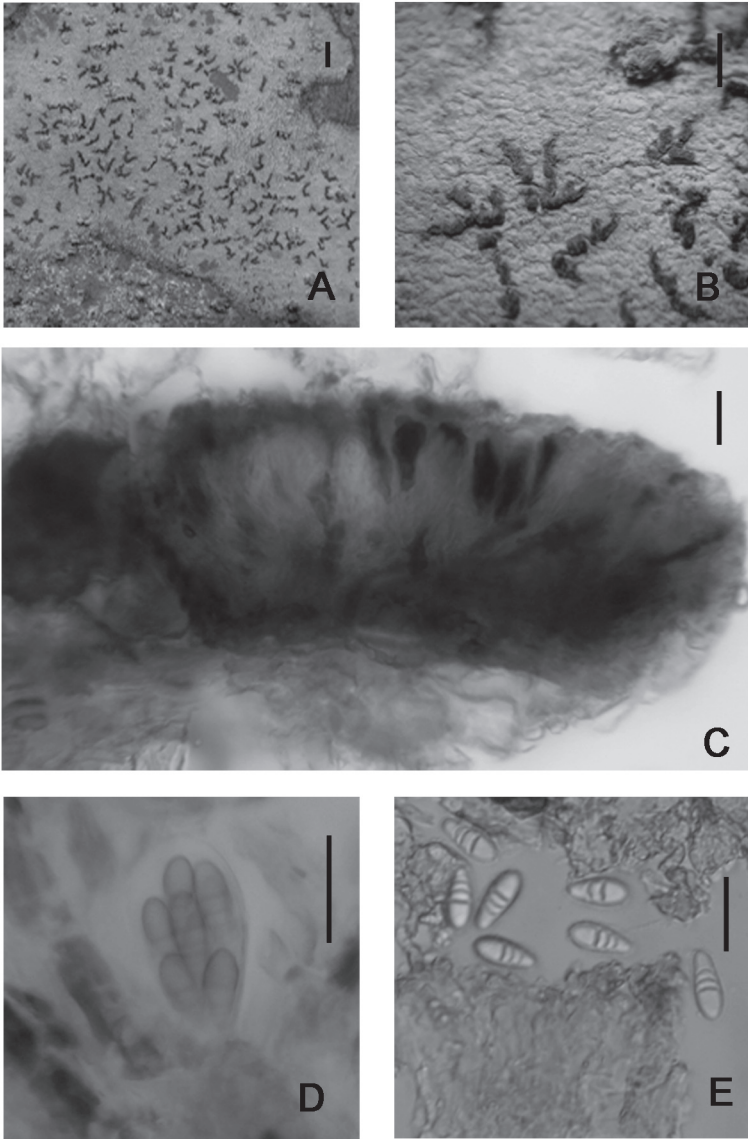


FIG. 1 *Thalloloma microsporum*. A, B. Thallus with apothecia; C. Apothecium cross section; D. An ascus containing ascospores; E. Ascospores.

Bars: A = 2 mm; B = 1 mm; C, D & E = 20 μ m.

VII-2005, Ze-feng Jia SQ380 (holotype in LHS; isotype in HMAS-L.); paratypes: *ibid.*, on cortices of *Pinus armandii* Franch. 29-VII-2005, Jia Ze-feng SQ374, SQ375 (LHS, HMAS-L).

ETYMOLOGY: The specific epithet "*microsporum*" refers to the small ascospores; *micro* is from Greek, small; *spora* in Greek, a seed.

Description: THALLUS corticolous, pale white to grayish-white, thin, 0.1–0.2 mm thick, with a dull surface. APOTHECIA elongate, rarely branched, apparently brown, conspicuous, sub-immersed to sessile, curved and sinuous, often with opening cinnabarine lips because of the reddish brown pigment isohypocrellin (Fig. 1A,B), 0.5–1.5 mm long, 0.1–0.25 mm wide, not grooved, without a distinguishable margin, surface of discs slightly granulous, grayish; PROPER EXCIPIE inconspicuous, not carbonized; EPITHECIUM 13–22 μm thick, brownish; HYPOTHECIUM red-brown, 15–30 μm tall; HYMENIUM slightly brown, clear, 66–80 μm tall, I+ slightly blue; PARAPHYSES with gelatinized wall, up to 1.5 μm wide, septate, enlarged at apices; ASCI club-shaped, 33–42 \times 13–20 μm , 8-spored; ASCOSPORES ellipsoid with one end narrower and slightly pointed, 3-septate, hyaline, 15.5–20 \times 5.5–8.0 μm , I+ blue, the largest upper cells 5.5–6.5 \times 5.0–6.0 μm , the lower end cells 3.5–4.0 \times 2.5–3.5 μm , the two middle rectangular cells 4.5–5.5 \times 1.5–3 μm (Fig. 1E).

CHEMISTRY: C–, K–, P–; contains isohypocrellin (reddish brown pigment).

The new species is characterized by the opening with reddish lirellae, due to the presence of isohypocrellin, and small, 3-septate, hyaline ascospores. It is similar to *Thalloloma hypoleptum* (Nyl.) Staiger, but differs in the red brown to nearly cinnabarine lips and smaller ascospores (15.5–20 \times 5.5–8.0 μm vs. 20–30 \times 6.0–8.0 μm) (Staiger 2002). It also resembles *T. cinnabarinum* (Fée) Staiger and *T. rhodastrum* (Redinger) Staiger in containing isohypocrellin (Staiger 2002) but differs by having 3-septate ascospores.

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