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LASIOLOMA STEPHANELLUM COMB. NOV. (LICHENIZED ASCOMYCETES: ECTOLECHIACEAE)

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Abstract: The new combination *Lasioloma stephanellum* (Nyl.) R. Lücking & Sérus. (Bas.: *Lecidea stephanella* Nyl.) is introduced for a rare corticolous species known from three collections gathered in Cuba (type), Brazil: Pernambuco, and Togo. A key to all known species of *Lasioloma* is provided.

Key Words: Ectolechiaceae —*Lasioloma* — Neotropics and Africa

Introduction

Within the Ectolechiaceae, the genus *Lasioloma* R. Sant. is distinguished by a dispersed to rarely continuous, smooth or irregular thallus, with a loosely woven, usually well-developed prothallus, margins of apothecia with hairs formed of thick-walled hyphae, a paraplectenchymatous excipulum, richly branched and anastomosed paraphyses, and campylidia of the *Pyrenotrichum splitgerberi*-type, producing filiform and transversely septate conidia with 2-4 long branches originating from a single point (VEZDA 1986; LÜCKING 1999; see Tab. 1). So far the genus includes six foliicolous taxa. Only one species has a pantropical distribution, while a center of diversity is found in S-E Asia, with four endemic species.

For several years we have been aware of a further species, which is corticolous and known from only two collections. While working on the neotropical corticolous representatives of the Ectolechiaceae, mainly *Calopadia* Vezda, we came across a forgotten epithet which turned out to represent this taxon. The necessary combination is made in this paper and we further provide an up-dated key to all species of the genus.

Relevant information on the genus can be found in SANTESSON (1952:545-551) for the original and detailed description of the genus and four species; SÉRUSIAUX (1986) and VEZDA (1986) for the description of the campylidia and conidia; VEZDA (1994: 134-136) for the original description of *L. spinosum*; APTROOT & al. (1997: 73-75) for details on the separation of *L.*

arachnoideum from *L. phycophilum*; and finally SANTESSON & LÜCKING (1999: 729-730) for the original description of *L. inexspectatum*.

Lasioloma stephanellum (Nyl.) R. Lücking & Sérus. comb. nov.

Basionym: *Lecidea stephanella* Nyl., Flora 49: 291 (1866). *Lopadium stephanellum* (Nyl.) Zahlbr., Cat. Lich. Univ. 4: 314 (1926). – Type: Cuba, without any indication on locality, date of collection nor identity of the collector (H-Nyl 18098!).

Description: Thallus warted, entirely made of densely or rather loosely compact verrucae which are whitish but with a faint yellowish green hue, 0.1-0.2 mm in diam. and c. 0.1 mm in height, and sometimes coalescing; medulla pale yellow to reddish when old. **Prothallus** abundant between the verrucae, and sometimes on the outer edge of the thallus, white or very pale grey, made of densely interwoven, 4-7 µm thick hyphae, with thick walls; outer parts of the prothallus typically made of dark blue hyphae. **Photobiont** a species of the Chlorococcaceae, most probably *Trebouxia*. **Cyanobacteria** always present on the prothallus, not clearly associated with hyphae, belonging to the Scytonemataceae (probably a species of *Scytonema*), forming dark blue or almost black patches.
Apothecia lecideoid, rounded or slightly irregular, 0.3-0.5 (-0.6) mm in diam., constricted at their base, disc plane or slightly convex, pale greyish to dark grey, or almost black, with a faint violet or bluish hue, non pruinose, margin paler than the disc, with densely and irregularly arranged (but sometimes almost absent), whitish or pale grey hairs which do not exceed 50-80 µm long. **Excipulum** hyaline or almost so, typically paraplectenchymatous, 40-70 µm thick; **hypothecium** dark brown, +/- aeruginose in central parts, up to 50 µm thick; **hymenium** hyaline, c. 100 µm thick; **paraphyses** abundant, branched and anastomosed; **asci** clavate, of the *Sporopodium*-type; **ascospores** single in the asci, strongly muriform, ellipsoid, 70-85 x 22-24 µm.
Campylidia not found.

Notes: Although campylidia have not been found, there is no doubt that this taxon belongs to *Lasioloma* as circumscribed by SANTESSON (1952), as all features match perfectly. The warted thallus entirely made of verrucae is diagnostic for the species, as well as the corticolous habit. *Lasioloma stephanellum* could be related to *L. phycophorum* and *L. trichophorum* as they all have a yellowish medulla. TLC analysis has not been performed but it has been suggested (APTROOT & al. 1997: 75) that the yellowish pigment is identical to that found in *Sporopodium lucidum*.

It is interesting to note that a verrucose to almost isidioid thallus is very rare and untypical in foliicolous representatives of the Ectolechiaceae but has been found in several corticolous representatives of *Calopadia* (e.g. *C. isidiosa*) and *Sporopodium* (two undescribed species from tropical Asia). Since most of the typically corticolous species of *Calopadia* (e.g. *C. lecanorella*, *C. perpallida*) do have a smooth thallus, we do not consider the verrucose-isidioid thallus an ecological modification but an ecomorphological feature that is specific.

Distribution and ecology: *Lasioloma stephanellum* is known from Cuba (type locality), from the N-E coast of Brazil in Pernambuco, where it was growing at the base of a small tree by an artificial lake in a highly disturbed remnant of the 'Mata Atlântica', and in Togo, in unknown ecological conditions.

Additional specimens examined: AMERICA: **Brazil**, Pernambuco, Caljibe Co, Aldeia, c. 20 km W of Recife, alt. 60 m, disturbed rainforest (Mata Atlântica), VI.1996, R. Lücking & E. Sérusiaux s. n. (LG). AFRICA: **Togo**, distr. Kluto-Palimé, 6°54'N 0°37'E, Hanyigba-Dugã, alt. c. 300 m, IX.1974, A. Mathey (B).

Key to the known species of *Lasioloma*

1a Asci with more than one spore; apothecial hairs conspicuous or not; foliicolous species 2

1b Asci with a single, muriform spore; apothecial hairs always conspicuous; foliicolous or corticolous species 3

2a Ascospores 8/ascus, 7-septate; apothecia with inconspicuous hairs; Africa (Ivory Coast) ..... ***Lasioloma inexspectatum* R. Sant. & R. Lücking**

2b Ascospores (2-)4/ascus, (sub-)muriform; apothecia with conspicuous, rather stiff hairs; Asia (Indonesia: Java) ..... ***Lasioloma spinosum* Hafellner & Vezda**

3a Thallus warted, entirely made of densely or rather loosely compact verrucae; medulla pale yellow to reddish when old; corticolous species; Neotropics (Brazil: Pernambuco, and Cuba), and W Africa (Togo) ..... ***Lasioloma stephanellum* (Nyl.) R. Lücking & Sérus.**

3b Thallus not made of verrucae; foliicolous species 4

4a Thallus continuous or with dispersed and irregular patches, especially near the margins, with an abundant fluffy prothallus between the patches or spreading over the thallus surface, and forming abundant vermicular cephalodia; Asia (Philippines: Luzon, Papua New Guinea, New Caledonia) ..... ***Lasioloma phycophilum* (Vain.) R. Sant.**

4b Thallus typically made of dispersed patches; prothallus produced between the patches; cephalodia present or not 5

5a Thallus made of rounded, flat patches, with a crenulate margin and a greenish grey, rather glossy surface; medulla whitish or almost so; cephalodia never produced; pantropical and ubiquitous ..... ***Lasioloma arachnoideum* (Krempelh.) R. Sant.**

5b Thallus made of irregular and rather convex patches, with a crenulate to irregular margin and a yellowish green, typically glossy surface; medulla pale to bright yellow; cephalodia present on the prothallus; species restricted to S-E Asia 6

6a Apothecial disc dark brown to blackish; Asia (Malaysia: Sarawak, Philippines: Luzon and Mindanao, New Caledonia) ..... ***Lasioloma phycophorum* (Vain.) R. Sant.**

6b Apothecial disc pale brown; Asia (Philippines: Luzon, Papua New Guinea, New Caledonia) ..... ***Lasioloma trichophorum* (Vain.) R. Sant.**

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