In the course of studying large collections of foliicolous lichens from tropical Africa, the following two new species have been discovered.

**Byssoloma vanderystii Sérusiaux sp. nov.**

(Fig. 1)

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Thallus ± orbicularis, continuus vel versus peripheriam dispersus, laevis vel minute farinosus, cinereo-viridis vel atroviridis, 10-20 \( \mu m \) crassus; apothecia orbicularia, 0-2-0-6 mm diam, 0-2-0-25 mm crassa, sessilia; discus primum planus sed celeriter valde convexus, atroruber, margo byssaceus, albidus vel bruneolus, 0-1-0-2 mm latus. Excipulum subhypotheciale ± paraplectenchymaticum, ad latera hymenii ex hyphis hyalinis dense intricatis contextum hypothecium atrofuscum in parte centrali, fuscum ad marginem, hymenium hyalinum, 65-75 \( \mu m \) crassum, I + caeruleum. Ascii clavati, 8-spori. Paraphyses simplices vel interdum

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ramosae, 1-1.5 μm crassae. Sporae bacilliformes–acicularae, 7-septatae, ad septa non vel paulum constrictae, 26-31 × 2-3 μm. Pycnidia sessilia, globosa, 0.05-0.1 mm lata, atra; conidia exobasidialia, simplicia, generaliter ellipsoidae, 3-5 × 1.5-2 μm. Alga cellulis globosis, viridibus, 5-10 μm crassis.


Thallus ± circular, covering large surfaces of the leaf, continuous or in the peripheral part dispersed, smooth to very slightly farinose, greenish grey to dark green, 10-20 μm thick. Apothecia not very abundant, circular, 0.2-0.6 mm diam, (margin included), sessile to slightly constricted at the base; disc plane when young but becoming rapidly strongly convex, reddish black with a dark red ring; margin byssoid, 0.1-0.2 mm thick, whitish to pale brown, spreading laterally over the thallus while becoming gradually thinner towards the edge. Excipulum ± paraplectenchymaticous below the hypothecium, laterally formed by loosely woven, uncoloured, smooth hyphae; hypothecium dark brown in the middle and brown at the margin; hymenium uncoloured except the epithecium which is ± dark red, I + blue. Asci clavate, 8-spored. Paraphyses not abundant, simple or sometimes branched, 1-0.4 × 1.5 μm thick, not thickened at the apices. Spores bacilliform to acicular, with rounded ends, (6)-7(-8) septate, not or slightly constricted at the septa, (22)-26-31(-33) × 2-3(-3.5) μm (average of 28.3 × 2.2 μm; 30 spores measured). Pycnidia rare, sessile, globose to ± pear-shaped, 0.05-0.1 mm diam., black to bluish black, covered by a whitish, loose tissue; conidia simple, mainly ellipsoid to bacilliform, but sometimes flask-shaped, 3-5 × 1.5-2 μm. Symbiotic alga: Trebouxia-like with globose green cells, 5-10 μm diam.

Byssoloma vanderystii can be easily distinguished from all other species of the genus by the reddish apothecia and 7-septate spores. Indeed, only two other species of Byssoloma have spores with more than 3 septa: Byssoloma fadenii Vézda (Vézda, 1975: 425) with small pale brown apothecia and 5-septate spores, 15-22 × 2-5-3 μm, and B. vezdaanum Sérusiaux (Sérisiaux, 1978: 16) with large thin orange brown apothecia and 5-septate spores, 18.5-28 × 4–6 μm. The Vanderyst collection examined was previously studied by Santesson (1952: 102, 277) who identified Opegrapha filicina Mont. and Trichothelium annulatum (Kratz.) R. Sant. in it.* Moreover, Mazosia phyllosea (Nyl.) Zahlbr. and Porina epiphylloides Vézda (perithecia not exceeding 0.25 mm diam., spores (23-)25-32 × (2-)2.5-3.5 μm) are also present.

Porina pseudofulvellae Sérisiaux sp. nov.

(Fig. 2)

Thallus tenuis, maculis orbicularibus, ± confluentibus constitutus, aurantiaco-brunneus, opacus. Perithecia copiosissima, verrucas hemisphaericas, thallo tectas, 0.1-0.2 mm diam, formantia, thallo concoloria, leviter nitida, ± translucida. Paries externus pallide brunneus, K+ fusco-rubens, strato aligfero obductus. Paries internus flavescens vel hyalinus. Asci clavati, 8-sporeae. Paraphyses simplices, ± flexuosae, ± 1 μm crassae. Sporae fusiformes, apicibus obtusis, 3-septatae, 18-23 × 2.5-3 μm. Algae ad Phycopolis pertinentes.

Typus: Kenya, Karura forest, 1750 m, semi-deciduous xerophilous forest with Croton megalocarpus, Albizzia gummosa, Teclea, etc., epiphyllous on leaves of Rawsia lucida, 1975, Lambiton 75220 (LG—holotypus; lb. Vézda— isotypus).

* Santesson incorrectly gave the locality as 'Bonga Boma, Sanda'; it is correctly 'Banza Boma' in the Province of Sanda (see Bamps, 1968: 11).
Thallus thin, formed by monocarpous, later confluent patches, finally covering large areas of the leaf surface, orange brown to brown, opaque, totally dominated by the algal layer. Perithecia very abundant, lens-shaped with their basal part slightly spreading, 0.1–0.2 mm diam, orange brown, concolorous with the thallus, slightly nitiduous and almost translucent. Outer perithecial wall light brown, K + brownish red, covered by the algal layer. Inner perithecial wall yellowish or uncoloured. Asci clavate, 8-spored. Paraphyses simple, ± flexuose, ± 1 μm thick. Spores fusiform with obtuse ends, 3-septate, 18–23 × 2.5–3 μm. Symbiotic alga: Phycopeltis with rectangular cells regularly radiately arranged.

Other specimens examined: Kenya: Karura forest, 1750 m, epiphyllous on leaves of Drypetes gerradii, 1975, Lambinon 75/215 (LG), of Uvariodendron anisatum, Lambinon 75/216 (LG), and of Tecla villosa, Lambinon 75/218, 75/219 (LG).

Porina pseudofulvella was found in a collection of lichens made by Lambinon in the Karura forest, north of Nairobi, alt. 1750 m, in 1975. This is a semi-deciduous xerophilous forest with Croton megalocarpus, Albizzia gummifera, Teclea, etc., and foliicolous lichens were collected on leaves of Drypetes gerradii (Lambinon 75/215), Uvariodendron anisatum (Lambinon 75/216), Teclea villosa (Lambinon 75/218, 75/219), Raacosia lucida (Lambinon 75/220, 75/234) and Teclea simplicifolia (Lambinon 75/264). The following further nine species have been determined in this collection: Calenia caucasia (Elenk. & Woronich.) Vězda, Mazosia melanophthalma (Müll. Arg.) R. Sant. (new to Kenya), Porina epiphylla (Fée) Fée (Vězda, Lich. Sel. Ess., no. 1526), Raciborskiella prasina (Müll. Arg.) R. Sant. (new to Kenya, mainly epiphyllous; Vězda, Lich. Sel. Ess., no. 1527), Strigula elegans (Fée) Müll. Arg., S. nemathora Mont., S. maculata (Cooke & Massee) R. Sant. (new to Kenya), and
Sporopodium xantholeucum (Müll. Arg.) Zahlbr. As the perithecial wall of Porina pseudofulvella reacts K+ intensely red and without the formation of any crystals, it clearly belongs to the Porina rufula-group as understood by Santesson (1952: 199–211). The following key should permit identification of any specimen of the rufula-group with lens-shaped perithecia and 3-septate spores (see also Sérasiaux, 1977: 40).

1. Algal layer between the inner and outer perithecial wall; perithecia 0.2–0.4 mm diam, orange brown, usually lacking a reddish tint, the basal part spreading to form a paler corona. P. fulvella Müll Arg. Algal layer covering the perithecial wall(s). P. cerina (Zahlbr.) R. Sant. Perithecia always lacking a greenish tint.

2(1). Perithecia 0.2–0.3 mm diam, yellowish green, the basal part spreading to form a paler corona; outer perithecial wall almost indistinct or absent. P. cerina (Zahlbr.) R. Sant.

3(2). Perithecium 0.2–0.3 mm diam. Perithecium 0.1–0.2 mm diam.

4(3). Perithecium brownish to reddish brown, always with a distinct red tint; thallus brown. P. rufula (Krempeh.) Vainio Perithecium dark red to reddish black, usually lacking a brownish tint; thallus greenish. P. limbulata (Krempeh.) Vainio


Porina pseudofulvella superficially recalls P. fulvella but with minute perithecia, but the two species are however very different on closer examination: P. fulvella has perithecia with the algal layer between the outer and the inner walls, giving the perithecia a lustreless colour, whereas P. pseudofulvella has perithecia covered by the algal layer (the outer and inner walls developed beneath the algae). Under high magnification, the distinct cellular structure on the perithecial surface is seen. Almost translucent perithecia are frequent amongst species with the algal layer covering the perithecium (e.g. P. rufula, P. limbulata, P. pseudofulvella), but never occur in ones similar to P. fulvella.

Summary

Two new foliicolous lichens are described from tropical Africa: Byssoloma vanderystii Sérasiaux from Zaire, and Porina pseudofulvella Sérasiaux from Kenya.

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References


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