A NEW SPECIES OF FLAVOPARMELIA AND FLAVOPUNCTELIA (LICHENIZED ASCOMYCOTINA) FROM ARGENTINA

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ABSTRACT: The species Flavoparmelia glomellijerica Elix & Adler, and Flavopunctelia lobulata Elix & Adler are described as new.

Throughout the present work chemical constituents were identified by thin layer chromatography (Culberson 1972; Culberson & Johnson 1982), high performance liquid chromatography (Lumbsch & Elix 1985) and by comparison with authentic samples.

Flavoparmelia glomellijerica Elix & Adler sp.nov. Figure 1

Species cum thallo ut in Flavoparmelia baltimorensis sed ab hac specie lobis angustioribus et arcte adnatis et acidum glomellifericum, acidum stenosporicum et acidum perlatolicum continente differt. Type. Argentina. Provincia de SALTA. On rocks, 50 m above the road, Las Pailas, 2280m, M.T. Adler; BAFC-holotype, ANUC-isotype.

Thallus folioid, saxicolous, tightly adnate, yellow-green in colour, to 5 cm in diameter; lobes rotund, 1.0-3.0 mm wide, becoming laterally imbricate, ± contiguous, plane, irregularly divided. Upper surface broadly undulating, rugose centrally, dull for the most part, with reticulate white maculae towards the apices, apices shiny, black margined; dactylate, dactyls laminal on older lobes, large, thick, simple or sparingly branched, forming isidioid-pustules, fragile, breaking open apically but rarely forming granular soredia; medulla white; lower surface black with a very narrow naked brown rim, sparsely rhizinate, rhizines short, simple or tufted at the apices, concolorous with the lower surface. Apothecia and pycnidia not seen.

Chemistry. Cortex K-, medulla K-, C-, KC+ pale purple, P-; containing usnic acid, glomelliferic acid (major), stenosporic acid (minor), perlatolic acid (minor), unknowns (traces).

This new species is characterised by the tightly adnate, thick, coriaceous thallus, the relatively narrow lobes (1-3 mm) and the production of erumpent dactyls and medullary glomelliferic acid. The erumpent dactyls produced by this species closely resemble those
Figures. New species of Parmeliaceae. 1 *Flavoparmelia glomelliiferica* (holotype in BAFC); 2 *Flavopunctelia lobulata* (isotype in ANUC). Scale in mm.
of *Flavoparmelia baltimoresensis* (Gyelnik) Hale, but the latter is distinguished by the more loosely adnate, thinner, almost papery, thallus, the broader (2-6 mm) lobes, and the production of medullary protocetraric acid and caperatic acid. Depsides are very rare in this genus [*F. helmsii* (Filson) Hale contains barbatic acid, a β-orcinol para-depside] and *F. glomelliferica* is the first representative known to produce an orcinol para-depside. This species is very rare and at present is known only from the type locality.

*Flavopunctelia lobulata* Elix & Adler sp.nov. Figure 2

Species cum thallo ut in *Flavopunctelia praesignis* sed ab hac specie thallo terricola, fragile et dense lobulato ad centrum differt.

*Type.* Argentina. Provincia de SALTA. Over mosses on soil, 50 m above the road, Las Pailas, 2280m, *M.T. Adler; BAFC 35.931-holotype, ANUC, NY-isotypes.*

*Thallus* foliose, terricolous, fragile, adnate or loosely attached, yellow to pale yellow-green, to 8 cm in diameter; *lobes* irregular, 1.0-4.0 mm wide, imbricate, with ascending ± pruinose margins, developing dense marginal and laminal lobulae in the thallus centre, lobulae suberect, dorsiventral, with pruinose margins, 0.5-1.0 mm wide. *Upper surface* opaque, maculate subapically, pseudocyphellate, *pseudocyphellae* dense, punctiform, elongate or eventually reticulate, commonly elevated or with raised margins, lacking soredia and isidia; medulla white. *Lower surface* black with a broad, naked, glossy, yellow to brown marginal zone, sparsely rhizinate, rhizines black, simple, short. Apothecia and pycnidia not seen.

*Chemistry.* Cortex K-, medulla K-, C+ red, P-; containing usnic acid, lecanoric acid (major), orsellinic acid (trace).

This species is characterised by the terricolous substrate and by the production of dense, suberect lobulae in the thallus centre. This species would appear to be closely related to *F. praesignis* (Nyl.) Hale. However *F. praesignis* is normally corticolous and the thalli are large (6-15 cm diam.), coriaceous, with broad lobes (7-15 mm wide) which are elobulate or, rarely, produce poorly developed laminal lobulae and have epruinose margins. By contrast *F. lobulata* is terricolous, with smaller (4-8 cm diam.), brittle thalli with narrower (1-4 mm wide) lobes which are densely lobulate centrally and have pruinose margins. At present this species is known only from the type locality.

**Climate and Vegetation at the Collection Site**

Las Pailas (25°05'S, 66°11'W) is situated above the river Las Arcas, near Cachi in the Argentine Province of Salta. The vegetation around the collection site typically represents the *cardonal* community, an arbustive steppe with abundant tall cacti, *Trichocereus pasacana* or cardón. This community is one of the principal types distinguished in the Prepuná Phytogeographic Province, and extends over the dry slopes of the mountains of north-west Argentina.

There is very little climatic data for this phytogeographic region. Nevertheless two localities in the Argentine Province of Jujuy (Humahuaca and Tumbaya) can be considered as representative, with mean annual temperatures of 10.4°C and 13.6°C, and mean annual rainfall of 175 mm and 179 mm respectively. In general the climate can be considered dry and warm with rain falling exclusively in summer (Cabrera 1976). The unusual combination of climatic features may well account for the number of rare or endemic lichens from the area (see also Nash, Elix & Johnston 1986).
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LITERATURE CITED


