

New species and records of tropical microlichens from Argentina, Brazil, Ecuador, Madagascar and Papua New Guinea

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Abstract. The following tropical microlichen species are described new to science: *Acanthotrema solediatum* from Brazil, *Coenogonium megasporum* from Papua New Guinea, *Glaucotrema inspersum* from Brazil, *Glaucotrema negativum* from Brazil, *Micarea resinoides* from Papua New Guinea, *Micarea viridibotryoides* from Papua New Guinea, *Myriotrema defectofrondosum* from Brazil, *Ocellularia suprafricana* from Brazil, *Ocellularia uniseptatoidea* from Brazil, and *Piccolia perithecioidea* from Argentina. Some other species are reported new to Argentina, Brazil or one of more of its states, Ecuador, Madagascar and/or Papua New Guinea.

Key words: *Acanthotrema*, *Coenogonium*, *Glaucotrema*, *Micarea*, *Myriotrema*, *Ocellularia*, *Piccolia*

Introduction

In the past decades, there has been a surge in the study of tropical microlichens. Although the first work was done in the 19th century, until recently relatively few species were known from the tropics. At the close of the last century, much on-site collecting was done by lichenologists as a preparation for more comprehensive treatments. The present paper reports species that were for two reasons never reported before. One reason was that much of the material cited below was on loan with colleagues; the other reason was the previous lack of keys for specific speciose groups like *Ocellularia* (notably Lücking 2014).

Material and methods

Specimens were observed with an Olympus SZX7 and pictures were taken with Nikon Coolpix 995. Hand-made sections of ascocmata and thallus were studied in water. Microscopic photographs were prepared using an Olympus BX50 with Nomarski interference contrast and Nikon Coolpix 995. Thin-layer chromatography (Orange et al. 2001) was performed in solvents A, B' and C.

Most specimens are in herbaria in the country of origin, like CGMS, CTES, ISE and SP. Duplicates are in ABL herbarium.

New species

Acanthotrema solediatum Aptroot, sp. nov. (Fig. 1A)

MycoBank MB 853088

Diagnosis: corticolous *Acanthotrema* with ascocmata covered with soredia and 3-septate ascospores.

Type: Brazil, Minas Gerais, Catas Altas, Carassa, near Funil, on tree bark, 20°06'S, 43°29'W, 1300 m, 18–21 September 1997, A. Aptroot 41409 (SP – holotype; ABL – isotype).

Description. Thallus crustose, continuous, following the surface of the substratum, corticate, dull, grey, but with blackish aspect, up to 10 cm diam., under 0.1 mm thick, not surrounded by a prothallus. Isidia absent, soredia present, but restricted to apothecium initials Photobiont trentepohlioid. Ascocmata erumpent, brownish grey, solitary, not clustered or divided, irregularly angular shaped, but more or less isodiametric, 0.3–0.6 mm diam., covered with granular whitish soredia. Excipulum not carbonized, becoming slightly raised above the disc and the thallus. Hamathecium not inspersed, epihymenium with warty to spinulose paraphysis tips. Ascospores 8/ascus, hyaline, 3-septate, 11–12 × 4–4.5 µm, IKI-negative, thin-walled, without gelatinous sheath. Pycnidia not observed.

Chemistry. UV–, K–, P–; TLC: nil.

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Etymology. Named for the soredia.

Ecology. On tree bark in rain forest.

Distribution. Only known from the type.

Discussion. The genus contains only a few species (Frisch 2006; Sipman et al. 2012; Aptroot & Feuerstein 2020). It is characterized by the chroodiscoid apothecia, the thin-walled ascospores and the spinulose paraphyses. This is the first species in the genus with soredia; the most common species have isidia, and some species have neither. *Acanthotrema brasilianum* (Hale) Frisch is the most common and widespread species in the genus. Although isidia were strangely not mentioned in the original description (Kalb 1983), they are always present (also in the type collection) and usually abundant in this species. The new species is closest in appearance and ascoma size and color to *A. minus* Aptroot (Aptroot & Feuerstein 2020), which differs by the 7-septate ascospores and the cover of the apothecia which consists of pruina, not soredia.

Coenogonium megasporum Aptroot, sp. nov. (Fig. 1B)

Mycobank MB 853089

Diagnosis: corticolous *Coenogonium* with crustose thallus and ascospores 27–32 μm long.

Type: Papua New Guinea, Madang, Huon Peninsula, Finisterre Range, Yupna valley, Teptep village, on tree bark, 146°33'E, 5°57'S, 2500 m, 30–31 July 1992, A. Aptroot 31986 (ABL – holotype).

Description. Thallus crustose, continuous, following the surface of the substratum, corticate, dull, green, up to 2 cm diam., under 0.1 mm thick, not surrounded by a prothallus. Photobiont trentepohlioid. Ascomata sessile, solitary, round, 0.5–0.8 mm diam. Excipulum not carbonized., small-celled with thick walls. Hamathecium not inspersed, ~150 μm high. Ascospores 8/ascus, hyaline, 1-septate, 27–32 \times 3.5–4 μm , IKI-negative, without gelatinous sheath. Pycnidia not observed.

Chemistry. UV–, K–, P–; TLC: nil.

Etymology. Named for the large ascospores.

Ecology. On tree bark in rain forest.

Distribution. Only known from the type.

Discussion. This species has longer ascospores than any species known in the genus (Rivas Plata et al. 2006). The ascospores of the two species known so far to have the longest ascospores, viz. *C. bacilliferum* (Malme) Lücking, Aptroot & Sipman and *C. wrightii* (Vězda) H. Harada & Lumbsch, only reach up to 25 μm .

Glaucotrema inspersum Aptroot, sp. nov. (Fig. 1C)

Mycobank MB 853090

Diagnosis: corticolous *Glaucotrema* with inspersed hamathecium, psoromic acid and 3-septate ascospores.

Type: Brazil, Rondônia, Porto Velho, Base Selva Guararapes, on tree bark, 100 m, 5 November 2014, C. Mendonça ISE 23254 (ISE – holotype; ABL – isotype).

Description. Thallus crustose, continuous, following the surface of the substratum, corticate, dull, greyish white, up to 8 cm diam., under 0.1 mm thick, not surrounded by a prothallus. Photobiont trentepohlioid. Ascomata erumpent, solitary, irregularly angular shaped, but more or less isodiametric, 0.4–0.8 mm diam. Disc creamish, 0.2–0.4 mm diam. Excipulum not carbonized, but brown tipped, often somewhat fissured; columella absent, but a hyaline pseudocolumella is present on the surface of the hymenium. Hamathecium densely inspersed with hyaline oil globules. Ascospores 8/ascus, hyaline, 3-septate, 15–16 \times 7.5–8 μm , lumina lenticular; without gelatinous sheath. Pycnidia not observed.

Chemistry. UV–, K–, P+ yellow; TLC: psoromic acid.

Etymology. Named for the inspersed hamathecium.

Ecology. On tree bark in rain forest.

Distribution. Only known from the type.

Discussion. The genus *Glaucotrema* is a small genus (Lücking et al. 2016), characterized by the hyaline structures, including a pseudocolumella; this is the first species known with an inspersed hamathecium. The somewhat similar genus *Stegobolus* is differentiated by the presence of a pale brown to brown or black columella that is either broad stump shaped, lobate or densely reticulate, in some species replaced or supplemented by a deep radial-fissured hymenium (Frisch & Kalb 2006).

Glaucotrema negativum Aptroot, sp. nov. (Fig. 1D)

Mycobank MB 853091

Diagnosis: corticolous *Glaucotrema* with 7-septate ascospores, without secondary metabolites.

Type: Brazil, Amazonas, Manaus, Reserva florestal Ducke, on tree bark, 59°57'W, 2°56'S, 100 m, 3–8 June 2016, M.E.S. Cáceres & A. Aptroot ISE 28494 (ISE – holotype; ABL – isotype).

Description. Thallus crustose, continuous, following the surface of the substratum, corticate, dull, greyish green, up to 15 cm diam., under 0.1 mm thick, with whitish punctiform pseudocypbellae of 0.05–0.15 mm diam., not surrounded by a prothallus. Photobiont trentepohlioid. Ascomata erumpent, solitary, irregularly angular shaped, but more or less isodiametric, 0.3–0.6 mm diam. Disc whitish, 0.2–0.4 mm diam. Excipulum not carbonized, outside corticate, greyish green, occasionally with punctiform whitish pseudocypbellae. Hamathecium not inspersed. Ascospores 8/ascus, hyaline, 7-septate, 21–23 \times 6–7 μm , IKI-negative, without gelatinous sheath. Pycnidia not observed.

Chemistry. UV–, K–, P–; TLC: nil.

Etymology. Named for the negative reactions.

Ecology. On tree bark in rain forest.

Distribution. Only known from the type.

Discussion. The genus *Glaucotrema* is a small genus (Lücking et al. 2016), characterized by the hyaline

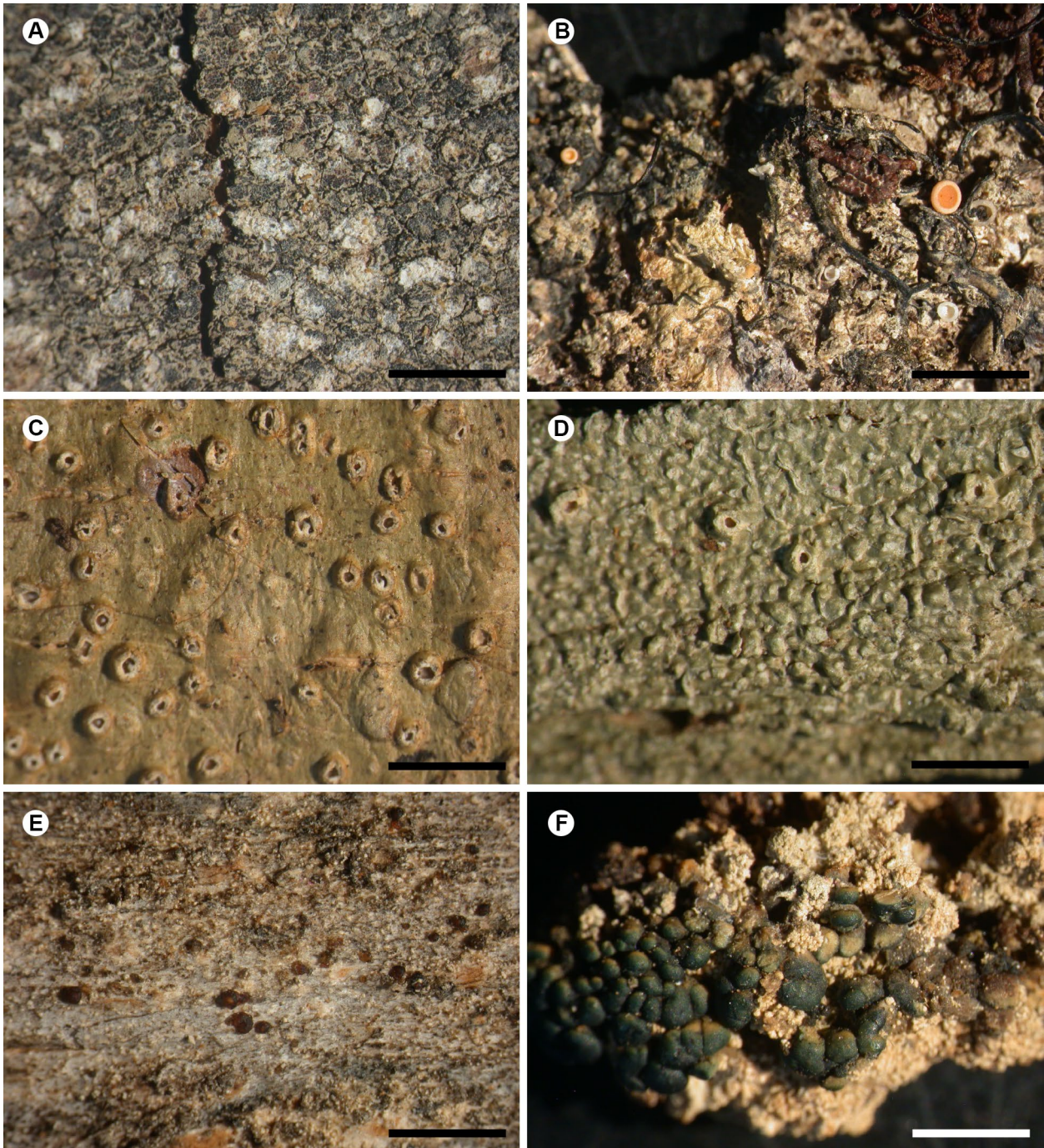


Figure 1. Habitus of types. A – *Acanthotrema soreddiatum*; B – *Coenogonium megasporum*; C – *Glaucotrema inspersum*; D – *Glaucotrema negativum*; E – *Micarea resinoides*; F – *Micarea viridibotryoides*. Scale = 5 mm.

structures, including a pseudocolumella; this is the first species without secondary metabolites and with 7-septate ascospores. The new species is thought to belong to the genus *Glaucotrema* because it has hyaline structures, including a pseudocolumella. All other genera lack a distinct pseudocolumella.

Micarea resinoides Aptroot, sp. nov. (Fig. 1E)

Mycobank MB 853092

Diagnosis: lignicolous *Micarea* with transparent brown apothecia, ascospores 8/ascus, hyaline, simple, ellipsoid, $5\text{--}6 \times 2 \mu\text{m}$, pycnidia $15\text{--}17 \times 1 \mu\text{m}$.

Type: Papua New Guinea, Simbu, Mount Wilhelm, near

Lake Aunde, on wood, $145^{\circ}03'E$, $5^{\circ}47'S$, 3600 m, March 1987, A. Aptroot 18450 (ABL – holotype).

Description. Thallus crustose, consisting of ~ 0.05 mm diam. granules, not corticate, dull, creamish white, up to 15 cm diam., not surrounded by a prothallus. Photobiont chlorococcoid. Ascomata sessile, hemispherical, transparent red brown, 0.3–0.6 mm diam. Excipulum of same color as the disc, thin and evanescent, of radial hyphae. Hamathecium not inspersed, paraphyses branched, epihymenium red brown, KOH+ olive brown. Ascus in IKI with clear tubular structure, similar to *Bacidia*-type. Ascospores 8/ascus, hyaline, simple, ellipsoid, $5\text{--}6 \times 2 \mu\text{m}$, without gelatinous sheath. Pycnidia $15\text{--}17 \times 1 \mu\text{m}$, straight.

Chemistry. UV–, C–, K–, P–; TLC: nil.

Etymology. Named for the resemblance to resin globules.

Ecology. On wood in mountain forest.

Distribution. Only known from the type locality, where it is rather common.

Discussion. *Micarea* is a common genus worldwide, most speciose in temperate regions (Cannon et al. 2022). In the tropics, it is most abundant in mountain regions (e.g. Kantelinen et al. 2021). Most species found in the tropics are actually specimens of species described from temperate areas, or at least closely resembling those (e.g. Aptroot et al. 2022; Fraga Junior et al. 2023). This species is, by the transparent red brown apothecia, widely different from any species known from temperate regions and is therefore described here as new.

Additional material examined. Papua New Guinea, Simbu, Mount Wilhelm, near Lake Piunde, on soil, March 1987, A. Aptroot 18624 & 18625; same locality, 5–8 August 1992, A. Aptroot 32752 (all ABL).

Micarea viridibotryoides Aptroot, sp. nov. (Fig. 1F)

MycoBank MB 853094

Diagnosis: terricolous *Micarea* with botryose bluish green apothecia, chlorococcoid algae and ascospores long ellipsoid, simple $7.5\text{--}8.5 \times 2.5\text{--}3 \mu\text{m}$.

Type: Papua New Guinea, Simbu, Mount Wilhelm, near Lake Piunde, on soil, $145^{\circ}03'E$, $5^{\circ}47'S$, 3600 m, 5–8 August 1992, A. Aptroot 31460 (ABL – holotype).

Description. Thallus crustose, consisting of ~ 0.05 mm diam. granules, not corticate, dull, mostly creamish white, but some sun-exposed parts darkened, up to 5 cm diam., under 0.1 mm thick, not surrounded by a prothallus. Photobiont chlorococcoid. Ascum sessile, bright bluish green when wet, dark where sun-exposed, pale to devoid of pigment at the shaded sides, mostly in botryose groups of 3–25, 0.4–1.6 mm diam. Excipulum not developed, hypothecium yellowish, but blackish green below, IKI+ blue. Hamathecium not interspersed, 60–90 μm high, yellowish, ephymenium blackish green. Ascospores 8/ascus, hyaline, long ellipsoid, simple $7.5\text{--}8.5 \times 2.5\text{--}3 \mu\text{m}$, without gelatinous sheath, one end usually pointed. Pycnidia not observed.

Chemistry. UV–, C–, K–, P–; TLC: nil.

Etymology. Named for the green apothecium color and the botryose apothecia.

Ecology. On soil and detritus in mountain forest.

Distribution. Known from upland regions in Papua New Guinea, where it is rather common.

Discussion. *Micarea* is a common genus worldwide, most speciose in temperate regions. In the tropics, it is most abundant in mountain regions. Most species found in the tropics are actually specimens of species described from temperate areas, or at least closely resembling those. This species is widely different from anything known

from temperate regions and is therefore described here as new.

Additional material examined. Papua New Guinea, Northern Province, Owen Stanley Range, Myola, 2700 m, on treefern, 16 oct. 1995, A. Aptroot 37632 (ABL).

Myriotrema defectofrondosum Aptroot, sp. nov. (Fig. 2A–B)

MycoBank MB 853095

Diagnosis: corticolous *Myriotrema* with thallus with creamish grey vegetative propagules which are irregular isidia similar to those in *Myriotrema frondosum*.

Type: Brazil, Minas Gerais, Catas Altas, Carassa, near Funil, on tree bark, $20^{\circ}06'S$, $43^{\circ}29'W$, 1300 m, 18–21 September 1997, A. Aptroot 41425 (SP – holotype; ABL – isotype).

Description. Thallus crustose, continuous, following the surface of the substratum, corticate, somewhat shiny, metallic grey, up to 11 cm diam., under 0.1 mm thick, not surrounded by a prothallus. Photobiont trentepohlioid. Vegetative propagules creamish grey, single, but usually grouped by 5–15 in $\sim 0.4\text{--}1.6$ mm diam. areas, consisting of irregular isidia of ~ 0.1 mm diam., leaving scars, of identical structure to those in *Myriotrema frondosum* Hale. These structures remain often attached to each other and do not disperse one after the other. Ascumata and pycnidia not observed.

Chemistry. UV–, K–, P–; TLC: nil.

Etymology. Named for the absence of secondary substances and the resemblance to *Myriotrema frondosum* Hale.

Ecology. On tree bark in Cerrado forest and in gardens.

Distribution. Only known from Brazil.

Discussion. This species shares with *Myriotrema frondosum* (Lücking et al. 2016) the very peculiar vegetative propagules which are variously called irregularly denticulate isidia (Lücking et al. 2016), flattened schizidia (Sipman et al. 2012), or even closed pustules (Frisch 2006). The new species differs from *M. frondosum* by the absence of secondary substances. The new species was found several times in places thousands of kilometers apart in Brazil. It should be looked for elsewhere.

Additional material examined. Brazil, Tocantins, Bananal, M.E.S. Cáceres & A. Aptroot ISE 28998; São Paulo, Apiaí, Cãnion Pirituba, A. Aptroot & L.A. dos Santos ISE 55177 (all ABL & ISE).

Ocellularia suprafricana Aptroot, sp. nov. (Fig. 2C)

MycoBank MB 853096

Diagnosis: corticolous *Ocellularia* with columella, ascospores 7–11 septate, $30\text{--}55 \times 7\text{--}9 \mu\text{m}$, thallus with soralia, containing protocetraric acid and cinchonaric acid.

Type: Brazil, Minas Gerais, Catas Altas, Carassa, near Funil, on tree bark, $20^{\circ}06'S$, $43^{\circ}29'W$, 1300 m, 18–21 September 1997, A. Aptroot 41372 (SP – holotype; ABL – isotype).

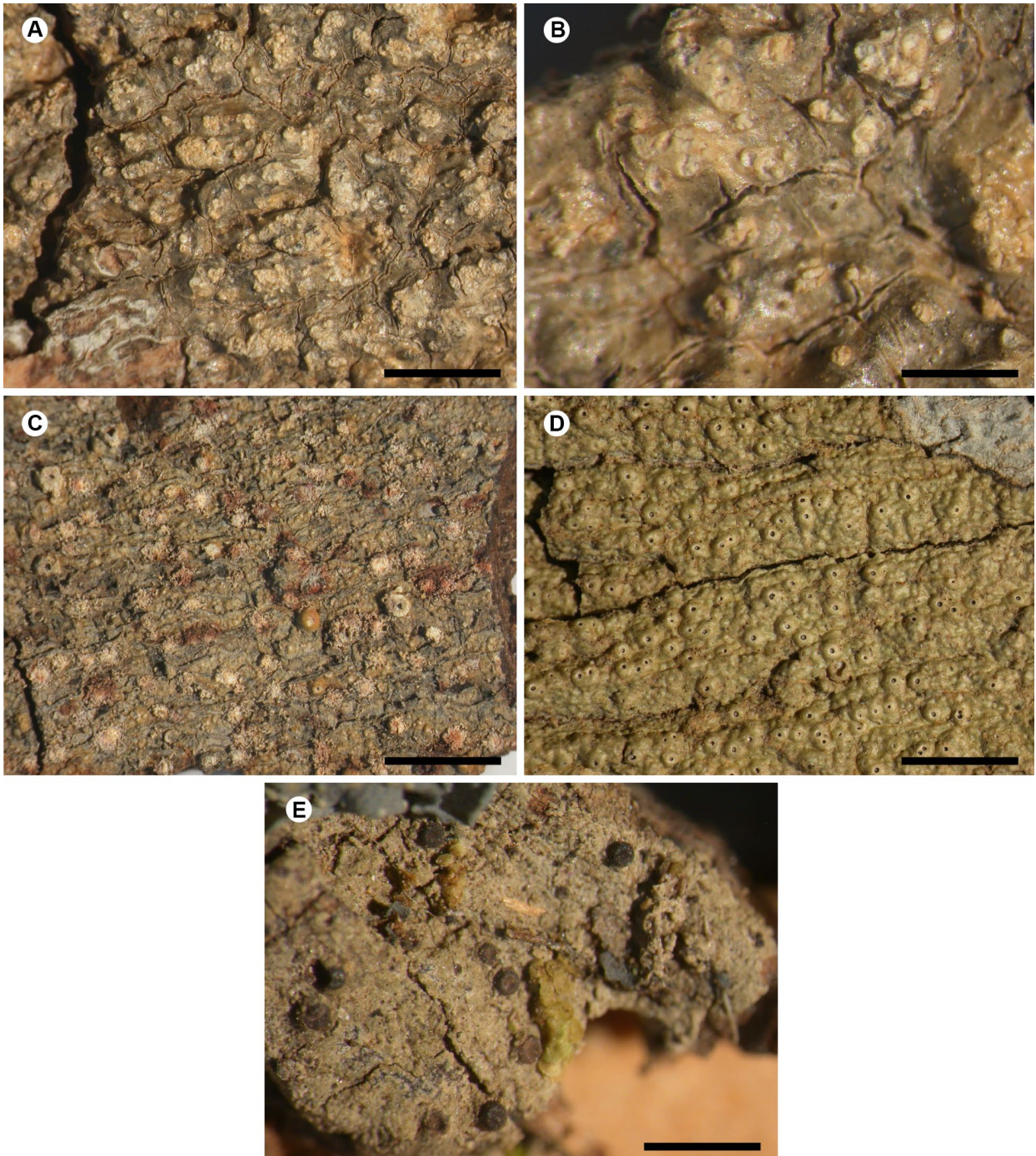


Figure 2. Habitus of types. A–B – *Myriotrema defectofrondosum*; C – *Ocellularia suprafricana*; D – *Ocellularia uniseptatoides*; E – *Piccolia perithecioidea*. Scale = 5 mm, except for B is 2 mm.

Description. Thallus crustose, somewhat verrucose, following the surface of the substratum, corticate, dull, olivaceous green, up to 5 cm diam., under 0.1 mm thick, not surrounded by a prothallus. Photobiont trentepohlioid. Soredia creamish grey, in 0.4–0.9 mm wide, sessile, roundish soralia, granular. Ascomata sessile, conical, round, olivaceous brown, glossy, 0.5–0.9 mm diam., margins becoming sorediate in older apothecia. Excipulum dark brown above; columella finger-like, carbonized above, becoming reticulate in overmature apothecia. Hamathecium not interspersed. Ascospores 8/ascus, hyaline, 7–11 septate, $30\text{--}55 \times 7\text{--}9 \mu\text{m}$, without gelatinous sheath. Pycnidia not observed.

Chemistry. UV–, K–, P+ red; TLC: protocetraric acid and cinchonaric acid.

Etymology. Named for the similarity with *Ocellularia africana* Frisch, from which it differs by the longer ascospores.

Ecology. On tree bark in rain forest.

Distribution. Only known from the type.

Discussion. There are a dozen *Ocellularia* species known which produce soredia (Hale 1974; Frisch 2006; Kalb 2009; Sipman et al. 2012; Rivas Plata & Lücking 2013; Lücking 2014; Aptroot et al. 2024); only one of

them, *O. africana* (Frisch 2006), shares the protocetraric chemistry with the new species, but *O. africana* differs by markedly smaller ascospores and the absence of cinchonaric acid.

Ocellularia uniseptatoides Aptroot, sp. nov. (Fig. 2D)

Mycobank MB 853097

Diagnosis: *Ocellularia* with protocetraric acid, black columella and 1-septate ascospores.

Type: Brazil, Sergipe, Santa Luzia do Itanhy, Mata do Crasto, 11°22'S, 37°25'W, 10 m, 26 March 2014, M.E.S. Cáceres & A. Aptroot ISE 18787 (ISE – holotype; ABL – isotype).

Description. Thallus crustose, continuous, irregularly low verrucose, corticate, dull, creamish green, up to 10 cm diam., ~0.1 mm thick, surrounded by a 0.1 mm wide black prothallus line. Photobiont trentepohlioid. Ascomata sessile, single or in loose groups or lines, conical, round, of thallus color, somewhat glossy, 0.5–0.9 mm diam. Excipulum pale brown; columella finger-like, fully carbonized; ostiole surrounded by a thin white zone. Hamathecium not interspersed. Ascospores 8/ascus, hyaline, IKI+ violet, ellipsoid, 1-septate, 8–9 × 4–4.5 µm, with pointed ends, without gelatinous sheath. Pycnidia not observed.

Chemistry. UV–, K–, P+ red; TLC: protocetraric acid.

Etymology. Named for the one-septate ascospores.

Ecology. On tree bark in rain forest.

Distribution. Only known from the type.

Discussion. This is the first true *Ocellularia* (as shown by the columella) known with 1-septate ascospores.

Piccolia perithecioides Aptroot, sp. nov. (Fig. 2E)

Mycobank MB 853098

Diagnosis: corticolous *Piccolia* with almost closed dark grey apothecia and ascospores >100/ascus, hyaline, globose, 3–3.5 µm diam.

Type: Argentina, Chaco, Parque Pampa del Indio, 59°58'40"W, 26°16'20"S, 110 m, 26 February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10825 (CTES – holotype; ABL – isotype).

Description. Thallus crustose, verrucose, corticate, dull, green, up to 15 cm diam., ~0.2 mm thick, not surrounded by a prothallus. Photobiont trentepohlioid, 5–7 µm diam. Ascomata closed apothecioid, dark grey, more or less immersed in the thallus to erumpent, solitary, hemispherical, 0.3–0.6 mm diam., often constricted at the base and somewhat flattened at the top. Open disc almost punctiform, ~0.1 mm diam., black, not pruinose. Excipulum not carbonized, dense, outside brown. Hamathecium not interspersed, epihymenium red brown. Ascospores >100/ascus, hyaline, globose, 3–3.5 µm diam., IKI-negative, without gelatinous sheath. Pycnidia not observed.

Chemistry. UV–, K–, P–; TLC: nil.

Etymology. Named for the closed apothecia.

Ecology. On tree bark in rain forest.

Distribution. Only known from the type locality.

Discussion. The genus *Piccolia* is a small, mostly tropical genus (Hafellner 1995; Van den Broeck et al. 2013) with mainly tropical corticolous species. The new species differs from all other currently known species in the genus by the almost closed apothecia, and especially by the lack of any pruina on the disc. All other species have thick a white, yellow or red pruina on the disc.

Additional material examined. Same as the type, 10902 (ABL, CTES).

New records

Agonimia opuntiella (Poelt & Buschardt) Vězda

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Iguazú national park, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10641 (ABL, CTES).

Agonimia tristicula (Nyl.) Zahlbr.

New to Argentina.

Specimens examined. ARGENTINA. Corrientes, Parque Mitre, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10699 (ABL, CTES).

Amandinea efflorescens (Müll. Arg.) Marbach

New to Argentina.

Specimens examined. ARGENTINA. Corrientes, Parque Mitre, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10695 (ABL, CTES).

Amandinea xylographella (Nyl.) Marbach

New to Argentina.

Specimens examined. ARGENTINA. Corrientes, Parque Mitre, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10689 (ABL, CTES).

Ampliotrema palaeoamplius (Aptroot & Sipman) Kalb ex Kalb

New to Amazonas state in Brazil.

Specimens examined. BRAZIL. Amazonas state: Manaus, Reserva Ducke, 100 m, June 2016, M.E.S. Cáceres & A. Aptroot ISE 28600 (ABL, ISE).

Anisomeridium albisedum (Nyl.) R.C. Harris

New to Argentina.

Specimens examined. ARGENTINA. Chaco, Parque Pampa del Indio, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10748 (ABL, CTES).

Anisomeridium stromaticum R.C. Harris

New to Argentina.

Specimens examined. ARGENTINA. Chaco, 15 km West of Presidencia Roca, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10888 (ABL, CTES).

Anisomeridium subprostans (Nyl.) R.C. Harris

New to Argentina.

Specimens examined. ARGENTINA. Chaco, Parque Pampa del Indio, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10751 (ABL, CTES).

Anisomeridium tamarindi (Fée) R.C. Harris

New to Argentina.

Specimens examined. ARGENTINA. Corrientes, Parque Mitre, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10694 (ABL, CTES).

Arctomia fascicularis (L.) Ojaló & Wedin

New to Mato Grosso do Sul state in Brazil.

Specimens examined. BRAZIL. Mato Grosso do Sul state: Bonito, A. Aptroot & M.F. Souza 80801 (ABL, CGMS).

Arthonia araucariae Vain.

New to Sergipe state in Brazil.

Specimens examined. BRAZIL. Sergipe state: Itabaiana, Parque Falcões, M.E.S. Cáceres & A. Aptroot 15050 & 15051 (all ABL, ISE).

Arthonia complanata Fée

New to Amazonas and Santa Catarina states in Brazil.

Specimens examined. BRAZIL. Amazonas state: Novo Aripuanã, Pousada Rio Roosevelt, A. Aptroot 87251 (ABL, CGMS); Santa Catarina state: São Francisco do Sul, Univille campus, M.E.S. Cáceres & A. Aptroot 27682 (ABL, ISE).

Arthonia microsperma Nyl.

New to Amazonas state in Brazil.

Specimens examined. BRAZIL. Amazonas state: Novo Aripuanã, Pousada Rio Roosevelt, A. Aptroot 87331 (ABL, CGMS).

Arthonia minutella Vain.

New to Amapá state in Brazil.

Specimens examined. BRAZIL. Amapá state: Macapá, Ecotel garden, M.E.S. Cáceres & A. Aptroot 27625 (ABL, ISE).

Arthonia punctiformis Ach.

New to Brazil.

Specimens examined. BRAZIL. Ceará, Fazenda Daniel de Quieroz, M.E.S. Cáceres & A. Aptroot 21472; Serro do Estevão, M.E.S. Cáceres & A. Aptroot 21447 & 21453; Sergipe: Itabaiana, Parque Falcões, M.E.S. Cáceres & A. Aptroot 15010 (all ABL, ISE).

Arthonia rugosula Vain.

New to Amapá and Sergipe states in Brazil.

Specimens examined. BRAZIL. Amapá state: Macapá, Ecotel garden, M.E.S. Cáceres & A. Aptroot 27175; Ceará, Fazenda Daniel de Quieroz, M.E.S. Cáceres & A. Aptroot 21506; Sergipe state: Itabaiana, Parque Nacional, M.E.S. Cáceres & A. Aptroot 21685; Mata da Fazenda Cafuz, M.E.S. Cáceres & A. Aptroot 18422 (all ABL, ISE).

Arthothelium bessale (Nyl.) Zahlbr.

New to Amazonas state in Brazil.

Specimens examined. BRAZIL. Amazonas state: Manaus, Reserva Ducke, M.E.S. Cáceres & A. Aptroot 28602 (ABL, ISE).

Arthothelium macrothecum (Fée) A. Massal.

New to Amazonas, Santa Catarina and Sergipe states in Brazil.

Specimens examined. BRAZIL. Amazonas state: Novo Aripuanã, Pousada Rio Roosevelt, A. Aptroot 86117 (ABL, CGMS); Santa Catarina state: São Francisco do Sul, Univille campus, M.E.S. Cáceres & A. Aptroot 27670; Parque Estadual do Acaraí,

M.E.S. Cáceres & A. Aptroot 27749; Sergipe state: Itabaiana, Parque Nacional, M.E.S. Cáceres & A. Aptroot 18455, 18609 & 18577; Parque da Cidade, M.E.S. Cáceres & A. Aptroot 18239 (all ABL, ISE).

Arthothelium spectabile A. Massal.

New to São Paulo state in Brazil.

Specimens examined. BRAZIL. São Paulo state: Apiaí, Morro do Ouro, A. Aptroot & L.A. dos Santos 55132 (ABL, ISE).

Astrothelium tetrasporum Aptroot & M. Cáceres

New to Rio de Janeiro in Brazil.

Specimens examined. BRAZIL. Rio de Janeiro: Itatiaia National Park, Visitor Center, 1000 m, 7 May 2015, M.E.S. Cáceres, Barreto, Menezes & Lücking ISE 25321 (ABL, F, ISE).

Bacidia arceutina (Ach.) Th. Fr.

New to Maranhão state in Brazil.

Specimens examined. BRAZIL. Maranhão state: Imperatriz, Bananal, M.E.S. Cáceres & A. Aptroot 28752 (ABL, ISE).

Bacidia millegrana (Taylor) Zahlbr.

New to Tocantins, Pará and Amazonas states in Brazil.

Specimens examined. BRAZIL. Tocantins state: Itaguatins, M.E.S. Cáceres & A. Aptroot 28844; Pará state: Dom Eliseu, N Fazenda Pantera, M.E.S. Cáceres & A. Aptroot 40437; Amazonas state: Manaus, Reserva Florestal Ducke, M.E.S. Cáceres & A. Aptroot 28743 (all ABL, ISE).

Bacidina delicata (Larbal. ex Leight.) V. Wirth & Vězda

New to Rondônia state in Brazil.

Specimens examined. BRAZIL. Rondônia state: Porto Velho, Cuniã, M.E.S. Cáceres & A. Aptroot 15682 (ABL, ISE).

Bacidina lacerata (Timdal) Kistenich, Timdal, Bendiksby & S. Ekman

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10563 (ABL, CTES).

Bacidina neosquamulosa (Aptroot & Herk) S. Ekman

New to Amapá, Pará, Maranhão and Sergipe states in Brazil.

Specimens examined. BRAZIL. Amapá state: Floresta Nacional do Amapá, M.E.S. Cáceres & A. Aptroot 27293; Pará state: Dom Eliseu, S Fazenda Pantera, M.E.S. Cáceres & A. Aptroot 40152; Maranhão state: Riachão, Poço Azul, M.E.S. Cáceres & A. Aptroot 28769; Sergipe state: Itabaiana, Parque Nacional, M.E.S. Cáceres & A. Aptroot 18250 (all ABL, ISE).

Bacidina neotropica Lücking

New to Sergipe state in Brazil.

Specimens examined. BRAZIL. Sergipe state: Capelia, Mata do Junco, M.E.S. Cáceres & A. Aptroot 18951 (ABL, ISE).

Bacidina phacodes (Körb.) Vězda

New to Rondônia, Maranhão and Sergipe states in Brazil.

Specimens examined. BRAZIL. Rondônia state: Porto Velho, Parque Natural Municipal, M.E.S. Cáceres & A. Aptroot 11535; Maranhão state: Riachão, Poço Azul, M.E.S. Cáceres & A. Aptroot 40015; Sergipe state: Itabaiana, Mata da Fazenda Cafuz, M.E.S. Cáceres & A. Aptroot 18377 (all ABL, ISE).

Bacidina pseudohyphophorifera (Lücking & Sérus.)
Lücking

New to Rondônia state in Brazil.

Specimens examined. BRAZIL. Rondônia state: Porto Velho, Nova Esperança, M.E.S. Cáceres & A. Aptroot 11492 (ABL, ISE).

Bacidina pseudoisidiata van den Boom

New to Sergipe and São Paulo states in Brazil.

Specimens examined. BRAZIL. Sergipe state: Itabaiana, M.E.S. Cáceres & A. Aptroot 18657 (ABL, ISE); São Paulo in Brazil: Apiaí, Morro do Ouro, A. Aptroot & L.A. dos Santos 56267 (ABL, ISE).

Bacidiopsora microphyllina Kalb

New to Amazonas state in Brazil.

Specimens examined. BRAZIL. Amazonas state: Novo Aripuanã, Pousada Rio Roosevelt, A. Aptroot 86155 (ABL, CGMS).

Bacidiopsora silvicola (Malme) Kalb

New to Amapá state in Brazil.

Specimens examined. BRAZIL. Amapá state: Florest Nacional do Amapá, M.E.S. Cáceres & A. Aptroot 27218 (ABL, ISE).

Botryolepraria neotropica Kukwa & Pérez-Ort.

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10617 (ABL, CTES).

Calicium salicinum Pers.

New to Argentina.

Specimens examined. ARGENTINA. Chaco, 18 km West of Presidencia Roca, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10872 (ABL, CTES).

Caloplaca bassiae (Ach.) Zahlbr.

New to Argentina.

Specimens examined. ARGENTINA. Chaco, Parque Pampa del Indio, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10822 (ABL, CTES).

Caloplaca chrysophthalma Degel.

New to Argentina.

Specimens examined. ARGENTINA. Chaco, Parque Pampa del Indio, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10821 (ABL, CTES).

Caloplaca crocina (Kremp.) Wilk & P. Vargas

New to Argentina.

Specimens examined. ARGENTINA. Chaco, Parque Pampa del Indio, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10823 (ABL, CTES).

Caprettia lichexanthotricha Aptroot & M.F. Souza

New to Rondônia state in Brazil.

Specimens examined. BRAZIL. Rondônia state: Porto Velho, Parque Circuito, M.E.S. Cáceres & A. Aptroot 11450 (ABL, ISE).

Catillaria depauperata Malme

New to São Paulo state in Brazil.

Specimens examined. BRAZIL. São Paulo state: Apiaí, Bom Sucesso de Itararé, A. Aptroot 54925 (ABL, ISE).

Catillaria variicolor Malme

New to Rondônia state in Brazil.

Specimens examined. BRAZIL. Rondônia state: Porto Velho, historical town center, M.E.S. Cáceres & A. Aptroot 11765 (ABL, ISE).

Chapsa alborosella (Nyl.) Frisch

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10615 (ABL, CTES).

Chapsa defectosorediata Lücking

New to Rondônia, Pernambuco, Sergipe and Bahia states in Brazil.

Specimens examined. BRAZIL. Rondônia state: Porto Velho, Estação Ecológica de Cuniã, 100 m, 20 November 2013, M.E.S. Cáceres & A. Aptroot ISE 15784 & 15792; Pernambuco state: Caruaru, Brejo dos Cavalos, 800 m, 16 September 2014, M.E.S. Cáceres & A. Aptroot ISE 22028; Sergipe state: Santa Luzia do Itanh, Mata do Crasto, 10 m, 26 March 2014, M.E.S. Cáceres & A. Aptroot ISE 18798; Bahia state: Santa Terezinha, Serra da Jiboia, 17 January 2015, C. Mendonça ISE 24114 (all ABL, ISE).

Chapsa subsorediata Rivas Plata & Lücking

New to Brazil.

Specimens examined. BRAZIL. São Paulo, Apiaí, Morro do Ouro, A. Aptroot & L.A. dos Santos 54872 (ABL, ISE).

Chrysothrix xanthina (Vain.) Kalb

New to Argentina.

Specimens examined. ARGENTINA. Chaco, 18 km West of Presidencia Roca, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10857 (ABL, CTES).

Clavascidium antillarum (Breuss) Breuss

New to São Paulo state in Brazil.

Specimens examined. BRAZIL. São Paulo state: Apiaí, Morro do Ouro, A. Aptroot & L.A. dos Santos 56043 (ABL, ISE).

Coccocarpia domingensis Vain.

New to Argentina.

Specimens examined. ARGENTINA. Corrientes, Parque Mitre, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10709 (ABL, CTES).

Coenogonium geralense (P. Henn.) Lücking

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10611 (ABL, CTES).

Coenogonium strigosum Rivas Plata, Lücking & Chaves

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10614 (ABL, CTES).

Coenogonium subdilutum (Malme) Lücking, Aptroot & Sipman

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10609 (ABL, CTES).

Coenogonium upretianum M. Cáceres & A. Aptroot

New to Santa Catarina state in Brazil.

Specimens examined. BRAZIL. Santa Catarina state: São Francisco do Sul, Parque Estadual do Acaraí, 10 m, 6 October 2015, M.E.S. Cáceres & A. Aptroot ISE 27750 (ABL, CTES).

Coenogonium zonatum (Müll. Arg.) Kalb & Lücking

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10610 (ABL, CTES).

Collema leptaleum Tuck.

New to Argentina.

Specimens examined. ARGENTINA. Corrientes, Parque Mitre, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10707 (ABL, CTES).

Collemopsidium argilospilum (Nyl.) Coppins & Aptroot

New to Argentina.

Specimens examined. ARGENTINA. Chaco, Parque Pampa del Indio, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10713 (ABL, CTES).

Cresponea proximata (Nyl.) Egea & Torrente

New to Argentina.

Specimens examined. ARGENTINA. Chaco, Parque Pampa del Indio, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10830 (ABL, CTES).

Crypthonia albida (Fée) Frisch & G. Thor

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10591 (ABL, CTES).

Crypthothecia lecanorosorediata Aptroot & M. Cáceres

New to Rondônia state in Brazil.

Specimens examined. BRAZIL. Rondônia state: Porto Velho, Parque Natural Municipal, 100 m, 16 November 2013, M.E.S. Cáceres & A. Aptroot ISE 15125 (ABL, ISE).

Crypthothecia striata G. Thor

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10604 (ABL, CTES).

Dichoporis phaea (Ach.) S.H. Jiang, Lücking & Sérus.

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10516 (ABL, CTES).

Dichoporis tenuis S.H. Jiang, Lücking & Sérus.

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Iguazú national park, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10651 (ABL, CTES).

Dichoporis wilsonii (Riddle) S.H. Jiang, Lücking & Sérus.

New to Ecuador.

Specimens examined. ECUADOR. Napo, Puerto Misahualli, 450 m, 19 August 1982, A. Aptroot 10653 (ABL).

Endocarpon pallidulum (Nyl.) Nyl.

New to Argentina and Maranhão state in Brazil.

Specimens examined. ARGENTINA. Corrientes, Parque Mitre, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10698 (ABL, CTES). BRAZIL. Maranhão state: Riachão, Poço Azul, M.E.S. Cáceres & A. Aptroot 40081 (ABL, ISE).

Eremothecella calamicola Syd. & P. Syd.

New to Santa Catarina state in Brazil.

Specimens examined. BRAZIL. Santa Catarina state: São Francisco do Sul, Parque Estadual do Acaraí, M.E.S. Cáceres & Aptroot 28018 (ABL, ISE).

Fellhanera dictyospora Lücking

New to Brazil.

Specimens examined. BRAZIL. São Paulo, Apiaí, Morro do Ouro, A. Aptroot & L.A. dos Santos 54818 (ABL, ISE).

Fellhanera rubida (Müll. Arg.) Lücking

New to Sergipe state in Brazil.

Specimens examined. BRAZIL. Sergipe state: Aracaju, Parque da Cidade, M.E.S. Cáceres & A. Aptroot 18227 (ABL, ISE).

Fellhanera termitophila Aptroot & M. Cáceres

New to Amapá and Sergipe states in Brazil.

Specimens examined. BRAZIL. Amapá state: Florest Nacional do Amapá, M.E.S. Cáceres & A. Aptroot 27171 (ABL, ISE); Sergipe state: Itabaiana, Parque Nacional Serra da Itabaiana, M.E.S. Cáceres & A. Aptroot 18116 (ABL, ISE).

Fellhaneropsis vezdae (Coppins & P. James) Sérus. & Coppins

New to Brazil.

Specimens examined. BRAZIL. Mato Grosso, Chapada dos Guimarães, A. Aptroot & M.F. Souza 81836 (ABL, CGMS).

Flakea papillata O.E. Erikss.

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10595 (ABL, CTES).

Glaucotrema glaucophaenum (Kremp.) Rivas Plata & Lumbsch

New to Pernambuco state in Brazil.

Specimens examined. BRAZIL. Pernambuco state: Caruaru, Brejo dos Cavalos, 800 m, 16 September 2014, M.E.S. Cáceres & A. Aptroot ISE 21991 (ABL, ISE).

Glomerulophoron confluentisorediatum Aptroot, L.A. Santos & M. Cáceres

New to Amazonas state in Brazil.

Specimens examined. BRAZIL. Amazonas state: Novo Aripuanã, Pousada Rio Roosevelt, A. Aptroot 86016 (ABL, CGMS).

Gyalecta myriadella (Nyl.) Hellb.

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10608 (ABL, CTES).

Heppia despreauxii (Mont.) Tuck.

New to Argentina.

Specimens examined. ARGENTINA. Chaco, 15 km West of Presidencia Roca, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10874 (ABL, CTES).

Herpothallon roseocinctum (Fr.) Aptroot, Lücking & G. Thor

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10589 (ABL, CTES).

Lecanora brasiliana Zahlbr.

New to Maranhão and Alagoas states in Brazil.

Specimens examined. BRAZIL. Maranhão state: Riachão, Poço Azul, M.E.S. Cáceres & A. Aptroot 40037; Alagoas state: AL 42421 (ABL, ISE).

Lecanora casuarinophila Lumbsch

New to Sergipe state in Brazil.

Specimens examined. BRAZIL. Sergipe state: Itabaiana, M.E.S. Cáceres & A. Aptroot 18934 & 42985 (both ABL, ISE).

Lecanora frustulosa (Dicks.) Ach.

New to Alagoas state in Brazil.

Specimens examined. BRAZIL. Alagoas state: Pedra Talhada, M.E.S. Cáceres & A. Aptroot 50936 (ABL, ISE).

Lecanora glaucomodes Nyl.

New to Argentina.

Specimens examined. ARGENTINA. Chaco, 18 km West of Presidencia Roca, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10854 (ABL, CTES).

Lecanora leproplaca Zahlbr.

New to Amazonas state in Brazil.

Specimens examined. BRAZIL. Amazonas state: Novo Aripuanã, Pousada Rio Roosevelt, A. Aptroot 87394 (ABL, CGMS).

Lecanora oreinodes (Körb.) Hertel & Rambold

New to Maranhão state in Brazil.

Specimens examined. BRAZIL. Maranhão state: Riachão, Poço Azul, M.E.S. Cáceres & A. Aptroot 40078 (ABL, ISE).

Lepra ventosa (Malme) Lendemer & R.C. Harris

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Iguazú national park, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10665 (ABL, CTES).

Lithothelium obtectum (Müll. Arg.) Aptroot

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10544 (ABL, CTES).

Lithothelium paraguayense Müll. Arg.

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Iguazú national park, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10645 (ABL, CTES).

Malmidea chryso stigma (Vain.) Kalb, Rivas Plata & Lumbsch

New to Ecuador.

Specimens examined. ECUADOR. Zamora Chinchipe, Zamora, along Rio Zamora, 1200 m, 25 July 1981, A. Aptroot 10506 (ABL).

Malmidea coralliformis Kalb

New to Papua New Guinea.

Specimens examined. PAPUA NEW GUINEA. Central province, along Hiritano highway, near Brown River bridge, 25 m, February 1987, A. Aptroot 17354 (ABL).

Malmidea eeunae Kalb

New to Papua New Guinea.

Specimens examined. PAPUA NEW GUINEA. Morobe, Huon peninsula, Saruwaged Range, near Honzeukngon village South of Derim in Timbe valley, 1950 m, March 1987, A. Aptroot 17838 (ABL).

Malmidea gyalectoides (Vain.) Kalb & Lücking

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10583 (ABL, CTES).

Malmidea hypomelaena (Nyl.) Kalb & Lücking

New to Paraná state in Brazil.

Specimens examined. BRAZIL. Paraná state: Guaratuba, Gumboski 4433 (ABL, JOI).

Malmidea leptoloma (Müll. Arg.) Kalb & Lücking

New to Argentina and Papua New Guinea.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10573 (ABL, CTES). PAPUA NEW GUINEA. Madang, Balek wildlife reserve 15 km South of Madang, 20 m, March 1987, A. Aptroot 17727; Same locality, 29 July 1992, A. Aptroot 30887 (both ABL).

Malmidea pallidoatlantica M. Cáceres

New to Espírito Santa state in Brazil.

Specimens examined. BRAZIL. Espírito Santa state: Reserva Biológica Augusto Ruschi, Santa Teresina, M.E.S. Cáceres 38079 (ABL, ISE).

Malmidea piperina (Zahlbr.) Breuss & Aptroot

New to Ecuador.

Specimens examined. ECUADOR. Morona Santiago, Gualaquiza, 900 m, 28 August 1982, A. Aptroot 10455 (ABL).

Malmidea piperis (Spreng.) Kalb, Rivas Plata & Lumbsch

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Iguazú national park, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10639 (ABL, CTES).

Malmidea polycampia (Spreng.) Kalb, Rivas Plata & Lumbsch

New to Papua New Guinea.

Specimens examined. PAPUA NEW GUINEA. Madang, Balek wildlife reserve 15 km South of Madang, 20 m, 29 July 1992, A. Aptroot 30904 (ABL).

Malmidea subaurigera (Vain.) Kalb, Rivas Plata & Lumbsch
New to Ecuador.

Specimens examined. ECUADOR. Napo, Santa Rosa, 5 km North, 400 m, 20 August 1982, A. Aptroot 10707 (ABL).

Malmidea subgranifera (Kalb & Elix) Kalb & Elix
New to Papua New Guinea.

Specimens examined. PAPUA NEW GUINEA. Madang, Karkar island, Kinim station, 50 m, March 1987, A. Aptroot 17616 (ABL).

Malmidea tratiana Kalb & Mongk.
New to Papua New Guinea.

Specimens examined. PAPUA NEW GUINEA. Madang, Wasabamal logging area, 30 km North of Madang, 25 m, February 1987, A. Aptroot 17428; Madang, Balek wildlife reserve 15 km South of Madang, 20 m, March 1987, A. Aptroot 17725 (both ABL).

Malmidea vinosa (Eschw.) Kalb, Rivas Plata & Lumbsch
New to Argentina, Madagascar and Papua New Guinea.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10507 (ABL, CTES). MADAGASCAR. Diego-Suarez, Nosy Be, 1 m, 5 June 1984, A. Aptroot 13737 (ABL). PAPUA NEW GUINEA. Madang, 3 km Northwest of Musom in Busom valley, 600 m, March 1987, A. Aptroot 18168 (ABL).

Megalaria bengalensis Jagad. Ram, Aptroot, G.P. Sinha & Kr.P. Singh
New to Maranhão state in Brazil.

Specimens examined. BRAZIL. Maranhão state: Carolina, Pedra Caída, 400 m, 28 October 2016, M.E.S. Cáceres & A. Aptroot ISE 40125 (ABL, ISE).

Micarea adnata Coppins
New to Brazil.

Specimens examined. BRAZIL. Amazonas, Manaus, Reserva Florestal Ducke, M.E.S. Cáceres & A. Aptroot 28084 (ABL, ISE).

Micarea bacillispora Aptroot & Schumm
New to Amazonas state in Brazil.

Specimens examined. BRAZIL. Amazonas state: Manaus, Reserva Ducke, M.E.S. Cáceres & A. Aptroot 28623 (ABL, ISE).

Micarea botryoides (Nyl.) Coppins
New to Amazonas state in Brazil.

Specimens examined. BRAZIL. Amazonas state: Manaus, Reserva Florestal Ducke, M.E.S. Cáceres & A. Aptroot 28551 (ABL, ISE); Santa Catarina, Tres Barras, Gumboski 5326 (ABL, JOI).

Micarea isidiothallina Aptroot & Schumm
New to Amazonas state in Brazil.

Specimens examined. BRAZIL. Amazonas state: Manaus, Reserva Ducke, M.E.S. Cáceres & A. Aptroot 28356 (ABL, ISE).

Micarea melaena (Nyl.) Hedl.
New to Brazil.

Specimens examined. BRAZIL. Rondônia, Porto Velho, Estação Ecológica de Cuniã, km 760 on road BR 319 N of Porto Velho, M.E.S. Cáceres & A. Aptroot 15804; Maranhão, Riachão, Poço Azul, M.E.S. Cáceres & A. Aptroot 40026 (both ABL, ISE).

Micarea micrococca (Körb.) Gams ex Coppins
New to Rondônia state in Brazil.

Specimens examined. BRAZIL. Rondônia state: Porto Velho, Estação Ecológica de Cuniã, km 760 on road BR 319 N of Porto Velho, M.E.S. Cáceres & A. Aptroot 11667 (ABL, ISE); new to Pará, Dom Eliseu, N Fazenda Pantera, M.E.S. Cáceres & A. Aptroot 40436 (ABL, ISE).

Micarea pycnidiphora Coppins & P. James
New to Pernambuco state in Brazil.

Specimens examined. BRAZIL. Pernambuco state: Caruaru, Brejo dos Cavalos, M.E.S. Cáceres & A. Aptroot 22031 (ABL, ISE).

Micarea viridileprosa Coppins & van den Boom
New to Brazil.

Specimens examined. BRAZIL. Amapá, Macapá, Near Povoado Abacate da Pedreina, km 34 on AP 070, M.E.S. Cáceres & A. Aptroot 27093; Fazendinha, Ecotel garden, M.E.S. Cáceres & A. Aptroot 27194 (both ABL, ISE).

Mycocalicium albonigrum (Nyl.) Tibell
New to Argentina.

Specimens examined. ARGENTINA. Chaco, Parque Pampa del Indio, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10782 (ABL, CTES).

Mycoporum sparsellum Nyl.
New to Argentina.

Specimens examined. ARGENTINA. Chaco, Parque Chico, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10851 (ABL, CTES).

Myriotrema frondosum Hale

New to Maranhão and Mato Grosso states in Brazil.

Specimens examined. BRAZIL. Maranhão state: Carolina, Pedra Caída, 400 m, 28 October 2016, M.E.S. Cáceres & A. Aptroot ISE 40024 (ABL, ISE); Mato Grosso state in Brazil: Chapada dos Guimarães, Pousada do Parque private area, 700 m, September 2020, A. Aptroot 81600 (ABL, CGMS).

Myriotrema subclandestinum M. Cáceres, Aptroot & Lüicking

New to Pará, Maranhão and Sergipe states in Brazil.

Specimens examined. BRAZIL. Pará state: Dom Eliseu, Vila Nazaré, S Fazenda Pantera, 120 m, 29 October 2016, M.E.S. Cáceres & A. Aptroot ISE 40293; Maranhão state: Imperatriz, Bananal, 150 m, 20 October 2016, M.E.S. Cáceres & A. Aptroot ISE 28749; Sergipe state: Itabaiana, Parque Nacional Serra da Itabaiana, 200 m, 10 May 2014, M.E.S. Cáceres & A. Aptroot ISE 21750 (all ABL, ISE).

Ocellularia africana Frisch
New to Madagascar.

Specimens examined. MADAGASCAR. Tamatave, Périnet (Andasibe), 950 m, 10 May 1984, A. Aptroot 13391 (ABL).

Ocellularia ascidioidea Hale

New to Pará state in Brazil.

Specimens examined. BRAZIL. Pará state: Dom Eliseu, Vila Nazaré, S Fazenda Pantera, 120 m, 29 October 2016, M.E.S. Cáceres & A. Aptroot ISE 40309 (ABL, ISE).

Ocellularia barroensis Hale

New to Amapá state in Brazil.

Specimens examined. BRAZIL. Amapá state: Floresta Nacional do Amapá, upstream of the station, 30 m, 20 August 2015, M.E.S. Cáceres & A. Aptroot ISE 27331 (ABL, ISE).

Ocellularia boarucensis Lücking

New to Rondônia state in Brazil.

Specimens examined. BRAZIL. Rondônia state: Porto Velho, Base Selva Guararapes, on tree bark, 100 m, 5 November 2014, C. Mendonça ISE 23175 (ABL, ISE).

Ocellularia brasiliensis M. Cáceres, Aptroot & Lücking

New to Ecuador and Minas Gerais states in Brazil.

Specimens examined. ECUADOR. Los Rios, Quevedo, km 54 North, 200 m, 15 July 1082, A. Aptroot 11221; Pichincha, Santa Domingo, km 19 South, 400 m, 16 July 1982, A. Aptroot 11243 (both ABL). So far only known from Brazil. BRAZIL. Minas Gerais state: Catas Altas, Carassa, 1300 m, September 1997, A. Aptroot 41359 (ABL, SP).

Ocellularia cicra Rivas Plata & Lücking

New to Pará state in Brazil.

Specimens examined. BRAZIL. Pará state: Dom Eliseu, Vila Nazaré, S Fazenda Pantera, 120 m, 29 October 2016, M.E.S. Cáceres & A. Aptroot ISE 40156 (ABL, ISE).

Ocellularia comparabilis (Kremp.) Müll. Arg.

New to Sergipe state in Brazil.

Specimens examined. BRAZIL. Sergipe state: Serra da Guia, 27 January 2015, C. Mendonça ISE 24254 (ABL, ISE).

Ocellularia crocea (Kremp.) Overeem & D. Overeem

New to Bahia state in Brazil.

Specimens examined. BRAZIL. Bahia state: Chapada da Diamantina, Mendonça 24020 (ABL, ISE).

Ocellularia decolorata Hale

New to Amapá and Sergipe states in Brazil.

Specimens examined. BRAZIL. Amapá state: Macapá, Near Povoado Abacate da Pedreina, km 34 on AP 70, 30 m, 18 August 2015, M.E.S. Cáceres & A. Aptroot ISE 27076; Sergipe state: Itabaiana, Parque Nacional Serra da Itabaiana, 200 m, 18 September 2013, M.E.S. Cáceres & A. Aptroot ISE 18608; Capela, Refúgio de vida silvestre Mata do Junco, 150 m, 24 March 2014, M.E.S. Cáceres & A. Aptroot ISE 18859 & 18950 (all ABL, ISE).

Ocellularia garoana Patw. & Nagarkar

New to Rondônia, Sergipe and São Paulo states in Brazil.

Specimens examined. BRAZIL. Rondônia state: Porto Velho, Base Selva Guararapes, on tree bark, 100 m, 5 November 2014, C. Mendonça ISE 23168 & 23185; Sergipe state: Itabaiana, Parque Nacional Serra da Itabaiana, 200 m, 10 May 2014, M.E.S. Cáceres & A. Aptroot ISE 21810; São Paulo state: Apiaí, Morro do Ouro, 1000 m, 24 May 2022, A. Aptroot & L.A. dos Santos ISE 54742 (all ABL, ISE).

Ocellularia inturgescens (Müll. Arg.) Mangold

New to Brazil.

Specimens examined. BRAZIL. São Paulo: Apiaí, Morro do Ouro, 1000 m, 24 May 2022, A. Aptroot & L.A. dos Santos ISE SP 55108, 55110 & 55111 (all ABL, ISE).

Ocellularia laeviusculoides Sipman & Lücking

New to Pará state in Brazil.

Specimens examined. BRAZIL. Pará state: Dom Eliseu, Vila Nazaré, S Fazenda Pantera, 120 m, 29 October 2016, M.E.S. Cáceres & A. Aptroot ISE 40286 (ABL, ISE).

Ocellularia landronii Hale

New to Pará state in Brazil.

Specimens examined. BRAZIL. Pará state: Dom Eliseu, Vila Nazaré, S Fazenda Pantera, 120 m, 29 October 2016, M.E.S. Cáceres & A. Aptroot ISE 40162 (ABL, ISE).

Ocellularia mauritiana Hale

New to Amapá state in Brazil.

Specimens examined. BRAZIL. Amapá state: Floresta Nacional do Amapá, upstream of the station, 30 m, 20 August 2015, M.E.S. Cáceres & A. Aptroot ISE 27473 (ABL, ISE).

Ocellularia papillata (Leight.) Zahlbr.

New to Rondônia state in Brazil.

Specimens examined. BRAZIL. Rondônia state: Porto Velho, Parque natural, 100 m, 6 November 2014, C. Mendonça ISE 23452 (ABL, ISE).

Ocellularia parvidisca (Sipman) Lücking

New to Amazonas state in Brazil.

Specimens examined. BRAZIL. Amazonas state: Novo Aripuanã, Pousada Rio Roosevelt, A. Aptroot 86289 (ABL, CGMS).

Ocellularia percolumellata Sipman

New to Rondônia state in Brazil.

Specimens examined. BRAZIL. Rondônia state: Porto Velho, Parque natural, 100 m, 6 November 2014, C. Mendonça ISE 23704 and many other collections from the same locality (all ABL, ISE).

Ocellularia perforata (Leight.) Müll. Arg.

New to Rondônia and Bahia states in Brazil.

Specimens examined. BRAZIL. Rondônia state: Porto Velho, Parque natural, 100 m, 6 November 2014, C. Mendonça ISE 23491; Bahia state: Santa Terezinha, Serra da Jiboia, 17 January 2015, C. Mendonça ISE 24061 & 24064 (all ABL, ISE).

Ocellularia pluripora Hale

New to Amazonas state in Brazil.

Specimens examined. BRAZIL. Amazonas state: Manaus, Reserva Ducke, 100 m, June 2016, M.E.S. Cáceres & A. Aptroot ISE AM 28075 & 28300 (both ABL, ISE).

Ocellularia pulverulenta Hale

New to Amapá and Tocantins states in Brazil.

Specimens examined. BRAZIL. Amapá state: Macapá, Plantio da Ancel near Curicaca, Itaubau, 6 km on AP 110, 30 m, 17 August 2015, M.E.S. Cáceres & A. Aptroot ISE 27016; Tocantins state: Itaguatins, 150 m, 23 October 2016, M.E.S. Cáceres & A. Aptroot ISE 28870 & 28873 (all ABL, ISE).

Ocellularia referta Hale

New to Amapá state in Brazil.

Specimens examined. BRAZIL. Amapá state: Floresta Nacional do Amapá, upstream of the station, 30 m, 20 August 2015, M.E.S. Cáceres & A. Aptroot ISE 27242 (ABL, ISE).

Ocellularia subperforata Nagarkar, Sethy & Patw.

New to Amazonas, Rondônia and Pará states in Brazil.

Specimens examined. BRAZIL. Amazonas state: Manaus, Reserva Ducke, 100 m, June 2016, M.E.S. Cáceres & A. Aptroot ISE 28213 & 28217; Rondônia state: Porto Velho, Sítio Seu Careca, 7 November 2014, C. Mendonça ISE 23508; Pará state: Dom Eliseu, Vila Nazaré, S Fazenda Pantera, 120 m, 29 October 2016, M.E.S. Cáceres & A. Aptroot ISE 40287 & 40383 (all ABL, ISE).

Ocellularia violacea Räsänen

New to Maranhão state in Brazil.

Specimens examined. BRAZIL. Maranhão state: Imperatriz, Bananal, 150 m, 20 October 2016, M.E.S. Cáceres & A. Aptroot ISE 28750 (ABL, ISE).

Ocellularia viridipallens Müll. Arg.

New to Amazonas, Amapá, Rondônia and Tocantins states in Brazil.

Specimens examined. BRAZIL. Amazonas state: Manaus, Reserva Ducke, 100 m, June 2016, M.E.S. Cáceres & A. Aptroot ISE 28124, 28208, 28272, 28473 & 28497; Amapá state: Macapá, Plantio da Ancel near Curicaca, Itaubau, 6 km on AP 110, 30 m, 17 August 2015, M.E.S. Cáceres & A. Aptroot ISE 27023 & 27520; Rondônia state: Porto Velho, Parque natural, 100 m, 6 November 2014, C. Mendonça ISE 23741; Tocantins state: Itaguatins, 150 m, 23 October 2016, M.E.S. Cáceres & A. Aptroot ISE 28890 (all ABL, ISE).

Opegrapha subdictyospora M. Cáceres, E.L. Lima & Aptroot

New to Rio Grande do Sul state in Brazil.

Specimens examined. BRAZIL. Rio Grande do Sul state: Porto Alegre, M.E.S. Cáceres & A. Aptroot 22045 (ABL, ISE).

Peltula koflerae Henssen & Büdel

New to Argentina.

Specimens examined. ARGENTINA. Corrientes, Parque Mitre, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10704 (ABL, CTES).

Peltula patellata (Bagl.) Swinscow & Krog

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Iguazú national park, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10628 (ABL, CTES).

Pertusaria georgeana A.W. Archer & Elix

New to Papua New Guinea.

Specimens examined. PAPUA NEW GUINEA. Central province, Motupore island in Bootless Bay, 1 m, February 1987, A. Aptroot 17253 (ABL).

Pertusaria muricata J.C. David

New to Papua New Guinea.

Specimens examined. PAPUA NEW GUINEA. Central province, Varirata national park, 800 m, 23 October 1995, A. Aptroot 39789 (ABL).

Pertusaria umbricola A.W. Archer & Elix

New to Papua New Guinea.

Specimens examined. PAPUA NEW GUINEA. Central province, Varirata national park, 800 m, 23 October 1995, A. Aptroot 39789a (ABL).

Phaeographis lindigiana Müll. Arg.

New to Amazonas state in Brazil.

Specimens examined. BRAZIL. Amazonas state: Novo Aripuanã, Pousada Rio Roosevelt, A. Aptroot 86410, 86415 & 86420 (ABL, CGMS).

Phyllopsora breviscula (Nyl.) Müll. Arg.

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10562 (ABL, CTES).

Phyllopsora buettneri (Müll. Arg.) Zahlbr.

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10560 (ABL, CTES).

Phyllopsora cinchonarum (Fée) Timdal

New to Amapá and Sergipe states in Brazil.

Specimens examined. BRAZIL. Amapá state: Floresta Nacional do Amapá, near the station, 30 m, 20 August 2015, M.E.S. Cáceres & A. Aptroot 27233; Sergipe state: Capela, Refúgio de vida silvestre Mata do Junco, M.E.S. Cáceres & A. Aptroot 18922 (both ABL, ISE).

Phyllopsora confusa Swinscow & Krog

New to Amazonas state in Brazil.

Specimens examined. BRAZIL. Amazonas state: Novo Aripuanã, Pousada Rio Roosevelt, A. Aptroot 85986 (ABL, CGMS).

Phyllopsora furfuracea (Pers.) Zahlbr.

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10559 (ABL, CTES).

Phyllopsora pyrromelaena (Tuck.) Swinscow & Krog

New to Amazonas and Pernambuco states in Brazil.

Specimens examined. BRAZIL. Amazonas state: Manaus, Reserva Ducke, M.E.S. Cáceres & A. Aptroot 28334; Pernambuco state: Caruaru, Brejo dos Cavalos, M.E.S. Cáceres & A. Aptroot 21998 (both ABL, ISE).

Phyllopsora pyxinoides (Nyl.) Kistenich, Timdal, Bendiksbj & S. Ekman

New to Argentina.

Specimens examined. ARGENTINA. Chaco, Parque Pampa del Indio, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10735 (ABL, CTES).

Physcia krogiae Moberg

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Iguazú national park, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10674 (ABL, CTES).

Physciella neotropica M.F. Souza & Aptroot

New to Argentina.

Specimens examined. ARGENTINA. Corrientes, Parque Mitre, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10702 (ABL, CTES).

Piccolia conspersa (Fée) Hafellner

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Iguazú national park, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10664 (ABL, CTES).

Placidium arboreum (Schwein. ex E. Michener) Lendemer

New to Argentina.

Specimens examined. ARGENTINA. Corrientes, Parque Mitre, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10696 (ABL, CTES).

Porina africana Müll. Arg.

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10512 (ABL, CTES).

Porocyphus dimorphus Henssen

New to Mato Grosso do Sul state of Brazil.

Specimens examined. BRAZIL. Mato Grosso do Sul state: Pirapitanga, A. Aptroot 80530 (ABL, CGMS).

Pseudobogoriella miculiformis (Müll. Arg.) Lücking, R. Miranda & Aptroot

New to Argentina.

Specimens examined. ARGENTINA. Chaco, Parque Pampa del Indio, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10750 (ABL, CTES).

Pseudobogoriella subfallens (Müll. Arg.) Lücking, R. Miranda & Aptroot

New to Amazonas state in Brazil.

Specimens examined. BRAZIL. Amazonas state: Novo Aripuanã, Pousada Rio Roosevelt, A. Aptroot 87241 (ABL, CGMS).

Psoroglaena cubensis Müll. Arg.

New to Argentina.

Specimens examined. ARGENTINA. Chaco, Parque Pampa del Indio, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10747 (ABL, CTES).

Psorotichia schaeereri (A. Massal.) Arnold

New to Brazil.

Specimens examined. BRAZIL. Mato Grosso do Sul A. Aptroot 80617 (ABL, CGMS).

Pterygiopsis guyanensis M. Schultz, Porembski & Büdel

New to Mato Grosso do Sul state of Brazil.

Specimens examined. BRAZIL. Mato Grosso do Sul state: Pirapitanga, A. Aptroot 80535; Ladário, 80567 (ABL, CGMS).

Pyrenopsis portoricensis Zahlbr.

New to Mato Grosso do Sul state of Brazil.

Specimens examined. BRAZIL. Mato Grosso do Sul state: Pirapitanga, A. Aptroot 80534 (ABL, CGMS).

Pyrenula aggregata (Fée) Fée

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10532 (ABL, CTES).

Pyrenula aggregataspistea Aptroot & M. Cáceres

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10537 (ABL, CTES).

Pyrenula anomala (Ach.) A. Massal.

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Iguazú national park, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10643 (ABL, CTES).

Pyrenula aspistea (Afzel. ex Ach.) Ach.

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10531 (ABL, CTES).

Pyrenula circumfiniens Vain.

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10539 (ABL, CTES).

Pyrenula cubana (Müll. Arg.) R.C. Harris

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10545 (ABL, CTES).

Pyrenula dissimulans (Müll. Arg.) R.C. Harris

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Iguazú national park, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10656 (ABL, CTES).

Pyrenula globifera (Eschw.) Aptroot

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10549 (ABL, CTES).

Pyrenula infraleucotrypa Aptroot & M. Cáceres

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10528 (ABL, CTES).

Pyrenula mamillana (Ach.) Trevis.

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10540 (ABL, CTES).

Pyrenula occidentalis (R.C. Harris) R.C. Harris

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Iguazú national park, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10638 (ABL, CTES).

Pyrenula ravenelii (Tuck.) R.C. Harris

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Iguazú national park, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10681 (ABL, CTES).

Pyrenula septicollaris (Eschw.) R.C. Harris

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10546 (ABL, CTES).

Pyrrhospora quernea (Dicks.) Körb.

New to Brazil (identity confirmed by DNA): Sergipe, Itabaiana, Parque Nacional Serra da Itabaiana.

Specimens examined. BRAZIL. Identity confirmed by DNA: Sergipe, Itabaiana, Parque Nacional Serra da Itabaiana, 200 m, 19 May 2017, M.E.S. Cáceres & A. Aptroot ISE 40512 (ABL, ISE).

Pyxine eschweileri (Tuck.) Vain.

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Iguazú national park, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10682 (ABL, CTES).

Ramboldia haematites (Fée) Kalb, Lumbsch & Elix

New to Argentina.

Specimens examined. ARGENTINA. Chaco, Parque Pampa del Indio, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10725 (ABL, CTES).

Ramonia malmei Vězda

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10526 (ABL, CTES).

Ramonia valenzueliana (Mont.) Stizenb.

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10625 (ABL, CTES).

Rinodi na colobinoides (Nyl.) Müll. Arg.

New to Argentina.

Specimens examined. ARGENTINA. Chaco, General Martín, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10910 (ABL, CTES).

Rinodina disjuncta Sheard & Toensberg

New to Brazil.

Specimens examined. BRAZIL. Sergipe, Ribeirópolis, Serra do Machada, Cáceres & A. Aptroot 21639 (ABL, ISE).

Rinodina maculans (Nyl.) Müll. Arg.

New to Argentina.

Specimens examined. ARGENTINA. Chaco, Parque Pampa del Indio, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10738 (ABL, CTES).

Schadonia subobscurata (Vain.) Kalb

New to Santa Catarina state in Brazil.

Specimens examined. BRAZIL. Santa Catarina state: São Bento do Sul, Gumboski 4929 (ABL, JOI).

Scoliciosporum intrusum (Th. Fr.) Hafellner

New to São Paulo state in Brazil.

Specimens examined. BRAZIL. São Paulo state: Apiaí, Morro do Ouro, A. Aptroot & L.A. dos Santos 56043 (ABL, ISE).

Spilonema paradoxum Bornet

New to Mato Grosso and Mato Grosso do Sul states in Brazil.

Specimens examined. BRAZIL. Mato Grosso state: Chapada dos Guimarães, A. Aptroot & M.F. Souza MT 81908 & 81492; Mato Grosso do Sul state: Pirapitanga, A. Aptroot 80536 (ABL, CGMS).

Stegobolus trachodes (Nyl.) Lücking, M. Cáceres & A. Aptroot

New to Rondônia state in Brazil.

Specimens examined. BRAZIL. Rondônia state: Porto Velho, Parque natural, 100 m, March 2013, M.E.S. Cáceres & A. Aptroot ISE 11312 (ABL, ISE).

Synarthonia ferruginea (Vain.) Van den Broeck & Ertz

New to Sergipe state in Brazil.

Specimens examined. BRAZIL. Sergipe state: Serra da Guia, Mendonça 24196 (ABL, ISE).

Synarthonia inconspicua (Stirt.) Van den Broeck & Ertz

New to Sergipe and Pernambuco states in Brazil.

Specimens examined. BRAZIL. Sergipe state: Assentamento, Nossa Senhora Aparecida, M.E.S. Cáceres & A. Aptroot 18348; Itabaiana, Mata da Fazenda Cafuz, M.E.S. Cáceres & A. Aptroot 18348; Pernambuco state: Recife, University campus, M.E.S. Cáceres & A. Aptroot 21842 (all ABL, ISE).

Synarthonia josephiana Van den Broeck & Ertz

New to Brazil.

Specimens examined. BRAZIL. Amazonas, Novo Aripuanã, Pousada Rio Roosevelt, A. Aptroot 86479 (ABL, CGMS).

Synarthonia pilosella Van den Broeck, Eb. Fisch., Killmann & Ertz

New to Amazonas and Alagoas states in Brazil.

Specimens examined. BRAZIL. Amazonas state: Novo Aripuanã, Pousada Rio Roosevelt, A. Aptroot 86479a (ABL, CGMS); Alagoas state: Quebrangulo, Pedra Talhada private area, 600 m, October 2017, M.E.S. Cáceres & A. Aptroot ISE 42743 (ABL, ISE).

Synarthothelium cerebriforme Sparrius

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10622 (ABL, CTES).

Tephromela colensoica Rambold & Knoph

New to Bahia state in Brazil.

Specimens examined. BRAZIL. Bahia state: Lençóis, M.E.S. Cáceres & A. Aptroot 40730 (ABL, ISE).

Thalloidima massatum (Tuck.) Kistenich, Tindal, Bendiksby & S. Ekman

New to Maranhão and Rio Grande do Sul states in Brazil.

Specimens examined. BRAZIL. Maranhão state: Riachão, Poço Azul, M.E.S. Cáceres & A. Aptroot 40053; Rio Grande do Sul state: Viamão, M.E.S. Cáceres & A. Aptroot 22151 (both ABL, ISE).

Thelenella paraguayensis Malme

New to Argentina.

Specimens examined. ARGENTINA. Chaco, 15 km West of Presidencia Roca, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10893 (ABL, CTES).

Trapelia glebulosa (Sm.) J.R. Laundon

New to Alagoas state in Brazil.

Specimens examined. BRAZIL. Alagoas state: Pedra Talhada, M.E.S. Cáceres & A. Aptroot 42591 (ABL, ISE).

Traponora asterella Aptroot

New to Argentina.

Specimens examined. ARGENTINA. Chaco, Parque Pampa del Indio, 100 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10719 (ABL, CTES).

Trypetheliopsis gigas (Zahlbr.) Aptroot

New to Papua New Guinea.

Specimens examined. PAPUA NEW GUINEA. Madang, Balek wildlife reserve 15 km South of Madang, 20 m, 3 November 1995, A. Aptroot 36867 (ABL).

Tylophoron moderatum Nyl.

New to Argentina.

Specimens examined. ARGENTINA. Misiones, Puerto Iguazú, 200 m, February 2013, L.I. Ferraro, A. Aptroot & M.E.S. Cáceres 10514 (ABL, CTES).

Wirthiotrema santessonii (Hale) Rivas Plata & Frisch

New to Brazil.

Specimens examined. BRAZIL. Amazonas, Manaus, Reserva Ducke, 100 m, June 2016, M.E.S. Cáceres & A. Aptroot ISE 28572 & 28062; Sergipe, Itabaiana, Parque Nacional Serra da Itabaiana, 200 m, 10 May 2014, M.E.S. Cáceres & A. Aptroot ISE 18484 (all ABL, ISE).

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