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ANDRÉ APTROOT[1]

Preliminary checklist of the lichens of Madagascar, with two new thelotremoid *Graphidaceae* and 131 new records

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Abstract: A checklist of 500 lichens known from Madagascar is published for the first time, including 131 new records. The following 22 species, mostly crustose lichens from rain forests, are here reported for the first time from the continent of Africa: *Agonimia opuntiella* (Buschardt & Poelt) Vězda, *Amandinea efflorescens* (Müll. Arg.) Marbach, *Anisomeridium ambiguum* (Zahlbr.) R. C. Harris, *Bacidina simplex* var. *cyanophila* Lücking, *Bogoriella miculiformis* (Nyl. ex Müll. Arg.) Aptroot & Lücking, *B. minutula* (Müll. Arg.) Aptroot & Lücking, *Catillaria ophthalmocarpa* Vain., *Coccotrema porinopsis* (Nyl.) Imshaug ex Yoshim., *Constrictolumina leucostoma* (Müll. Arg.) Lücking & al., *Dibaeis arcuata* (Stirt.) Kalb & Gierl, *Graphis argentia* Makhija & Adaw., *G. consimilis* Vain., *Lecanora flavidorufa* Hue, *L. pangerangoensis* Zahlbr., *L. subflava* Tuck., *Megalotremis pustulata* Aptroot, *Mycoporum californicum* (Zahlbr.) R. C. Harris, *Myeloconis erumpens* P. M. McCarthy & Elix, *Polychidium dendriscum* (Nyl.) Henssen, *Pyrenula hibernica* (Nyl.) Aptroot, *Thelotrema leucophthalmum* Nyl. and *Traponora fusca* Aptroot. The following new species of thelotremoid *Graphidaceae* are described as new to science: *Clandestinotrema minutum*, with warted periphyses, granular, blackish epihymenium, and hyaline, 6–9-septate ascospores in one bundle in clavate asci; and *Pseudoramonia psoromica*, with stout isidia, thallus with psoromic acid, and submuriform ascospores.

Key words: taxonomy, checklist, new species, new records, lichens, Madagascar, biogeography, *Graphidaceae*, *Clandestinotrema*, *Pseudoramonia*

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Introduction

Madagascar is a tropical archipelago in the Indian Ocean, east of Africa. It is well known for its high numbers of endemic animal and plant species, genera and even completely endemic families like the *Didieraceae* (Oberlé 1981). There are several factors that caused its unique biodiversity: it is geologically relatively old and with an origin different from Africa; original forest remains on some islands (Collinson 1977), and the main island contains relatively high mountains.

Two different biomes can be distinguished in Madagascar (Oberlé 1981), each with a characteristic flora and fauna:

1. The dry tropical area with open savannah and semidesert covers most of the country in the south and southwest, including the coastal regions in the west and south. It occupies roughly one-third of the island. It includes granitic inselbergs and some limestone karst.

2. The wet tropical area extends from the coastal regions in the north and east (including small islands like Nosy Be, Nosy Komba and Île St. Marie) to the inland, including the central plateau. It occupies roughly two-thirds of the island. The bedrock is mostly siliceous.

There is no fundamental distinction in lichen flora between the coastal and more inland regions; the wet tropical forest used to extend all the way to the beach in the north and east and the dry semidesert still extends to the beach in the south. The areas on the central plateau tend to have a somewhat different set of species from the lowland areas, with relatively more macrolichens, but the original vegetation on the central plateau has vanished so completely that it is not even known what it looked like, and all areas are disturbed. Disturbed areas in or near pris-

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tine lowland wet forests also have a higher proportion of macrolichens. Some of the (near) endemic *Cladonia* and *Parmeliaceae* species are currently known only from the central plateau, but others are also known from lowland localities, suggesting that there is a continuum.

The lichen flora of Madagascar is very incompletely known. A few lichenologists have collected on the island, some long ago (Abbayes 1947, 1948, 1956, 1961); those who were there more recently published only a few selected, often new, species. Almost 33 years ago, when still an undergraduate student, I made a two-month collecting trip around Madagascar, visiting some easily accessible places, but also some remote, pristine areas when traversing the Presqu'île de Masoala on foot. Several papers were published soon afterwards, dealing with *Cladonia* (Ahti & Aptroot 1992), *Parmeliaceae* (Aptroot 1991a), *Physciaceae* (Aptroot 1988) and miscellaneous species (Aptroot 1990). Many other collections remained unidentified or unpublished, and some were out on loan for a considerable time.

Graphidaceae constitute the second largest lichen family in terms of described species, but it may well be the largest, as many species are thought to be still undiscovered (Lücking & al. 2014). The family is most speciose in the tropics, and the species are almost invariably associated with trentepohlioid phytobionts (Rivas Plata & al. 2012). A reliable identification of the thelotremoid *Graphidaceae* was virtually impossible until about a decade ago. This is the group of lichenized fungi that was united in the family *Thelotrematáceae* until 2010 (Rivas Plata & al. 2010, 2012). After the publication of a monograph of this group for Africa (Frisch & al. 2006), it was thought that identification would be much easier, but, somewhat surprisingly, no specimens from Madagascar were mentioned in that monograph, and half of the thelotremoid *Graphidaceae* species found by me in Madagascar still seem to remain undescribed. In the meantime, many identifications of species in other groups had accumulated, mostly in the material collected by me, and partly in material collected by F. Schumm.

In the present work, a checklist of 500 lichens known from Madagascar is published for the first time, including 131 new records and two newly described thelotremoid *Graphidaceae*.

Material and methods

Descriptive work was carried out in Soest using an Olympus SZX7 stereomicroscope and an Olympus BX50 compound microscope with interference contrast, connected to a Nikon Coolpix digital camera. Sections were mounted in tap water, in which all measurements were taken. The chemistry of the type specimens was investigated by thin-layer chromatography (TLC) using solvent A (Orange & al. 2001). The newly reported specimens are partly preserved in ABL, partly in B, but mostly in BR; specimens collected by F. Schumm are deposited in his private herbarium and will eventually go to B. Herbarium codes are according to *Index Herbariorum* (Thiers [continuously updated]).

Results

New species

Clandestinotrema minutum Aptroot, **sp. nov.** – MycoBank #818238 – Fig. 1A–C.
Holotype: Madagascar, Tulear, Ankilibe, 43°46'E, 23°25'S, 1 m, on dry shrub twigs in coastal bush, 22 Apr 1984, *A. Aptroot & R. Hensen 12570a* (B; isotype: ABL).

Diagnosis — *Clandestinotrema* with warted periphyses; granular, blackish epihymenium; hyaline, 6–9-septate ascospores in 1 bundle in clavate asci.

Description — *Thallus* crustose, not corticate, dull, pale yellowish white, less than 0.1 mm thick, surrounded by a c. 0.5 mm-wide, black prothallus line. *Vegetative propagules* absent. *Algae* trentepohlioid. *Ascomata* erumpent to superficial, round, black, perithecioid, 0.15–0.3 mm wide, 0.1–0.2 mm high, disc covered by black, incurved margin. *Excipulum* black in upper half, periphyses stout, hanging, with rough surface. *Hamathecium* not inspersed, 60–80 µm high, IKI-negative, paraphyses unbranched, tips hardly thickened, but epihymenium granular, blackish, 15–20 µm high. *Asci* clavate, 40–45 × 15–20 µm, with 8 ascospores in 1 bundle. *Ascospores* hyaline, long ellipsoid, (6 or)7(–9)-septate, 20–27 × 5–6 µm, IKI-negative to reddish (dextrinoid), ends rounded, lumina of irregular shape with much-thickened walls. *Pycnidia* not observed.

Secondary chemistry — Thallus and ascomata UV–, C–, P–, K–. TLC: no substances.

Distribution and ecology — Known only from Madagascar. On twigs of shrubs in coastal bush, growing together with *Mycoporum californicum* (Zahlbr.) R. C. Harris.

Remarks — This is a tiny thelotremoid *Graphidaceae* that has some unusual characters. The ascospores, which are arranged in one bundle in a clavate ascus, are especially weird. It looks in aspect much like a pyrenocarpous lichen. It is described here in the genus *Clandestinotrema*, because of the black superficial excipulum and the thick-walled ascospores. So far, 15 species are recognized in the genus (Rivas Plata & al. 2012). The warty periphyses are unique in the genus. The new species might well belong to a different lineage.

Pseudoramonia psoromica Aptroot, **sp. nov.** – MycoBank #818239 – Fig. 1D–E.
Holotype: Madagascar, Tamatave, Perinet (= Andasibe), on E slope of mountain Maromiza, 48°29'E, 18°58'S,

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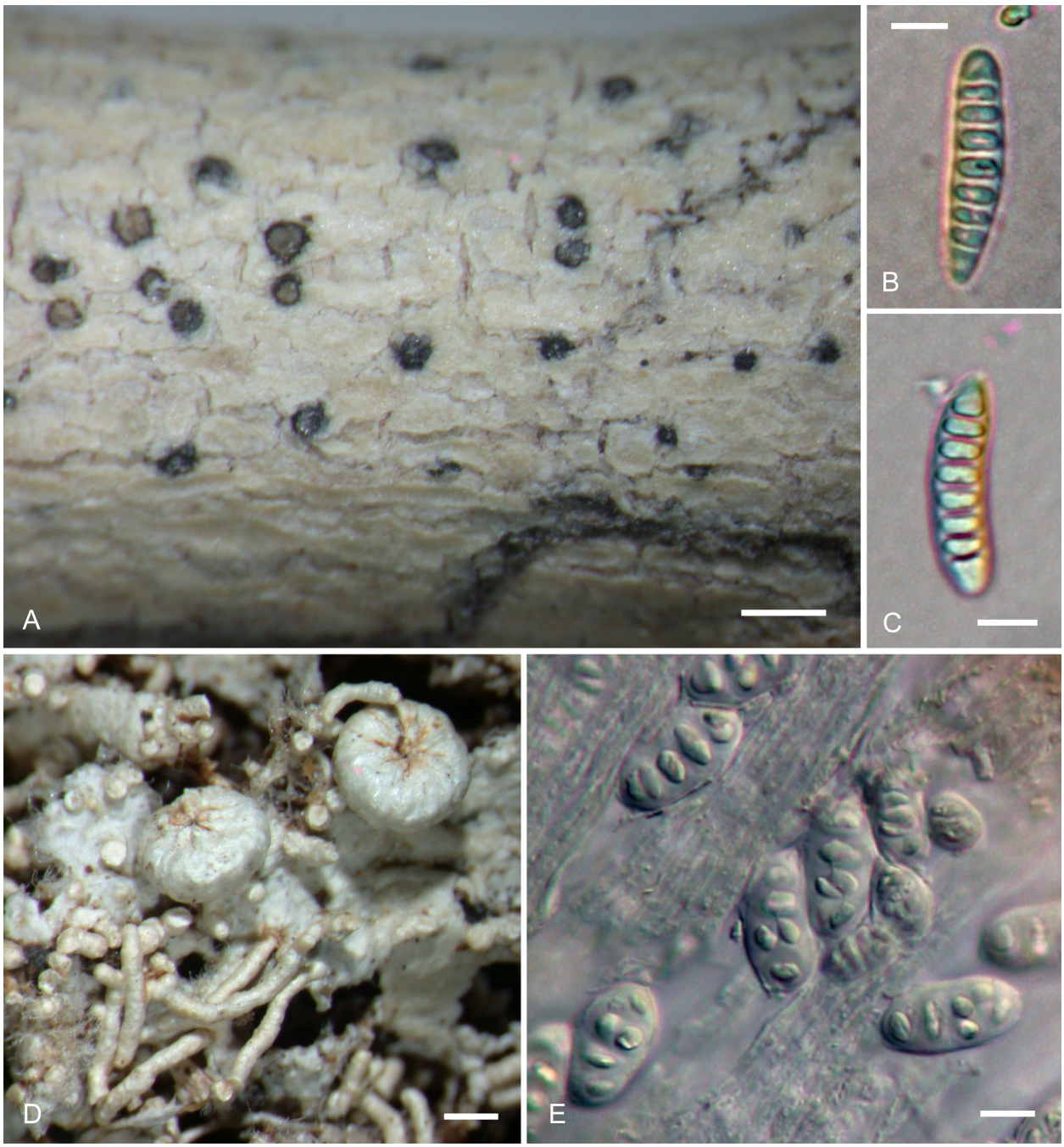

Fig. 1. A–C: *Clandestinotrema minutum* (holotype) – A: habit; B, C: ascospores; D, E: *Pseudoramonia psoromica* (holotype); D: habit; E: ascospores. – Scale bars: A, D = 0.5 mm; B, C, E = 5 µm.

1150 m, on moss and detritus on tree bark in open forest, 12 May 1984, *A. Aptroot & R. Hensen 13576* (B; isotype: ABL).

Diagnosis — *Pseudoramonia* with stout isidia; thallus with psoromic acid; submuriform ascospores.

Description — *Thallus* crustose, corticate, somewhat shiny, pale yellowish grey, thin but forming a rather thick layer of conglutinated moss and detritus with a thallus cover, not surrounded by a prothallus. *Isidia* numerous, dense (4–10 per mm^2), mostly unbranched, regularly cylindric with blunt tips, corticate, partly glossy, of thallus colour, c. 0.3 mm thick, to 2.7 mm long, easily detached. *Algae* trentepohlioid. *Ascomata* superficial to stalked, turbinate, round, 1.2–1.5 mm wide, 0.9–1 mm high, disc deeply concave, pinkish yellowish, not visible from above (because obscured by completely incurved margin, closing with some radial fissures, c. 0.2 mm wide). *Excipulum* yellowish, extending as a hypothecium, without periphyses. *Hamathecium* not inspersed, 100–120 µm high, paraphyses unbranched, tips hardly thickened. *Asci* cylindric, 100–110 × 10–13 µm, with 8 uniseriate ascospores. *Ascospores* hyaline, ellipsoid to ovoid, sub-

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muriform, 3 × (0 or)1(or 2)-septate with 4–10 lumina, 13–17 × 7–9 µm, ends rounded, lumina of irregular shape with much-thickened walls. *Pycnidia* not observed.

Secondary chemistry — Thallus and ascomata UV–, C–, P+ yellow, K–. TLC: psoromic acid.

Distribution and ecology — Known only from Madagascar. On tree bark in open mountain forest, overgrowing mosses and detritus.

Remarks — The genus *Pseudoramonia* is a very small genus (Rivas Plata & al. 2010), with only three rare species known, each from one country (Venezuela, Solomon Islands and Tasmania). True isidia are known from *P. isidiata* Aptroot (Aptroot 2014), but it is a small species and the isidia are very tiny, only to c. 0.1 mm thick; moreover it lacks secondary chemistry and has transversely septate ascospores. *Pseudoramonia stipitata* (Vězda & Hertel) Kantvilas & Vězda (Kantvilas & Vězda 2000) has structures that are described as isidia, but they are very different in nature: cylindric and stout, and they may actually all represent apothecium initials, as the apothecia are stalked on similar structures.

New reports

In recently studied material, 131 species were identified that have not been reported before from Madagascar, also not under synonymous names. They are included in the checklist (see Appendix), with collectors, year of collection and herbarium location of the specimen.

Checklist

The available literature was scrutinized for published records of lichens from Madagascar. The results are presented in the Appendix. In total, 500 species are now known, including the two new species described above and 131 species that are here newly reported from Madagascar. Species are listed alphabetically under the currently accepted name, with literature references. If a species was reported under another name, this name is mentioned after the reference to the literature.

The number of 367 lichen species already known from Madagascar before this publication is considerably higher than the number of 157 records that was recently reported in the literature (Ertz & al. 2014a), based on a very incomplete internet list, which was prepared from only a handful of publications and of which the authorship was unfortunately erroneously attributed to me (Aptroot 2013). Still, the present number of 500 is very small for such a large island, and it can be safely predicted that the number could easily be doubled with just a few months of dedicated research.

Apart from being incomplete, this checklist also contains some records of species that are unlikely to occur in the area, or of which the current taxonomic status is unclear, especially for instance in the genera *Cladonia*, *Leptogium*, *Peltigera*, *Pseudocyphellaria*, *Pyxine*, *Ricasolia*, *Sticta* and *Usnea*. These records have not been removed, as it was not immediately clear what other species they refer to. This concerns mainly macrolichens, because they have been collected since the 18th century and identifications have been published over many years.

Discussion

The present checklist is too incomplete to allow definite conclusions about the lichenological affinities of Madagascar. It should be noted that the number of widespread tropical species is higher than that of typically African or endemic species. The following 22 species, mostly crustose lichens from rain forests, are here reported for the first time from the continent of Africa: *Agonimia opuntiella* (Buschardt & Poelt) Vězda, *Amandinea efflorescens* (Müll. Arg.) Marbach, *Anisomeridium ambiguum* (Zahlbr.) R. C. Harris, *Bacidina simplex* var. *cyanophila* Lücking, *Bogoriella miculiformis* (Nyl. ex Müll. Arg.) Aptroot & Lücking, *B. minutula* (Müll. Arg.) Aptroot & Lücking, *Catillaria ophthalmocarpa* Vain., *Coccotrema porinopsis* (Nyl.) Imshaug ex Yoshim., *Constrictolumina leucostoma* (Müll. Arg.) Lücking & al., *Dibaeis arcuata* (Stirt.) Kalb & Gierl, *Graphis argentia* Makhija & Adaw., *G. consimilis* Vain., *Lecanora flavidorufa* Hue, *L. pangerangoensis* Zahlbr., *L. subflava* Tuck., *Megalotremis pustulata* Aptroot, *Mycoporum californicum* (Zahlbr.) R. C. Harris, *Myeloconis erumpens* P. M. McCarthy & Elix, *Polychidium dendriscum* (Nyl.) Henssen, *Pyrenula hibernica* (Nyl.) Aptroot, *Thelotrema leucophthalmum* Nyl. and *Traponora fusca* Aptroot. Some new records are unexpected, for instance a corticolous specimen of the enigmatic *Bacidina simplex* var. *cyanophila*, which was so far only known from a few foliicolous thalli from Colombia and Ecuador.

Some comparisons can be made to the lichenologically better-known Seychelles islands (Seaward & Aptroot 2009; Schumm & Aptroot 2010) or to E Africa, from which area the macrolichens are relatively well known (Swinscow & Krog 1988). It appears that Madagascar is especially rich in the genera *Cladonia* (Abbayes 1947, 1948; Ahti & Aptroot 1992), *Parmotrema*, *Pyrenula*, *Sticta* and *Xanthoparmelia* (Abbayes 1961; Hale 1990; Aptroot 1991a). In the first and last of these genera, several species are known to be endemic to Madagascar or to the Mascarene Islands. In *Sticta* less so, but there is no recent treatment of the *Sticta* species from Madagascar, and, based on recent publications on *Sticta* from other parts of the world, where a much narrower species concept is used than in former days, it can be safely predicted that several of the *Sticta* species reported below are actually referable to undescribed species.

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Within Madagascar, there is a clear distinction between the lichen floras of the two biomes mentioned in the introduction. From the dry tropical region only relatively few species are reported (see Table 1), mainly because the lichen flora is indeed poor due to the dry climate. All other species cited in the checklist are only known from the wet tropical area.

Table 1. Lichen species known in Madagascar from the dry tropical regions.

Canoparmelia quintarigera Aptroot
Clandestinotrema minutum Aptroot
Constrictolumina leucostoma (Müll. Arg.) Lücking & al.
Crespoa inhaminensis (C. W. Dodge) Lendemer & B. P. Hodk.
Dermatiscum thunbergii (Ach.) Nyl.
Dirina madagascariensis Tehler & al.
Dirinaria complicata D. D. Awasthi
Glyphis scyphulifera (Ach.) Staiger
Isalonactis madagascariensis Ertz. & al.
Lecanora helva Stizenb. – also known from the wet region
Lecanora leprosa Fée – also known from the wet region
Lecanora subflava Tuck.
Lecanora tropica Zahlbr.
Mycoporum californicum (Zahlbr.) R. C. Harris
Opegrapha varians (Müll. Arg.) Vain.
Roccella africana Vain.
Roccella applanata M. Choisy
Roccella belangeriana D. D. Awasthi
Roccella boryi Delise ex Fée
Roccella linearis (Ach.) Vain.
Roccella montagnei Bél.
Sclerophyton madagascariense Sparrius
Xanthoparmelia subflabellata (J. Steiner) Hale – also known from the wet region

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Appendix: Preliminary checklist of lichens of Madagascar

References are given to literature reports, with page number to facilitate cross-checking (except for Stizenberger 1890), or to specimens, in which case the collector(s), the year of collecting and the herbarium are given. Uncertain, older records are included but marked with a question mark "?". Literature reports that mention species or specimens from Madagascar but do not add to this list are not cited at all; the aim here is to list all species that have been cited from Madagascar, not to list all papers that have ever mentioned a lichen from Madagascar. Stizenberger (1890) sums up all early 19th century reports from papers that are not all repeated here.

Aderkomyces albostrigosus (R. Sant.) Lücking & al. – new report, *Aptroot & Hensen 13348a*, 1984 (BR). Foliicolous.
Agonimia opuntiella (Buschardt & Poelt) Vězda – new report, *Aptroot & Hensen 12470*, 1984 (BR). Corticolous.
Amandinea efflorescens (Müll. Arg.) Marbach – new report, *Aptroot & Hensen 13760*, 1984 (BR). Corticolous.
Anisomeridium ambiguum (Zahlbr.) R. C. Harris – new report, *Aptroot & Hensen 13758*, 1984 (ABL). Corticolous.
Anisomeridium tamarindi (Fée) R. C. Harris – Stizenberger (1890, as *Verrucaria vaga* Nyl.). Corticolous.
Anthracothecium prasinum (Eschw.) R. C. Harris – Harris (1989: 79), Stizenberger (1890, as *Verrucaria borbonica* Nyl.). Corticolous.
Anzia parasitica (Fée) Zahlbr. – Abbayes (1956: 15). Corticolous.
Anzia semiteres (Mont. & Bosch) Stizenb. – Abbayes (1956: 16, as *A. madagascarensis* Abbayes). Corticolous.

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Arthonia cyanea Müll. Arg. – new report, *Aptroot & Hensen 13309a* & *13310a*, 1984 (BR). Foliicolous.

Arthonia trilocularis Müll. Arg. – Santesson (1952: 84). Foliicolous.

Aspidothelium fugiens (Müll. Arg.) R. Sant. – Santesson (1952: 282). Foliicolous.

Asterothyrium octomerum R. Sant. – Santesson (1952: 330). Foliicolous.

Bacidina simplex var. c*yanophila* Lücking – new report, *Aptroot & Hensen*, 1984 (ABL). Corticolous.

Badimia dimidiata (Bab. ex Leight.) Vězda – new report, *Aptroot & Hensen 13312a* & *13313a*, 1984 (BR). Foliicolous.

Baeomyces fungoides (Sw.) Ach. – Aptroot (1990: 402). Terricolous.

Bogoriella miculiformis (Nyl. ex Müll. Arg.) Aptroot & Lücking – Stizenberger (1890, as *Verrucaria micula* Flot.). Corticolous.

Bogoriella minutula (Müll. Arg.) Aptroot & Lücking – Stizenberger (1890, as *Verrucaria minutula* (Müll. Arg.) Stiz.). Corticolous.

Brigantiaea leucoxantha (Spreng.) R. Sant. & Hafellner – Hafellner (1997: 53), Aptroot (1990: 402). Corticolous.

Brigantiaea tricolor (Mont.) Trevis. – Hafellner (1997: 70). Corticolous.

Bulbothrix goebelii (Zenker) Hale – Vainio (1898: 31, as *Parmelia granatensis* Nyl.), Abbayes (1961: 98, as *P. scortella* Nyl.). Corticolous.

Bulbothrix isidiza (Nyl.) Hale – Hale (1976b: 16), Aptroot (1990: 402), Abbayes (1961: 101, as *Parmelia isidiza* Nyl.), Vainio (1898: 31, as *P. isidiza*). Corticolous.

Bulbothrix meizospora (Nyl.) Hale – Aptroot (1990: 402). Corticolous.

Bulbothrix sensibilis (J. Steiner & Zahlbr.) Hale – Aptroot (1990: 403). Corticolous.

Bulbothrix suffixa (Stirt.) Hale – Aptroot (1990: 403). Corticolous.

Bulbothrix tabacina (Mont. & Bosch) Hale – Hale (1976b: 24), Aptroot (1990: 403). Corticolous.

Bunodophoron australe (Laurer) A. Massal. – Abbayes (1956: 2, as *Sphaerophorus australis* Laurer, incl. var. *proliferus* F. Wilson and var. *scrobiculatus* Church Bab.). Corticolous.

Bunodophoron diplotypum (Vain.) Wedin – Abbayes (1956: 2, as *Sphaerophorus diplotypus* Vain.), Vainio (1898: 34, as *S. diplotypus*). Corticolous.

Bunodophoron madagascareum (Nyl.) Wedin – Abbayes (1956: 2, as *Pleurocybe madagascarea* (Nyl.) Zahlbr.), Vainio (1898: 34, as *Sphaerophorus madagascareus* Nyl.). Corticolous.

Bunodophoron melanocarpum (Sw.) Wedin – new report, *Aptroot & Hensen 13529*, 1984 (BR). Corticolous.

Byssolecania fumosonigricans (Müll. Arg.) R. Sant. – new report, *Aptroot & Hensen*, 1984 (BR). Foliicolous.

Byssoloma discordans (Vain.) Zahlbr. – Santesson (1952: 488). Foliicolous.

Byssoloma leucoblepharum (Nyl.) Vain. – Santesson (1952: 483), Vainio (1898: 34, as *Pilocarpon leucoblepharum* (Nyl.) Vain.). Foliicolous.

Byssoloma subdiscordans (Nyl.) P. James – Santesson (1952: 490, as *B. rotuliforme* (Müll. Arg.) R. Sant.). Corticolous and foliicolous.

Calenia aspidota (Vain.) Vězda – Santesson (1952: 360, as *Gyalectidium aspidotum* (Vain.) R. Sant.). Foliicolous.

Calicium chlorosporum F. Wilson – Aptroot (1990: 403). Corticolous.

Calicium hyperelloides Nyl. – Aptroot (1990: 403). Corticolous.

Calicium pluriseptatum Tibell & Frisch – Tibell & Frisch (2010). Corticolous.

Calopadia fusca (Müll. Arg.) Vězda – Santesson (1952: 532, as *Lopadium fuscum* Müll. Arg.). Foliicolous.

Calopadia subfusca Kalb & Vězda – new report, *Aptroot & Hensen*, 1984 (BR). Foliicolous.

Caloplaca crocea (Kremp.) Hafellner & Poelt – Hafellner & Poelt (1979: 23). Corticolous.

Candelaria concolor (Dickson) Stein – Aptroot (1990: 403). Corticolous.

Candelariella reflexa (Nyl.) Lettau – new report, *Aptroot & Hensen 12957*, 1984 (BR). Corticolous.

Canoparmelia amazonica (Nyl.) Elix & Hale – Aptroot (1991a: 150). Corticolous.

Canoparmelia ecaperata (Müll. Arg.) Elix & Hale – Abbayes (1961: 94, as *Parmelia ecaperata* Müll. Arg.). Corticolous.

Canoparmelia epileuca (Hale) Elix & Hale – Aptroot (1991a: 150). Corticolous.

Canoparmelia eruptens (Kurok.) Elix & Hale – Aptroot (1991a: 150). Corticolous.

Canoparmelia pustulescens (Kurok.) Elix & J. Johnst. – Elix (2001: 210). Corticolous.

Canoparmelia quintarigera Aptroot – Aptroot (1991a: 150). Corticolous.

Canoparmelia rodriguesiana (Hue) Elix – Hale (1976a: 9, as *Pseudoparmelia rodriguesiana* (Hue) Hale), Swinscow & Krog (1988: 250, as *P. rodriguesiana*). Saxicolous.

Canoparmelia somaliensis (Müll. Arg.) Elix & Hale – Hale (1976a: 48, as *Pseudoparmelia somaliensis* (Müll. Arg.) Hale), Swinscow & Krog (1988: 252, as *P. somaliensis*). Corticolous.

Canoparmelia texana (Tuck.) Elix & Hale – Aptroot (1990: 403), Abbayes (1961: 102, as *Parmelia texana* Tuck. and as *Parmelia confluescens* Nyl.), Hale (1976a: 52, as *Pseudoparmelia texana* (Tuck.) Hale). Corticolous.

Carbacanthographis marcescens (Fée) Staiger & Kalb – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

Catillaria ophthalmocarpa Vain. – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

Chiodecton natalense Nyl. – new report, *Aptroot & Hensen 12433*, 1984 (BR). Corticolous.

Chiodecton papillosum G. Thor – Henssen & Thor (1998: 105). Corticolous.

Chiodecton pustuliferum Aptroot – Lumbsch & al. (2011: 39). Corticolous.

Chroodiscus mirificus (Kremp.) R. Sant. – new report, *Aptroot & Hensen*, 1984 (BR). Foliicolous.

Cladia terebrata (Laurer) S. Parnmen & Lumbsch. – Lumbsch & Aptroot (1993: 239, as *Cladia aggregata* (Sw.) Nyl),

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Aptroot (1990: 403, as *Cladia aggregata*), Abbayes (1948: 59, as *Cladonia aggregata* (Sw.) Spreng. and *Cladonia gorgonina* (Bory) Vain.), Vainio (1898: 34, as *Cladonia aggregata*). Terricolous.

Cladonia abbatiana Stenroos – Stenroos (1991: 107). Terricolous.

Cladonia boivinii Vain. – Ahti & Aptroot (1992: 119), Abbayes (1948: 61). Terricolous.

Cladonia borbonica Nyl. – Ahti & Aptroot (1992: 119), Abbayes (1948: 59). Terricolous.

Cladonia candelabrum (Bory) Nyl. – Abbayes (1948: 60). Terricolous.

Cladonia centrophora Müll. Arg. – Abbayes (1948: 60). Terricolous.

Cladonia ceratophyllina (Nyl.) Vain. – Ahti & Aptroot (1992: 120), Abbayes (1948: 59), Abbayes (1956: 8). Terricolous.

Cladonia chlorophaea (Flörke ex Sommerf.) Sprengel – Ahti & Aptroot (1992: 120), Abbayes (1948: 58, as *C. pyxidata* var. *chlorophaea* (Flörke ex Sommerf.) Flörke). Terricolous.

Cladonia chondroidea Abbayes – Abbayes (1948: 59). Terricolous.

Cladonia cinereorubens Abbayes – Abbayes (1948: 61). Terricolous.

Cladonia confusa R. Sant. – Abbayes (1948: 59, as *C. leptoclada* Abbayes and 60, as *C. alpestroides* Abbayes), Abbayes (1956: 6, as *C. leptoclada*, incl. f. *cinerascens* Abbayes and f. *thyrsifera* (Nyl.) Abbayes), Ahti & Aptroot (1992: 118). Terricolous.

Cladonia crispatula (Nyl.) Ahti – Vainio (1898: 34, as *C. rangiferina* f. *crispatula* Nyl.). Terricolous.

Cladonia didyma (Fée) Vain. – Ahti & Aptroot (1992: 120). Terricolous.

Cladonia diplotypa Nyl. – Ahti & Aptroot (1992: 120), Abbayes (1948: 60). Terricolous.

Cladonia fruticulosa Kremp. – Ahti & Aptroot (1992: 120). Terricolous.

Cladonia gigantea (Bory) H. Olivier – Ahti & Aptroot (1992: 121), Czeczuga & al. (1998: 575), Abbayes (1948: 60). Terricolous.

Cladonia glaucopallida Vain. – Ahti & Aptroot (1992: 121). Terricolous.

Cladonia hedbergii Ahti – Ahti & Aptroot (1992: 121). Terricolous.

Cladonia macilenta Hoffm. – Ahti & Aptroot (1992: 121), Abbayes (1948: 58). Terricolous.

Cladonia medusina (Bory) Nyl. – Swinscow & Krog (1988: 50), Ahti & Aptroot (1992: 121), Czeczuga & al. (1998: 575), Abbayes (1948: 59), Abbayes (1956: 7, incl. var. *luteola* (Bory) Vain. and var. *dealbata* Vain.). Terricolous.

Cladonia pachyclados (Vain.) Ahti – Swinscow & Krog (1988: 52), Ahti & Aptroot (1992: 121). Terricolous.

Cladonia peltasta Sprengel – Ahti & Aptroot (1992: 121), Abbayes (1948: 59), Abbayes (1956: 7, incl. f. *esignata* Vain., f. *pachyclados* (Vain.) Abbayes and f. *normalis* Vain.). Terricolous.

Cladonia perplexa Abbayes – Ahti & Aptroot (1992: 122), Abbayes (1948: 60). Terricolous.

Cladonia perrieri Abbayes – Abbayes (1948: 60). Terricolous.

Cladonia praetermissa A. W. Archer – Ahti & Aptroot (1992: 122). Terricolous.

?*Cladonia rangiformis* Hoffm. – Vainio (1898: 34). Terricolous.

Cladonia squamosa Hoffm. – Ahti & Aptroot (1992: 122), Czeczuga (1998: 575), Abbayes (1948: 58). Terricolous.

Cladonia subpityrea Sandst. – Swinscow & Krog (1988: 57), Abbayes (1948: 61, as *C. decaryana* Abbayes). Terricolous.

Cladonia subpungens Abbayes – Ahti & Aptroot (1992: 122). Terricolous.

Cladonia subradiata (Vain.) Sandstede – Ahti & Aptroot (1992: 122). Terricolous.

Cladonia subsquamosa Kremp. – Ahti & Aptroot (1992: 122), Abbayes (1948: 58). Terricolous.

Cladonia valida (Abbayes) Stenroos – Stenroos (1991: 108). Terricolous.

Cladonia varians Vain. ex Ahti – Ahti & Aptroot (1992: 122), Abbayes (1948: 60). Terricolous.

?*Cladonia verticillata* (Hoffm.) Schaer. – Abbayes (1948: 58). Terricolous.

Cladonia vulcanica Zoll. & Moritzi – Abbayes (1948: 59). Terricolous.

Clandestinotrema minutum Aptroot – this paper. Corticolous.

Coccocarpia domingensis Vain. – Aptroot (1990: 403). Foliicolous.

Coccocarpia erythroxyli (Spreng.) Swinscow & Krog – Arvidsson (1982: 57), Aptroot (1990: 403), Czeczuga & al. (1998: 575). Corticolous, saxicolous and terricolous.

Coccocarpia filiformis Arv. – Aptroot (1990: 403). Foliicolous.

Coccocarpia flavicans Arv. – Aptroot (1990: 403). Corticolous.

Coccocarpia palmicola (Sprengel) Swinscow & Krog – Arvidsson (1982: 72), Aptroot (1990: 403), Czeczuga & al. (1998: 575). Corticolous and saxicolous.

Coccocarpia pellita (Ach.) Müll. Arg. – Aptroot (1990: 404). Corticolous.

Coccocarpia smaragdina Pers. – Arvidsson (1982: 84), Aptroot (1990: 404), Vainio (1898: 34, as *C. pellita* var. *smaragdina* (Pers.) Müll. Arg.). Corticolous.

Coccocarpia stellata Tuck. – Arvidsson (1982: 86), Aptroot (1990: 404). Foliicolous.

Coccotrema porinopsis (Nyl.) Imshaug ex Yoshim. – new report, *Aptroot & Hensen 13349*, 1984 (BR). Corticolous.

Coenogonium epiphyllum Vain. – new report, *Aptroot & Hensen*, 1984 (BR). Foliicolous.

Coenogonium interplexum Nyl. – new report, *Aptroot & Hensen*, 1984 (BR). Foliicolous.

Coenogonium interpositum Nyl. – new report, *Aptroot & Hensen*, 1984 (BR). Foliicolous.

Coenogonium madagascarense Vězda – Vězda (2004). Foliicolous.

Collema leptaleum var. *biliosum* (Mont.) Degel. – Aptroot (1990: 404). Corticolous.

Collema pulcellum var. s*ubnigrescens* (Müll. Arg) Degel. – Aptroot (1990: 404). Corticolous.

Collema rugosum Kremp. – Aptroot (1990: 404). Corticolous.

Coniocarpon cinnabarinum DC. – new report, *Schumm 4029* (herb. Schumm). Corticolous.

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Constrictolumina leucostoma (Müll. Arg.) Lücking & al. – new report, *Aptroot & Hensen 12568*, 1984 (ABL). Corticolous.

Cratiria lauricassiae (Fée) Marbach – new report, *Aptroot & Hensen 13064*, 1984 (BR). Corticolous.

Crespoa crozalsiana (B. de Lesd. ex Harm.) Lendemer & B. P. Hodk. – Aptroot (1990: 403, as *Canoparmelia crozalsiana* (B. de Lesd. ex Harm.) Elix & Hale). Corticolous, saxicolous and terricolous.

Crespoa inhaminensis (C. W. Dodge) Lendemer & B. P. Hodk. – Aptroot (1990: 403, as *Canoparmelia inhaminensis* (C. W. Dodge) Elix & Hale). Corticolous.

Crocodia aurata (Ach.) Link – Galloway (1994: 119, as *Pseudocyphellaria aurata* (Ach.) Vain.), Abbayes (1956: 3, as *Sticta aurata* Ach.), Vainio (1898: 32, as *P. aurata*). Corticolous.

Crocodia clathrata (De Not.) Trevis. – Galloway (1994: 123, as *Pseudocyphellaria clathrata* (De Not.) Malme). Corticolous.

Crocynia gossypina (Sw.) A. Massal. – Aptroot (1990: 404). Corticolous.

Dermatiscum thunbergii (Ach.) Nyl. – Ertz & al. (2014a: 165). Saxicolous.

Dibaeis arcuata (Stirt.) Kalb & Gierl – new report, *Aptroot & Hensen 12364* & *13525*, 1984 (BR). Terricolous.

Dibaeis sorediata Kalb & Gierl – new report, *Aptroot & Hensen 12382*, 1984 (BR) and *Schumm* (herb. Schumm). Terricolous.

Dichosporidium brunnthaleri (Zahlbr.) G. Thor – new report, *Aptroot & Hensen 13365* & *13366*, 1984 (B). Corticolous.

Dictyonema sericeum (Sw.) Berk. – Aptroot (1990: 404). Corticolous.

Diorygma junghuhnii (Mont. & Bosch) Kalb & al. – Stizenberger (1890, as *Glyphis mendax* Müll. Arg). Corticolous.

Diploschistes cinereocaesius (Sw.) Vain. – Doidge (1950: 248), Guderley & Lumbsch (1996: 275). Saxicolous.

Diploschistes muscorum subsp. *bartlettii* Lumbsch – Lumbsch (1987). Terricolous.

Diploschistes scruposus (Schreb.) Norman – new report, *Aptroot & Hensen 12380*, 1984 (BR). Saxicolous.

Diploschistes thelenelloides Lumbsch & Aptroot – Lumbsch & Aptroot (1993: 237). Saxicolous.

Dirina madagascariensis Tehler & al. – Tehler & al. (2013: 456), Aptroot (1990: 404, as *D. ceratoniae* (Ach.) Fr.). Corticolous.

Dirinaria aegialita (Afz. in Ach.) Moore – Aptroot (1988: 143). Corticolous and saxicolous.

Dirinaria applanata (Fée) D. D. Awasthi – Aptroot (1988: 143). Corticolous.

Dirinaria complicata D. D. Awasthi – Swinscow & Krog (1988: 80), Aptroot (1988: 143), Awasthi (1975: 51). Corticolous.

Dirinaria confluens (Fr.) D. D. Awasthi – Aptroot (1988: 143). Corticolous.

Dirinaria consimilis (Stirt.) D. D. Awasthi – Awasthi (1975: 91). Corticolous.

Dirinaria picta (Sw.) Clem. & Shear – Aptroot (1988: 143), Czeczuga & al. (1998: 575). Corticolous.

Echinoplaca diffluens (Müll. Arg.) R. Sant. – new report, *Aptroot & Hensen*, 1984 (BR). Foliicolous.

Echinoplaca pachyparaphysata R. Sant. – Santesson (1952: 373). Foliicolous.

Echinoplaca pellicula (Müll. Arg.) R. Sant. – Santesson (1952: 367). Foliicolous.

Endocarpon pusillum Hedw. – Schumm & Aptroot (2010: 373). Saxicolous.

Ephebe solida Born. – Schultz & Aptroot (2008: 437). Saxicolous.

Erioderma leylandii (Taylor) Müll. Arg. subsp. *leylandii* – Jørgensen (2001: 528), Corticolous.

Erioderma tomentosum Hue – Jørgensen (2001: 529), Vainio (1898: 33, as *E. groendalianum* (Ach.) Hue and as *E. polycarpum* Fée). Corticolous.

Erioderma unguigerum (Bory) Nyl. – Jørgensen (2001: 534), Vainio (1898: 33). Corticolous.

Eschatogonia prolifera (Mont.) R. Sant. – new report, *Aptroot & Hensen 13338a*, 1984 (BR). Corticolous.

Glyphis cicatricosa Ach. – Aptroot (1990: 404), Stizenberger (1890, as *G. confluens* Zenker). Corticolous.

Glyphis scyphulifera (Ach.) Staiger – Aptroot (1990: 404, as *Gyrostomum scyphuliferum* (Ach.) Nyl.). Corticolous.

Graphis acharii Fée – new report, *Aptroot & Hensen*, 1984 (B). Corticolous.

Graphis anfractuosa (Eschw.) Eschw. – new report, *Aptroot & Hensen*, 1984 (B). Corticolous.

Graphis aperiens Müll. Arg. – new report, *Aptroot & Hensen*, 1984 (B). Corticolous.

Graphis argentia Makhija & Adaw. – new report, *Schumm 5798* (herb. Schumm). Corticolous.

Graphis chlorotica A. Massal. – new report, *Aptroot & Hensen*, 1984 (B). Corticolous.

Graphis cincta (Pers.) Aptroot – new report, *Aptroot & Hensen*, 1984 (B). Corticolous.

Graphis consimilis Vain. – new report, *Aptroot & Hensen*, 1984 (B). Corticolous.

Graphis crebra Vain. – new report, *Aptroot & Hensen*, 1984 (B). Corticolous.

Graphis dracaenae Vain. – new report, *Aptroot & Hensen*, 1984 (B). Corticolous.

Graphis glaucescens Fée – new report, *Aptroot & Hensen*, 1984 (B). Corticolous.

Graphis renschiana (Müll. Arg.) Stizenb. – Lücking & al. (2009: 399). Corticolous.

Graphis subserpentina Nyl. – new report, *Aptroot & Hensen*, 1984 (B). Corticolous.

Gyalolechia bassiae (Ach.) Søchting & al. – new report, *Schumm 5788*, p.p. (herb. Schumm). Corticolous.

Haematomma africanum (J. Steiner) C. W. Dodge – new report, *Aptroot & Hensen 12815*, 1984 (BR). Corticolous.

Haematomma flexuosum Hillm. – Staiger & Kalb (1995: 108). Corticolous.

Haematomma persoonii (Fée) A. Massal. – Aptroot (1990: 404, as *H. puniceum* (Sw.) A. Massal.), Schumm & Aptroot (2009: 308). Corticolous.

Hafellia dissa (Stirt.) H. Mayrhofer & Sheard – Aptroot (1988: 146, as *Rinodina dissa* (Stirt.) H. Mayrhofer). Corticolous.

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Hemithecium implicatum (Fée) Staiger – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

Herpothallon roseocinctum (Fr.) Aptroot & al. – Aptroot & al. (2008: 60). Corticolous.

Herpothallon rubrocinctum (Ehrenb.) Aptroot & al. – Aptroot (1990: 403, as *Chiodecton rubrocinctum* (Ehrenb.) G. Thor). Corticolous.

Heterodermia albicans (Pers.) Swinscow & Krog – Aptroot (1988: 143). Corticolous.

Heterodermia barbifera (Nyl.) Kr. P. Singh – Dodge (1971: 218, as *Anaptychia podocarpiza* (Stiz.) C. W. Dodge), Stizenberger (1890, as *Physcia barbifera* var. *podocarpiza* Stizenb.). Corticolous.

Heterodermia comosa (Eschw.) Follm. & Redón – Aptroot (1988: 143), Czeczuga & al. (1998: 575). Corticolous.

Heterodermia dactyliza (Nyl.) Swinscow & Krog – Stizenberger (1890, as *Physcia speciosa* var. *dactyliza* Nyl.). Corticolous.

Heterodermia diademata (Taylor) D. D. Awasthi – Aptroot (1988: 143), Czeczuga & al. (1998: 575). Corticolous.

Heterodermia flabellata (Fée) D. D. Awasthi – Aptroot (1988: 143). Corticolous.

Heterodermia galactophylla (Tuck.) W. L. Culb. – Aptroot (1988: 143). Corticolous.

Heterodermia isidiophora (Vain.) D. D. Awasthi – Aptroot (1988: 144). Corticolous.

Heterodermia lutescens (Kurok.) Follm. – Aptroot (1988: 144). Corticolous.

Heterodermia obscurata (Nyl.) Trevis. – Aptroot (1988: 144), Czeczuga & al. (1998: 575). Corticolous and saxicolous.

Heterodermia podocarpa (Bél.) D. D. Awasthi – Aptroot (1988: 144), Vainio (1898: 32, as *Anaptychia podocarpa* (Bél.) Trevis.). Corticolous.

Heterodermia speciosa (Wulf.) Trevis. – Aptroot (1988: 144), Czeczuga & al. (1998: 575), Vainio (1898: 32, as *Anaptychia speciosa* (Wulf.) Vain.). Corticolous and saxicolous.

Heterodermia verrucifera (Kurok.) W. A. Weber – Aptroot (1988: 144). Corticolous.

Hyperphyscia granulata (Poelt) Moberg – Aptroot (1990: 404), Aptroot (1988: 145, as *H. adglutinata* (Flörke) H. Mayrhofer & Poelt). Corticolous.

Hyperphyscia syncolla (Nyl.) Kalb – Swinscow & Krog (1988: 105). Corticolous.

Hypotrachyna angolense (W. L. Culb. & C. F. Culb.) Divakar & al. – Aptroot (1991a: 152, as *Everniastrum angolense* (W. L. Culb. & C. F. Culb.) Sipman), Abbayes (1956: 9, as *Parmelia americana* (Meyen & Flot.) Mont.), Abbayes (1961: 88, as *P. americana*). Corticolous and saxicolous.

Hypotrachyna endochlora (Leighton) Hale – Swinscow & Krog (1988: 105), Vainio (1898: 32, as *Parmelia madagascarensis* Vain.). Corticolous.

Hypotrachyna flavida (Zahlbr.) Hale – Abbayes (1961: 93, as *Parmelia flava* Kremp.). Corticolous.

Hypotrachyna gracilescens (Vain.) Hale – Abbayes (1961: 96, as *Parmelia gracilescens* Vain.). Corticolous.

Hypotrachyna majoris (Vain.) Hale – Vainio (1898: 31, as *Parmelia majoris* Vain.). Corticolous.

Hypotrachyna neodissecta (Hale) Hale – Aptroot (1990: 404). Corticolous.

Hypotrachyna osseoalba (Vain.) Park & Hale – Aptroot (1990: 404), Abbayes (1961: 99, as *Parmelia formosana* Zahlbr.). Corticolous.

Hypotrachyna revoluta (Flörke) Hale – Abbayes (1961: 98, as *Parmelia revoluta* Flörke), Vainio (1898: 32, as *P. revoluta*). Corticolous.

Hypotrachyna rockii (Zahlbr.) Hale – Aptroot (1990: 404). Corticolous.

Hypotrachyna sorocheila (Vain.) Divakar & al. – Abbayes (1961: 88, as *Parmelia sorocheila* Vain.). Corticolous.

Hypotrachyna sublaevigata (Nyl.) Hale – Abbayes (1961: 100, as *Parmelia sublaevigata* Nyl.). Corticolous.

Hypotrachyna subsaxatilis (B. de Lesd.) Hale – Abbayes (1961: 97, as *Parmelia subsaxatilis* B. de Lesd.). Corticolous.

Isalonactis madagascariensis Ertz. & al. – Ertz & al. (2014a: 163). Corticolous.

Lacrymospora parasitica Aptroot – Aptroot (1991b: 95). Corticolous.

Lasioloma arachnoideum (Kremp.) R. Sant. – Santesson (1952: 547). Foliicolous.

Lecanactis rubra Ertz & Sérus. – Ertz & Sérusiaux (2009: 147). Corticolous.

Lecanactis spermatospora Egea & Torrente – new report, *Aptroot & Hensen 13371*, 1984 (B). Already reported as uncertain record by Egea & Torrente (1994: 104). Corticolous.

Lecanora epichlorina Vain. – new report, *Aptroot & Hensen 12645*, 1984 (BR). Corticolous.

Lecanora farinacea Fée – new report, *Aptroot & Hensen 12425*, 1984 (BR). Saxicolous.

Lecanora flavidorufa Hue – new report, *Aptroot & Hensen 12704*, 1984 (BR). Corticolous.

Lecanora helva Stizenb. – new report, *Aptroot & Hensen 12366*, *12564*, *12584*, *12600*, *12609* & *13075* 1984 (BR). Corticolous.

Lecanora leprosa Fée – new report, *Aptroot & Hensen 12560*, *12605* & *13139*, 1984 (BR). Corticolous.

Lecanora pangerangoensis Zahlbr. – new report, *Aptroot & Hensen 12823* & *12934*, 1984 (BR). Corticolous.

Lecanora pseudistera Nyl. – new report, *Aptroot & Hensen 12952*, 1984 (BR). Saxicolous.

Lecanora subflava Tuck. – new report, *Aptroot & Hensen 12593*, 1984 (BR). Corticolous.

Lecanora tropica Zahlbr. – new report, *Aptroot & Hensen 12585*, 1984 (BR). Corticolous.

Leioderma erythrocarpum (Delise ex Nyl.) D. J. Galloway & P. M. Jørg. – Galloway & Jørgensen (1987: 383). Corticolous.

Lempholemma polycarpum M. Schultz – Schultz & Aptroot (2008: 441). Saxicolous.

Lepraria finkii R. C. Harris – new report, *Aptroot & Hensen 13014*, 1984 (BR). Corticolous.

Lepraria pallida Sipman – Sipman (2004). Saxicolous.

Leprocollema nova-caledonianum A. L. Sm. – new report, *Aptroot & Hensen 13030*, 1984 (BR). Corticolous.

Leptogium austroamericanum (Malme) C. W. Dodge – Aptroot (1990: 404). Corticolous.

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Leptogium azureum (Sw.) Mont. – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

Leptogium burgessii (L.) Mont. – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

?*Leptogium caesium* (Ach.) Vain. – Vainio (1898: 34). Corticolous.

Leptogium cochleatum (Dicks.) P. M. Jørg. & P. James – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

Leptogium coralloideum (Meyen & Flot.) Vain. – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

Leptogium cyanescens (Rabenh.) Körb. – new report, *Schumm 5793* (herb. Schumm). Corticolous.

Leptogium diaphanum (Sw.) Mont. – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

Leptogium hibernicum M. E. Mitch. – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

Leptogium hypotrachynum Mull. Arg. – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

?*Leptogium inflexum* Nyl. – Vainio (1898: 34). Corticolous.

Leptogium laceroides B. de Lesd. – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

Leptogium marginellum (Sw.) Gray – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

Leptogium phyllocarpum (Pers.) Mont. – Vainio (1898: 34, incl. f. *caerulescens* Nyl.). Corticolous.

?*Leptogium tremelloides* (L. f.) Gray – Vainio (1898: 34). Corticolous.

Letrouitia vulpina (Tuck.) Hafellner & Bellemère – Aptroot (1990: 405). Corticolous.

Leucodermia boryi (Fée) Kalb – Aptroot (1988: 144, as *Heterodermia leucomela* subsp. *boryi* (Fée) Swinscow & Krog), Stizenberger (1890, as *Physcia leucomela*), Czeczuga & al. (1998: 575), Vainio (1898: 32, as *Anaptychia leucomelaena* var. *multifida* (Meyen & Flot.) Vain.). Corticolous and tericolous.

Leucodermia vulgaris (Vain.) Kalb – Aptroot (1988: 145, as *Heterodermia vulgaris* (Vain.) Follmann & Redón). Corticolous.

Lobaria isidiosa (Müll. Arg.) Vain. – Abbayes (1956: 3), Vainio (1898: 33, as *L. retigera* var. *isidiosa* Müll. Arg.). Corticolous.

Lobaria pulmonaria (L.) Hoffm. – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

Lobaria retigera (Bory) Trevis. – Vainio (1898: 33, incl. var. *leptalea* Vain.). Corticolous.

Malmidea granifera (Ach.) Kalb & al. – new report, *Aptroot & Hensen 12529*, *13727* & *13751*, 1984 (BR). Corticolous.

Malmidea piperis (Spreng.) Kalb & al. – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

Maronea constans (Nyl.) Hepp – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

Mazosia dispersa (Hedrick) R. Sant. – Santesson (1952: 120). Foliicolous.

Mazosia melanophthalma (Müll. Arg.) R. Sant. – Santesson (1952: 117). Foliicolous.

Mazosia phyllosema (Nyl.) A. Zahlbr. – Santesson (1952: 123). Foliicolous.

Megaloblastenia marginiflexa var. *dimota* (Malme) Sipman – Sipman (1986: 557). Corticolous.

Megalospora coccodes (Bél.) Sipman – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

Megalospora pruinata (Müll. Arg.) Sipman – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

Megalospora sulphurata var. *nigricans* (Müll. Arg.) Riddle – Sipman (1986: 561). Corticolous.

Megalospora tuberculosa (Fée) Sipman – Sipman (1983: 230). Corticolous.

Megalotremis pustulata Aptroot – new report, *Aptroot & Hensen 13403*, 1984 (BR). Corticolous.

Menegazzia subsimilis (H. Magn.) R. Sant. – Abbayes (1961: 88, as *Parmelia pertusa* Schaer.). Corticolous.

Micarea peliocarpa (Anzi) Coppins & R. Sant. – Aptroot (1990: 405). Corticolous.

Mycoporum californicum (Zahlbr.) R. C. Harris – new report, *Aptroot & Hensen 12570*, 1984 (ABL). Corticolous.

Mycoporum eschweileri (Müll. Arg.) R. C. Harris – new report, *Schumm 4016* (herb. Schumm). Corticolous.

Myelochroa aurulenta (Tuck.) Elix & Hale – Hale (1976c: 20, as *Parmelina aurulenta* (Tuck.) Hale), Abbayes (1961: 105, as *Parmelia aurulenta* Tuck.). Corticolous.

Myeloconis erumpens P. M. McCarthy & Elix – new report, *Aptroot & Hensen 13404*, 1984 (BR). Corticolous.

Nephroma helveticum Ach. – Aptroot (1990: 405). Corticolous.

Normandina pulchella (Borrer) Turner – Aptroot (1990: 405), Vainio (1898: 35). Corticolous.

Ochrolechia africana Vain. – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

Opegrapha simplicior (Nyl.) Nyl.- Ertz (2009: 107). Corticolous.

Opegrapha varians (Müll. Arg.) Vain. – new report, *Aptroot & Hensen 12553 &12580*, 1984 (B). Corticolous.

Opegrapha viridis (Ach.) Behlen & Desberger – Ertz (2009: 139). Corticolous.

Pannaria fulvescens (Pers.) Mont. – Aptroot (1990: 405). Corticolous.

Pannaria lurida (Mont.) Nyl. – Aptroot (1990: 405), Vainio (1898: 34, incl. f. *cyanorhiza* Vain.). Corticolous.

Paraporpidia leptocarpa (Nyl.) Rambold & Hertel – new report, *Schumm 5804*, *5806* & *5809* (herb. Schumm). Saxicolous.

Parmeliella brisbanensis (C. Knight) P. M. Jørg. & D. J. Galloway – Aptroot (1990: 405, as *P. pannosa* (Sw.) Müll. Arg.). Corticolous.

Parmeliella endomilta (Vain.) Makhija & Adaw. – Jørgensen & Sipman (2006: 707). Corticolous.

Parmeliella mariana (Fr.) P. M. Jørg. & D. J. Galloway – Aptroot (1990: 405, as *Pannaria mariana* (Fr.) Müll. Arg.), Vainio (1898: 34, as *P. mariana*, incl. f. *cinerascens*). Corticolous.

Parmelinella wallichiana (Taylor) Elix & Hale – Aptroot (1990: 405), Hale (1976c: 52, as *Parmelina wallichiana* (Taylor) Hale). Corticolous.

Parmelinopsis horrescens (Taylor) Elix & Hale – Aptroot (1990: 405). Corticolous.

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Parmelinopsis megadactyla Aptroot – Aptroot (1991a: 152). Corticolous.

Parmelinopsis minarum (Vain.) Elix & Hale – Aptroot (1990: 405). Corticolous.

Parmelinopsis spumosa (Asahina) Elix & Hale – Aptroot (1991a: 152), Hale (1976c: 46, as *Parmelina spumosa* (Asahina) Hale). Corticolous and foliicolous.

Parmelinopsis subfatiscens (Kurok.) Elix & Hale – Aptroot (1991a: 152). Corticolous.

Parmotrema abessinicum (Nyl. ex Kremp.) Hale – Aptroot (1991a: 153), Hale (1965: 320, as *Parmelia abessinica* Nyl. ex Kremp., also as *Parmelia glaucocarpa* Müll. Arg.). Corticolous.

Parmotrema aldabrense (C. W. Dodge) Hale – Swinscow & Krog (1988: 165), Hale (1965: 321, as *Parmelia aldabrensis* C. W. Dodge). Corticolous.

Parmotrema andinum (Müll. Arg.) Hale – Hale (1965: 237, as *Parmelia andina* Müll. Arg.). Corticolous.

Parmotrema appendiculatum (Fée) Hale – Abbayes (1956: 9, as *Parmelia appendiculata* Fée, incl. f. *disparilis* (Nyl.) Abbayes). Corticolous.

Parmotrema arnoldii (Du Rietz) Hale – Abbayes (1961: 113, as *Parmelia arnoldii* Du Rietz). Corticolous and saxicolous.

Parmotrema austrosinense (Zahlbr.) Hale – Aptroot (1990: 405), Czeczuga & al. (1998: 575), Abbayes (1961: 108, as *Parmelia austrosinensis* Zahlbr.). Corticolous.

Parmotrema breviciliatum (Hale) Hale – Hale (1965: 282, as *Parmelia breviciliata* Hale). Corticolous.

Parmotrema cetratum (Ach.) Hale – Abbayes (1961: 103, as *Parmelia cetrata* Ach.), Aptroot (1991a: 154, as *Rimelia cetrata* (Ach.) Hale & A. Fletcher). Corticolous.

Parmotrema clavuliferum (Räsänen) Streimann – Abbayes (1961: 104, as *Parmelia reticulata* var. *corniculata* Abbayes). Corticolous.

Parmotrema cooperi (J. Steiner & Zahlbr.) Sérus. – Swinscow & Krog (1988: 171), Aptroot (1991a: 153), Czeczuga & al. (1998: 575), Hale (1965: 323, as *Parmelia cooperi* J. Steiner & Zahlbr.), Abbayes (1961: 112, as *Parmelia segreganda* Abbayes). Corticolous.

Parmotrema crinitum (Ach.) M. Choisy – Abbayes (1961: 114, as *Parmelia crinita* Ach.), Vainio (1898: 31, as *Parmelia proboscidea* Taylor). Corticolous.

Parmotrema cristiferum (Taylor) Hale – Aptroot (1990: 405), Abbayes (1961: 106, as *Parmelia cristifera* Taylor). Corticolous.

Parmotrema cryptoxanthum (Abbayes) Hale – Swinscow & Krog (1988: 172), Hale (1965: 286, as *Parmelia cryptoxantha* Abbayes), Abbayes (1961: 115, as *P. cryptoxantha*). Corticolous.

Parmotrema defectum (Hale) Hale – Swinscow & Krog (1988: 172), Hale (1965: 245, as *Parmelia defecta* Hale). Saxicolous.

Parmotrema dilatatum (Vain.) Hale – Abbayes (1961: 107, as *Parmelia dilatata* Vain.). Corticolous.

Parmotrema dolosum (Abbayes) Hale – Hale (1965: 334, as *Parmelia paulensis* Zahlbr.), Abbayes (1961: 115, as *Parmelia dolosa* Abbayes). Corticolous.

Parmotrema endosulphureum (Hillmann) Hale – Hale (1965: 252, as *Parmelia endosulphurea* (Hillmann) Hale). Corticolous.

Parmotrema gardneri (C. W. Dodge) Sérus. – Aptroot (1990: 405). Corticolous.

Parmotrema hababianum (Gyeln.) Hale – Hale (1965: 327, as *Parmelia hababiana* Gyeln.). Corticolous.

Parmotrema hololobum (Hale) Hale – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

Parmotrema lophogenum (Abbayes) Hale – Swinscow & Krog (1988: 182), Aptroot (1991a: 153). Corticolous.

Parmotrema maclayanum (Müll. Arg.) Hale – Swinscow & Krog (1988: 183), Aptroot (1991a: 153). Corticolous.

Parmotrema madagascariaceum (Hue) Hale – Hale (1965: 275 & 277, as *Parmelia xanthina* (Müll. Arg.) Vain., p.p.), Abbayes (1961: 117, as *Parmelia madagascariacea* (Hue) Abbayes and 116, as *Parmelia aberrans* (Vain.) Abbayes). Corticolous.

Parmotrema melanothrix (Mont.) Hale – Abbayes (1956: 11, as *Parmelia melanothrix* (Mont.) Vain., incl. var. *lacinulata* Müll. Arg.), Abbayes (1961: 109, as *Parmelia melanothrix*, Vainio (1898: 31, as *Parmelia melanothrix* f. *regressa* Vain.). Corticolous.

Parmotrema mellissii (C. W. Dodge) Hale – Aptroot (1990: 405). Corticolous.

Parmotrema nilgherrense (Nyl.) Hale – Vainio (1898: 31, as *Parmelia nilgherrensis* Nyl.). Corticolous.

Parmotrema parahypotropum (W. L. Culb.) Hale – Aptroot (1990: 405). Corticolous.

Parmotrema perforatum (Jacq.) A. Massal. – Hale (1965: 337, as *Parmelia perforata* (Jacq.) Ach.). Corticolous.

Parmotrema permutatum (Stirt.) Hale – Aptroot (1991a: 153). Corticolous.

Parmotrema poolii (C. W. Dodge) Krog & Swinscow – Swinscow & Krog (1988: 187), Aptroot (1991a: 153). Corticolous.

Parmotrema praesorediosum (Nyl.) Hale – Aptroot (1991a: 153), Abbayes (1961: 108, as *Parmelia sanctae-crucis* Vain.). Corticolous and saxicolous.

Parmotrema rampoddense (Nyl.) Hale – Aptroot (1990: 406), Hale (1965: 305, as *Parmelia rampoddensis* Nyl.). Corticolous.

Parmotrema reticulatum (Taylor) M. Choisy – Aptroot (1990: 406), Abbayes (1961: 104, as *Parmelia reticulata* (Taylor) Hale & A. Fletcher), Vainio (1898: 31, as *Parmelia cetrata* f. *sorediifera* Vain.). Corticolous and saxicolous.

Parmotrema sancti-angelii (Lynge) Hale – Aptroot (1990: 406), Hale (1965: 307, as *Parmelia sancti-angelii* Lynge), Abbayes (1961: 112, as *Parmelia sancti-angelii*). Corticolous and saxicolous.

Parmotrema soyauxii (Müll. Arg.) Hale – Swinscow & Krog (1988: 190), Hale (1965: 264, as *Parmelia soyauxii* Müll. Arg.), Abbayes (1961: 111, as *Parmelia nitens* Müll. Arg.). Saxicolous.

Parmotrema subarnoldii (Abbayes) Hale – Swinscow & Krog (1988: 191), Aptroot (1991a: 153), Hale (1965: 309, as *Parmelia subarnoldii* Abbayes) Abbayes (1961: 113, as *Parmelia subarnoldii*). Corticolous.

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Parmotrema subhanningtonianum Sérus. – Aptroot (1991a: 153). Corticolous.

Parmotrema subisidiosum (Müll. Arg.) Hale – Aptroot (1990: 406), Abbayes (1961: 104, as *Parmelia subisidiosa* (Müll. Arg.) C. W. Dodge). Corticolous.

Parmotrema subrugatum (Kremp.) Hale – Abbayes (1961: 109, as *Parmelia subrugata* Kremp.). Corticolous.

Parmotrema subsumptum (Nyl.) Hale – Aptroot (1990: 406). Terricolous.

Parmotrema subtinctorium (Zahlbr.) Hale – Aptroot (1991a: 153). Corticolous.

Parmotrema tinctorum (Despr. ex Nyl.) Hale – Aptroot (1990: 406), Hale (1965: 266, as *Parmelia tinctorum* Despr. ex Nyl.), Abbayes (1961: 108, as *Parmelia tinctorum*). Corticolous.

Parmotrema umbrosum (Krog & Swinscow) Krog & Swinscow – Aptroot (1991a: 153). Corticolous.

Parmotrema wainii (A. L. Sm.) Hale – Abbayes (1961: 111, as *Parmelia wainii* A. L. Sm.). Corticolous.

Parmotrema xanthinum (Müll. Arg.) Hale – Aptroot (1990: 406), Hale (1965: 276, as *Parmelia xanthina* (Müll. Arg.) Vain.). Corticolous.

Paulia perforata (Pers.) Asahina – Schultz & Aptroot (2008). Saxicolous.

Peltigera dolichorrhiza (Nyl.) Nyl.- Abbayes (1956: 6), Stizenberger (1890), Vainio (1898: 32, as *P. polydactylon* var. *dolichorrhiza* (Nyl.) Müll. Arg.). Terricolous.

Peltigera lambinonii Goffinet – new report, *Aptroot & Hensen 12368*, 1984 (BR). Terricolous.

?*Peltigera leptoderma* Nyl. – Vainio (1898: 32). Terricolous.

Peltigera ulcerata Müll. Arg. – new report, *Aptroot & Hensen*, 1984 (BR). Terricolous.

Phaeographis intricans (Nyl.) Vain. – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

Phaeophyscia hispidula (Ach.) Moberg – Aptroot (1988: 145), Stizenberger (1890, as *Physcia setosa* (Ach.) Nyl.). Corticolous.

Phyllopsora buettneri (Müll. Arg.) Zahlbr., incl. var. *glauca* (Vain.) Zahlbr. – Brako (1991: 30). Corticolous.

Phyllopsora confusa Swinscow & Krog – Brako (1991: 37). Corticolous.

Phyllopsora furfuracea Zahlbr. – Brako (1991: 48). Corticolous.

Phyllopsora kiiensis (Vain.) Gotth. Schneid. – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

Physcia atrostriata Moberg – Aptroot (1988: 145). Corticolous.

Physcia erumpens Moberg – Aptroot (1988: 145). Corticolous.

Physcia integrata Nyl. – Stizenberger (1890). Corticolous.

Physcia krogiae Moberg – Aptroot (1988: 145). Corticolous.

Physcia poncinsii Hue – new report, *Schumm 5790* (herb. Schumm). Corticolous.

Physcia sorediosa (Vain.) Lynge – Aptroot (1988: 145, as *P. fragilescens* Zahlbr.). Corticolous.

Physcia stellaris (L.) Nyl. – Aptroot (1988: 145), Stizenberger (1890). Corticolous.

Physma byrsaeum (Ach.) Tuck. – Aptroot (1990: 406). Corticolous.

Placopsis parellina (Nyl.) I. M. Lamb – new report, *Aptroot & Hensen*, 1984 (BR). Saxicolous.

Platythecium colliculosum (Mont.) Staiger – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

Polyblastidium hypoleucum (Muhl.) Kalb – Vainio (1898: 32, as *Anaptychia hypoleuca* (Muhl.) Vain.). Corticolous.

Polyblastidium japonicum (M. Satô) Kalb – Aptroot (1988: 144, as *Heterodermia japonica* (M. Satô) Swinscow & Krog). Corticolous, saxicolous and terricolous.

Polychidium dendriscum (Nyl.) Henssen – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

Porina africana Müll. Arg. – new report, *Aptroot & Hensen 12709*, 1984 (ABL). Corticolous.

Porina atrocoerulea Müll. Arg. – new report, *Aptroot & Hensen 13331a*, 1984 (BR). Foliicolous.

Porina epiphylla (Fée) Fée var. *epiphylla* – Santesson (1952: 234), Stizenberger (1890, as *Verrucaria epiphylla* (Fée) Eschw.). Foliicolous.

Porina internigrans (Nyl.) Müll. Arg. – new report, *Aptroot & Hensen 13385*, 1984 (ABL). Corticolous.

Porina lucida R. Sant. var. *lucida* – Lücking & Vězda (1998: 208). Foliicolous.

Porina mazosioides Lücking & Vězda – Lücking & Vězda (1998: 210). Foliicolous.

Porina nitidula Müll. Arg. – Santesson (1952: 225). Foliicolous.

Porina nuculastrum (Müll. Arg.) R. C. Harris – McCarthy (2003: 75), Harris (1995: 174), Stizenberger (1890, as *Verrucaria nuculastrum* (Müll. Arg.) Stizenb.). Corticolous.

Porina radiata Kalb & al. – Lücking & Vězda (1998: 214). Foliicolous.

Porina rubentior (Stirt.) Müll. Arg. – new report, *Aptroot & Hensen*, 1984 (BR). Foliicolous.

Porina sphaerocephala Vain. – Santesson (1952: 264). Foliicolous.

Porina sphaerocephaloides Farkas – new report, *Aptroot & Hensen*, 1984 (BR). Foliicolous.

Porina tetramera (Malme) R. Sant. – new report, *Aptroot & Hensen*, 1984 (BR). Foliicolous.

Porina virescens (Kremp.) Müll. Arg. – Stizenberger (1890, as *Verrucaria virescens* Kremp.). Foliicolous.

Pseudocyphellaria argyracea (Delise) Vain. – Galloway (1994: 116), Vainio (1898: 33), Delise (1825: 91, as *Sticta argyracea* Delise, incl. var. *sorediifera* Delise). Corticolous.

Pseudocyphellaria beccarii (Kremp.) D. J. Galloway – Galloway (1994: 121). Corticolous.

?*Pseudocyphellaria billardierei* (Delise) Räsänen – Abbayes (1956: 3, as *Sticta flotowiana* var. *subcyphellata* (Nyl.) Zahlbr.), Vainio (1898: 33, as *S. fossulata* var. *subcyphellata* (Nyl.), Müller (1891: 374, as *S. damaecornis* var. *scrobiculata* Müll. Arg.). Corticolous.

Pseudocyphellaria crocata (L.) Vain. – Galloway (1994: 124), Vainio (1898: 32 & 33, also as *P. mougeotiana* var. *dissecta* Müll. Arg.). Corticolous.

Pseudocyphellaria desfontainii (Delise) D. J. Galloway – Galloway (1994: 128), Vainio (1898: 32 & 33, as *P. carpoloma* (Delise) Vain., incl. f. *desfontainii* (Delise) Nyl.). Corticolous.

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Pseudocyphellaria dozyana (Mont. Bosch) D. J. Galloway – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

Pseudocyphellaria gilva (Ach.) Malme – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

Pseudocyphellaria intricata (Delise) Vain. – Galloway (1994: 138), Vainio (1898: 33, as *P. intricata* var. *thouarsii* (Delise) Nyl.). Corticolous.

Pseudocyphellaria sulphurea (Schaer.) D. J. Galloway – Galloway (1994: 155). Corticolous.

Pseudoparmelia sphaerospora (Nyl.) Hale – Hale (1976a: 49), Swinscow & Krog (1988: 252), Aptroot (1990: 406), Abbayes (1961: 95, as *Parmelia sphaerospora* Nyl.). Corticolous.

Pseudoramonia psoromica Aptroot – this paper. Corticolous.

Punctelia borreri (Sm.) Krog – Aptroot (1990: 406). Terricolous.

Punctelia rudecta (Ach.) Krog – Aptroot (1991a: 153), Abbayes (1961: 101, as *Parmelia ruderata* Vain.). Corticolous.

Punctelia subflava (Taylor) Elix & J. Johnst. – new report, *Aptroot & Hensen 12883*, 1984 (BR). Corticolous.

Punctelia subrudecta (Nyl.) Krog – Aptroot (1990: 406). Corticolous.

Pyrenula aggregata (Fée) Fée – new report, *Aptroot & Hensen 13389*, 1984 (ABL). Corticolous.

Pyrenula anomala (Ach.) Vain. – new report, *Aptroot & Hensen 13757*, 1984 (ABL). Corticolous.

Pyrenula aspistea (Ach.) Ach. – new report, *Aptroot & Hensen 13726* & *13755*, 1984 (ABL). Corticolous.

Pyrenula astroidea (Fée) R. C. Harris – new report, *Aptroot & Hensen 13110*, 1984 (ABL). Corticolous.

Pyrenula breutelii (Müll. Arg.) Aptroot – Harris (1989: 94, as *P. macularis* (Zahlbr.) R. C. Harris). Corticolous.

Pyrenula confinis (Nyl.) R. C. Harris – new report, *Aptroot & Hensen 12448*, *12642* & *12949*, 1984 (ABL). Corticolous.

Pyrenula fetivica (Kremp.) Müll. Arg. – new report, *Aptroot & Hensen 13582*, 1984 (BR). Corticolous.

Pyrenula hibernica (Nyl.) Aptroot – new report, *Aptroot & Hensen 12824*, 1984 (ABL). Corticolous.

Pyrenula mamillana (Ach.) Trevis. – Stizenberger (1890, as *Verrucaria mamillana* Ach.). Corticolous.

Pyrenula microcarpa Müll. Arg. – new report, *Aptroot & Hensen 13116*, 1984 (ABL). Corticolous.

Pyrenula nitidula (Bres.) R. C. Harris – new report, *Aptroot & Hensen 13063*, 1984 (ABL). Corticolous.

Pyrenula parvinuclea (Meyen & Flot.) Aptroot – Stizenberger (1890, as *Verrucaria denudata* Nyl.). Corticolous.

Pyrenula pyrenuloides (Mont.) R. C. Harris – Stizenberger (1890, as *Verrucaria pyrenuloides* (Mont.) Nyl.). Corticolous.

Pyrenula quassiicola (Fée) Fée – new report, *Aptroot & Hensen 13579*, 1984 (ABL). Corticolous.

Pyrenula rockii Zahlbr. – new report, *Aptroot & Hensen 12440*, 1984 (ABL). Corticolous.

Pyrgillus javanicus (Mont. & Bosch) Nyl. – Aptroot (1990: 406), Aptroot (1991b: 86). Corticolous.

Pyxine berteriana (Fée) Imshaug – Aptroot (1988: 145). Corticolous.

Pyxine cocoes (Sw.) Nyl. – Aptroot (1988: 145). Corticolous.

Pyxine copelandii Vain. – Aptroot (1988: 145). Corticolous.

Pyxine coralligera Malme – Stizenberger (1890, as *P. cocoes* f. *isidiophora* Müll. Arg.). Corticolous.

Pyxine glaucovirescens (Nyl.) Aptroot – Aptroot (1988: 146). Corticolous.

Pyxine kibweziensis Swinscow & Krog. – Aptroot (1988: 146). Saxicolous.

Pyxine meissnerina Nyl. – Aptroot (1988: 146). Corticolous.

Pyxine petricola Nyl. – Aptroot (1988: 146). Corticolous.

Pyxine retirugella Nyl. – Aptroot (1988: 145, as *P. consocians* Vain.). Corticolous.

Ramalina arabum (Dill. ex Ach.) Meyen & Flot. – Krog (1994). Corticolous.

Ramalina celastri (Sprengel) Krog & Swinscow – Aptroot (1990: 406). Corticolous.

Ramalina consanguinea Müll. Arg. – Aptroot (1990: 406). Corticolous.

Ramalina dendriscoides Nyl. – Aptroot (1990: 406). Corticolous.

Ramalina fimbriata Krog & Swinscow – Aptroot (1990: 407). Corticolous.

Ramalina praetermissa Abbayes – Abbayes (1956: 17). Corticolous.

Ramboldia russula (Ach.) Kalb & al. – new report, *Aptroot & Hensen 12972*, 1984 (BR). Corticolous.

Relicina amphithrix Hale – Aptroot (1990: 407), Aptroot (1991a: 153, as *R. planiuscula* (Kurok.) Hale). Corticolous.

Rhabdodiscus auberianus (Mont.) Vain. – new report, *Aptroot & Hensen 13386* & *13721*, 1984 (ABL). Corticolous.

Rhabdodiscus subcavatus (Nyl.) Rivas Plata & al. – new report, *Aptroot & Hensen 13373*, 1984 (ABL). Corticolous.

Rhabdodiscus tanzanicus (Frisch) Rivas Plata & al. – new report, *Aptroot & Hensen 13376*, 1984 (ABL). Corticolous.

Ricasolia comorensis Kremp. – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

Ricasolia discolor (Bory) Nyl. – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

?*Ricasolia marginata* Müll. Arg. – Vainio (1898: 33, as *Lobaria marginata* (Müll. Arg.) Vain.). Corticolous.

Roccella africana Vain. – Aptroot & Schumm (2011: 17). Corticolous.

Roccella applanata M. Choisy – Aptroot & Schumm (2011: 17). Corticolous.

Roccella belangeriana D. D. Awasthi – Aptroot & Schumm (2011: 17). Corticolous.

Roccella boryi Delise ex Fée – Aptroot & Schumm (2011: 17). Corticolous.

Roccella linearis (Ach.) Vain. – Aptroot & Schumm (2011: 17). Corticolous.

Roccella montagnei Bél. – Aptroot (1990: 407), Aptroot & Schumm (2011: 17), Ertz & al. (2014a). Corticolous.

Sarcographa labyrinthica (Ach.) Müll. Arg. – Aptroot (1990: 407). Corticolous.

Sarcographa tricosa (Ach.) Müll. Arg. – new report, *Schumm 5787* (herb. Schumm). Corticolous.

Savoronala madagascariensis Ertz & al. – Ertz & al. (2014). Corticolous.

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Sclerophyton madagascariense Sparrius – Sparrius (2004: 73). Corticolous.

Sclerophyton seriale (Ach.) Sparrius – new report, *Aptroot & Hensen 13316*, 1984 (B). Corticolous.

Scoliciosporum arachnoideum Aptroot – Aptroot (2008: 120). Corticolous.

Siphula abbatiana A. Mathey – Mathey (1971: 853). Corticolous.

Siphula decumbens Nyl. – new report, *Aptroot & Hensen 13526*, 1984 (BR). Corticolous.

Siphula mascarena A. Mathey – new report, *Aptroot & Hensen 13227*, 1984 (BR). Corticolous.

Sporopodium leprieurii Mont. – new report, *Aptroot & Hensen 13338a*, 1984 (BR). Foliicolous.

Stereocaulon anomalum I. M. Lamb – Sérusiaux (1979: 6), Swinscow & Krog (1988: 296), Aptroot (1990: 407). Terricolous.

Stereocaulon meyeri B. Stein – Swinscow & Krog (1988: 299). Terricolous.

Stereocaulon ramulosum Raeusch. – Abbayes (1956: 8, as var. *macrocarpum* Church. Bab.). Terricolous.

Sticta ambavillaria (Bory) Ach. – Vainio (1898: 33). Corticolous.

Sticta brevipes (Müll. Arg.) Zahlbr – new report, *Aptroot & Hensen 13248* & *13251*, 1984 (BR). Corticolous.

?*Sticta damicornis* (Sw.) Ach. – Abbayes (1956: 4), Vainio (1898: 33). Corticolous.

Sticta dichotoma Bory – Abbayes (1956: 4). Corticolous.

?*Sticta fuliginosa* (Dicks.) Ach. – Vainio (1898: 33). Corticolous.

Sticta macrophylla Bory – Abbayes (1956: 6). Corticolous.

?*Sticta orbicularis* (A. Braun ex Meyen & Flot.) Hue – Vainio (1898: 33). Corticolous.

Sticta papyracea Delise – new report, *Aptroot & Hensen 12861*, *12865* & *13259*, 1984 (BR). Corticolous.

?*Sticta sinuosa* Pers. – Vainio (1898: 33). Corticolous.

?*Sticta variabilis* Ach. – Vainio (1898: 33), Abbayes (1956: 5, incl. var. *glaberrima* Nyl.). Corticolous.

?*Sticta weigelii* Isert – Vainio (1898: 33). Corticolous.

Strigula complanata (Fée) Mont. – Santesson (1952: 190). Foliicolous.

Strigula janeirensis (Müll. Arg.) Lücking – Santesson (1952: 196, as *Raciborskiella janeirensis* (Müll. Arg.) R. Sant.). Foliicolous.

Strigula nemathora Mont. var. *nemathora* – Santesson (1952: 149). Foliicolous.

Strigula nitidula Mont. – Santesson (1952: 179). Foliicolous.

Strigula rostrata R. C. Harris & Aptroot – Harris (1995: 159). Corticolous.

Strigula smaragdula Fr. – Stizenberger (1890, as *S. elegans* (Fée) Müll. Arg.), Santesson (1952: 160, as *S. elegans*, incl. var. *stellata* (Nyl. & Cromb. ex H. M. Ward) R. Sant.). Foliicolous.

Strigula subtilissima (Fée) Müll. Arg. – Santesson (1952: 183). Foliicolous.

Syncesia madagascariensis Ertz & al. – Ertz & al. (2010: 47). Corticolous.

Teloschistes exilis (Michx.) Vain. – Almborn (1989: 527). Corticolous.

Teloschistes flavicans (Sw.) Norman – Almborn (1989: 529), Aptroot (1990: 407), Dodge (1971: 124, as *T. capensis* (L. f.) Vain. and 128, as *T. costatus* (J. Steiner) Hillmann), Abbayes (1956: 23, incl. f. *cinerascens* Müll. Arg.), Stizenberger (1890, as *Physcia flavicans* (Sw.) DC.). Corticolous.

Teloschistes perrugosus Müll. Arg. – Almborn (1989: 532). Corticolous.

Tephromela atra (Hudson) Hoffm. – Aptroot (1990: 407). Corticolous and saxicolous.

Thecaria quassiicola Fée – Staiger (2002: 446). Corticolous.

Thelotrema leucophthalmum Nyl. – new report, *Aptroot & Hensen 13753*, 1984 (ABL). Corticolous.

Thyrea plectopsora A. Massal. – Schultz & Aptroot (2008: 456). Saxicolous.

Trapelia coarctata (Turner) M. Choisy – Aptroot (1990: 407), Lumbsch & Aptroot (1993: 239). Saxicolous and terricolous.

Trapelia pallidocervina (Kremp.) Hertel – new report, *Schumm 5808* (herb. Schumm). Saxicolous.

Trapeliopsis granulosa (Hoffm.) Lumbsch – Aptroot (1990: 407). Lignicolous.

Traponora fusca Aptroot – new report, *Aptroot & Hensen 12979*, 1984 (BR). Corticolous.

Traponora globosa Aptroot – Aptroot (2009). Corticolous.

Trichothelium alboatrum Vain. – new report, *Aptroot & Hensen*, 1984 (BR). Foliicolous.

Trichothelium epiphyllum Müll. Arg. – new report, *Aptroot & Hensen 13353a*, 1984 (BR). Foliicolous.

Triclinum cinchonarum f. *janeirense* (Müll. Arg.) Elix – new report, *Aptroot & Hensen 13343*, 1984 (BR). Corticolous.

Trinathotrema stictideum (Nyl.) Lücking & al. – new report, *Aptroot & Hensen 13375*, 1984 (ABL). Corticolous.

Trypetheliopsis kalbii (Lücking & Sérus.) Aptroot – Lücking & Sérusiaux (1996, as *Musaespora kalbii* Lücking & Sérus.). Corticolous.

Trypethelium eluteriae Spreng. – new report, *Aptroot & Henssen 13757a*, 1984 (ABL), *Schumm 5786* & *5797* (herb. Schumm). Corticolous.

?*Usnea ambigua* Motyka – Motyka (1954: 30). Corticolous.

Usnea baileyi (Stirt.) Zahlbr. – Aptroot (1990: 407), Abbayes (1956: 21, as *U. implicata* (Stirt.) Zahlbr.). Corticolous.

?*Usnea chrysoleuca* Motyka – Motyka (1954: 31). Corticolous.

Usnea complanata (Müll. Arg.) Motyka – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.

?*Usnea contorta* Jatta – Abbayes (1956: 22). Corticolous.

?*Usnea eburnea* Motyka – Motyka (1954: 29). Corticolous.

Usnea erinacea Vain. – Clerc (2004: 84). Corticolous.

Usnea exasperata (Müll. Arg.) Motyka – Aptroot (1990: 407). Corticolous.

?*Usnea fragilescens* var. *mollis* (Vain.) Clerc – Vainio (1898: 31, as *U. barbata* var. *mollis* (Stirt.) Vain.). Corticolous.

?*Usnea fuscorubens* Motyka – Abbayes (1956: 22). Corticolous.

Usnea gigas Motyka – Swinscow & Krog (1988: 335). Corticolous.

?*Usnea gracilis* Ach. – Abbayes (1956: 22). Corticolous.

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?*Usnea horridula* (Müll. Arg.) Motyka – Abbayes (1956: 21). Corticolous.
?*Usnea humbertii* Motyka – Motyka (1954: 32). Corticolous.
?*Usnea indigena* Motyka – Motyka (1954: 27). Corticolous.
Usnea leprosa Motyka – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.
?*Usnea luteola* Motyka – Motyka (1954: 33). Corticolous.
Usnea maculata Stirt. – Swinscow & Krog (1988: 338). Corticolous.
Usnea nodulosa Swinscow & Krog – new report, *Aptroot & Hensen*, 1984 (BR). Corticolous.
Usnea perhispidella J. Steiner – Aptroot (1990: 407). Corticolous.
Usnea perplexans Stirt. – Vainio (1898: 31, as *U. barbata* var. *perplexans* (Stirt.) Vain.). Corticolous.
Usnea pulvinata Fr. – Swinscow & Krog (1988: 341), Aptroot (1990: 407). Saxicolous.
Usnea rubicunda Stirt. – Aptroot (1990: 407). Corticolous.
Usnea rubrotincta Stirt. – Abbayes (1956: 21, as *U. rubescens* var. *rubrotincta* (Stirt.) Motyka). Corticolous.
Usnea sorediosula (Müll. Arg.) Motyka – new report, *Aptroot & Hensen 12524*, *12544* & *13145*, 1984 (BR). Corticolous.
?*Usnea sorosa* Motyka – Motyka (1954: 26). Saxicolous.
?*Usnea subelegans* (Vain.) Motyka – Vainio (1898: 31, as *U. barbata* var. *subelegans* Vain.). Corticolous.
?*Usnea subfloridana* (Zahlbr.) Motyka – Vainio (1898: 31, as *U. barbata* var. *comosa* (Ach.) Vain.). Corticolous.
?*Usnea sulphurascens* Motyka – Motyka (1954: 34). Corticolous.
Usnea trichodeoides Vain. – Aptroot (1990: 407), Abbayes (1956: 22). Corticolous.
Usnea undulata Stirt. – Aptroot (1990: 407). Corticolous.
Xanthoparmelia annexa (Kurok.) Elix – Aptroot (1991a: 152, as *Paraparmelia annexa* (Kurok.) Elix & J. Johnst.). Saxicolous.
Xanthoparmelia benyovskyana (Gyeln.) Hale – Lumbsch & Aptroot (1993: 239), Hale (1990: 75), Abbayes (1961: 91, as *Parmelia benyovskyana* Gyeln.). Terricolous.
Xanthoparmelia constrictans (Nyl.) Hale – Abbayes (1961: 92, as *Parmelia constrictans* Nyl.). Saxicolous.
Xanthoparmelia molybdiza (Nyl.) Blanco & al. – Elix (2001: 210, as *Paraparmelia molybdiza* (Nyl.) Elix & J. Johnst.), Aptroot (1991a: 152, as *P. quartzitica* Aptroot). Saxicolous.
Xanthoparmelia phaeophana (Stirt.) Hale – Aptroot (1990: 408), Hale (1990: 173). Saxicolous and terricolous.
Xanthoparmelia suberadicata (Abbayes) Hale – Hale (1990: 200), Abbayes (1961: 89, as *Parmelia suberadicata* Abbayes). Saxicolous.
Xanthoparmelia subflabellata (J. Steiner) Hale – Hale (1990: 200), Ertz & al. (2014a: 163, as *X. tananarivensis* (Gyeln.) Hale), Abbayes (1961: 91, as *Parmelia tananarivensis* Gyeln.). Saxicolous.
Xanthoparmelia subramigera (Gyeln.) Hale – Hale (1990: 204), Abbayes (1961: 93, as *Parmelia ambositrana* Abbayes). Saxicolous.

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