

A first checklist of the lichen-forming fungi of the Venezuelan Andes

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ABSTRACT: Basing on an evaluation of the literature and some unpublished collections, 745 taxa of lichen-forming-fungi are reported from the Venezuelan Andes, including 10 infraspecific taxa. Of these taxa 37 are new records for Venezuela: *Actinoplaca vulgaris* (Müll. Arg.) Vezda & Poelt, *Asterothyrium decipiens* (Rehm) R. Sant., *Calopadia foliicola* (Fée) Vezda, *C. fusca* (Müll. Arg.) Vezda, *C. phyllogena* (Müll. Arg.) Vezda, *Chrysothrix chlorina* (Ach.) J. R. Laundon, *Cystocoleus ebeneus* (Dillwyn) Thwaites, *Diploschistes scruposus* (Schreb.) Norm., *Echinoplaca leucotrichoides* (Vain.) R. Sant., *Fellhanera bouteillei* (Desm.) Vezda, *F. dominicana* (Vain.) Vezda, *F. fuscatula* (Müll. Arg.) Vezda, *F. sublecanorina* (Nyl.) Vezda, *Gyalectidium filicinum* Müll. Arg., *Lecidea limosa* Ach., *Lepraria neglecta* Auct., *Ochrolechia africana* Vain., *Peltigera vainioi* Gyelnik, *Phyllobathelium nigrum* R. Sant. & Tibell, *Phyllophiale alba* R. Sant., *Polymeridium albidum* (Müll. Arg.) R. C. Harris, *Porina epiphylla* (Fée) Fée, *Racodium rupestre* Pers., *Ramalina asahinae* W. Culb. & C. Culb., *R. calcarata* Krog & Swinsc., *R. puiggarii* Müll. Arg., *R. rectangularis* Nyl., *Rhizoplaca melanophthalma* (DC.) Leuckert & Poelt, *Strigula antillarum* (Fée) Müll. Arg., *S. platypoda* (Müll. Arg.) R. C. Harris, *Tapellaria epiphylla* (Müll. Arg.) R. Sant., *T. nana* (Fée) R. Sant., *Tephromela aglaea* (Sommerf.) Hertel & Rambold, *Tricharia vainioi* R. Sant., *Trichothelium epiphyllum* Müll. Arg., *T. bipindense* F. Schill. and *Vezdaea foliicola* Sérusiaux. Another 4 species are new records only for the Venezuelan Andes: *Dimerella epiphylla* (Müll. Arg.) Malme, *Porina atrocoerulea* Müll. Arg., *Ramalina peruviana* Ach. and *Woessia apiahica* (Müll. Arg.) Sérus. A list of synonyms used in the consulted literature is added. Four new combinations are proposed: *Dictyonema zahlbruckneri* (Schiffn.) V. Marcano, *Heterodermia tropica* (Kurok.) Sipman, *Parmelinopsis cleefii* (Sipman) V. Marcano & Sipman and *Phyllobaeis linearis* (De Vries) V. Marcano & Sipman.

INTRODUCTION

During the preparation of the Lichen Flora of Andean Venezuela (1990-1996) a necessity was felt to have a list of all species recorded from the Venezuelan Andes. Numerous references have been published to the lichen flora of the Venezuelan Andes, in many scattered publications, and in particular during the last few decades. Marcano (1994) listed some of these references, but an approximately complete survey was still lacking. Certainly such a catalog cannot be complete, because currently the distribution of the Andean Venezuelan lichens is not yet perfectly known. Nevertheless it is obviously useful to have a first comprehensive catalog available.

Five publications are of special importance. Dennis (1970) listed 63 lichen taxa from the Sierra Santo Domingo in the state of Mérida. Hertel (1971) published on 27 holarctic, crustaceous species from the Venezuelan Andes. Vareschi (1973) produced a first catalogue from the whole country, comprising 40 genera and 248 species. López-Figueiras (1978) listed 305 macrolichen species from the state of Mérida. Later he reported 520 species, mainly macrolichens, from the Andean States and Falcon (López-Figueiras 1986). Marcano (1994) listed 116 genera and estimated 638 species from the Venezuelan Andes. Other important contributions were made by Tibell (1982), Walker (1985), de Vries & Sipman (1984), Ahti & Stenroos (1986), Sipman (1986), Esslinger (1989), Moberg (1989), Aptroot (1991), Brako (1991), Sipman & Topham (1992), Marcano & Morales (1994a, b and c), Marcano et al. (1995, 1996) and Nash et al. (1995). The frequent new records in recent publications depend to a large extent on the activities of Prof. Manuel López Figueiras.

The present checklist includes not only literature references but also some unpublished identifications of herbarium collections. Most of these collections were obtained by the authors during 1990-1996, and by R. Lücking during 1995-1996. Also included are a number of misspellings and unpublished names, which were encountered during the preparation of the list, in particular in López Figueiras (1986).

At present 745 lichen taxa are known from the

Venezuelan Andes. They are listed below, with indications of habitat and altitudinal range in the investigated area, distribution, pertinent collection numbers (for newly recorded taxa), and incidental notes. The systematic arrangement largely follows Eriksson & Hawksworth (1993), with occasional changes according to the authors opinions. Taxa new to the Venezuelan Andes are marked by an asterisk, and those new to Venezuela by two asterisks. The most complete set of collections is kept in the herbarium of the Faculty of Pharmacy, University of the Andes (MERF) and in the herbarium of the Lichenological Research Center of the Foundation for the Development of Science and Technology (herb. lich. CEILT). Herbarium abbreviations follow the Index Herbariorum (Holmgren et al. 1991).

SOME INFORMATION ON THE STUDY AREA

The Venezuelan Andes or *Cordillera de Mérida*, as understood here, comprise the states Lara (**LA**), Mérida (**ME**), Táchira (**TA**) and Trujillo (**TR**) (excepting the Sierra de Perijá). They cover 36.120 km², and are the best known area in Venezuela from a lichenological point of view. Brief comments on the lichen flora in the four main vegetation types (desertic forest, pre-montane forest, montane forest and paramo) are following. Many lichens occur in more than one vegetation type. For details of the floristic composition of these vegetation types see Huber & Alarcón (1988) and Veillon (1989), and about their lichen flora see Marcano (1994).

1. Desertic forest

Desertic forest, dry deciduous forest, or semi-desert occur at a wide range of altitudes, between 200-1000 m, but are confined to intermountain valleys with an arid climate. The vegetation is xerophytic, deciduous and dominated by species like *Ritterocereus griseus*, *Opuntia wentiana*, *O. caribaea* and *Prosopis* sp. The observed lichen flora comprises 37 species, mainly from the families Collemataceae, Parmeliaceae, Physciaceae and Teloschistaceae.

2. Pre-montane forest

Pre-montane forest gradually replaces the desertic forest at an altitude of c. 700-900 m. It reaches

up to about 1200 m where it merges into montane forest. The annual rainfall seems to be very variable, 300-3000 mm. The vegetation is partly semi-deciduous, partly evergreen, and dominated by *Vochysia lehmannii*, *Inga spuria*, *Ficus* sp., *Clusia minor*, and other species of the families Lauraceae, Moraceae, Myrtaceae, Bignoniaceae, Euphorbiaceae and Araliaceae. It is not rich in lichens, and some 87 species are known, from the families Arthoniaceae, Collemaataceae, Lecanoraceae, Lobariaceae, Parmeliaceae, Peltigeraceae and Teloschistaceae.

3. Montane forest

Montane forest (including lower- and upper montane forest) occurs between c. 1500 and 3000 m. The annual rainfall seems to be 800-2200 mm. The characteristic vegetation is an evergreen, microphyllous forest, the trees loaded with mosses, filmy ferns, orchids and bromeliads. The vegetation is dominated by species like *Decussocarpus rospigliosii*, *Prumnopytis montana*, *Podocarpus oleifolius*, *Oreopanax moritzii*, *Weinmannia jahnii*, *W. microphylla*, *Tetrorchidium rubrivenium*, *Ruagea glabra* and *Cyathea* spp. It is exceptionally rich in lichens. However, most of the vegetation is now replaced by cultivated fields, which may still show a luxuriant lichen growth. So far 523 species are known, especially species of *Dibaeis*, *Cladonia*, *Hypotrachyna*, *Leptogium*, *Oropogon*, *Peltigera*, *Ramalina*, *Stereocaulon*, *Sticta*, *Usnea* and many microlichens.

4. Paramo

Paramo grassland dominates between 3000 and 5000 m. In the transition zone with the montane forest rather large stands of small *Polylepis sericea* trees may occur with an abundant corticolous lichen flora containing species of *Everniastrum*, *Hypotrachyna*, *Oropogon*, *Pseudocyphellaria* and *Sticta*. The terricolous lichen flora includes species of *Cladonia*, *Diploschistes*, *Leprocaulon*, *Peltigera*, *Siphula*, *Stereocaulon*, *Thamnia* and *Xanthoparmelia*, whereas on rock species of *Melanelia*, *Neofuscelia*, *Umbilicaria*, *Usnea*, *Xanthoparmelia* and *Xanthoria* are found. Currently most paramos are bordered by cultivated or deforested land. The lichen flora is very rich and contains 418 species.

THE LICHEN-FORMING FUNGI FROM THE VENEZUELAN ANDES

***Actinoplaca vulgaris* (Müll. Arg.) Vezda & Poelt

Foliicolous, montane forest, 1700 m, R. Lücking 95-119, 95-120, 95-140 (herb. lich. CEILT, herb. Lücking), **ME**.

Alectoria imshaugii Brodo & D. Hawksw. var. *venezuelensis* V. Marcano & A. Morales

Corticolous, on small shrubs and pines, subparamo, paramo, 3500-3800 m, **ME** (Hawksworth 1977; Marcano & Morales 1994c).

Alectoria ochroleuca (Hoffm.) Massal. var. *tropica* V. Marcano & A. Morales

Terricolous, on wet soils, desertic paramos, 3100-4500 m, **ME**, **TR** (Vareschi 1973, as *Alectoria ecuadorensis*; López Figueiras 1986; Marcano 1994; Marcano & Morales 1994c).

Anthracothecium paraguayense Malme

Corticolous, montane forest, 1600 m, **ME** (López Figueiras 1986).

Anzia americana Yoshim. & Sharp

Corticolous, montane forest and paramo, 2200-3000 m, **ME** (López Figueiras 1986).

Anzia dictyorrhiza (Masse) Yoshim.

Corticolous, paramo, 3500-3600 m, **ME** (López Figueiras 1986).

Anzia leucobates (Nyl.) Müll. Arg.

Corticolous, paramo, 2800-3600 m, **ME** (López Figueiras 1986).

Anzia masonii Yoshim.

Corticolous, paramo and montane forest, 2350-3200 m, **ME** (López Figueiras 1986).

Anzia parasitica (Fée) A. Zahlbr.

Corticolous, paramo and montane forest, 2400-3500 m, **ME**, **TA** (López Figueiras 1986; Marcano 1994).

Arthonia cinnabarina (DC.) Wallr.

Corticolous, montane forest and paramo, 800-3200 m, **ME, LA, TR** (López Figueiras 1986, as *Arthonia tumidula*; Marcano 1994).

Arthonia intexta Almq.

Saxicolous, paramo, 4250 m, **ME** (Hertel 1971; Vareschi 1973).

Arthonia rubella (Fée) Nyl.

Corticolous, desertic forest, 500-600 m, **LA** (López Figueiras 1986).

Arthopyrenia cinchonae (Ach.) Mull. Arg.

Corticolous, montane forest and paramo, 2450-2700 m, **ME, TA** (López Figueiras 1986).

Arthrorhapis citrinella (Ach.) Poelt

Terricolous, paramo, 2850-4500 m, Marcano 7212 (herb. lich. CEILT, B) **ME** (Hertel 1971, Vareschi 1973).

Arthrorhapis alpina (Schaer.) R. Sant. in D. Hawksw., P. James & Coppins

Terricolous, paramo, 3500 m, **ME** (López Figueiras 1986, misspelt as *A. litina*).

***Asterothyrium decipiens* (Rehm) R. Sant.

Follicolous, montane forest, 1700 m, R. Lücking 95-124 (herb. lich. CEILT, herb. Lücking), **ME**.

Astrothelium eustomum (Mont.) Müll. Arg.

Corticolous, montane forest, 2000-2300 m, **ME** (López Figueiras 1986; Marcano 1994).

Auriculora byssomorpha (Nyl.) Kalb

Corticolous, montane forest, 1400-1600 m, **TR** (López Figueiras & Morales 1989b, as *Lecidea byssomorpha*).

Bacidia millegrana (Tayl.) A. Zahlbr.

Corticolous, montane forest, 1100 m, **LA** (López Figueiras 1986; Marcano 1994).

Baeomyces rufus (Huds.) Rebent.

Terricolous, saxicolous, paramo, 3500-4150 m, **ME** (de Vries & Sipman 1984).

Brigantiaea leucoxantha (Spreng.) R. Sant. et Hafelln.

Corticolous, montane forest, 1200-2600 m, **ME, TA**

(López Figueiras & Morales 1989b).

Buellia millegrana (Tayl.) A. Zahlbr.

Corticolous, freestanding tree in pasture, montane forest zone, 2750 m, **ME** (Kalb 1990).

Bulbothrix apophysata (Hale & Kurok.) Hale

Corticolous, montane forest, 1400-2400 m, **ME, TA** (Hale 1976a).

Bulbothrix fungicola (Lyngé) Hale

Corticolous, montane forest, 1300-1400 m, **ME, TA** (Hale 1976a).

Bulbothrix goebelii (Zenker) Hale

Corticolous, pre-montane forest and montane forest, 900-2400 m, **ME, TA, LA** (Hale 1976a).

Bulbothrix hypocraea (Vain.) Hale

Corticolous, montane forest, 1400-1500 m, **LA** (Hale 1976a).

Bulbothrix imshaugii (Hale) Hale

Saxicolous, corticolous, paramo, 2600-3200 m, **ME** (Hale 1976a).

Bulbothrix isidiza (Nyl.) Hale

Corticolous, montane forest, 700-1500 m, **LA, TR** (Hale 1976a).

Bulbothrix lopezii Hale

Corticolous, montane forest, 1400 m, **ME** (López Figueiras 1986a).

Bulbothrix sensibilis (Stein. & A. Zahlbr.) Hale

Corticolous, pre-montane forest, 800-1100 m, **TA** (Hale 1976a).

Bulbothrix suffixa (Stirt.) Hale

Corticolous, montane forest, 1400-2300 m, **ME** (Hale 1976a).

Bulbothrix tabacina (Mont. & Bosch) Hale

Corticolous, montane forest, 700-1500 m, **LA, TA, TR** (Hale 1976a).

Bulbothrix ventricosa (Hale & Kurok.) Hale

Saxicolous, montane forest, paramo, 900-3000 m, **LA, ME** (Hale 1976a).

- Bunodophoron melanocarpum* (Sw.) Wedin
Corticolous, sometimes terricolous, montane forest and paramo, 2000-4750 m, **ME, TA, TR** (Dodge & Vareschi 1956, as *Sphaerophorus*; López Figueiras 1986, as *Sphaerophorus*; Marcano 1994, as *Sphaerophorus*).
- Byssocaulon tenue* (Hue) Vain.
Saxicolous, paramo, 4350 m, **ME** (Vareschi 1973).
- Calicium chlorosporum* F. Wilson in Bailey
Corticolous, montane forest, 2200-2250 m, **ME** (López Figueiras 1986, as *C. auratum* Tibell; Marcano 1994).
- Calicium hyperelloides* Nyl.
Corticolous, montane forest and paramo, 2300-3000 m, **ME, TA** (López Figueiras 1986; Marcano 1994).
- Calicium salicinum* Pers.
Lignicolous, on wood of fencepost between meadow and road, montane forest, 1200-1400 m, **ME** (López Figueiras 1986; Tibell 1996).
- ***Calopadia foliicola* (Fée) Vezda
Foliicolous, montane forest, 1700 m, R. Lücking 95-110, 95-136a, 95-140 (herb. lich. CEILT, herb. Lücking), **ME**.
- ***Calopadia fusca* (Müll. Arg.) Vezda
Foliicolous, montane forest, 1700 m, R. Lücking 95-106 (herb. lich. CEILT, herb. Lücking), **ME**.
- ***Calopadia phyllogena* (Müll. Arg.) Vezda
Foliicolous, on *Coffea* leaves in shady coffee plantation (former mossy forest area), montane forest, 1200-1700 m, R. Lücking 95-109, 95-136b (herb. lich. CEILT, herb. Lücking); H. Sipman & A. Morales 38077 (B, herb. lich. CEILT), **ME**.
- Caloplaca brebissonii* (Fée) J. Sant. ex Hafelln. et Poelt
Corticolous, montane forest and paramo-shrub, 2900 m, **ME** (López Figueiras & Morales 1989b; Kalb 1990).
- Caloplaca calicioides* P. M. Jörg.
Corticolous, paramo, 3500 m, **ME** (Jørgensen 1986).
- Caloplaca erythroleuca* (Nyl.) A. Zahlbr.
Corticolous, montane forest, 1700 m, **ME** (Hafellner & Poelt 1979).
- Caloplaca hensseniana* Kalb
Corticolous, dry steppe-vegetation (15 km E of Barquisimeto), 550 m, **LA** (Kalb 1990).
- Caloplaca herbidella* (Hue) Magnusson
Corticolous, montane forest, 800-2400 m, **LA** (Kärnefelt 1990).
- Caloplaca saxicola* (Hoffm.) Nordin.
Saxicolous, desertic forest, xeric, 500-600 m, **LA** (López Figueiras 1986; Marcano 1994).
- Candelaria concolor* (Discks.) B. Stein
Saxicolous, corticolous, pre-montane forest, montane forest and paramo, 200-2600 m, **ME, LA, TA, TR** (López Figueiras 1986; Marcano 1994).
- Candelaria fruticans* Poelt & Oberw.
Saxicolous, corticolous, montane forest and paramo, 1100-2500 m, **ME, TA, LA** (López Figueiras 1986).
- Candelariella vitellina* (Hoffm.) Müll. Arg.
Saxicolous, paramo, 3900 m, **ME** (Hertel 1971; Vareschi 1973).
- Candelina mexicana* (B. de Lesd.) Poelt
Saxicolous, pre-montane forest, montane forest and paramo, 900-3000 m, **ME, LA, TR** (López Figueiras 1986; Marcano 1994).
- Candelina submexicana* (B. de Lesd.) Poelt
Saxicolous, montane forest and paramo, 1700-3100 m, **LA, TR** (López Figueiras 1986).
- Canomaculina muelleri* (Vain.) Elix & Hale
Corticolous, montane forest, 1300-1900 m, **LA, ME, TA, TR** (Hale 1976c, as *Parmelina*; López Figueiras 1986, as *Parmelina*).
- Canomaculina pilosa* (Stizenb.) Elix & Hale
Corticolous, pre-montane forest and montane forest, 1000-1500 m, **LA, ME** (Vareschi 1973, as *Parmelia*; López Figueiras 1986, as *Parmelina*).
- Canoparmelia caribaea* (Hale) Elix & Hale
Saxicolous, montane forest, 2000 m, **ME** (Hale

1976b, as *Pseudoparmelia*).

Canoparmelia carneopruinata (A. Zahlbr.) Elix & Hale

Saxicolous, corticolous, pre-montane forest, montane forest and paramo, 800-3200 m, **LA, ME** (Hale 1976b, as *Pseudoparmelia*).

Canoparmelia caroliniana (Nyl.) Elix & Hale

Corticolous, saxicolous, pre-montane forest and montane forest, 1000-2900 m, **LA, ME, TA, TR** (Vareschi 1973, as *Parmelia*; Hale 1976b, as *Pseudoparmelia*).

Canoparmelia cinerascens (Lyngé) Elix & Hale

Corticolous, pre-montane forest and montane forest, 200-300 m, **LA** (Hale 1976b, as *Pseudoparmelia*).

Canoparmelia crozalsiana (B. de Lesd.) Elix & Hale

Corticolous, saxicolous, desertic forest and montane forest, 700-2300 m, **LA, ME, TR** (Vareschi 1973, as *Parmelia*; Hale 1976b, as *Pseudoparmelia*).

Canoparmelia scrobicularis (Kremp.) Elix & Hale

Corticolous, montane forest, 2000-2400 m, **ME** (Hale 1976b, as *Pseudoparmelia*; López Figueiras 1986, as *Pseudoparmelia*).

Canoparmelia texana (Tuck.) Elix & Hale

Saxicolous, also corticolous, desertic forest, pre-montane forest, montane forest and paramo, 600-3500, **LA, ME, TA, TR** (Hale 1976b, as *Pseudoparmelia*; López Figueiras 1986, as *Pseudoparmelia*).

Carbonea vorticosa (Flk.) Hertel

Saxicolous, paramo, 3900 m, **ME** (Hertel 1971, as *Lecidea*; Vareschi 1973, as *Lecidea*).

Cetrariastrum andense Kärnf. in W. Culb. & C. Culb.

Corticolous, paramo, 3500-4000 m, **ME** (Culberson & Culberson 1981).

Chaenotheca chrysocephala (Turner ex Ach.) Th. Fr.

Corticolous, paramo, 4000 m, **ME** (López Figueiras 1986, as *Chaenotheca* sp.; Tibell 1996).

Chiodecton antillarum Vain.

Corticolous, montane forest, 1200-1250 m, **LA** (López Figueiras 1986).

Chiodecton hypochnoides Nyl.

Corticolous, montane forest, 2300-2600 m, **ME, TA, TR** (López Figueiras 1986; Marcano 1994).

Chiodecton sphaerale Ach.

Corticolous, montane forest, 2000-2700 m, **ME, TA, TR** (López Figueiras 1986).

***Chrysothrix chlorina* (Ach.) J. R. Laundon

Humicolous, paramo, 3500-4000 m, Marcano 95-56 (herb. lich. CEILT), **ME**.

Cladia aggregata (Sw.) Nyl.

Terricolous, saxicolous, montane forest and paramo, 1300-4000 m, **LA, ME, TA, TR** (Vareschi 1973, as *Cladonia*; López Figueiras 1986).

Cladina arcuata (Ahti) Ahti & Follm.

Terricolous, corticolous, saxicolous, humicolous, montane forest and paramo, 1800-3600 m, **ME, TA, TR** (Vareschi 1973, as *Cladonia*; López Figueiras 1986).

Cladina boliviana (Ahti) Ahti

Terricolous, sometimes humicolous and muscicolous, montane forest and paramo, 1150-3750 m, **LA, ME, TA, TR** (López Figueiras 1986).

Cladina confusa (R. Sant.) Follm. ex Ahti fo. *confusa*

Terricolous, corticolous, sometimes saxicolous and humicolous, montane forest and paramo, 1450-4045 m, **LA, ME, TA, TR** (Vareschi 1973, as *Cladonia*; López Figueiras 1986; Marcano 1994).

Cladina confusa (R. Sant.) Follm. & Ahti fo. *bicolor* (Müll. Arg.) Ahti

Terricolous, montane forest and paramo, 2000-3400 m, **ME, TA, TR** (López Figueiras 1986).

Cladina halei Ahti

Terricolous, montane forest and paramo, 2000-3600 m, **ME, TA, TR** (Ahti 1986a).

Cladina rangiferina (L.) Nyl. ssp. *abbayesii* (Ahti)

W. Culb.

Saxicolous, terricolous, corticolous, montane forest and paramo, 1800-3600 m, **ME, TA, TR** (López Figueiras 1986).

Cladonia andesita Vain.

Terricolous, corticolous, montane forest and paramo, 2000-3750 m, **ME, TA, TR** (López Figueiras 1986).

Cladonia bacillaris Nyl.

Saxicolous, corticolous, humicolous, montane forest and paramo, 1400-3600 m, **LA, ME, TA, TR** (Ahti & Stenroos 1986).

Cladonia calycantha Del. ex Nyl. em. Ahti

Terricolous, montane forest and paramo, 2442-3452 m, **ME** (Vareschi 1973; López Figueiras 1986).

Cladonia carassensis Vain.

Terricolous, montane forest and paramo, 1800-3452 m, **LA, ME, TA, TR** (Vareschi 1973; López Figueiras 1986).

Cladonia cartilaginea Müll. Arg.

Terricolous, corticolous, montane forest and paramo, 1400-3450 m, **LA, ME, TA, TR** (Vareschi 1973; López Figueiras 1986).

Cladonia ceratophylla (Sw.) Spreng.

Terricolous, corticolous, muscicolous, montane forest and paramo, 790-4500 m, **LA, ME, TA, TR** (Vareschi 1973; López Figueiras 1986).

Cladonia chlorophaea (Flk. ex Sommerf.) Spreng.

Terricolous, saxicolous, montane forest and paramo, 1800-3500 m, **ME, TA, TR** (López Figueiras 1986).

Cladonia coccifera (L.) Willd.

Terricolous, muscicolous, montane forest and paramo, 2200-4000 m, **LA, ME, TA, TR** (Vareschi 1973; López Figueiras 1986; Ahti & Stenroos 1986).

Cladonia coccifera (L.) Willd. fo. *ochrocarpia* (Flk. ex Sommerf.) Rebut.

Terricolous, paramo, 3750 m, **ME** (Ahti & Stenroos 1986; López Figueiras 1986).

Cladonia corallifera (Kunze) Nyl.

Terricolous, montane forest and paramo, 1900-

3500 m, **ME, TA, TR** (Ahti & Stenroos 1986; López Figueiras 1986).

Cladonia corniculata Ahti & Kashiw.

Terricolous, saxicolous, corticolous, montane forest and paramo, 2000-4100 m, **ME, TA, TR** (López Figueiras 1986; Huovinen et al. 1990).

Cladonia corymbites Nyl.

Terricolous, paramo, 3500 m, **ME** (López Figueiras 1986).

Cladonia crispata (Ach.) Flot.

Terricolous, corticolous, saxicolous, montane forest and paramo, 1700-3452 m, **LA, ME, TR** (López Figueiras 1986).

Cladonia crispatula (Nyl.) Ahti

Terricolous, montane forest, 1900 m, **TA** (López Figueiras 1986).

Cladonia cryptochlorophaea Asah.

Terricolous, saxicolous, humicolous, montane forest and paramo, 1400-3400 m, **LA, TA, TR** (López Figueiras 1986).

Cladonia dactylota Tuck.

Terricolous, muscicolous, montane forest and paramo, 1400-3400 m, **LA, ME, TA, TR** (Vareschi 1973; López Figueiras 1986; Huovinen et al. 1990).

Cladonia didyma (Fée) Vain. var. *didyma*

Corticolous, humicolous, montane forest, 1800-2400 m, **ME** (Ahti & Stenroos 1986).

Cladonia didyma (Fée) Vain. var. *vulcanica* (Zoll. & Moritzi) Vain.

Corticolous, terricolous, saxicolous, humicolous, muscicolous, montane forest and paramo, 1225-4045 m, **LA, ME, TA, TR** (Vareschi 1973, as *C. vulcanica*; López Figueiras 1986, as *C. vulcanica*; Ahti & Stenroos 1986).

Cladonia dilleniana Flk.

Corticolous, montane forest-paramo transition zone, 3000 m, **ME** (López Figueiras 1986).

Cladonia fimbriata (L.) Fr.

Terricolous, montane forest-paramo transition zone, 2700 m, **TA** (Vareschi 1973; López Figueiras

1986).

Cladonia furcata (Huds.) Schad.Terricolous, humicolous, montane forest and paramo, 1700-3630 m, **LA, ME, TA, TR** (Vareschi 1973; López Figueiras 1986).*Cladonia granulosa* (Vain.) AhtiTerricolous, sometimes saxicolous, montane forest and paramo, 1400-4000 m, **LA, ME, TA, TR** (Huovinen & Ahti 1988; Ahti 1986b).*Cladonia grayi* Merr. ex Sandst.Terricolous, montane forest and paramo, 2300-3000 m, **ME** (López Figueiras 1986).*Cladonia isabellina* Vain.Terricolous, saxicolous, muscicolous, montane forest and paramo, 2400-4200 m, **ME** (Vareschi 1973; López Figueiras 1986; Huovinen et al. 1990).*Cladonia leprocephala* Ahti & Stenr.Terricolous, corticolous, saxicolous, montane forest and paramo, 2900-4250 m, **ME, TA, TR** (Ahti & Stenroos 1986).*Cladonia lopezii* Stenr.Terricolous, saxicolous, or on rotten wood, paramo, 2300-3935 m, **ME, TR, TA** (Stenroos 1989).*Cladonia macilenta* Ehrh. ex Hoffm.Corticolous, terricolous, montane forest, 1400-2750 m, **LA, ME, TR** (Ahti & Stenroos 1986).*Cladonia meridensis* Ahti & Stenr.Terricolous, saxicolous, sometimes corticolous, montane forest and paramo, 1300-4000 m, **ME, TA, TR** (Vareschi 1973, as *C. hypoxanthoides*; López Figueiras 1986, as *C. hypoxanthoides*; Ahti & Stenroos 1986).*Cladonia merochlorophaea* Asah.Corticolous, terricolous, saxicolous, montane forest and paramo, 2000-3400 m, **ME, TA, TR** (López Figueiras 1986).*Cladonia mexicana* Vain.Terricolous, corticolous, saxicolous, montane forest and paramo, 2000-3600 m, **ME, TA, TR** (López Figueiras 1986; Huovinen, Ahti & Sten-

roos 1990).

Cladonia microscypha Ahti & Stenr.Humicolous, terricolous, saxicolous, sometimes corticolous, montane forest and paramo, 2300-3600 m, **ME, TA, TR** (Ahti & Stenroos 1986).*Cladonia miniata* Meyer var. *miniata*Humicolous, saxicolous, montane forest and paramo, 1800-3750 m, **ME, TA, TR** (Vareschi 1973; Ahti & Stenroos 1986; Stenroos 1989).*Cladonia mutabilis* Vain.Saxicolous, terricolous, montane forest, 1750-2400 m, **ME** (López Figueiras 1986).*Cladonia nana* Vain.Muscicolous, montane forest, 1600-2000 m, **ME** (López Figueiras 1986).*Cladonia ochrochlora* Flk.Corticolous, terricolous, montane forest and paramo, 1800-3500 m, **LA, ME, TA, TR** (López Figueiras 1986).*Cladonia pityrophylla* Nyl.Terricolous, montane forest, 1500-1600 m, **LA** (López Figueiras 1986, misspelt as *C. pitriophylla*).*Cladonia pleurota* (Flk.) Schaer.Terricolous, paramo, 3000-4000 m, **ME, TA, TR** (López Figueiras 1986).*Cladonia pocillum* (Ach.) O. Rich.Corticolous, terricolous, saxicolous, montane forest, 2300-3400 m, **ME, TR** (López Figueiras 1986).*Cladonia pyxidata* (L.) Hoffm.Terricolous, montane forest and paramo, 1600-3400 m, **ME, TR** (López Figueiras 1986).*Cladonia ramulosa* (With.) J. R. LaundonTerricolous, corticolous, montane forest, 1800-2750 m, **LA, ME, TA, TR** (López Figueiras 1986, as *Cladonia anomaea*).*Cladonia rappii* Evans var. *exilior* (des Abb.)

Ahti

Terricolous, corticolous, montane forest and paramo, 1300-4000 m, **LA, ME, TA, TR** (López Figueiras 1986).

Cladonia rugulosa Ahti

Terricolous, saxicolous, montane forest, 1750-2400 m, **ME** (Ahti 1986b).

Cladonia scholanderi des Abb.

Terricolous, corticolous, saxicolous, montane forest and paramo, 1800-3000 m, **ME, TA** (López Figueiras 1986; Huovinen & Ahti 1988).

Cladonia squamosa (Scop.) Hoffm. var. *subsquamosa* (Nyl. ex Leight.) Vain.

Corticolous, terricolous, saxicolous, montane forest and paramo, 1400-3750 m, **LA, ME, TA, TR** (López Figueiras 1986).

Cladonia steyermarkii Ahti

Saxicolous, terricolous, montane forest and paramo, 2400-3100 m, **ME, TA** (Ahti 1986).

Cladonia subradiata (Vain.) Sandst.

Terricolous, corticolous, montane forest and paramo, 1400-3400 m, **LA, ME, TA, TR** (López Figueiras 1986).

Cladonia subsquamosa Kremp.

Terricolous, corticolous, montane forest and paramo, 1000-4500 m, **LA, ME, TA, TR** (López Figueiras 1986).

Cladonia verruculosa (Vain.) Ahti

Humicolous, terricolous, muscicolous, corticolous, montane forest and paramo, 2000-4500 m, **LA, ME, TA, TR** (López Figueiras 1986).

Cladopycnidium sinense Magnusson

Saxicolous, paramo, 3900-4150 m, **ME** (Vareschi 1973, as *Lecidea tessellata*).

Coccocarpia culatensis V. Marcano & A. Morales

Lichenicolous, corticolous, montane forest-paramo transition zone, 2900-3000 m, **ME** (Marcano et al. 1995).

Coccocarpia domingensis Vain.

Corticolous, montane forest, 2500-2650 m, **ME** (Arvidsson 1982; Marcano et al. 1995).

Coccocarpia erythrocardia (Müll. Arg.) L. Arvidss.

Corticolous, pre-montane forest and montane forest, 150-2400 m, **ME, BA** (Arvidsson 1982; Marcano et al. 1995).

Coccocarpia erythroxyli (Spreng.) Swinsc. & Krog

Corticolous, muscicolous, montane forest and paramo, 800-3100 m, **LA, ME, TA, TR** (Vareschi 1973, as *Coccocarpia parmelioides*; Marcano et al. 1995).

Coccocarpia palmicola (Spreng.) L. Arvidss. & D. Gall.

Corticolous, montane forest and paramo, 1800-3000 m, **ME, TA, BA** (López Figueiras 1986; Marcano 1994; Marcano et al. 1995).

Coccocarpia pellita (Ach.) Müll. Arg. emend. R. Sant.

Corticolous, montane forest, 1600-2500 m, **ME, TA, BA** (Marcano et al. 1995).

Coenogonium linkii Ehrenb.

Corticolous, montane forest, 1100-2600 m, **LA, ME, TA, TR** (Vareschi 1973; López Figueiras 1986; Marcano 1994).

Collema glaucophthalmum Nyl. var. *glaucophthalmum*

Corticolous, montane forest and paramo, 2600-4000 m, **ME, TA, TR** (López Figueiras 1986; Marcano 1994).

Collema pulcellum Ach. var. *subnigrescens* (Müll. Arg.) Degel.

Corticolous, pre-montane forest, 200 m, **LA** (López Figueiras 1986).

Coniocybe sanguinea Tibell

Corticolous, humicolous, high montane forest, 2300 m, **ME** (Tibell 1982).

Crocynia gossipina (Sw.) Massal.

Corticolous, saxicolous, montane forest, 1800-2400 m, **ME** (Vareschi 1973; López Figueiras 1986).

Cryptothecia rubrocincta (Ehrenb.) Thor
Corticolous, montane forest, 1000-2600 m, **ME, TA, TR** (López Figueiras 1986, as *Chiodecton sanguineum*).

***Cystocoleus ebeneus* (Dillwyn) Thwaites
Saxicolous, paramo, 3000-4500 m, Marcano 95-71 (herb. lich. CEILT), **ME**.

Dermatocarpon miniatum (L.) Mann
Saxicolous, montane forest, 1800 m, **ME** (López Figueiras 1986).

Dibaeis absoluta (Tuck.) Kalb & Gierl
Terricolous, humicolous, often on dead mosses, paramo, 1300-3600 m, **LA, ME, TA, TR** (de Vries & Sipman 1984, as *Baeomyces*; Gierl & Kalb 1993).

Dibaeis columbina (Vain.) Kalb & Gierl
Terricolous, roadside bank, 2300-2800 m, **ME, TA** (Gierl & Kalb 1993).

Dibaeis fungoides (Sw.) Kalb & Gierl
Terricolous, humicolous, among mosses and on dead vegetation, montane forest and paramo, 1000-3400 m, **LA, ME, TA, TR** (de Vries & Sipman 1984, as *Baeomyces*; Kalb 1991, as *Baeomyces*; Gierl & Kalb 1993; Marcano 1994, as *Baeomyces*).

Dibaeis globulifera Kalb & Gierl
Terricolous, paramo, Boconó (Paramo de Guaramacal), **TR** (Gierl & Kalb 1993).

Dictyonema glabratum (Spreng.) D. Hawksw.
Corticolous, saxicolous, terricolous, montane forest and paramo, 1000-4200 m, **LA, ME, TA, TR** (Vareschi 1973, as *Corapavonia*; López Figueiras 1986, as *Cora montana*; Marcano 1994, as *Cora montana*).

Dictyonema sericeum (Sw.) Berk.
Saxicolous, corticolous, montane forest and paramo, 1300-3300 m, **LA, ME, TA** (Vareschi 1973; López Figueiras 1986; Marcano 1994).

Dictyonema zahlbruckneri (Schiffn.) V. Marcano COMB. NOV.
Basionym: *Corella zahlbruckneri* Schiffner in Zahlbruckner, Denkschr. K. Akad. Wiss. Wien, Math.-nat. Kl. 83: 200 (1927).

Saxicolous, corticolous, montane forest, 1300-2500 m, **LA, ME, TA, TR** (López Figueiras 1986, as *Corella*). Parmasto (1978) listed *Corella zahlbruckneri* as a synonymy of *D. glabratum*, but *D. zahlbruckneri* is a valid species well separated from *D. glabratum* and widely distributed in the Neotropical region. It is characterized by its small and dense lobes, of a greenish color when wet, whereas *D. glabratum* has wider lobes, of a whitish to bluish color when wet.

Dimerella chiodectonoides Kalb
Corticolous, montane forest, 2750 m, **ME, TA** (Kalb 1991).

**Dimerella epiphylla* (Müll. Arg.) Malme
Foliicolous, montane forest, 1700 m, R. Lücking 95-113 (herb. gr. lich. CEILT), **ME**.

Diploschistes cinereocaesius (Sw. ex Ach.) Vain.
Terricolous, saxicolous, montane forest and paramo, 2200-4450 m, **LA, ME, TA, TR** (Vareschi 1973; López Figueiras 1986; Marcano 1994).

Diploschistes gypsaceus (Ach.) A. Zahlbr.
Saxicolous, paramo, 3450-3500 m, **ME** (López Figueiras 1986; Lumbsch 1989).

Diploschistes hypoleucus A. Zahlbr.
Terricolous, paramo, 3000-4500 m, **ME** (Lumbsch 1989).

***Diploschistes* vs. *scruposus* (Schreb.) Norm.
Saxicolous, paramo, 4000-4700 m, Marcano 7130 (B, herb. lich. CEILT), **ME**.

Dirinaria applanata (Fée) Awas.
Corticolous, saxicolous, desertic forest, montane forest, pre-montane forest and paramo, 200-3452 m, **LA, ME, TR** (López Figueiras 1986; López Figueiras & Morales 1989a).

Dirinaria confluens (Fée) Awas. var. *confluens*
Corticolous, saxicolous, desertic forest, pre-montane forest, 850-1900 m, **LA, ME, TA, TR** (López Figueiras 1986).

Dirinaria confluens (Fée) Awas. var. *coccinea* (Lyngé) Awas.
Corticolous, montane forest, 900-2600 m, **TA** (López Figueiras 1986).

- Dirinaria confusa* Awas. var. *saxicola* (Räs.) Awas.
Saxicolous, montane forest, 1300-1450 m, **ME** (López Figueiras 1986; López Figueiras & Morales 1989a).
- Dirinaria consimilis* (Stirt.) Awas.
Corticolous, montane forest, 2400 m, **ME, TR** (López Figueiras 1986; López Figueiras & Morales 1989a).
- Dirinaria leopoldii* (Stein) Awas.
Corticolous, montane forest, 1100 m, **LA** (López Figueiras 1986).
- Dirinaria picta* (Sw.) Clem. & Shear
Saxicolous, montane forest, 2400 m, **ME, TA** (López Figueiras 1986).
- ***Echinoplaca leucotrichoides* (Vain.) R. Sant.
Foliicolous, montane forest, 1700 m, R. Lücking 95-118 (herb. lich. CEILT, herb. Lücking), **ME**.
- Erioderma chilense* Mont.
Corticolous, montane forest and paramo, 2500-3600 m, **ME** (López Figueiras 1986).
- Erioderma soledatum* D. Gallow. & P. M. Jörg.
Corticolous, montane forest and paramo, 2450-3200 m, **ME, TA, TR** (López Figueiras 1986; Marcano 1994).
- Erioderma verruculosum* Vain.
Corticolous, montane forest, 2900 m, **ME** (López Figueiras 1986).
- Erioderma wrightii* Tuck.
Corticolous, montane forest-paramo transition zone, 3000-3500 m, **ME** (López Figueiras 1986).
- Everniastrum catawbiense* (Degel.) Hale ex Sipman
Corticolous, montane forest-paramo transition zone, 2800-3500 m, **ME** (Culberson & Culberson 1981, as *Cetrariastrum*; López Figueiras 1986, as *Cetrariastrum*; Sipman 1986).
- Everniastrum cirrhatum* (E. Fr.) Hale ex Sipman
Corticolous, saxicolous, montane forest and paramo, 1400-4000 m, **ME, LA, TR** (Culberson & Culberson 1981, as *Cetrariastrum*; López Figueiras 1986, as *Cetrariastrum*; Sipman 1986).
- Everniastrum columbiense* (A. Zahlbr.) Hale ex Sipman
Corticolous, paramo, 3000-3600 m, **ME, TA, TR** (Vareschi 1973; Culberson & Culberson 1981, as *Cetrariastrum*; López Figueiras 1986, as *Cetrariastrum*; Sipman 1986).
- Everniastrum lipidiferum* (Hale & Wirth) Hale ex Sipman
Saxicolous, foliicolous, paramo, 2900-3600 m, **ME, TR** (Culberson & Culberson 1981, as *Cetrariastrum*; Sipman 1986).
- Everniastrum nigrociliatum* (Bouly de Lesd.) Hale ex Sipman
Saxicolous, paramo, 3500 m, **ME** (Culberson & Culberson 1981, as *Cetrariastrum*; López Figueiras 1986, as *Cetrariastrum*; Sipman 1986).
- Everniastrum sorocheilum* (Vain.) Hale ex Sipman
Corticolous, montane forest-paramo transition zone, 2400-3500 m, **ME, TA, TR** (Culberson & Culberson 1981, as *Cetrariastrum*; López Figueiras 1986, as *Cetrariastrum*; Sipman 1986).
- Everniastrum vexans* (A. Zahlbr. ex. W. Culb. & Ch. Culb.) Hale ex Sipman
Corticolous, saxicolous, montane forest and paramo, 1400-3600 m, **ME, TA, TR** (Culberson & Culberson 1981, as *Cetrariastrum*; López Figueiras 1986, as *Cetrariastrum*; Sipman 1986; Marcano 1994, as *Cetrariastrum*).
- ***Fellhanera bouteillei* (Desm.) Vezda
Foliicolous, montane forest, 1700 m, R. Lücking 95-105, 95-140 (herb. lich. CEILT, herb. Lücking), **ME**.
- ***Fellhanera dominicana* (Vain.) Vezda
Foliicolous, montane forest, 1700 m, R. Lücking 95-108 (herb. lich. CEILT, herb. Lücking), **ME**.
- ***Fellhanera fuscata* (Müll. Arg.) Vezda
Foliicolous, montane forest, 1700 m, R. Lücking 95-107 (herb. lich. CEILT, herb. Lücking), **ME**.
- ***Fellhanera sublecanorina* (Nyl.) Vezda

- Foliicolous, montane forest, 1700 m, R. Lücking 95-102 (herb. lich. CEILT, herb. Lücking), **ME**.
- Flavoparmelia caperata* (L.) Hale
Corticolous, saxicolous, terricolous, montane forest, 1800-3000 m, **LA, ME, TR** (Hale 1976b, as *Pseudoparmelia*).
- Flavoparmelia gerlachei* (A. Zahlbr.) Hale
Corticolous, saxicolous, montane forest and paramo, 1800-3750 m, **LA, ME, TR** (Hale 1976; López Figueiras 1986).
- Flavoparmelia leucoxantha* (Müll. Arg.) Hale
Saxicolous, desertic forest, pre-montane forest and montane forest, 700-2000 m, **LA, TA, TR** (Hale 1976b, as *Pseudoparmelia*; López Figueiras 1986, as *Pseudoparmelia*).
- Flavoparmelia rutidota* (Hooker & Tayl.) Hale
Saxicolous, montane forest-paramo transition zone, 2200-3100 m, **LA, ME** (Hale 1976b, as *Pseudoparmelia*).
- Flavoparmelia soredians* (Nyl.) Hale
Saxicolous, montane forest and paramo, 2600-3800 m, **ME** (Hale 1976b, as *Pseudoparmelia*).
- Flavopunctelia flaventior* (Stirt.) Hale
Saxicolous, montane forest and paramo, 2000-3300 m, **ME, TR** (Vareschi 1973; López Figueiras 1986).
- Graphina confluens* Müll. Arg.
Corticolous, montane forest, 1100 m, **LA** (López Figueiras 1986).
- ***Gyalectidium filicinum* Müll. Arg.
Foliicolous, montane forest, 1700 m, R. Lücking 95-122 (herb. lich. CEILT, herb. Lücking), **ME**.
- Gyalideopsis monospora* Kalb & Vezda
On moss and dead plant debris, clearing in paramo vegetation, 3500 m, **ME** (Kalb 1990).
- Gyalideopsis peruviana* Vezda
On moss and dead plant debris, clearing in paramo vegetation, 3500 m, **ME** (Kalb 1990).
- Gyrostomum scyphuliferum* (Ach.) Nyl.
Corticolous, desertic forest, 800 m, **LA** (López Figueiras 1986).
- Haematomma africanum* (Steiner) Dodge
Corticolous, pasturefield, montane forest, 1200-2000 m, **ME** (Staiger & Kalb 1995); H. Sipman & A. Morales 38052 (B, herb. lich. CEILT), **ME**.
- Haematomma puniceum* (Sw. ex Ach.) Massal.
Corticolous, desertic forest, pre-montane forest and montane forest, 200-1900 m, **LA, ME** (Vareschi 1973; López Figueiras 1986).
- Haematomma rufidulum* (Fée) Massal.
Corticolous, montane forest, **LA** (Staiger & Kalb 1995).
- Hafellia callispora* (Knight) Mayrh. & Sheard
Corticolous, paramo, 3300 m, **ME** (López Figueiras 1986, as *Buellia*).
- Helminthocarpon leprevostii* Fée
Corticolous, pre-montane forest, 800 m, **LA** (López Figueiras 1986).
- Heterocyphelium leucampyx* (Tuck.) Vain.
Corticolous, pre-montane forest, 1100 m, **LA** (López Figueiras 1986).
- Heterodermia albicans* (Pers.) Swinsc. & Krog
Saxicolous, corticolous, montane forest, 1000-2600 m, **LA, ME** (López Figueiras 1986).
- Heterodermia antillarum* (Vain.) Swinsc. & Krog
Saxicolous, corticolous, montane forest and paramo, 1400-3400 m, **ME** (López Figueiras 1986).
- Heterodermia boryi* (Fée) Hale
Saxicolous, corticolous, montane forest and paramo, 900-3500 m, **LA, ME, TA** (López Figueiras 1986).
- Heterodermia casarettiana* (Massal.) Trev.
Saxicolous, corticolous, montane forest and paramo, 1300-3400 m, **LA, ME, TA, TR** (Vareschi 1973; López Figueiras 1986).
- Heterodermia comosa* (Eschw.) Follm. & Redon
Corticolous, desertic forest, pre-montane forest and montane forest, 600-2400 m, **LA** (Vareschi

1973; López Figueiras 1986).

Heterodermia corallophora (Tayl.) Skorepa
Corticolous, saxicolous, desertic forest, montane forest and paramo, 600-3300 m, **LA, ME, TA, TR** (Vareschi 1973; López Figueiras 1986).

Heterodermia dendritica (Pers.) Poelt
Corticolous, montane forest and paramo, 1800-2350 m, **ME** (López Figueiras 1986).

Heterodermia diademata (Tayl.) Awas.
Corticolous, saxicolous, montane forest, 1400-2300 m, **LA, ME, TR** (López Figueiras 1986).

Heterodermia flabellata (Fée) Awas.
Corticolous, saxicolous, montane forest, pre-montane forest and paramo, 1100-3100 m, **LA, ME, TA, TR** (López Figueiras 1986).

Heterodermia galactophylla (Tuck) W. Culb. Cfr.
Corticolous, montane forest, 2300 m, **TR** (López Figueiras 1986).

Heterodermia isidiophora (Vain.) Awas.
Corticolous, saxicolous, montane forest and paramo, 1200-3500 m, **LA, ME, TA, TR** (Vareschi 1973; López Figueiras 1986).

Heterodermia japonica (Sato) Swinsc. & Krog
Corticolous, saxicolous, montane forest and paramo, 700-3600 m, **LA, ME, TA, TR** (López Figueiras 1986).

Heterodermia lamelligera (Tayl.) Follm. & Redon
Corticolous, montane forest, 2300 m, **ME** (López Figueiras 1986).

Heterodermia lepidota Swinsc. & Krog
Corticolous, saxicolous, montane forest, 1400-2000 m, **LA, ME, TA** (López Figueiras 1986).

Heterodermia leucomela (L.) Poelt
Corticolous, montane forest, 1100-2300 m, **LA, ME** (López Figueiras 1986).

Heterodermia lutescens (Kurok.) Follm. & Redon
Corticolous, foliicolous, montane forest and paramo, 1225-3200 m, **LA, TA, TR** (Vareschi 1973; López Figueiras 1986).

Heterodermia magellanica (A. Zahlbr.) Swinsc. & Krog
Corticolous, saxicolous, terricolous, montane forest and paramo, 1300-3750 m, **LA, ME, TA, TR** (López Figueiras 1986).

Heterodermia microphylla (Kurok.) Swinsc. & Krog
Corticolous, saxicolous, foliicolous, montane forest, 1000-2500 m, **ME, TA, TR** (López Figueiras 1986).

Heterodermia obscurata (Nyl.) Trev.
Corticolous, saxicolous, terricolous, montane forest, pre-montane forest and paramo, 700-3500 m, **LA, ME, TA, TR** (López Figueiras 1986).

Heterodermia podocarpa (Bél.) Awas.
Corticolous, montane forest and paramo, 1300-3500 m, **ME** (López Figueiras 1986).

Heterodermia pseudospeciosa (Kurok.) W. Culb.
Corticolous, montane forest, 800-2400 m, **ME, TA** (López Figueiras 1986).

Heterodermia speciosa (Wulf.) Trev.
Corticolous, saxicolous, terricolous, pre-montane forest, montane forest and paramo, 300-3452 m, **LA, ME, TA, TR** (López Figueiras 1986).

Heterodermia squamulosa (Degel.) W. Culb.
Corticolous, saxicolous, montane forest and paramo, 1300-3100 m, **LA, ME, TA, TR** (Vareschi 1973; López Figueiras 1986).

Heterodermia tremulans (Müll. Arg.) W. Culb.
Saxicolous, montane forest, 1800-2100 m, **ME** (López Figueiras 1986).

Heterodermia tropica (Kurok.) Sipman, COMB. NOV.
Basionym: *Anaptychia tropica* Kurokawa, Beih. Nova Hedwigia 6: 36 (1962).
Saxicolous, montane forest, 2000 m, **ME** (Vareschi 1973; López Figueiras 1986).

Heterodermia verrucifera (Kurok.) W. A. Web.
Corticolous, saxicolous, montane forest and paramo, 1100-3450 m, **LA, ME, TA, TR** (López Figueiras 1986, as *H. leucomela* fo. *verrucifera*).

Heterodermia vulgaris (Vain.) Follm. & Redón
Corticolous, foliicolous, montane forest and paramo, 1225-3000 m, **ME, TR** (López Figueiras 1986).

Hypogymnia bitteri (Lyngé) Ahti
Corticolous, saxicolous, paramo, 3100-4500 m, **ME** (López Figueiras 1986; Marcato 1994).

Hypotrachyna andensis Hale
Corticolous, saxicolous, montane forest and paramo, 1600-4000 m, **ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna bogotensis (Vain.) Hale
Corticolous, saxicolous, muscicolous, terricolous, montane forest and paramo, 2000-4500 m, **ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna brevirhiza (Kurok.) Hale
Corticolous, saxicolous, montane forest and paramo, 1700-4045 m, **ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna caraccensis (Tayl.) Hale
Corticolous, saxicolous, terricolous, montane forest and paramo, 2350-4500 m, **ME, TA, TR** (Vareschi 1973, as *Parmelia*; Hale 1975; López Figueiras 1986).

Hypotrachyna cendensis Hale & López Figueiras
Saxicolous, paramo, 2800-3400 m, **ME** (Hale & López-Figueiras 1978; López Figueiras 1986).

Hypotrachyna chicitae (Hale) Hale
Saxicolous, montane forest and paramo, 2600-3750 m, **ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna chlorina (Müll. Arg.) Hale
Corticolous, saxicolous, terricolous, montane forest and paramo, 1400-3200 m, **LA, ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna costaricensis (Nyl.) Hale
Corticolous, saxicolous, terricolous, muscicolous, montane forest and paramo, 1400-3500 m, **LA, ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna croceopustulata (Kurok.) Hale

Corticolous, saxicolous, montane forest and paramo, 1750-3750 m, **ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna dactylifera (Vain.) Hale
Corticolous, saxicolous, montane forest and paramo, 1400-3100 m, **LA, ME, TA, TR** (Vareschi 1973, as *Parmelia*; Hale 1975; López Figueiras 1986).

Hypotrachyna degelii (Hale) Hale
Corticolous, saxicolous, montane forest and paramo, 1400-3500 m, **LA, ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna densirhizinata (Kurok.) Hale
Corticolous, saxicolous, muscicolous, montane forest and paramo, 2400-3600 m, **ME, TA, TR** (Vareschi 1973, as *Parmelia*; Hale 1975; López Figueiras 1986).

Hypotrachyna dentella (Hale & Kurok.) Hale
Saxicolous, montane forest and paramo, 1600-4500 m, **LA, ME, TA** (Hale 1975; López Figueiras 1986).

Hypotrachyna ducalis (Jatta) Hale
Corticolous, saxicolous, montane forest and paramo, 2400-3200 m, **ME** (Hale 1975; López Figueiras 1986).

Hypotrachyna enderythraea (A. Zahlbr.) Hale
Corticolous, saxicolous, montane forest and paramo, 2000-4000 m, **ME, TA, TR** (Hale, 1975; López Figueiras 1986).

Hypotrachyna endochlora (Leight.) Hale
Corticolous, saxicolous, montane forest and paramo, 2160-3400 m, **ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna ensifolia (Kurok.) Hale
Corticolous, saxicolous, montane forest and paramo, 2000-4500 m, **ME, TA, TR** (Vareschi 1973, as *Parmelia*; Hale 1975; López Figueiras 1986).

Hypotrachyna erythrodes (A. Zahlbr.) Hale
Corticolous, saxicolous, montane forest and paramo, 1400-3500 m, **ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna exsplendens (Hale) Hale

Corticolous, saxicolous, montane forest and paramo, 1200-4750 m, **LA, ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna flavida (A. Zahlbr.) Hale
Saxicolous, montane forest and paramo, 900-3800 m, **ME, TA, TR** (Vareschi 1973, as *Parmelia*; Hale 1975; López Figueiras 1986).

Hypotrachyna flavovirens (Kurok.) Hale
Corticolous, paramo-montane forest transition zone, 2800-3300 m, **ME** (Hale 1975; López Figueiras 1986).

Hypotrachyna gigas (Kurok.) Hale
Corticolous, saxicolous, terricolous, montane forest and paramo, 2400-4500 m, **ME, TA, TR** (Vareschi 1973, as *Parmelia*; Hale 1975; López Figueiras 1986).

Hypotrachyna gondylophora (Hale) Hale
Corticolous, saxicolous, montane forest and paramo, 2000-3600 m, **LA, ME, TA, TR** (Vareschi 1973, as *Parmelia*; Hale 1975; López Figueiras 1986).

Hypotrachyna imbricatula (A. Zahlbr.) Hale
Corticolous, saxicolous, muscicolous, montane forest, pre-montane forest and paramo, 900-3600 m, **LA, ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna immaculata (Kurok.) Hale
Saxicolous, rarely corticolous, montane forest and paramo 2000-3000 m, **LA, ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna isidiocera (Nyl.) Hale
Corticolous, saxicolous, montane forest and paramo, 1400-3000 m, **LA, ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna laevigata (Smith) Hale
Corticolous, saxicolous, montane forest and paramo, 2000-3600 m, **ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna lineariloba (Kurok.) Hale
Corticolous, montane forest and paramo, 2100-3500 m, **LA, ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna livida (Tayl.) Hale
Saxicolous, montane forest and paramo, 1800-3500 m, **ME, TA** (Hale 1975; López Figueiras 1986).

Hypotrachyna lopezii Hale
Corticolous, saxicolous, montane forest and paramo 2700-4045 m, **ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna meridensis Hale & López F.
Corticolous, montane forest and paramo, 1600-3100 m, **ME** (Hale & López-Figueiras 1978).

Hypotrachyna microblasta (Vain.) Hale
Corticolous, saxicolous, terricolous, montane forest, pre-montane forest and paramo, 800-3500 m, **LA, ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna minima (Lyngé) Hale
Saxicolous, montane forest-paramo transition zone, 2400-3000 m, **TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna monilifera (Kurok.) Hale
Corticolous, saxicolous, montane forest and paramo, 2000-3600 m, **ME, TA** (Hale 1975; López Figueiras 1986).

Hypotrachyna neodissecta (Hale) Hale
Corticolous, montane forest and paramo, 1300-3452 m, **LA, ME** (Hale 1975; López Figueiras 1986).

Hypotrachyna neoflavida Hale & López F.
Saxicolous, paramo, 3000 m, **TA** (Hale & López-Figueiras 1978; López Figueiras 1986).

Hypotrachyna novella (Vain.) Hale
Corticolous, montane forest, 2000 m, **ME** (Hale 1975; López Figueiras 1986).

Hypotrachyna obscurella (Vain.) Hale
Saxicolous, corticolous, montane forest and paramo, 1450-3500 m, **LA, ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna oostingii (Dey) Hale
Corticolous, paramo, 3300-3500 m, **ME** (Hale 1975; López Figueiras 1986).

Hypotrachyna osseoalba (Vain.) Park & Hale
Corticolous, saxicolous, montane forest and paramo, 1225-3300m, **LA, ME, TA, TR** (Hale 1975, as *H. formosana*; López Figueiras 1986, as *H. formosana*).

Hypotrachyna osteoleuca (Nyl.) Hale
Saxicolous, corticolous, montane forest and paramo, 1500-3600 m, **LA, ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna paramensis W. Culb. & C. Culb.
Saxicolous, corticolous, terricolous, montane forest and paramo, 2100-3750 m, **ME, TA, TR** (Hale & López Figueiras 1978, as *Everniastrum*; Culberson & Culberson 1981; López Figueiras 1986).

Hypotrachyna partita Hale
Saxicolous, corticolous, montane forest and paramo, 1900-3500 m, **LA, ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna peruviana (Nyl.) Hale
Corticolous, saxicolous, montane forest, 1225-2400 m, **LA, ME, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna physcioides (Nyl.) Hale
Saxicolous, corticolous, montane forest and paramo, 1225-4000 m, **LA, ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna physodalica (Hale) Hale
Corticolous, saxicolous, montane forest-paramo transition zone, 2950-4200 m, **ME, TA** (Hale 1975; López Figueiras 1986).

Hypotrachyna primitiva Hale & López F.
Corticolous, saxicolous, muscicolous, montane forest-paramo transition zone, 2900-4750 m, **ME, TA, TR** (Hale & López-Figueiras 1978; López Figueiras 1986).

Hypotrachyna producta Hale
Corticolous, saxicolous, montane forest and paramo, 2150-3500 m, **ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna prolongata (Kurok.) Hale

Corticolous, saxicolous, montane forest and paramo, 2000-3600 m, **ME, TA, TR** (Vareschi 1973, as *Parmelia*; Hale 1975, also as *H. rachista*; López Figueiras 1986, also as *H. rachista*).

Hypotrachyna protenta Hale
Saxicolous, corticolous, pre-montane forest, montane forest and paramo, 800-4000 m, **LA, ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna pseudosinuosa (Asah.) Hale
Saxicolous, corticolous, montane forest and paramo, 1400-3750 m, **LA, ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna pulvinata (Fée) Hale
Corticolous, saxicolous, terricolous, montane forest and paramo, 2000-4200 m, **ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna reducens (Nyl.) Hale
Corticolous, saxicolous, montane forest and paramo, 2442-4000 m, **ME, TA, TR** (Vareschi 1973, as *Parmelia*; Hale 1975; López Figueiras 1986).

Hypotrachyna revoluta (Flk.) Hale
Saxicolous, corticolous, montane forest and paramo, 2000-3200 m, **LA, ME** (Hale 1975; López Figueiras 1986).

Hypotrachyna rhabdiformis (Kurok.) Hale
Corticolous, terricolous, montane forest-paramo transition zone, 2900-3100 m, **TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna rockii (A. Zahlbr.) Hale
Corticolous, saxicolous, montane forest and paramo, 1250-4750 m, **LA, ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna sinuosa (Smith) Hale
Saxicolous, corticolous, terricolous, montane forest and paramo, 1750-4045 m, **ME, TA, TR** (Hale 1975; López Figueiras 1986).

Hypotrachyna subformosana Hale INED.
Corticolous, saxicolous, montane forest, 1500-2400 m, **LA, ME** (López-Figueiras 1986)

Hypotrachyna subsaxatilis (B. de Lesd.) Hale
Saxicolous, corticolous, paramo, 3000-4045 m, **ME,**

TR (Hale 1975; López Figueiras 1986).

Hypotrachyna velloziae (Vain.) Hale
Corticolous, montane forest, 1500-1600 m, **LA**
(Hale 1975; López Figueiras 1986).

Icmadophila aversa (Nyl.) Rambold & Hertel
Corticolous, saxicolous, terricolous, montane forest
and paramo, 2400-3100 m, **ME, TA, TR** (López-
Figueiras 1986, as *Glossodium*; Rambold et al.
1993; Marcano 1994, as *Glossodium*).

Imshaugia aleurites (Ach.) S. L. F. Meyer
Saxicolous, paramo, 3500-3600 m, **ME** (López
Figueiras 1986, as *Parmeliopsis*).

Lecanographa illecebrosula (Müll. Arg.) Egea &
Torrente
Corticolous, montane forest, 2600 m, **ME** (Egea &
Torrente 1994).

Lecanora caesiiorubella Ach. subsp. *glaucomodes*
(Nyl.) Imsh. & Brodo
Corticolous, montane forest, 1100 m, **LA** (López
Figueiras 1986).

Lecanora chlarotera Nyl. s. lat.
Corticolous, montane forest, 1100 m, **LA** (López
Figueiras 1986).

Lecanora concilians Nyl.
Corticolous, pre-montane forest, 800 m, **LA** (López
Figueiras 1986).

Lecanora glaucoides Nyl.
Corticolous, montane forest, 1100 m, **LA** (Vareschi
1973).

Lecidea acerviformis Murray
Saxicolous, paramo, 3500-4750 m, **ME** (Vareschi
1973, as *Lecanora polytropa*).

Lecidea biatorina
Saxicolous, paramo, 3500 m, **ME** (López Figueiras
1986).

Lecidea hypomela Nyl.
Corticolous, montane forest, 1100 m, **LA** (López
Figueiras 1986).

Lecidea lapicida (Ach.) Ach.
Saxicolous, paramo, 3900-4150 m, **ME** (Vareschi
1973).

***Lecidea limosa* Ach.
Corticolous, paramo, 4000-4700 m, Marcano 7160
(B, herb. lich. CEILT), **ME**.

Lecidella carpathica Körb.
Saxicolous, paramo, 4150 m, **ME** (Hertel 1971, as
Lecidea durietzii; Vareschi 1973, as *Lecidea*
durietzii).

Lecidella elaeochroma (Ach.) M. Choisy
Corticolous, paramo, 3500-4720 m, **ME** (Hertel 1971;
Vareschi 1973).

Lecidella stigmataea (Ach.) Hertel & Leuckert
Saxicolous, paramo, 4250 m, **ME** (Hertel 1971;
Vareschi 1973).

Lecidella viridans (Flot.) Körb.
Saxicolous, montane forest, 1600 m, **ME** (Hertel
1971; Vareschi 1973).

***Lepraria neglecta* Auct.
Humicolous, saxicolous, paramo, 3500-4000 m,
Marcano 95-03 (herb. lich. CEILT), **ME**.

Leprocaulon arbuscula (Nyl.) Nyl.
Terricolous, montane forest, 2300-2400 m, **TA**
(Lamb & Ward 1977; López Figueiras 1986;
Marcano 1994; Marcano et al. 1996).

Leprocaulon congestum (Nyl.) Lamb & Ward
Saxicolous, terricolous, corticolous, montane forest
and paramo, 2700-4500 m, **ME, TA, TR** (Vareschi
1973, as *Stereocaulon congestum* and *S. albicans*;
Lamb & Ward 1977; López Figueiras 1986; Kalb
1991; Marcano et al. 1996).

Leprocaulon microscopicum (Vill.) Gams
Terricolous, humicolous, paramo 3500-3600 m, **ME**
(Marcano et al. 1996).

Leptogium aciculare P. M. Jörg.
Corticolous, paramo, 3500 m, **ME** (López Figueiras
1986).

Leptogium andinum P. M. Jörg.

Corticolous, saxicolous, montane forest and paramo, 2250-4045 m, **ME, TA, TR** (López Figueiras 1986).

Leptogium austroamericanum (Malme) Dodge
Corticolous, saxicolous, pre-montane forest and montane forest, 1000-2300 m, **LA, ME, TR** (Vareschi 1973; López Figueiras 1986).

Leptogium azureum (Sw.) Mont.
Corticolous, terricolous, saxicolous, montane forest and paramo, 1400-3500 m, **ME, TA, TR** (López Figueiras 1986).

Leptogium burgessii (L.) Mont.
Corticolous, saxicolous, montane forest and paramo, 2250-3500 m, **ME, TA, TR** (López Figueiras 1986; Marcano 1994).

Leptogium burnetiae Dodge
Corticolous, saxicolous, montane forest and paramo, 2200-4045 m, **ME, TA, TR** (López Figueiras 1986).

Leptogium chloromelum (Sw.) Nyl.
Corticolous, saxicolous, montane forest and paramo, 2000-3500 m, **ME, TR** (Vareschi 1973; López Figueiras 1986).

Leptogium coralloideum (Mey. & Flot.) Vain.
Corticolous, montane forest, 1600-2000 m, **ME** (Vareschi 1973; López Figueiras 1986).

Leptogium corniculatum (Hoffm.) Minks
Terricolous, paramo, 3500 m, **ME** (López Figueiras 1986, as *L. palmatum*).

Leptogium cyanescens (Rabenh.) Körb.
Corticolous, terricolous, desertic forest, montane forest and paramo, 500-3200 m, **LA, ME, TA, TR** (López Figueiras 1986).

Leptogium denticulatum Nyl.
Corticolous, montane forest and paramo, 1400-3500 m, **ME, TA, TR** (López Figueiras 1986).

Leptogium diaphanum (Sw.) Mont.
Corticolous, terricolous, saxicolous, montane forest and paramo, 1400-3450 m, **ME, TA, TR** (López Figueiras 1986, also as *Leptogium punctulatum*).

Leptogium digitatum (Massal.) A. Zahlbr.
Corticolous, montane forest and paramo, 2250-3750 m, **ME, TE** (López Figueiras 1986; Marcano 1994).

Leptogium floridanum Sierk
Corticolous, paramo, 3750 m, **ME** (López Figueiras 1986).

Leptogium furfuraceum (Harm.) Sierk
Saxicolous, montane forest and paramo transition zone, 2700-3300 m, **ME** (López Figueiras 1986).

Leptogium hibernicum Mitch. ex P. M. Jörg.
Corticolous, montane forest and paramo, 2400-3200 m, **ME, TR** (López Figueiras 1986).

Leptogium aff. *moluccanum* (Pers.) Vain.
Corticolous, paramo, 3500 m, **ME** (López Figueiras 1986, misspelt as *L. involuccanum*).

Leptogium isidiosellum (Riddle) Sierk
Corticolous, saxicolous, desertic forest, montane forest and paramo, 500-3300 m, **LA, ME, TA, TR** (López Figueiras 1986).

Leptogium laceroides B. de Lesd.
Corticolous, saxicolous, montane forest and paramo, 2300-3500 m, **LA, ME, TA, TR** (López Figueiras 1986).

Leptogium mandonii P. M. Jörg.
Corticolous, saxicolous, montane forest and paramo, 2400-4400 m, **ME, TA, TR** (López Figueiras 1986).

Leptogium marginellum (Sw.) S. F. Gray.
Corticolous, pre-montane forest, 1000-1600 m, **ME** (López Figueiras 1986).

Leptogium menziesii (Ach.) Mont.
Corticolous, terricolous, montane forest and paramo, 2250-4045 m, **ME, TA** (López Figueiras 1986).

Leptogium microstictum Vain.
Corticolous, montane forest, 1225-2450 m, **ME, TR** (López Figueiras 1986).

Leptogium milligranum Sierk

- Corticolous, montane forest and paramo 1300-3000 m, **LA, ME, TA** (López Figueiras 1986).
- Leptogium olivaceum* (Hook.) A. Zahlbr.
Corticolous, montane forest and paramo, 1400-3500 m, **ME, TA, TR** (Vareschi 1973, as *L. foveolatum*; López Figueiras 1986, as *L. foveolatum*).
- Leptogium papillosum* (B. de Lesd.) Dodge
Corticolous, montane forest and paramo, 2000-3300 m, **ME, TA, TR** (López Figueiras 1986).
- Leptogium phyllocarpum* (Pers.) Mont.
Corticolous, saxicolous, montane forest and paramo, 900-3750 m, **LA, ME, TA, TR** (López Figueiras 1986).
- Leptogium resupinans* Nyl.
Corticolous, paramo, 3000-3500 m, **ME, TA** (López Figueiras 1986; Kalb 1991).
- Leptogium reticulatum* Mont.
Corticolous, sometimes saxicolous, montane forest and paramo 1400-3100 m, **ME, TA, TR** (López Figueiras 1986).
- Leptogium stipitatum* Vain.
Corticolous, montane forest and paramo, 1400-3300 m, **LA, ME, TR** (López Figueiras 1986).
- Leptogium vesiculosum* (Sw.) Malme
Corticolous, pre-montane forest and montane forest, 1000-1600 m, **LA, ME, TA** (Vareschi 1973; López Figueiras 1986).
- Lobaria corrosa* (Ach.) Vain.
Corticolous, montane forest-paramo transition zone, 2550-2950 m, **ME** (Vareschi 1973; López Figueiras 1986).
- Lobaria crenulata* (Hook. in Kunth) Trev.
Corticolous, montane forest and paramo, 1225-3600 m, **LA, ME, TA, TR** (López Figueiras 1986).
- Lobaria exornata* (A. Zahlbr.) Yoshim.
Corticolous, montane forest, 1550-2900 m, **ME** (López Figueiras 1986).
- Lobaria pallida* (Hook. in Kunth) Trev.
Corticolous, montane forest and paramo, 2400-3600 m, **ME, TA, TR** (Vareschi 1973; López Figueiras 1986).
- Lobaria peltigera* (Del.) Vain.
Corticolous, montane forest, 2600-2700 m, **ME, TA** (López Figueiras 1986).
- Lobaria subexornata* Yoshim.
Corticolous, montane forest, 2000-2300 m, **ME** (López Figueiras 1986).
- Lopezaria versicolor* (Fée) Kalb & Hafelln.
Corticolous, in light, mossy forest, montane forest and paramo, 1450-3300 m, **LA, ME, TA, TR** (Vareschi 1973, as *Megalospora*; Sipman 1983, as *Catinaria*; López Figueiras 1986, as *Catinaria*; Marcano 1994).
- Megalospora foersteri* Kalb.
On moss, low paramo forest, 4200 m, **ME** (Kalb 1990).
- Megalospora sulphurata* Meyen & Flot. var. *sulphurata*
Corticolous, montane forest, 2400 m, **TA** (Sipman 1983; López Figueiras 1986).
- Megalospora sulphurata* Meyen & Flot. var. *nigricans* (Müll. Arg.) Riddle
Corticolous, rarely saxicolous, in a wide range of open, humid forests, montane forest and paramo, 2000-3100 m, **ME, TA, TR** (Sipman 1983; López Figueiras 1986).
- Megalospora tuberculosa* (Fée) Sipman
Corticolous, on canopy branches, on shrubs in clearings or on less exposed branches, in montane forest and paramo, 1300-3100 m, **LA, ME, TA, TR** (Sipman 1983; López Figueiras 1986).
- Megaspora verrucosa* (Ach.) Hafelln. & V. Wirth
Saxicolous, paramo, 4250 m, **ME** (Hertel 1971, as *Pachyospora*; Vareschi 1973, as *Pachyospora*).
- Melanelia panniformis* (Nyl.) Essl.
Saxicolous, paramo, 3500-4200 m, **ME** (Esslinger 1977; López Figueiras 1986).
- Menegazzia terebrata* (Hoffm.) Massal.
Corticolous, montane forest and paramo, 2300-

3100 m, **ME, TA, TR** (López Figueiras 1986; Marcano 1994).

Multiclavula mucida (Fr.) Petersen
Corticolous, montane forest, 2700 m, **ME** (Oberwinkler 1984).

Mycomicrothelia subfallens (Müll. Arg.) D. Hawksw.
Corticolous, montane forest, 2500-3000 m, **ME** (Aptroot 1991).

Myriotrema compunctum (Ach.) Hale
Corticolous, pre-montane forest, 800 m, **LA** (López Figueiras 1986).
Myriotrema occultum (Eschw.) Hale
Corticolous, pre-montane forest, 800 m, **LA** (López Figueiras 1986).

Myriotrema pachystomum (Nyl.) Hale
Corticolous, montane forest, 2400 m, **ME** (López Figueiras 1986, as *Ocellularia*).

Nephroma helveticum Ach.
Corticolous, montane forest and paramo, 2700-3600 m, **ME, TR** (López Figueiras 1986; Marcano 1994).

Normandina pulchella (Borr.) Nyl.
Lichenicolous, corticolous, muscicolous, montane forest and paramo, 2400-3500 m, **ME, TA, TR** (López Figueiras 1986; Marcano 1994).

Ocellularia cavata (Ach.) Müll. Arg.
Corticolous, montane forest, 2600-3000 m, **ME** (López Figueiras 1986).

Ocellularia eumorpha (Stirt.) Hale
Corticolous, montane forest, 2400 m, **ME** (López Figueiras 1986, as *Thelotrema*).

Ocellularia isidiifera Hale
Corticolous, montane forest, 2200-2400 m, **ME** (López Figueiras 1986).

Ocellularia leucomelana (Nyl.) Hale
Corticolous, montane forest, 2400 m, **ME** (López Figueiras 1986, as *Thelotrema*).

Ocellularia perforata (Leight.) Müll. Arg.

Corticolous, montane forest, 2400 m, **ME** (López Figueiras 1986).

***Ochrolechia africana* Vain.
Corticolous, on wood of fencepost between meadow and road (former mossy forest area), montane forest, 1200 m, H. Sipman & A. Morales 38056(B, herb. lich. CEILT), **ME**.

Omphalina ericetorum (Pers. ex Fr.) M. Lange
Terricolous, paramo, 3500 m, **ME** (Oberwinkler 1984).

Omphalina foliacea P. M. Jörg.
Muscicolous, humicolous, corticolous, paramo, 3500 m, **ME** (Jorgensen M. 1989).

Oropogon aliphaticus Essl.
Corticolous, or on soil among vegetation, paramo 3050-3100 m, **ME, TR** (Esslinger 1989).

Oropogon americanus Essl.
Corticolous, or on soil or rocks, paramo, 3050-4100 m, **ME, TR** (Esslinger 1989).

Oropogon atranorinus Essl.
Corticolous, montane forest and paramo, 2000-3100 m, **ME, TR** (López Figueiras 1986; Esslinger 1989; Marcano 1994).

Oropogon barbaticus Essl.
Corticolous, saxicolous, or on the ground, paramo, 2700-4045 m, **ME, TA, TR** (Esslinger 1989; Marcano 1994).

Oropogon bicolor Essl.
On soil with other vegetation, sometimes on rock or bark, montane forest and paramo, 2600-4200 m, **ME, TA, TR** (Esslinger 1989).

Oropogon byssaceus Essl.
Saxicolous, paramo, 4045 m, **ME** (Esslinger 1989).

Oropogon colibor Essl.
Corticolous, sometimes on the ground, paramo, 3650-4000 m, **ME** (Esslinger 1989).

Oropogon diffractaicus Essl.
Corticolous, sometimes on rock or on soil among vegetation, montane forest and paramo, 1600-

4000 m, **ME, TA, TR** (Esslinger 1989).

Oropogon fissuratus Essl.

Corticolous, or on soil among vegetation, montane forest and paramo, 1600-3600 m, **ME, TA** (Esslinger 1989).

Oropogon formosanus Asahina

Corticolous, also on rock or on soil among vegetation, montane forest, 2400-4200 m, **ME, TA, TR** (Esslinger 1989).

Oropogon granulatus Essl.

Corticolous, terricolous, saxicolous, montane forest, 2600-3600 m, **ME, TA, TR** (Esslinger 1989).

Oropogon halei Essl.

Corticolous, or rarely on rock, montane forest and paramo, 2800-4000 m, **ME, TR** (Esslinger 1989).

Oropogon lateralis Essl.

Saxicolous, paramo, 3100-3200 m, **ME** (Esslinger 1989).

Oropogon lopezii Essl.

Corticolous, montane forest, 2000-3100 m, **ME, TA, TR** (López Figueiras 1986; Esslinger 1989).

Oropogon lorobic Essl.

Corticolous, also on soil, montane forest and paramo, 2450-3600 m, **ME, TA, TR** (Esslinger 1989).

Oropogon loxensis (Fée) Th. Fr.

Corticolous, saxicolous, sometimes on soil, montane forest and paramo, 2200-4000 m, **ME, TA, TR** (Dodge & Vareschi 1956; Vareschi 1973; López Figueiras 1986; Esslinger 1989).

Oropogon maurus Essl.

Corticolous, saxicolous, or on soil among vegetation, montane forest, paramo, 3000-3600 m, **ME, TR** (Esslinger 1989).

Oropogon parietinus Essl.

Terricolous, paramo, 3500 m, **TA** (Esslinger 1989).

Oropogon pseudoloxensis Essl.

Corticolous, montane forest, 1200-1500 m, **ME** (Esslinger 1989).

Oropogon sperlingii Essl.

Corticolous, occasionally on soil or rock, montane forest and paramo, 2400-4100 m, **ME, TA, TR** (Esslinger 1989).

Oropogon striatulus Essl.

Corticolous, montane forest-paramo transition zone, paramo, 2900-3100 m, **LA, ME, TA, TR** (Esslinger 1989).

Oropogon venezuelensis Essl.

On soil among vegetation, paramo, 3100 m, **ME** (Esslinger 1989).

Pannaria rubiginosa (Ach.) Bory

Corticolous, montane forest and paramo, 2700-3500 m, **ME, TA** (López Figueiras 1986).

Paraparmelia alabamensis (Hale & McCullough) Elix & Johnston

Saxicolous, montane forest, 1400-2500 m, **LA, TR** (Hale 1976b, as *Pseudoparmelia*).

Parathelium indutum Nyl.

Corticolous, montane forest, 2200-2800 m, **ME, TA** (López Figueiras 1986; Marcano 1994).

Parmeliella nigrocineta (Mont.) Müll. Arg.

Corticolous, paramo, 3500 m, **ME** (López Figueiras 1986; Marcano 1994).

Parmeliella pannosa (Sw.) Müll. Arg.

Corticolous, montane forest and montane forest-paramo transition zone, 1225-3000 m, **ME, TA, TR** (López Figueiras 1986).

Parmelina versiformis (Kremp.) Hale

Corticolous or saxicolous, montane forest and paramo, 2600-3500 m, **ME** (Hale 1976; López Figueiras 1986).

Parmelinopsis cleefii (Sipman) V. Marcano & Sipman COMB. NOV.

Basionym: *Parmelina cleefii* Sipman, Proceed. Kon. Ned. Akad. Wetensch. C 83(4): 352 (1980). Saxicolous, paramo, 3450-3500 m, **ME** (López Figueiras 1986, as *Parmelina*).

Parmelinopsis cryptochlora (Vain.) Elix & Hale

Corticolous, saxicolous, montane forest-paramo

transition zone, paramo, 2900-3400 m, **ME** (López Figueiras 1986, as *Parmelina*).

Parmelinopsis damaziana (A. Zahlbr.) Elix & Hale
Corticolous, montane forest, 1800-2100 m, **ME**
(López Figueiras 1986, as *Parmelina*).

Parmelinopsis horrescens (Tayl.) Elix & Hale
Corticolous, pre-montane forest and montane
forest, 900-3000 m, **LA, ME, TA, TR** (Hale 1976c, as
Parmelina; López Figueiras 1986, as *Parmelina*).

Parmelinopsis minarum (Vain.) Elix & Hale
Corticolous, montane forest, 1225-2700 m, **LA,
ME, TA, TR** (Hale 1976c, as *Parmelina dissecta*;
López Figueiras 1986, as *Parmelina dissecta*).

Parmelinopsis spumosa (Asah.) Elix & Hale
Corticolous, montane forest, 2000-2300 m, **ME**
(Hale 1976c, as *Parmelina*; López Figueiras 1986,
as *Parmelina*).

Parmelinopsis swinscowii (Hale) Elix & Hale
Saxicolous, montane forest and paramo, 1100-
3500 m, **LA, ME** (López Figueiras 1986, as
Parmelina).

Parmentaria chilensis Fée
Corticolous, montane forest-paramo transition
zone, 2350-3000 m, **TA** (López Figueiras 1986).

Parmotrema arnoldii (DR) Hale
Corticolous, saxicolous, montane forest-paramo
transition zone, 1800-3750 m, **ME, TA** (López
Figueiras 1986).

Parmotrema argentinum (Kremp.) Hale
Corticolous, desertic forest, 600-700 m, **LA** (López
Figueiras 1986).

Parmotrema austrosinense (A. Zahlbr.) Hale
Corticolous, saxicolous, montane forest-paramo
transition zone, 1700-3200 m, **LA, ME** (Vareschi
1973, as *Parmelia*; López Figueiras 1986).

Parmotrema bangii (Vain.) Hale
Corticolous, montane forest, 1800 m, **LA** (López
Figueiras 1986).

Parmotrema blanchetianum (Müll. Arg.) Hale

Saxicolous, montane forest, 1550-2200 m, **ME**
(López Figueiras 1986).

Parmotrema chinense (Osbeck) Hale & Ahti
Corticolous, saxicolous, pre-montane forest and
montane forest, 200-2000 m, **LA, ME** (López
Figueiras 1986, as *Parmotrema perlatum*).

Parmotrema concurrens Hale
Saxicolous, montane forest, 1700 m, **ME** (López
Figueiras 1986).

Parmotrema conformatum (Vain.) Hale
Saxicolous, corticolous, montane forest and para-
mo 1440-2950 m, **LA, ME, TA, TR** (Vareschi 1973,
as *Parmelia*; López Figueiras 1986).

Parmotrema crinitum (Ach.) Hale
Corticolous, saxicolous, montane forest and para-
mo, 1200-3600 m, **LA, ME, TA, TR** (Vareschi 1973,
as *Parmelia*; López Figueiras 1986).

Parmotrema cristiferum (Tayl.) Hale
Corticolous, pre-montane forest and montane
forest, 200-1400 m, **LA, ME** (López Figueiras 1986).

Parmotrema dactylinum Hale INED.
Saxicolous, montane forest, 1200-2100 m, **ME**
(López Figueiras 1986).

Parmotrema delicatulum (Vain.) Hale
Saxicolous, corticolous, pre-montane forest and
montane forest, 800-2500 m, **LA, ME, TA** (López
Figueiras 1986).

Parmotrema dilatatum (Vain.) Hale
Corticolous, montane forest, 1100 m, **ME, LA**
(Vareschi 1973, as *Parmelia*; López Figueiras 1986).

Parmotrema dominicanum (Vain.) Hale
Saxicolous, montane forest, 900-1300 m, **ME** (López
Figueiras 1986).

Parmotrema eborinum (Hale) Hale
Saxicolous, montane forest and paramo, 800-3500
m, **LA, ME, TA, TR** (López Figueiras 1986).

Parmotrema ecrinitum Hale INED. (or misspelling
of *P. eciliatum* (Nyl.) Hale?)
Corticolous, montane forest-paramo transition
zone, 2000-3450 m, **ME** (López Figueiras 1986).

- Parmotrema endosulphureum* (Hillm.) Hale
Corticolous, saxicolous, pre-montane forest and montane forest, 200-1550 m, **LA, ME** (Vareschi 1973, as *Parmelia*; López Figueiras 1986).
- Parmotrema enteroxanthum* Hale
Corticolous, montane forest and paramo, 2200-3000 m, **ME, TA** (López Figueiras 1986).
- Parmotrema fasciculatum* (Vain.) Hale
Corticolous, paramo, 3300 m, **ME** (López Figueiras 1986).
- Parmotrema flavescens* (Kremp.) Hale
Saxicolous, corticolous, sometimes terricolous, pre-montane forest and montane forest, 790-2600 m, **LA, ME, TA, TR** (López Figueiras 1986).
- Parmotrema fractum* (Hale) Hale
Corticolous, saxicolous, montane forest-paramo transition zone, 2300-3500 m, **ME, TA, TR** (López Figueiras 1986).
- Parmotrema gardneri* (Dodge) Sérus.
Corticolous, sometimes saxicolous, montane forest, 1400-2600 m, **LA, ME, TR** (López Figueiras 1986).
- Parmotrema grayanum* (Hue) Hale
Saxicolous, corticolous, pre-montane forest and montane forest, 800-2500 m, **LA, ME, TA** (López Figueiras 1986).
- Parmotrema hababianum* (Gyeln.) Hale
Corticolous, montane forest, 1400-2100 m, **ME** (López Figueiras 1986).
- Parmotrema hypomiltoides* (Vain.) Hale
Corticolous, montane forest, 1300-1900 m, **LA** (López Figueiras 1986).
- Parmotrema larense* López Figueiras
Corticolous, montane forest, 1400-1500 m, **LA** (López Figueiras 1986).
- Parmotrema latissimum* (Fée) Hale
Saxicolous, corticolous, pre-montane forest, montane forest and paramo, 790-3500 m, **LA, ME, TA, TR** (López Figueiras 1986).
- Parmotrema leucosemothetum* (Hue) Hale
Saxicolous, montane forest-paramo transition zone, 1500-3200 m, **ME** (López Figueiras 1986).
- Parmotrema lopezii* Hale
Corticolous, montane forest, 2400-2750 m, **ME, TA** (López Figueiras 1986).
- Parmotrema madagascariaceum* (Hue) Hale
Corticolous, saxicolous, montane forest, 1400-2400 m, **LA, ME, TR** (López Figueiras 1986).
- Parmotrema mellissii* (Dodge) Hale
Corticolous, saxicolous, montane forest and paramo, 1225-3452 m, **LA, ME, TA, TR** (López Figueiras 1986).
- Parmotrema mirandum* (Hale) Hale Cfr.
Saxicolous, montane forest, 1900-2300 m, **TA, TR** (López Figueiras 1986).
- Parmotrema mordenii* (Hale) Hale
Saxicolous, montane forest, 2000-2250 m, **ME** (López Figueiras 1986).
- Parmotrema peralbidum* (Hale) Hale
Corticolous, saxicolous, pre-montane forest, montane forest and paramo, 200-3200 m, **LA, ME, TA, TR** (López Figueiras 1986).
- Parmotrema praesorediosum* (Nyl.) Hale
Corticolous, saxicolous, pre-montane forest and montane forest, 600-2600 m, **LA, ME, TA** (López Figueiras 1986).
- Parmotrema rampoddense* (Nyl.) Hale
Corticolous, saxicolous, desertic forest, montane forest and paramo, 600-3300 m, **LA, ME** (López Figueiras 1986).
- Parmotrema reitzii* Hale
Corticolous, montane forest, 2000-2350 m, **TA** (López Figueiras 1986).
- Parmotrema robustum* (Degel.) Hale
Corticolous, saxicolous, montane forest and paramo, 1225-3500 m, **LA, ME, TA, TR** (López Figueiras 1986).

Parmotrema sancti-angelii (Lynge) Hale
Saxicolous, corticolous, terricolous, pre-montane forest and montane forest, 700-2500 m, **LA, ME, TA, TR** (Vareschi 1973, as *Parmelia*; López Figueiras 1986).

Parmotrema setchellii (Vain.) Hale
Corticolous, paramo, 2950 m, **ME** (López Figueiras 1986).

Parmotrema soreidiiferum Hale
Corticolous, montane forest, 2000-2350 m, **TA** (López Figueiras 1986).

Parmotrema stuppeum (Tayl.) Hale
Saxicolous, pre-montane forest and paramo, 800-3200 m, **ME, TA, TR** (López Figueiras 1986).

Parmotrema subarnoldii (des Abb.) Hale
Corticolous, montane forest, 1400-1900 m, **LA, ME** (López Figueiras 1986).

Parmotrema subtinctorium (A. Zahlbr.) Hale
Corticolous, montane forest, 1400-1500 m, **LA** (López Figueiras 1986, as *P. subcrintum*).

Parmotrema sulphuratum (Nees & Flot.) Hale
Corticolous, montane forest, 1400-2400 m, **ME, TA** (López Figueiras 1986).

Parmotrema tinctorum (Nyl.) Hale
Corticolous, saxicolous, desertic forest, pre-montane forest, montane forest and paramo, 200-3100 m, **LA, ME, TA, TR** (López Figueiras 1986).

Parmotrema ultralucens (Krog) Hale
Corticolous, saxicolous, pre-montane forest and montane forest, 700-2000 m, **LA, ME, TA, TR** (López Figueiras 1986).

Parmotrema virescens Hale
Corticolous, montane forest and paramo, 1400-3100 m, **ME, TA** (López Figueiras 1986).

Parmotrema viridiflavum (Hale) Hale
Corticolous, or on rocks, montane forest and paramo, 2000-3000 m, **ME, TA** (López Figueiras 1986).

Parmotrema xanthinum (Müll. Arg.) Hale
Saxicolous, montane forest, 1300-2000 m, **LA, ME** (López Figueiras 1986).

Parmotrema zollingeri (Hepp) Hale
Corticolous, pre-montane forest, montane forest and paramo, 700-3000 m, **ME, TR** (López Figueiras 1986).

Parmotremopsis antillensis (Nyl.) Elix & Hale
Corticolous, montane forest, 1300-2300 m, **ME** (Hale 1976c, as *Parmelina*; López Figueiras 1986, as *Parmelina*).

Peltigera austroamericana A. Zahlbr.
Corticolous, saxicolous, terricolous, muscicolous, pre-montane forest, montane forest and paramo, 790-4000 m, **ME, TA, TR** (Vareschi 1973; López Figueiras 1986).

Peltigera canina (L.) Willd.
Corticolous, muscicolous, saxicolous, terricolous, montane forest and paramo, 2400-4500 m, **ME, TA, TR** (López Figueiras 1986).

Peltigera dolichorhiza (Nyl.) Nyl.
Corticolous, montane forest, 2300-2400 m, **ME** (Vareschi 1973; López Figueiras 1986).

Peltigera laciniata (Merr. ex Riddle) Gyeln.
Terricolous, corticolous, saxicolous, montane forest and paramo, 790-4750 m, **LA, ME, TA, TR** (Vareschi 1973; López Figueiras 1986).

Peltigera pulverulenta (Tayl.) Kremp.
Corticolous, muscicolous, terricolous, montane forest and paramo, 2200-4750 m, **ME, TA, TR** (López Figueiras 1986; Vareschi 1973).

Peltigera rufescens (Weiss) Humb.
Saxicolous, corticolous, terricolous, montane forest and paramo, 1750-4200 m, **ME, TA, TR** (López Figueiras 1986; Marcano 1994).

Peltigera spuriella Vain.
Terricolous, corticolous, montane forest, 2000-2600 m, **ME, TA, TR** (López Figueiras 1986).

Peltigera ulcerata Müll. Arg.
Terricolous, corticolous, montane forest and

paramo, 1200-3600m, **ME, TA, TR** (López Figueiras 1986).

***Peltigera vainioi* Gyelnik

Terricolous, montane forest and paramo, 2000-3300m, Marcano, Morales et Vidal 7100 (B, H, herb. lich. CEILT, VEN), López Figueiras 27892 (MERF), López Figueiras, Ahti & Jörgensen 17934 (MERF), **ME**

Peltula tortuosa (Nees) Wetm.

Saxicolous, desertic forest and pre-montane forest, 500-800 m, López Figueiras 18961, López Figueiras & Smith 20879, 20886 (MERF) **LA; ME** (Marcano 1994).

Pertusaria culbersonii Vezda

On dead plant debris, paramo vegetation, 3500 m, **ME** (Kalb 1990).

Pertusaria hypothamnicola Dibb.

Corticolous, montane forest, 2000-2300 m, **ME** (López Figueiras 1986).

Pertusaria tuberculifera Nyl.

Corticolous, montane forest, 1800-2100 m, **ME** (López Figueiras 1986; Marcano 1994).

Pertusaria xanthodes Müll. Arg.

Corticolous, desertic forest, 600 m, **LA** (López Figueiras 1986).

Phaeographis lobata (Eschw.) Müll. Arg.

Corticolous, montane forest, 1800 m, **LA** (López Figueiras 1986).

Phaeophyscia endococcinodes (Poelt) Essl.

Saxicolous, montane forest and paramo, 1900-4045 m, **ME, TA, TR** (López Figueiras 1986).

Phaeophyscia hispidula (Ach.) Moberg

Corticolous, saxicolous, montane forest and paramo, 1300-3300m, **LA, ME, TA, TR** (Vareschi 1973, as *Physcia setosa*; López Figueiras 1986, also as *Physcia setosa*).

Phlytella andensis Nyl.

Corticolous, montane forest, 2400-2800 m, **TA** (López Figueiras & Morales 1989b).

Phyllobaeis imbricatus (Hook. in Kunth) Kalb &

Gierl

Terricolous, on loamy or humous soil, among mosses, sometimes saxicolous, paramo, 1200-3600 m, **ME, TA, TR** (de Vries & Sipman 1984, as *Baeomyces*; Kalb 1991, as *Baeomyces*; Marcano 1994, as *Baeomyces*).

Phyllobaeis erythrellus (Mont.) Kalb

Terricolous, in ecology this variety resembles *P. imbricata*, paramo, 1800-3452 m, **ME, TA, TR** (Vareschi 1973, as *Baeomyces*; de Vries & Sipman 1984, as *Baeomyces imbricatus* var.).

Phyllobaeis linearis (De Vries) V. Marcano & Sipman **COMB. NOV.**

Basionym: *Baeomyces imbricatus* Hook. var. *linearis* De Vries, Proceed. Kon. Ned. Akad. Wetensch. C 87(2):243 (1984).

Terricolous, in ecology this species resembles *P. imbricatus*, paramo, 2400-3200 m, **ME, TA** (de Vries & Sipman 1984, as *Baeomyces imbricatus* var.).

***Phyllobathelium nigrum* R. Sant. & Tibell

Foliicolous, montane forest, 1700m, R. Lücking 95-123 (herb. lich. CEILT, herb. Lücking), **ME**.

***Phyllophiale alba* R. Sant.

Foliicolous, montane forest, 1700m, R. Lücking 95-131 (herb. lich. CEILT, herb. Lücking), **ME**.

Phyllopsora buettneri (Müll. Arg.) A. Zahlbr. var. *glauca* (Bouly des Lesd.) Brako

Corticolous, montane forest and paramo, 1400-3500m, **ME, TA** (Brako 1991).

Phyllopsora chlorophaea (Müll. Arg.) A. Zahlbr. Corticolous, montane forest, 900-2200m, **ME, TR** (Brako 1991).

Phyllopsora confusa Swinsc. & Krog

Corticolous, montane forest and paramo, 1600-3500m, **ME** (Brako 1991).

Phyllopsora corallina (Eschw.) Müll. Arg. var. *corallina*

Corticolous, montane forest, 1600 m, **ME** (Brako 1991).

Phyllopsora corallina (Eschw.) Müll. Arg. var.

- ochroxantha* (Nyl.) Brako
Corticolous, montane forest, 1700-2200 m, **ME** (Brako 1991).
- Phyllopsora fendleri* (Tuck. & Mont.) Müll. Arg.
Corticolous, montane forest and paramo, 2400-3500 m, **ME, TR** (Brako 1991).
- Phyllopsora intermediella* (Nyl.) A. Zahlbr.
Corticolous, montane forest, 2100-2400 m, **ME, TA** (Brako 1991).
- Phyllopsora isidiotyla* (Vain.) Riddle
Corticolous, montane forest, 3000 m, **ME** (Brako 1991).
- Phyllopsora kalbii* Brako
Corticolous, paramo, 2750 m, **ME** (Kalb 1991).
- Phyllopsora parvifolia* (Eschw.) Müll. Arg. var. *parvifolia*
Corticolous, montane forest, 2600-2900 m, **ME, TR** (Brako 1991).
- Physcia aipolia* (Humb.) Fürnrohr
Corticolous, pre-montane and montane forest, 700-1200 m, **LA, ME** (Moberg 1989).
- Physcia alba* (Fée) Müll. Arg.
Corticolous, desertic forest, pre-montane and montane forest, 450-3200 m, **LA, ME, TR** (Vareschi 1973; López Figueiras 1986; Moberg 1989).
- Physcia atrostriata* Moberg
Corticolous, sometimes saxicolous, desertic forest, pre-montane and montane forest, 200-2000 m, **LA, ME** (Moberg 1989).
- Physcia cinerea* Moberg
Saxicolous or corticolous, montane forest and paramo, 2500-4500 m, **ME, TR** (Moberg 1989).
- Physcia crista* Nyl.
Corticolous, pre-montane forest, 500-700 m, **LA** (Vareschi 1973; Moberg 1989).
- Physcia decorticata* Moberg
Corticolous or saxicolous, 1000-2700 m, **LA, ME, TA** (Moberg 1989).
- Physcia dimidiata* (Arn.) Nyl. var. *ornata* (Nadv.) Moberg
Corticolous or saxicolous, montane forest and paramo, 2600-3200 m, **ME, TR** (Moberg 1989).
- Physcia erumpens* Moberg
Corticolous, montane forest and paramo, 2200-3100, **ME** (Moberg 1989).
- Physcia integrata* Nyl.
Corticolous, also on exposed rocks, pre-montane forest and montane forest, 400-3000 m, **LA, ME, TA, TR** (Vareschi 1973; Moberg 1989, Kalb 1991).
- Physcia krogiae* Moberg
Corticolous, also on exposed rocks, pre-montane forest and montane forest, 700-1200 m, **ME** (Moberg 1989).
- Physcia lacinulata* Müll. Arg.
Corticolous, rarely on rocks, pre-montane forest and montane forest, 600-2000 m, **ME** (Moberg 1989).
- Physcia lobulata* Moberg
Corticolous or saxicolous, montane forest, 1225-2400 m, **ME, TR** (Moberg 1989).
- Physcia lopezii* Moberg
Corticolous, saxicolous or muscicolous, montane forest and paramo, 2200-3600 m, **ME, TR, TA** (Moberg 1989).
- Physcia manuelii* Moberg
Corticolous, rarely saxicolous, pre-montane forest and montane forest, 300-1700 m, **LA, ME, TA, TR** (Moberg 1989).
- Physcia pachyphylla* Müll. Arg.
Corticolous or saxicolous, pre-montane forest, montane forest and paramo, 400 m, **LA** (Moberg 1989).
- Physcia poncinsii* Hue.
Corticolous or saxicolous, desertic forest, pre-montane forest, montane forest and paramo, 200-3600 m, **LA, ME** (Moberg 1989).
- Physcia rolfii* Moberg
Saxicolous, desertic forest, pre-montane forest

- and montane forest, 200-2250 m, **LA, ME** (Moberg 1989).
- Physcia sinuosa* Moberg
On cacti or trunks of trees, desertic forest and pre-montane forest, 700-1500 m, **LA, ME** (Moberg 1989).
- Physcia solediosa* (Vain.) Lyngé
Corticolous or saxicolous, pre-montane forest and montane forest, 700-2800 m, **LA, ME, TA** (Moberg 1989).
- Physcia stellaris* (L.) Nyl.
Corticolous, desertic forest and pre-montane forest, 500-800 m, **LA, ME** (López Figueiras 1986, Moberg 1989).
- Physcia tenuis* Moberg
Corticolous, rarely on rocks, desertic forest and pre-montane forest, 600-1100 m, **LA** (Moberg 1989).
- Physcia tribacia* (Ach.) Nyl.
Saxicolous, montane forest, 2000-2800 m, **ME** (Moberg 1989).
- Piccolia conspersa* (Fée) Hafelln.
Corticolous, montane forest, 1500-2200 m, **ME** (Hafellner 1995).
- Placopsis gelida* (L.) Lindsay
Saxicolous, montane forest and paramo, 1800-3500 m, **ME, TA** (López Figueiras 1986).
- Placynthiella uliginosa* (Schrad.) Coppins & P. James
Corticolous, montane forest, 2200 m, **ME** (López Figueiras 1986, as *Lecidea*).
- Polycoccum arnoldii* (Hepp) D. Hawksw.
Lichenicolous on *Diploschistes cinereoceus*, montane forest, 2200 m, **ME** (López Figueiras 1986).
- ***Polymeridium albidum* (Müll. Arg.) R. C. Harris
Corticolous, on bark of fencepost between meadow and road (former mossy forest area), montane forest, 1200 m, H. Sipman & A. Morales 38060 (B, herb. lich. CEIL), **ME**.
- Polymeridium catapastum* (Nyl.) R. C. Harris
Corticolous, low montane forest, 1000 m, **LA** (López Figueiras 1986; Harris 1991).
- Polymeridium proponens* (Nyl.) R. C. Harris
Corticolous, high montane forest, 2000-2300 m, **TR** (Harris 1991).
- **Porina atrocoerulea* Müll. Arg.
Foliicolous, montane forest, 1700 m., R. Lücking 95-130 (herb. lich. CEILT, herb. Lücking), **ME**.
- ***Porina epiphylla* (Fée) Fée
Foliicolous, montane forest, 1700 m., R. Lücking 95-129 (herb. lich. CEILT, herb. Lücking), **ME**.
- Porina nucula* Ach.
Corticolous or foliicolous, montane forest, 2350-3000 m, **TA** (López Figueiras 1986).
- Porina octomera* (Müll. Arg.) F. Schill.
Corticolous, montane forest, 2200-2500 m, **ME** (Hafellner & Kalb 1995).
- Porina umbilicata* Müll. Arg.
Corticolous, montane forest, 2200-2500 m, **ME** (Hafellner & Kalb 1995, as *Pseudosagedia*).
- Porpidia crustulata* (Ach.) Hertel & Knoph
Saxicolous, paramo, 3500 m, **ME** (Hertel 1971, as *Lecidea crustulata*; Vareschi 1973, as *Lecidea crustulata*).
- Pseudevernia furfuracea* (L.) Zopf.
Corticolous, montane forest-paramo transition zone, 2900-3100 m, **TR** (López Figueiras 1986).
- Pseudocyphellaria aurata* (Ach.) Vain.
Corticolous, montane forest and paramo, 800-3100 m, **LA, ME, TA, TR** (Vareschi 1973; López Figueiras 1986).
- Pseudocyphellaria clathrata* (de Not.) Malme
Corticolous, montane forest, 1300-2000 m, **LA** (López Figueiras 1986); Marcano 16-9/95 (herb. lich. CEILT) **ME** new record.
- Pseudocyphellaria crocata* (L.) Vain.
Corticolous, montane forest, 2200-3000 m, **ME, TA** (López Figueiras 1986; Marcano 1994).

- Pseudoparmelia cyphellata* Lynge
Corticolous, montane forest, 1750 m, **ME** (Hale 1976b).
- Punctelia reddenda* (Stirt.) Krog
Corticolous, pre-montane forest and montane forest, 800-2900 m, **LA, ME, TA, TR** (López Figueiras 1986; Marcano 1994).
- Punctelia rudecta* (Ach.) Krog
Corticolous, also on rocks, 1450-3300 m, **LA, ME, TA, TR** (López Figueiras 1986).
- Punctelia stictica* (Del. ex Duby) Krog
Corticolous, saxicolous, montane forest and paramo, 2000-4200 m, **ME, TR** (Vareschi 1973, as *Parmelia*; López Figueiras 1986).
- Punctelia subrudecta* (Nyl.) Krog
Saxicolous or corticolous, desertic forest, pre-montane forest, montane forest and paramo, 900-3400 m, **LA, ME, TA, TR** (Vareschi 1973, as *Parmelia*; López Figueiras 1986).
- Pyrenula dermatodes* (Borr.) Schaer.
Corticolous, montane forest, 2700 m, **TA** (López Figueiras 1986; Marcano 1994).
- Pyrrhospora cinnabarina* (Sommerf.) M. Choisy
Saxicolous, montane forest, 1750 m, **ME** (López Figueiras 1986, as *Lecidea*; Marcano 1994, as *Lecidea*).
- Pyrrhospora russula* (Ach.) Hafelln. in Kalb & Hafelln.
Corticolous, pre-montane forest, 600-800 m, **LA** (López Figueiras & Morales 1989b, as *Biatora*).
- Pyxine albovirens* (G.Mey.) Aptroot
Saxicolous, pre-montane forest and montane forest, 700-2500 m, **LA, ME, TR** (Vareschi 1973; López Figueiras 1986; López-Figueiras & Morales 1989; all as *P. caesiopruinosa*).
- Pyxine berteriana* (Fée) Imsh.
Saxicolous, montane forest, 1200-2100 m, **ME** (Vareschi 1973; López Figueiras 1986; López-Figueiras & Morales 1989; Marcano 1994).
- Pyxine cocoes* (Sw.) Nyl.
Saxicolous or corticolous, desertic forest and pre-montane forest, 400-600 m, **LA, ME, TR** (Vareschi 1973; López-Figueiras & Morales 1989).
- Pyxine cognata* Stirt.
Corticolous, montane forest and paramo, 1500-3100 m, **ME, TA, TR** (López-Figueiras & Morales 1989).
- Pyxine coralligera* Malme
Saxicolous or corticolous, montane forest, 1100-2800 m, **LA, ME, TA, TR** (Vareschi 1973; López-Figueiras & Morales 1989).
- Pyxine daedalea* Krog & R. Sant.
Saxicolous or corticolous, montane forest and paramo, 1100-3200 m, **ME** (López-Figueiras & Morales 1989).
- Pyxine endolutea* Kalb
Corticolous or saxicolous, montane forest, 1800-1900 m, **ME, TR** (López-Figueiras & Morales 1989).
- Pyxine eschweileri* (Tuck.) Vain.
Corticolous or saxicolous, pre-montane forest, montane forest and paramo, 600-3200 m, **LA, ME** (López-Figueiras & Morales 1989).
- Pyxine limbulata* Müll. Arg.
Corticolous or saxicolous, paramo, 3800-4200 m, **ME** (López-Figueiras & Morales 1989).
- Pyxine microspora* Vain.
Saxicolous, montane forest, 1200-2800 m, **LA, ME** (López-Figueiras & Morales 1989).
- Pyxine petricola* Nyl. in Cromb.
Corticolous or saxicolous, desertic forest, pre-montane forest and montane forest, 400-2900 m, **LA, ME, TA, TR** (López-Figueiras & Morales 1989).
- Pyxine pungens* A. Zahlbr.
Saxicolous or corticolous, montane forest and montane forest-paramo transition zone, 800-3100 m, **ME** (López Figueiras 1986; López-Figueiras & Morales 1989).
- Pyxine pyxinoides* (Müll. Arg.) Kalb.
Saxicolous, montane forest-paramo transition zone,

2950-3000m, **ME** (López-Figueiras & Morales 1989).

Pyxine rhodesiaca Vain. ex Lynge.

Corticolous, montane forest-paramo transition zone, 2800-3100 m, **ME** (López Figueiras 1986; López-Figueiras & Morales 1989).

Pyxine subcinerea Stirt.

Corticolous, saxicolous, desertic forest, 200-400 m, **LA** (López Figueiras 1986; López-Figueiras & Morales 1989).

***Racodium rupestre* Pers.

Saxicolous, paramo, 3000-4500 m, Marcano 94-120 (herb. lich. CEILT), **ME**.

Ramalina africana (B. Stein) Dodge.

Corticolous, montane forest, 1200 m, **ME** (Marcano & Morales 1994f).

Ramalina andina V. Marcano et A. Morales.

Corticolous, montane forest, 2200-2500 m, **ME, TA** (Marcano & Morales 1994b).

***Ramalina asahinae* W. Culb. & C. Culb.

Corticolous, on tree branches along pasture field, montane forest and paramo, 600-3500 m, Sipman & A. Morales 38071 (B, herb. lich. CEILT), **ME, LA**.

Ramalina aspera Räsänen

Corticolous, desertic forest and montane forest, 1200-1950 m, **LA, ME**.

Ramalina asperula Kremp.

Corticolous, montane forest, 1200 m, **ME** (López Figueiras 1986).

***Ramalina calcarata* Krog & Swinsc.

Corticolous, montane forest, 1900-2900 m, Marcano 6108, 6116-B (herb. lich. CEILT) **ME, TA**; Morales 141 (herb. lich. CEILT) **ME**.

Ramalina camptospora Nyl.

Corticolous, paramo, 3200-3600 m, **ME** (Vareschi 1973, López Figueiras 1986).

Ramalina canaguensis V. Marcano et A. Morales

Corticolous, montane forest, montane forest-paramo transition zone, 1200-3200, **ME, TA, TR** (Marcano & Morales 1994d).

Ramalina caracasana Müll. Arg.?

Corticolous, desertic forest, 600-800 m, **LA** (López Figueiras 1986).

Ramalina celastri (Spreng.) Krog & Swinsc.

Corticolous, montane forest and paramo, 1200-3500 m, **LA, ME, TA** (López Figueiras 1986, also as *R. ecklonii*).

Ramalina chiguarensis V. Marcano et A. Morales

Corticolous, montane forest, 1000-2900 m, **ME** (Marcano & Morales 1994b).

Ramalina cochlearis A. Zahlbr.

Corticolous, montane forest and paramo, 1700-3800 m, **LA, ME, TA, TR** (Vareschi 1973; Marcano 1994; Marcano & Morales 1994e).

Ramalina complanata (Sw.) Ach.

Corticolous, montane forest and paramo, 1100-3500 m, **ME** (Vareschi 1973).

Ramalina crispata A. Morales et V. Marcano

Corticolous, montane forest, 1200-2900 m, **ME, TA** (Marcano & Morales 1994b).

Ramalina cumanensis Fée

Corticolous, montane forest and paramo, 2100-3550 m, **ME, TR** (Dodge & Vareschi 1956; Vareschi 1973; López Figueiras 1986; Kalb 1991).

Ramalina dendriscoides Nyl.

Corticolous, montane forest and paramo, 1600-3100 m, **ME** (Vareschi 1973).

Ramalina dictyota Dodge & Vareschi

Corticolous, montane forest and paramo, 2600-3500 m, **LA, ME, TR** (Dodge & Vareschi 1956; Vareschi 1973; López Figueiras 1986).

Ramalina escorialensis V. Marcano et A. Morales

Corticolous, montane forest-paramo transition zone, 2500-3000 m, **ME** (Marcano 1994; Marcano & Morales 1994e).

Ramalina lopezii A. Morales et V. Marcano

Corticolous, montane forest-paramo transition zone, 2900-3100 m, **TR** (Marcano & Morales 1994b).

**Ramalina peruviana* Ach.

Corticolous, montane forest, 2800-2900 m, Marcano 172 (herb. lich. CEILT) **ME**; López Figueiras 22276, 25107 (herb. lich. CEILT, MERF) **ME, TA**, first record for the Venezuelan Andes, but cited by Vareschi (1973) from Miranda state.

***Ramalina puiggarii* Müll. Arg.

Corticolous, paramo, 3100-3500 m, Vareschi 5451, 5932 (VEN), **ME, TA**.

Ramalina pusiola Müll. Arg.

Corticolous, montane forest and paramo, 900-3500 m, Marcano 6116-A **TA**; Morales 122 **ME**; López Figueiras 17152 **LA** (herb. lich. CEILT, MERF); (Marcano 1994).

***Ramalina rectangularis* Nyl.

Corticolous, montane forest and paramo, 1100-3350 m, Vareschi 5405, 5448, 5504 (VEN) **ME, TA**.

Ramalina reducta Krog & Swinsc.

Corticolous, montane forest, 2500-3000 m, **ME, TA** (Marcano & Morales 1993).

Ramalina subfraxinea Nyl. var. *confirmata* (Nyl.) N. Stevens

Corticolous, montane forest, 900-1200 m, **ME** (Morales & Marcano 1994).

Ramalina subpollinaria Nyl.

Corticolous, montane forest, 2000-2900 m, **ME** (Marcano & Morales 1994e).

Ramalina tenuissima V. Marcano et A. Morales
Corticolous, montane forest, 2200-3400 m, **ME, TA** (Marcano & Morales 1994b).

Ramalina towarensis V. Marcano et A. Morales
Corticolous, montane forest, 1000-1300, **ME** (Marcano & Morales 1994b).

Ramalina usnea (L.) R. H. Howe

Corticolous, montane forest and paramo, 1100-3500 m, **ME** (Dodge & Vareschi 1956; Vareschi 1973; López Figueiras 1986).

Ramalina vareschii V. Marcano & A. Morales
Corticolous, montane forest, 1750-3000 m, **ME** (Marcano & Morales 1994e).

Relicina abstrusa (Vain.) Hale

Saxicolous, rarely corticolous, pre-montane forest and montane forest, 900-3100 m, **LA, ME, TA, TR** (Hale 1975b; López Figueiras 1986; Marcano 1994).

Relicina subabstrusa (Gyeln.) Hale

Corticolous, montane forest, 1200-2300 m, **TR** (Vareschi 1973, as *Parmelia*; Hale 1975b; López Figueiras 1986).

Rhizocarpon leptolepis Anzi

Saxicolous, paramo, 3500 m, **ME** (Vareschi 1973).

Rhizocarpon superficiale (Schaer.) Vain.

Saxicolous, paramo, 4000-4700 m, **ME** (Vareschi 1973).

***Rhizoplaca melanophthalma* (DC.) Leuckert & Poelt

Terricolous or saxicolous, paramo, 4000-4200 m, Marcano 7046 (B, herb. lich. CEILT), **ME**.

Rimelia cetrata (Ach.) Hale & Fletcher

Saxicolous, corticolous, pre-montane forest, montane forest and paramo, 400-4200 m, **LA, ME, TA, TR** (Vareschi 1973, as *Parmelia*; López Figueiras 1986, as *Parmotrema*).

Rimelia commensurata (Hale) Hale & Fletcher

Corticolous, saxicolous, montane forest and paramo, 900-3200 m, **LA, ME, TA, TR** (López Figueiras 1986, as *Parmotrema*).

Rimelia reticulata (Taylor) Hale & Fletcher

Corticolous, saxicolous, sometimes muscicolous, pre-montane forest, montane forest and paramo, 300-3500 m, **LA, ME, TA, TR** (Vareschi 1973, as *Parmelia*; López Figueiras 1986, as *Parmotrema*).

Rimelia simulans (Hale) Hale & Fletcher

Corticolous, saxicolous, montane forest-paramo transition zone, 1400-2750 m, **LA, ME, TA** (López Figueiras 1986, as *Parmotrema*).

Rimelia subsidiosa (Müll. Arg.) Hale & Fletcher

Corticolous, saxicolous, pre-montane forest, montane forest and paramo, 900-3300 m, **LA, ME, TA, TR** (López Figueiras 1986, as *Parmotrema*).

Rimeliella conferenda (Hale) Kurok.

- Corticolous, montane forest and paramo, 1200-3300m, **LA, ME, TA, TR** (López Figueiras 1986, as *Parmotrema*).
- Rimeliella neotropica* (Kurok.) Kurok.
Corticolous, montane forest, 1100-2350 m, **LA, ME, TA** (López Figueiras 1986, as *Parmotrema*).
- Rimeliella subsumpta* (Nyl.) Kurok.
Corticolous, montane forest, 1300-2350 m, **LA, ME, TA** (López Figueiras 1986, as *Parmotrema*).
- Rimeliella subtinctoria* (A. Zahlbr.) Kurok.
Corticolous, sometimes saxicolous, montane forest-paramo transition zone, 1300-3000 m, **LA, ME** (López Figueiras 1986, as *Parmotrema haitiense* and *Parmotrema sulphuratum*).
- Rinodina colobinoides* (Nyl.) A. Zahlbr.
Corticolous, tree in pasture, 2000 m, **ME** (Kalb 1990).
- Sagenidiopsis undulata* (Fée) Egea et al.
Corticolous, montane forest, 1600-2500m, **ME, TR** (López Figueiras 1986, as *Chiodecton dilatatum*).
- Polysporina simplex* (Dav.) Vezda
Saxicolous, paramo, 4250m, **ME** (Vareschi 1973, as *Sarcogyne*).
- Schistophoron variabile* Tibell
Corticolous, low montane forest, 1100m, **LA** (Tibell 1982).
- Siphula fastigiata* (Nyl.) Nyl.
Terricolous, also on rocks, paramo, 3100-4045 m, **ME, TA, TR** (Vareschi 1973; López Figueiras 1986).
- Siphula pteruloides* Nyl.
Terricolous, paramo, 2700-4000 m, **ME, TA, TR** (Vareschi 1973; López Figueiras 1986; Marcano 1994).
- Solorina crocea* (L.) Ach. Cfr.
Terricolous, paramo, 3600m, **TA** (López Figueiras 1986).
- Sporastatia testudinea* (Ach.) Massal.
Saxicolous, paramo, 4250m, **ME** (Vareschi 1973).
- Stereocaulon atlanticum* (Lamb) Lamb.
Terricolous, saxicolous, muscicolous, montane forest-paramo transition zone, 2700-3600 m, **ME, TA** (López Figueiras 1986).
- Stereocaulon crambidiocephalum* Lamb
Terricolous, paramo, 3500m, **ME** (López Figueiras 1986).
- Stereocaulon didymicum* Lamb
Terricolous, saxicolous, montane forest and paramo, 2000-3452 m, **ME, TA, TR** (López Figueiras 1986).
- Stereocaulon meyeri* B. Stein
Terricolous, montane forest-paramo transition zone, 2450-4200m, **ME, TR** (López Figueiras 1986).
- Stereocaulon microcarpum* Müll. Arg.
Terricolous, saxicolous, montane forest and paramo, 1400-4045, **LA, ME, TA, TR** (López Figueiras 1986).
- Stereocaulon obesum* Th. Fr.
Saxicolous, terricolous, montane forest-paramo, 2442-3452 m, **ME** (Vareschi 1973; López Figueiras 1986).
- Stereocaulon pachycephalum* Vain.
Terricolous, montane forest, 2400-3100m, **TA, TR** (López Figueiras 1986).
- Stereocaulon pityrizans* Nyl.
Terricolous, saxicolous, montane forest and paramo, 2400-3500m, **ME, TA** (López Figueiras 1986).
- Stereocaulon pomiferum* Duvign.
Saxicolous, montane forest and paramo, 1500-3300 m, **ME** (López Figueiras 1986).
- Stereocaulon ramulosum* Räusch.
Terricolous, saxicolous, pre-montane forest, montane forest and paramo, 790-4045 m, **LA, ME, TA, TR** (Vareschi 1973; López Figueiras 1986).
- Stereocaulon strictum* Th. Fr.
Terricolous, montane forest, 3000 m, **TA** (López Figueiras 1986; Marcano 1994).
- Stereocaulon strictum* Th. Fr. var. *compressum* (Nyl.) Lamb

Terricolous, saxicolous, montane forest and paramo, 1700-3500 m, **ME, TA, TR** (López Figueiras 1986).

Stereocaulon tomentosum Fr.

Terricolous, saxicolous, montane forest-paramo transition zone, 2400-4200 m, **ME, TA, TR** (López Figueiras 1986).

Stereocaulon vesuvianum Pers.

Terricolous, saxicolous, montane forest and paramo, 2000-4000 m, **ME, TA, TR** (Vareschi 1973).

Stereocaulon vesuvianum Pers. var. *nodulosum* (Wallr.) Lamb

Saxicolous, paramo, 3300 m, **ME** (López Figueiras 1986).

Sticta ambavillaria (Bory) Ach.

Corticolous, paramo, 3450 m, **ME** (López Figueiras 1986).

Sticta andensis (Nyl.) Trev.

Corticolous, saxicolous, montane forest and paramo, 1800-3500 m, **LA, ME, TA, TR** (López Figueiras 1986, as *S. andina*).

Sticta damaecornis Pers. Aggr.

Corticolous, montane forest and paramo, 2200-3500 m, **ME, TA, TR** (Vareschi 1973; López Figueiras 1986).

Sticta filicina Ach.

Corticolous, montane forest and paramo, 1800-3550 m, **LA, ME, TA, TR** (López Figueiras 1986).

Sticta filicinella (Nyl.) A. Zahlbr.

Corticolous, montane forest, 1800-2600 m, **ME** (Vareschi 1973; López Figueiras 1986).

Sticta filix (Sw.) Nyl.

Corticolous, montane forest, 1800-2100 m, **ME** (López Figueiras 1986).

Sticta fuliginosa (Dicks.) Ach.

Corticolous, saxicolous, montane forest and paramo, 1400-4750 m, **LA, ME, TA, TR** (Vareschi 1973; López Figueiras 1986).

Sticta gyalocarpa (Nyl.) Trev. Cfr.

Corticolous, montane forest-paramo transition zone, 2700-3600 m, **ME** (López Figueiras 1986).

Sticta humboldtii Hooker

Corticolous, montane forest-paramo transition zone, 2600-3500 m, **ME** (Vareschi 1973; López Figueiras 1986).

Sticta orbicularis (A. Br.) Hue. Cfr.

Corticolous, montane forest, 1400-2600 m, **ME** (López Figueiras 1986).

Sticta sinuosa Pers. Aggr.

Corticolous, montane forest and paramo, 1400-3600 m, **ME, TA, TR** (Vareschi 1973; López Figueiras 1986).

Sticta tomentosa Ach.

Corticolous, montane forest and paramo, 1000-3750 m, **LA, ME, TA, TR** (Vareschi 1973; López Figueiras 1986).

Sticta weigelii (Isert ex Ach.) Vain.

Corticolous, saxicolous, pre-montane forest, montane forest and paramo, 790-4800 m, **LA, ME, TA, TR** (Vareschi 1973; López Figueiras 1986).

***Strigula antillarum* (Fée) Müll. Arg.

Foliicolous, montane forest, 1700 m, R. Lücking 95-s/n (herb. lich. CEILT, herb. Lücking), cited for Mérida by Santesson (1952), **ME**.

***Strigula platypoda* (Müll. Arg.) R. C. Harris

Foliicolous, montane forest, 1700 m, R. Lücking 95-132 (herb. lich. CEILT, herb. Lücking), **ME**.

***Tapellaria epiphylla* (Müll. Arg.) R. Sant.

Foliicolous, montane forest, 1700 m, R. Lücking 95-101, 95-103 (herb. lich. CEILT, herb. Lücking), **ME**.

***Tapellaria nana* (Fée) R. Sant.

Foliicolous, montane forest, 1700 m, R. Lücking 95-104, 95-103 (herb. lich. CEILT, herb. Lücking), **ME**.

Teloschistes chrysophthalmus (L.) Th. Fr.

Corticolous, rarely saxicolous, montane forest and paramo, 2500-3450 m, **LA, ME, TA** (Vareschi 1973; López Figueiras 1986).

Teloschistes exilis (Michx.) Vain.

Corticolous, desertic forest, pre-montane forest, montane forest and paramo, 600-3000 m, **LA, ME, TR** (López Figueiras 1986).

Teloschistes flavicans (Sw.) Norm.

Corticolous, desertic forest, pre-montane forest, montane forest and paramo, 600-3300 m, **LA, ME, TA, TR** (Keogh & Obando 1972; Vareschi 1973; López Figueiras 1986; Marcano 1994).

Tephromela atra (Huds.) Hafelln.

Corticolous, sometimes saxicolous, montane forest and paramo, 1400-3900 m, **LA, ME** (Vareschi 1973, as *Lecanora*; López Figueiras 1986, as *Lecanora*; Marcano 1994, as *Lecanora*).

***Tephromela aglaea* (Sommerf.) Hertel & Rambold

Saxicolous, paramo, 4000-4700 m, Marcano 7090 (B, herb. lich. CEILT), **ME**.

Tephromela elixii Kalb

Saxicolous, paramo, 3500 m, **ME** (Kalb 1991).

Thamnolia vermicularis (Sw.) Ach. ex Schaer var. *vermicularis*

Terricolous, paramo, 3500-4500 m, **LA, ME, TA, TR** (Vareschi 1973; López Figueiras 1986; Marcano 1992).

Thelotrema alborosellum (Nyl.) Tuck.

Corticolous, montane forest, 2400 m, **ME** (López Figueiras 1986, as *Ocellularia*).

Thelotrema carassense Vain.

Corticolous, montane forest, 2400 m, **ME** (López Figueiras 1986).

Thelotrema glaucopallens Nyl.

Corticolous, montane forest, 2400 m, **ME** (López Figueiras 1986).

Thelotrema lepadinum (Ach.) Ach.

Corticolous, montane forest, 2400-2900 m, **ME** (López Figueiras 1986; Marcano 1994).

Thelotrema neoleucomelanum Hale INED.

Corticolous, montane forest, 2400 m, **ME** (López

Figueiras 1986).

Thelotrema sphinctrinellum Nyl.

Corticolous, montane forest, 2200 m, **ME** (López Figueiras 1986, as *Ocellularia lopezii*).

Thelotrema plittii Hale INED.

Corticolous, montane forest, 2400 m, **ME** (López Figueiras 1986).

Trapelia coarctata (Sm.) M. Choisy in Werner
Saxicolous, paramo, 2950-3900 m, **ME** (Hertel 1971; Vareschi 1973).

Trapelia mooreana (Carroll) P. James

Saxicolous, montane forest and paramo, 2000-3500 m, **ME** (Hertel 1971, as *Trapelia torelli*; Vareschi 1973, as *Trapelia torelli*).

Trapelia obtogens (Th. Fr.) Hertel

Saxicolous, paramo, 3500 m, **ME** (Hertel 1971; Vareschi 1973).

Tremolecia atrata (Ach.) Hertel

Saxicolous, paramo, 3900 m, **ME** (Hertel 1971, as *Lecidea dicksonii*; Vareschi 1973, as *Lecidea dicksonii*).

***Tricharia vainioi* R. Sant.

Foliicolous, montane forest, 1700 m, R. Lücking 95-117 (herb. lich. CEILT, herb. Lücking), **ME**.

***Trichothelium bipindense* F. Schill.

Foliicolous, montane forest, 1700 m, R. Lücking 95-126 (herb. lich. CEILT, herb. Lücking), **ME**.

***Trichothelium epiphyllum* Müll. Arg.

Foliicolous, montane forest, 1700 m, R. Lücking 95-127 (herb. lich. CEILT, herb. Lücking), **ME**.

Trypethelium aeneum (Eschw.) A. Zahlbr.

Corticolous, montane forest, 1400 m, **TR** (López Figueiras 1986).

Trypethelium ochroleucum (Eschw.) Nyl.

Corticolous, pre-montane forest, 500-1000 m, **LA, ME, TA, TR** (López Figueiras 1986; Marcano 1994).

Trypethelium tropicum (Ach.) Müll. Arg.

Corticolous, pre-montane forest, 600-900 m, **LA,**

ME (López Figueiras 1986; Marcano 1994).

Tuckneraria laureri (Kremp.) Randlane & Thell
Corticolous, paramo, 3500-4200 m, **ME** (Randlane
et al. 1994).

Tylophorella pyrenocarpoides (Müll. Arg.) Egea
Corticolous, montane forest, 2200-2250 m, **ME**
(López Figueiras 1986; Marcano 1994; both as *T.*
polyspora).

Tylophoron crassiusculum Tibell
Corticolous, montane forest, 1300-2000 m, **LA, ME**
(Tibell 1982; López Figueiras 1986; Marcano 1994).

Tylophoron moderatum Nyl.
Corticolous, montane forest, 2200-2300 m, **ME**
(Tibell 1982; López Figueiras 1986).

Umbilicaria africana (Jatta) Krog & Swinsc.
Saxicolous, paramo, 4045-4750 m, **ME** (Marcano &
Morales 1994a).

Umbilicaria mifafensis V. Marcano & A. Morales
Saxicolous, paramo, 4115 m, **ME** (Marcano &
Morales 1994a).

Umbilicaria nylanderiana (A. Zahlbr.) H. Magn.
Saxicolous, paramo, 3800-4700 m, **ME** (López
Figueiras 1986; Marcano & Morales 1994a).

Umbilicaria polyphylla (L.) Baumg.
Saxicolous, paramo, 3200-4045 m, **ME** (López
Figueiras 1986; Marcano & Morales 1994a).

Umbilicaria polyrrhiza (L.) Fr.
Saxicolous, paramo, 2700-3500 m, **ME** (López
Figueiras 1986; Marcano & Morales 1994a).

Umbilicaria subcalvescens Sipman
Saxicolous, paramo, 2440-2700 m, **ME** (Sipman &
Topham 1992; Marcano 1994; Marcano & Morales
1994a).

Usnea acanthella (Lamb) F. J. Walker
Saxicolous, montane forest and paramo, 1980-
4762 m, **ME** (Vareschi 1973, as *U. sulphurea* fo.).

Usnea amabilis Motyka
Corticolous, montane forest, 2000-2300 m, **TR**

(Vareschi 1973; López Figueiras 1986).

Usnea amazonica Motyka
Corticolous, montane forest, 300-1800 m, **ME**
(Vareschi 1973).

Usnea andina Motyka
Corticolous, montane forest, paramo, 1800-3550
m, **ME** (Vareschi 1973).

Usnea angulata Ach.
Corticolous, montane forest, 2400 m, **TA** (López
Figueiras 1986).

Usnea aspera (Eschw.) Vain.
Saxicolous, paramo, 3350 m, **ME** (Vareschi 1973;
López Figueiras 1986).

Usnea aureola Motyka
Corticolous, montane forest-paramo transition
zone, 3000-4200 m, **ME** (Vareschi 1973).

Usnea bogotensis Vain.
Saxicolous, montane forest-paramo transition zone,
2900-3700 m, **ME** (Vareschi 1973; López Figueiras
1986).

Usnea bornmuelleri Stnr.
Terricolous, saxicolous, paramo, 3000 m, **ME**
(Vareschi 1973).

Usnea brasiliensis (A. Zahlbr.) Motyka
Corticolous, paramo, 3520 m, **ME** (Vareschi 1973).

Usnea caespitia Motyka
Saxicolous, montane forest and paramo, 1800-
3300 m, **ME** (Vareschi 1973).

Usnea cinchonae (Willd.) A. Zahlbr.
Corticolous, paramo, 3190 m, **ME** (Vareschi 1973).

Usnea cirrosa Motyka
Corticolous, montane forest, 1800 m, **ME** (Vareschi
1973).

Usnea cladoblephara (Müll. Arg.) Motyka
Corticolous, montane forest and paramo, 1800-
3400 m, **ME** (Vareschi 1973).

Usnea cladocarpa Fée.
Corticolous, montane forest-paramo transition

zone, 3000 m, **ME** (Vareschi 1973).

Usnea columbiana Motyka

Corticolous, montane forest, 2350-3000 m, **TA** (Vareschi 1973; López Figueiras 1986).

Usnea concinna Stirt.

Corticolous, montane forest-paramo transition zone, 1980-3190 m, **ME** (Vareschi 1973).

Usnea duriuscula Motyka

Corticolous, montane forest, 2400 m, **TA** (Vareschi 1973; López Figueiras 1986; Marcano 1994).

Usnea durietzii Mot.

Saxicolous, paramo, 3200-4750, **ME** (Walker 1985; López Figueiras 1986).

Usnea finckii A. Zahlbr.

Corticolous, montane forest-paramo transition zone, 3000-3190 m, **ME** (Vareschi 1973).

Usnea fruticans Motyka

Corticolous, paramo, 3250 m, **TR** (Vareschi 1973; López Figueiras 1986; Marcano 1994).

Usnea furfurosula (A. Zahlbr.) Motyka

Corticolous, montane forest, 1800-2500 m, **ME** (Vareschi 1973).

Usnea hawaiiensis Motyka

Corticolous, montane forest-paramo transition zone, 3000 m, **TA** (Vareschi 1973).

Usnea hawaiiensis Motyka. var. *sensitiva* Motyka

Corticolous, paramo, 3400 m, **ME** (Vareschi 1973).

Usnea humboldtii Motyka

Corticolous, montane forest, 1800 m, **ME** (Vareschi 1973).

Usnea jamaicensis Ach.

Corticolous, paramo, 3550 m, **ME** (Vareschi 1973).

Usnea laevigata Vain.

Corticolous, paramo, 3300-3700 m, **ME** (Vareschi 1973).

Usnea laevis (Eschw.) Nyl.

Saxicolous, paramo, 3500-3750 m, **ME** (Vareschi 1973; López Figueiras 1986).

Usnea laevis Nyl. var. *bogotensis* V. Vareschi **INED**.

Saxicolous, paramo, 3500-3600 m, **ME** (López Figueiras 1986).

Usnea laevis Nyl. var. *laevis* fo. *gigas* V. Vareschi **INED**.

Saxicolous, paramo, 3200 m, **TR** (López Figueiras 1986).

Usnea laevis Nyl. var. *glacialis* (Motyka) V. Vareschi **INED**.

Saxicolous, paramo, 3500-3600 m, **ME** (López Figueiras 1986).

Usnea laevis Nyl. var. *laevigata* (Motyka) V. Vareschi **INED**.

Saxicolous, paramo, 3500 m, **ME** (López Figueiras 1986).

Usnea laevis Nyl. var. *rocellana* (Motyka) V. Vareschi **INED**.

Saxicolous, montane forest, 2400 m, **ME** (López Figueiras 1986).

Usnea leioclada (A. Zahlbr.) Motyka

Corticolous, montane forest-paramo transition zone, 3190 m, **ME** (Vareschi 1973).

Usnea lesdainii Motyka

Corticolous, montane forest, 1350 m, **ME** (Vareschi 1973).

Usnea mearnsii (Vain.) Motyka

Corticolous, montane forest-paramo transition zone, 200-3140 m, **ME** (Vareschi 1973).

Usnea meridensis Hale **INED**?

Corticolous, montane forest, 2500 m, **ME** (López Figueiras 1986).

Usnea meridionalis A. Zahlbr.

Corticolous, montane forest, 2000 m, **ME** (Vareschi 1973).

Usnea mexicana Vain.

Corticolous, montane forest-paramo transition

zone, 3190 m, **ME** (Vareschi 1973).

Usnea mirabilis Motyka

Corticolous, montane forest, 2000 m, **ME** (Vareschi 1973).

Usnea moreliana Motyka

Corticolous, montane forest-paramo transition zone, 2000-3190 m, **ME** (Vareschi 1973).

Usnea paradoxa (A. Zahlbr.) Motyka

Corticolous, desertic forest, montane forest, 700-2100 m, **ME, TA** (Vareschi 1973).

Usnea roccinella Motyka. var. *glacialis* (A. Zahlbr.) Motyka

Saxicolous, paramo, 3200-3800 m, **ME** (Vareschi 1973).

Usnea rubescens Stirt.

Corticolous, sometimes terricolous, montane forest and paramo, 1800-4200 m, **ME** (Vareschi 1973).

Usnea rubicunda Stirt.

Corticolous, montane forest, 1800-2900 m, **ME, TR** (Vareschi 1973).

Usnea rubicunda Stirt. var. *insensibilis* Motyka

Corticolous, montane forest, 1700-1800 m, **ME** (Vareschi 1973).

Usnea scaberrima (Mont.) Motyka

Corticolous, paramo, 3000 m, **ME** (Vareschi 1973).

Usnea setulosa Motyka

Corticolous, paramo, 3000-3600 m, **ME** (Vareschi 1973).

Usnea solida Motyka

Corticolous, desertic forest, montane forest-paramo transition zone, 700-3190 m, **ME, TA** (Vareschi 1973; López Figueiras 1986).

Usnea splendida Motyka INED.

Corticolous, paramo, 3900 m, **ME** (Vareschi 1973).

Usnea steineri A. Zahlbr.

Corticolous, desertic forest, montane forest and paramo, 700-3520 m, **ME, TA** (Vareschi 1973).

Usnea subelegans (Vain.) Motyka

Corticolous, montane forest-paramo transition zone, 1700-3000 m, **ME** (Vareschi 1973).

Usnea subhirta (Vain.) Motyka

Corticolous, montane forest-paramo transition zone, 1800-3000 m, **ME** (Vareschi 1973).

Usnea subplicata (Vain.) Motyka

Corticolous, montane forest-paramo transition zone, 3000-3200 m, **ME** (Vareschi 1973).

Usnea sulcata Motyka

Corticolous, montane forest-paramo transition zone, 1800-3000 m, **ME** (Vareschi 1973).

Usnea tenuis Motyka

Corticolous, paramo, 3000-3600 m, **ME** (Vareschi 1973).

Usnea transitoria Motyka

Corticolous, montane forest and paramo, 2300-3350 m, **ME, TA** (Vareschi 1973).

***Vezdaea foliicola* Sérus.

Foliicolous, montane forest, 1700 m, R. Lücking 95-134 (herb. lich. CEILT), **ME**.

**Woessia apiahica* (Müll. Arg.) Sérus.

Foliicolous, montane forest, 1700 m, R. Lücking 95-140 (herb. lich. CEILT, herb. Lücking), **ME**.

Xanthoparmelia alectoronica Hale

Saxicolous, montane forest, 1100-1900 m, **LA** (López Figueiras 1986; Nash et al. 1995).

Xanthoparmelia conspersa (Ach.) Hale

Saxicolous, montane forest-paramo transition zone and paramo, 2900-3500 m, **ME** (Vareschi 1973, as *Parmelia*; López Figueiras 1986; Nash et al. 1995).

Xanthoparmelia cumberlandia (Gyeln.) Hale

Saxicolous, pre-montane forest, montane forest and paramo, 800-4400 m, **LA, ME, TR** (López Figueiras 1986; Nash et al. 1995).

Xanthoparmelia lopezii Nash & Elix

Saxicolous, paramo, 4100 m, **ME** (Nash et al. 1995).

Xanthoparmelia mexicana (Gyelnik) Hale

Saxicolous, sometimes terricolous, pre-montane forest, 915-1680 m, **LA, ME** (Nash et al. 1995).

Xanthoparmelia microspora (Müll. Arg.) Hale
Saxicolous, montane forest and paramo, 2000-4200 m, **ME, TA, TR** (López Figueiras 1986; Nash et al. 1995).

Xanthoparmelia mougeotii (Schaer) Hale
Saxicolous, rarely corticolous, montane forest and paramo, 1500-4200 m, **LA, ME, TR** (López Figueiras 1986; Nash et al. 1995).

Xanthoparmelia neopropaguloides Hale
Saxicolous, montane forest, 1000-2500 m, **ME** (Nash et al. 1995).

Xanthoparmelia plittii (Gyeln.) Hale
Saxicolous, rarely corticolous, desertic forest, pre-montane forest and montane forest, 300-2500 m, **LA, ME, TA, TR** (Vareschi 1973, as *Parmelia*; López Figueiras 1986; Nash et al. 1995).

Xanthoparmelia sipmanii Nash & Elix
Saxicolous, paramo, 4100 m, **ME** (Nash et al. 1995).

Xanthoparmelia somloënsis (Gyelnik) Hale
Saxicolous, paramo, 3800 m, **ME** (Nash et al. 1995).

Xanthoparmelia standaertii (Gyeln.) Hale
Terricolous, paramo, 3700-3800 m, **ME** (López Figueiras 1986; Nash et al. 1995).

Xanthoparmelia subplittii Hale
Saxicolous, pre-montane forest and montane forest, 915-1680 m, **LA, ME** (Nash et al. 1995).

Xanthoparmelia subramigera (Gyeln.) Hale
Saxicolous, pre-montane forest and montane forest, 800-2300 m, **LA, ME, TR** (López Figueiras 1986; Nash et al. 1995).

Xanthoparmelia subsorediata Hale
Saxicolous, paramo, 3000-4200 m, **ME** (Nash et al. 1995).

Xanthoparmelia substenophylloides Hale
Saxicolous, pre-montane forest and montane forest, 915-2400 m, **LA, ME** (Nash et al. 1995).

Xanthoparmelia subulcerosa Nash & Elix
Terricolous, montane forest, 1800 m, **ME** (Nash et

al. 1995).

Xanthoparmelia succedans Elix & J. Johnston
Saxicolous, pre-montane forest, 610-1220 m, **LA, ME** (Nash et al. 1995).

Xanthoparmelia taractica (Kremp.) Hale
Terricolous or saxicolous, montane forest-paramo transition zone, 2800-3100 m, **TR** (López Figueiras 1986; Nash et al. 1995).

Xanthoparmelia tasmanica (Hook. & Tayl.) Hale
Saxicolous, paramo, 3200-3400 m, **ME, TR** (López Figueiras 1986; Nash et al. 1995).

Xanthoparmelia ulcerosa (A. Zahlbr.) Hale
Saxicolous, montane forest and paramo, 1800-3400 m, **LA, ME, TA, TR** (López Figueiras 1986; Nash et al. 1995).

Xanthoparmelia wildeae (Dodge) Hale
Saxicolous, rarely on soil, pre-montane forest, 1680 m, **ME** (Nash et al. 1995).

Xanthoria candelaria (L.) Th. Fr.
Saxicolous, desertic forest and pre-montane forest, 1000-1100 m, **LA, ME** (López Figueiras 1986).

Xanthoria elegans (Link) Th. Fr.
Saxicolous, paramo, 3900-4200 m, **ME** (Hertel 1971; Vareschi 1973, as *Caloplaca*; López Figueiras 1986; Marcano 1994).

SYNONYMS AND MISAPPLIED NAMES

Alectoria ecuadorensis (A. Zahlbr.) Gyelnik = *A. ochroleuca*

Arthonia tumidula (Ach.) Ach. = *A. cinnabarina*
Arthrorhaphis litina = probable misspelling for *A. alpina*

Baeomyces absolutus Tuck. = *Dibaeis*

Baeomyces erythrellus Mont. = *Phyllobaeis*

Baeomyces fungoides (Sw.) Ach. = *Dibaeis*

Baeomyces imbricatus Hook. = *Phyllobaeis*

Baeomyces imbricatus Hook. var. *erythrellus* (Mont.) De Vries = *Phyllobaeis erythrellus*

Baeomyces imbricatus Hook. var. *linearis* De Vries = *Phyllobaeis linearis*

- Biatora russula* Mont. = *Pyrrhospora*
Buellia callispora (Knight) Stein. = *Hafellia*
Calicium auratum Tibell INED. = *C. chlorosporum*
Caloplaca elegans (Link) Th. Fr. = *Xanthoria*
Catinaria versicolor (Fée) Sipman = *Lopezaria*
Cetrariastrum catawbiense (Degel.) W. Culb & C. Culb. = *Everniastrum*
Cetrariastrum cirrhatum (E. Fr.) W. Culb & C. Culb. = *Everniastrum*
Cetrariastrum columbiense (A. Zahlbr.) W. Culb & C. Culb. = *Everniastrum*
Cetrariastrum lipidiferum (Hale & Wirth) W. Culb & C. Culb. = *Everniastrum*
Cetrariastrum nigrociliatum (B. de Lesd) W. Culb & C. Culb. = *Everniastrum*
Cetrariastrum sorocheilum (Vain.) W. Culb & C. Culb. = *Everniastrum*
Cetrariastrum vexans A. Zahlbr. ex W. Culb & C. Culb. = *Everniastrum*
Chaenotheca sp. (López Figueiras 1986) = *C. chrysocephala*
Chiodecton dilatatum (Nyl.) Vain. = *Sagenidiopsis undulata*
Chiodecton sanguineum (Sw.) Vain. = *Cryptothecia rubrocincta*
Cladonia aggregata (Sw.) Ach. = *Cladia*
Cladonia anomoea (Ach.) Ahti & P. James = *C. ramulosa*
Cladonia arcuata Ahti = *Cladina*
Cladonia confusa R. Sant. = *Cladina*
Cladonia hypoxanthoides Auct., non Vain. = *C. meridensis*
Cladonia vulcanica Zoll. = *C. didyma* var.
Coccocarpia parmelioides (Hook.) Trev. = *C. erythroxyli*
Cora montana (Sw.) R. Sant. = *Dictyonema glabratum*
Cora pavonia L. = *Dictyonema glabratum*
Corella zahlbruckneri Schiffner = *Dictyonema*
Everniastrum paramense Hale & López F. = *Hypotrachyna*
Glossodium aversum Nyl. = *Icmadophila*
Heterodermia leucomela (L.) Poelt fo. *verrucifera* Kurok. = *H. verrucifera*
Hypotrachyna formosana (A. Zahlbr.) Hale = *H. osseoalba*
Hypotrachyna rachista (Hale) Hale = *H. prolongata*
Lecanora atra (Huds.) Ach. = *Tephromela*
Lecanora polytropa (Hoffm.) Rabh. = *Lecidea acerviformis*
Lecidea byssomorpha Nyl. = *Auriculora*
Lecidea cinnabarina Sommerf. = *Pyrrhospora*
Lecidea dicksonii (Gmel.) Ach. = *Tremolecia atrata*
Lecidea crustulata (Ach.) Sprg. = *Porpidia*
Lecidea durietzii = *Lecidella carpathica*
Lecidea tessellata Flk. = *Cladopycnidium sinense*
Lecidea uliginosa (Schrad.) Ach. non sensu Vain. = *Placynthiella*
Lecidea vorticosa (Flk.) Körb. = *Carbonea*
Leptogium foveolatum Nyl. = *L. olivaceum*
Leptogium involuccanum = probable misspelling for *L. moluccanum*
Leptogium palmatum (Huds.) Mont. = *L. corniculatum*
Leptogium punctulatum Nyl. = *L. diaphanum*
Megalospora versicolor (Fée) A. Zahlbr. = *Lopezaria*
Ocellularia alborosella Nyl. = *Thelotrema*
Ocellularia lopezii Hale = *Thelotrema sphinctrinellum*
Ocellularia pachystoma Nyl. = *Myriotrema*
Pachyospora verrucosa (Ach.) Massal. = *Megaspora*
Parmelia austrosinensis A. Zahlbr. = *Parmotrema*
Parmelia caraccensis Tayl. = *Hypotrachyna*
Parmelia caroliniana Nyl. = *Canoparmelia*
Parmelia cetrata Ach. = *Rimelia*
Parmelia conformata Vain. = *Parmotrema*
Parmelia conspersa Ach. = *Xanthoparmelia*
Parmelia crinita Ach. = *Parmotrema*
Parmelia crozalsiana B. de Lesd. = *Canoparmelia*
Parmelia dactylifera Vain. = *Hypotrachyna*
Parmelia densirhizinata Kurok. = *Hypotrachyna*
Parmelia dilatata Vain. = *Parmotrema*
Parmelia endosulphureum Hill. = *Parmotrema*
Parmelia ensifolia Kurok. = *Hypotrachyna*
Parmelia flavida A. Zahlbr. = *Hypotrachyna*
Parmelia gigas Kurok. = *Hypotrachyna*
Parmelia gondylophora Hale = *Hypotrachyna*
Parmelia pilosa Stitzb. = *Canomaculina*
Parmelia plittii Gyeln. = *Xanthoparmelia*
Parmelia prolongata Kurok. = *Hypotrachyna*
Parmelia reducens Nyl. = *Hypotrachyna*
Parmelia reticulata Tayl. = *Rimelia*
Parmelia sancti-angelii Lyngé = *Parmotrema*
Parmelia stictica Nyl. = *Punctelia*

Parmelia subrudecta Nyl. = *Punctelia*
Parmelina antillensis (Nyl.) Hale = *Parmotre-*
mopsis
Parmelina cleefii Sipman = *Parmelinopsis*
Parmelina cryptocolora (Vain.) Hale = *Parmeli-*
nopsis
Parmelina damaziana (A. Zahlbr.) Hale = *Parme-*
linopsis
Parmelina dissecta (Nyl.) Hale = *Parmelinopsis*
minarum
Parmelina horrescens (Tayl.) Hale = *Parmelinop-*
sis
Parmelina muelleri (Vain.) Hale = *Canomaculina*
Parmelina pilosa (Stizenb.) Hale = *Canomaculi-*
na
Parmelina spumosa (Asah.) Hale = *Parmelinop-*
sis
Parmelina swinscowii (Hale) Hale = *Parmelinop-*
sis
Parmeliopsis aleurites (DR.) Hale = *Imshaugia*
Parmotrema cetratum (Ach.) Hale = *Rimelia*
Parmotrema conferendum Hale = *Rimeliella*
Parmotrema commensuratum (Hale) Hale = *Rime-*
liella
Parmotrema haitiense (Hale) Hale = *Rimeliella*
subtinctoria
Parmotrema neotropicum (Kurok.) Hale = *Rime-*
liella
Parmotrema perlatum (Huds.) Hale = *P. chinense*
Parmotrema reticulatum (Tayl.) Hale = *Rimelia*
Parmotrema simulans (Hale) Hale = *Rimelia*
Parmotrema subcristatum (Nyl.) Hale = *P. subtinc-*
torium
Parmotrema subsidiosum (Müll. Arg.) Hale =
Rimelia
Parmotrema subsumptum (Nyl.) Hale = *Rimeliel-*
la
Parmotrema sulfuratum Auct. = *Rimeliella sub-*
tinctoria
Physcia setosa Ach. = *Phaeophyscia hispidula*
Pseudosagedia umbilicata (Müll. Arg.) Hafelln.
 & Kalb = *Porina*
Pseudoparmelia alabamensis (Hale & McCul-
 lough) Hale = *Paraparmelia*
Pseudoparmelia caperata (L.) Hale = *Flavopar-*
melia
Pseudoparmelia caribaea (Hale) Hale = *Cano-*
parmelia
Pseudoparmelia carneopruinata (A. Zahlbr.) Hale
 = *Canoparmelia*

Pseudoparmelia caroliniana (Nyl.) Hale = *Cano-*
parmelia
Pseudoparmelia cinerascens (Lyng.) Hale = *Ca-*
no-parmelia
Pseudoparmelia crozalsiana (B. de Lesd) Hale =
Canoparmelia
Pseudoparmelia leucoxantha (Müll. Arg.) Hale =
Flavoparmelia
Pseudoparmelia rutidota (Hook. & Tayl.) Hale =
Flavoparmelia
Pseudoparmelia scrobicularis (Kremp.) Hale =
Canoparmelia
Pseudoparmelia soledians (Nyl.) Hale = *Flavo-*
parmelia
Pseudoparmelia texana (Tuck.) Hale = *Canopar-*
melia
Pyxine caesiopruinosa (Nyl.) Imsh. = *P. albovi-*
rens
Ramalina ecklonii Auct., non (Spreng.) Mey. &
 Flot. = *R. celastri*
Sarcogyne simplex (Dav.) Nyl. = *Polysporina*
Sphaerophorus melanocarpus (Sw.) DC. = *Buno-*
dophoron
Sticta andina Trev. = probable misspelling for *S.*
andensis
Thelotrema eumorphum Stirt. = *Ocellularia*
Thelotrema leucomelanum Nyl. = *Ocellularia*
Trapelia torelli (Anzi) Hertel = *Trapelia moorea-*
na
Tylophorella polyspora Vain. = *T. pyrenocarpoi-*
des
Usnea sulphurea Koen. fo. *acanthella* Lamb = *U.*
acanthella

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References

- Ahti T. 1986a.** New species of reindeer lichens (*Cladina*). *Annales Botanici Fennici* 23: 221-227.
- Ahti T. 1986b.** New species and nomenclatural combinations in the lichen genus *Cladonia*. *Annales Botanici Fennici* 23: 205-220.
- Ahti T. & S. Stenroos 1986.** A revision of *Cladonia* sect. *Cocciferae* in the Venezuelan Andes. *Annales Botanici Fennici* 23: 229-238.
- Aptroot A. 1991.** A monograph of the Pyrenulaceae (excluding *Anthracotheicum* and *Pyrenula*) and the Requinellaceae, with notes on the Pleomasariaceae, the Trypetheliaceae and Mycomicrothelia (Lichenized and Non-lichenized Ascomycetes). *Bibliotheca Lichenologica* 44: 1-178.
- Arvidsson L. 1982.** A monograph of the lichen genus *Coccocarpia*. *Opera Botanica* 67: 1-96.
- Brako, L. 1991.** *Phylopsora* (Bacidiaceae). *Flora Neotropica Monograph* 55: 1-66.
- Culberson W.L. & C. F. Culberson 1981.** The genera *Cetrariastrum* and *Concamerella* (Parmeliaceae): A chemosystematic synopsis. *The Bryologist* 84: 273-314.
- de Vries B. G. & H. Sipman 1984.** Studies on Colombian cryptogams. XXI. The lichen genus *Baeomyces* in Colombia and Venezuela. *Proceedings of the Koninklijke Nederlandse Akademie van Wetenschappen, Series C*, 87: 235-246.
- Dodge C. W. & V. Vareschi 1956.** Resultados liquenológicos de excursiones efectuadas en Venezuela. No. 1. *Acta Biológica Venezuelica* 2: 1-11.
- Egea J. M. & P. Torrente 1994.** El género de hongos liquenizados *Lecanactis* (Ascomycotina). *Bibliotheca Lichenologica* 54.
- Eriksson, O. E. & D. L. Hawksworth 1993.** Outline of the Ascomycetes - 1993. *Systema Ascomycetum* 12: 51-257.
- Esslinger T. L. 1977.** A chemosystematic revision of the brown *Parmeliae*. *Journal Hattori Botanical Laboratory* 42: 1-211.
- Esslinger T. L. 1989.** Systematics of *Oropogon* (Alectoriaceae) in the New World. *Systematics Botany Monographs* 28: 281-284.
- Gierl C. & K. Kalb 1993.** Die Flechtengattung *Dibaeis*. Eine Übersicht über die rosafrüchtigen Arten von *Baeomyces* sens. lat. nebst Anmerkungen zu *Phyllobaeis* gen. nov. *Herzogia* 9: 593-645.
- Hafellner J. & J. Poelt 1979.** Die arten der gattung *Caloplaca* mit pluriloculären sporen (*Meroplacis*, *Triophthalmidium*, *Xanthocarpia*). *Journal of the Hattori Botanical Laboratory* 46: 1-41.
- Hafellner J. 1995.** Über *Piccolia*, eine lichenisierte Pilzgattung der Tropen (Ascomycotina, Lecanorales). Pp. 107-122 in: E. É. Farkas, R. Lücking & V. Wirth (eds.): *Scripta Lichenologica - Lichenological papers dedicated to Antonín Vezda*. *Bibliotheca Lichenologica* 58: 1-501; J. Cramer in der Gebrüder Borntraeger Verlagsbuchhandlung, Berlin- Stuttgart.
- Hafellner J. & K. Kalb 1995.** Studies in Trichotheliales ordo novus. Pp. 161-186 in: J.-G. Knoph, K. Schrüfer & H. J. M. Sipman (eds.): *Studies in lichenology with emphasis on chemotaxonomy, geography and phytochemistry Festschrift Ch. Leuckert*. *Bibliotheca Lichenologica* 57: 1-476. J. Cramer in der Gebrüder Borntraeger Verlagsbuchhandlung, Berlin- Stuttgart.
- Hale M. E. 1975a.** A monograph of the lichen genus *Hypotrachyna* (Parmeliaceae) in tropical America. *Smithsonian Contributions to Botany* 25: 1-73.
- Hale M. E. 1975b.** A monograph of the lichen genus *Relicina* (Parmeliaceae). *Smithsonian Contributions to Botany* 26: 1-32.
- Hale M. E. 1976a.** A monograph of the lichen genus *Bulbothrix* (Parmeliaceae). *Smithsonian Contributions to Botany* 32: 1-29.
- Hale M. E. 1976b.** A monograph of the lichen genus *Pseudoparmelia* Lynge (Parmeliaceae). *Smithsonian Contributions to Botany* 31: 1-62.
- Hale M. E. 1976c.** A monograph of the lichen genus *Parmelina* Hale (Parmeliaceae). *Smithsonian Contributions to Botany* 33: 1-60.
- Hale M. E. & M. López Figueiras 1978.** New species of *Everniastrum* and *Hypotrachyna* from South America (Lichenes: Parmeliaceae). *The Bryologist* 81: 590-593.
- Hawksworth D. 1977.** *Alectoria* and allied genera in North America. *Opera Botanica* 42: 1-164.
- Hertel H. 1971.** Ueber holarktische Krustenflechten aus den venezuelanischen Anden. *Willdenowia* 6: 225-272.
- Holmgren, P. K., N. H. Holmgren & L. C. Barnett 1990.** *Index Herbariorum Part. I: The herbaria of the world*. Eighth edition. New York Botanical Garden. 693 p.
- Huber O. & C. Alarcón. 1988.** Mapa de vegetación de

- Venezuela. Ministerio del Ambiente y de los Recursos Naturales Renovables - Fundación Bioma, Caracas.
- Huovinen K., T. Ahti & S. Stenroos 1990.** The composition and contents of aromatic lichen substances in *Cladonia* section *Cladonia* and group *Furcatae*. Pp. 209-241 in: H. M. Jahns (ed.), Contributions to lichenology in honour of A. Henssen. Festschrift A. Henssen. Bibliotheca Lichenologica 38: 1-427; J. Cramer in der Gerbrüder Bromtraeger Verlagsbuchhandlg, Berlin-Stuttgart.
- Huovinen K. & T. Ahti 1988.** The composition and contents of aromatic lichen substances in *Cladonia* section *Perviae*. Annales Botanici Fennici 25: 371-383.
- Jørgensen P. M. 1986.** A *Calicium*-like *Caloplaca* from Venezuela. Lichenologist 18: 389-390.
- Jørgensen P. M. 1989.** *Omphalina foliacea*, a new basidiolichen from America. Nordic Journal of Botany 9: 89-95.
- Kalb K. 1990.** Lichenes Neotropici. Fascikel XI (No. 451-475). Neumarkt.
- Kalb K. 1991.** Lichenes Neotropici. Fascikel XII (No. 476-525). Neumarkt.
- Kärnefelt I. 1990.** Isidiate taxa in the Teloschistales and their ecological and evolutionary significance. Lichenologist 22: 307-320.
- Keogh M. F. & R. M. Obando 1972.** Constituents of *Teloschistes flavicans*. Phytochemistry 11: 1495.
- Lamb M. & A. Ward 1977.** A preliminary conspectus of the species attributed to the imperfect lichen genus *Leprocaulon* Nyl. Journal of the Hattori Botanical Laboratory 38: 499-553.
- López-Figueiras M. 1978.** Censo de Macrolíquenes del estado Mérida. Trabajo de ascenso, Facultad de Farmacia, Universidad de los Andes, Mérida. 204 p.
- López-Figueiras M. 1986.** Censo de Macrolíquenes de los estados Falcón, Lara, Mérida, Táchira, y Trujillo. Facultad de Farmacia, Universidad de los Andes, Mérida. 521 p.
- López Figueiras M. & A. Morales 1989a.** Aportaciones a la flora liquenológica de Venezuela I. Ernstia 56: 8-9.
- López Figueiras M. & A. Morales 1989b.** Aportaciones a la flora liquenológica de Venezuela II. Ernstia 56: 13-14.
- Lumbsch H. T. 1989.** Die holarktischen Vertreter der Flechtengattung *Diploschistes* (Thelotremataceae). Journal of the Hattori Botanical Laboratory 66: 133-196.
- Marcano V. 1994.** Introducción al estudio de los líquenes de los Andes de Venezuela. Serie Flora Liquélica de los Andes Venezolanos, Vol. 1, Immecca Press. 338 p.
- Marcano V. & A. Morales 1993.** *Ramalina reducta* Krog et Swiscow, especies de liquen de los Andes Venezolanos, nueva para América. Ernstia 3: 19-26.
- Marcano V. & A. Morales 1994a.** Revisión del género *Umbilicaria* (Ascomycetes liquenizados) en Venezuela. Ernstia 4: 21-35.
- Marcano V. & A. Morales 1994b.** New species of *Ramalina* from Venezuela. The Bryologist 97: 26-33.
- Marcano V. & A. Morales 1994c.** El género *Alectoria* Ach. (Ascomycetes liquenizados) en los Andes de Venezuela. Ernstia 4: 89-100.
- Marcano V. & A. Morales 1994d.** A new species of *Ramalina* from the Venezuelan Andes. Ernstia 3: 101-104.
- Marcano V. & A. Morales 1994e.** El grupo de *Ramalina cochlearis* A. Zahlbr. con especial referencia al Trópico Americano. Tropical Bryology 9: 187-199.
- Marcano V. & A. Morales 1994f.** *Ramalina africana* in Venezuela. The Bryologist 97: 190-192.
- Marcano V., A. Morales, S. Mohali, L. Galiz & E. Palacios-Prü 1995.** El género *Coccocarpia* Pers. (Ascomycetes liquenizados) en Venezuela. Tropical Bryology 10: 215-227.
- Marcano V., L. Galiz, S. Mohali, A. Morales & E. Palacios-Prü 1996.** Revisión del género *Leprocaulon* Nyl. ex Lamy (Lichenes Imperfecti) en Venezuela. Tropical Bryology 11 (in press).
- Moberg R. 1989.** The lichen genus *Physcia* in Central and South America. Nordic Journal of Botany 10: 319-342.
- Morales A. & V. Marcano 1994.** *Ramalina subfraxinea* Nyl. var. *confirmata* (Nyl.) N. Stevens (Ascomycete Liquealizado, Ramalinaceae) en America. Tropical Bryology 9: 201-204.
- Nash, T. H., Gries C & J. A. Elix. 1995.** A revision of the lichen genus *Xanthoparmelia* in South America. Bibliotheca Lichenologica 56: 1-158.
- Oberwinkler F. 1984.** Fungus-alga interactions in basidiolichens. Beiheft 79 zur Nova Hedwigia (Festschrift J. Poelt): 739-774.
- Randlane T., A. Saag, A. Thell & I. Kärnefelt 1994.** The lichen genus *Tuckneraria* Randlane & Thell

- a new segregate in the Parmeliaceae. Acta Botanica Fennica 150: 143-151.

- Santesson R. 1952.** Foliicolous lichens I. A revision of the taxonomy of the obligately foliicolous, lichenized fungi. Symbolae Botanicae Upsaliensis 12: 1-590.
- Sipman H. 1983.** A monograph of the lichen family Megalosporaceae. Bibliotheca Lichenologica 18: 1-241.
- Sipman H. 1986.** Notes on the lichen genus *Everniastrum* (Parmeliaceae). Mycotaxon 26: 235-251.
- Sipman H. & P. Topham 1992.** The genus *Umbilicaria* (lichenized ascomycetes) in Colombia. Nova Hedwigia 54: 63-75.
- Staiger B. & K. Kalb 1995.** *Haematomma*-Studien. Bibliotheca Lichenologica 59: 1-222.
- Stenroos S. 1989.** Taxonomic revision of the *Cladonia miniata* group. Annales Botanici Fennici 26: 237-261.
- Tibell T. 1982.** Caliciales of Costa Rica. Lichenologist 14: 219-254.
- Tibell, T. 1996.** Caliciales. Flora Neotropica Monograph 69: 1-79.
- Vareschi V. 1973.** Resultados liquenológicos de excursiones efectuadas en Venezuela No.3. Catalogo de los líquenes de Venezuela. Acta Botánica Venezuelica 8: 177-245.
- Veillon J. P. 1989.** Los bosques naturales de Venezuela. Instituto de Silvicultura, Universidad de Los Andes. Oscar Todtmann Press. 118 p.
- Walker F. J. 1985.** The lichen genus *Usnea* subgenus *Neuropogon*. Bulletin of the British Museum (Natural History), Botany 13: 1-130.
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