

Foliicolous lichens from Venezuela with new and remarkable records

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Abstract: NEUWIRTH, G. 2007. Foliicolous lichens from Venezuela with new and remarkable records. – *Herzogia* 20: 319–326.

The foliicolous lichens of lowland and montane rainforests were investigated on five different localities in Venezuela. A compilation of 117 taxa is presented. 61 taxa are new to Venezuela.

Zusammenfassung: NEUWIRTH, G. 2007. Foliikole Flechten aus Venezuela mit neuen und bemerkenswerten Nachweisen. – *Herzogia* 20: 319–326.

Die foliikolen Flechten von Tieflands- und Gebirgsregenwäldern wurden an fünf Lokalitäten in Venezuela untersucht. Eine Zusammenstellung der 117 gefundenen Taxa wird vorgelegt. 61 Taxa sind neu für Venezuela.

Key words: Lichenized Ascomycetes, biodiversity, rainforests, South America.

Introduction

The current checklist of lichens and lichenicolous fungi in Venezuela contains 1232 taxa (FEUERER 2006). Publications on the lichen flora mainly relate to corticolous and terricolous species (HERTEL 1971; RAMÍREZ REYES & SKOREPA 1974; MARCANO et al. 1996; KOMPOSCH & HAFELLNER 1999, 2000, 2002, 2003; KOMPOSCH et al. 2002; LÓPEZ-FIGUEIRAS 1977, 1979, 1981a, 1981b, 1982, 1983, 1985; LÓPEZ-FIGUEIRAS & MORALES MENDEZ 1989; VARESCHI 1973, 2001), but only some papers include foliicolous lichens in this South American region (SANTESSON 1952; SIPMAN 1992, 1993, 1997). This fact explains the high number of 61 species, which are first records for Venezuela. All listed taxa are well known and have been mentioned in former studies of adjacent regions in Central America (Costa Rica, Panama) and Southern America (Brazil, Colombia, French Guiana). The aim of the presented study is an addition and contribution to the foliicolous representatives of the neotropical lichen flora of Venezuela.

Material and methods

All collected samples were studied with the standard optical equipment. Most samples are indicated by the symbol Gn and a number of the authors private herbarium (unless otherwise stated leg. et det. G. Neuwirth), some with Br (herb. Breuß) and localities indicated by the abbreviations 1 to 5, are ordered geographically from north (1, 2) to south (3, 4, 5). Lichen species indicated by an asterisk are new records to Venezuela.

The following list cannot be a comprehensive checklist of foliicolous lichens of Venezuela, but represents a useful and necessary addition to the lichen biodiversity of this tropical area.

Unpublished samples (Lücking, pers. comm.) from various collectors deposited in different herbaria (B, CEILT, S, STU, US) are included in the following list.

Localities

Samples were collected during a four week trip through different parts of Venezuela. All localities are indicated on the map (Fig. 1).

- 1: El Ávila region north of Caracas: Part of Cordillera de la Costa. The mountains, built up of metamorphites of 70 Mio. years, are covered with montane rainforest up to 3000 m s. m. Only a few samples were collected along the trail between Hotel Humboldt and cable railway station (990–1000 m s. m.); 30.10.2005.
- 2: Maracay: Border of Parque Nacional Henry Pittier (Rancho Grande). This rainforest represents a transition zone from dry lowland vegetation to moist montane rainforest with typical species *Gyranthera caribensis* (Bombacaceae). Only a few epiphytes cover the trees,



Fig. 1: Relief map of Venezuela with dots indicating the geographical position of the investigated localities (based on Microsoft Encarta Weltatlas Version 98; designed by W. Obermayer).

also a few large palm species and partly deciduous vegetation are typical for this region. Dry climate with 690 mm annual precipitation on the coast raises up to 2000 mm yearly in higher elevations (WEISSENHOFER & HUBER 2005). The specimens were collected in border zones of Henry Pittier National Park; 1.11.2005.

- 3: Lowland rainforest 35 km south of Puerto Ayacucho (Prov. Amazonas) between Coromoto and Tobogan de la Selva. All records on leaves of shrubs in understorey along a trail to an Indian village through primary rainforest 10 km W of Rio Orinoco and the border to Colombia (70 m s. m.); 10.11.2005.
- 4: Primary lowland rainforest at banks of Rio Caura 5 km south of Las Trincheras (60–70 m s. m.). Understorey vegetation along banks of the river and in the surrounding area of silicate blocks (Lajas); 13.11.2005.
- 5: Primary rainforest on the area of the camp at Rio Churun across from Salto Angel and Auyan Tepuy south of Canaima (La Gran Sabana); 18.11.2005.

Results

Aderkomyces heterellus (Stirt.) R.Lücking, Sérus. & Vězda: 1 (Gn 7931); 3 (Gn 8112, 8135, 8168); 4 (Gn 8271, 8276, 8372); SIPMAN (1992, as *Echinoplaca heterella*). Unpublished Venezuelan samples: Amazonas, Alto Orinoco, Savanna of La Esmeralda near Humboldt Station, 150 m s. m., 1996, Jentzsch 29d (B).

Arthonia accoloris Stirt.: 2 (Br 25199); 3 (Gn 8088); SIPMAN (1992).

Arthonia aciniformis Stirt.: 4 (Gn 8403); SIPMAN (1992).

Arthonia cyanea Müll.Arg.: 3 (Gn 8138); 4 (Gn 8248); SANTESSON (1952).

Arthonia mira R.Sant.: 4 (Gn 8336); SANTESSON (1952); SIPMAN (1992).

**Arthonia palmulacea* (Müll.Arg.) R.Sant.: 3 (Gn 8163, det. O. Breuß); 4 (Br 25246).

**Arthotheliopsis planicarpus* (R.Lücking) R.Lücking, Sérus. & Vězda: 4 (Gn 8277). Unpublished Venezuelan sample: Bolivar, Cerro Guaiquinima, 320 m s. m., 1990, Sipman 27305 (B).

Aspidothelium fugiens (Müll.Arg.) R.Sant.: 4 (Gn 8400); SIPMAN (1992).

**Aspidothelium geminiparum* (Malme) R.Sant.: 4 (Gn 8377). Rarely on the surface of leaves, mainly corticolous.

Asterothyrium microsporium R.Sant.: 3 (Gn 8175); FEUERER (2006).

Asterothyrium rotuliforme (Müll.Arg.) Sérus.: 1 (Gn 7913); 3 (Gn 8106); 4 (Gn 8259); 5 (Gn 8460); FEUERER (2006).

**Aulaxina intermedia* R.Lücking: 3 (Gn 8073).

**Aulaxina microphana* (Vain.) R.Sant.: 3 (Gn 8076).

Aulaxina minuta R.Sant.: 3 (Gn 8104); 4 (Gn 8361); SIPMAN (1992).

Bacidia brasiliensis (Müll.Arg.) Zahlbr.: 3 (Br 25225); SANTESSON (1952); SIPMAN (1992).

Bacidina apiahica (Müll.Arg.) Vězda: 1 (Gn 7904, 7917, 7926); 4 (Gn 8208, 8286, 8316); SIPMAN (1992).

**Bacidina pallidocarnea* (Müll.Arg.) Vězda: 4 (Gn 8191). Unpublished Venezuelan sample: Aragua, Cordillera de la Costa, Rancho Grande, Henri Pittier National Park, 1800 m s. m., 1979, Wirth 24020 (STU).

Badimia dimidiata (C.Bab. ex Leight.) Vězda: 3 (Gn 8177); SIPMAN (1992).

**Byssolecania deplanata* (Müll.Arg.) R.Sant.: 3 (Gn 8158); 4 (Gn 8364).

Byssolecania fumosonigricans (Müll.Arg.) R.Sant.: 3 (Gn 8156, 8544); 4 (Gn 8309); SANTESSON (1952).

**Byssolecania hymenocarpa* (Vain.) Kalb, Vězda & R.Lücking: 4 (Gn 8373b, 8381). Unpublished Venezuelan sample: Amazonas, Alto Orinoco, Savanna of Esmeralda, Humboldt Station, 150 m s. m., 1996, Jentzsch 28v (B).

**Byssolecania vezdae* Kalb & R.Lücking: 3 (Gn 8160).

- Byssoloma leucoblepharum* (Nyl.) Vain.: 3 (Gn 8149, 8151); 4 (Gn 8302); 5 (Gn 8459); SANTESSON (1952); SIPMAN (1992).
- **Byssoloma minutissimum* Kalb & Vězda: 4 (Gn 8215).
- Byssoloma subdiscordans* (Nyl.) P.James: 3 (Gn 8109); 4 (Gn 8388); 5 (Gn 8456, 8461, 8465); SIPMAN (1992).
- Byssoloma tricholomum* (Mont.) Zahlbr.: 3 (Gn 8150); SANTESSON (1952).
- **Calenia depressa* Müll.Arg.: 2 (Gn 7950); 4 (Br 25232). Unpublished Venezuelan sample: Aragua, Cordillera de la Costa, Rancho Grande, Henri Pittier National Park, 1800 m s. m., 1979, Wirth 24037c (STU).
- **Calenia lueckingii* C.Hartmann: 4 (Br 25263).
- **Calenia phyllogena* (Müll.Arg.) R.Sant.: 4 (Gn 8275, 8280). Unpublished Venezuelan samples: Aragua, Cordillera de la Costa, Rancho Grande, Henri Pittier National Park, 1800 m s. m., 1979, Wirth 24025, 24032 (STU).
- Calopadia fusca* (Müll.Arg.) Vězda: 2 (Gn 7964); FEUERER (2006).
- Calopadia phyllogena* (Müll.Arg.) Vězda: 3 (Gn 8079); FEUERER (2006).
- **Calopadia puiggarii* (Müll.Arg.) Vězda: 4 (Gn 8295). Unpublished Venezuelan sample: Aragua, Cordillera de la Costa, Rancho Grande, Henri Pittier National Park, 1800 m s. m., 1979, Wirth 24028 (STU).
- **Calopadia subcoerulescens* (Zahlbr.) Vězda: 2 (GN 8225).
- **Chroodiscus australiensis* Vězda & Lumbsch: 3 (Br 25217).
- Chroodiscus coccineus* (Light.) Müll.Arg.: 3 (Gn 8122, 8131); 4 (Gn 8413); SIPMAN (1992).
- **Coenogonium ciliatum* Kalb & R.Lücking: 4 (Gn 8237).
- Coenogonium dilucidum* (Kremp.) Kalb & R.Lücking: 4 (Gn 8213, 8399); SANTESSON (1952, as *Dimerella dilucida*).
- Coenogonium hypophyllum* (Vězda) Kalb & R.Lücking: 3 (Gn 8127); 4 (Gn 8192, 8289); SIPMAN (1992, 1993, as *Dimerella hypophylla*).
- Coenogonium linkii* Ehrenb.: 4 (Gn 8288, 8408); SIPMAN (1992).
- **Coenogonium minimum* (Müll.Arg.) R.Lücking: 4 (Gn 8214, 8216).
- **Coenogonium siquirrensis* (R.Lücking) R.Lücking: 2 (Gn 7958); 3 (Gn 8155).
- Coenogonium subluteum* (Rehm) Kalb & R.Lücking: 4 (Gn 8207); SIPMAN (1992, as *Dimerella epiphylla*).
- **Echinoplaca epiphylla* Fée: 2 (Gn 7972). Unpublished Venezuelan samples: Amazonas, Alto Orinoco, Savanna of La Esmeralda, near Humboldt Station, 150 m s. m., 1996, Jentzsch 29d (B; filed under *Aderkomyces heterellus*); Bolivar, Matacuchillo, 920 m s. m., 1976, Steyermark et al. 112262 (US); Aragua, Cordillera de la Costa, Rancho Grande, Henri Pittier National Park, 1800 m s. m., 1979, Wirth 24009, 24027 (STU).
- **Echinoplaca marginata* R.Lücking: 2 (Gn 7977, 7979, 7981).
- **Eremothecella calamicola* Syd.: 3 (Gn 8139). The author's current sample shows the species on the lower surface of the leaves in an unusual position.
- **Fellhanera fuscata* (Müll.Arg.) Vězda: 4 (Gn 8307, Br 25268). Unpublished Venezuelan sample: Aragua, Cordillera de la Costa, Rancho Grande, Henri Pittier National Park, 1800 m s. m., 1979, Wirth 24031 (STU).
- **Fellhanera semecarpi* (Vain.) Vězda: 4 (Gn 8240).
- Fellhanera stanhopeae* (Müll.Arg.) R.Lücking, Lumbsch & Elix: 1 (Gn 7905a, 7936); Santesson (1952, as *Bacidia s.*). Unpublished Venezuelan sample: Aragua, Cordillera de la Costa, Rancho Grande, Henri Pittier National Park, 1800 m s. m., 1979, Wirth 24025 (STU).
- **Fellhanera subternella* (Nyl.) Vězda: 3 (Gn 8135). Unpublished Venezuelan sample: Bolivar, Cerro Guaiquinima, 320 m s. m., 1990, Sipman 27334 (B).
- Gyalectidium filicinum* Müll.Arg.: 1 (Gn 7907a); 2 (Gn 7965, 7969, 7989); SIPMAN (1992).
- **Gyalidea epiphylla* Vězda: 4 (Gn 8301).
- Lasioloma arachnoideum* (Kremp.) R.Sant.: 5 (Gn 8454, 8458; campylidia only); FEUERER (2006).
- Mazosia dispersa* (Hedrick) R.Sant.: 2 (Gn 7947); 3 (Gn 8086, 8120, 8123, 8143); SIPMAN (1992).

- Mazosia melanophthalma* (Müll.Arg.) R.Sant.: 2 (Gn 7993); 3 (Gn 8083, 8091, 8152); 4 (Gn 8219, 8236, 8239, 8305, 8390, 8397); SIPMAN (1992). Unpublished Venezuelan sample: Amazonas, Alto Orinoco, Savanna of La Esmeralda, Humboldt Station, 150 m s. m., 1996, Jentzsch 28w (B).
- **Mazosia paupercula* (Müll.Arg.) R.Sant.: 3 (Br 25218), 4 (Br 25230).
- **Mazosia phyllosema* (Nyl.) Zahlbr.: 2 (Gn 7990); 3 (Gn 8084, 8121, 8147); 4 (Gn 8206, 8263, 8272, 8292, 8331).
- Mazosia pilosa* Kalb & Vězda: 4 (Br 25227); SIPMAN (1992). Unpublished Venezuelan samples: Alto Orinoco, Savanna of La Esmeralda, Humboldt Station, 150 m s. m., March 1996, Jentzsch 28y (B).
- Mazosia praemorsa* (Stirt.) R.Sant.: 3 (Gn 8069, 8126, 8129, 8144, 8167); 4 (Gn 8262, 8282, 8287, 8306, 8313, 8359, 8369, 8395, 8600); SIPMAN (1992, 1997).
- Mazosia pseudobambusae* Kalb & Vězda: 3 (Gn 8182); 4 (Gn 8261); MATZER (1996).
- Mazosia rotula* (Mont.) A.Massal.: 2 (Gn 7941); 3 (Gn 8065, 8092, 8125, 8136, 8186); 4 (Gn 8238, 8269, 8296, 8358, 8398, 8404); SANTESSON (1952); SIPMAN (1992).
- Mazosia rubropunctata* R.Sant.: 3 (Gn 8062, 8087); 4 (Gn 8235); SIPMAN (1992, 1997). In several samples the typical small red-coloured warts are lacking, other samples contain red zones in apothecial margin only. One sample lacks both attributes. But all samples share the characteristic 4-septate ascospores.
- **Mazosia tenuissima* R.Lücking & Matzer: 4 (Br 25228).
- Mazosia tumidula* (Stirt.) Müll.Arg.: 3 (Gn 8111); SIPMAN (1992, 1997). Unpublished Venezuelan samples: Amazonas, Alto Orinoco, Savanna of La Esmeralda, Humboldt Station, 150 m s. m., 1996, Jentzsch 29p (B).
- **Microtheliopsis uleana* Müll.Arg.: 4 (Br 25267).
- **Microtheliopsis uniseptata* Herrera-Campos & R.Lücking: 3 (Gn 8099); 4 (Gn 8230, 8334, 8340, 8405).
- Opegrapha filicina* Mont.: 1 (Gn 7900); 2 (Gn 7970, 7974, 7991, 8002, 8008); 4 (Br 25251); SANTESSON (1952).
- **Opegrapha phylloporinae* Müll.Arg.: 4 (Gn 8204).
- **Opegrapha puiggarii* Müll.Arg.: 4 (Gn 8385, 8387).
- **Phyllobathelium firmum* (Stirt.) Vězda: 4 (Br 25245, Gn 8297). Unpublished Venezuelan samples: Cordillera de la Costa, Rancho Grande, Henri Pittier National Park, 1800 m s. m., 1979, Wirth 24027, 24031 (STU).
- **Phyllobathelium leguminosae* (Cavalc. & A.A.Silva) R.Lücking: 4 (Gn 8298, 8406). Only pycnidia, no perithecia. Pycnosporos 3-septate, 18–21 × 3–4 µm. Unpublished Venezuelan sample: Aragua, Cordillera de la Costa, Rancho Grande, Henri Pittier National Park, 1800 m s. m., 1979, Wirth 24020 (STU).
- Porina alba* (R.Sant.) R.Lücking: 2 (Gn 7998); 3 (Gn 8162); 4 (Gn 8274, 8341, 8373); SANTESSON (1952, as *Phyllophiale a.*); SIPMAN (1992, as *Phyllophiale a.*); MATZER (1996, as *Phyllophiale a.*).
- **Porina atriceps* (Vain.) Vain.: 2 (Gn 7948); 4 (Gn 8247, 8260, 8365, 8602).
- **Porina barvica* R.Lücking: 1 (Gn 7927, det. O. Breuß). Unpublished Venezuelan sample: Distrito Federal, Coastal Cordillera between Caracas and La Guaria, 1600–1800 m s. m., Santesson 6742 (S, filed under *Byssoloma leucoblepharum*).
- Porina epiphylla* (Fée) Fée: 1 (Gn 7920); 2 (Gn 7951); 4 (Gn 8196, 8221, 8226, 8273, 8314); SIPMAN (1992).
- Porina fusca* R.Lücking: 3 (Gn 8116); SIPMAN (1992).
- **Porina guianensis* f. *pentaseptata* R.Lücking: 4 (Br 25231).
- **Porina karnatakensis* Makhija, Adawadkar & Patwardhan: 2 (Gn 7956, 8000, 8005, 8006). Unpublished Venezuelan samples: Aragua, Cordillera de la Costa, Rancho Grande, Henri Pittier National Park, 1800 m s. m., 1979, Wirth 24013d, 24016b, 24020b (STU).
- **Porina leptosperma* Müll.Arg.: 4 (Gn 8257).
- **Porina limbulata* (Kremp.) Vain.: 2 (Gn 7992); 4 (Gn 8220). Unpublished Venezuelan samples: Aragua, Cordillera de la Costa, Rancho Grande, Henri Pittier National Park, 1800 m s. m., 1979, Wirth 24015, 24020 (STU).

- **Porina lucida* R.Sant.: 4 (Gn 8254, 8294, 8330).
- **Porina mirabilis* R.Lücking & Vězda: 4 (Gn 8198, 8224, 8278, 8283, 8317, 8320, 8357, 8370, 8389).
- Porina nitidula* Müll.Arg.: 1 (Gn 7928, 7934); SANTESSON (1952).
- **Porina octomera* (Müll.Arg.) Schill.: 4 (Gn 8366). Unpublished Venezuelan sample: Aragua, Cordillera de la Costa, Rancho Grande, Henri Pittier National Park, 1800 m s. m., 1979, Wirth 24035f (STU, filed under *P. rufula*).
- **Porina radiata* Kalb, R.Lücking & Vězda: 2 (Gn 8265); 4 (Br 25229).
- Porina rubentior* (Stirt.) Müll.Arg.: 2 (Gn 7942, 7952, 7963, 7995, 8001); 3 (Gn 8097, 8099b); 4 (Gn 8193, 8231, 8253, 8255, 8412); SIPMAN (1992).
- **Porina rubrosphaera* R.Sant.: 4 (Gn 8228, 8324). Unpublished Venezuelan sample: Aragua, Cordillera de la Costa, Rancho Grande, Henri Pittier National Park, 1800 m s. m., 1979, Wirth 24035f (STU, filed under *P. rufula*).
- Porina rufula* (Kremp.) Vain.: 2 (Gn 7973); 3 (Br 25221); 4 (Gn 8266); SANTESSON (1952); SIPMAN (1992).
- **Porina subepiphylla* R.Lücking & Vězda: 2 (Br 25196); 4 (Gn 8285). Unpublished Venezuelan samples: Aragua, Cordillera de la Costa, Rancho Grande, Henri Pittier National Park, 1800 m s. m., 1979, Wirth 24007, 24036 (STU).
- Porina tetracerae* (Afz. in Ach.) Müll.Arg.: 4 (Gn 8223); SIPMAN (1992).
- Porina tetramera* (Malme) R.Sant.: 1 (Gn 7919, 7924); 4 (Br 25242); SANTESSON (1952).
- Porina verruculosa* Müll.Arg.: 4 (Gn 8303, 8315); SANTESSON (1952).
- **Sporopodium lepreurii* Mont.: 4 (Gn 8372a). Unpublished Venezuelan sample: Aragua, Cordillera de la Costa, Rancho Grande, Henri Pittier National Park, 1800 m s. m., 1979, Wirth 24027f (STU).
- Strigula antillarum* (Fée) Müll.Arg.: 2 (Gn 7966); SANTESSON (1952).
- **Strigula concreta* (Fée) R.Sant.: 4 (Gn 8234). Unpublished Venezuelan samples: Aragua, Cordillera de la Costa, Rancho Grande, Henri Pittier National Park, 1800 m s. m., 1979, Wirth 24030, 24032, 24037 (STU).
- **Strigula macrocarpa* Vain.: 4 (Gn 8210).
- Strigula nemathora* Mont. var. *nemathora*: 3 (Gn 8080, 8095, 8146, 8169); 4 (Gn 8205, 8241, 8394); SANTESSON (1952); SIPMAN (1992).
- Strigula nemathora* var. *hypothela* (Nyl.) R.Sant.: 4 (Gn 8256, 8322, 8337); SANTESSON (1952).
- **Strigula nemathora* var. *pulchella* (Müll.Arg.) R.Sant.: 4 (Gn 8243).
- Strigula nitidula* Mont.: 2 (Gn 7945); 4 (Gn 8203); SANTESSON (1952).
- Strigula orbicularis* Fr.: 4 (Gn 8312); 5 (Gn 8462); SANTESSON (1952).
- Strigula phyllogena* (Müll.Arg.) R.C.Harris: 1 (Gn 7903, 7929); 2 (Gn 8003, 8007); 4 (Gn 8227); SANTESSON (1952, as *Porina p.*).
- Strigula schizospora* R.Sant.: 4 (Gn 8244, 8291); SANTESSON (1952).
- Strigula smaragdula* Fr.: 4 (Gn 8210b, 8332); SANTESSON (1952).
- Strigula subtilissima* (Fée) Müll.Arg.: 1 (Gn 7902); 3 (Gn 8064, 8090); 4 (Gn 8311, 8374, 8412b, 8601); SANTESSON (1952).
- **Tapellariopsis octomera* R.Lücking: 1 (Gn 7925, det. O. Breuß). This lichen is described as a non-foliicolous species in a paper by KALB & VĚZDA (1987), but mentioned as a foliicolous species in Costa Rica by LÜCKING (1992). The present sample from Ávila corresponds with all attributes, except ascospores. The ascospores contain distinctly more septa as mentioned by LÜCKING (1992). 9-septate spores were found as well as up to 12-septate ascospores.
- Tricharia albostrigosa* R.Sant.: 5 (Gn 8455, 8464); SANTESSON (1952).
- **Tricharia urceolata* (Müll.Arg.) R.Sant.: 4 (Gn 8281, 8321); 5 (Gn 8465b).
- **Tricharia vainioi* R.Sant.: 1 (Gn 7906, 7912). Unpublished Venezuelan sample: Aragua, Cordillera de la Costa, Rancho Grande, Henri Pittier National Park, 1800 m s. m., 1979, Wirth 24026 (STU).
- Trichothelium annulatum* (Karst.) R.Sant.: 3 (Gn 8089); 4 (Gn 8310); SIPMAN (1992).
- **Trichothelium bipindense* F.Schill.: 4 (Gn 8325). Unpublished Venezuelan samples: Aragua, Cordillera de la Costa, Rancho Grande, Henri Pittier National Park, 1800 m s. m., 1979, Wirth 24034 (STU);

Distrito Federal, Rancho Grande, Henri Pittier National Park, 1800 m s. m., 1979, Wirth 24035 (STU); Merida, near Chiguará, 1700 m s. m., 1995, Lücking 95-126 (CEILT).

Trichothelium epiphyllum Müll.Arg.: 4 (Gn 8249, 8367); SANTESSON (1952).

**Trichothelium juruense* (P.Henn.) F.Schill.: 3 (Gn 8176); 4 (Gn 8229, 8386).

**Trichothelium minus* Vain.: 4 (Gn 8195).

**Trichothelium minutum* (R.Lücking) R.Lücking: 4 (Gn 8252).

**Trichothelium montanum* f. *latisporum* R.Lücking: 4 (Gn 8250). Unpublished Venezuelan samples: Distrito Federal, Rancho Grande, Henri Pittier National Park, 1800 m s. m., 1979, Wirth 24034, 24035 (STU).

**Trichothelium ulei* (P.Henn.) Höhnel: 4 (Gn 8258).

**Trichothelium sipmanii* R.Lücking: 4 (Gn 8211, 8279, 8318, 8379). Unpublished Venezuelan sample: Amazonas, Humboldt Station at Surumoni river, 150 m s. m., 1996, Jentzsch 28i (B).

Discussion

The present study is based on the results of five field trips mainly in rainforest habitats in Venezuela in 2005. All foliicolous lichens were recorded in tropical rainforest understorey. The investigated localities represent typical lowland and montane rainforests with high lichen biodiversity. Considering the fact that all lichens were collected on short walking tours, the publication contains a large amount of useful foliicolous lichen data and new records to the country. Some species seem to have a broad ecological amplitude in primary rainforests of Central and South America, growing on upper and lower surfaces of leaves mainly of ever-green shrubs.

The following species represent the frequent foliicolous lichens in the investigated areas, recorded at least at three localities: *Aderkomyces heterellus*, *Asterothyrium rotuliforme*, *Byssoloma leucoblepharum*, *B. subdiscordans*, *Mazosia phyllosema*, *M. rotula*, *Opegrapha filicina*, *Porina epiphylla*, *P. rubentior*, *P. rufula*, *Strigula phyllogena* and *S. subtilissima*. Rarely recorded species are *Arthotheliopsis planicarpus*, *Bacidina pallidocarnea*, *Coenogonium ciliatum*, *Eremothecella calamicola*, *Gyalidea epiphylla*, *Microtheliopsis uleana*, *Phyllobathelium leguminosae*, *Porina barvica* and *Tapellaria octomera*.

Most taxa (93) were found at Rio Caura (locality 4) during a field trip through the lowland rainforest at banks of the river (Fig. 2).

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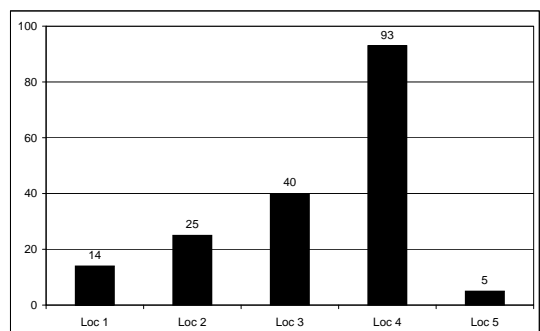


Fig. 2: Numbers of taxa occurring at the five examined localities. Loc 1 – El Ávila, Loc 2 – Maracay, Loc 3 – Puerto Ayacucho, Loc 4 – Rio Caura, Loc 5 – Salto Angel Camp.

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