

A REVIEW OF LICHENOLOGY IN SAINT LUCIA INCLUDING A LICHEN CHECKLIST

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Abstract. The lichenological history of Saint Lucia is reviewed from published literature and catalogues of herbarium specimens. 238 lichens and 2 lichenicolous fungi are reported. Of these 145 species are known only from single localities in Saint Lucia. Important herbarium collections were made by Alexander Evans, Henry and Frederick Imshaug, Dag Øvstedal, Emmanuël Sérusiaux and the authors. Soufrière is the most surveyed botanical district for lichens.

Keywords. Lichenology, Caribbean islands, tropical forest lichens, history of botany, Saint Lucia

Saint Lucia is located at 14°N and 61°W in the Lesser Antillean archipelago, which stretches from Anguilla in the north to Grenada and Barbados in the south. The Caribbean Sea lies to the west and the Atlantic Ocean is to the east. The island has a land area of 616 km² (238 square miles).

This paper presents a comprehensive checklist of lichens in Saint Lucia, using new records, unpublished data, herbarium specimens, online resources and published records. When our study began in March 2007, Feuerer (2005) indicated 2 species from Saint Lucia and Imshaug (1957) had reported 3 species. It was quickly realised that Prather & Fryday (2001)

had related that there were 693 collections by Imshaug from Saint Lucia and that these specimens were catalogued online (Johnson et al. 2005). An excursion was made by the authors in April and May 2007 to collect and study lichens in Saint Lucia. The unpublished Imshaug field notebook referring to the Saint Lucia expedition of 1963 was transcribed on a visit to MSC in September 2007. Loans of herbarium specimens were obtained for study from BG, MICH and MSC. These voucher specimens collected by Evans, Imshaug, Øvstedal and the authors were examined with a stereoscope and a Nikon Eclipse 80i microscope.

GEOLOGY AND SAXICOLOUS LICHEN HABITATS

Saint Lucia was formed from sub-sea volcanoes that emerged from the ocean during the Miocene (Briden et al. 1979). Magma to supply these Antillean arc volcanoes was generated as a result of the Atlantic Plate being subducted and melted under the Caribbean Plate. That process continues and the current rate of subduction is 22 mm per annum. Naked cores of stratovolcanoes dominate Saint Lucia's skyline. Eroded tholeiitic island arc basalts and associated andesites of Miocene age are more common in the north of Saint Lucia (Newman 1965). Tholeiite is a basalt that is relatively poor in sodium and silica (<50%) whereas andesite is relatively richer in silica. Across the centre of Saint Lucia is an area of dissected and andesitic conglomerates. Reworked volcanogenic sediments with ash and pumice are the main lithologies there. Between the older, more weathered rocks in the south of the island, rise younger rocks, for example, the Eocene aged iconic spires of Gros Piton and Petit Piton.

The Pitons are made of dacite, an igneous rock higher in silica than andesite and paler in colour. In the south west of Saint Lucia, the Quaternary rocks of the Qualibou depression around Soufrière are still home to active fumaroles that emit sulphur dioxide gas and superheated water. The most recent sizeable phreatic eruption was at Sulphur Springs in 1766. Excellent reports on volcanic hazards (Lindsay et al. 2002a, b) contain a wealth of information.

The woody plant flora that supports epiphytes of Saint Lucia and the saxicolous lichen flora are dependent on lithologies of the island. Coral reef limestones are virtually absent above sea level in Saint Lucia. The volcanic lithologies which dominate the landscape are all relatively siliceous in nature. Given an adequate water supply, a lack of excessive heat, topographical stability, rock outcrops and boulders have good potential to support saxicolous lichens.

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TROPICAL FORESTS WITH CORTICOLOUS AND FOLIICOLOUS LICHEN HABITATS

Saint Lucian tropical forest vegetation was described by Beard (1946, 1949). Forests, including gladed woodlands, cover more than 20,000 hectares. This accounts for approximately 35% of Saint Lucia's land area. Significant changes in forest cover land use since the 1940s include clearings for agriculture, for example on the Atlantic slopes of Micoud and Dennery in the east and on the Caribbean slopes North of Soufrière in the west. About half of the forests in Saint Lucia are now forest reserves that extend to 9,196 hectares. A series of reports from the National Forest Demarcation and Bio-physical Resource Inventory Project have recently transformed public knowledge of Saint Lucia's tropical forests (Daltry 2009, Graveson 2009a, 2009b, Moreton 2009, Tennent 2009, Van Eynde 2009). Knowledge of the distribution of vascular plants in the Saint Lucian rainforests is increasing through the checklists and online publishing initiatives of Graveson (2007, 2010).

The forests of Saint Lucia are wonderfully complex in botanical composition. The Forest Reserve is dominated by "Wet" forest formations, namely Lowland Montane

Rainforest, Montane Forest, Cloud Montane Forest and Elfin Shrublands. "Dry" forest formations around the coast are under-represented in the Forest Reserve network. Scattered forestry plantations covering 505ha are dominated by *Swietenia macrophylla* and *Swietenia mahogani* (mahogany), *Talipariti elatum* (blue mahoe), *Pinus caribaea* (caribbean pine), *Gmelina arborea* (gmelina), *Tectona grandis* (teak), *Eucalyptus alba*, *Eucalyptus deglupta*, *Eucalyptus robusta* (eucalyptus) and *Leucaena leucocephala* (leucaena).

Tree bark is the most important substrate for all dependent lichens; basal trunks, canopy crowns and twigs provide distinct niches for shade-tolerant and photophilous corticolous lichen communities respectively (Bricaud 2008). Tropical rainforests differ from temperate forests as they are dominated by evergreen broadleaved species that lose their leaves slowly and never all at once. Species that retain leaves for many years have the potential to be habitats for a rich and interesting flora of foliicolous lichens (Bricaud 2009)—a niche best developed in the tropics.

TROPICAL FOREST CONSERVATION FOR WATER MANAGEMENT AND BIODIVERSITY

Forested montane land captures and holds rainwater more efficiently than other forms of land cover, and this soil releases water steadily. This is due in part to the high bryophyte biomass of montane forest epiphyte and elphin habitats. This forest characteristic serves to buffer a landscape against seasonal flash floods, soil erosion and subsequent drought. Protection of critical catchment areas was the reason for designation of many Forest Reserves on high ground in the central part of Saint Lucia. Major rivers have their headwaters in the island's mountainous interior where rainfall exceeds 3,000 mm per annum.

Most Forest Reserve lands have mature and secondary forest. Extensive tracts of deciduous seasonal forest have slowly reclaimed cotton plantations (e.g. at Anse La Liberté) that

had been abandoned. Forest areas have been modified by human activities including livestock grazing, charcoal making, creole gardens, exotic plantings and property development.

The long history of human use, natural spatial variation in topography, rainfall, temperature, wind and hurricane exposure and geologic variation have enabled a diverse set of tropical forest types to develop in Saint Lucia. A classification system of these forest types is proposed by Graveson (2009a).

The native flora of Saint Lucia includes 1295 species of plants (Graveson 2009b) including more than 250 tree species, exact count 257 native trees and 141 native shrubs calculated from Graveson <tracheophyta.xls> data. Many trees support corticolous or foliicolous lichen growth.

CLIMATE

Saint Lucia has a tropical climate throughout the year, tempered by subtropical sea breezes from the Caribbean Sea and the Atlantic Ocean, with prevailing northeasterly trade winds. The average temperature year round is between 25°C (77°F) and 27°C (80°F) (Isaac and Bourque 2001) and the average annual rainfall ranges from between 1,152 mm on the coast and 4,015 mm in mountain forests. The six Holdridge life zones of Saint Lucia are subtropical (T < 24°C) (dry/moist, moist, moist/wet, wet) below 200m altitude and tropical premontane (T > 24°C) (moist/wet, wet) above 200m altitude. At Edmund Forest (490 m) the mean annual air temperature is 23.5°C and at the highest summits of Gros Piton (798 m) and Mont Gimie (950 m), the mean annual air temperature is 21°C. The driest parts of

Saint Lucia with high potential evapotranspiration ratios of 1.0 to 1.2 are in the extreme south (south Vieux Fort, Moule a Chique, the Laborie and Choiseul coast) and the extreme north (northern Gros Islet).

The Lesser Antillean region is prone to hurricanes. Classic climax rainforest structure, as envisioned by Beard (1949), is compromised by occasional hurricanes and so does not develop in Saint Lucia. These hurricanes can devastate forests by reducing the value of harvestable timber. Although Saint Lucia has historically been spared from serious hurricane destruction, Hurricane Allen in 1980 and Hurricane Tomas in 2010 caused the deaths of 16 and 14 people respectively and both storms caused significant landslide debris flows in the landscape.

HISTORY OF BOTANY

From collections of Saint Lucian cinchona bark, three lichens and one coelomycete species were described new to science and were catalogued by A.L.A. Fée (1824–1837). While it is recorded that J. J. Roemer & J. A. Schultes collected specimens of one of these species, the collectors

of the other species remain anonymous. Bark samples of "Du Quinquina Piton ou [Du Quinquina] De Sainte Lucie" were studied analytically for their medicinal substances by Fée in Geneva and his results were published in a report on "Cortices Exostematis floribundae Offic." (Fée 1828: 269).

Prof. Alexander William Evans (1868–1959) visited Castries in August and September 1926, during a cruise that also docked at St. Croix (Fredrickstad), Montserrat (Plymouth), and Dominica (Roseau). He was Eaton Professor of Botany at Yale University. Evans visited the Botanic Garden in Castries on several dates between 28 August and 4 September 1926 based on MICH packet labels. It is known that he collected corticolous lichens there from Royal Palm *Roystonea oleracea*, *Pandanus* and other trees (see Fig. 1). Evans made an estimated 50 to 70 collection numbers on Saint Lucia. Evans' lichen collections were incompletely identified, perhaps by G.K. Merrill, in the short time before Merrill died in 1927. Evans' specimens are now widely dispersed in North American lichen herbaria and some are difficult to trace. Archival papers from Evans' work at the Yale herbarium and in the Department of Botany are now kept in the library's Manuscripts and Archives section. The Evans material that was identified to species and filed initially in YU, was transferred to the Smithsonian (US) in the 1960s (Patrick Sweeney, pers. comm.). The catalogue of the virtual herbarium in US reveals three entries of this material. On the breakup of the YU herbarium, some unidentified material of Evans' went to the MICH herbarium. Collections of six Saint Lucian specimens were found in a search of MICH for Evans' unnamed lichens in genera of the Pyrenulaceae and in *Pertusaria* (Patricia Rogers, pers. comm.). Undetermined collections in MICH were studied in 1974 by R.C. Harris who performed lichen chemistry analysis of sample extracts using thin layer chromatography (TLC plate number 546). Some of Evans' named specimens were also traced to MO (Imshaug 1957) but these were later transferred to US. Unidentified collections from MO went to NY (James Lendemer, pers. comm.). Some of Evans' material resides there. Due to taxonomic difficulties which have existed for many decades surrounding the identification of tropical lichens and because of several transfers of material between researchers, the herbarium filing positions of only 20% of Evans' material is known so far, and 50 or so packets require further research. Evans' specimens represent first collections of 8 species from Saint Lucia to date: These are *Bulbothrix laevigatula*, *Caloplaca diplacioides*, *Canoparmelia martinicana*, *Cladonia subradiata*, *Coccocarpia palmicola*, *Leptogium cyanescens*, *Mycoporum eschweileri* and *Pyxine subcinerea*. Localities visited by Evans were Castries, Botanic Garden (Evans 74, 101, 108, 113, 114, 120); Castries, Morne Fortuné (Evans 89) and Soufrière (Evans 92, 134). Some collecting localities were unspecified (Evans 71, 75, 118, 125) in the secondary sources consulted.

Prior to working with the University of West Indies at Mona, George Richardson Proctor worked at the Institute of Jamaica, where he helped to develop the herbarium. He collected vascular plants in Saint Lucia in 1958 during which time he collected a lichen specimen of *Dictyonema glabratum* from a ridge line in the forest at Piton Troumassée, to the east of Quillesse, in Micoud. This is the first record of this conspicuous cyanobacterial basidiolichen from Saint Lucia. As an example of mobility in nomenclature, this species has undergone taxonomic change several times since its first description and has previously been known



FIGURE 1. Photograph (circa 1910) of Royal Palms, on the Central Walk, Botanical Station, Castries. Westall & Co., Saint Lucia. These palms were planted in circa 1890 and were sampled for lichens by A.W. Evans in 1926.

under three earlier synonyms: *Dictyonema montanum*, *Cora pavonia*, and *Cora glabrata*.

Henry Imshaug was Professor of Botany and Curator of the Cryptogamic Herbarium at Michigan State University from 1956 to 1990 (Brodo 2011). He brought his son Frederick to Saint Lucia in July 1963 as part of a long study trip to several Caribbean islands. This work was never fully published. From their base at St. Remy, they studied lichens between the 3rd and 29th July 1963, with their main focus on the Quarter of Soufrière. They studied one distant locality: Barre de L'Isle to Mont La Combe, a ridge line south of the Castries to Dennery Road. Some details were documented by Prather & Fryday (2001) and Mercado-Días & Santiago-Valentin (2010). In total, 693 numbered collections were made in Saint Lucia, from which approximately 190 species have been identified by more than 20 lichenologists. Publications citing Imshaug collections under specimens examined include papers by Imshaug & Harris (1969: 81) for *Anthracotheceum pyrenuloides*; Hale (1976: 38) for *Pseudoparmelia martinicana*; Wirth & Hale (1978: 34) for *Platytheceum colliculosa*; Brodo (1991: 71) for *Ochrolechia antillarum*; Wetmore (1996: 301) for *Caloplaca crenularia*; Sheard & May (1997: 167) for *Amandinea placodiomorpha*; Fryday & Coppins (2004: 512) for *Aspidothelium fugiens*; Wetmore (2004: 287) for *Caloplaca epiphora*; Bungartz et

al. (2005: 467) for *Buellia mamillana* and Aptroot et al., (2009: 31) for *Diorygma antillarum*.

Dag Olav Øvstedal, Professor at the University of Bergen visited Saint Lucia in 1977. Øvstedal collected from Piton Minor, (739m (2461ft); 13°50'3"N; 61°3'53"W). His collections of *Coccocarpia domingensis* and *Coccocarpia palmicola* are published by Arvidsson (1982: 51, 75) and a collection of *Cladonia subradiata* is cited by Ahti (2000: 158). The 28 specimens collected by Øvstedal are held in BG (Astri Botnen, pers. comm.). Specimens collected by Øvstedal include nine species that are first collections for Saint Lucia, namely: *Canoparmelia caroliniana*, *Coccocarpia domingensis*, *Erioderma unguigerum*, *Heterodermia magellanica*, *Heterodermia pseudospeciosa*, *Leptogium leptophyllum*, *Leptogium pichneum*, *Pyxine berteriana* and *Ramalina usnea*.

Emmanuel Sérusiaux, Professor of Botany at University of Liège in Belgium, visited two localities in Saint Lucia in 1993; Quillesse forest and the Barre de l'Île trail towards Mont La Combe. His focus was foliicolous lichens, with an emphasis on new species including the first collections of eight species from Saint Lucia: *Bacidina pseudohyphophorifera*, *Calopadia turbinata*, *Caprettia amazonensis*, *Fellhanera santessonii*, *Gyalideopsis cochlearifera*, *Lambinonia strigulae* on *Strigula nemathora* and *Trypetheliopsis kalbii*. Subsequent study (Lücking pers. comm.) has revealed that a 1963 collection by Imshaug of *Bacidina defecta*, which was described new to science by Sérusiaux in 1995, is held in MSC.

The authors, two Irish mycologists, visited Saint Lucia in April and May 2007. Most collections are from six localities: Mamiku Gardens, Gros Piton, Edmond (now Edmund) Forest Reserve, Cas-en-Bas, Barre de l'Île and Balenbouche Estate. The following 19 lichen species: *Arthonia rubella*, *Bacidia* sp. A (Øvstedal 2010: 18), *Caloplaca aphanotripta*, *Chapsa alborosella*, *Chapsa cinchonarum*, *Coccocarpia erythroxyli*, *Coenogonium zonatum*, *Dictyonema sericeum*, *Dyplolabia afzelii*, *Graphis duplicata*, *Ocellularia fecunda*, *Pertusaria plana*, *Phaeographis fusca*, *Phaeographis lobata*, *Porina conspersa*, *Porina nucula*, *Porina tetracerae*, *Pyrenula cerina* and *Ramonia rappii* are reported as new to Saint Lucia.



FIGURE 2. Saint Lucian botanical district numbers, names and catalogued lichen species diversity. **1**, Anse La Raye (AR) 8; **2**, Castries (CS) 39; **3**, Choiseul (CH) 11; **4**, Dauphin (DP) 1; **5**, Dennery (DY) 38; **6**, Gros Islet (GI) 3; **7**, Laborie (LB) 28; **8**, Micoud (MI) 7; **9**, Praslin (PR) 5; **10**, Soufrière (SO) 195; **11**, Vieux Fort (VF) 11; **12**, Saint Lucia (LCA) 17.

CHECKLIST OF GEOGRAPHIC LOCALITIES AND SPECIES DISTRIBUTION DATA

Caribbean lichens are held in many herbaria across the Caribbean and in Europe and North America. Acronyms for the main host herbaria are given (Table 1) following Index Herbariorum (Thiers 2011). In the case of Saint Lucia, Imshaug (1957) initially reported three lichens. Feuerer (2005) gave only two species: *Caloplaca epiphora* and *Gyalideopsis cochlearifera* for Saint Lucia on his website. Prather & Fryday (2001) indicated that Henry Imshaug made 693 collection numbers from Saint Lucia and details are published online (Johnson et al. 2005). From the latter data source, we prepared an online checklist of 163 species (Fox & Cullen 2008). Discussions with the MSC lichen curator led to a website detailing 186 species from Saint Lucia based on specimens housed there (Fryday 2007). The MSC catalogue is updated regularly (Johnson et al. 2005–2011) over time. Herbarium voucher specimens have been named, identified

and revised by: A. Fée, A. Evans, A.L. Welden, H.A. Imshaug, M.E. Hale, M. Wirth, R.C. Harris, I. Brodo, L. Arvidsson, R. Moberg, P.M. Jørgensen, D.O. Øvstedal, E. Sérusiaux, C. Wetmore, P. Clerc, J. Lendemer, R. Lücking, A. Aptroot, H. Fox, M. Cullen, A. Fryday, E. Timdal.

We cite all the taxonomic literature consulted, as we agree with Funk (2006) that citation endorses and supports all contributors to the taxonomic enterprise. During the compilation of the Saint Lucian checklist, we have used a broad range of tropical lichenological and botanical references for: Taxonomic advice (Frodin 2001, Galloway 2008, Priss 2003); Book reviews (Sérusiaux 2011); Vascular plant nomenclature and identification (Graveson 2007, 2009a, 2009b, 2010, Howard 1988); Line graphics (Duncan 1963, Mitchell 2009); Foliicolous lichens (Santesson 1952, Farkas and Sipman 1993, 1997,

TABLE 1. Herbaria acronyms and addresses.

ACRONYM	INSTITUTION, CITY, STATE, COUNTRY
BG	Univ. Bergen, Bergen, Norway
ESS	Univ. Essen, Essen, Germany
FH	Farlow, Harvard Univ., Cambridge, MA, USA
G	Conservatoire et Jardin botaniques de la Ville de Genève, Geneva, Switzerland
LG	Univ. Liège, Liège, Belgium
M	Botanische Staatssammlung München, München, Germany
MICH	Univ. Michigan, Ann Arbor, MI, USA
MIN	Univ. Minnesota, St. Paul, MN, USA
MO*	Missouri Bot. Garden, St. Louis, MO, USA
MSC	Michigan State Univ., East Lansing, MI, USA
NY	New York Bot. Garden, Bronx, NY, USA
PC	Muséum National d'Histoire Naturelle, Paris, France
US	Smithsonian Institution, Washington DC, USA
YU*	Yale Univ., New Haven, CT, USA

*These herbaria hosted Saint Lucian lichen material in the past.

Lücking 2008, Bricaud 2009); Herbarium information (Fryday 2007, Imshaug 1957, 1963, Johnson et al. 2005, Thiers 2011); Lichenological bibliography (Culberson et al. 2011); Fungal systematic position (Lumbsch and Huhndorf 2010); Lichen biogeography (Feuerer and Hawksworth 2007, Feuerer 2011, Martínez et al. 2003); Neotropical distribution data (Breuss 2000, 2001, 2002, 2004, 2006, Breuss and Neuwirth 2007, Imshaug 1956, 1957, Lücking 2008, Lücking et al. 2011); Lesser Antillean distribution data (Bricaud 2007, 2008, 2009, Fryday 2007, Imshaug 1957, Øvstedal 2010, Sipman 2007, Vainio 1896, 1915); Identification keys and regional guide books (Brodo et al. 2001, Cacaes 2007, Fink 1960, Harris 1988, 1989, 1995, Neuwirth et al. 2011, Øvstedal 2010, Schumm and Aptroot 2010, Swinscow and Krog 1988, Throrer 1988, Vainio 1890); and Lichen genus monographs or papers with keys and/or species descriptions (Aptroot 2012, Aptroot et al. 2008, Frisch et al. 2006, Hale 1965, 1971, 1974, 1976a, 1976b, 1976c, 1978, 1990, Imshaug 1955, 1957, Kashiwadani and Kalb 1993, Knudsen et al. 2008, Kurokawa 1962, Lendemer and Morse 2010, Lumbsch 2004, Redinger 1933, Sérusiaux 1995, Staiger 2002, Thor 1990, Wirth and Hale 1963, 1978). Taxonomic references cited for every species have been tabulated specifically during our exercise, and while not published here, are available from the corresponding author on request.

Geographic collection localities on Saint Lucia investigated by all lichenologists are presented here. The format of entries is as follows: Site number, Place names, Collector and Collector numbers, Quarter district, Collection date, Latitude/Longitude coordinates, Altitude range.

- 1, SAINT LUCIA, anon., sine quart., 1780s to 1830s, 14.0N 61.0W, 0m to 950m
- 2, CASTRIES Botanical Garden [later King George V Botanical Garden], Evans 50 to 134, Quarter of Castries, 28/8/1926 to 4/9/1926, 14.012N 60.987W, 0m to 50m
- 3, CASTRIES Morne Fortune, Evans 50 to 134, Quarter of Castries, 28/8/1926 to 4/9/1926, 13.983N 60.983W, 300m
- 4, SOUFRIÈRE, Evans 50 to 134, Quarter of Soufrière, 28/8/1926 to 4/9/1926, 13.850N 61.050W, 0m to 950m
- 5, SAINT LUCIA, Evans 50 to 134, sine quart., 28/8/1926 to 4/9/1926, 14.0N 61.0W, 0m to 950m
- 6, TROUMASSÉE, Proctor 18198, Quarter of Micoud, -/8/1958, 13.817N 60.933W, 0m to 350m
- 7, ST REMY to UNION VALE, Imshaug 29618 to 29640, Quarter of Soufrière, 03/07/1963, 13.800N 61.033W, 198m to 305m
- 8, SW slopes of GROS PITON, Imshaug 29641 to 29661, Quarter of Soufrière, 04/07/1963, 13.800N 61.067W, 305m to 457m
- 9, ST REMY, Imshaug 29662 to 29680, Quarter of Soufrière, 06/07/1963, 13.817N 61.050W, 305m
- 10, VICTORIA to BELLE PLAINE, Imshaug 29681 to 29714, Quarters of Soufrière / Choiseul, 06/07/1963, 13.800N 61.033W, 335m to 366m
- 11, ST REMY, Imshaug 29715 to 29744, Quarter of Soufrière, 07/07/1963, 13.817N 61.033W, 305m
- 12, Road South of PITON CANARIE, Imshaug 29745 to 29784, Quarter of Soufrière, 07/07/1963, 13.833N 61.000W, 579m
- 13, MOUNT CASTEAU, Imshaug 29785 to 29826, Quarter of Soufrière, 08/07/1963, 13.850N 61.017W, 610m
- 14, RAVINE TORAILLE to MOUNT GIMIE, Imshaug 29827 to 29856, Quarter of Anse La Raye, 10/07/1963, 13.850N 61.000W, 671m to 950m
- 15, MOUNT GIMIE, Imshaug 29857 to 29861, Quarter of Anse La Raye, 10/07/1963, 13.833N 61.000W, 549m to 610m
- 16, FOND DOUX, Imshaug 29862 to 29894, Quarter of Soufrière, 12/07/1963, 13.817N 61.050W, 366m to 507m

- 17, MORNE BONIN, Imshaug 29895 to 29923, Quarter of Soufrière, 13/07/1963, 13.817N 61.017W, 518m to 671m
- 18, Road S of PITON CANARIE above MIGNY, Imshaug 29924 to 29944, Quarter of Soufrière, 14/07/1963, 13.833N 61.017W, 549m to 610m
- 19, VALLEY of L'IVROGNE RIVER, Imshaug 29945 to 29969, Quarter of Soufrière, 15/07/1963, 13.800N 61.050W, 183m to 244m
- 20, ST REMY, Imshaug 29970 to 30017, Quarter of Soufrière, 16/07/1963, 13.817N 61.050W, 305m
- 21, MOUNT GRAND MAGAZIN, Imshaug 30018 to 30041, Quarter of Vieux Fort, 17/07/1963, 13.817N 61.000W, 549m to 616m
- 22, Trail from MOUNT BELVIDERE to MOUNT GRAND MAGAZIN, Imshaug 30042 to 30049, Quarter of Laborie, 17/07/1963, 13.817N 61.000W, 457m
- 23, BARRE DE L'ISLE Ridge to MONT LA COMBE, Imshaug 30050 to 30074, Quarters of Castries / Dennery, 19/07/1963, 13.933N 60.950W, 305m to 440m
- 24, DES BOTTES, Imshaug 30075 to 30111, Quarter of Soufrière, 20/07/1963, 13.867N 61.033W, 610m
- 25, RACHETTE POINT to TROU AU DIABLE, Imshaug 30112 to 30148, Quarter of Soufrière, 22/07/1963, 13.850N 61.067W, 61m to 76m
- 26, GRAND CAILLE POINT, Imshaug 30149 to 30175, Quarter of Soufrière, 23/07/1963, 13.850N 61.067W, 61m to 76m
- 27, GROS PITON, Imshaug 30176 to 30229, Quarter of Soufrière, 24/07/1963, 13.800N 61.050W, 701m to 798m
- 28, ANSE DE PITONS, Imshaug 30230 to 30246, Quarter of Soufrière, 25/07/1963, 13.817N 61.050W, 0m
- 29, Ridge at Head of RAVINE MARCHE GAYE, Imshaug 30247 to 30265, Quarter of Laborie, 26/07/1963, 13.817N 61.000W, 610m to 671m
- 30, MOUNT TABAC Ridge, Imshaug 30266 to 30300, Quarter of Soufrière, 28/07/1963, 13.850N 61.033W, 671m to 732m
- 31, ANSE L'IVROGNE, Imshaug 30301 to 30310, Quarter of Soufrière, 29/07/1963, 13.783N 61.050W, 0m
- 32, SAINT LUCIA, Øvstedal 113 to 231, sine quart., -/12/1977, 14N 61W, 0-950m
- 33, PITON MINOR, Øvstedal 113 to 231, Quarter of Soufrière, -/12/1977, 13.783N 61.050W, 0-710m
- 34, QUILESSE, Sérusiaux, Quarter of Micoud, -/2/1993, 13.783N 61.050W, 250m to 350m
- 35, BARRE DE L'ISLE Ridge, Sérusiaux, Quarters of Castries / Dennery, -/2/1993, 13.933N 60.950W, 250m to 300m
- 36, SAINT LUCIA, Sérusiaux, sine quart., /2/1993, 14.0N 61.0W, 0m to 950m
- 37, HEWANORRA, Cullen & Fox, Quarter of Vieux Fort, 24/4/2007, 13.737N 60.950W, 10m to 50m.
- 38, MAMIKU, Cullen & Fox, Quarter of Praslin, 25/4/2007, 13.868N 60.900W, 0m to 100m.
- 39, DENNERY RIVER, Cullen & Fox, Quarter of Dennery, 25/4/2007, 13.909N 60.912W, 50m to 200m.
- 40, PALMIS, Cullen & Fox, Quarter of Micoud, 26/4/2007, 13.769N 60.922W, 0m to 10m.
- 41, ANSE DE SABLE, Cullen & Fox, Quarter of Vieux Fort, 26/4/2007, 13.758N 61.027W, 0m to 5m.
- 42, GROS PITON, Cullen & Fox, Quarter of Soufrière, 27/04/2007, 13.800N 61.050W, 300m to 798m
- 43, EDMOND, Cullen & Fox, Quarter of Soufrière, 28/04/2007, 13.800N 61.050W, 400m to 600m
- 44, GRAND ANSE, Cullen & Fox, Quarter of Dauphin, 29/04/2007, 13.758N 61.027W, 0m to 50m
- 45, CAS-EN-BAS, Cullen & Fox, Quarter of Gros Islet, 29/04/2007, 14.099N 60.953W, 0m to 30m
- 46, BARRE DE L'ISLE RIDGE, Cullen & Fox, Quarters of Castries / Dennery, 30/4/2007, 13.933N 60.950W, 250m to 300m
- 47, BALENBOUCHE, Cullen & Fox, Quarter of Laborie, 1/05/2007, 13.758N 61.027W, 0m to 50m

The species list presented supersedes an online list of 163 species (Fox and Cullen 2008). The format of entries on the list is as follows: Species name with authors; Substrate ecology; Number of localities, botanical district codes locality names, site numbers, year of most recent collection from Saint Lucia, herbarium with voucher specimen, specimen number(s), literature citation reference: author(s) (year: page).

SPECIES NAME WITH AUTHORS	SUBSTRATE ECOLOGY	NUMBER OF LOCALITIES, BOTANICAL DISTRICT CODES, LOCALITY NAMES, SITE NUMBERS, YEAR OF MOST RECENT COLLECTION FROM SAINT LUCIA, HERBARIUM WITH VOUCHER SPECIMEN, SPECIMEN NUMBER(S), LITERATURE CITATION REFERENCE: AUTHOR (YEAR: PAGE).
<i>Acarospora chrysoys</i> (Tuck.) H.Magn.	Saxicolous	1, SO, Grande Caille Point, 26, 1963, MSC, 18301.
<i>Aderkomyces albostrigosus</i> (R.Sant.) Lücking, Sérus. & Vězda	Foliicolous	2, SO, Piton Canarie above Migny, Gros Piton, 18, 27, 1963, MSC, 29040, 30442 to 30445.
<i>Amandinea efflorescens</i> (Müll. Arg.) Marbach	Corticulous	2, SO, Anse de Piton, Anse L Ivrogne, 28, 31, 2007, MSC, 6260, 7998.
<i>Amandinea placodiomorpha</i> (Vain.) Marbach	Corticulous	1, SO, Anse L Ivrogne, 31, 2007, MSC, 18314, 18315, Sheard and May (1997: 167).
<i>Anisomeridium americanum</i> (A.Massal.) R.C.Harris	Corticulous	2, SO, Mont Casteau, Des Bottes, 13, 24, 1963, MSC, 18327, 18328.
<i>Anisomeridium terminatum</i> (Nyl.) R.C.Harris	Corticulous	1, SO, Gros Piton, 27, 1963, MSC, 18339, 18340.
<i>Arthonia circumtincta</i> Müll. Arg.	Corticulous	1, CH/SO, Victoria to Belle Plaine, 10, 1963, MSC, 18420.
<i>Arthonia rubella</i> (Fée) Nyl.	Corticulous	1, LB, Balenbouche, 47, 2007, Barrow herb., 20663.
<i>Arthonia trilocularis</i> Müll. Arg.	Foliicolous	6, CS/DY, LB, SO, Morne Bonin, Piton Canarie above Migny, Barre de L'Isle, Des Bottes, Gros Piton, Ravine March Gaye, 17, 18, 23, 24, 27, 29, 2007, MSC, 19923 to 19929.
<i>Aspidothelium fugiens</i> (Müll. Arg.) R.Sant.	Foliicolous	6, CS/DY, LB, SO, Piton Canarie, Barre de L'Isle, Des Bottes, Gros Piton, Ravine March Gaye, 12, 18, 23, 24, 27, 29, 1963, MSC, 13314, 13315, 13317 to 13326, Fryday and Coppins (2004: 89).
<i>Aspidothelium scutellarpum</i> Lücking	Foliicolous	2, SO, Piton Canarie, Mont Tabac, 12, 30, 1963, MSC, 13316, 13327.
<i>Aulaxina quadrangula</i> (Stirt.) R.Sant.	Foliicolous	1, SO, Piton Canarie, 12, 1963, MSC, 13339.
<i>Bacidia</i> sp. A Øvstedal	Corticulous	2, GI, LB, Mamiku, Balenbouche, 2007, Barrow herb., 19960, 20561.
<i>Bacidina apiahica</i> (Müll. Arg.) Vězda	Foliicolous	3, CS/DY, SO, Piton Canarie above Migny, Barre de L'Isle, Gros Piton, 18, 23, 27, 1963, MSC, 13509 to 13511.
<i>Bacidina defecta</i> Vězda	Foliicolous	2, CS/DY, SO, Barre de L'Isle, Des Bottes, 24, 35, 1993, LG, MSC, Imshaug 30072F, Lücking (2008: 611).
<i>Bacidina pseudohyphophorifera</i> (Lücking & Sérus.) Lücking	Foliicolous	1, MI, Quillesse, 34, 1993, LG, —, Sérusiaux (1995: 422).
<i>Badimia dimidiata</i> (C. Babingt. ex Leight.) Vězda	Foliicolous	1, SO, Piton Canarie, 12, 1963, MSC, 13341.
<i>Brigantiaea leucoxantha</i> (Spreng.) R.Sant. & Hafellner	Corticulous	1, SO, Gros Piton, SW, 8, 2007, MSC, 19761.
<i>Buellia dispersula</i> Müll. Arg.	Saxicolous	1, SO, Grande Caille Point, 26, 1963, MSC, 7995.
<i>Buellia mamillana</i> (Tuck.) W.A.Weber	Saxicolous	3, SO, St. Remy to Union Vale, Rachette Point to Trou au Diable, Grande Caille Point, 7, 25, 26, 1963, MSC, 21582, 21583, 29115, 29117, 29154, Bungartz et al. (2004: 467).
<i>Bulbothrix fungicola</i> (Lyngé) Hale	Corticulous	1, SO, Mont Casteau, 13, 1963, MSC, 19944.
<i>Bulbothrix goebelii</i> (Zenker) Hale	Corticulous	1, LCA, A specimen from Saint Vincent was erroneously reported as from Saint Lucia, —, 1963, MSC, MSC 19957, Imshaug 30737.
<i>Bulbothrix laevigatula</i> (Nyl.) Hale	Corticulous	5, LCA, SO, St. Remy, 5, 7, 11, 19, 20, 1963, US, MSC, 20002 to 20007, Hale (1976: 19).
<i>Bulbothrix suffixa</i> (Stirt.) Hale	Corticulous	1, SO, Mont Casteau, 13, 1963, MSC, Imshaug 29820, Hale (1976: 24).

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<i>Bulbothrix tabacina</i> (Mont. & v.d.Bosch) Hale	Corticolous	1, SO, Morne Bonin, 17, 1963, MSC, 19993.
<i>Byssoloma discordans</i> (Vain.) Zahlbr.	Foliicolous	4, CS/DY, SO, Piton Canarie, Barre de L'Isle, Gros Piton, Mont Tabac, 12, 23, 27, 30, 1963, MSC, 13575 to 13580.
<i>Byssoloma subdiscordans</i> (Nyl.) P.James	Foliicolous	6, CS/DY, LB, SO, Morne Bonin, Piton Canarie above Migny, Barre de L'Isle, Mont Tabac, Ravine March Gaye 12, 17, 18, 23, 29, 30, 2007, MSC, 13600 to 13609, 20013 to 20017.
<i>Byssoloma tricholomum</i> (Mont.) Zahlbr.	Foliicolous	1, SO, Des Bottes, 24, 1963, MSC, 114665.
<i>Calopadia perpallida</i> (Nyl.) Vězda	Corticolous	1, SO, Gros Piton, 27, 42, 2007, MSC, 22947, Barrow herb., 20211.
<i>Calopadia phyllogena</i> (Müll. Arg.) Vězda	Foliicolous	3, CS/DY, SO, Mont Casteau, Barre de L'Isle, Gros Piton, 13, 23, 27, 2007, MSC, 22949, 22950, 22951.
<i>Calopadia puiggarii</i> (Müll. Arg.) Vězda	Foliicolous	1, SO, Piton Canarie above Migny, 18, 1963, MSC, Imshaug 29936.
<i>Calopadia turbinata</i> (Tuck.) Sérus. & Lücking	Corticolous	1, MI, Quillesse, 34, 1993, LG, —, Lücking et al. (2005: 486).
<i>Caloplaca aphanotripta</i> (Nyl.) Zahlbr.	Corticolous	1, PR, Mamiku, 2007, Barrow herb., 20040.
<i>Caloplaca cinnabarina</i> (Ach.) Zahlbr.	Saxicolous	1, SO, Grande Caille Point, 26, 1963, MSC, 13916.
<i>Caloplaca crenularia</i> (With.) J.R.Laundon	Saxicolous	1, SO, Grande Caille Point, 26, 1963, MSC, 6524, Wetmore (1996: 301).
<i>Caloplaca diplacioides</i> (Vain.) Zahlbr.	Saxicolous	1, CS, Morne Fortune, 3, 1926, NY, Evans 89, Lendemmer and Morse (2010: 331).
<i>Caloplaca epiphora</i> (Tayl.) F.H.Dodge	Corticolous	15, CH/SO, CS/DY, GI, LB, PR, SO, St. Remy, Valley of Ivrogne River, Rachette Point to Trou au Diable, Mamiku, Palmis, Edmond, Cas en Bas, Barre de L Isle, Balenbouche, 7, 8, 9, 10, 19, 20, 25, 26, 28, 38, 40, 43, 45, 46, 47, 2007, MSC, 121634 to 121651, Barrow herb., 19959, 20336, 20406, 20424, 20531, 20560, 20592, 20644, 20654, Wetmore (2004: 287).
<i>Canoparmelia caroliniana</i> (Nyl.) Elix & Hale	Corticolous	1, LCA, sine loc, 32, 1977, BG, BG-L-31717 (Øvstedal 139).
<i>Canoparmelia martinicana</i> (Nyl.) Elix & Hale	Corticolous	7, LCA, SO, LB, St. Remy, Valley of Ivrogne River, Mamiku, Balenbouche, 5, 7, 8, 10, 19, 20, 31, 38, 47, 2007, US, FH, NY, MSC, 18532 to 18537, Barrow herb., 20574, 20606, 20670, 20009. Hale (1976: 38).
<i>Caprettia amazonensis</i> Bat. & H.Maia	Foliicolous	1, CS/DY, 8, Barre de L'Isle, 35, 1993, LG, —, Lücking (2008: 213).
<i>Chapsa alborosella</i> (Nyl.) A.Frisch	Corticolous	1, PR, Mamiku, 38, 2007, Barrow herb., 20016.
<i>Chapsa cinchonarum</i> (Nyl.) A.Frisch	Corticolous	1, SO, Edmond, 43, 2007, Barrow herb., 20371.
<i>Chapsa thallotrema</i> Lücking & N.Salazar	Corticolous	6, CS/DY, SO, VF, Morne Bonin, Piton Canarie above Migny, Mont Grand Magazin, Barre de L'Isle, Des Bottes, Gros Piton, 17, 18, 21, 23, 24, 27, 1963, MSC, 32278 to 32280, 32295, 32297.
<i>Chiodecton cineretium</i> (Ach.) Vain.	Corticolous	1, LB, 13, Ravine March Gaye, 29, 2007, MSC, 114773.
<i>Cladonia nana</i> Vain.	Corticolous	1, LB, 13, Mount Belvidere to Mont Grand Magazin, 22, 1963, MSC, 20299, Ahti (2000: 253).
<i>Cladonia subradiata</i> (Vain.) Sandst.	Lignicolous	3, LB, SO, sine loc., Balenbouche, 4, 32, 47, 2007, BG, NY, BG-L-62174, Barrow herb., 20611, 20618, Ahti (2000: 158).
<i>Coccocarpia domingensis</i> Vain.	Corticolous	1, SO, Petit Piton, 33, 1977, BG, BG-L-31720, BG-L-31737, Arvidsson (1982: 51).
<i>Coccocarpia erythroxyli</i> (Ach.) Arvid. & D.J.Galloway	Corticolous	1, SO, Edmond, 43, 2007, Barrow herb., 20267.

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<i>Coccocarpia palmicola</i> (Spreng.) Arvid. & D.J.Galloway	Corticolous	13, CH/SO, SO, St. Remy, Morne Bonin, Piton Canarie above Migny, Valley of Ivrogne River, Rchette Point to Trou au Diable, Gros Piton, Pal Mis, Balenbouche, 7, 9, 10, 11, 12, 16, 17, 18, 19, 26, 27, 28, 42, 47, 2007, MSC, 6297 to 6300, 21069 to 21079, Barrow herb., 20104, 20648, 20228, Arvidsson (1982: 75).
<i>Coccocarpia pellita</i> (Ach.) Müll. Arg.	Corticolous	5, AR, SO, Victoria to Belle Plaine, Mont Gimie, Edmond 10, 12, 15, 17, 30, 2007, MSC, 6399 to 6405. Barrow herb., 20297.
<i>Coccocarpia stellata</i> Tuck.	Foliicolous	1, SO, Piton Canarie, Edmond, 12, 42, 2007, MSC, 6455. Barrow herb., 20311.
<i>Coenogonium hypophyllum</i> (Vězda) Kalb & Lücking	Foliicolous	3, CS/DY, SO, Piton Canarie, Barre de L'Isle, Des Bottes, 12, 23, 24, 1963, MSC, 20599 to 20601.
<i>Coenogonium interplexum</i> Nyl.	Foliicolous	2, SO, Mont Casteau, Gros Piton, 13, 27, 1963, MSC, 6509, 6510.
<i>Coenogonium interpositum</i> Nyl.	Foliicolous	1, SO, Gros Piton, 27, 1963, MSC, 6547.
<i>Coenogonium linkii</i> Ehrenb.	Foliicolous	1, SO, Mont Casteau, 13, 2007, MSC, 6586.
<i>Coenogonium luteum</i> (Dicks.) Kalb & Lücking	Foliicolous	1, SO, Mont Casteau, 13, 1963, MSC, 20604.
<i>Coenogonium subluteum</i> (Rehm) Kalb & Lücking	Foliicolous	1, SO, Gros Piton, 27, 1963, MSC, 20597.
<i>Coenogonium zonatum</i> Nyl.	Foliicolous	1, SO, Edmond, 43, 2007, Barrow herb., 20268.
<i>Cratiria americana</i> (Fée) Kalb & Marbach	Corticolous	1, SO, Rchette Point to Trou au Diable, 25, 1963, MSC, 22217.
<i>Cratiria lauricassiae</i> (Fée) Marbach	Corticolous	6, CH/SO, SO, St. Remy, Balenbouche, 10, 11, 19, 20, 28, 2007, MSC, 20464, 20465, 20468, 20469, 20470, 20481, 20482, Barrow herb., Marbach (2000: 160).
<i>Cryptothecia malmei</i> Redinger	Corticolous	1, CH/SO, Victoria to Belle Plaine, 10, 1963, MSC, 21340.
<i>Cryptothecia subnidulans</i> Stirt.	Corticolous	1, SO, St. Remy, 9, 1963, MSC, 21336.
<i>Dictyonema glabratum</i> (Spreng.) Fr.	Terricolous	4, SO, MI, Troumassee, St. Remy to Union Vale, Morne Bonin, Edmond, 6, 7, 17, 43, 2007, MSC, NY, 23021, 21296, Proctor 18198 (NY 462120), Barrow herb., 20280, 20303.
<i>Dictyonema sericeum</i> (Mont.) D.Hawksw.	Terricolous	1, DY, Dennery River, 39, 2007, Barrow herb., 20091.
<i>Diorygma antillarum</i> (Vain.) Nelsen, Lücking & Rivas Plata	Corticolous	1, SO, Mont Tabac, Edmond, 30, 42, 2007, MSC, 114765 Aptroot et al. (2009: 31). Barrow herb., 20272.
<i>Diploschistes actinostomus</i> (Pers. ex Ach.) Zahlbr.	Saxicolous	2, SO, Gros Piton, SW, Grande Caille Point, 8, 26, 1963, MSC, 20626, 20631.
<i>Diploschistes chloroleucus</i> (Tuck.) Zahlbr.	Saxicolous	2, SO, Fond Doux, Rchette Point to Trou au Diable, 16, 25, 1963, MSC, 20650, 20651, 20655 to 20657.
<i>Dirinaria aegialita</i> (Afzel.) B.Moore	Corticolous	3, CH/SO, SO, St. Remy, Victoria to Belle Plaine, 9, 10, 11, 1963, MSC, 22330 to 22333.
<i>Dirinaria applanata</i> (Fée) D.D.Awasthi	Corticolous	3, SO, St. Remy, Fond Doux, 9, 16, 20, 1963, MSC, 22368 to 22373.
<i>Dirinaria picta</i> (Sw.) Clem. & Shear	Corticolous	4, SO, LB, Valley of Ivrogne River, Grande Caille Point, Anse de Piton, Mamiku, Balenbouche, 19, 26, 28, 38, 47, 2007, MSC, 20788, 20789, 20794, 20795, Barrow herb., 20546, 20578, 20635, 20646, 19957.
<i>Dyplotabia afzelii</i> (Ach.) Kalb & Staiger	Corticolous	1, SO, Edmond, 43, 2007, Barrow herb., 20333
<i>Dyplotabia oryzoides</i> (Leight.) Kalb & Staiger	Corticolous	1, SO, Gros Piton, 27, 1963, MSC, 6574, 6575.

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<i>Echinoplaca atrofusca</i> R.Sant.	Foliicolous	2, LB, SO, Gros Piton, Ravine March Gaye, 27, 29, 1963, MSC, 20860 to 20862.
<i>Echinoplaca diffluens</i> (Müll. Arg.) R.Sant.	Foliicolous	1, SO, Gros Piton, 27, 1963, MSC, 30216.
<i>Echinoplaca leucotrichoides</i> (Vain.) R.Sant.	Foliicolous	1, SO, Gros Piton, 27, 1963, MSC, 20864.
<i>Echinoplaca melanothrix</i> Lücking	Foliicolous	1, CS/DY, Barre de L'Isle, 23, 1963, MSC, 13331.
<i>Echinoplaca pellicula</i> (Müll. Arg.) R.Sant.	Foliicolous	5, CS/DY, LB, SO, Barre de L'Isle, 12, 13, 18, 23, 29, 1963, MSC, 20865 to 20868, 20870 to 20874.
<i>Erioderma unguigerum</i> (Bory) Nyl.	Corticulous	1, LCA, sine loc, 32, 1977, BG, BG-L-31708 (Øvstedal), BG-L-31709.
<i>Fellhanera fuscata</i> (Müll. Arg.) Vězda	Foliicolous	1, SO, Piton Canarie, 12, 1963, MSC, 13342.
<i>Fellhanera rhapsidophylli</i> (Rehm) Vězda	Foliicolous	1, SO, Piton Canarie, 12, 1963, MSC, 13344.
<i>Fellhanera santessonii</i> Barillas & Lücking	Foliicolous	1, LCA, 15, sine loc, 36, 1993, LG, —, Sérusiaux (1996: 217).
<i>Fellhanera stanhopeae</i> (Müll. Arg.) Lücking, Lumbsch & Elix	Foliicolous	1, SO, Mont Tabac, 30, 1963, MSC, 13378.
<i>Fellhanera subternella</i> (Nyl.) Vězda	Foliicolous	1, SO, Des Bottes, 24, 1963, MSC, 13386, 650.
<i>Fissurina triticea</i> (Nyl.) Staiger	Corticulous	1, SO, Morne Bonin, 17, 1963, MSC, 22902.
<i>Glyphis cicatricosa</i> Ach.	Corticulous	3, GI, LB, SO, St. Remy, Mamiku, Cas en Bas, Balenbouche, 11, 38, 45, 47, 2007, MSC, 20923, Barrow herb., 20006, 20441, 20580.
<i>Graphis antillarum</i> Vain.	Corticulous	1, SO, St. Remy, 20, 1963, MSC, 24004.
<i>Graphis argentata</i> Lücking & Umaña	Corticulous	3, AR, SO, VF, Ravine Toraille to Mont Gimie, Piton Canarie above Migny, Mont Grand Magazin, 14, 18, 21, 1963, MSC, 20691, 20693, 6579, 6861.
<i>Graphis asterizans</i> Nyl.	Corticulous	1, SO, Piton Canarie, 12, 1963, MSC, Imshaug 29745.
<i>Graphis caesiella</i> Vain.	Corticulous	1, SO, St. Remy to Union Vale, 7, 1963, MSC, 24144.
<i>Graphis disserpens</i> Nyl.	Corticulous	1, SO, Piton Canarie above Migny, 18, 1963, MSC, Imshaug 29941.
<i>Graphis dracenaee</i> Vain.	Corticulous	1, SO, Grande Caille Point, 26, 1963, MSC, Imshaug 30171.
<i>Graphis duplicata</i> Ach.	Corticulous	1, SO, Mamiku, 38, 2007, Barrow herb., 20024.
<i>Graphis duplicatoinspersa</i> Lücking	Corticulous	1, SO, Rchette Point to Trou au Diable, 25, 1963, MSC, NY, NY 1068387 (Imshaug 30131).
<i>Graphis flavens</i> Müll. Arg.	Corticulous	1, SO, Mont Casteau, 13, 1963, MSC, 6683.
<i>Graphis furcata</i> Fée	Corticulous	1, SO, Rchette Point to Trou au Diable, 25, 2007, MSC, 6867.
<i>Graphis librata</i> C.Knight	Corticulous	1, SO, Rchette Point to Trou au Diable, 25, 1963, MSC, Imshaug 30128.
<i>Graphis longula</i> Krempelh.	Corticulous	1, SO, Fond Doux, 16, 1963, MSC, 6862.
<i>Graphis nanodes</i> Vain.	Corticulous	1, SO, Morne Bonin, 17, 1963, MSC, 24005.
<i>Graphis olivacea</i> Redinger	Corticulous	1, SO, Des Bottes, 24, 1963, MSC, Imshaug 30089.
<i>Graphis plurispora</i> (Redinger) Lücking & Cháves	Corticulous	1, SO, Rchette Point to Trou au Diable, 25, 1963, MSC, Imshaug 30131.
<i>Graphis rhizocola</i> (Fée) Cháves & Lücking	Corticulous	1, SO, Mont Tabac, 30, 1963, MSC, NY, NY 1058931 (Imshaug 30288).

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<i>Graphis rigidula</i> Müll. Arg.	Corticolous	1, SO, Valley of Ivrogne River, 19, 1963, MSC, 6866.
<i>Graphis sapii</i> Zahlbr.	Corticolous	1, SO, Piton Canarie above Migny, 18, 1963, MSC, Imshaug 29935.
<i>Graphis subflexibilis</i> Lücking & Cháves	Corticolous	1, CS/DY, Barre de L'Isle, 23, 1963, MSC, 6662.
<i>Graphis tenella</i> Ach.	Corticolous	1, SO, St. Remy, 20, 2007, MSC, Imshaug 29984.
<i>Gyalectidium filicinum</i> Müll. Arg.	Foliicolous	4, CS/DY, MI, SO, Barre de L'Isle, 18, 23, 27, 34, 1963, 1993, LG, MSC, 29040 to 29042, 29048, 29050, 29052, Ferraro et al. (2001: 331).
<i>Gyalectidium imperfectum</i> Vězda	Foliicolous	4, CS/DY, MI, SO, Piton Canarie, Barre de L'Isle, Gros Piton, Quillesse, 12, 23, 27, 34, 1963, 1993, LG, MSC, 29043, 29044, 29045, 29047, Ferraro et al. (2001: 338).
<i>Gyalideopsis cochlearifera</i> Lücking & Sérus.	Foliicolous	1, MI, Quillesse, 34, 1993, LG, —, Lücking and Sérusiaux (1998: 549).
<i>Gyalideopsis vulgaris</i> (Müll. Arg.) Lücking	Foliicolous	1, SO, Piton Canarie above Migny, Edmond, 18, 43, 2007, MSC, 20859. Barrow herb., 20385.
<i>Hafellia callispora</i> (C.Knight) H.Mayrhofer & Sheard	Corticolous	2, SO, St. Remy to Union Vale, Valley of Ivrogne River, 7, 19, 1963, MSC, 29108, 29109.
<i>Herpothallon roseocinctum</i> (Ehrenb.: Fr.) Aptroot, Lücking & G.Thor	Corticolous	1, SO, Piton Canarie, Edmond, 12, 43, 1963, MSC, 29177, Barrow herb., 20343, Aptroot et al. (2009: 59).
<i>Heterodermia albicans</i> (Pers.) Swinscow & Krog	Corticolous	5, SO, VF, St. Remy, Mamiku, Cas en Bas, 7, 11, 16, 20, 21, 38, 45, 2007, MSC, 25079 to 25085, 29555, 29561 to 29564. Barrow herb., 20023, 20402.
<i>Heterodermia allardii</i> (Kurok.) Trass	Corticolous	1, SO, Des Bottes, 24, 1963, MSC, 27910.
<i>Heterodermia comosa</i> (Eschw.) Follm. & Redon	Corticolous	1, SO, Gros Piton, 27, 1963, MSC, 22495.
<i>Heterodermia dendritica</i> (Pers.) Poelt	Corticolous	2, LB, SO, Ravine March Gaye, Mont Tabac, 29, 30, 1963, MSC, 139964, 139965.
<i>Heterodermia flabellata</i> (Fée) D.D.Awasthi	Corticolous	1, SO, Des Bottes, 24, 1963, MSC, 26035.
<i>Heterodermia isidiophora</i> (Nyl.) D.D.Awasthi	Corticolous	1, SO, Des Bottes, 24, 1963, MSC, 26183.
<i>Heterodermia leucomela</i> (L.) Poelt	Corticolous	7, SO, VF, Morne Bonin, Piton Canarie above Migny, Gros Piton, Edmond, 13, 17, 18, 21, 24, 27, 30, 42, 2007, MSC, 26190 to 26201, Barrow herb., 20326, 20386, 20202, 20245, 20194, 20238, 20210.
<i>Heterodermia lutescens</i> (Kurok.) Follm.	Corticolous	3, LB, SO, Mont Casteau, Gros Piton, Ravine March Gaye, 13, 27, 29, 1963, MSC, 26947, 26948, 26949.
<i>Heterodermia magellanica</i> (Zahlbr.) Swinscow & Krog	Corticolous	1, LCA, sine loc, 32, 1977, BG, BG-L-31710 (Øvstedal 231).
<i>Heterodermia podocarpa</i> (C.Bél.) D.D.Awasthi	Corticolous	1, SO, Gros Piton, 27, 2007, MSC, 139995.
<i>Heterodermia pseudospeciosa</i> (Kurok.) Culb.	Corticolous	1, SO, Petit Piton, 33, 1977, BG, BG-L-31736 (Øvstedal).
<i>Heterodermia tremulans</i> (Müll. Arg.) Culb.	Corticolous	3, SO, St. Remy to Union Vale, Fond Doux, Morne Bonin, 7, 16, 17, 2007, MSC, 31964 to 31967.
<i>Julella geminella</i> (Nyl.) R.C.Harris	Corticolous	2, SO, VF, Fond Doux, Pal Mis, 16, 40, 2007, MSC, 28477, Barrow herb., 20107, Harris (1995: 83).

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<i>Lambinonia strigulae</i> (Elenkin & Woron.) Sérus. & Diederich	Foliicolous	1, CS/DY, Barre de L'Isle, 35, 1993, LG, —, Sérusiaux and Diederich (2005: 505).
<i>Lasioloma arachnoideum</i>	Foliicolous	2, CS/DY, SO, Piton Canarie above Migny, Barre de L'Isle, 18, 23, 1963, MSC, 24016, 24017, 759.
<i>Lecanora helva</i> Stizenb.	Corticulous	1, SO, Valley of Ivrogne River, Balenbouche, 19, 47, 2007, MSC, 24393. Barrow herb., 20665.
<i>Lecanora leprosa</i> Fée	Corticulous	3, SO, Valley of Ivrogne River, Grande Caille Point, Anse de Piton, 19, 26, 28, 1963, MSC, 20739, 24267, 24273, 24274, 114293, 114298.
<i>Lecanora prosecha</i> Ach.	Corticulous	1, SO, Fond Doux, 16, 2007, MSC, 24413.
<i>Lecanora subimmersa</i> (Fée) Vain.	Saxicolous	1, SO, Gros Piton, SW, 8, 1963, MSC, 24431.
<i>Lecanora tropica</i> Zahlbr.	Corticulous	3, SO, SO/CH, St. Remy to Union Vale, Victoria to Belle Plaine, Valley of Ivrogne River, 7, 10, 19, 2007, MSC, 6755 to 6758.
<i>Leptogium austroamericanum</i> (Malme) C.W.Dodge	Corticulous	4, SO, DP, St. Remy to Union Vale, St. Remy, Valley of Ivrogne River, Cas en Bas, 7, 11, 19, 20, 45, 2007, MSC, 24163 to 24169. Barrow herb., 20444.
<i>Leptogium azureum</i> (Sw. ex Ach.) Mont.	Corticulous	3, AR, SO, Mont Casteau, Mont Gimie, Des Bottes, Grande Anse, 13, 15, 24, 2007, MSC, 24212 to 24214, Barrow herb., 20400.
<i>Leptogium chloromelum</i> (Ach.) Nyl.	Corticulous	1, CH/SO, Victoria to Belle Plaine, 10, 1963, MSC, 24641.
<i>Leptogium coralloideum</i> (Mey. & Flot.) Vain.	Corticulous	1, SO, Fond Doux, 16, 1963, MSC, 24905.
<i>Leptogium cyanescens</i> (Rabenh.) Körb.	Corticulous	1, LCA, sine loc, 5, 1926, US, US 1026622 (Evans 118), US 1026621 (Evans 125).
<i>Leptogium denticulatum</i> Nyl.	Corticulous	5, CH/SO, SO, St. Remy, Gros Piton, 9, 10, 24, 27, 30, 1963, MSC, 29385, 29414, 29415, 29419, 29420.
<i>Leptogium leptophyllum</i> (Mey. & Flot.) Zahlbr.	Corticulous	1, LCA, sine loc, 32, 1977, BG, BG-L-31707 (Øvstedal).
<i>Leptogium marginellum</i> (Sw.) S.F.Gray	Corticulous	4, SO, Victoria to Belle Plaine, Fond Doux, Valley of Ivrogne River, St. Remy, Edmond, 10, 16, 19, 20, 43, 2007, MSC, 22551 to 22557. Barrow herb., 20298.
<i>Leptogium phyllocarpum</i> (Pers. in Gaudich.) Mont.	Corticulous	2, SO, St. Remy, Des Bottes, 9, 24, 1963, MSC, 22622, 22623.
<i>Leptogium pichneum</i> (Ach.) Nyl.	Corticulous	1, SO, Petit Piton, 33, 1977, BG, BG-L-31706 (Øvstedal).
<i>Leptogium reticulatum</i> Mont.	Corticulous	1, SO, Mont Tabac, 30, 1963, MSC, 22649.
<i>Leptogium standleyi</i> C.W.Dodge	Corticulous	1, AR, Mont Gimie, 15, 1963, MSC, 22656 to 22659.
<i>Letrouitia domingensis</i> (Pers.) Hafellner & Bellem.	Corticulous	1, CS/DY, Barre de L'Isle, Dennery River, Gros Piton, 23, 39, 41, 2007, MSC, 22860. Barrow herb., 20070, 20168.
<i>Loflammia epiphylla</i> (Fée) Lücking & Vězda	Foliicolous	2, SO, Piton Canarie above Migny, Gros Piton, 18, 27, 1963, MSC, 22891, to 22893, 22939 to 22941, 775.
<i>Malmidea granulifera</i> (Vain.) Aptroot	Corticulous	1, SO, 1963, MSC.
<i>Mazosia dispersa</i> (Hedrick) R.Sant.	Foliicolous	1, SO, Gros Piton, 27, 1963, MSC, 22991.
<i>Mazosia paupercula</i> (Müll. Arg.) R.Sant.	Foliicolous	2, CS/DY, SO, Piton Canarie, Barre de L'Isle, 12, 23, 1963, MSC, 22994 to 22996.
<i>Mazosia phyllosema</i> (Nyl.) Zahlbr.	Foliicolous	3, CS/DY, SO, Piton Canarie above Migny, Barre de L'Isle, Des Bottes, 18, 23, 24, 1963, MSC, 22998 to 29003.

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<i>Megalospora coccodes</i> (C.Bél.) Sipman	Corticolous	3, SO, Piton Canarie above Migny, Des Bottes, Gros Piton, 18, 24, 27, 1963, MSC, 29019 to 29022.
<i>Mycoporum eschweileri</i> (Müll. Arg.) R.C.Harris	Corticolous	2, CS, SO, Botanic Station in Castries, Fond Doux, 2, 16, 1963, MSC, 29458, MICH 68119.
<i>Myriotrema hartii</i> (Müll.Arg.) Hale	Corticolous	1, LCA, Piton Canarie, 12, 1963, MSC, 117501, Imshaug 29757.
<i>Ocellularia fecunda</i> Hale	Corticolous	1, SO, Edmond, 43, 2007, Barrow herb., 20334, 20508.
<i>Ocellularia interposita</i> (Nyl.) Hale	Corticolous	1, SO, Des Bottes, 24, 1963, MSC, 23130.
<i>Ocellularia olivacea</i> (Fée) Müll. Arg.	Corticolous	2, SO, Mont Casteau, Mont Tabac, 13, 30, 1963, MSC, 26024, 26025, 26027.
<i>Ocellularia perforata</i> (Leight.) Müll. Arg.	Corticolous	3, AR, SO, Mont Gimie, Morne Bonin, Gros Piton, 15, 17, 27, 47, Balenbouche, 2007, MSC, 26042, 26043, 26045. Barrow herb., 20652.
<i>Ocellularia praestans</i> (Müll. Arg.) Hale	Corticolous	3, SO, CS/DY, Mont Casteau, Edmond, Barre de L'Isle, 13, 43, 46, 2007, MSC, 26050, Barrow herb., 20467.
<i>Ocellularia rhodostroma</i> (Mont.) Zahlbr.	Corticolous	4, LB, SO, VF, Gros Piton, Mont Tabac, 17, 21, 29, 30, 1963, MSC, 26059 to 26064.
<i>Ochrolechia antillarum</i> Brodo	Corticolous	1, SO, St. Remy, Edmond, 9, 43, 2007, MSC, 29185, Brodo (1991: 71). Barrow herb., 20300.
<i>Opegrapha filicina</i> Mont.	Foliicolous	4, CS/DY, SO, Mont Casteau, Barre de L'Isle, Des Bottes, Gros Piton, 13, 23, 24, 27, 46, 2007, MSC, 6712 to 6721, 175. Barrow herb., 20480.
<i>Opegrapha lambinonia</i> Sérus.	Foliicolous	1, CS/DY, Barre de L'Isle, 23, 1963, MSC, 29045, 13331, 29046.
<i>Pannaria mariana</i> (Fr.) Müll. Arg.	Corticolous	1, SO, St. Remy, 20, 2007, MSC, 29212.
<i>Pannaria mosenii</i> C.W.Dodge	Corticolous	5, LB, SO, St. Remy, Gros Piton, 16, 20, 22, 27, 30, 1963, MSC, 29244, 29246, 29584 to 29586.
<i>Pannaria prolificans</i> Vain.	Corticolous	4, LB, SO, VF, St. Remy, 20, 21, 22, 30, 1963, MSC, 29594 to 29598, 29612, 29613.
<i>Parmelinopsis minarum</i> (Vain.) Elix & Hale	Corticolous	1, SO, Des Bottes, 24, 1963, MSC, 24832.
<i>Parmotrema conformatum</i> (Vain.) Hale	Corticolous	1, SO, Gros Piton, 27, 1963, MSC, 25012.
<i>Parmotrema endosulphureum</i> (Hillmann) Hale	Corticolous	5, SO, St. Remy to Union Vale, St. Remy, Victoria to Belle Plaine, Gros Piton, 7, 9, 10, 20, 42, 2007, MSC, 27027 to 27032, Barrow herb., 20175.
<i>Parmotrema praesorediosum</i> (Nyl.) Hale	Corticolous	2, SO, Fond Doux, Piton Canarie above Migny, 16, 18, 1963, MSC, 28955, 28956.
<i>Parmotremopsis antillensis</i> (Nyl.) Elix & Hale	Corticolous	1, SO, Des Bottes, 24, 1963, MSC, 33182, 33183.
<i>Pertusaria plana</i> Vain.	Corticolous	1, SO, Gros Piton, 42, 2007, Barrow herb., 20136.
<i>Phaeographis brasiliensis</i> (A.Massal.) Kalb & Matthes-Leicht	Corticolous	2, SO, St. Remy, 11, 20, 1963, MSC, 30800, 30811.
<i>Phaeographis fusca</i> Staiger	Corticolous	1, SO, Edmond, 43, 2007, Barrow herb., 20140.
<i>Phaeographis lobata</i> (Eschw.) Müll. Arg.	Corticolous	1, SO, Edmond, 43, 2007, Barrow herb.
<i>Phyllobathelium leguminosae</i> (Cavalc. & A.A. Silva) Lücking & Sérus.	Foliicolous	1, CS/DY, Barre de L'Isle, 23, 1963, MSC, 13331.
<i>Phyllopsora chodatnica</i> Elix	Corticolous	1, SO, Mont Casteau, 13, 1963, MSC, Imshaug 29810, Timdal (2011: 330).
<i>Phyllopsora parvifolia</i> (Pers.) Müll. Arg.	Corticolous	1, SO, St. Remy to Union Vale, 7, 1963, MSC, Imshaug 29624, Timdal (2011: 340).

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<i>Phyllopsora phaeobyscina</i> (Vain.) Tindal	Corticulous	4, AR, SO, VF, Mont Casteau, Mont Gimie, Gros Piton, 13, 15, 21, 27, 1963, MSC, Imshaug 29802, 29857, 30025, 30181, Tindal (2011: 343).
<i>Phyllopsora porphyromelaena</i> (Vain.) Zahlbr.	Corticulous	3, AR, LB, SO, Ravine Toraille to Mont Gimie, Piton Canarie above Migny, Ravine March Gaye, 14, 18, 29, 1963, MSC, Imshaug 29832, 29926, 30250, Tindal (2011: 344).
<i>Physcia alba</i> (Fée) Müll. Arg.	Corticulous	3, SO, Piton Canarie, Valley of Ivrogne River, Rchette Point to Trou au Diable, 12, 19, 25, 1963, MSC, 25711 to 25714, 25718, 25719.
<i>Physcia crispa</i> (Pers. in Gaudich.) Nyl.	Corticulous	6, CH/SO, SO, St. Remy to Union Vale, Victoria to Belle Plaine, St. Remy, Rchette Point to Trou au Diable, Cas en Bas, 7, 10, 11, 20, 26, 30, 1963, MSC, 25753 to 25762. Barrow herb., 20450.
<i>Platythecium colliculosa</i> (Mont.) Staiger	Corticulous	1, LCA, sine loc, —, 1963, MSC, —, Wirth & Hale (1978: 34).
<i>Platythecium dimorphodes</i> (Nyl.) Staiger	Corticulous	1, SO, Mont Casteau, 13, 1963, MSC, 6859.
<i>Platythecium grammitis</i> (Fée) Staiger	Corticulous	2, SO, Piton Canarie, Mont Casteau, 12, 13, 2007, MSC, 6858, 24151.
<i>Platythecium leiogramma</i> (Nyl.) Staiger	Corticulous	1, SO, Morne Bonin, 17, 1963, MSC, 6863.
<i>Porina alba</i> (R.Sant.) Lücking	Foliicolous	2, SO, Piton Canarie, Gros Piton, 12, 27, 1963, MSC, Imshaug 29770E, Imshaug 30216C.
<i>Porina americana</i> Fée	Corticulous and Foliicolous	1, LCA, sine loc, 1, 1820, G, —, Fée (1837: 74).
<i>Porina conspersa</i> Mull. Arg.	Lignicolous	1, CS/DY, Barre de L'Isle, 46, 2007, Barrow herb., 20482.
<i>Porina epiphylla</i> Fée	Foliicolous	1, CS/DY, Barre de L'Isle, 23, 1963, MSC, 28503, 28504, 28505.
<i>Porina imitatrix</i> Müll. Arg.	Foliicolous	2, CS/DY, SO, Mont Casteau, Barre de L'Isle, 13, 23, 2007, MSC, 28508, 28509.
<i>Porina nucula</i> Ach.	Foliicolous	1, PR, Mamiku, 38, 2007, Barrow herb., 20013.
<i>Porina pseudoapplanata</i> Lücking & Cáceres	Foliicolous	1, SO, Gros Piton, 27, 1963, MSC, Imshaug 30217D.
<i>Porina rufula</i> (Krempelh.) Vain.	Foliicolous	2, CS/DY, SO, Barre de L'Isle, Des Bottes, Mamiku 23, 24, 38, 2007, MSC, 28515, 28516, Barrow herb.
<i>Porina tetracerae</i> Ach.	Foliicolous	1, PR, Mamiku, 38, 2007, Barrow herb.
<i>Pyrenula astroidea</i> (Fée) R.C.Harris	Corticulous	1, SO, St. Remy, 9, 1963, MSC, 29895.
<i>Pyrenula cerina</i> (Ach.) Nyl.	Corticulous	1, VF, Pal Mis, 40, 2007, Barrow herb., 20092, 20102.
<i>Pyrenula cocoes</i> Müll. Arg.	Corticulous	1, SO, Valley of Ivrogne River, Edmond, Balenbouche, 19, 42, 47, 2007, MSC, 30165, 30166. Barrow herb., 20536, 20377, 20559.
<i>Pyrenula cubana</i> (Müll. Arg.) R.C.Harris	Corticulous	2, SO, St. Remy, 9, 11, 1963, MSC, 30182, 30183.
<i>Pyrenula duplicans</i> (Nyl.) Aptroot	Corticulous	1, SO, Rchette Point to Trou au Diable, 25, 1963, MSC, 24878.
<i>Pyrenula globifera</i> (Eschw.) Aptroot	Corticulous	2, SO, St. Remy, Rchette Point to Trou au Diable, 11, 25, 1963, MSC, 18442, 18443.
<i>Pyrenula leucostoma</i> Ach.	Corticulous	2, SO, St. Remy, Valley of Ivrogne River, 9, 19, 1963, MSC, 18353.
<i>Pyrenula parvinuclea</i> (Meyen & Flot.) Aptroot	Corticulous	1, SO, Anse de Piton, 28, 1963, MSC, 18396.
<i>Pyrenula pyrenuloides</i> (Mont.) R.C.Harris	Corticulous	4, CS/DY, LB, SO, St. Remy, Fond Doux, Mont Belvidere to Mont Grand Magazin, Barre de L'Isle, 9, 16, 22, 23, 1963, MSC, 30314 to 30316, 23146, Imshaug and Harris (1969: 81).

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<i>Pyrenula subpraelucida</i> Müll. Arg.	Corticolous	2, SO, St. Remy, Fond Doux, 9, 16, 1963, MSC, 30276, 30293.
<i>Pyrenula subsoluta</i> (Müll. Arg.) Aptroot	Corticolous	1, SO, Gros Piton, 1963, MSC.
<i>Pyxine berteriana</i> (Fée) Imshaug	Corticolous	1, SO, Petit Piton, 33, 1977, BG, BG-L-87836 (Øvstedal 224).
<i>Pyxine cocoes</i> (Sw.) Nyl.	Corticolous	2, SO, Grande Caille Point, Anse L Ivrogne, 26, 31, 1963, MSC, 26332, 26333.
<i>Pyxine subcinerea</i> Stirt.	Corticolous	3, SO, SO/CH, Soufrière, Victoria to Belle Plaine, Anse de Piton, 4, 10, 28, 1963, FH, MSC, NY, 27420, 27421, Imshaug 29690, Imshaug (1957: 262).
<i>Ramalina anceps</i> Nyl.	Corticolous	5, SO, Mont Casteau, Gros Piton, Edmond, 13, 18, 24, 27, 30, 2007, MSC, 32933 to 32940. Barrow herb., 20360, 20241, 20240, 20252.
<i>Ramalina dendroides</i> (Nyl.) Nyl.	Corticolous	1, CS/DY, Barre de L'Isle, 23, 1963, MSC, 32802.
<i>Ramalina gracilis</i> (Pers. in Gaudich.) Nyl.	Corticolous	1, SO, Fond Doux, 16, 1963, MSC, 26462.
<i>Ramalina peranceps</i> Nyl.	Corticolous	6, LB, SO, VF, 19, Morne Bonin, Piton Canarie above Migny, Ravine March Gaye, 13, 17, 18, 21, 22, 29, 1963, MSC, 33737 to 33739, 33757, 33758, 33761, 33912 to 33914.
<i>Ramalina usnea</i> (L.) R.Howe	Corticolous	2, LCA, SO, sine loc, Gros Piton, 32, 42, 2007, BG, BG-L-31718 (Øvstedal), Barrow herb., 20146.
<i>Ramonia rappii</i> R.C. Harris	Corticolous	1, LB, Balenbouche, 47, 2007, Barrow herb., 20601.
<i>Rhabdodiscus fissus</i> (Nyl.) Vain.	Corticolous	1, SO, Gros Piton, 27, 1963, MSC, 23125.
<i>Rhabdodiscus metaphoricus</i> (Nyl.) Vain.	Corticolous	1, SO, St. Remy, 20, 1963, MSC, 113154, 133155.
<i>Rhabdodiscus subcavatus</i> (Nyl.) Rivas Plata, Lücking & Lumbsch	Corticolous	1, SO, Mont Casteau, 13, 1963, MSC, 28099.
<i>Sclerophyton elegans</i> Eschw.	Corticolous	1, LCA, sine loc, 1, 1820, G, 243660/1; G00294751, Fée (1824: 35), Sparrius (2004: 70).
<i>Siphula fastigiata</i> (Nyl.) Nyl.	Saxicolous	1, SO, Piton Canarie above Migny, 18, 1963, MSC, 30044, 30045.
<i>Sporopodium lepreurii</i> Mont.	Foliicolous	1, CS/DY, Barre de L'Isle, 23, 1963, MSC, 29046, Imshaug 30061C.
<i>Sporopodium xantholeucum</i> (Müll. Arg.) Zahlbr.	Foliicolous	4, CS/DY, SO, Barre de L'Isle, Des Bottes, Gros Piton, Mont Tabac, 23, 24, 27, 30, 1963, MSC, 30070 to 30076.
<i>Stereocaulon virgatum</i> Ach. in Spreng.	Saxicolous	1, SO, Mont Casteau, 13, 1963, MSC, 30205.
<i>Sticta weigelii</i> (Ach.) Vain.	Corticolous	7, AR, LB, SO, Victoria to Belle Plaine, Mont Gimie, Edmond, 10, 12, 15, 17, 27, 29, 30, 43, 2007, MSC, 26143 to 26153, 28395 to 28397. Barrow herb., 20269, 20265.
<i>Stigmatochroma gerontoides</i> (Stirt.) Marbach	Corticolous	4, LB, SO, Fond Doux, Grande Caille Point, Anse de Piton, Balenbouche, 16, 26, 28, 47, 2007, MSC, 20420, 20421, 20435, Barrow herb., 20664.
<i>Strigula nemathora</i> Mont.	Foliicolous	2, CS/DY, Barre de L'Isle, 35, 46, 2007, LG, —, Barrow herb., 20482, Sérusiaux and Diederich (2005: 505).
<i>Strigula phyllogena</i> (Müll. Arg.) R.C. Harris	Foliicolous	2, CS/DY, SO, Barre de L'Isle, Gros Piton, 23, 27, 1963, MSC, 28511, 28512.
<i>Strigula platypoda</i> (Müll. Arg.) R.C. Harris	Foliicolous	2, CS/DY, SO, Piton Canarie above Migny, Barre de L'Isle, 18, 23, 1963, MSC, 28510, 28513, 28514.
<i>Tapellaria epiphylla</i> (Müll. Arg.) R.Sant.	Foliicolous	7, LB, SO, Morne Bonin, Piton Canarie above Migny, Ravine March Gaye, 12, 17, 18, 24, 27, 29, 30, 1963, MSC, 27182, 27183, 13903, 28827 to 28835.

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<i>Tapellaria nigrata</i> (Müll. Arg.) R.Sant.	Foliicolous	1, SO, Gros Piton, 27, 1963, MSC, 27185.
<i>Teloschistes flavicans</i> (Sw.) Norm.	Corticulous	8, LB, SO, VF, Ravine March Gaye, Gros Piton, Edmond, 13, 21, 24, 27, 29, 30, 33, 42, 2007, BG, MSC, 32031, 32033 to 32040, Barrow herb., 20249, 20253, 20187, 20191, 20185.
<i>Tephromela atra</i> (Huds.) Hafellner	Saxicolous	2, LCA, Gros Piton, Anse L Ivrogne, 26, 31, 1963, MSC, 24667 or 24668, 32260 Imshaug 30208.
<i>Thelotrema leucomelaenum</i> Nyl.	Corticulous	1, LCA, sine loc., 1963, Hale (1978: 48).
<i>Tricharia vainioi</i> R.Sant.	Foliicolous	1, SO, Gros Piton, 27, 1963, MSC, 29040, 439.
<i>Trichothelium minus</i> Vain.	Foliicolous	1, SO, Gros Piton, 27, 1963, MSC, 30463.
<i>Trypetheliopsis kalbii</i> (Lücking & Sérus.) Aptroot	Foliicolous	1, MI, Quillesse, 34, 1993, LG, —, Lücking (2008: 215).
<i>Trypethelium annulare</i> Mont.	Corticulous	2, SO, Gros Piton, Mont Tabac, 27, 30, 1963, MSC, 30471, 30473.
<i>Trypethelium degenerans</i> (Vain.) Zahlbr.	Corticulous	1, SO, Grande Caille Point, 26, 1963, MSC, 30476.
<i>Trypethelium ochroleucum</i> (Eschw.) Nyl.	Corticulous	1, LCA, sine loc., 1, 1820s, G, 252563/1; G00294936; 252566/2; G00294937; Fée (1824: 68).
<i>Usnea cornuta</i> Körb.	Corticulous	4, LB, SO, Mont Casteau, Morne Bonin, Ravine March Gaye, Gros Piton, 13, 17, 27, 29, 42, 2007, MSC, 30548 to 30550, 30568, 30569, Barrow herb., 20203.
<i>Wirthiotrema glaucopallens</i> (Nyl.) Rivas Plata & Kalb	Corticulous	1, CS/DY, Barre de L'Isle, 23, 1963, MSC, 30334.
<i>Xanthoparmelia conspersa</i> (Ach.) Hale	Saxicolous	1, SO, Anse L Ivrogne, 31, 1963, MSC, 30893.
<i>Xanthoparmelia stenophylla</i> (Ach.) Ahti & D.Hawksw.	Saxicolous	1, SO, St. Remy, 20, 1963, MSC, 31204.
<i>Xanthoparmelia subramigera</i> (Gyeln.) Hale	Saxicolous	2, SO, Gros Piton SW, Fond Doux, 8, 16, 1963, MSC, 31214 to 31217.

BOTANICAL DISTRICT SYSTEM, CONSERVATION AND FUTURE LICHENOLOGICAL EXPLORATION

Graveson's (2009) work demonstrates that the Quarter of Dauphin has been employed in databasing vascular plants in the National Herbarium at Union, Saint Lucia. Effectively, this specific usage is an example of dividing Saint Lucia into eleven districts for botanical reporting purposes. This botanical recording system is maintained in our paper, even though the Quarter of Dauphin is not in formal administrative use according to the Saint Lucian census. This system of eleven botanical districts for plant and fungal recording in Saint Lucia is endorsed here. The function of a botanical district system is to graphically tabulate and summarize all distribution records. With the flexibility of GIS outputs, a synoptic chart of nested third and fourth order geographic units is becoming a classic graphic design for communicating all record data in countries. Stability of the boundaries of national and county map units is essential for clear indexing of biological data over time.

The boundaries of the eleven botanical districts are based on exact boundaries of the administrative districts marked on the Ordnance Survey 1: 50,000 map Third edition of 1980. The botanical district boundaries are drawn in Fig. 2. The species diversity of each botanical district is presented in the legend for Fig. 2.

Locality numbers for all sites studied by lichenologists have been assigned in this paper to each proposed botanical district as follows: Saint Lucia (district not specified), 1, 5, 32, Anse La Raye, 14, 15, Castries, 2, 3, 23, 35, 46, Choiseul, 10, Dauphin, 44, Dennery, 23, 35, 39, 46, Gros Islet 45, Laborie, 22, 29, 47, Micoud, 6, 34, 40, Praslin, 38, Soufrière, 4, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 20, 24, 25, 26, 27, 28, 30, 31, 33, 42, 43, Vieux Fort, 21, 37, 41. The lichenological exploration of Anse La Raye, Castries, Choiseul, Dauphin, Gros Islet and Praslin is at a preliminary stage. Many areas explored by lichenologists in the past are now included in conservation

and protected areas. These include The Pitons (8, 27, 33, 42) and Barre de l'Isle (23, 35, 46). Tropical rainforests of the mountains are part of Forest Reserve ranges (6, 13, 14, 15, 17, 21, 22, 24, 29, 30, 34, 43). Areas with columnar cacti (8, 25, 26), coastal rocks (28, 31), and dry scrub woodland (25, 26, 28, 31, 40, 44, 45) have also been sampled. Forest Reserves contain 'wet' forests, while xeric habitats are found near the Caribbean coast and Atlantic coast.

A surprising fact of tropical vegetation is the low abundance and patchy distribution of many species. This is a normal characteristic of tropical forest habitats in Saint Lucia (Daltry 2009). Lichen data reported in our checklist also shows this tropical pattern of biodiversity distribution, as well as a focus on new species recording, with 145 taxa (60%) known from just one locality. Of course, compounded in these data are the limitations of human endeavour in specimen collection from forests. Intensive survey effort and a comprehensive knowledge of taxonomic concepts are required to detect and identify species diversity on bark and leaves during the field collection process at studied localities. In the central reserve, large old trees are preserved over a wide area for nesting parrots and for roosting bats (Moreton 2009). This progressive policy also serves to protect lichens in this area. While proposed for removal by some conservationists, old coconut palms are good lichen habitats, so this policy of felling them should be monitored for environmental impact. As with many settings across the world, just because the woody plant host is exotic the dependent epiphytic flora is usually native, sometimes relict, and occasionally has become specialised to the new woody plant host.

Biodiversity offsets (Daltry 2009) are an interesting concept and may be used by the government of Saint Lucia in the protection of flora and fauna. Biodiversity offset areas could be recognised by the Department of Forestry on the basis of botanical, lichen, fungal and other biodiversity inventories. Botanic gardens, outdoor activity centres and private nature reserves also have the potential for educational use of lichens in capacity building, such as at the mangrove centre at Mankote. Simple ideas such as marking selected lichen species for display to the public on forest interpretative trails in public areas can help.

Site inventories for named sites can be readily abstracted from the data presented. Differences in floristic data from sites visited twice are not discussed in general, as the half-life of lichen populations of species at collection localities is unknown for almost all species. Colony persistence between 1963 data and 2007 data is only estimable for a few localities and a very small range of species, like *Teloschistes flavicans* and *Heterodermia leucomelos* which

have persisted for 44 years on the summit of Gros Piton. Omissions of lichens from collections is normal for botanists with limited tropical experience. Pragmatism ensures that communication, between generations of botanists is through taxonomic works on tropical lichens where collectors have limited familiarity with all the taxonomic concepts available for treating tropical lichens, is always incomplete over a wide range of species. Place names are included in the species accounts to allow readers familiar with Saint Lucian geography to construct psycho-geographic mental models of habitats to screen for each species in the forest landscape. Herbarium studies of the collections of Alexander Evans in North America have the potential to provide first collections of additional species from Saint Lucia. Likewise, ongoing herbarium studies of Henry and Frederick Imshaug material in MSC should continue, as approximately 190 collection numbers await identification to species level. The authors' collections are not fully identified and study of these specimens is continuing.

It is clear that the Soufrière district is lichenologically the most thoroughly explored botanical district of Saint Lucia to date (Fig. 2). Part of Soufrière is a geologically dynamic area with a natural source of sulphur dioxide, repeat surveys near fumaroles could reveal changes in the local lichen flora over time. Botanical districts that have not been investigated to a great extent are those along the Caribbean coast. Hurricanes can act like clearfell operations and they destroy lichen substrates creating discontinuities in lichen distribution patterns. This phenomenon can be mapped many years later. Similarly, lichenometry can help to age historic landslides by using lichen thallus body size variation on trees and rocks. This information may supplement GIS data in identifying historic landslides in rainforests where evidence is obscured with time. Landslide hazard mapping and modeling will continue to inform planning policy and save lives in Saint Lucia.

In the Lesser Antilles, the habitat restriction of lichen species to particular rainforest vegetation communities is better known in Guadeloupe (Bricaud 2007, 2008, 2009) than in Saint Lucia (Fox and Cullen, this paper) and in general the ecology of tropical lichens is better understood for foliicolous habitats (Lücking 2008) than for corticolous habitats (Sipman 2007). More data is required to better understand rainforest community lichen composition. Duplicate sets of identified and documented specimens should be lodged locally in the Saint Lucian national herbarium (Graveson 2009). With international partnerships and mentoring in place, indigenous scientific research on lichens in Saint Lucia can advance and prosper.

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TABLE 2. First collection of lichens from Saint Lucia.

COLLECTORS	YEAR	HERBARIA	ADDITIONAL SPECIES IDENTIFIED FROM SAINT LUCIA FROM THE RESPECTIVE EXCURSIONS.
Anon., J. J. Roemer & J. A. Schultes	1820s to 1830s	G, PC, M	3 <i>Porina americana</i> , <i>Sclerophyton elegans</i> , <i>Trypethelium ochroleucum</i> .
Alexander W. Evans	1926	US, NY, MICH, FH, [YU, MO]	8 <i>Bulbothrix laevigatula</i> , <i>Caloplaca diplacioides</i> , <i>Canoparmelia martinicana</i> , <i>Cladonia subradiata</i> , <i>Coccocarpia palmicola</i> , <i>Leptogium cyanescens</i> , <i>Mycoporum eschweileri</i> , <i>Pyxine subcinerea</i> .
George Proctor	1958	NY	1 <i>Dictyonema glabratum</i> .
Henry A. Imshaug & Frederick H. Imshaug	1963	MSC, ESS, MIN, NY	192 <i>Acarospora chrysops</i> , <i>Aderkomyces albostrigosus</i> , <i>Amandinea efflorescens</i> , <i>Amandinea placodimorpha</i> , <i>Anisomeridium americanum</i> , <i>Anisomeridium terminatum</i> , <i>Anthracothecium americanum</i> , <i>Arthonia circumincta</i> , <i>Arthonia trilocularis</i> , <i>Aspidothelium fugiens</i> , <i>Aspidothelium scutellarpum</i> , <i>Aulaxina quadrangula</i> , <i>Bacidina apiahica</i> , <i>Bacidina defecta</i> , <i>Badimia dimidiata</i> , <i>Brigantiaea leucoxantha</i> , <i>Buellia dispersula</i> , <i>Buellia mamillana</i> , <i>Bulbothrix fungicola</i> , <i>Bulbothrix goebelii</i> , <i>Bulbothrix suffixa</i> , <i>Bulbothrix tabacina</i> , <i>Byssoloma discordans</i> , <i>Byssoloma subdiscordans</i> , <i>Byssoloma tricholomum</i> , <i>Calopadia perpallida</i> , <i>Calopadia phyllogena</i> , <i>Calopadia puiggarii</i> , <i>Caloplaca cinnabarina</i> , <i>Caloplaca crenularia</i> , <i>Caloplaca epiphora</i> , <i>Chapsa thallorema</i> , <i>Chiodecton cineritium</i> , <i>Cladonia nana</i> , <i>Coccocarpia palmicola</i> , <i>Coccocarpia pellita</i> , <i>Coccocarpia stellata</i> , <i>Coenogonium hypophyllum</i> , <i>Coenogonium interplexum</i> , <i>Coenogonium interpositum</i> , <i>Coenogonium linkii</i> , <i>Coenogonium luteum</i> , <i>Coenogonium subluteum</i> , <i>Cratiria americana</i> , <i>Cratiria lauricassiae</i> , <i>Cryptothecia malmei</i> , <i>Cryptothecia subnidulans</i> , <i>Diploschistes actinostomus</i> , <i>Diploschistes chloroleucus</i> , <i>Dirinaria aegialita</i> , <i>Dirinaria applanata</i> , <i>Dirinaria picta</i> , <i>Dyplolabia oryzoides</i> , <i>Echinoplaca atrofusca</i> , <i>Echinoplaca diffluens</i> , <i>Echinoplaca leucotrichoides</i> , <i>Echino-placa melanothrix</i> , <i>Echinoplaca pellicula</i> , <i>Fellhanera fuscata</i> , <i>Fellhanera rhapsidophylli</i> , <i>Fellhanera stanhopeae</i> , <i>Fellhanera subternella</i> , <i>Fissurina triticea</i> , <i>Glyphis cicatricosa</i> , <i>Graphis antillarum</i> , <i>Graphis argentata</i> , <i>Graphis asterizans</i> , <i>Graphis caesiella</i> , <i>Graphis disserpens</i> , <i>Graphis dracena</i> , <i>Graphis duplicatoinspersa</i> , <i>Graphis flavens</i> , <i>Graphis furcata</i> , <i>Graphis librata</i> , <i>Graphis longula</i> , <i>Graphis nanodes</i> , <i>Graphis olivacea</i> , <i>Graphis plurispora</i> , <i>Graphis rhizocola</i> , <i>Graphis rigidula</i> , <i>Graphis sapii</i> , <i>Graphis subflexibilis</i> , <i>Graphis tenella</i> , <i>Gyalectidium filicinum</i> , <i>Gyalectidium imperfectum</i> , <i>Gyalideopsis vulgaris</i> , <i>Hafellia callispora</i> , <i>Herpothallon antillarum</i> , <i>Herpothallon roseocinctum</i> , <i>Heterodermia albicans</i> , <i>Heterodermia allardii</i> , <i>Heterodermia comosa</i> , <i>Heterodermia dendritica</i> , <i>Heterodermia flabellata</i> , <i>Heterodermia isidiophora</i> , <i>Heterodermia leucomela</i> , <i>Heterodermia lutescens</i> , <i>Heterodermia podocarpa</i> , <i>Heterodermia tremulans</i> , <i>Julella geminella</i> , <i>Lasioloma arachnoideum</i> , <i>Lecanora helva</i> , <i>Lecanora leprosa</i> , <i>Lecanora prosecha</i> , <i>Lecanora subimmersa</i> , <i>Lecanora tropica</i> , <i>Leptogium austroamericanum</i> , <i>Leptogium azureum</i> , <i>Leptogium chloromelum</i> , <i>Leptogium coralloideum</i> , <i>Leptogium denticulatum</i> , <i>Leptogium marginellum</i> , <i>Leptogium phyllocarpum</i> , <i>Leptogium reticulatum</i> , <i>Leptogium standleyi</i> , <i>Letrouitia domingensis</i> , <i>Loflammia epiphylla</i> , <i>Mazosia dispersa</i> , <i>Mazosia paupercula</i> , <i>Mazosia phyllosema</i> , <i>Megalospora coccodes</i> , <i>Myriotrema hartii</i> , <i>Ocellularia interposita</i> , <i>Ocellularia olivacea</i> , <i>Ocellularia perforata</i> ,

TABLE 2 CONT. First collection of lichens from Saint Lucia.

COLLECTORS	YEAR	HERBARIA	ADDITIONAL SPECIES IDENTIFIED FROM SAINT LUCIA FROM THE RESPECTIVE EXCURSIONS.
Henry A. Imshaug & Frederick H. Imshaug <i>continued</i>	1963	MSC, ESS, 192 MIN, NY	<i>Ocellularia praestans</i> , <i>Ocellularia rhodostroma</i> , <i>Ochrolechia antillarum</i> , <i>Opegrapha filicina</i> , <i>Opegrapha lambinonia</i> , <i>Pannaria mariana</i> , <i>Pannaria mosenii</i> , <i>Pannaria prolificans</i> , <i>Parmelinopsis minarum</i> , <i>Parmotrema conformatum</i> , <i>Parmotrema endosulphureum</i> , <i>Parmotrema praesorediosum</i> , <i>Parmotremopsis antillensis</i> , <i>Phaeographis brasiliensis</i> , <i>Phyllobathelium leguminosae</i> , <i>Phyllopsora chodatunica</i> , <i>Phyllopsora parvifolia</i> , <i>Phyllopsora phaeobyssina</i> , <i>Phyllopsora porphyromelaena</i> , <i>Physcia alba</i> , <i>Physcia crispa</i> , <i>Platythecium colliculosa</i> , <i>Platythecium dimorphodes</i> , <i>Platythecium graminis</i> , <i>Platythecium leiogramma</i> , <i>Porina alba</i> , <i>Porina epiphylla</i> , <i>Porina imitatrix</i> , <i>Porina pseudoapplanata</i> , <i>Porina rufula</i> , <i>Pyrenula astroidea</i> , <i>Pyrenula cocoes</i> , <i>Pyrenula cubana</i> , <i>Pyrenula duplicans</i> , <i>Pyrenula globifera</i> , <i>Pyrenula parvinuclea</i> , <i>Pyrenula pyrenuloides</i> , <i>Pyrenula subpraelucida</i> , <i>Pyxine cocoes</i> , <i>Ramalina anceps</i> , <i>Ramalina dendroides</i> , <i>Ramalina gracilis</i> , <i>Ramalina peranceps</i> , <i>Siphula fastigiata</i> , <i>Sporopodium leprieurii</i> , <i>Sporopodium xantholeucum</i> , <i>Stegobolus fissus</i> , <i>Stegobolus metaphoricus</i> , <i>Stegobolus subcavatus</i> , <i>Stereocaulon virgatum</i> , <i>Sticta weigelii</i> , <i>Stigmatochroma gerontoides</i> , <i>Strigula phyllogena</i> , <i>Strigula platypoda</i> , <i>Tapellaria epiphylla</i> , <i>Tapellaria nigrata</i> , <i>Teloschistes flavicans</i> , <i>Tephromela atra</i> , <i>Thelotrema leucomelaenum</i> , <i>Tricharia vainioi</i> , <i>Trichothelium minus</i> , <i>Trypethelium annulare</i> , <i>Trypethelium degenerans</i> , <i>Usnea cornuta</i> , <i>Wirthiotrema glaucopallens</i> , <i>Xanthoparmelia conspersa</i> , <i>Xanthoparmelia stenophylla</i> , <i>Xanthoparmelia subramigera</i> .
Dag Olav Øvstedal	1977	BG	9 <i>Canoparmelia caroliniana</i> , <i>Coccocarpia domingensis</i> , <i>Erioderma unguigerum</i> , <i>Heterodermia magellanica</i> , <i>Heterodermia pseudospeciosa</i> , <i>Leptogium leptophyllum</i> , <i>Leptogium pichneum</i> , <i>Pyxine berteriana</i> , <i>Ramalina usnea</i> .
Emannuël Sérusiaux	1993	LG	8 <i>Bacidina pseudohyphophorifera</i> , <i>Calopadia turbinata</i> , <i>Caprettia amazonensis</i> , <i>Fellhanera santessonii</i> , <i>Gyalideopsis cochlearifera</i> , <i>Lambinonia strigulae</i> on <i>Strigula nemathora</i> , <i>Trypetheliopsis kalbii</i> .
Howard F. Fox & Maria L. Cullen	2007	Barrow herb. of Fox & Cullen	19 <i>Arthonia rubella</i> , <i>Bacidia</i> sp. A., <i>Caloplaca aphanotripta</i> , <i>Chapsa alborosella</i> , <i>Chapsa cinchonarum</i> , <i>Coccocarpia erythroxyli</i> , <i>Coenogonium zonatum</i> , <i>Dictyonema sericeum</i> , <i>Dyplolabia afzelii</i> , <i>Graphis duplicata</i> , <i>Ocellularia fecunda</i> , <i>Pertusaria plana</i> , <i>Phaeographis fusca</i> , <i>Phaeographis lobata</i> , <i>Porina conspersa</i> , <i>Porina nucula</i> , <i>Porina tetracerae</i> , <i>Pyrenula cerina</i> , <i>Ramonia rappii</i> .