

A contribution to the foliicolous lichen flora of La Réunion

Stig RØNHEDE *, Sanne JOHANSSON & Ulrik SØCHTING

*Department of Mycology, Botanical Institute,
University of Copenhagen,
Øster Farimagsgade 2D,
1353 Copenhagen K, Denmark*

Abstract – This paper lists the 27 taxa of foliicolous lichens reported from the French island La Réunion (Indian Ocean). 16 taxa are reported from La Réunion for the first time.

Foliicolous lichens / La Réunion / Indian Ocean

Résumé – Cette communication présente la liste des 27 taxons de lichens foliicoles connus de l'île française de La Réunion. 16 espèces sont rapportées de La Réunion pour la première fois.

INTRODUCTION

The previous literature on the foliicolous lichens of La Réunion consists of two publications. Sérusiaux (1977) lists 10 species from one locality, an unspecified forest in Cirque de Cilaos at an altitude of 1350 m. Ferraro *et al.* (2001) add one species, since they include a collection from "Forêt de Bebov" (a misspell of Forêt de Bébour or Forêt de Bélouve?) on La Réunion in the description of *Gyalectidium ciliatum* Lücking, G. Thor & T. Matsumoto. The flora of foliicolous lichens is thus largely unexplored in the primary rainforest on La Réunion and this is the habitat holding the greatest diversity of foliicolous lichens. The purpose of this project was to study the foliicolous lichens based on a broader sampling during a field trip in August 2001 to La Réunion covering the major vegetation types of the tropical island. Foliicolous lichens were collected at seven localities and the results are reported below.

MATERIAL AND METHODS

Study areas on La Réunion

The different forests are classified according to the system of Cadet (1980).

Basse Vallée, 4 km north-east of Saint Philippe, (21°20,49'S 55°43,22'E). Altitude: 640 m. A ravine in an intact rainforest dominated by endemic species in

* Correspondence and reprints: Ulrik Søchting, ulriks@bot.ku.dk

the transition between Forêt mégatherme hygrophile and Forêt mésotherme hygrophile.

Forêt de Bébour (21°05,76'S 55°33,06'E). Altitude: 1500 m. Undisturbed mountain rainforest with frequent mists. Forêt mésotherme hygrophile.

Rempart de Tremplet (21°17,02'S 55°47,09'E). Altitude: 230 m. Lowland rainforest in an approximately 500-year-old kipuka (an island of vegetation in lava-fields) used for vanilla production.

Forêt de Notre Dame de la Paix (21°15,88'S 55°36,05'E). Altitude: 1700 m. Highland forest dominated by *Monimia* sp. Forêt mésotherme hygrophile.

Takamaka (21°05,47'S 55°37,20'E). Altitude: 790 m. Undisturbed rainforest in steep montaneous area. Forêt mégatherme hygrophile.

Forêt de D'Amour (21°20,97'S 55°43,68'E). Altitude: 130 m. An approximately 100-year-old secondary forest dominated by *Syzygium jambos* used for vanilla production and intermingled with plantations of palms.

Sentier de la Roche Écrite (20°57,0'S 55°27,0'E). Altitude: 1250 m. Footpath to la Roche Écrite through Forêt mésotherme hygrophile.

Collection and Identification

The collections were made in August 2001. Leaves reachable by hand with visible foliicolous lichens were collected from mainly identified hosts; they were later pressed and air-dried. The 113 collections of leaves were studied with a dissecting microscope and a compound microscope. Photos were taken with an Olympus DP10 digital camera mounted on an Olympus SZH-ILLD microscope.

The specimens are deposited at the Botanical Museum, University of Copenhagen (C) and the numbering of the collections are those of the museum.

The nomenclature follows Farkas (1993) and Lücking *et al.* (2000).

LIST OF FOLIICOLOUS LICHENS

The list includes the obligate foliicolous lichens from our collections. Taxa new for La Réunion are marked with an asterisk. Taxa reported by Sérusiaux (1977), which were not found in our collections, are included in parentheses so that the list contains all taxa hitherto reported from La Réunion. The geographical distributions mentioned in the list are from Lücking *et al.* (2000).

* **Aulaxina quadrangula** (Stirt.) R. Sant. Takamaka C 14818. Distribution: Tropical America and Africa.

* **Bacidina pallidocarpa** (Müll. Arg.) Vězda Forêt de Bébour C 14690; Notre Dame de La Paix C 14786. Distribution: Pantropical.

* **Badimia pallidula** (Kremp.) Vězda Basse Vallée C 14587. Distribution: Tropical America and Asia.

* **Byssoloma chlorinum** (Vain.) Zahlbr. Takamaka C 14826; Forêt de D'Amour C 14854. Distribution: Pantropical.

Byssoloma leucoblepharum (Nyl.) Vain. Basse Vallée C 14581 14655; Forêt de Bébour C 14680; Forêt de Notre Dame de la Paix C 14783. Distribution: Pantropical, extending into subtropical regions.

Byssoloma subdiscordans (Nyl.) P. James Forêt de Notre Dame de la Paix C 14787; Takamaka C 14827. Distribution: Cosmopolitan.

* **Calopadia subcoerulescens (Zahlbr.) Vězda** Forêt de Bébour C 14681; Forêt de Notre Dame de la Paix C 14785. Distribution: Pantropical.

(**Echinoplaca pellicula (Müll. Arg.) R. Sant.** Distribution: Pantropical.)

Fellhanera bouteillei (Desm.) Vězda Basse Vallée C 14582; Rempart de Tremplet C 14768; Forêt de Notre Dame de la Paix C 14807; Takamaka C 14819; Forêt de D'Amour C 14855. Distribution: Cosmopolitan.

Gyalectidium ciliatum Lücking, G. Thor & T. Matsumoto Forêt de Notre Dame de la Paix C 14792. Distribution: Tropical America (Costa Rica) and Asia (Japan).

Mazosia dispersa (Hedrick) R. Sant. Basse Vallée C 14638 14596; Forêt de D'Amour C 14851. Distribution: Pantropical.

* **Mazosia paupercula (Müll. Arg.) R. Sant.** Forêt de D'Amour C 14846. Distribution: Pantropical.

* **Mazosia phyllosema (Nyl.) Zahlbr.** Basse Vallée C 14635; Forêt de Bébour C 14683; Forêt de Notre Dame de la Paix C 14807; Takamaka C 14844. Distribution: Pantropical.

* **Porina atriceps (Vain.) Vain.** Basse Vallée C 14595; Takamaka C 14824. Distribution: Tropical America, Asia and Australia.

(**Porina atrocoerulea Müll. Arg.** Distribution: Pantropical.)

* **Porina epiphylla (Fée) Fée** Basse Vallée C 14588; Forêt de Bébour C 14713; Rempart de Tremplet C 14732; Takamaka C 14845; Forêt de D'Amour C 14853. Distribution: Pantropical.

Porina rufula (Kremp.) Vain. Basse Vallée C 14589; Takama C 14823. Distribution: Pantropical.

* **Sporopodium phyllocaris (Mont.) Massal** Sentier de la Roche Écrite C 14686. Distribution: Pantropical.

* **Strigula melanobapha (Kremp.) R. Sant.** Basse Vallée C 14643. Distribution: Pantropical.

* **Strigula nemathora var. pulchella (Müll. Arg.) R. Sant.** Forêt de Notre Dame de la Paix C 14784. Distribution: Tropical America.

Strigula nitidula Mont. Basse Vallée C 14580; Forêt de Notre Dame de la Paix C 14789; Takamaka C 14821; Forêt de D'Amour C 14850. Distribution: Pantropical.

* **Strigula phyllogena (Müll. Arg.) R. C. Harris** Basse Vallée C 14591; Forêt de Bébour C 14714; Takamaka C 14715; Forêt de D'Amour C 14852. Distribution: Pantropical.

* **Strigula smaragdula Fr.** Basse Vallée C 14619; Forêt de Notre Dame de la Paix C 14794; Takamaka C 14282. Distribution: Pantropical.

* **Strigula subtilissima (Fée) Müll. Arg.** Basse Vallée C 14590. Distribution: Pantropical.

Tapellaria phyllophila (Stirt.) R. Sant. Forêt de Notre Dame de la Paix C 14811 C 14791. Distribution: Pantropical.

(**Tricharia armata Vězda.** Distribution: Tropical Africa.)

* **Tricharia amazonum Vain.** Forêt de Bébour C 14720. Distribution: Tropical America.

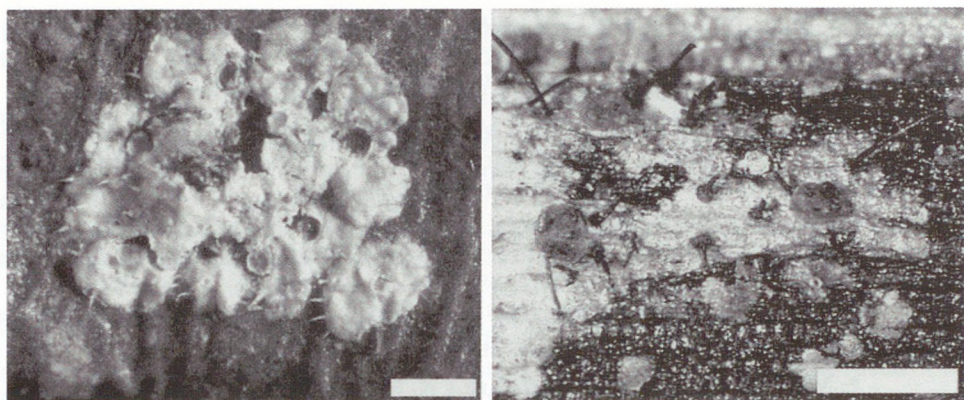


Fig. 1. Left: *Gyalectidium ciliatum* with hyphophores at the thallus margin (C 14792). Right: *Tricharia amazonum* with black hairs and apothecia (C 14720). Bars = 0.5 mm.

COMMENTS

Apart from adding to the list of known foliicolous lichens of La Réunion, the worldwide distribution of four of the taxa is also expanded through this study. *Tricharia amazonum* (Fig. 1) has until now only been reported from the neotropics. The variety *pulchella* of *Strigula nemathora* is also found for the first time outside the neotropics, but Lücking (1992: 41) questions whether this variety is within the variation range of this common, pantropical species, rather than a genetically separate population. *Badimia pallidula* and *Porina atriceps* have apparently not been reported from Africa before. The specimen of *Calopadia subcoerulescens* has a light bluish apothecial disc instead of the bluish-black colour described by Santesson (1952: 538, as *Lopadium*) and Thor *et al.* (2000: 32), but the material is identified as *C. subcoerulescens* on account of the grey margin and aerugineous hypothecium.

All collected specimens were mainly epiphyllous, except *Byssoloma chlorinum* that was hypophyllous in the two specimens found.

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