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Myxomycete biodiversity on five islands of the Seychelles

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Abstract

A survey of myxomycete diversity on five islands of the Seychelles yielded 105 species and 10 infra-specific taxa, which included 89 species on La Digue, 66 on Praslin, 63 on Mahé, 31 on Curieuse and 4 on Félicité. Among these records, 64 species are new for the Seychelles and together with data from the literature, 143 species of myxomycetes are now known for all of the Seychelles. Most collecting on all five islands was carried out in low elevation areas. Forty-four species (73% of all specimens of myxomycetes) were found in low-elevation localities, and among these were *Arcyria helvetica, Dictydiaethalium dictyosporum*, *Echinostelium paucifilum, Physarum aeneum, Ph. echinosporum, Reticularia olivacea,* and *Stemonaria longa*. From 54 species of plants used by myxomycetes as substrates, eight species provided 63% of the specimens of myxomycetes, with most samples recorded from *Calophyllum inophyllum.* On the basis of substrate type, myxomycetes were distributed as follows: 37% of specimens were collected on dead wood and decaying palm stems, 16% on the bark and stems of living plants, 25% on ground litter, and 22% on aerial litter. A comparison of the assemblages of myxomycetes found in zones with different levels of human impact indicated that 84 species were found in forests, 74 in anthropogenic areas, and 62 in recreational coastal areas. The Seychelles provide a good background for a high level of myxomycete diversity, as a consequence of favorable climatic conditions and their location between Asia and Africa.

Key words: ecology, myxomycetes, plant substrates, tropics

Introduction

The islands of the isolated Seychelles archipelago lie in the Indian Ocean between Africa and Asia, and their location affects biodiversity in a special way. The biota, including introduced **s**pecies, is a mixture of species from one or both of these continents with a large number of endemics. At least 50% of the animals and plants of the Seychelles are endemic (UNEP 2011) and on that basis the islands are recognized as a biodiversity hotspot by international conservation agencies (Fleischmann *et al.* 2003). While the animals and plants are rather well known, almost nothing is known about the diversity of myxomycetes (plasmodial slime molds or myxogastrids) in the Seychelles. This rather distinctive group of Eumycetozoans, associated primarily with the decomposing remains of plants, is widely distributed around the world. There are many recent studies of tropical myxomycetes (e.g., Adamonyte *et al.* 2011; Lado *et al.* 2008; Stephenson & Rojas 2017; Stephenson *et al.* 2004; Wrigley de Basanta *et al.* 2013), but there are only two publications for the Seychelles, which list a total of 79 species of myxomycetes (Ing and Hnatiuk 1981; Kryvomaz *et al.* 2017). As such, additional research relating to the occurrence of myxomycetes on isolated islands is needed for a better understanding of their distribution patterns. Myxomycete distribution is strongly linked to vegetation, so evaluating preferences for certain plant species and substrate types is the first task of this research. The second is to find out whether any myxomycetes exhibit preferences for particular elevations. Another important aim is to evaluate human impacts on myxomycete diversity and abundance, particularly in response to recreational pressures and environmental destruction.

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The Republic of Seychelles consists of 115 islands making up an archipelago with a total land area of 455 km² and scattered over an immense area of 1.4 million km² between 4° and 10° S latitude and 46° to 54° E longitude near the equator in the Western Indian Ocean (Fleischmann *et al.* 1996). There are two different zones, the first consisting of the granitic group and containing some of the oldest islands in the world and the second consisting of a more recent coralline outer group. In the earlier publications mentioned above, 55 species of myxomycetes were reported from coralline Aldabra Atoll (Ing and Hnatiuk 1981), and then 47 species and infraspecific taxa were reported from granitic Mahé island (Kryvomaz *et al.* 2017). The coralline Seychelles comprise 216.57 km² located at distances of more than a thousand km from islands of granitic group. The granitic islands have a total area of about 245 km^2 (Stoddart 1984) but hold more than 95% of the population of the country. In the present study, with those aims in mind, five islands of the Seychelles were selected (Fig. 1). The main ones are Mahé (142 km^2), which reaches an elevation of 905 m at Morne Seychellois, Praslin (elevation 367 m, 38 km^2), and La Digue (elevation 333 m, 10 km^2), which are the largest and most densely populated islands of the Seychelles (Hansen & Laboudallon 2013). Also, collections were made on the heavily forested little granitic islands Curieuse (2.9 km^2) and Félicité (2.68 km^2). Material collected from these islands during the rainy and dry seasons was used for this contribution to our understanding of the diversity, ecology and distribution of the myxomycetes of the Seychelles.

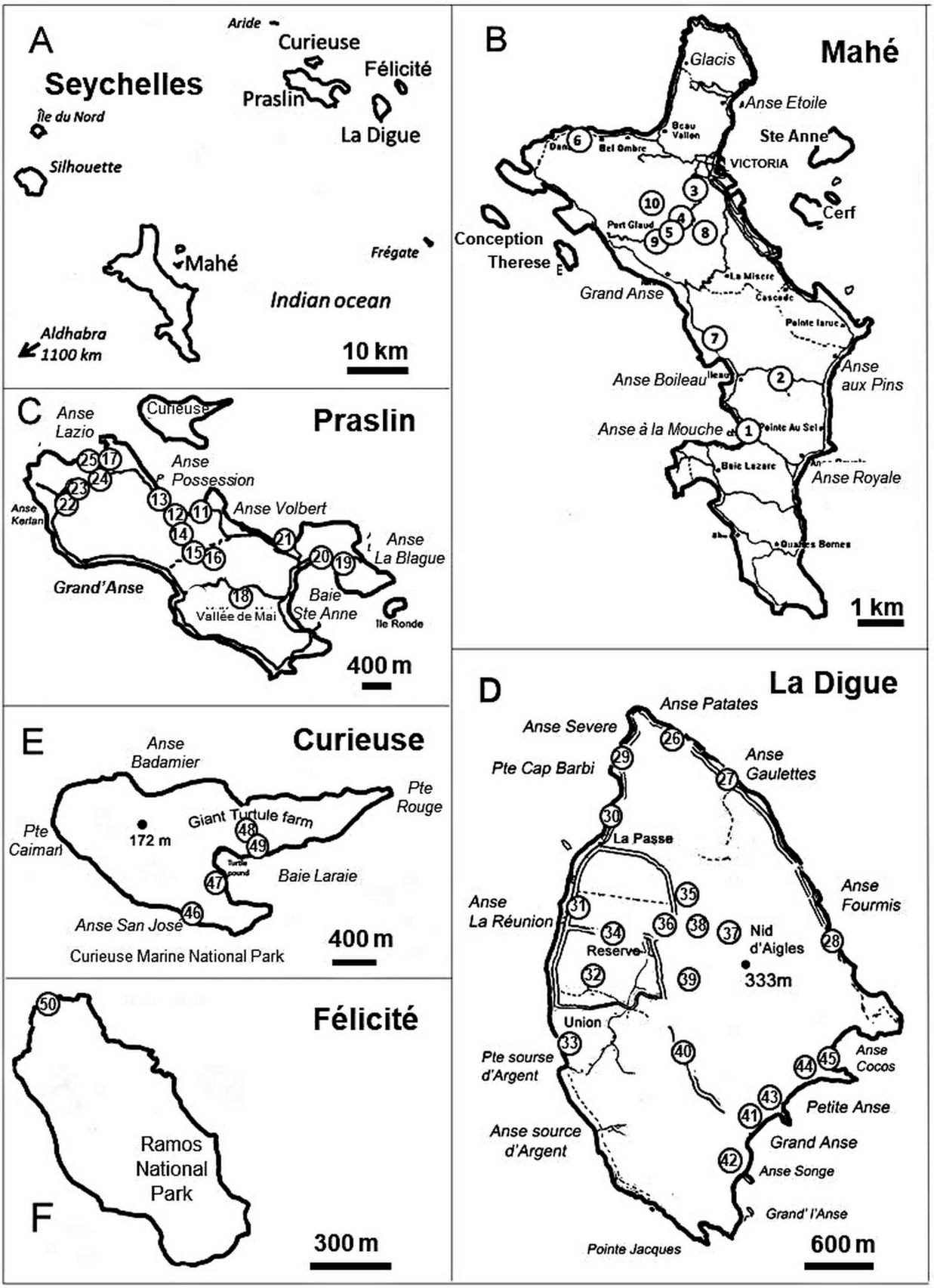
TABLE 1. The dominant plants in the main natural vegetation types of the Seychelles.

Vegetation types	Trees, shrubs, palms and tree ferns
Coastal plateau	*Barringtonia asiatica*, *Calophyllum inophyllum*, *Cocos nucifera*, *Cordia subcordata*, *Guettarda speciosa*, *Hernandia nymphaeifolia*, *Hibiscus tiliaceus*, *Sophora tomentosa*
Lowland and coastal forests	*Calophyllum inophyllum*, *Casuarina equisetifolia*, *Cordia subcordata*, *Deckenia nobilis, Heritiera littoralis*, *Intsia bijuga*, *Mimusops seychellarum*, *Nephrosperma vanhoutteanum*, *Phoenicophorium borsigianum*, *Syzygium wrightii*, *Terminalia catappa*, *Vateriopsis seychellarum*
Mangrove	*Avicennia marina*, *Bruguiera gymnorrhiza*, *Ceriops tagal*, *Heritiera littoralis*, *Lumnitzera racemosa*, *Rhizophora mucronata*, *Sonneratia alba*, *Xylocarpus granatum*
Riverine forest	*Barringtonia racem andanus balfouri*, *Phoenicophorium borsigianum*, *Vateriopsis seychellarum*, *Verschaffeltia splendida, Verschaffeltia splendida*
Intermediate forest	*Campnosperma seychellarum*, *Campnosperma seychellarum*, *Canthium bibracteatum*, *Cyathea seychellarum*, *Dillenia ferruginea*, *Diospyros seychellarum*, *Erythroxylon seychellarum*, *Excoecaria benthamiana*, *Gastonia crassa*, *Grisollea thomassetii*, *Memecylon eleagni*, *Northea hornei*, *Paragenipa wrightii*, *Pouteria obovata*, *Soulamea terminalioides*, *Syzygium wrightii*, *Vateriopsis seychellarum*
Mountain mist forest	*Cyathea seychellarum*, *Gastonia crassa*, *Northea hornei*, *Pandanus seychellarum*, *Psychiotria pervillei*, *Roscheria melanochaetes*
Glacis vegetation (inselbergs)	*Excoecaria benthamiana*, *Memecylon eleagni*, *Mimusops seychellarum*, *Pandanus multispicatus*, *Soulamea terminalioides*

The climate of Seychelles is a warm and not very contrasting humid tropical type with a strong maritime influence. The average annual temperature ranges from 25°C to 30°C, the maximum and absolute minimum being 32.8°C and 19.3°C at sea level and it is estimated that it never drops below 12–13°C on the top of Morne Seychellois. The year can be divided into two main seasons – the Northwest Monsoon that extends from November to April and a slightly cooler season, the Southeast Monsoon, which extends from May to October. The rainy season runs from October to April. The wettest month is January, followed by December, and the driest period runs from June to August. Rainfall usually exceeds 2000 mm at sea level, with about three relatively dry months receiving less than 100 mm, and the peaks are between 4000 and 5000 mm (Hansen & Laboudallon 2013). Although the Seychelles have a fairly homogeneous climate, they still have some differences. The island of Mahé is the wettest, especially in the interior mountainous part at high elevations with mountain mist forest (Fleischmann *et al.* 2003).

The present flora of the Seychelles is relatively homogeneous. No differences in morphological characters were observed between populations of the same plant on different islands (Fleischmann *et al.* 2003). The native flora of the Seychelles includes elements of African, Madagascan and Indo-Malaysian origin, with the latter being the most prominent (Cox & Moor 1996, Fleischmann *et al.* 2003). About 250 species of indigenous flowering plants are known, about 34% (84 taxa) of which are supposed to be endemic to the Seychelles (Fleischmann *et al.* 2003). The main concentration of native plants is in the Morne Seychellois National Park and Barbarons National Biodiversity

Centre on Mahé. Many invasive species have become ubiquitous and cover 5–10% of the total surface area of the islands (Hansen & Laboudallon 2013).



FIGS 1. Collecting localities on five islands in the Seychelles. **A.** Map of the Seychelles inner islands (granitic group). **B.** Mahé. **C.** Praslin. **D.** LaDigue. **E.** Curieuse. **F.** Félicité.

The main type of vegetation of the Seychelles is an evergreen forest that can be subdivided into several formations, stages and facies, according to differences in ecology and floristic composition. The main natural vegetation types of the Seychelles are the coastal plateau, lowland and coastal forests, mangrove forests, riverine forests, intermediate forests, mountain mist forests and glacis type vegetation (Fleischmann *et al.* 2003). The dominant trees and shrubs in the main natural vegetation types present are listed in Table 1. Most plants growing along the coast are species common to the shores of most tropical islands. The exploitation of the trees of the beach crest, land reclamation, construction of houses and establishment of coconut plantations have all contributed to the alteration of the original coastal vegetation (Sauer 1967). Coastal forests are found along the edge of sandy beaches and also on the granite coasts. Near sea level are also mangrove swamps dominated by *Avicennia marina* and *Rhizophora mucronata*. The vegetation along most rivers in the Seychelles was much affected by human activities. Most of the remaining river forests are composed of palm trees. There also seems to be a constant association of *Martellidendron hornei* and *Verschaffeltia splendida* (Fleischmann *et al.* 2003).

The lowland forests originally covered the mountain slopes up to about 200–300 m, and the species of plants present are not dispersed by ocean currents as is the case for many coastal species. The primary lowland flora was apparently composed partly of endemic species as well as indigenous species more widely spread on most islands in the Indian Ocean. However, it is obvious that the endemic species played a less important role in the lowland vegetation than at the higher elevations (Fleischmann *et al.* 2003). From 200 to 500 m there is an intermediate forest zone. These forests are rich in species and have a high canopy at least occasionally reaching up to 30–40 m. On drier sites the intermediate forests have probably been dominated by the endemic palm trees. Palms were of only minor importance in the forests of the more humid type. There are also large stands of screwpines (Pandanaceae) and tree ferns (*Cyathea seychellarum*). Much of the dry ridges with shallow soil have been described as having a Mimusops and Excoecaria dominated forest type. High elevation forests originally covered most of the land above 400–500 m in the Seychelles. At higher elevations above about 600 m, including the mountain peaks that are frequently in the clouds, the predominant vegetation is a hygrophile forest (Hansen & Laboudallon 2013). The mountain mist forest is rich in mosses, lichens, filmy ferns and epiphytic orchids. Large trees can still be found at undisturbed sites at higher elevations, indicating that the canopy was previously up to about 15 m tall. *Northea hornei* is the dominant species of the canopy of this zone. In the original forests at higher elevations, endemic species dominated the vegetation. However, the total number of endemic species in the mist forest is lower than in the forests that occur at intermediate elevations. On Mahé there are still substantial areas of humid high-elevation forests and inselbergs containing a rich endemic flora. On the granite islands of the Seychelles there is a vegetation element of the glacis type (inselbergs) which cannot be related to elevation. This vegetation type, made up of vegetation growing on solitary, often monolithic rocks or parts of mountain systems which rise abruptly from their surroundings (Fleischmann *et al.* 2003).

Materials and methods

Field collecting (FC) of specimens of myxomycetes and samples for preparation of moist chamber (MC) cultures was carried out on five islands of the Seychelles (Fig. 1). The expedition to Mahé took place in June 2016 to supplement the results of research carried out in October 2011 (Kryvomaz *et al.* 2017). Myxomycetes were studied on Praslin in June-July 2015. There were three expeditions to La Digue in July 2015, in January 2016 and July 2016. In addition, material was collected on two islands with limited access on Curieuse in June 2015 and on Félicité in July 2016. The fieldwork was carried out by Tetiana Kryvomaz and Alain Michaud. Material was collected from these islands during the rainy and dry seasons to coincide with the time of the year when fruiting bodies of myxomycetes might be expected to be most abundant. Field-based surveys of myxomycetes were planned to account for seasonal and environmental variation across the study area. In total, 50 different localities (Table 2) were subjected to some sampling. At each locality, the microhabitats in which myxomycetes are known or suspected to occur were examined systematically. The study plots were arranged systematically within each of the main vegetation types of the Seychelles (Table 1). Each plot was representative of the particular forest community with respect to both vegetation and site conditions and consisted of a relatively homogenous unit of vegetation located in an area of essentially uniform topography. Sampling was repeated to obtain a series of substrate samples of each type following the procedure described in Stephenson & Rojas (2017). All myxomycete substrates were classified into five categories.

These were decaying wood and bark; ground litter (dead leaves and other types of plant debris, but also including small twigs); aerial litter (defined as dead but still attached plant parts); the bark of living trees; epiphyllic mosses and liverworts on trees.

TABLE 2. List of sampling localities

Localities №	Places	Coordinate& elevation	Data	Description of localities
	Mahé			
1	Anse à la mouche	-4.74015, 55.4892, 4 m	24-VI-2016	fringe of *Cocos nucifera* between road and beach
2	La Reserve trail	-4.70694, 55.5005, 245 m	25-VI-2016	forest with *Bambusa* sp., *Cinnamomum verum*, *Deckenia nobilis*, *Nephrosperma vanhoutteanum*, *Swietenia macrophylla*
3	Sans Souci road, Mont Fleuri district	-4.63482, 55.45009, 223 m	26-VI-2016	forest along roadsides with *Calophyllum inophyllum* and *Dillenia suffruticosa*
4	Sans Souci road to Audibert	-4.65298, 55.44498, 458 m	26-VI-2016	mist forest along roadsides with *Calophyllum inophyllum*, *Dillenia suffruticosa*, *Mangifera indica*, *Nephrosperma vanhoutteanum*, *Terminalia catappa*
5	Sans Souci road	-4.65401, 55.44518, 448 m	26-VI-2016	mist forest along roadsides with *Cinnamomum verum*, *Ipomoea cairica*, *Elaeis guineensis*, *Nephrolepis biserrata*, *Tabebuia pallida*, *Thunbergia grandiflora*
6	Anse Major trail, Bel Ombre district	-4.61883, 55.39717, 55 m	27-VI-2016	open dry trailside along the sea with *Agave vera-cruz*, *Artocarpus altilis*, *Cinnamomum verum*, *Cordyline fruticosa*, *Epipremnum pinnatum*, *Phoenicophorium borsigianum*, *Tabebuia pallida*, *Terminalia catappa*
7	National Biodiversity Centre Barbarons, Grand' Anse district	-4.69281, 55.46512, 76 m	28-VI-2016	public garden with *Artocarpus altilis*, *Nephrosperma vanhoutteanum*, *Pandanus balfourii*, *Phoenicophorium borsigianum*, *Roscheria melanochaetes*, *Spondias cytherea*, *Tabebuia pallida*
8	Salazie trail, Bel Air district	-4.65283, 55.44862, 430 m	29-VI-2016	trailside with water movement in the topsoil in mist forest with *Artocarpus altilis*, *Calophyllum inophyllum*, *Dianella ensifolia*, *Dieffenbachia sequine*, *Dillenia ferruginea*, *Dioscorea* sp., *Ipomoea cairica*
9	Sans Souci road – parking Tea factory	-4.66247, 55.43767, 399 m	30-VI-2016	anthropogenic area with *Calophyllum inophyllum*
10	Morne Blanc trail, Sans Souci Road, Port Glaud district	-4.65937, 55.43747, 458 m	30-VI-2016	humid rain forest with *Cinnamomum verum*, *Deckenia nobilis*, *Dillenia ferruginea*, *Pandanus balfourii*, *Tabebula pallida* with abundant epiphytes and moss on the bark of trunks and branches
	Praslin			
11	Possession Estate	-4.31428, 55.7301, 50 m	27-VI-2015	humid forest with *Adenanthera pavonina*, *Alstonia macrophylla*, *Calophyllum inophyllum*, *Dillenia ferruginea*, *Leucaena leucocephala*, *Phoenicophorium borsigianum*, *Vanilla planifolia* with abundant plant remains in seaside rocky areas

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TABLE 2. (Continued)

Localities №		Places	Coordinate& elevation	Data	Description of localities
12		Anse Pasquière	-4.31149, 55.72122, 5 m	28-VI-2015	beach fringes along roadside with *Calophyllum inophyllum*, *Cassytha filiformis*, *Casuarina equisetifolia*, *Cocos nucifera*, *Thespesia populnea*
13		Anse Takamaka near Raffles resort	-4.30761, 55.71896, 12 m	28-VI-2015	public park with *Terminalia catappa* near the beach trailside
14	a	Anse Possession to Grand' Anse, Pasquière Estate	-4.32643, 55.72341, 72 m	30-VI-2015	roadsides vegetation with *Artocarpus heterophyllus*, *Cinnamomum verum* and *Falcataria moluccana* near habitation
	b	Anse Possession to Grand' Anse, Pasquière Estate	-4.31907, 55.7234, 101 m	30-VI-2015	roadsides with species of *Calophyllum inophyllum*, *Syzygium jambos*, *Costularia hornei*, *Chrysobalanus icaco* on sunny exposed rocky red soils
15		Anse Possession to Grand' Anse, Salazie	-4.3247, 55.72396, 117 m	30-VI-2015	humid forest with species of *Artocarpus heterophyllus*, *Calophyllum inophyllum*, *Cinnamomum verum*, *Phoenicophorium borsigianum* with abundant plant remains along trailside near agricultural land
16		Anse Possession to Grand' Anse, La Plaine hollandaise	-4.32401, 55.72429, 119 m	30-VI-2015	forest on top of hill with species of *Artocarpus heterophyllus*, *Calophyllum inophyllum*, *Falcataria moluccana*
17		Anse Lazio	-4.2941, 55.70274, 5 m	2-VII-2015	coastal areas trailside with species of *Cocos nucifera*, *Musa paradisiaca*, *Phoenicophorium borsigianum* near the beach and habitation
18		Vallée de Mai	-4.33185, 55.7401, 179 m	3-VII-2015	public park with endemic palm *Lodoicea maldivica* and species of *Dillenia ferruginea*, *Erythroxylum sechellarum*, *Martellidendron hornei*, *Tabebuia pallida*,
19		Baie Ste. Anne, Anse Takamaka	-4.32653, 55.77244, 12 m	3-VII-2015	roadside coastal areas with species of *Cocos nucifera* and muddy mangroves near habitation and recreation
20	a	Anse Takamaka to Anse La Blague	-4.32654, 55.76661, 1 m	3-VII-2015	beach fringes along roadside with species of *Cordia subcordata*
	b	Anse Takamaka to Anse La Blague	-4.32654, 55.76661, 1 m	3-VII-2015	roadside vegetation near old agriculture area along the beach with lianas *Passiflora foetida* and *Syngonium podophyllum*
21		Anse Gouvernement	-4.32104, 55.76104, 7 m	4-VII-2015	woodland plateau in coastal areas near the beach with species of *Casuarina equisetifolia*, *Cordia subcordata*, *Tabebuia pallida*
22	a	Anse Kerlan to Savoy State Land	-4.30414, 55.6867, 47 m	5-VII-2015	roadside vegetation with *Falcataria moluccana* on slope
	b	Anse Kerlan to Savoy State Land	-4.30555, 55.6889, 99 m	5-VII-2015	roadside near habitation and bus stop with species of *Cinnamomum verum*, *Epipremnum pinnatum*, *Falcataria moluccana, Tabebuia pallida*
	c	Anse Kerlan to Savoy State Land	-4.30083, 55.69246, 132 m	5-VII-2015	sunny exposed forest on red soil with species of *Acacia mangium*, *Adenanthera pavonina*, *Calophyllum inophyllum, Epipremnum pinnatum*, *Phoenicophorium borsigianum* on the top of hill near agriculture areas

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TABLE 2. (Continued)

Localities №		Places	Coordinate& elevation	Data	Description of localities
23		Anse Kerlan, Newcome to Savoy State Land	-4.30398, 55.6899, 104 m	5-VII-2015	roadside vegetation with species of *Calophyllum inophyllum*, *Phoenicophorium borsigianum*, *Terminalia catappa* on red soil near habitation
24		Anse Lazio to Anse Lemuria, Savoy state Land	-4.30288, 55.69204, 40 m	7-VII-2015	coastal sunny exposed forest with species of *Calophyllum inophyllum* trailside with *Chrysobalanus icaco* scrub on rocky and sandy soil
25	a	Anse Kerlan Estate	-4.29629, 55.6962, 39 m	8-VII-2015	woodland humid plateau with *Terminalia catappa* roadside in coastal areas
	b	Anse Kerlan Estate	-4.29619, 55.6948, 48 m	8-VII-2015	woodland humid plateau with *Terminalia catappa* roadside in coastal areas
		La Digue			
26		Anse Patates	-4.33769, 55.83306, 11 m	4-VII-2016	roadsides vegetation near beach with species of *Terminalia catappa*
27	a	Anse Gaulettes	-4.33988, 55.83652, 9 m	5-I-2016	polluted roadside vegetation near the beach with species of *Calophyllum inophyllum*, *Terminalia catappa*
	b	Anse Gaulettes	-4.340350, 55.83734, 4 m	4-VII-2016	roadsides vegetation near beach with species of *Artocarpus altilis*, *Calophyllum inophyllum*, *Cinnamomum verum*, *Cocos nucifera*
	c	Anse Gaulettes	-4.34077, 55.8372, 9 m	4-VII-2016	roadsides vegetation near beach in dry river banks with *Calophyllum inophyllum* and *Cocos nucifera*
28	a	Anse Fourmis	-4.35633, 55.8493, 22 m	9-I-2016	vegetation near beach with *Calophyllum inophyllum*
	b	Anse Fourmis	-4.35888, 55.85055, 31 m	9-I-2016	costal forest in sunny rocky area with *Terminalia catappa*
29		Anse Severe	-4.34184, 55.8304, 3 m	4-VII-2016	roadsides vegetation near beach with *Calophyllum inophyllum* and *Cocos nucifera*
30		Pointe Cap Barbi	-4.34396, 55.83094, 16 m	4-I-2016	near cemetery, roadside vegetation with *Mangifera indica*
31	a	Anse La Réunion	-4.35357, 55.82742, 7 m	2-I-2016	roadsides vegetation near habitation with *Cocos nucifera* and *Terminalia catappa*
	b	Anse La Réunion	-4.35692, 55.83019, 16 m	3-I-2016	trailside vegetation near habitation with *Cocos nucifera* and *Terminalia catappa*
	c	Anse La Réunion	-4.35773, 55.8303, 16 m	6-VII-2015	public garden with *Hernandia nymphaeifolia*
32		Union to Grand Anse	-4.36224, 55.82804, 5 m	8-I-2016	roadsides vegetation with *Terminalia catappa*

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TABLE 2. (Continued)

Localities №		Places	Coordinate& elevation	Data	Description of localities
33		Union	-4.36597, 55.8269, 8 m	9-I-2016	agricultural land with *Cocos nucifera*
34	a	La Passe	-4.34962, 55.8304, 9 m	2-I-2016	roadsides vegetation near habitation with *Terminalia catappa*
	b	La Passe	-4.35013, 55.83734, 126 m	6-I-2016	roadside vegetation near habitation with *Alocasia macrorrhizos*, *Cocos nucifera*, *Terminalia catappa*
	c	La Passe	-4.35289, 55.83607, 27 m	13-I-2016	trailside polluted forest near habitation with *Falcataria moluccana*
35		La Passe	-4.35498, 55.8360, 30 m	05-I-2016	polluted forest near habitation with *Terminalia catappa*
36		near Natural Reserve La Veuve	-4.35655, 55.8340, 9 m	8-VII-2016	public gardens near habitation with *Calophyllum inophyllum*, *Cordia subcordata*, *Terminalia catappa*
37	a	The road to Belle Vue, Nid d'Aigles	-4.35528, 55.84305, 80 m	5-VII-2016	roadsides vegetation near habitation with *Calophyllum inophyllum*
	b	The road to Belle Vue, Nid d'Aigles	-4.35759, 55.8427, 275 m	5-VII-2015	moist forest with *Calophyllum inophyllum* and *Cinnamomum verum* with dryer exposed rocky areas
	c	The road to Belle Vue, Nid d'Aigles	-4.35756, 55.84275, 277 m	5-VII-2015	moist forest with *Artocarpus heterophyllus*, *Calophyllum inophyllum*, *Chrysobalanus icaco*, *Cinnamomum verum*, *Falcataria mollucana*, *Phymatodes scolopendria* with dryer exposed rocky areas
	d	The road to Belle Vue, Nid d'Aigles	-4.35684, 55.84345, 293 m	5-VII-2015	moist forest with *Cinnamomum verum*
	e	The road to Belle Vue, Nid d'Aigles	-4.35786, 55.83982, 133 m	13-I-2016	forest with *Falcataria moluccana*
	f	The road to Belle Vue, Nid d'Aigles	-4.35859, 55.84031, 163 m	3-I-2016	forest with *Falcataria moluccana*
	g	The road to Belle Vue, Nid d'Aigles	-4.35878, 55.84023, 160 m	3-I-2016	roadsides vegetation with *Calophyllum inophyllum* and *Falcataria moluccana*
	h	The road to Belle Vue, Nid d'Aigles	-4.35861, 55.8399, 147 m	3-I-2016	roadsides vegetation near habitation with *Calophyllum inophyllum* and *Cinnamomum verum*
	i	The road to Belle Vue, Nid d'Aigles	-4.35854, 55.83963, 126 m	13-I-2016	forest with *Falcataria moluccana*
	j	The road to Belle Vue, Nid d'Aigles	-4.35893, 55.84018, 160 m	5-VII-2016	roadsides vegetation near habitation with *Alocasia macrorrhiza*, *Calophyllum inophyllum*, *Syngonium podophyllum*

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TABLE 2. (Continued)

Localities №		Places	Coordinate& elevation	Data	Description of localities
	k	The road to Belle Vue, Nid d'Aigles	-4.35904, 55.84059, 182 m	5-VII-2016	roadsides vegetation near habitation with *Calophyllum inophyllum*, *Cinnamomum verum*, *Dicranopteris linearis*
	l	The road to Belle Vue, Nid d'Aigles	-4.35775, 55.84138, 212 m	5-VII-2016	moist forest with dryer exposed rocky areas with *Calophyllum inophyllum* and *Cinnamomum verum*
	m	The road to Belle Vue, Nid d'Aigles	-4.35806, 55.83719, 60 m	3-VII-2016	roadsides vegetation near habitation with *Cinnamomum verum* and *Cheilocostus speciosus*
	n	The road to Belle Vue, Nid d'Aigles	-4.36009, 55.83867, 111 m	13-I-2016	roadsides vegetation near habitation with *Falcataria moluccana*
	o	The road to Belle Vue, Nid d'Aigles	-4.35993, 55.83845, 106 m	3-I-2016	roadsides vegetation with *Falcataria moluccana*
	p	The road to Belle Vue, Nid d'Aigles	-4.36029, 55.83920, 128 m	3-I-2016	roadsides vegetation with *Cinnamomum verum*, *Falcataria moluccana*, *Thespesia populnea*
38	a	Réunion to Grand Anse	-4.36016, 55.83470, 21 m	7-I-2016	wet forest near the road with *Cinnamomum verum*
	b	Réunion to Grand Anse	-4.36043, 55.8344, 15 m	6-VII-2015	roadside vegetation near habitation with *Artocarpus altilis*, *Calophyllum inophyllum*, *Cocos nucifera*, *Merremia peltata*, *Musa paradisiaca*, *Syngonium podophyllum*
39	a	Union - Maurice Payet river	-4.36285, 55.83712, 40 m	7-VII-2016	wet shady forest in river beds near habitation with *Alocasia macrorrhiza*, *Calophyllum inophyllum*, *Cocos nucifera*, *Musa paradisiaca*, *Syngonium podophyllum*, *Tabebuia pallida*, *Terminalia catappa*
	b	Union - Maurice Payet river	-4.36341, 55.83583, 21 m	12-I-2016	forest near habitation with *Calophyllum inophyllum*, *Cocos nucifera*, *Terminalia catappa*
	c	Union - Maurice Payet river	-4.36374, 55.8355, 16 m	12-I-2016	forest near habitation with *Calophyllum inophyllum* and *Terminalia catappa*
40	a	Union to Grand Anse	-4.36454, 55.83498, 19 m	8-I-2016	roadsides vegetation in wet river banks with *Terminalia catappa*
	b	Union to Grand Anse	-4.36016, 55.8347, 27 m	8-I-2016	wet forest with *Calophyllum inophyllum*
	c	Union to Grand Anse	-4.36689, 55.83645, 42 m	8-I-2016	roadsides vegetation with *Calophyllum inophyllum* and *Cinnamomum verum*
	d	Union to Grand Anse	-4.36915, 55.83759, 55 m	10-I-2016	roadsides vegetation near habitation with *Calophyllum inophyllum*
41	a	Grand Anse	-4.37305, 55.8419, 9 m	6-VII-2015	shady forest near beach with *Calophyllum inophyllum*

...Continued on the next page

TABLE 2. (Continued)

Localities №		Places	Coordinate& elevation	Data	Description of localities
	b	Grand Anse	-4.37345, 55.84314, 6 m	11-I-2016	shady forest near beach with *Calophyllum inophyllum*
42	a	Grand Anse to Anse Songe	-4.37503, 55.84158, 21 m	3-VII-2016	wet forest near coastal areas on rocky soil with *Calophyllum inophyllum* and *Cocos nucifera*
	b	Grand Anse to Anse Songe	-4.37628, 55.84206, 14 m	10-I-2016	wet forest near coastal area with *Calophyllum inophyllum* and *Terminalia catappa*
	c	Grand Anse to Anse Songe	-4.37609, 55.84225, 12 m	11-I-2016	wet forest in river banks near coastal area with *Calophyllum inophyllum*, *Cocos nucifera*, *Terminalia catappa*
43		Grand Anse to Petite Anse	-4.37196, 55.84513, 14 m	10-I-2016	shady forest near coastal areas with *Calophyllum inophyllum*, *Thespesia populnea*
44		Petite Anse	-4.36996, 55.8462, 7 m	2-VII-2016	woodland sunny plateau in coastal areas with *Leucaena leucocephala* with sandy soil
45	a	Petite Anse to Anse Cocos	-4.36889, 55.84638, 17 m	2-VII-2016	woodland shady plateau in coastal areas with *Calophyllum inophyllum*, *Cinnamomum verum*, *Cocos nucifera* with sandy soil
	b	Petite Anse to Anse Cocos	-4.36903, 55.84845, 30 m	2-VII-2016	woodland sunny plateau in coastal areas with *Casuarina equisetifolia* with sandy soil
	c	Petite Anse to Anse Cocos	-4.36842, 55.8487, 41 m	2-VII-2016	woodland sunny plateau in coastal areas with *Lantana camara* on sandy soil
	d	Petite Anse to Anse Cocos	-4.36828, 55.8499, 16 m	2-VII-2016	woodland sunny plateau in coastal areas with *Cordia subcordata* with sandy soil
		Curieuse			
46		Anse Saint José	-4.29019, 55.72624, 14 m	29-VI-2015	woodland coastal areas near recreation zone with *Calophyllum inophyllum* and *Ficus lutea*
47	a	Anse Saint José to giant turtles farm	-4.28748, 55.72838, 19 m	29-VI-2015	open sunny exposed rocky coastal areas with *Phoenicophorium borsigianum* scrub
	b	Anse Saint José to giant turtles farm	-4.28748, 55.72838, 19 m	29-VI-2015	coastal area with muddy mangroves *Rhizophora mucronata*
48		Baie Laraie, giant turtles farm	-4.28254, 55.73157, 13 m	29-VI-2015	woodland coastal areas near river banks and recreation zone with *Calophyllum inophyllum* and *Cocos nucifera*
49		near giant turtles farm	-4.28303, 55.73126, 11 m	29-VI-2015	woodland coastal areas *Calophyllum inophyllum*, *Cocos nucifera* and *Thespesia populnea* near river banks and plant remains
		Félicité			
50		near sea side	-4.31736, 55.86806, 4 m	6-VII-2016	beach vegetation with *Cordia subcordata* and *Cocos nucifera*

During this study, 54 species of plants found on the Seychelles were recorded as myxomycete substrates in field collections and/or in moist chamber cultures. This total includes the trees *Acacia mangium* Willd., *Adenanthera*

pavonina L., *Artocarpus altilis* (Parkinson) Fosberg, *Artocarpus heterophyllus* Lam., *Calophyllum inophyllum* L., *Casuarina equisetifolia* L., *Cinnamomum verum* J. Presl, *Cordia subcordata* Lam., the endemic *Dillenia ferruginea* (Baillon) Gilg, *Dillenia suffruticosa* (Griff ex Hook.f. & Thomson) Martelli, introduced *Falcataria moluccana* (Miq.) Barneby & J.W. Grimes, *Ficus lutea* Vahl, *Hernandia nymphaeifolia* (Presl.) Kubitzki, *Mangifera indica* L., *Spondias cytherea* Sonner., *Swietenia macrophylla* King, *Syzygium jambos* L. (Alston), *Tabebuia pallida* (Lindl.) Miers, *Terminalia catappa* L., *Thespesia populnea* (L.) Sol. ex Corrêa. In the mangrove forests of the Seychelles, only *Rhizophora mucronata* Lam. produced myxomycetes in MC. Shrub or small tree substrates included *Cheilocostus speciosus* (J.Konig) C. Specht, *Chrysobalanus icaco* (L.) L., *Erythroxylum sechellarum* O. Schulz (endemic), *Lantana camara* L., and *Leucaena leucocephala* (Lam.) de Wit. Palm substrates were represented by the agricultural species *Cocos nucifera* L. and *Musa* × *paradisiaca* L., the endemic palms *Deckenia nobilis* H.Wendl. ex Seem., *Lodoicea maldivica* (J.F. Gmelin) Persoon, *Martellidendron hornei* (Balf.f.) Callm. & Chassot, *Roscheria melanochaetes* H. Wendl., and also *Nephrosperma vanhoutteanum* Balf., *Pandanus balfourii* Martelli, *Phoenicophorium borsigianum* (K. Koch) Stuntz. Some myxomycetes were found on the introduced and native plants *Alocasia macrorrhizos* (L.) G. Don, *Cordyline fruticosa* (L.) A. Chev., *Costularia hornei* (C.B. Clarke) Kük., *Dianella ensifolia* (L.) DC., *Dieffenbachia seguine* (Jacq.) Schott. Other species of myxomycetes species were appeared in MC on the dry ferns *Dicranopteris linearis* (Burm.f.) Underw. and *Phymatosorus scolopendria* (Burm. f.) Pic. Serm., as well as on the parasitic tropical fern *Nephrolepis biserrata* (Sw.) Schott, which was growing on the supporting palm *Elaeis guineensis* Jacq. Other substrates for myxomycetes were the semi-parsitic liana *Cassytha filiformis* L., the epiphytic lianas *Dioscorea* sp., *Epipremnum pinnatum* (L.) Engl., *Ipomoea cairica* Sweet, *Ipomoea* sp., *Passiflora foetida* L., *Synogonium podophyllum* Schott, *Thunbergia grandiflora* (Roxb. ex Rottler) Roxb., and the epiphytic orchid *Vanilla planifolia* Jacks. ex Andrews. A small number of specimens were found on *Bambousa* sp. and *Agave angustifolia* Haw. The identification of the vegetation was carried out using the book "Flora of the Seychelles" by S.G. Hansen & V.F. Laboudallon (2013), with some references to the website http://www.seychellesplantgallery.com.

MC cultures were prepared with samples of the various substrates such as the bark of living trees, aerial litter and ground litter. Samples consisting of substrate material were placed on filter paper in Petri dishes. Distilled water adjusted to pH 7.0 was added to each Petri dish, and what had become a moist chamber culture was maintained under diffuse daylight and at room temperature (22–23 °C). Water was added every few days as required to maintain moist conditions for the entire observation period of up to three months. The pH of each moist chamber culture (taken at 24 hours) was recorded in all instances. Moist chamber cultures were prepared by Steve Stephenson and Alain Michaud. Samples were examined with the use of a high-magnification Zeiss Axiostar dissecting microscope every day for the first two weeks and subsequently every 2–3 days for the entire period of observation. Mature fruiting bodies were removed when present and placed in small pasteboard boxes for permanent storage. A species recorded from one moist chamber culture was regarded as a single specimen, irrespective of the number of fruiting bodies appearing or the number of days separating their appearance (Stephenson *et al.* 2008).

Determinations of specimens were made with the use of *"Les Myxomycètes"* (Poulain *et al.* 2011). Nomenclature follows Nomenmyx (Lado 2005–2019) with the exception of *Ceratiomyxa fruticulosa* var. *arbuscula*, *Comatricha elegans* var. *microspora*, *Craterium minutum* var. *brunneum*, *Cribraria intricata* var. *dictydioides*, *C. pachydictyon*, *Fuligo septica* var. *candida*, *F. septica* var. *flava*, *Physarum viride* var. *aurantium*, *Stemonitis fusca* var. *fusca, S. fusca* var. *nigrescens*, *S. pallida* var. *rubescens*, as noted in *"Les Myxomycètes"* (Poulain *et al.* 2011). All microscopic measurements and observations were made with material mounted in water and a solution of sodium hexametaphosphate. All photographs reproduced in this paper were taken by Alain Michaud. The light photomicrographs were obtained using an Olympus TG3 on a Carl Zeiss Axiostar microscope with the Zeiss Acroplan 40x, 100x, 400x, 630x, and 1000x lenses. Macrophotographs of myxomycetes were taken with an Olympus TG3 and a Nikon D70 camera mounted on a Nikon PB6 bellows, with AF Micro Nikkor 60 mm or Nikon AF Nikkor 28 mm lens used in conjunction with an inversion ring with a Nikon SB-26 flash for supplemental lighting. Photographs of plants were taken in situ with a Nikon D5300 with a lens Nikon AF-S Nikkor 28–300mm 1:3.5–5.6 G-ED VR, a DMC Panasonic TZ20, and an Olympus TG3. The permanent collection of specimens collected in the Seychelles are preserved in the publicly available herbarium of the University of Arkansas (UARK), Jardin Botanique de Genève (G), and the private herbaria of Alain Michaud in France and Tetiana Kryvomaz in the Ukraine.

Myxomycete abundance was classified according to the ACOR scale based upon the proportion of a species to the total number of records for each survey: A – abundant (> 3%), C – common (> 1.5–3%), R – rare (< 0.5%), O – occasional (≥ 0.5–1.5%), (Stephenson *et al.* 1993). The Sørensen coefficient of community (*CC*) index was

used to examine the similarity of the different assemblages. This index, which considers the presence or absence of species in the study areas being compared, uses the formula $CC = 2z / (x + y)$, where x and y equal the number of species in assemblages A and B, respectively, and z is the number of species common to both assemblages. Comparisons of specific myxomycete assemblages represented by field collections and specimens collected from moist chamber cultures were carried out. During this study, 54 species of myxomycetes were found only in field, 40 were recorded only in the laboratory with the MC method, and 25 were obtained by both methods. A comparison of field collections and MC results is important for determining myxomycete requirements with respect to environmental conditions and thus could help us to understand the patterns of their distribution and dispersal in nature.

Results

From 2015 to 2016 on five of the islands of the Seychelles (Mahé, Praslin, La Digue, Curieuse, Félicité) 105 species and 10 infra-specific taxa were recorded. These represent six orders, 11 families and 28 genera of the class Myxomycetes, with a predominance of members of the order Physarales. Among these, 64 species are new records for the Seychelles, thus bringing the total number of species of myxomycetes known for all of the territory of the Seychelles archipelago to 143. The most abundant species were *Arcyria cinerea, A. denudata, Diderma effusum, Didymium columellacavum*, *Hemitrichia calyculata, Physarum melleum,* and *P. pusillum.* Sixteen species were common, 21 were found occasionally, 37 were rare, and 45 species had only a single record.

Myxomycetes demonstrate individual patterns of frequency of presence in the field and MC; for example, two of the most abundant species in the Seychelles (*Arcyria cinerea* and *Diderma effusum*) occurred with equal frequency in MC and in the field. *Arcyria denudata* appeared very rarely in MC, whereas *Physarum melleum* occurred in MC more often*,* but for both species the specimens collected in the field dominated. In contrast, *Physarum pusillum* very often occurred in MC but only a single specimen was collected in the field. *Didymium columellacavum* and *Hemitrichia calyculata* were found only in the field and never in MC during the present study. Conversely, a rare species from the same genus (*Hemitrichia minor*) developed only in MC. In addition, no species from the genus *Trichia* was ever found during field collecting in the Seychelles, and *Trichia decipiens* was recorded only once from MC. Some species of the genus *Perichaena* were rather common in MC, including such examples as *P. chrysosperma, P. dictyonema, P. pedata,* and *P. vermicularis*, when field collecting produced only *P. depressa.*

The highest species diversity during this study was for La Digue, where 90 species were found as a result of the three expeditions. The data for this little island show that the rainy season on the Seychelles is more productive for myxomycetes than the tropical dry season, because in winter on La Digue field collecting yielded more than fifty species, while in summer it was fewer than thirty species. Even under wet tropical conditions, myxomycetes can be represented by large aethalia of *Fuligo septica* var. *flava*, *Lycogala epidendrum* and the pseudoaethalium of *Dictydiaethalium dictyosporum* (6 to 13 mm long) right after a cloudburst. A notable feature of this island is a very low level of transported pollution during most of the time as a result of the low level of human occupancy, because bicycles are the main type of transportation. Thus, a low level pollution could be another contributing factor for high myxomycetes diversity in addition to the favorable climate conditions and a rich cover of vegetation. During this study, 17 species were found only on La Digue and not on any of the other four islands or the Aldabra atoll.

On Mahé, together with published 47 species from October 2011 (Kryvomaz *et al.* 2017), 80 myxomycete species are now known. Specific to Mahé is the presence of a high-elevation humid forest, which provides a profuse array of various substrates for myxomycetes. This large island still has the potential for discovering new species of myxomycetes. On Mahé, 17 species were found only here, and these were represented by several specimens in FC and one in MC.

The expedition to Praslin took place in a dry summer in 2015, with a lack of precipitation (Republic of Seychelles statistical abstract 2016); thus, only 29 species were collected in field. But in laboratory MC, 41 species were recorded, seven of them replicated records from the field, and 62 species are currently known for Praslin. Different from the other islands of the Seychelles for this study were nine species, most of them found only once. However, this island still has the potential for additional myxomycetes to be recorded for expeditions taking place during the rainy season.

The little island of Curieuse does not have any residential buildings or any transport, but there is moderate recreational pressure from tourists, who come by boat to visit the park to observe the turtle *Aldabrachelys gigantea*.

During one day of collecting, six species of myxomycetes were collected in the field; afterwards 31 species were obtained from MC. Among these were four species different from those recorded on one or more of the other studied islands. Unfortunately, on the most interesting substrate, the dung of the giant herbivorous turtle, nothing appeared in MC. In total, 37 species are now known for Curieuse, but sunny rocky scrubland hills and shady semihumid coastal vegetation probably provide microhabitats for a number of other species of myxomycetes. On the other little island of Félicité, during field collecting in beach vegetation no myxomycetes were found, but MC did yield four species.

For six islands (Aldabra, Mahé, Praslin, La Digue, Curieuse and Félicité) one species of myxomycete (*Physarum crateriforme*) was shared in common. During a survey carried out in 1974 by R. J. Hnatiuk on the Aldabra atoll, 55 species of myxomycetes were recorded, among these 16 species were not recorded during the collecting we carried out on Mahé, Praslin, La Digue, Curieuse and Félicité. In general, our analysis clearly shows that isolated tropical islands with low levels of technological impact can support a diverse assemblage of myxomycetes.

The evaluation of human impact on assemblages of myxomycetes

Despite the rather low level of industrial pollution, the islands of the Seychelles have considerable recreational pressure, so to evaluate the human-produced impact factors on myxomycete species diversity, three main zones were delimited in this study as myxomycete habitats. The first was forest vegetation, which includes native woodland, areas of sunny exposed shrubs and woodland, trailsides and roadsides inside the forest. It should be noted that trailsides in the forest also are subjected to recreational influence, but in the Seychelles they are characterized by the highest myxomycete diversity, because trailsides are often associated with the best areas of forest. The second zone was represented by recreational coastal areas, which consists of beach vegetation near the sea, the fringe area between roads and the beach, vegetation opposite the beach on the other side of the road and muddy mangrove forests. The third zone consisted of anthropogenic areas, including public gardens, parks, woodlands near habitations with rubbish present, agricultural lands, roadside vegetation and parking places subject to transport pollution. In such places, those areas with fallen litter retained after cleaning were especially interesting for species of myxomycetes. The distribution of myxomycetes in areas subject to different levels of pollution consisted of 84 species in forests (44% of the total amount of specimens), 74 species (22%) in the anthropogenic zone and 62 (22%) for recreational coastal sites. Thirty-six species were common to all three habitats, but the community coefficient value was highest for forests and the anthropogenic zone (0.69, 55 species in common), less for the anthropogenic and recreation zones (0.63, 43 species in common) and lowest for forests and the recreational coastal sites (0.57, 42 species in common) (Fig. 2). The zones chosen to represent different levels of human impact contain different plant species and microhabitats, which are arguably more important for myxomycetes than their proximity to human impact.

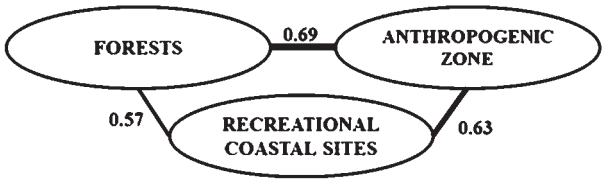

FIG. 2. The distribution of myxomycetes by areas subject to different levels of human impact.

When all three myxomycete habitat types were considered, 23 species were found only in forests. Most of these were recorded only in field, including such species as *Arcyria obvelata, Badhamia macrocarpa, Craterium concinnum, Cribraria pachydictyon, C. aurantiaca, C. intricata, Didymium clavus, D. ovoideum, D. verrucosporum, Physarum atroviolaceum, P. plicatum*, *Stemonitopsis gracilis,* and *Tubifera ferruginosa*. Some species appeared only in MC, including *Arcyria marginoundulata, Comatricha tenerrima, Echinostelium paucifilum, Licea biforis, L. operculata, Perichaena pedata*, and *Physarum decipiens.* Only three species were recorded in the field as well as in MC. These were *Comatricha pulchella, Didymium bahiense* and *D. minus.* For the anthropogenic zone and coastal sites, 13 species were specific to each habitat type. Among the myxomycetes recorded from the anthropogenic zone, only three species (*Licea scyphoides, Physarum aeneum* and *Trichia decipiens*) were from MC, with the others found in the field. The latter group included *Craterium minutum* var. *brunneum*, *Cribraria tenella, Dictydiaethalium dic-*

tyosporum, *Diderma chondrioderma, D. rimosum*, *Physarum bethelii, P. cinereum, P. echinosporum, P. florigerum*, and *Stemonitis flavogenita.* Just the opposite type of distribution was observed for the recreation coastal site, where species collected in the field or from MC were less specific, with *Comatricha elegans* var. *microspora*, *Physarum luteolum, P. mutabile, P. notabile, and Stemonitis pallida* var. *rubescens* recorded from the field and *Arcyria helvetica, A. incarnata, A. pomiformis, Licea kleistobolus, L. minima, Macbrideola scintillans, Reticularia olivacea,* and *Stemonitis herbatica* appearing in MC. There was a similar pattern in the distribution of percentage between FC+MC, FC and MC: for forest species it was 24%, 46% and 30%, respectively, for the anthropogenic zone 26%, 48%, and 26%, and more homogeneous for seaside sites with values of 31%, 31%, and 38%. Such results seem logical, because near the sea habitats are drier and many species of myxomycetes wait until favorable conditions in the spore stage. As such, for their detection the MC method is necessary. The abundance of myxomycetes collected in the field depends greatly upon the humidity of the collecting locality and the substrate moisture at the time of sampling.

Distribution myxomycetes by elevation

High elevations – The highest peak in the Seychelles is Morne Seychellois (914 m), but in this study the high elevation areas surveyed were limited to 300 to 500 m above sea level in the central portion of Mahé. This elevation range included high elevation rain forests, hygrophile and moist forests, where there were five collecting localities. Only 8% of the specimens representing 34 species were found here (Fig. 3). Nevertheless, six species were recorded only at high elevations, among these were *Physarum plicatum*, which was very abundant on very wet fallen leaves of *Cinnamomum verum, Deckenia nobilis, Dillenia ferruginea,* and *Pandanus balfourii*. Also occurring only in the field but less abundant here was *Cribraria pachydictyon*, *Physarum atroviolaceum* and *Didymium clavus*. On fallen leaves of *Dianella ensifolia* and *Dillenia ferruginea* collected in the rain forest along trailsides characterized by water movement in the topsoil, *Didymium minus* was recorded by the MC method. On dead leaves of *Calophyllum inophyllum* collected along roadsides in moist forests and examined in MC, *Didymium ovoideum* appeared. Furthermore, particular only for high elevation species, *Didymium columellacavum* should be noted. This species was abundant in this zone, much more so than at others elevations. Our impression is that high-elevation areas in the Seychellois should be subjected to future study.

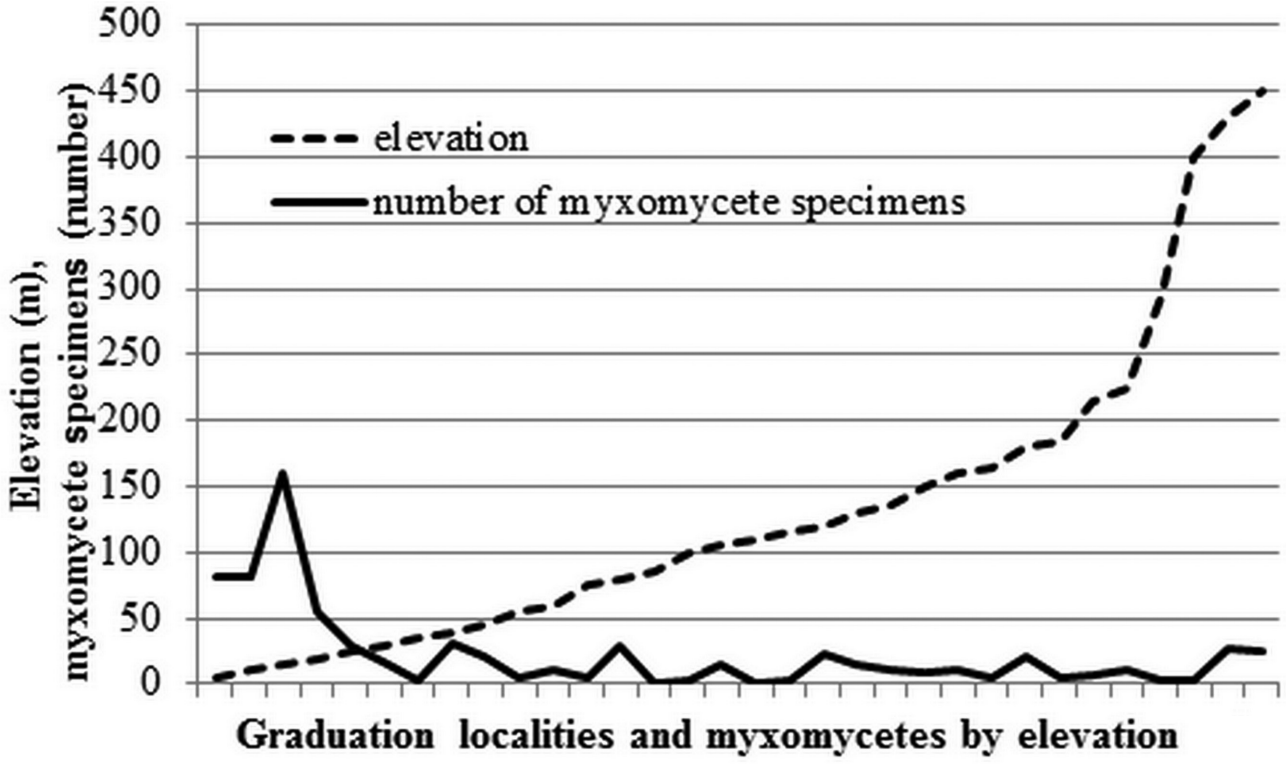

FIG. 3. Distribution of myxomycete specimens by elevation on five islands in the Seychelles.

Mid-elevations – The mid-elevations localities considered in this study ranged from 90 to 300 m above sea level. A total of 25 localities were studied in this zone, which included humid forests with a considerable amount of plant remains in moist forests, on dryer sunny exposed rocky areas, open scrublands, sunny exposed woodland, slopes with red soil in association with bracken ferns, public parks or plant remains in reserves, semi-humid woodlands near habitations, and agricultural land or old plantations. In mid-elevation localities 19% of all specimens of myxomycetes representing 66 species were recorded, including 10 species which were found only in this zone (Fig. 3). Among these were *Arcyria marginoundulata* recovered in a MC from the bark of *Cinnamomum verum* collected in a moist forest with dryer sunny exposed rocky areas on the highest hill "Nids d'Aigles" in La Digue. Also at the foot of this hill *Cribraria aurantiaca* was collected in the field on a large dead trunk of *Falcataria moluccana*, and not far from this trunk *Diderma rimosum* was very abundant on the fallen leaves of *Cinnamomum verum*. On Mahé in mid-elevation forests away from the coast, specimens of a member of the genus *Badhamia* were found which differs from all known species of this genus. In same place, other peculiar to mid-elevation species were recorded, including *Physarum viride*, which was also collected on Praslin in a humid mid-elevation forest near agricultural lands on the remains of *Cinnamomum verum* and on the dead wood of *Terminalia catappa,* which occurred on roadsites on red soil near habitations. *Collaria arcyrionema* was found on La Digue along roadsides on the dead wood of *Cinnamomum verum* in field but also in MC on the spathe of *Cocos nucifera* collected in wet forests in coastal areas on rocky soil on same island. Two other particular species (*Comatricha laxa* and *Cribraria confusa*) appeared in MC on the bark of *Cinnamomum verum*, on *Chrysobalanus icaco* collected on La Digue in a moist forest on dryer exposed rocky areas and on the litter of *Lodoicea maldivica* from Vallée de Mai on Praslin. Also from Vallée de Mai in MC *Trichia decipiens* and *Licea* cf *scyphoides* were recorded. *Licea minima* appeared in MC on the bark of *Syzygium jambos* collected in sunny exposed scrublands in the red earth hill area on Praslin. In addition to those species peculiar to mid-elevations, *Cribraria microcarpa*, *Physarum sessile*, *Stemonitis fusca* var. *nigrescens* and *S. pallida* were more abundant here than in any other zone.

Low elevation – in the present study low elevation localities were considered to be those up to about 90 m above sea level. A total of 70 low-elevation localities were examined, which included beach vegetation, beach fringes along roadsides, muddy coastal areas with mangroves present, coastal sunny exposed scrublands, rocky or sandy woodlands, wet lowland shady forests, woodlands in wet river beds, semi-humid slope forests, vegetation near habitations, and recreation areas, public parks and gardens, and agricultural land. As a result, 73% of all specimens of myxomycetes were associated with this zone, which consisted of 103 species, 44 of which were found only in the low elevation zone during this study (Fig. 3). In the field on La Digue and Praslin, *Cribraria lepida* and *Fuligo septica* var. *flava* were common. *Lycogala exiguum* was found in field on Curieuse and La Digue. Only in low elevation localities on La Digue *Arcyria obvelata, Badhamia macrocarpa, Craterium concinnum, Cribraria tenella, Dictydiaethalium dictyosporum*, *Physarum cinereum, P. luteolum, P. tenerum, Stemonaria longa, Stemonitis flavogenita, Stemonitopsis gracilis, S. hyperopta* were recorded in the field. At the same elevations on Mahé, field collections included *Physarum bethelii, P. mutabile, P. florigerum,* and *P. notabile*. On Praslin, *Comatricha elegans* var. *microspora, Physarum echinosporum, Stemonitis pallida* var. *rubescens,* and *Tubifera ferruginosa* were observed during field collecting. From MC and in the field *Didymium bahiense* was recorded on Praslin, La Digue and Curieuse, while *Didymium anellus* was obtained on same islands, but only in MC. The wide range of substrates collected in low elevation localities and processed in MC yielded *Arcyria incarnata*, *Clastoderma debaryanum*, *Didymium verrucosporum,* and *Licea kleistobolus* from La Digue; *Comatricha tenerrima, Licea biforis, Macbrideola scintillans,* and *Physarum decipiens* from Curieuse; *Arcyria helvetica, Physarum aeneum, and Reticularia olivacea* from Praslin; and *Stemonitis herbatica* from Mahé. *Physarum gyrosum* appeared in MC on substrates from Praslin, La Digue and Mahé; *Arcyria pomiformis*, *Macbrideola decapillata,* and *Perichaena dictyonema* from Praslin and La Digue; and *Echinostelium paucifilum* from Praslin and Curieuse at low elevations. Also in this zone two interesting species with abnormally large spores were collected—*Diderma* cf *chondrioderma* on Mahé and *Arcyria* cf *cinerea* in MC from La Digue.

Substrate specificity

In the tropics, as in the temperate zone, the microhabitat represented by dead wood is the most common substrate for myxomycetes, but it is also possible to find very specific myxomycete assemblages on leaves. The most abun-

dant substrates in the present study were various portions of *Calophyllum inophyllum* such as dead wood, ground litter, and the bark of living and dead trees. On just this single plant species, 60 species of myxomycetes were recorded, including most of the common species and also some rare examples. *Calophyllum inophyllum* is one of the dominant trees in lowland forests and on the beach crests and had 19% proportion of sampling during this study. On the same kinds of substrates with the addition of aerial litter from *Cinnamomum verum* 41 species of myxomycetes were recorded, with *Arcyria denudata* the most common. On the dead wood and ground liter of *Terminalia catappa* 38 species were recorded, including not only the most common but also *Dictydiaethalium dictyosporum*. *Cocos nucifera* served as the substrate for 29 species of myxomycetes, with certain examples occurring on specific portions of the plant such as the dead spathe on living palms, dead leaves and large inflorescence attached living plants, ground litter including coconut shells and large fallen palm stems. The most common species on this plant were *Hemitrichia serpula*, *Diderma effusum*, and *Physarum stellatum*. Among the 16 species found on the bark of dead and living trunks of *Thespesia populnea*, some species (e.g., *Physarum crateriforme* and *Stemonaria longa*) appear to prefer this substrate in comparison with other substrates. On the ground litter, dead wood and bark of living trees of *Tabebuia pallida,* 21 species of myxomycetes were recorded, including *Diachea leucopodia*, which seems to prefer this plant to others. Mainly on the dead wood but also on the aerial litter of *Falcataria moluccana,* 19 species were recorded. Of these, *Cribraria aurantiaca* was collected only from this substrate. Stems of the liana *Synogonium podophyllum* produced 11 species in MC. In total, these eight plant species (15% of all of the species of plants involved in the present study) provided substrates for 63% of all specimens of myxomycetes.

Common plant substrates in the present study involved nine species. These were *Musa* × *paradisiaca, Pandanus balfourii, Phoenicophorium borsigianum, Dillenia ferruginea, Ipomoea cairica, Casuarina equisetifolia, Cordia subcordata, Artocarpus altilis*, and *Swietenia macrophylla*. These represented 17% of all involved plant species and provided substrates for 19% of all specimens of myxomycetes. Sixteen species of plants (30%) provided occasional substrates; they represented the largest group of plant species on which myxomycetes were recorded, accounting for 13% of specimens of myxomycetes during this study. These were *Epipremnum pinnatum, Lodoicea maldivica, Leucaena leucocephala, Vanilla planifolia, Agave angustifolia, Artocarpus heterophyllus, Dillenia suffruticosa, Lantana camara, Nephrosperma vanhoutteanum, Passiflora foetida, Alocasia macrorrhizos, Chrysobalanus icaco, Dianella ensifolia, Mangifera indica, Merremia peltata,* and *Thunbergia grandiflora*. The group of rare substrates included 11 species of plants (20%), from which 35% of the specimens of myxomycetes were recorded. This group was made up of *Adenanthera pavonina, Cheilocostus speciosus, Deckenia nobilis, Dioscorea* sp., *Nephrolepis biserrata, Cordyline fruticosa, Erythroxylum sechellarum, Syzygium jambos, Cassytha filiformis, Rhizophora mucronata*, and *Spondias cytherea*. In addition, there were instances in which a particular species of plant played a role as a substrate for myxomycetes only once. The group of such singleton substrates for just 1% of all species of myxomycetes accommodated 10 species of plants (18%), including *Acacia mangium, Bambousa* sp., *Costularia hornei, Dicranopteris linearis, Dieffenbachia seguine, Ficus lutea, Hernandia nymphaeifolia, Martellidendron hornei, Phymatosorus scolopendria,* and *Roscheria melanochaetes*. It is noteworthy that among singleton substrates, there no single example specific for singleton myxomycetes; most single and rare species usually were found on substrates that were abundant and common.

The type of substrate for myxomycetes is probably even more important than the particular species of plant providing the substrate. Evaluating preferences for certain types of substrates is possible for species with enough specimens collected in field or in MC. In this study, the largest group was made up by lignicolous myxomycetes on dead wood, which included 37% of specimens collected not only on decaying trunks and stumps but also on the large stems of dead palms, the bark of dead wood, with the latter sometimes covered by mosses and fungi. Recorded only on dead wood and only in the field during the Seychelles expeditions were *Ceratiomyxa fruticulosa, Cribraria cancellata, C. intricata, C. intricata* var. *dictydioides, Cribraria lepida, Lycogala epidendrum, Physarella oblonga*, *Stemonitis axifera, S. splendens, S. fusca* var. *fusca, S. pallida* and *Tubifera microsperma*. *Arcyria denudata* occurred only in MC on the bark from a living tree *Casuarina equisetifolia* and spathes of *Cocos nucifera* while in field it was very abundant only on dead wood. *Arcyria cinerea* occurred on all types of substrates, both in field and in MC, but in the field it displayed an exclusive preference for dead wood. *Fuligo septica* var. *candida* occurred mainly in field on dead wood and in several cases it was on the forest floor. The same was true for *Physarum viride* var. *aurantium*, which was very often found in the field on dead wood and only occasionally occurred on other types of substrates. A special case was *Hemitrichia calyculata*, which was extremely abundant in the field and never occurred in MC. Moreover, this species was always on wood with one exception which was plant debris collected

from the forest floor. *Diderma chondrioderma* and *Perichaena chrysosperma* also prefered wood, but their fruiting bodies were found on the bark of dead as well as living trees in the field and in MC.

The substrate group designated as "living plants" essentially consists of the bark of living trees collected for moist chamber cultures but also included the stem of living palms and living parasitic or epiphytic plants, where 16% of specimens of myxomycete were found. This was the case for *Cribraria violacea, Echinostelium minutum,* and *Physarum crateriforme*, which occurred mainly on the bark of living trees and just a few times on aerial litter in MC. *Physarum crateriforme* also was found in the field on dead wood.

The substrate group designated as ground litter is well known as typical for tropical myxomycetes. It is made up of fallen leaves, twigs, fruits, inflorescences, old spathes and also dry grass and plant stems. In this study 25% of all myxomycetes were found on the forest floor, including *Physarum bogoriense*, *P. plicatum*, and *P. sessile*, which were found only in field and only on ground litter. *Diachea leucopodia* and *Didymium nigripes* were collected mainly in field on ground litter and only once recovered in MC on aerial litter. *Diderma rimosum*, *Didymium columellacavum,* and *Physarum cremiluteum* were abundant on ground litter in the field and recorded only once on dead wood. *Didymium squamulosum* was abundant in MC on the pods *Leucaena leucocephala*, the stems of different species of lianas species and fallen coconuts, but in the field it was found only a few times on fallen leaves. In the field, *Physarum hongkongense* was associated with ground litter and in MC was recovered from the bark of living trees.

Aerial litter is a specific tropical substrate for myxomycetes, which includes such things as dead plant parts still attached to living trees or palms, dead leaves and large inflorescences, dry suspended fruits or pods, dead spathes of living coconut palms, dead parasitic lianas or ferns on living supporting trees. From these collections, 22% of myxomycetes belong to this group. Most of species from this group were recorded only from MC, including such examples as *Didymium iridis, Perichaena vermicularis, Physarum compressum,* and *P. gyrosum*. In addition to the primary substrate of aerial litter these species also were recorded from ground litter, living plants and once on dead wood, but these were rare. *Perichaena depressa, Physarum lakhanpalii*, and *P. pusillum* were found in field but were more abundant in MC, with a usual prevalence for aerial litter. For *Hemitrichia serpula*, the most common substrate was the dead spathe of living coconut palms, but in the field it also was possible to find this species on dead and living palm stems, ground litter, dead wood, and only once in MC. *Lamproderma scintillans* and *Stemonitis fusca* var. *nigrescens* occurred with the same frequency on both kinds of litter but only in MC. Both types of litter were the substrate for *Comatricha pulchella*, but in field it occurred on fallen leaves and in MC it appeared on aerial litter such as dried leaves attached to a living tree.

Some species in the present study don't clearly display a substrate preference. For example, *Physarum roseum* and *Physarum stellatum* were not found very often and occurred mainly in the field on dead wood and litter, with a preference for the former, but the tree species were different except for *Calophyllum inophyllum*, which was common for both species. For *Collaria arcyrionema* and *Cribraria microcarpa*, all field collections were associated with dead wood, in MC these species appeared on the bark of living trees but also on aerial litter and ground litter. *Diderma hemisphaericum* and *Physarum oblatum* were recorded in MC on litter and the bark of living trees. *Diderma saundersii* was usually found in the field and associated with mosses on the bark of dead trees and palms, and sometimes also on ground litter. *Diderma effusum* and *Physarum melleum* were very abundant on fallen leaves and occurred less often on dead wood in field, but in MC the primary substrate was aerial litter.

Because myxomycete distribution patterns are strongly linked with vegetation, especially with plant remains, there is always the hope of finding special myxomycetes on endemic plants; sometimes these expectations are realized but not always. For example, mangrove forests are very common in the Seychelles, but meticulous field observations haven't yet identified any species of myxomycetes on mangrove trees. Only *Hemitrichia serpula* was found on the spathe of *Cocos nucifera*, which occurred in the zone of mangroves on Praslin. However, *Cribraria violacea* and *Macbrideola scintillans* were recovered in MC from bark specimens of *Rhizophora mucronata* collected on Curieuse.

The Barbarons National Biodiversity Centre on the west coast of Mahé has a palm forest containing several species of rare plants, but common endemic species also were gathered here from the natural habitats in larger numbers. In total, 15 species of myxomycetes were found in this place, but they occupied mainly the usual substrates from plants common in the Seychelles. For example, *Didymium nigripes* was found on the fallen leaves of *Artocarpus altilis*, and on the same substrate eight other species of myxomycetes species occurred in different localities during the present study. On the stem surface of *Nephrosperma vanhoutteanum* two species *Physarum viride* var. *auran-*

tium and *P. roseum* were collected. Moreover, the first of these was also found on the dead wood of *Spondias cytherea* together with *Arcyria cinerea*. The most productive substrates here were provided by the common Seychelles tree *Tabebuia pallida*, with the ground litter derived from the latter representing the substrate for *Diderma effusum*, *Physarum bogoriense*, and *P. melleum*. *Diderma chondrioderma* occured on mosses covering the bark of this tree. Another *Diderma* which is similar to *D. chondrioderma* but differs in having larger spores was collected here on the mossy palm stem of *Phoenicophorium borsigianum* together with *Ceratiomyxa fruticulosa* var. *arbuscula* and *Physarum bethelii*. The common species *Hemitrichia serpula* was found on the fallen leaves of *Pandanus balfourii*. On ground litter at the Barbarons National Biodiversity Centre such species as *Diderma saundersii*, *Didymium columellacavum*, and *Physarum florigerum* were abundant. However, only *Echinostelium minutum* was recovered from this locality by the MC method (from dry leaves and other plant parts attached to *Roscheria melanochaetes*).

High expectations existed for the myxomycetes of the Vallée de Mai Nature Reserve, which has been preserved its original state since prehistoric times on Praslin because of its endemic palm *Lodoicea maldivica*. However, field collections yielded only *Arcyria cinerea* on an old wooden border near the entrance to the park and three specimens of *Fuligo septica* var. *candida* on the forest floor. Fortunately, MC produced rather good results, yielding a total of 13 species. Ground and aerial litter of *Lodoicea maldivica* produced *Arcyria cinerea, Comatricha laxa, Diderma effusum, Didymium iridis, Physarum album, P. lakhanpalii,* and *Stemonitis fusca* var. *nigrescens*. On the fallen leaves of *Dillenia ferruginea Arcyria cinerea* together with *Cribraria microcarpa* were found. *Cribraria confusa, Echinostelium minutum* and *Licea scyphoides* were recorded on the bark of *Erythroxylum sechellarum*. Aerial roots *of Martellidendron hornei* yielded *Physarum compressum*. The most interesting species was *Trichia decipiens*, recovered from the bark *Tabebuia pallida*. In the temperate zone, this species of myxomycete is very common, but in tropical collections representatives of the genus *Trichia* almost never occur, and no one knows why.

Natural and artificial habitats in the Seychelles have a large number of endemic and introduced plants. Tropical forests with a dense canopy could in some circumstances be a barrier against the dispersal of myxomycetes, but it also can result in a characteristic assemblage of species. However, endemic vegetation is not always accompanied by endemic myxomycetes. Nevertheless, endemic vegetation sometimes can provide interesting results and this represents a possible direction for feature research in the Seychelles.

Discussion and conclusions

Despite of the number of studies relating to the diversity myxomycetes in the tropics, there is currently no exact definition of what is a "tropical myxomycete" because most of species are found in the temperate zone as well. For example, in the updated list of species of myxomycetes from the Seychelles after this study, 18 species were present on the most studied islands of La Dique, Mahé, Praslin and Aldabra. However, this group of common myxomycetes contains mostly cosmopolitan species such as *Arcyria cinerea, A. denudata, Ceratiomyxa fruticulosa, Lycogala epidendrum, Physarum album, Stemonitis fusca* var. *fusca,* and *S. splendens*. Other members of this central group of species for Seychelles also are common around the world but with a more fragmented distribution. These include *Cribraria microcarpa, C. violacea, Diderma effusum, Didymium squamulosum, Perichaena depressa, Physarum compressum, P. crateriforme,* and *P. pusillum*. Only *Hemitrichia calyculata, H. serpula* and *Physarum melleum* actually seem to be associated with the tropics to a greater extent than the majority of these common Seychelles species. Nevertheless, distribution maps the Discover Life website (www.discoverlife.org) for these three species show that they are also cosmopolitan, but only in the tropics do they become really abundant. The convenient label of "tropical myxomycete" needs to be refined for a better understanding of the distribution and ecological patterns of these organisms and their morphology, physiology and metabolism. The evidence that certain myxomycetes are specific for the tropics could be related to such things as their abundance in tropics in comparison with the temperate zone and a preference for substrates specific to the tropics. Perhaps for *Hemitrichia calyculata* the reason of the success of this species in the tropics is a small plasmodium, rapid life cycle and small fruiting bodies, which help it to succeed under variable tropical conditions (e.g., rainy season versus dry season). However, the same features should support the development of *H. serpula* in MC, but it was found only once in MC during the present study. *Hemitrichia serpula*, another presumably tropical species, was very abundant in the Seychelles on specific tropical substrates such as the spathe of *Cocos nucifera*. Something special in the tropical environmental apparently supports some species and this same factor must account for why certain other species are so rare. This is the case for species

from genus *Trichia*, which were never found in field in the Seycheles and only once in MC (*T. decipiens*). In contrast, on two other islands in the Indian Ocean, three species of *Trichia* (*T. crateriformis*, *T. affinis* and *T. favoginea*) were found on Madagascar (Wrigley de Basanta *et al.* 2013) and two species of *Trichia* on La Réunion (*T. persimilis* and *T. scabra*) (Adamonyte *et al.* 2011). This means that species of *Trichia* are present in the tropics but do not always have suitable condition for developing. The interesting question is why some species are so common in the temperate zone and so rare in the tropics? What conditions allow one species to develop but prevent others from doing so? In additional myxomycetes may actually spend more time as amoebae without fruitification, so it could be that conditions may actually be forcing rather than allowing fruiting to occur. The answer could be provided by biochemists together with specific studies of the conditions under which plasmodial formation and sporulation of a particular species occur. However, for the moment we would like to propose other candidates for consideration as tropical myxomycetes on the basis of our collections from the Seychelles. These would be *Diderma rimosum*, *Diderma saundersii, Didymium columellacavum*, *Physarella oblonga*, *Physarum melleum, Physarum cremiluteum, Physarum hongkongense, Physarum lakhanpalii, Physarum plicatum*, *Physarum roseum*, and *Physarum stellatum*, based on their tropical abundance, association with specific substrates and habitat preferences, as confirmed by other studies in tropics (Adamonyte *et al.* 2011; Ing & Hnatiuk 1981 ; Kryvomaz *et al.* 2017; Lado *et al.* 2003, 2008, 2016, 2017; Stephenson & Rojas 2017; Stephenson *et al.* 2004; Wrigley de Basanta *et al.* 2008, 2010, 2013).

How myxomycetes choose their substrates is certainly related to the physiology of the plasmodium, which is much understudied in the field. A study of myxomycete substrate preferences could help us understand patterns of their distribution. From 54 species of plants in the Seychelles which were recorded as myxomycete substrates during the present study, eight plant species provided substrates for 63% of the specimens of myxomycetes, nine species for 19%, 16 species for 13%, 11 species for 4%, and 10 species for 1% (Fig. 4). The most important plant substrates for myxomycetes in the Seychelles were *Calophyllum inophyllum, Cinnamomum verum, Terminalia catappa, Cocos nucifera, Thespesia populnea, Tabebuia pallida, Falcataria moluccana,* and *Synogonium podophyllum*. For less sampled substrates only abundant and common species of myxomycetes were found. In the tropics, as in the temperate zone, the microhabitat represented by dead wood is the most common substrate, but it is also possible to find very specific myxomycete assemblages on dead leaves. As already noted, the type of substrates is probably even more important for myxomycetes than it is for the species plant providing the substrate. Therefore, it is interesting to note that 37% of the specimens of myxomycete were collected on dead wood and decaying palm stems, 16% on bark and stems of living plants, 25% on ground litter, and 22% on aerial litter. Some species were not very selective with respect their choice of substrates, but others clearly preferred certain substrates. In summary, in the Seychelles lignicolous species of myxomycetes prevail over foliicolous species.

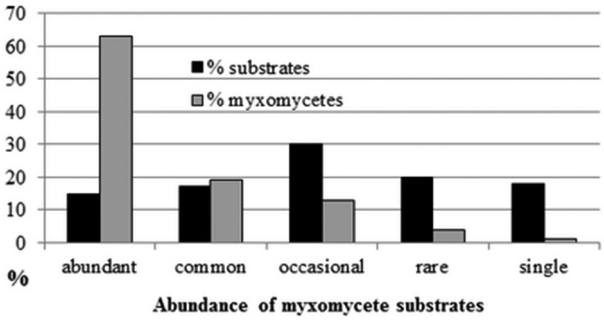

FIG. 4. Percentage ratio of plant substrate species and specimens of myxomycetes found on these substrates.

It is well known that in the tropics humidity is the major factor limiting myxomycete development, particularly for species with large fruiting bodies. However, during the present study it appeared that tropical rains do not seem to prevent the aethalia of *Fuligo septica* var. *flava* and other species with large fruiting bodies from forming. Rain also helps spore dispersal for species which were abundant on fallen leaves along roadsides in areas of rainwater drainage. Examles were *Diderma rimosum*, *Physarum cremiluteum* and *P. melleum*. On the Seychelles, the rainy season is more productive for myxomycetes than the tropical drier season, shown for example on La Digue where field collections were almost twice as abundant in the rainy season than during the drier season. The analysis of myxomycete distribution in relation to humidity was considered for the overall wetness and substrate moisture assessed in the different localites at the time of sampling. Not tropical rain but air humidity could be the more

important limiting factor for myxomycetes. In this respect, conditions in the Seychelles favour the occurrence of myxomycetes in comparison with the Caribbean region and its high atmospheric humidity.

Isolated tropical islands with low levels of technogical impact may be expected to support a diverse assemblage of myxomycetes, including some rare species. *Cribraria pachydictyon*, *Didymium clavus, D. minus, D. ovoideum, Physarum atroviolaceum*, and *P. plicatum* were recorded only at high elevations on Mahé. Among the 10 species peculiar for mid-elevations, *Arcyria marginoundulata, Diderma rimosum, Comatricha laxa,* and *Cribraria confusa* were noteworthy examples. The majority of collecting localities were concentrated in low elevations areas, and 68% of the specimens of myxomycetes collected were associated with this zone, and 41 species of myxomycetes were found only at low elevations; among these were *Arcyria helvetica, Dictydiaethalium dictyosporum*, *Echinostelium paucifilum, Physarum aeneum, P. echinosporum*, *Reticularia olivacea,* and *Stemonaria longa.* A comparison of myxomycetes assemblages in zones with different kinds of human pressure indicated that 84 species of myxomycetes were found in forests (44% of the total number), 74 (34%) in anthropogenic areas, and 62 (22%) in recreational coastal areas. Among these, 23 species were found only in forests and 13 species were specific for a particular zone. Most of the species specific for forests and anthropogenic areas appeared only in the field, but for coastal sites the more characteristic species appeared mainly in MC.

Future studies need to be carried out on high-elevation mountains on Mahé and the other islands of the Seychelles, which have not been searched for myxomycetes previously. As a consequence of favorable climatic conditions and their location between Asia and Africa, the Seychelles provide a good background for rich myxomycetes diversity.

Taxonomy

All the specimens of myxomycetes recorded in the present survey are listed first by genus and then by species in alphabetical order. Details of collecting localities and data are given in Material and methods. Only the number of the locality and the name of the island are written, and the name of plant substrates are given without authors, because they are given in the materials and methods section under substrates. In order to save space, the types of information associated with each specimen collected are abbreviated as follows: FC – field collection, MC – moist chamber (species obtained in moist chamber cultures in the laboratory), loc – locality, ps – plant substrate species. New records for the Seychelles are indicated with superscript asterisk (*). Specimens cited herein are deposited in the herbarium (UARK) of the University of Arkansas, Fayetteville, USA) under the acronym SLS, which refers to S. L. Stephenson, as well as in the private collections of A. Michaud (AM), T.I. Kryvomaz (TK) and Marianne Meyer (MM). Comments include morphological notes relating to how the specimens collected differ from published descriptions as well as ecological notes about the substrate upon which the fruiting bodies occurred.

Arcyria cinerea (Bull.) Pers. (52 FC, 55 MC, 47 loc, 29 ps)

Loc. 2 Mahé: On dead wood and bark of *Swietenia macrophylla*, AM3043, TK2792. On rotten mossy wood of *Swietenia macrophylla*, AM3055, TK2807 (3FC). On fallen leaves of *Cheilocostus speciosus*, SLS 32410 (MC pH 7). **Loc. 5** Mahé: On roots of living epiphytic *Nephrolepis biserrata* on *Elaeis guineensis*, SLS (MC pH 6.4). On bark of living tree *Tabebuia pallida*, SLS (MC pH 6.8). On dry stems of living climber liana *Thunbergia grandiflora*, SLS (MC pH 6.4). **Loc. 6** Mahé: On dead leaves attached to a living succulent *Agave angustifolia*, SLS (MC pH 8.1), SLS (MC pH 7.2). On fallen leaves of climber liana *Epipremnum pinnatum*, SLS 32326 (MC pH 7.1). On fallen leaves of *Cheilocostus speciosus*, SLS 32410 (MC pH 7). **Loc. 7** Mahé: On dead wood of *Spondias cytherea*, AM3102, TK2917. On fallen palm leaf, AM3111, TK2930. **Loc. 8** Mahé: On dry grass *Dianella ensifolia*, SLS (MC pH). On dry stems of living liana *Ipomoea cairica*, SLS (MC pH 6.9), SLS (MC pH 6.7), SLS (MC pH 6.1). **Loc. 10** Mahé: On stem surface of living palm *Deckenia nobilis*, AM3123, TK2969. On fallen palm leaf of *Pandanus balfourii*, AM3133, TK2984 (2FC). On dead wood of *Tabebuia pallida*, AM3151, TK3020. On very rotten mossy wood AM3141, TK2996. **Loc. 11** Praslin: On large leaves of *Dillenia ferruginea*, SLS (MC pH 5.5). On dry pods attached to living *Leucaena leucocephala*, SLS (MC pH 6.2). On leaves of living climbing epiphytic orchid *Vanilla planifolia*, SLS (MC pH 5.6), SLS 32158 (MC pH 6.5). **Loc. 12** Praslin: On bark of living tree *Casuarina equisetifo-*

lia, SLS (MC pH 5.7), SLS 32222 (MC pH 5.4). **Loc. 13** Praslin: On wood inside a rotten log of *Terminalia catappa*, AM2709, TK2047 (2FC). **Loc. 14a** Praslin: On wood of rotten branch of *Cinnamomum verum*, AM2744, TK2080. **Loc. 14b** On wood of rotten mossy large branch of *Calophyllum inophyllum*, AM2722, TK2052. **Loc. 15** Praslin: On wood of rotten mossy branch of *Artocarpus heterophyllus*, AM2731, TK2067. **Loc. 17a** Praslin: On dry leaves attached to young perennial herb *Musa* sp. SLS (MC pH 6.9). **Loc. 18** Praslin: On fallen leaves of *Dillenia ferruginea* SLS (MC pH 6.3). On dry leaves attached to palm *Lodoicea maldivica*, SLS (MC pH 6). On wooden old edge of the path near the entrance to Vallée de Mai, AM2747, TK2102. **Loc. 19** Praslin: On dry leaves attachet to palm *Pandanus balfourii*, SLS (MC pH 6.1); SLS (MC pH 6.7). **Loc. 20b** Praslin: On dry stems of living herbaceous creeper *Passiflora foetida*, SLS (MC pH 6.6). On dry stems of living epiphytic liana *Syngonium podophyllum*, SLS (MC pH 7). **Loc. 21** Praslin: On wood of rotten log of *Casuarina equisetifolia*, AM2762, TK2169. **Loc. 22c** Praslin: On dead stem of living palm *Phoenicophorium borsigianum*, AM2778, TK2194; AM 2807 (MC 16). **Loc. 23** Praslin: On wood of rotten log of *Calophyllum inophyllum*, AM2769, TK2183 (2FC). On wood and bark of rotten log of *Calophyllum inophyllum*, AM2775, TK2190 (2FC). **Loc. 24** Praslin: On dead bark of living epiphytic liana *Syngonium podophyllum*, SLS (MC pH 7.7), SLS (MC pH 7.8). On wood of rotten log of *Calophyllum inophyllum* AM2783, TK2202 (2FC). **Loc. 25b** Praslin: On wood of rotten log of *Terminalia catappa*, AM2789, TK2210 (4FC). **Loc. 27c** La Digue: On dead spathe fixed to living palm *Cocos nucifera*, SLS 32194 (MC pH 7.9). **Loc.28a** La Digue: On dead wood of *Calophyllum inophyllum*, AM2931, TK2479. **Loc.29** La Digue: On dead spathe fixed to living palm *Cocos nucifera*, SLS (MC pH 5). **Loc. 31a** La Digue: On very wet surface of log of *Terminalia catappa*, AM2851, TK2362. **Loc. 34b** La Digue: On surface of large fallen stem of *Cocos nucifera*, AM2901, TK2436. **Loc. 34c** La Digue: On wood of rotten log of *Falcataria moluccana*, AM2997, TK2581. **Loc. 35** La Digue: On wood of very rotten log of *Terminalia catappa*, AM2888, TK2417. **Loc. 36** La Digue: On wood and bark of large rotten branch of *Terminalia catappa*, AM3220, TK2772 (2FC). **Loc. 37c** La Digue: On bark of living tree *Artocarpus heterophyllus*, SLS 32432 (MC pH 7). On bark of living tree *Calophyllum inophyllum*, SLS (MC pH 6). On bark of stump of *Chrysobalanus icaco*, SLS (MC pH 4.6), SLS (MC pH 4.8). **Loc. 37m** La Digue: On rotten piece of wood AM2873, TK2398. **Loc. 38a** La Digue: On wood of very rotten log of *Cinnamomum verum*, AM2904, TK2440. **Loc. 38b** La Digue: On dry stems of living liana *Ipomoea* sp., SLS (MC pH 7.3). On dry leaves attached to perennial herb *Musa* sp., SLS (MC pH 6.2), SLS (MC pH 6.3), SLS 32157 (MC pH 6.2), SLS (MC pH 7,4), SLS (MC pH 7.4). **Loc. 39a** La Digue: On dead leaves attached to perennial herb *Musa* sp., SLS (MC pH 7.2), SLS 32150 (MC pH 6.9), SLS (MC pH 7.5). On wood of rotten log of *Terminalia catappa*, AM3206, TK2745. **Loc. 39b** La Digue: On wood of very rotten branch of *Calophyllum inophyllum*, AM2980, TK2552 (2FC), AM2983, TK2555. **Loc. 39c** La Digue: On wood of rotten log of *Calophyllum inophyllum*, AM2973, TK2543. **Loc. 40c** La Digue: On wood and bark of rotten log of *Calophyllum inophyllum*, AM2921, TK2465. **Loc. 41a** La Digue: On old dry inflorescences attached to living palm *Cocos nucifera*, SLS (MC pH 7.1). On dry stems of living epiphytic liana *Syngonium podophyllum*, SLS (MC pH 6.2). **Loc. 42b** La Digue: On wood of very rotten log *Calophyllum inophyllum*, AM2942, TK2502, AM2946, TK2508. On wood of standing dead tree *Calophyllum inophyllum*, AM2949, TK2511. On rotten wood of *Calophyllum inophyllum*, AM2967, TK2534. **Loc. 43** La Digue: On wood and bark of large standing dead tree *Thespesia populnea*, AM2937, TK2490 (2FC), AM2938, TK2492. On stem of fallen leaves of *Thespesia populnea*, AM3155, TK2583. **Loc. 44** La Digue: On dry pods fixed to living tree *Leucaena leucocephala*, SLS 32453 (MC pH 6), SLS (MC pH 6.3). **Loc. 45c** La Digue: On dry stems of living liana *Lantana camara*, SLS 32327 (MC pH 7.2), SLS 32330 (MC pH 6.2), SLS 32456 (MC pH 7.1), SLS (MC pH 7.1). **Loc. 47a** Curieuse: On dry leaves attached to palm *Phoenicophorium borsigianum*, SLS (MC pH 4.5), SLS (MC pH 6). **Loc. 48** Curieuse: On dead spathe fixed to living palm *Cocos nucifera*, SLS (MC pH 6.2), on bark of living tree *Thespesia populnea,* SLS (MC pH 7,1).

Arcyria cf *cinerea* (1 MC, 1 loc, 1 ps)

Loc. 35 La Digue: On stems of living climber liana *Epipremnum pinnatum*, AM3901 (MC 115), TK2421. This specimen obtained in MC is very close to *A. cinerea*, with yellow stipitate sporocarps, scattered and crowded, total height 0.98 mm, sporocyst 0.78 mm height and 0.45 mm in diameter, stalk 0.2 mm long. Capillitium also yellow, warty, smooth near the cup, but this specimen can be distinguished by its larger spores 11.1– 12.5 μm, in case of *A. cinerea* their size is 8–9 μm.

***Arcyria denudata* (L.) Wettst. (34 FC, 2 MC, 19 loc, 8 ps)**

Loc. 2 Mahé: On wood of rotten log of *Cinnamomum verum*, AM3052, TK2803 (3FC). On wood of rotten mossy log of *Swietenia macrophylla*, AM3042, TK2790 (2FC), AM3051, TK2801 (2FC). **Loc. 10** Mahé: On wood of rotten mossy log of *Tabebuia pallida*, AM3151, TK3021 (2FC). **Loc. 12** Praslin: On bark of living tree *Casuarina equisetifolia*, SLS 32217 (MC pH 5.4). **Loc. 16** Praslin: On wood of rotten branch of *Calophyllum inophyllum*, AM2725, TK2059 (2FC). **Loc. 24** Praslin: On wood and mossy bark of rotten log of *Calophyllum inophyllum*, AM2774, TK2189. **Loc.27a** La Digue: On dead wood of *Terminalia catappa*, AM2890, TK2423. **Loc.27b** La Digue: On wood of large wet branch of *Cinnamomum verum*, AM3171, TK2632 (3FC). **Loc.29** La Digue: On dead spathe fixed to living palm *Cocos nucifera*, SLS 32502 (MC pH 4.7). **Loc. 37a** La Digue: On wood of large branch of *Calophyllum inophyllum*, AM3199, TK2742 (2FC). **Loc. 37c** La Digue: On wood and bark of rotten branch of *Calophyllum inophyllum*, AM3181, TK2700. **Loc. 37g** La Digue: On dead wood of *Calophyllum inophyllum*, AM3197, TK2734. **Loc. 37k** La Digue: On dead wood of *Calophyllum inophyllum*, AM3195, TK2669 (2FC). On dead wood of *Cinnamomum verum*, AM3193, TK2667 (2FC). **Loc. 37p** La Digue: On bark of very rotten log of *Cinnamomum verum*, AM2856, TK2370. On wood of rotten log of *Falcataria moluccana*, AM2995, TK2579. **Loc. 38a** La Digue: On wood and bark of very rotten log of *Cinnamomum verum*, AM2909, TK2446. **Loc. 39a** La Digue: On wood of fallen branch of *Terminalia catappa*, AM3212, TK2746. **Loc. 40c** La Digue: On wood under bark of rotten log of *Calophyllum inophyllum*, AM2918, TK2460 (3FC). **Loc. 41b** La Digue: On wood of large cut log of *Calophyllum inophyllum*, AM2970, TK2540. **Loc. 45a** La Digue: On wood of rotten log of *Cinnamomum verum*, AM3156, TK2587 (2FC).

****Arcyria helvetica* (Meyl.) H. Neubert, Nowotny & K. Baumann (1 MC, 1 loc, 1 ps)**

Loc. 17b Praslin: On bark of large stump of *Calophyllum inophyllum*, SLS 324995 (MC pH 6.1).

***Arcyria incarnata* (Pers. ex J.F. Gmel.) Pers. (1 MC, 1 loc, 1 ps)**

Loc. 45b La Digue: On bark of living tree *Casuarina equisetifolia*, SLS 32446 (MC pH 4.9).

***Arcyria insignis* Kalchbr. & Cooke (3 FC, 1 MC, 4 loc, 3 ps)**

Loc. 23 Praslin: On rotten piece of wood of *Calophyllum inophyllum*, AM2768, TK2182. **Loc.29** La Digue: On dead spathe fixed to living palm *Cocos nucifera*, SLS 32477 (MC pH 4.7). **Loc. 39c** La Digue: On wood of rotten branch of *Terminalia catappa*, AM2977, TK2546. **Loc. 40d** La Digue: On wood of dead log of *Calophyllum inophyllum*, AM2941, TK2499.

****Arcyria marginoundulata* Nann.-Bremek. & Y. Yamam. (1 MC, 1 loc, 1 ps)**

Loc. 37d La Digue: On bark of living tree *Cinnamomum verum*, SLS 32354 (MC pH 5.3).

****Arcyria obvelata* (Oeder) Onsberg (1 FC, 1 loc, 1 ps)**

Loc. 42c La Digue: On wood and bark of rotten branch of *Terminalia catappa*, AM2961, TK2526.

****Arcyria pomiformis* (Leers) Rostaf. (2 MC, 2 loc, 1 ps)**

Loc. 12 Praslin: On bark of living tree *Casuarina equisetifolia*, SLS32218 (MC pH 5.4). **Loc. 45b** La Digue: On bark of living tree *Casuarina equisetifolia*, SLS 32445 (MC pH 4.9).

******Badhamia macrocarpa* **(Ces.) Rostaf. (2 FC, 2 loc, 2 ps)**

Loc. 42c La Digue: On dead wood and bark of *Calophyllum inophyllum*, AM2957, TK2522. **Loc. 43** La Digue: On moss on bark of large standing dead tree *Thespesia populnea*, AM2934, TK2484.

***Badhamia* sp. (2 FC, 1 loc, 1 ps, Fig. 6A&B)**

Loc. 2 Mahé: On fallen leaf of palm *Nephrosperma vanhoutteanum*, AM3047, TK2795, MM47933 (2FC).

This stalked species has umbilicate and yellow sporocarps. The slender stalk is not furrowed and is 0.93 mm long, black at the base then orange-yellow to orange-red at the top. The peridium is yellow with white lime. Opened specimens show orange-red at the base and bright yellow nodes stretched from the stalk to the peridium. Under the microscope, the spores are 8– 9 µm, smooth, clear. The capillitium consists of yellow granular nodes 225 µm long x 9 µm thick, stretched from stalk to peridium. Hypothallus black. Altogether, these features distinguish this specimen from all known species of *Badhamia* or *Physarum*.

***Ceratiomyxa fruticulosa* (O.F. Müll.) T. Macbr. (7 FC, 7 loc, 4 ps)**

Loc. 15 Praslin: On wood of rotten log of *Cinnamomum verum*. AM2742, TK2077. **Loc. 23** Praslin: On wood of dead log of *Calophyllum inophyllum*, AM2767, TK2181. **Loc. 25a** Praslin: On wood of rotten log of *Terminalia catappa*, AM2788, TK2208. **Loc. 31a** La Digue: On dead wood of *Terminalia catappa*, AM2848, TK2359. **Loc. 37o** La Digue: On very rotten wood of *Falcataria moluccana*, AM2854, TK2367. **Loc. 39b** La Digue: On very rotten wood of *Terminalia catappa*. **Loc. 43** La Digue: On wood and bark of rotten log of *Calophyllum inophyllum*, AM2933, TK2483.

******Ceratiomyxa fruticulosa* **var.** ***arbuscula* (Berk. & Broome) Nann.-Bremek. (4 FC, 3 loc, 3 ps)**

Loc. 7 Mahé: On dead palm stem of *Phoenicophorium borsigianum*, AM3098, TK2913. **Loc. 37e** La Digue: On wood of rotten branch of *Falcataria moluccana*, AM2990-2, TK2574. **Loc. 42c** La Digue: On dead wood and bark of large branch of *Terminalia catappa*, AM2951, TK2514, AM2963, TK2528.

***Clastoderma debaryanum* A. Blytt (4 MC, 2 loc, 2 ps)**

Loc.29 La Digue: On dead spathe fixed to living palm *Cocos nucifera*, SLS 32210 (MC pH 4.7), SLS (MC pH 4.5), SLS (MC pH 4.7). **Loc. 31c** La Digue: On bark of living tree *Hernandia nymphaeifolia*, SLS 32488 (MC pH 6.9).

***Collaria arcyrionema* (Rostaf.) Nann.-Bremek. ex Lado (7 FC, 14 MC, 11 loc, 8 ps)**

Loc. 6 Mahé: On dead leaves attached to a living succulent *Agave angustifolia*, SLS 32347 (MC pH 6.5). **Loc. 8** Mahé: On dry stems of living liana *Ipomoea cairica*, SLS 32378 (MC pH 6.7), SLS (MC pH 6.9), SLS 32395 (MC pH 6.8), SLS (MC pH 7.1), SLS 32394 (MC pH 7.1). **Loc. 11** Praslin: On bark of dead standing tree *Calophyllum inophyllum,* AM2833 (MC 20). **Loc. 22b** Praslin: On dry stems of living climber liana *Epipremnum pinnatum*, AM 2805 (MC 14). **Loc. 25b** Praslin: On wood of rotten log of *Terminalia catappa*, AM2789,2, TK2214 (3FC). **Loc. 37f** La Digue: On wood of large cut trunk of *Falcataria moluccana*, AM2859, TK2374 (2FC). On dead bark of liv-

ing epiphytic liana *Syngonium podophyllum*, SLS (MC pH 5.6), SLS (MC pH 5.3), SLS (MC pH 5.8). **Loc. 39a** La Digue: On wood of rotten large log of *Terminalia catappa*, AM3207, TK2748. **Loc. 40c** La Digue: On dead wood and bark of *Cinnamomum verum*, AM2923, TK2469. **Loc. 42a** La Digue: On dead spathe fixed to living palm *Cocos nucifera*, SLS (MC pH 5.9). **Loc. 48** Curieuse: On bark of living tree *Thespesia populnea*, SLS (MC pH 6.1), SLS (MC pH 7.4).

******Comatricha elegans* **var.** ***microspora*** **H. Marx, in Neubert, Nowotny & Baumann (1 FC, 1 loc, 1 ps)**

Loc. 24 Praslin: On wood of rotten log of *Calophyllum inophyllum*, AM2786, TK2205.

Comatricha **sp. (1 MC, 1 loc, 1 ps)**

Loc. 24 Praslin: On pods of a broken branch attached to living tree *Falcataria moluccana*, SLS (MC pH 5).

******Comatricha elegans* **(Racib.) G. Lister (2 MC, 2 loc, 2 ps)**

Loc. 17a Praslin: On dry leaves attached to young of perennial herb *Musa* sp., SLS 32492 (MC pH 7). **Loc. 37c** La Digue: On bark of stump of *Chrysobalanus icaco*, SLS 32459 (MC pH 4.83).

******Comatricha laxa* **Rostaf. (2 MC, 2 loc, 2 ps)**

Loc. 18 Praslin: On fallen palm leaves and spathe of *Lodoicea maldivica*, SLS (MC pH 5.6). **Loc. 37c** La Digue: On bark of living tree *Cinnamomum verum*, SLS 32440 (MC pH 6.7).

******Comatricha pulchella* **(C. Bab.) (7 FC, 4 MC, 4 loc, 5 ps)**

Loc. 8 Mahé: On dry grass *Dianella ensifolia*, SLS (MC). On dry stems of living liana *Ipomoea cairica*, SLS (MC pH 7.1). **Loc. 10** Mahé: On fallen leaves of tree *Dillenia ferruginea*, AM3137, TK2990 (3FC). On fallen palm leaf of *Pandanus balfourii*, AM3138, TK2993 (2FC). **Loc. 37c** La Digue: On dry leaves attachet to tree *Cinnamomum verum*, SLS 32454 (MC pH 6), SLS 32458 (MC pH 4.6). **Loc. 42c** La Digue,: On fallen leaves of *Calophyllum inophyllum*. AM2959, TK2523 (2FC).

******Comatricha tenerrima* **(M.A. Curtis) G. Lister (1 MC, 1 loc, 1 ps)**

Loc. 48 Curieuse: On bark of living tree *Thespesia populnea*, SLS 32207 (MC pH 7.2).

******Craterium minutum* **var.** ***brunneum*** **(Nann.-Bremek.) L.G. Krieglst. (2 FC, 2 loc, 1 ps)**

Loc. 34b La Digue: On fallen leaves of *Terminalia catappa*, AM2898, TK2433. **Loc. 35** La Digue: On wood and bark of rotten log of *Terminalia catappa*, AM2884, TK2414.

*******Craterium concinnum* **Rex (1 FC, 1 loc, 1 ps)**

Loc. 42c La Digue: On fallen leaves of *Terminalia catappa*, AM2956, TK2520.

***Cribraria cancellata* (Batsch) Nann.-Bremek. (5 FC, 2 loc, 3 ps)**

Loc. 37-l La Digue: On dead wood and bark of *Calophyllum inophyllum*, AM3185, TK2674 (2FC). On wood and bark of large rotten log of *Cinnamomum verum*, AM3183, TK2673. **Loc. 39a** La Digue: On wood of rotten large log *Terminalia catappa*, AM3203, TK2749 (2FC).

***Cribraria intricata* var. *dictydioides* (Cooke & Balf.f.) Lister (13 FC, 8 loc, 4 ps)**

Loc. 5 Mahé: On wood inside the hole of half-dead tree *Cinnamomum verum*, AM3074, TK2838. **Loc. 8** Mahé: On dead wood of *Calophyllum inophyllum*, AM3119, TK2942. **Loc. 31a** La Digue: On dead wood of *Terminalia catappa*, AM2850, TK2360 (2FC). **Loc. 37b** La Digue: On dead wood of *Calophyllum inophyllum*, AM3179, TK2680 (2FC). **Loc. 37-l** La Digue: On wood of rotten large log of *Calophyllum inophyllum*, AM3177, TK2676. **Loc. 37i** La Digue: On wood of very rotten log of *Falcataria moluccana*, AM2989, TK2567 (2FC). **Loc. 39c** La Digue: On wood of burned branch of *Terminalia catappa*, AM2976, TK2545. **Loc. 45a** La Digue: On wood of rotten log of *Calophyllum inophyllum*, AM3157, TK2590 (2FC). On wood of rotten log *Cinnamomum verum*, AM3157, TK2589.

***Cribraria pachydictyon* Nann.-Bremek. (2 FC, 1 loc, 1 ps)**

Loc. 10 Mahé: On wood of rotten log, AM3134, TK2986 (2FC).

This species is distinguished from *Cribraria microcarpa* (Schrad.) Pers by spores that are 7.5– 8.5 µm in diameter and densely and finely ornamented, the thick orange-brown nodes, rather rigid threads and rare free ends, small membranous cup at the base, total height 1.85 mm, stipe without granules 1.6 mm long, and a sporocyst 0.25 mm in diameter.

***Cribraria aurantiaca* Schrad. (2 FC, 1 loc, 1 ps)**

Loc. 37f La Digue: On wood of large cut trunk of *Falcataria moluccana*, AM2860, TK2376 (2FC).

***Cribraria confusa* Nann.-Bremek. & Y. Yamam. (2 MC, 2 loc, 2 ps)**

Loc. 18 Praslin: On bark of living tree *Erythroxylum sechellarum*, SLS 32414 (MC pH 4.2). **Loc. 37c** La Digue: On bark of stump of *Chrysobalanus icaco*, SLS 32348 (MC pH 4.6).

***Cribraria intricata* Schrad. (5 FC, 2 loc, 3 ps)**

Loc. 2 Mahé: On dead wood and mossy bark of *Cinnamomum verum*, AM3057, TK2810, on very rotten wood *Swietenia macrophylla*, AM3048, TK2797 (2FC). **Loc. 42c** La Digue: On wood and bark of rotten branch of *Calophyllum inophyllum*, AM2963, TK2529 (2FC).

***Cribraria lepida* Meyl. (6 FC, 3 loc, 3 ps)**

Loc. 13 Praslin: On fungi growing on old log of *Terminalia catappa*, AM2711, TK2050. **Loc. 43** La Digue: On wood and bark of large standing dead tree *Thespesia populnea*, AM2936, TK2487 (3FC). **Loc. 45a** La Digue: On wood and bark of large rotten log of *Calophyllum inophyllum*, AM3158, TK2592 (2FC).

***Cribraria microcarpa* (Schrad.) Pers. (2 FC, 5 MC, 7 loc, 5 ps)**

Loc. 2 Mahé: On shell of fallen fruit of *Deckenia nobilis*, SLS 32384 (MC pH 5.3). **Loc. 7** Mahé: On bark of living tree *Tabebuia pallida*, SLS 32407 (MC pH 6.2). **Loc. 12** Praslin: On bark of living tree *Calophyllum inophyllum*, SLS 32403 (MC pH 5.7). **Loc. 16** Praslin: On wood of fallen branch of *Calophyllum inophyllum*, AM2726, TK2060. **Loc. 18** Praslin: On fallen leaves of *Dillenia ferruginea*, SLS 32486 (MC pH 6.3). **Loc. 36** La Digue: On wood and bark of fallen branch of *Terminalia catappa*, AM3217, TK2774. **Loc. 37c** La Digue: On bark of living tree *Calophyllum inophyllum*, SLS 32336 (MC pH 6.6).

****Cribraria tenella* Schrad. (1 FC, 1 loc, 1 ps)**

Loc. 40c La Digue: On burned wood of *Cinnamomum verum*, AM2925, TK2471.

***Cribraria violacea* Rex (18 MC, 9 loc, 10 ps)**

Loc. 3 Mahé: On bark of living tree *Tabebuia pallida*, SLS 32424 (MC pH 6.2).

Loc. 8 Mahé: On dry stems of living liana *Ipomoea cairica*, SLS (MC pH 7.1). **Loc. 14a** Praslin: On bark of living tree *Artocarpus heterophyllus*, SLS 32226 (MC pH 7.33). **Loc. 14b** On bark of living tree *Syzygium jambos*, SLS 32427 (MC pH 6.1). **Loc. 20a** Praslin: On bark of living tree *Cordia subcordata*, SLS 32208 (MC pH 7.2). **Loc. 20b** On dry stems of living herbaceous creeper *Passiflora foetida*, SLS 32205 (MC pH 7.8). **Loc. 26** La Digue: On bark of living tree *Terminalia catappa*, SLS 32408 (MC pH 6.6), SLS 32420 (MC pH 6.6). **Loc. 37c** La Digue: On bark of living tree *Calophyllum inophyllum*, SLS (MC pH 7.4). **Loc. 45d** La Digue: On bark of living tree *Cordia subcordata*, SLS 32402 (MC pH 5.6), SLS 32325 (MC pH 6.6), SLS (MC pH 6.6), SLS (MC pH 6.6). **Loc. 47b** Curieuse: On bark of living mangrove tree *Rhizophora mucronata*, SLS (MC pH 7.1). **Loc. 48** Curieuse: On bark of living tree *Thespesia populnea*, SLS 32444 (MC pH 7.2), SLS 32206 (MC pH 7.1), SLS (MC pH 7.2), SLS 32404 (MC pH 7.4).

***Diachea leucopodia* (Bull.) Rostaf. (4 FC, 1 MC, 2 loc, 3 ps)**

Loc. 6 Mahé: On fallen leaves of *Tabebuia pallida*, AM3088, TK2882 (3FC). On fallen leaves of *Artocarpus altilis*, AM3085, TK2878. **Loc. 37c** La Digue: On dry leaves attachet to tree *Cinnamomum verum*, SLS 32339 (MC pH 4.6).

****Dictydiaethalium dictyosporum* (Schumach.) Rostaf. (4 FC, 1 loc, 1 ps, Fig. 5B)**

Loc. 39c La Digue: On dead wood and bark of large branch of *Terminalia catappa*, AM2978, TK2547 (4FC), MM47558.

***Diderma chondrioderma* (de Bary & Rostaf.) Kuntze (11 FC, 10 MC, 13 loc, 8 ps)**

Loc. 6 Mahé: On fallen leaves of *Artocarpus altilis*, AM3077, TK2864 (2FC). **Loc. 7** Mahé: On moss on bark of living tree *Tabebuia pallida*, AM3106, TK2923 (2FC). **Loc. 11** Praslin: On dead branch fixed to living tree *Calophyllum inophyllum*, SLS 32209 (MC pH 4.8). **Loc. 12** Praslin: On bark of living tree *Calophyllum inophyllum*, SLS 32221 (MC pH 6.4). On bark of living tree *Casuarina equisetifolia*, SLS 32451 (MC pH 5.7), SLS 32224 (MC pH 5.4). **Loc. 23** Praslin: On moss on bark of living tree *Calophyllum inophyllum*, AM2773, TK2188. **Loc.29** La Digue: On bark of living tree *Calophyllum inophyllum*, SLS 32429 (MC pH 5.7). **Loc. 33** La Digue: On moss covering living palm stem of *Cocos nucifera*, AM2932, TK2481. **Loc. 37c** La Digue: On bark of stump of *Chrysobalanus icaco*,

SLS 32426 (MC pH 5.7). On bark of living tree *Cinnamomum verum*, SLS32412 (MC pH 6.7). **Loc. 38b** La Digue: On bark of living tree *Artocarpus altilis*, SLS 32412 (MC pH 5.7). **Loc. 42c** La Digue: On moss on bark of living tree *Calophyllum inophyllum*, AM2954, TK2517 (2FC). **Loc. 43** La Digue: On moss on bark of large standing dead tree *Thespesia populnea*, AM2934, TK2485 (3FC). **Loc. 48** Curieuse: On bark of living tree *Calophyllum inophyllum*, SLS 32212 (MC pH 5.9). On bark of living mangrove tree *Rhizophora mucronata*, AM2834 (MC 21).

FIGS 5. A. *Didymium columellacavum* (AM2879, TK2407) sporocarps on fallen leaves of *Mangifera indica* (bar 0.25 mm). **B.** *Dictydiaethalium dictyosporum* (AM2978, TK2547, MM47558) aethalium on dead wood and bark of large branch of *Terminalia catappa* (bar 0.8 mm). **C.** *Stemonaria longa* (AM2939, TK2496) group of sporangia on wood and bark of a large standing dead tree *Thespesia populnea* (bar = 0.2 mm). **D.** *Stemonaria longa* (AM2939, TK2496) capillitium and spores of *Stemonaria longa* (bar = 20 µm). **E.** *Physarum plicatum* (AM3131, TK2979) on a fallen leaf of *Cinnamomum verum* (bar = 1 mm). **F.** *Diderma rimosum* (AM2863, TK2386) *in situ* on a fallen leaf of *Calophyllum inophyllum* (bar = 0.5 mm).

Diderma cf *chondrioderma* (1 FC, 1 loc, 1 ps)

Loc. 7 Mahé: On mosses covering a living palm stem of *Phoenicophorium borsigianum*. AM3097, TK2912.
This specimen has white pulvinate and concave plasmodiocarps up to 11 x 2 mm. It could be close to *Diderma effusum* but this specimen has larger warted spores 14 – 15.9 (-17.5) µm and a hyaline hairy capillitium attached to granular gray peridium by ramifications with 3 or 4 ends.

Diderma effusum (Schwein.) Morgan (16 FC, 19 MC, 21 loc, 13 ps)

Loc. 3 Mahé: On fallen leaves of *Dillenia suffruticosa*, AM3060, TK2816 (2FC). **Loc. 4** Mahé: On fallen leaves, AM3065, TK2824 (2FC). **Loc. 5** Mahé: On roots of epiphytic *Nephrolepis biserrata* on palm *Elaeis guineensis*,

SLS (MC pH 6.4). On bark of living tree *Tabebuia pallida*, SLS 32369 (MC pH 6.4). **Loc. 7** Mahé: On fallen leaves of *Tabebuia pallida*, AM3103, TK2918 (2FC). **Loc. 8** Mahé: On fallen leaves of *Calophyllum inophyllum*, AM3115, TK2937. **Loc. 11** Praslin: On dry pods fixed to living tree *Alstonia macrophylla*, SLS (MC pH 6). On dead leaves and stem of palm *Phoenicophorium borsigianum*, SLS 32401 (MC pH 5.3). **Loc. 15** Praslin: On fallen leaf of *Calophyllum inophyllum*, AM2732, TK2068. **Loc. 18** Praslin: On fallen old dry inflorescences of palm *Lodoicea maldivica*, SLS 32763 (MC pH 5.5). On fallen palm leaves and spathe of palm *Lodoicea maldivica*, SLS (MC pH 5.1). **Loc. 19** Praslin: On dead spathe fixed to living palm *Cocos nucifera*, AM2757, TK2132. **Loc. 20a** Praslin: On bark of living tree *Cordia subcordata*, SLS (MC pH 5.8). **Loc. 22c** Praslin: On fallen dry pods of *Adenanthera pavonina*, SLS (MC pH 5.7); AM 2806 (MC 15). **Loc.27a** La Digue: On fallen leaves of *Calophyllum inophyllum*, AM2896, TK2429. **Loc. 31a** La Digue: On bark of dead palm *Cocos nucifera*, AM2847, TK2358. **Loc. 34b** La Digue: On fallen leaves of *Terminalia catappa*, AM2899, TK2434. **Loc. 35** La Digue: On fallen leaves accumulated between roots of living tree *Terminalia catappa*, AM2887, TK2416. **Loc. 37h** La Digue: On fallen leaves of *Cinnamomum verum*, AM2864, TK2389, AM2868, TK2392. **Loc. 38b** La Digue: On dead spathe fixed to living palm *Cocos nucifera*, SLS 32169 (MC pH 6.4), SLS 32170 (MC pH 6.2). **Loc. 39b** La Digue: On fallen leaves and bark of *Calophyllum inophyllum*, AM2985, TK2557. **Loc. 45b** La Digue: On bark of living tree *Casuarina equisetifolia*, SLS 32485 (MC pH 6.7), SLS 32489 (MC pH 7). **Loc. 45d** La Digue: On bark of living tree *Cordia subcordata*, SLS 32344 (MC pH 6.6), SLS 32352 (MC pH 6.7). **Loc. 48** Curieuse: On dead spathe fixed to living palm *Cocos nucifera*, SLS 32480 (MC pH 6.3), SLS (MC pH 6.2), SLS (MC pH 6.2). On bark of living tree *Calophyllum inophyllum* AM2830 (MC 17).

***Diderma hemisphaericum* (Bull.) (6 MC, 5 loc, 5 ps)**

Loc. 6 Mahé: On fallen leaves of climber liana *Epipremnum pinnatum*, SLS (MC pH 5.8). **Loc. 37c** La Digue: On dry leaves attachet to tree *Cinnamomum verum*, SLS (MC pH 6). **Loc. 38b** La Digue: On bark of living tree *Artocarpus altilis*, SLS 32213 (MC pH 5.71), SLS 32195 (MC pH 5.6). **Loc. 39a** La Digue: On dead stems of living epiphytic liana *Syngonium podophyllum*, SLS 32359 (MC pH 8.5). **Loc. 48** Curieuse: On fallen dry inflorescences of palm *Cocos nucifera*, SLS (MC pH 5).

****Diderma rimosum* Eliasson & Nann.-Bremek. (5 FC, 2 loc, 2 ps, Fig. 5F)**

Loc. 3 Mahé: On wood of fallen little branch, AM3063, TK2821. **Loc. 37h** La Digue: On fallen leaves of *Calophyllum inophyllum*, AM2863, TK2386 (4FC).

****Diderma saundersii* (Berk. & Broome ex Massee) E. Sheld. (11 FC, 4 loc, 3 ps)**

Loc. 5 Mahé: On moss on bark half-dead tree *Cinnamomum verum*, AM3075, TK2839 (5FC). **Loc. 7** Mahé: inside of fallen palm leaf, AM3108, TK2927 (2CF), on thin dry grass stem, AM3109, TK2929. **Loc. 39a** La Digue: On surface of large fallen stem of *Cocos nucifera*, AM3208, TK2751. **Loc. 39b** La Digue: On threads of rotten coconut fruit of *Cocos nucifera*, AM2987, TK2562.

***Diderma* cf *saundersii* (1 MC, 1 loc, 1 ps)**

Loc. 40b La Digue: On bark of dead tree *Calophyllum inophyllum*, AM3903 (MC 117), TK2458.

Distinguishing features of this specimen are the spores 10-12 μm (x1000) instead of 6-9 μm as it is usual for *Diderma saundersii*, also they have dense fine warted ornamentation with darker groups of warts, the capillitium is thin hyaline with some hyaline warts, brownish orange inner layer.

***Didymium* spp. (4 MC, 4 loc, 3 ps)**

Loc. 6 Mahé: On fallen leaves of climber liana *Epipremnum pinnatum*, SLS (MC pH 5.8). **Loc. 17a** Praslin: On

dry leaves attached to young perennial herb *Musa* sp., SLS 32473, (MC pH 7). **Loc. 22c** Praslin: On fallen pods of *Acacia mangium*, SLS 32185, (MC pH 6.1). **Loc. 38b** La Digue: On dry leaves attached to perennial herb *Musa* sp., SLS (MC pH 7.4).

***Didymium anellus* Morgan (3 MC, 3 loc, 3 ps)**

Loc. 11 Praslin: On air stems of living semi-parasitic creeper *Cassytha filiformis* over-growing on living tree *Prosopis juliflora*, SLS 32467 (MC pH 5.9). **Loc. 39a** La Digue: On dead stem caudex and dead leaves of *Alocasia macrorrhiza*, SLS 32381 (MC pH 6.6). **Loc. 48** Curieuse: On fallen dry inflorescences of palm *Cocos nucifera*, SLS (MC pH 5.6).

****Didymium bahiense* Gottsb. (1 FC, 2 MC, 3 loc, 3 ps)**

Loc. 24 Praslin: On pods of broken branch attached to living tree *Falcataria moluccana*, SLS 32497 (MC pH 6.2). **Loc. 42c** La Digue: On fallen leaf of *Terminalia catappa*, AM2943, TK2503. **Loc. 48** Curieuse: On fallen dry inflorescences of palm *Cocos nucifera*, SLS 32356 (MC pH 5).

****Didymium clavus* (Alb. & Schwein.) Rabenh. (1 FC, 1 loc, 1 ps)**

Loc. 10 Mahé: On fallen leaves of *Cinnamomum verum*, AM3135, TK2988.

****Didymium columellacavum* Hochg., Gottsb. & Nann.-Bremek. (27 FC, 9 loc, 6 ps, Fig. 5A)**

Loc. 3 Mahé: On branch of living palm, AM3061, TK2818. **Loc. 4** Mahé: On stem surface of living palm *Nephrosperma vanhoutteanum*, AM3070, TK2834 (2FC). **Loc. 6** Mahé: On fallen leaves of *Cinnamomum verum*, AM3083, TK2874 (2FC). **Loc. 7** Mahé: On fallen leaves, AM3107, TK2925 (2FC). **Loc. 8** Mahé: On fallen leaves of *Artocarpus altilis*, AM3117, TK2940 (2FC). **Loc. 10** Mahé: On fallen palm leaf of *Pandanus balfourii*, AM3149, TK3018 (2FC). On fallen palm leaf, AM3146, TK3007 (4FC), AM3147, TK3011 (4FC), AM3148, TK3015 (3FC). **Loc. 15** Praslin: On wood and bark of rotten branch of *Cinnamomum verum*, AM2743, TK2078. **Loc. 30** La Digue: On fallen leaves of *Mangifera indica*, AM2879, TK2407 (2FC) det. MM. **Loc. 42c** La Digue: On fallen green leaves of *Calophyllum inophyllum*, AM2966, TK2532 (2FC).

****Didymium iridis* (Ditmar) Fr. (16 MC, 9 loc, 10 ps)**

Loc. 11 Praslin: On large leaves of *Dillenia ferruginea*, SLS 32478 (MC pH 5.5), on dry pods fixed to living tree *Leucaena leucocephala*, SLS (MC pH 6.4). On leaves of living climbing epiphytic orchid *Vanilla planifolia*, SLS 32171 (MC pH 6.2). **Loc. 17a** Praslin: On dry leaves attached to young perennial herb *Musa* sp., SLS 32474 (MC pH 6.9). **Loc. 18** Praslin: On dry leaves attached to palm *Lodoicea maldivica*, SLS (MC pH 6.6), SLS 32493 (MC pH 6.5). **Loc. 19** Praslin: On dead spathe and dry leaves fixed to living palm *Pandanus balfourii*, SLS 32481 (MC pH 6.4). **Loc. 37c** La Digue: On dry leaves attachet to tree *Cinnamomum verum*, SLS 32462 (MC pH 6). **Loc. 38b** La Digue: On fallen large leaf of *Calophyllum inophyllum*, SLS (MC pH 7.9). **Loc. 39a** La Digue: On dead leaves attached to living perennial herb *Musa* sp., SLS (MC pH 6.9); SLS (MC pH 7.2), SLS (MC pH 7.5). **Loc. 45c** La Digue: On dry stems of living liana *Lantana camara*, SLS 32464 (MC pH 6.2). **Loc. 50** Félicité: On fallen leaves of *Cocos nucifera*, SLS 32318 (MC pH 6.6), SLS 32324 (MC pH 6.5), SLS (MC pH 6.9).

***Didymium minus* (Lister) Morgan (2 FC, 1 MC, 1 loc, 2 ps)**

Loc. 8 Mahé: On dry grass *Dianella ensifolia*, SLS 32328 (MC pH 6). On fallen leaves of *Dillenia ferruginea*, AM3116, TK2938 (2FC).

Didymium nigripes **(Link) Fr. (7 FC, 1 MC, 3 loc, 4 ps)**

Loc. 7 Mahé: On fallen leaves of *Artocarpus altilis*, AM3113, TK2932 (2FC). **Loc. 10** Mahé: On fallen leaves of *Dillenia ferruginea*, AM3126, TK2972 (2FC), AM3136, TK2989. On fallen palm leaf of *Pandanus balfourii*, AM3144, TK3000 (2FC). **Loc. 11** Praslin: On dry leaves and living stems of climbing epiphytic orchid *Vanilla planifolia* on living support tree, SLS 32154 (MC pH 7).

Didymium ochroideum **G. Lister (1 FC, 1 MC, 2 loc, 2 ps)**

Loc. 6 Mahé: On dry leaves attached to living *Cordyline fruticosa*, SLS 32392 (MC pH 8.6). **Loc. 34b** La Digue: On surface of large fallen stem of *Alocasia macrorrhizos*, AM2903, TK2438.

****Didymium ovoideum*** **Nann.-Bremek. (3 FC, 1 loc, 1 ps)**

Loc. 4 Mahé: On fallen leaves of *Calophyllum inophyllum*, AM3068, TK2828 (3FC).

Didymium squamulosum **(Alb. & Schwein.) Fr. & Palmquist (3 FC, 12 MC, 8 loc, 12 ps)**

Loc. 3 Mahé: On fallen leaves of *Dillenia suffruticosa*, AM3059, TK2814 (2FC). **Loc. 5** Mahé: On stems of living liana *Ipomoea cairica*, SLS (MC pH 6.8), on roots of epiphytic *Nephrolepis biserrata* on *Elaeis guineensis*, SLS (MC pH 6.4). On stems of living liana *Thunbergia grandiflora*, SLS (MC pH 6.4). **Loc. 6** Mahé: On dead leaves attached to a living succulent *Agave angustifolia*, SLS 32320 (MC pH 7.2), on dead leaves attached to living *Cordyline fruticosa*, SLS (MC pH 7.2). On fallen leaves of *Terminalia catappa*, AM3078, TK2866. **Loc. 8** Mahé: On dry grass *Dianella ensifolia*, SLS (MC pH 6.4). **Loc. 11** Praslin: On dry pods fixed to living tree *Leucaena leucocephala*, SLS (MC pH 6.5). **Loc. 20b** Praslin: On dry stems of living epiphytic liana *Syngonium podophyllum*, SLS (MC pH 6.9). **Loc. 38b** La Digue: On fallen large leaf of *Calophyllum inophyllum*, SLS 32166 (MC pH 7.7), SLS (MC pH 8.2). **Loc. 48** Curieuse: On fallen old dry inflorescences of palm *Cocos nucifera*, SLS (MC pH 5), SLS (MC pH 5).

Didymium verrucosporum **A.L. Welden (1 FC, 1 loc, 1 ps)**

Loc. 42c La Digue: On fallen leaves of *Calophyllum inophyllum*, AM2959, TK2524.

****Echinostelium minutum*** **de Bary (10 MC, 10 loc, 9 ps)**

Loc. 7 Mahé: On dry leaves and old inflorescences attached to living palm *Roscheria melanochaetes*. SLS (MC pH). **Loc. 18** Praslin: On bark of living tree *Erythroxylum sechellarum*, SLS 32421 (MC pH 4.2). **Loc. 26** La Digue: On bark of living tree *Terminalia catappa*, SLS 32406 (MC pH 6.6). **Loc. 37d** La Digue: On bark of living tree *Cinnamomum verum*, SLS (MC pH 5). On bark of living tree *Falcataria mollucana*, SLS 32422 (MC pH 6.9). **Loc. 38b** La Digue: On bark of living tree *Artocarpus altilis*, SLS 32214 (MC pH 5.7). **Loc. 42a** La Digue: On bark of living tree *Calophyllum inophyllum*, SLS 32373 (MC pH 5.5). **Loc. 45b** La Digue: On bark of living tree *Casuarina equisetifolia*, SLS 32430 (MC pH 4.9). **Loc. 46** Curieuse: On bark of living tree *Calophyllum inophyllum*, SLS 32413 (MC pH 5.5). **Loc. 47a** Curieuse: On dry leaves attachet to palm *Phoenicophorium borsigianum*, SLS 32346 (MC pH 5.6).

***Echinostelium paucifilum* K.D. Whitney (2 MC, 2 loc, 2 ps)**

Loc. 21 Praslin: On bark of living tree *Tabebuia pallida*, SLS 32437 (MC pH 5.7). **Loc. 48** Curieuse: On bark of living tree *Calophyllum inophyllum*, SLS 32439 (MC pH 5.9).

***Fuligo septica* var. *candida* (Pers.) R.E. Fr. (5 FC, 3 loc, 3 ps)**

Loc. 6 Mahé: On wood of rotten log of *Cinnamomum verum*, AM3082, TK2872 (2FC). **Loc. 18** Praslin: On fallen palm leaf of *Lodoicea maldivica*, AM2748, TK2103 (2FC). **Loc. 36** La Digue: On wood and bark of large rotten log of *Terminalia catappa*, AM3214, TK2775.

***Fuligo septica* var. *flava* (Pers.) Lázaro Ibiza (4 FC, 4 loc, 3 ps)**

Loc. 12 Praslin: On wood and bark of living tree *Thespesia populnea*, AM2707, TK2028. **Loc. 31a** La Digue: On large cat log of *Terminalia catappa*, AM2845, TK2355. **Loc. 31b** La Digue: On wood of burnt log of *Terminalia catappa*, AM2852, TK2364. **Loc. 40d** La Digue: On wood of burnt stump of *Calophyllum inophyllum*, AM2947, TK2500.

***Hemitrichia calyculata* (Speg.) M.L. Farr (29 FC, 19 loc, 5 ps)**

Loc. 5 Mahé: On dead mossy wood of *Cinnamomum verum*, AM3076, TK2844 (2FC). **Loc. 6** Mahé: On very rotten wood, AM3086, TK2879. **Loc. 10** Mahé: On wood of rotten log, AM3132, TK2983. **Loc. 14b** Praslin: On wood of rotten log of *Calophyllum inophyllum*, AM2724, TK2053. **Loc. 15** Praslin: On rotten wood of *Cinnamomum verum*, AM2738, TK2073 (2FC). **Loc. 22a** Praslin: On wood of rotten log of *Falcataria moluccana*, AM2764, TK2174. **Loc. 24** Praslin: On wood of rotten log of *Calophyllum inophyllum*, AM2784, TK2204. **Loc. 30** La Digue: On wood of fallen branch, AM2882, TK2410. **Loc. 31a** La Digue: On wood of large cut log of *Terminalia catappa*, AM2846, TK2357. **Loc. 35** La Digue: On wood of very rotten log of *Terminalia catappa*, AM2889, TK2418. **Loc. 36** La Digue: On wood of fallen branch of *Terminalia catappa*, AM3221, TK2776. **Loc. 37b** La Digue: On wood and bark of rotten branch of *Calophyllum inophyllum*, AM3181, TK2682, AM3188, TK2683, AM3191, TK2684, AM3196, TK2685. **Loc. 37i** La Digue: On wood of very rotten log of *Falcataria moluccana*, AM2990,1, TK2569. **Loc. 37p** La Digue: On very rotten wood of *Falcataria moluccana*, AM2855, TK2369. **Loc. 38a** La Digue: On wood of very rotten log of *Cinnamomum verum*, AM2905, TK2441. **Loc. 39a** La Digue: On surface of large fallen stem of *Cocos nucifera*, AM3209, TK2754. On dead wood of *Terminalia catappa*, AM3202, TK2752 (2FC). **Loc. 40a** La Digue: On wood of very large rotten log of *Terminalia catappa*, AM2912, TK2450. On dead wood and bark of *Terminalia catappa*, AM2915, TK2453. **Loc. 40c** La Digue: On wood and bark of rotten log of *Calophyllum inophyllum*, AM2921, TK2466 (2FC). **Loc. 42c** La Digue: On rotten wood of *Calophyllum inophyllum*, AM2970, TK2535 (2FC).

***Hemitrichia minor* G. Lister (4 MC, 3 loc, 4 ps)**

Loc. 12 Praslin: On bark of living tree *Calophyllum inophyllum*, SLS 32220 (MC pH 6.4). On bark of living tree *Casuarina equisetifolia*, SLS 32223 (MC pH 5.4). **Loc. 21** Praslin: On bark of living tree *Tabebuia pallida*, SLS 32443 (MC pH 5.7). **Loc. 37c** La Digue: On bark of living tree *Cinnamomum verum*, SLS 32416 (MC pH 6.7).

***Hemitrichia serpula* (Scop.) Rostaf. ex Lister (16 FC, 1 MC, 10 loc, 5 ps)**

Loc. 7 Mahé: On base of fallen palm leaf of *Pandanus balfourii*, AM3104, TK2920. **Loc. 12** Praslin: On dead

spathe fixed to living palm *Cocos nucifera*, AM2708, TK2029. **Loc. 17a** Praslin: On stem surface of living *Phoenicophorium borsigianum*, AM2746, TK2086. **Loc. 19** Praslin: On dead spathe fixed to living palm *Cocos nucifera*, AM2752, TK2124 (4FC). **Loc. 34b** La Digue: On surface of large fallen stem of *Cocos nucifera*, AM2902, TK2437. **Loc. 37c** La Digue: On dry leaves attachet to tree *Cinnamomum verum*, SLS 32400 (MC pH 6). **Loc. 39a** La Digue: On dead spathe and surface of stem of living palm *Cocos nucifera*, AM3211, TK2755 (2FC). **Loc. 42a** La Digue: On wood of very rotten log of *Calophyllum inophyllum*, AM3163, TK2627. **Loc. 45a** La Digue: On wood of rotten log of *Calophyllum inophyllum*, AM3159, TK2594. On dead spathe fixed to living palm *Cocos nucifera*, AM3160, TK2595 (2FC). **Loc. 49** Curieuse: On fallen palm spathe of *Cocos nucifera*, AM2717, TK2239 (2FC).

***Lamproderma scintillans* (Berk. & Broome) Morgan (11 MC, 5 loc, 7 ps)**

Loc. 5 Mahé: On dry stems of living liana *Ipomoea cairica*, SLS (MC). On dry stems of living liana *Thunbergia grandiflora*, SLS (MC pH 6.4). **Loc. 6** Mahé: On dry leaves attached to a living succulent *Agave angustifolia*, SLS (MC). **Loc. 22c** Praslin: On dry stems of living climber liana *Epipremnum pinnatum*, SLS (MC pH 7.4). **Loc. 38b** La Digue: On fallen large leaf of *Calophyllum inophyllum*, SLS 32181 (MC pH 7.7), SLS (MC pH 8.2), SLS 32176 (MC pH 6.3), SLS (MC pH 6.31), SLS (MC pH 6.67). On dry stems of living liana *Ipomoea* sp., SLS 32179 (MC pH 8.5). **Loc. 41a** La Digue: On dry stems of living epiphytic liana *Syngonium podophyllum*, SLS (MC pH 6.2), SLS (MC pH 6.2).

****Licea biforis* Morgan (1 MC, 1 loc, 1 ps)**

Loc. 48 Curieuse: On bark of living tree *Calophyllum inophyllum*, SLS 32417 (MC pH 5.9).

****Licea kleistobolus* G.W. Martin (1 MC, 1 loc, 1 ps)**

Loc. 26 La Digue: On bark of living tree *Terminalia catappa*, SLS 32411 (MC pH 6.6).

****Licea minima* Fr. (1 MC, 1 loc, 1 ps)**

Loc. 14b Praslin: On bark of living tree *Syzygium jambos*, SLS 32418 (MC pH 6.1).

****Licea operculata* (Wingate) G.W. Martin (2 MC, 2 loc, 2 ps)**

Loc. 37c La Digue: On bark of living tree *Falcataria mollucana*, SLS 32409 (MC pH 6.9). **Loc. 48** Curieuse: On bark of living tree *Thespesia populnea*, SLS (MC pH 7.2).

****Licea* cf. *scyphoides* T.E. Brooks & H.W. Keller (1 MC, 1 loc, 1 ps)**

Loc. 18 Praslin: On bark of living tree *Erythroxylum sechellarum*, SLS 32448 (MC pH 4.2).

****Licea rufocuprea* Nann.-Bremek. & Y. Yamam. (1 MC, 1 loc, 1 ps)**

Loc. 48 Curieuse: On bark of living tree *Thespesia populnea*, SLS (MC pH 7.2).

***Lycogala epidendrum* (L.) Fr. (9 FC, 7 loc, 4 ps)**

Loc. 16 Praslin: On wood of rotten branch of *Artocarpus heterophyllus*, AM2730, TK2065. **Loc.27b** La Digue: On rotten wood of *Calophyllum inophyllum*, AM3174, TK2635. **Loc. 37i** La Digue: On wood of very rotten log of *Falcataria moluccana*, AM2988.1, TK2566. **Loc. 39a** La Digue: On wood of rotten log of *Tabebuia pallida*, AM3201, TK2757 (2FC). **Loc. 41a** La Digue: On wood of rotten log of *Calophyllum inophyllum*, AM2782, TK2339 (2FC). **Loc. 41b** La Digue: On wood of large cut log of *Calophyllum inophyllum*, AM2968, TK2538. **Loc. 42a** La Digue: On wood of large branch of *Calophyllum inophyllum*, AM3161, TK2628.

****Lycogala exiguum* Morgan (2 FC, 2 loc, 2 ps)**

Loc. 49 Curieuse: On dead stem of palm *Cocos nucifera*, AM2716, TK2238. **Loc. 41b** La Digue: On wood of large cut log of *Calophyllum inophyllum*, AM2969, TK2539.

****Macbrideola decapillata* H.C. Gilbert (3 MC, 2 loc, 2 ps)**

Loc. 2 Mahé: On bark of living tree *Swietenia macrophilla*, SLS 32442 (MC pH 6.6). **Loc. 12** Praslin: On bark of living tree *Casuarina equisetifolia*, SLS 32436 (MC pH 5.7), SLS 32216 (MC pH 5.4).

****Macbrideola scintillans* H.C. Gilbert (1 MC, 1 loc, 1 ps)**

Loc. 47b Curieuse: On bark of living mangrove tree *Rhizophora mucronata*, SLS 32393 (MC pH 7.5).

***Perichaena* sp. (1 MC, 1 loc, 1ps.)**

Loc. 38b La Digue: On dry leaves attached to the perennial herb *Musa* sp., SLS 32198 (MC pH 7.4).

***Perichaena chrysosperma* (Curr.) Lister (15 MC, 12 loc, 10 ps)**

Loc. 6 Mahé: On fallen leaves of *Cheilocostus speciosus*, SLS 32447 (MC pH 7). **Loc. 8** Mahé: On dry stems of living liana *Dioscorea* sp., SLS 32329 (MC pH 7.1). **Loc. 11** Praslin: On dry pods fixed to living tree *Leucaena leucocephala*, SLS 32498 (MC pH 6.2). **Loc. 14a** Praslin: On bark of living tree *Artocarpus heterophyllus*, SLS 32227 (MC pH 7.3). **Loc. 17b** Praslin: On bark of large stump of *Calophyllum inophyllum*, SLS 32491 (MC pH 6.5). **Loc. 24** Praslin: On dead bark of living epiphytic liana *Syngonium podophyllum*, SLS (MC pH 7.7). **Loc.27b** La Digue: On bark of living tree *Calophyllum inophyllum*, SLS (MC pH 7), on dead spathe fixed to living palm *Cocos nucifera*, SLS (MC pH 7.9). **Loc. 38b** La Digue: On dry stems of living liana *Ipomoea* sp., SLS (MC pH 7.3). **Loc. 39a** La Digue: On dead stems of living epiphytic liana *Syngonium podophyllum*, SLS 32385 (MC pH 8.7). **Loc. 45d** La Digue: On bark of living tree *Cordia subcordata*, SLS 32321 (MC pH 6.7), SLS 32345 (MC pH 6.6), SLS MC pH 6.6). **Loc. 48** Curieuse: On bark of living tree *Thespesia populnea*, SLS 32200 (MC pH 7.1). **Loc. 50** Félicité: On bark of living tree *Cordia subcordata*, SLS 32419 (MC pH 6.7).

***Perichaena depressa* Lib. (4 FC, 10 MC, 10 loc, 9 ps)**

Loc. 6 Mahé: On dead wood and bark of *Cinnamomum verum*, AM3081, TK2870 (2FC). On dry leaves and old inflorescences attached to living palm *Phoenicophorium borsigianum*, SLS 32350 (MC pH 5.7). **Loc. 8** Mahé: On dry stems of living liana *Dioscorea* sp., SLS (MC pH 7.1). **Loc. 21** Praslin: On wood of rotten branch of *Cordia*

subcordata. AM2760, TK2167. **Loc. 37c** La Digue: On dry leaves attachet to tree *Cinnamomum verum*, SLS (MC pH 6.4). **Loc. 37m** La Digue: On dead wood. AM2874, TK2399. **Loc. 38b** La Digue: On fallen large leaf of *Calophyllum inophyllum*, SLS 32189 (MC pH 7.9). **Loc. 39a** La Digue: On dead leaves attached to living perennial herb *Musa* sp., SLS (MC pH 7.5). **Loc. 45c** La Digue: On dry stems of living liana *Lantana camara*, SLS (MC pH 7.2). **Loc. 45d** La Digue: On bark of living tree *Cordia subcordata*, SLS (MC pH 6.6). **Loc. 48** Curieuse: On fallen dry inflorescences of palm *Cocos nucifera*, SLS (MC pH 6.8). On bark of living tree *Thespesia populnea*, SLS 32140 (MC pH 6.9), SLS 32175 (MC pH 7.1).

Perichaena dictyonema **Rammeloo (4 MC, 4 loc, 4 ps)**

Loc. 20b Praslin: On dry stems of living epiphytic liana *Syngonium podophyllum*, SLS 32483 (MC pH 6.9). **Loc. 38b** La Digue: On fallen large leaf of *Calophyllum inophyllum*, SLS 32193 (MC pH 8.2). **Loc. 39a** La Digue: On dead leaves attached to living perennial herb *Musa* sp., SLS 32374 (MC pH 6.9). **Loc. 41a** La Digue: On dry inflorescences attached to living palm *Cocos nucifera*, SLS 32177 (MC pH 6.8).

****Perichaena pedata*** **(Lister & G. Lister) G. Lister ex E. Jahn (3 MC, 2 loc, 3 ps)**

Loc. 8 Mahé: On stem caudex of *Dieffenbachia sequine*, SLS 32372 (MC pH 7.7). On dry stems of living liana *Dioscorea* sp. SLS 32389 (MC pH 6.9). **Loc. 11** Praslin: On fallen branch with dry leaves and red fruits of *Adenanthera pavonina*, SLS (MC pH 6.4).

Perichaena vermicularis **(Schwein.) Rostaf. (11 MC, 7 loc, 9 ps)**

Loc. 5 Mahé: On dry stems of living liana *Ipomoea cairica* , SLS 32368 (MC pH 6.8). On roots of epiphytic *Nephrolepis biserrata* on *Elaeis guineensis*, SLS 32365 (MC pH 6.4). On dry stems of living liana *Thunbergia grandiflora*, SLS 32461 (MC pH 6.4). **Loc. 11** Praslin: On dry leaves of climbing epiphytic orchid *Vanilla planifolia* on living tree, SLS 32139 (MC pH 7). **Loc. 19** Praslin: On dead spathe and dry leaves fixed to living palm *Pandanus balfourii*, SLS 32471 (MC pH 6.4). **Loc. 20b** Praslin: On dry stems of living herbaceous creeper *Passiflora foetida*, SLS (MC pH 8.1). **Loc. 38b** La Digue: On dry leaves attached to perennial herb *Musa* sp., SLS 32182 (MC pH 6.3). **Loc. 41a** La Digue: On dead spathe fixed to living palm *Cocos nucifera*, SLS 32148 MC pH 7.07), SLS (MC pH 6.8). **Loc. 44** La Digue: On dry pods fixed to living tree *Leucaena leucocephala*, SLS 32182 (MC pH 6.3), SLS 32461 (MC pH 6.4).

****Physarella oblonga*** **(Berk. & M.A. Curtis) Morgan (5 FC, 3 loc, 2 ps, Fig. 6C)**

Loc. 37p La Digue: On bark of very rotten log of *Thespesia populnea*, AM2857, TK2371. On wood and bark of burnt log, AM2875, TK2400 (2FC). **Loc. 49** Curieuse: On wood of rotten log of *Cocos nucifera*, AM2719, TK2241 (2FC).

****Physarum aeneum*** **(Lister) R.E. Fr. (1 MC, 1 loc, 1 ps)**

Loc. 14a Praslin: On bark of living tree *Artocarpus heterophyllus*, SLS 32225 (MC pH 7.3).

Physarum album **(Bull.) Chevall. (2 FC, 2 MC, 4 loc, 3 ps)**

Loc. 2 Mahé: On wood of fallen branch of *Swietenia macrophylla*, AM3044, TK2793. **Loc. 18** Praslin: On fallen

palm leaves and spathe of *Lodoicea maldivica*, SLS (MC pH 5.6). **Loc.29** La Digue: On dead spathe fixed to living palm *Cocos nucifera*, SLS 32499 (MC pH 4.7). **Loc. 49** Curieuse: On rotten log of palm *Cocos nucifera*, AM2718, TK2240.

FIGS 6. A. *Badhamia* sp. (AM3047, TK2795, MM47933) group of sporangium on a fallen leaf of palm *Nephrosperma vanhoutteanum* (bar = 0.20 mm). **B.** *Badhamia* sp. (AM3047, TK2795, MM47933) nodes of capillitium 225 µm long x 9 µm thick (bar = 20 µm). **C.** *Physarella oblonga* (AM2875, TK2400) on wood and bark of a burned log (bar = 0.4 mm). **D.** *Stemonitis fusca* var. *fusca* (AM2776, TK2191) on branch of *Falcataria moluccana* (bar = 1 mm). **E.** *Tubifera microsperma* (AM 3120) on a rotten log on the ground (bar = 0.5 mm). **F.** *Physarum roseum* (AM3200, TK2698) on a branch of *Calophyllum inophyllum* (bar = 0.2 mm).

***Physarum atroviolaceum* G. Moreno, Y. Yamam. & A. Castillo (2 FC, 1 loc, 1 ps)**

Loc. 10 Mahé: On fallen leaves of *Pandanus balfourii*, AM3142, TK2997 (2FC).

***Physarum bethelii* T. Macbr. ex G. Lister (2 FC, 1 loc, 1 ps)**

Loc. 7 Mahé: On dead stem of palm *Phoenicophorium borsigianum*, AM3099, TK2914 (2FC) det. MM47935.

***Physarum bogoriense* Racib. (8 FC, 6 loc, 4 ps)**

Loc. 7 Mahé: On fallen leaves of *Tabebuia pallida*, AM3105, TK2921 (2FC). **Loc. 37-l** La Digue: On fallen leaf of *Cinnamomum verum*, AM3178, TK2677. **Loc. 37g** La Digue: On fallen leaves of *Calophyllum inophyllum*, AM2862, TK2380 (2FC). On fallen leaves of *Cinnamomum verum*, AM2869, TK2393. **Loc. 37m** La Digue: On fallen leaves of *Cinnamomum verum*, AM2871, TK2396. **Loc. 39a** La Digue: On fallen leaves of *Terminalia catappa*, AM3213, TK2759.

***Physarum cinereum* (Batsch) Pers. (1 MC, 1 loc, 1 ps)**

Loc. 35 La Digue: On stems of living climber liana *Epipremnum pinnatum*, AM3899 (MC 113), TK2419.

***Physarum compressum* Alb. & Schwein. (19 MC, 9 loc, 10 ps)**

Loc. 5 Mahé: On dry stems of living liana *Ipomoea cairica*, SLS (MC pH 6.4), SLS 32146 (MC pH 7.7). **Loc. 6** Mahé: On fallen leaves of climber liana *Epipremnum pinnatum*, SLS 32360 (MC pH 6.9). **Loc. 11** Praslin: On dead branch fixed to living tree *Calophyllum inophyllum*, SLS 32358 (MC pH 6.9). On dead leaves and stem of palm *Phoenicophorium borsigianum*, SLS 32145 (MC pH 5.9). On leaves of living climbing epiphytic orchid *Vanilla planifolia* on tree, SLS 32159 (MC pH 6.5). **Loc. 18** Praslin: On living air roots of *Martellidendron hornei*, SLS 32482 (MC pH 5,9). **Loc. 20b** Praslin: On dry stems of living herbaceous creeper *Passiflora foetida*, SLS 32152 (MC pH 6.4), SLS (MC pH 6.6), SLS 32160 (MC pH 8.1). On dry stems of living epiphytic liana *Syngonium podophyllum*, SLS (MC pH 6.9). **Loc. 24** Praslin: On pods on broken branch attached to living tree *Falcataria moluccana*, SLS (MC pH 6.5). On dead bark of living epiphytic liana *Syngonium podophyllum*, SLS 32144 (MC pH 7.8), SLS 32146 (MC pH 7.7). **Loc. 35** La Digue: On stems of living climber liana *Epipremnum pinnatum*, AM3900 (MC114), AM3902 (MC 116), TK2420. **Loc. 37j** La Digue: On dead leaves of *Alocasia macrorrhiza*, SLS (MC pH 6.5). **Loc. 38b** La Digue: On dry stems of living liana *Ipomoea* sp., SLS 32143 (MC pH 7.3). On dry stems of living epiphytic liana *Syngonium podophyllum*, SLS 32164 (MC pH 6.3).

***Physarum crateriforme* Petch (2 FC, 13 MC, 9 loc, 9 ps)**

Loc. 5 Mahé: On bark of living tree *Tabebuia pallida*, SLS 32364 (MC pH 6.4). On dry stems of living liana *Thunbergia grandiflora*, SLS 32363 (MC pH 6.8). **Loc. 14b** Praslin: On bark of living tree *Syzygium jambos*, SLS 32433 (MC pH 6.1). **Loc. 17a** Praslin: On dead spathe fixed to living palm *Cocos nucifera*, SLS (MC pH 7). **Loc. 36** La Digue: On bark of living tree *Calophyllum inophyllum* & *Terminalia catappa* & *Cordia subcordata*, SLS 32370 (MC pH 6.8). **Loc. 37c** La Digue: On bark of living tree *Calophyllum inophyllum*, SLS 32319 (MC pH 7). **Loc. 38b** La Digue: On bark of living tree *Artocarpus altilis*, SLS (MC pH 5.7). On dry stems of living liana *Ipomoea* sp., SLS 32151 (MC pH 8.5). **Loc. 43** La Digue: On wood and bark of large standing dead mossy tree *Thespesia populnea*, AM2938, TK2494 (2FC). **Loc. 48** Curieuse: On bark of living tree *Calophyllum inophyllum*, SLS 32423 (MC pH 5.9). On bark of living tree *Thespesia populnea*, SLS 32141 (MC pH 6.9), SLS 32138 (MC pH 7.3), SLS 32142 (MC pH 7.2). **Loc. 50** Félicité: On bark of living tree *Cordia subcordata*, SLS 32441 (MC pH 6.7).

****Physarum cremiluteum* Y.F. Chen & C.H. Liu (17 FC, 8 loc, 6 ps)**

Loc. 4 Mahé: On fallen leaves of *Dillenia suffruticosa*, AM3069, TK2831 (3FC). On fallen leaves of *Mangifera indica*, AM3066, TK2826. **Loc. 6** Mahé: On fallen leaves of *Tabebuia pallida*, AM3087, TK2880. On wood of fallen large branch of *Cinnamomum verum*, AM3079, TK2867. On fallen leaves of *Tabebuia pallida*, AM3084, TK2876 (2FC). **Loc. 22b** Praslin: On fallen leaves and twigs of *Cinnamomum verum* & *Falcataria moluccana* & *Tabebuia pallida*, AM2765, TK2176. **Loc.28a** La Digue: On fallen leaves of *Calophyllum inophyllum*, AM2930, TK2478. **Loc. 34b** La Digue: On fallen leaves of *Terminalia catappa*, AM2900, TK2435. **Loc. 35** La Digue: On fallen leaves accumulated between roots of living tree *Terminalia catappa*, AM2885, TK2415. **Loc. 39b** La Digue: On fallen leaf

of *Calophyllum inophyllum*, AM2981, TK2558 (3FC). **Loc. 42b** La Digue: On fallen leaf of *Terminalia catappa*, AM2950, TK2512, AM2956, TK2521.

***Physarum decipiens* M.A. Curtis (2 MC, 1 loc, 2 ps)**

Loc. 48 Curieuse: On bark of living tree *Calophyllum inophyllum*, SLS 32435 (MC pH 5.9). On bark of living tree *Thespesia populnea*, SLS 32190 (MC pH 6.1).

***Physarum echinosporum* Lister (1 FC, 1 loc, 1 ps)**

Loc. 13 Praslin: On wood inside rotten log of *Terminalia catappa*, AM2710, TK2049.

****Physarum florigerum* (Meyl.) Y. Yamam. (1 FC, 1 loc)**

Loc. 7 Mahé: On very rotten palm stem, AM3112, TK2931.

****Physarum gyrosum* Rostaf. (5 MC, 4 loc, 4 ps)**

Loc. 6 Mahé: On dry leaves and inflorescences attached to living palm *Phoenicophorium borsigianum*, SLS 32351 (MC pH 5.7). **Loc. 20b** Praslin: On dry stems of living epiphytic liana *Syngonium podophyllum*, SLS (MC pH 6.3), SLS 32745 (MC pH 7). **Loc. 38b** La Digue: On fallen large leaf of *Calophyllum inophyllum*, SLS (MC pH 8.2). **Loc. 41a** La Digue: On dry inflorescences attached to living palm *Cocos nucifera*, SLS 32163 (MC pH 7.2).

***Physarum hongkongense* Chao H. Chung (6 FC, 2 MC, 6 loc, 6 ps)**

Loc. 2 Mahé: On fallen leaves of *Swietenia macrophylla*, AM3049, TK2799. **Loc. 4** Mahé: On fallen leaves of *Terminalia catappa*, AM3064, TK2822 (2FC). **Loc.27a** La Digue: On fallen leaves of *Calophyllum inophyllum*, AM2894, TK242 (2FC). **Loc. 30** La Digue: On fallen leaves of *Mangifera indica*, AM2880, TK2409. **Loc. 37c** La Digue: On bark of living tree *Artocarpus heterophyllus*, SLS 32438 (MC pH 7). **Loc. 45d** La Digue: On bark of living tree *Cordia subcordata*, SLS 32343 (MC pH 6.6).

***Physarum lakhanpalii* Nann.-Bremek. & Y. Yamam. (2 FC, 9 MC, 7 loc, 5 ps)**

Loc. 6 Mahé: On wood and bark of rotten branch of *Tabebuia pallida*, AM3093, TK2888. **Loc. 12** Praslin: On bark of living tree *Calophyllum inophyllum*, SLS 32219 (MC pH 6.4). **Loc. 17b** Praslin: On bark of large stump of *Calophyllum inophyllum*, SLS 32476 (MC pH 6), SLS (MC pH 6.1). **Loc. 18** Praslin: On dry leaves attached to palm *Lodoicea maldivica*, SLS 32371 (MC pH 6.6). **Loc. 19** Praslin: On dry leaves attachet to palm *Pandanus balfourii*, SLS 32762 (MC pH 6.7). On dead spathe fixed to living palm *Cocos nucifera*, AM2753, TK2126. **Loc.29** La Digue: On dead spathe fixed to living palm *Cocos nucifera*, SLS 32355 (MC pH 5), SLS 32362 (MC pH 6). **Loc. 50** Félicité: On fallen leaves of *Cocos nucifera*, SLS 32388 (MC pH 6.4), SLS (MC pH 6.6).

****Physarum luteolum* Peck (1 FC, 1 loc, 1 ps)**

Loc.27a La Digue: On fallen leaves of *Calophyllum inophyllum*, AM2895, TK2428.

***Physarum melleum* (Berk. & Broome) Massee (25 FC, 16 MC, 21 loc, 17 ps)**

Loc. 4 Mahé: inside of fallen palm leaf, AM3067, TK2827. **Loc. 6** Mahé: On fallen leaves of *Tabebuia pallida*, AM3087, TK2881. On wood of fallen large branch of *Cinnamomum verum*, AM3079, TK2868. **Loc. 7** Mahé: On wood of fallen little branch and fallen leaves of *Tabebuia pallida*, AM3114, TK2934 (2FC). **Loc. 8** Mahé: On dry grass *Dianella ensifolia*, SLS (MC pH 6). **Loc. 10** Mahé: On fallen leaves of *Cinnamomum verum*, AM3143, TK2999. On fallen leaves of *Dillenia ferruginea*, AM3139, TK2995. **Loc. 11** Praslin: On dry pods fixed to living tree *Leucaena leucocephala*, SLS (MC pH 5.8). On dead leaves and stem of palm *Phoenicophorium borsigianum*, SLS (MC pH 5.9). **Loc. 19** Praslin: On dead spathe fixed to living palm *Cocos nucifera*, AM2756, TK2131 (2FC). **Loc.27a** La Digue: On fallen leaves of *Calophyllum inophyllum*, AM2892, TK2425 (3FC). **Loc.29** La Digue: On dead spathe fixed to living palm *Cocos nucifera*, SLS (MC pH 6). **Loc. 30** La Digue: On fallen leaves of *Mangifera indica*, AM2878, TK2406. **Loc. 35** La Digue: On *Xylaria* sp. on wood of rotten log, AM2883, TK2412 (2FC). **Loc. 36** La Digue: On fallen leaves of *Terminalia catappa*, AM3223, TK2777. **Loc. 37c** La Digue: On dry leaves attachet to tree *Cinnamomum verum*, SLS 32353 (MC pH 6), SLS 32178 (MC pH 6.44). On root of living epiphytic *Phymatodes scolopendria*, SLS 32380 (MC pH 6.3). **Loc. 37j** La Digue: On dead bark of living epiphytic liana *Syngonium podophyllum*, SLS 32331 (MC pH 5.8). On fallen leaves of *Calophyllum inophyllum*, AM2862, TK2381 (3FC). On fallen leaves of *Cinnamomum verum*, AM2867, TK2391. **Loc. 37k** La Digue: On dry fern *Dicranopteris linearis*, AM3184, TK2671. **Loc. 37m** La Digue: On fallen dead influence of *Cheilocostus speciosus*, AM2870, TK2395. **Loc. 38b** La Digue: On bark of living tree *Artocarpus altilis*, SLS 32211 (MC pH 5.7). On dead spathe fixed to living palm *Cocos nucifera*, AM2781, TK2295, SLS 32178 (MC pH 6.4), SLS (MC pH 6.3). On dry leaves attached to perennial herb *Musa* sp., SLS (MC pH 6.3), SLS 32187 (MC pH 7.4). On dry stems of living epiphytic liana *Syngonium podophyllum*, SLS (MC pH 6.3). **Loc. 39b** La Digue: On wood of fallen branch of *Terminalia catappa*, AM2982, TK2554. **Loc. 40a** La Digue: On wood and bark of rotten branch of *Terminalia catappa*, AM2913, TK2451. **Loc. 47a** Curieuse: On dead inflorescence attached to living palm *Phoenicophorium borsigianum*, SLS 32196 (MC pH 5.9), SLS (MC pH 6).

***Physarum mutabile* (Rostaf.) G. Lister (2 FC, 1 loc, 1 ps)**

Loc. 6 Mahé: On fallen leaves of *Tabebuia pallida*, AM3089, TK2884 (2FC).

****Physarum notabile* T. Macbr. (1 FC, 1 loc, 1 ps)**

Loc. 6 Mahé: On dry stems of living climber liana *Epipremnum pinnatum*, AM3080, TK2869.

****Physarum nucleatum* Rex (3 FC, 2 loc, 2 ps)**

Loc. 15 Praslin: On stem of dead palm, AM2741, TK2076;
Loc. 36 La Digue: On wood and bark of fallen branch of *Terminalia catappa*, AM3219, TK2778 (2FC).

***Physarum oblatum* T. Macbr. (6 MC, 4 loc, 4 ps)**

Loc. 5 Mahé: On bark of living tree *Tabebuia pallida*, SLS 32367 (MC pH 6.4). **Loc. 22c** Praslin: On dry stems of living climber liana *Epipremnum pinnatum*, SLS 32147 (MC pH 7.4), SLS (MC pH 7.5). **Loc. 47a** Curieuse: On dry leaves attachet to palm *Phoenicophorium borsigianum*, SLS 32165 (MC pH 4.9). **Loc. 48** Curieuse: On bark of living tree *Thespesia populnea*, SLS (MC pH 6.1), SLS 32425 (MC pH 7.4).

****Physarum plicatum* Nann.-Bremek. & Y. Yamam. (18 FC, 1 loc, 4 ps, Fig. 5E)**

Loc. 10 Mahé: On fallen leaves of *Cinnamomum verum*, AM3131, TK2979 (4FC). On fallen palm leaf of *Deckenia nobilis*, AM3128, TK2975 (2FC). On fallen leaves of *Dillenia ferruginea*, AM3122, TK2967 (7FC). On fallen palm leaf of *Pandanus balfourii*, AM3145, TK3002 (5FC).

Physarum pusillum (Berk. & M.A. Curtis) G. Lister (1 FC, 26 MC, 15 loc, 15 ps)

Loc. 6 Mahé: On dry leaves attached to a living succulent *Agave angustifolia*, SLS 32391 (MC pH 8.6). On fallen leaves of *Cheilocostus speciosus*, SLS 32431 (MC pH 7).**Loc. 11** Praslin: On dry pods fixed to living tree *Alstonia macrophylla*, SLS (MC pH 6). On dry pods fixed to living tree *Leucaena leucocephala*, SLS 32496 (MC pH 6.5). On leaves of living climbing epiphytic orchid *Vanilla planifolia*, SLS 32398 (MC pH 5.6). **Loc. 12** Praslin: On air stems of living semi-parasitic creeper *Cassytha filiformis* over-growing tree *Prosopis juliflora*, SLS (MC pH 5.9). **Loc. 17a** Praslin: On dead spathe fixed to living palm *Cocos nucifera*, SLS (MC pH 4.9). On dry leaves attached to young perennial herb *Musa* sp., SLS 32469 (MC pH 7.3), SLS (MC pH 7.2), SLS (MC pH 7.4). **Loc. 19** Praslin: On dry leaves attachet to palm *Pandanus balfourii*, SLS (MC pH 6.7). **Loc. 22c** Praslin: On fallen dry pods of *Adenanthera pavonina*, SLS (MC pH 5.8). **Loc. 24** Praslin: On pods on broken branch attached to living tree *Falcataria moluccana*, SLS 32155 (MC pH 6.2), SLS 32496 (MC pH 6.5). **Loc.27b** La Digue: inside fallen spathe of palm *Cocos nucifera*, AM3164, TK2636. **Loc. 37j** La Digue: On dead bark of living epiphytic liana *Syngonium podophyllum*, SLS (MC pH 8.3). **Loc. 38b** La Digue: On dry stems of living epiphytic liana *Syngonium podophyllum*, SLS (MC pH 6.3), SLS 32168 (MC pH 6.3). **Loc. 41a** La Digue: On dead spathe fixed to living palm *Cocos nucifera*, SLS (MC pH 6.8). On dry stems of living epiphytic liana *Syngonium podophyllum*, SLS 32155 (MC pH 6.2), SLS 32174 (MC pH 6.2). **Loc. 45c** La Digue: On dry stems of living liana *Lantana camara*, SLS 32463 (MC pH 7). **Loc. 46** Curieuse: On air root of living tree *Ficus lutea* growing on the wall of a destroyed building, SLS (MC pH 6). **Loc. 47a** Curieuse: On dry leaves attachet to palm *Phoenicophorium borsigianum*, SLS (MC pH 4.3), SLS 32167 (MC pH 4.5). **Loc. 48** Curieuse: On fallen dry inflorescences of palm *Cocos nucifera*, SLS (MC pH 6.9), SLS(nc) (MC pH 6.8).

Physarum cf *pusillum* (2 FC, 1 loc, 1 ps)

Loc.27b La Digue: On spathe inside fallen palm leaf *Cocos nucifera*, AM3164, TK2637 (2FC).

Distinguishing features of this specimen that separate it from *Physarum pusillum* are spores 11.6-12.7 µm (x1000 immersion) warty with darker groups of warts and a capillitium with pale yellow nodes. Sporangium total height 0.78 m, stalk 0.4 mm, white sporocyst with round scales and a brown base 0.45 mm in diameter.

Physarum roseum Berk. & Broome (5 FC, 1 MC, 5 loc, 4 ps, Fig. 6F)

Loc. 4 Mahé: On rotten wood. AM3072, TK2837. **Loc. 6** Mahé: On fallen leaves of *Cinnamomum verum*, AM3095, TK2890. **Loc. 7** Mahé: On stem of living palm *Nephrosperma vanhoutteanum*, AM3096, TK2910. **Loc. 37c** La Digue: On wood of large branch of *Calophyllum inophyllum*, AM3200, TK2698 (2FC). **Loc. 44** La Digue: On dry pods fixed to living tree *Leucaena leucocephala*, SLS 32503 (MC pH 4.4).

Physarum sessile Brândza (6 FC, 4 loc, 2 ps)

Loc. 3 Mahé: On fallen leaves of *Calophyllum inophyllum*, AM3058, TK2812 (2FC). **Loc.27a** La Digue: On fallen leaves of *Calophyllum inophyllum*, AM2891, TK2424. **Loc. 37b** La Digue: On fallen leaf of *Cinnamomum verum*, AM3186, TK2686 (2FC). **Loc. 37m** La Digue: On fallen leaves of *Cinnamomum verum*. AM2872, TK2397.

Physarum stellatum (Massee) G.W. Martin (16 FC, 7 loc, 4 ps)

Loc. 1 Mahé: On dead spathe fixed to living palm *Cocos nucifera*, AM3040, TK2788 (2FC). **Loc. 3** Mahé: On wood of rotten branch, AM3062, TK2819 (2FC). **Loc. 6** Mahé: On dead wood of *Tabebuia pallida*, AM3091, TK2887. **Loc.27b** La Digue: On wood and bark of large rotten log of *Calophyllum inophyllum*, AM3173, TK2639. **Loc. 31b** La Digue: On dead spathe fixed to living palm *Cocos nucifera*, AM2853, TK2365. **Loc. 42b** La Digue: On wood and bark of rotten log of *Terminalia catappa*, AM2945, TK2505 (2FC). On wood and bark of large standing dead mossy tree *Calophyllum inophyllum*, AM2948, TK2510. On dead palm leaf attached to living palm *Cocos nucifera*, AM2955, TK2518 (2FC). **Loc. 49** Curieuse: On fallen leaves of *Calophyllum inophyllum*, AM2714, TK2234 (2FC). On dead stem of palm *Cocos nucifera*, AM2715, TK2236 (2FC).

***Physarum tenerum* Rex (4 FC, 2 loc, 2 ps)**

Loc. 36 La Digue: On wood and bark of fallen branch of *Terminalia catappa*, AM3217, TK2780 (3FC). **Loc. 42c** La Digue: On roots of liana on living tree *Calophyllum inophyllum*, AM2953, TK2516.

***Physarum viride* (Bull.) Pers. (4 FC, 3 loc, 3 ps)**

Loc. 2 Mahé: On wood of broken branch of *Swietenia macrophylla*, AM3050, TK2800. **Loc. 15** Praslin: On stem of dead palm, AM2736, TK2071 (2FC). **Loc. 23** Praslin: On wood of very rotten log of *Terminalia catappa*, AM2766, TK2180.

****Physarum viride* var. *aurantium* (Bull.) Lister (25 FC, 11 loc, 9 ps)**

Loc. 2 Mahé: On cut branches of *Bambousa* sp., AM3054, TK2806. **Loc. 7** Mahé: On stem surfase of living palm *Nephrosperma vanhoutteanum*, AM3096, TK2909 (2FC). On dead wood *Spondias cytherea*, AM3102, TK2916. **Loc. 19** Praslin: On dead spathe fixed to living palm *Cocos nucifera*, AM2755, TK2130. **Loc.27b** La Digue6: On wood of rotten log of *Artocarpus altilis*, AM3169, TK2642 (4FC). **Loc. 37b** La Digue: On wood and bark of rotten log of *Calophyllum inophyllum*, AM3192, TK2690 (3FC). On wood of rotten log of *Cinnamomum verum*, AM3180, TK2688 (2FC). **Loc. 37e** La Digue: On wood and bark of rotten branch of *Falcataria moluccana*, AM2993, TK2573 (2FC). **Loc. 38a** La Digue: On wood of very rotten log of *Cinnamomum verum*, AM2905, TK2445 (2FC). **Loc. 39b** La Digue: On wood under bark of rotten branch of *Calophyllum inophyllum*, AM2984, TK2556 (2FC). **Loc. 40c** La Digue: On dead wood of *Cinnamomum verum*, AM2922, TK2468 (2FC). **Loc. 42c** La Digue: On wood of rotten log of *Terminalia catappa*, AM2944, TK2504. On wood of rotten branch of *Terminalia catappa*, AM2963, TK2527 (2FC).

***Physarum* sp. (1 FC, 4 MC, 4 loc, 4 ps)**

Loc. 23 Praslin: On fallen palm leaf of *Phoenicophorium borsigianum*, AM2771, TK2186.

Distinguishing features of this specimen are the stipite sporocarps with an orange-red stalk and red hypothallus. The stalk is fibrillose, 0.4 mm, matt beige peridium with dark orange base, with white nodes inside. In transmitted light the capillitial nodes are yellowish-greyish, the stalk is red and cup is yellow. Spores 8-8.5 μm in diameter and weakly warted.

Loc. 38b La Digue: On dead spathe fixed to living palm *Cocos nucifera*, SLS 32197 (MC pH 6.2). On fallen leaves of *Calophyllum inophyllum*, SLS32202, (MC pH 6.3), not enough material to determine those specimens. **Loc. 44** La Digue: On dry pods fixed to living tree *Leucaena leucocephala*, SLS 32322 (MC pH 6.4), not enough material to determine this specimen. **Loc. 48** Curieuse: On dead spathe fixed to living palm *Cocos nucifera*, SLS (nc), (MC pH 6.3) not enough material to determine this specimen.

***Reticularia olivacea* (Ehrenb.) Fr. (1 MC, 1 loc, 1 ps)**

Loc. 12 Praslin: On bark of living tree *Calophyllum inophyllum*, SLS 32452 (MC pH 5.7).

***Stemonaria longa* (Peck) Nann.-Bremek., R. Sharma & Y. Yamam. (4 FC, 3 loc, 2 ps, Fig. 5C)**

Loc.28b La Digue: On wood of burnt log of *Terminalia catappa*, AM2929, TK2476. **Loc. 43** La Digue: On wood and bark of large standing dead tree *Thespesia populnea*, AM2939, TK2496 (2FC). On wood and bark of half-dead tree *Thespesia populnea*, AM3154, TK2585.

***Stemonitis axifera* (Bull.) T.Macbr. (8 FC, 6 loc, 3 ps)**

Loc. 2 Mahé: On wood of rotten branch of *Swietenia macrophylla*, AM3046, TK2794. **Loc. 4** Mahé: On rotten wood, AM3071, TK2836. **Loc. 15** Praslin: On wood and bark of rotten branch of *Cinnamomum verum*, AM2734, TK2069. **Loc. 37m** La Digue: On wood of rotten log, AM2877, TK2404. **Loc. 38a** La Digue: On wood of very rotten log of *Cinnamomum verum*, AM2910, TK2447 (2FC). **Loc. 40c** La Digue: On wood under bark of rotten log of *Calophyllum inophyllum*, AM2919, TK2463, AM2928, TK2474.

***Stemonitis pallida* var. *rubescens* Y. Yamam. (1 FC, 1 loc, 1 ps)**

Loc. 24 Praslin: On wood of rotten burnt log of *Calophyllum inophyllum*, AM2787, TK2206.

***Stemonitis flavogenita* E. Jahn (1 FC, 1 loc)**

Loc. 37m La Digue: On dead wood, bark and leaves, AM2876, TK2402.

***Stemonitis fusca* var. *fusca* Roth (9 FC, 7 loc, 3 ps, Fig. 6D)**

Loc. 24 Praslin: On wood and mossy bark of rotten log of *Calophyllum inophyllum*, AM2776, TK2191. **Loc. 25b** Praslin: On wood of rotten log of *Terminalia catappa*, AM2791, TK2217. **Loc.27b** La Digue: On wood of rotten log of *Calophyllum inophyllum*, AM3170, TK2644. **Loc. 36** La Digue: On wood of fallen branch of *Terminalia catappa*, AM3216, TK2784 (2FC). **Loc. 37n** La Digue: On wood and bark of rotten mossy branch of *Falcataria moluccana*, AM2988, TK2577 (2FC). **Loc. 40c** La Digue: On wood under bark of rotten log of *Calophyllum inophyllum*, AM2920, TK2464. **Loc. 43** La Digue: On wood and bark of large standing dead mossy tree *Calophyllum inophyllum*, AM2937, TK2507.

***Stemonitis fusca* var. *nigrescens* (Rex) Torrend (10 MC, 6 loc, 6 ps)**

Loc. 8 Mahé: On dry stems of living liana *Dioscorea* sp., SLS 32379 (MC pH 6.7). **Loc. 11** Praslin: On fallen branch with dry leaves and red fruits of *Adenanthera pavonina*, SLS (MC pH 5.2). **Loc. 14a** Praslin: On dry leaves of grass, SLS 32494 (MC pH 5.5). **Loc. 18** Praslin: On fallen old dry inflorescences of palm *Lodoicea maldivica*, SLS 32490 (MC pH 5.5), SLS 32494 (MC pH 5.4). **Loc. 37c** La Digue: On dry leaves attachet to tree *Cinnamomum verum*, SLS 32333 (MC pH 4.6), SLS 32338 (MC pH 4.6). On bark of living tree *Cinnamomum verum*, SLS 32377 (MC pH 5.2). **Loc. 47a** Curieuse: On dry leaves attachet to palm *Phoenicophorium borsigianum*, SLS (MC pH 4.9), SLS (MC pH 4.7).

***Stemonitis herbatica* Peck (1 MC, 1 loc, 1 ps)**

Loc. 6 Mahé: On fallen leaves of climber liana *Epipremnum pinnatum*, SLS 32383 (MC pH 5.5).

****Stemonitis pallida* Wingate (5 FC, 3 loc, 3 ps)**

Loc. 15 Praslin: inside stem of rotten palm, AM2737, TK2072. **Loc. 16** Praslin: On wood of rotten branch of *Calophyllum inophyllum*, AM2727.1, TK2061 (3FC). **Loc. 40a** La Digue: On dead wood and bark of *Terminalia catappa*, AM2914, TK2452.

***Stemonitis splendens* Rostaf. (15 FC, 14 loc, 6 ps)**

Loc. 6 Mahé: On wood of dead log of *Tabebuia pallida*, AM3094, TK2889. **Loc. 14a** Praslin: On wood of rotten large log of *Falcataria moluccana*, AM2745, TK2081. **Loc. 15** Praslin: on dead wood *Cinnamomum verum*, AM2735, TK2070. **Loc. 23** Praslin: On wood and bark of large broken branch fixed on living tree *Calophyllum inophyllum*, AM2772, TK2187 (2FC). **Loc. 31c** La Digue: On wooden pillar, AM2780, TK2292. **Loc. 32** La Digue: On wood and bark of rotten log of *Terminalia catappa*, AM2916, TK2455. **Loc. 34a** La Digue: On stump of *Terminalia catappa*, AM2844, TK2353. **Loc. 37b** La Digue: On wood and bark of large rotten log of *Calophyllum inophyllum*, AM3187, TK2694. **Loc. 37-l** La Digue: On wood and bark of large rotten log of *Cinnamomum verum*, AM3176, TK2678. **Loc. 37g** La Digue: On bark of dead log of *Falcataria moluccana*, AM2861, TK2379. On wood on cut part of hard log of *Falcataria moluccana*, AM2992, TK2571. **Loc. 37m** La Digue: On bark of dead log, AM2876, TK2403. On bark of very rotten log of *Falcataria moluccana*, AM2858, TK2372. **Loc. 49** Curieuse: On bark of dead tree *Calophyllum inophyllum*, AM2712, TK2233.

***Stemonitis* sp. (5 FC, 1 MC, 6 loc, 5 ps)**

Loc. 11 Praslin: On leaves of living climbing epiphytic orchid *Vanilla planifolia*, SLS (MC pH 5.6). There is not enough material to identify this specimen. **Loc. 21** Praslin: On wood of rotten log *Casuarina equisetifolia*, AM2763, TK2170. There are not enough material to identify this specimen. **Loc. 36** La Digue: On wood of fallen branch *Terminalia catappa*, AM3222, TK2783. There are not enough material to identify this specimen. **Loc. 37b** La Digue: On wood and bark of rotten log *Calophyllum inophyllum*, AM3191, TK2693. Total height up to 6 mm, but there is not enough material to identify this specimen **Loc. 37i** La Digue: On wood of very rotten log *Falcataria moluccana*, AM2991, TK2570. The total height of the sporocarps is up to 6.1 mm, sporocyst 3.6 mm long, stipe 2.5 mm long, capillitium black, but there are not enough material to identify this specimen **Loc. 40c** La Digue: On dead wood and bark *Calophyllum inophyllum*, AM2926, TK2472, total height up to 2.6 mm, but there are not enough material to identify this specimen.

****Stemonitopsis gracilis* (G. Lister) Nann.-Bremek. (1 FC, 1 loc, 1 ps)**

Loc. 42b La Digue: On dead wood of *Calophyllum inophyllum*, AM2946, TK2509.

****Stemonitopsis hyperopta* (Meyl.) Nann.-Bremek. (2 FC, 2 loc, 1 ps)**

Loc. 39c La Digue: On wood of rotten log of *Calophyllum inophyllum*, AM2973, TK2544. **Loc. 41b** La Digue: On wood of large cut log of *Calophyllum inophyllum*, AM2971, TK2541.

***Trichia decipiens* (Pers.) T. Macbr. (1 MC, 1 loc, 1 ps)**

Loc. 18 Praslin: On bark of dead tree *Tabebuia pallida*, SLS 32449 (MC pH 5.6).

***Tubifera ferruginosa* (Batsch) J.F. Gmel. (1 FC, 1 loc, 1 ps)**

Loc. 21 Praslin: On wood on cuting side of old stump of *Tabebuia pallida*, AM2761, TK2168.

***Tubifera microsperma* (Berk. & M.A. Curtis) G.W. Martin (5 FC, 3 loc, 2 ps, Fig. 6E)**

Loc. 9 Mahé: On large rotten trunk on ground, AM 3120 (2 FC). **Loc. 33** La Digue: On rotten log, AM 2906 (2 FC). **Loc. 37b** La Digue: On wood of rotten log of *Calophyllum inophyllum*, AM 3182.

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