

Floristic inventory of the Ambatovy-Analamay mine site and comparison to other sites in Madagascar

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Abstract

An inventory of vascular plants growing within the forests, thickets, and marshes of the Ambatovy and Analamay area (Moramanga, Alaotra-Mangoro Region, ex Toamasina Province) has been produced and analyzed. This was conducted largely to advance the environmental and conservation program associated with the commercial extraction of nickel and cobalt from the Ambatovy project mine site. The inventory is based on both newly collected specimens made in different portions of the Ambatovy-Analamay site and the available historical herbarium specimens originating from the immediate area, analyzed according to up-to-date taxonomic frameworks. The analysis involves the identification of those species most likely to be seriously impacted by the mine and in particular those whose survival is threatened by the mining activities. These taxa are termed "Species of Concern", and are defined as the plant species endemic to Madagascar that are known to occur on the mine footprint and at no more than three other sites across the island. Currently, the plant inventory comprises 7,747 herbarium specimens distributed between 151 families, 629 genera, and 1,580 species or morphospecies. Compared to other Malagasy humid forests for which extensive inventories are available, Ambatovy is the most thoroughly sampled, and our work suggests that it has the most species-rich flora and the highest family diversity. Among the

species inventoried, 196 are classified as Species of Concern, 34 of which are known only from the mine footprint and are therefore at considerable risk of extinction. It is clear that the Ambatovy-Analamay forests have an exceptionally diverse flora, which includes many locally endemic species.

Key Words: Ambatovy, Analamay, threatened species, botanical inventory, flora, Madagascar

Résumé détaillé

Un inventaire des plantes vasculaires rencontrées dans les forêts, fourrés et marais d'Ambatovy et d'Analamay (Moramanga, Alaotra Mangoro, ex Province de Toamasina) a été effectué et analysé afin de fournir des informations sur la stratégie environnementale à élaborer dans le cadre de l'extraction commerciale de nickel et de cobalt du site minier du Projet Ambatovy. L'inventaire est basé à la fois sur les spécimens récoltés récemment sur l'ensemble du site ainsi que sur les spécimens d'herbier historiques provenant du site en incluant des identifications pertinentes et mises à jour de spécimens conformément au nouveau cadre taxonomique reconnu actuellement. L'analyse est destinée à l'identification des espèces qui pourraient être sérieusement menacées par l'exploitation minière et plus particulièrement celles dont la survie est menacée par les activités de la mine. Ces espèces sont appelées « Species of Concern » et sont définies comme étant les espèces endémiques à Madagascar qui sont rencontrées sur le territoire de la mine sans être connues dans plus de trois autres sites sur l'ensemble du pays. Actuellement l'inventaire comprend 7747 spécimens d'herbier répartis en 151 familles, 629 genres et 1580 espèces ou morpho-espèces. Lorsque cet inventaire botanique est comparé à ceux qui ont été réalisés dans un certain nombre de parcs et réserves abritant des forêts humides malgaches, il apparaît que celui du site minier est basé sur un nombre plus élevé de spécimens d'herbier, qu'il comprend bien plus de familles, de genres et d'espèces. Parmi les espèces inventoriées, 196 sont classées comme « Species of Concern » dont 34 ne sont connues que du territoire de la mine et se trouvent ainsi confrontées à un risque élevé d'extinction. Il est clair que le site minier

d'Ambatovy-Analamay a une diversité floristique exceptionnelle avec un nombre élevé d'espèces endémiques locales.

Mots clés: Ambatovy, Analamay, espèce en danger, inventaire botanique, flore, Madagascar

Introduction

In 2004, Golder Associates, the consultants then responsible for coordinating the development of an environmental strategy for mining operations at the Ambatovy-Analamay site, contracted the Missouri Botanical Garden (MBG) to provide botanical information to be used in both the mine's environmental impact assessment and their environmental strategy. In particular, MBG was charged with producing a botanical inventory of the site's higher plants (i.e. excluding bryophytes and algae) and identifying species requiring special attention from the mining company to avoid their extinction. This article presents a summary to date (through December 2009) of the results of this on-going research. MBG had been involved in earlier botanical inventory work at the site conducted between January 1997 and September 1999, under contract to Dynatec Madagascar SA.

The Ambatovy-Analamay site is defined here as the area leased by the Ambatovy project for the commercial extraction of nickel and cobalt (see Figure 2, Dickinson & Berner, p. 10). It includes both the mine footprint (2,126 ha), where all existing natural habitats will be entirely removed by mining-related activities, and the surrounding area (4,900 ha) where natural habitats are scheduled to be managed for conservation purposes and sustainable local use. Furthermore, these forests are linked to the Ankeniheny-Zahamena corridor, comprising a series of protected areas to the east of the Ambatovy-Analamay site.

The Ambatovy-Analamay site includes three major climax vegetation types: thicket, evergreen humid forest, and marshland (following the classification of Moat & Smith, 2007), and their anthropogenic derivatives. (A different vegetation classification has been used by the Ambatovy project, which is reviewed by Goodman & Raselimanana (pp. 36-37)). The thicket is located on the ferrallitic crust mostly on the higher plateau areas, which have poorly developed soils containing little organic matter, and marshland is found in areas of impeded drainage generally within the thicket. The mine footprint largely coincides with the thicket because the richest nickel and cobalt deposits are situated below the ferrallitic crust. The

thicket is susceptible to burning from wild fires caused by humans and of natural origins (i.e. from lightning strikes). Forest is mainly located on the slopes. The proposed conservation zone comprises mostly forest and only small areas of thicket and marsh.

Materials and Methods

The MBG team has carried out fieldwork on a regular basis involving extensive plant specimen collecting since 2004. The results presented here are based on the study of these collections, together with those from the initial phase of botanical inventory work (1997 to 1999), and the relatively few historical herbarium specimens that are available in the relevant herbaria in Madagascar (TAN & TEF) and at the Muséum national d'Histoire naturelle, Paris (P). Fieldwork during the last six years has been conducted primarily by a team of field botanists from MBG, the Centre National d'Application des Recherches Pharmaceutique (CNARP), and the Parc Botanique et Zoologique de Tsimbazaza (PBZT). During this phase, the team has devoted nearly 3,500 person-days to inventory work at the Ambatovy-Analamay site. The material collected by the field team was supplemented by specimens provided by botanists who were invited to visit the site to contribute their specialist knowledge on particular plant groups. To date, 37 different botanists have contributed to the inventory effort.

The botanical inventory team has collected specimens across much of the Ambatovy-Analamay site, although emphasis has been placed on sampling the mine footprint. Collections that are more intensive will begin shortly in the surrounding proposed conservation zone. Precise geographical coordinates were recorded for each collection and the data are then mapped to reveal the distribution of individual taxa and of the overall inventory effort within the site. Each new period of sampling was orientated towards areas previously identified as under-sampled. Results from the inventory were reviewed yearly to detect and rectify potential issues such as under-sampling of certain growth forms or taxonomic groups. For example, early in the inventory, herbs, ferns, and palms had been under-sampled. Herbarium specimens were prepared according to the standard methods used by MBG throughout the world, as described in Dold *et al.* (2000). As far as possible each collection comprised multiple herbarium sheets, one of which was deposited in each of the following herbaria: PBZT (officially known by the acronym TAN), CNARP, P, and MBG (MO).

Table 1. The botanical inventory of the Ambatovy-Analamay site.

The list provided below includes all taxa recorded and identified from the Ambatovy-Analamay site, including 'morphospecies'. Each species name is followed by the total number of specimens recorded to date, and that by the SOC class (- = not SOC; ? = possible SOC; * = second population in the proposed conservation zone).

Part 1: Ferns and fern allies	No. of specimens	SOC class
Adiantaceae		
<i>Adiantum phanerophlebium</i> (Baker) C. Chr.	2	-
<i>Cheilanthes bergiana</i> Schtdl.	3	-
<i>Pellaea angulosa</i> (Bory ex Willd.) Baker	3	-
<i>Pellaea pectiniformis</i> Baker	3	-
<i>Pellaea tripinnata</i> Bonap.	2	-
<i>Pellaea viridis</i> (Forssk.) Prantl	5	-
Aspleniaceae		
<i>Asplenium aethiopicum</i> (Burm. f.) Bech.	6	-
<i>Asplenium anisophyllum</i> Kunze	8	-
<i>Asplenium auritum</i> Sw.	1	-
<i>Asplenium blastophorum</i> Hieron.	1	-
<i>Asplenium cancellatum</i> Alston	1	-
<i>Asplenium cuneatum</i> Lam.	2	-
<i>Asplenium dregeanum</i> Kunze	11	-
<i>Asplenium friesiorum</i> C. Chr.	1	-
<i>Asplenium geppii</i> Carruth.	2	-
<i>Asplenium herpetopteris</i> Baker var. <i>acutipinnata</i> (Bonap.) Tardieu	1	-
<i>Asplenium herpetopteris</i> Baker var. <i>masoulae</i> (Bonap.) Tardieu	1	-
<i>Asplenium herpetopteris</i> Baker var. <i>villosum</i> (Bonap.) Tardieu	1	-
<i>Asplenium lividum</i> Mett. ex Kuhn	1	-
<i>Asplenium macrophyllum</i> Sw.	1	-
<i>Asplenium nidus</i> L.	1	-
<i>Asplenium normale</i> D. Don	1	-
<i>Asplenium pellucidum</i> Lam.	2	-
<i>Asplenium petiolulatum</i> Mett.	3	-
<i>Asplenium poolii</i> Baker	3	-
<i>Asplenium sandersonii</i> Hook.	2	-
<i>Asplenium</i> sp. indet. 1	11	?
Blechnaceae		
<i>Blechnum attenuatum</i> (Sw.) Mett.	1	-
Cyatheaceae		
<i>Cyathea boivinii</i> Mett. ex Kuhn var. <i>concava</i> (Bonap.) Tardieu	4	-
<i>Cyathea boivinii</i> Mett. ex Kuhn var. <i>humblotii</i> (Baker) C. Chr.	2	-
<i>Cyathea boiviniiformis</i> Rakotondr. & Janssen	1	-
<i>Cyathea borbonica</i> Desv.	1	-
<i>Cyathea bullata</i> J. Sm. var. <i>bullata</i>	3	-
<i>Cyathea bullata</i> J. Sm. var. <i>lobata</i> Rakotondr.	1	-
<i>Cyathea bullata</i> J. Sm. var. <i>madagascarica</i> (Bonap.) Rakotondr.	1	-
<i>Cyathea decrescens</i> Mett.	1	-
<i>Cyathea dregei</i> Kunze	2	-
<i>Cyathea emilei</i> Rakotondr. & Janssen	2	-
<i>Cyathea hildebrandtii</i> Kuhn	3	-
<i>Cyathea pilosula</i> Tardieu	2	-
<i>Cyathea serratifolia</i> Baker	21	-
<i>Cyathea similis</i> C. Chr.	2	-
<i>Cyathea zakamenensis</i> Tardieu	2	-
Davalliaceae		
<i>Davallia denticulata</i> (Burm. f.) Mett. ex Kuhn	6	-
Dennstaedtiaceae		
<i>Blotiella madagascariensis</i> (Kaulf.) R.M. Tryon	1	-
<i>Histiopteris incisa</i> (Thunb.) J. Sm.	1	-
<i>Lindsaea madagascariensis</i> Baker	1	-
<i>Odontosoria melleri</i> (Hook. ex Baker) C. Chr.	1	-
<i>Pteridium aquilinum</i> (L.) Kuhn	1	-
<i>Saccoloma henriettae</i> (Baker) C. Chr.	2	-
<i>Sphenomeris chinensis</i> (L.) Maxon	2	-

Table 1. (cont.)

Part 1: Ferns and fern allies	No. of specimens	SOC class
Dryopteridaceae		
<i>Ctenitis cirrhosa</i> (Schumach.) Ching	1	-
<i>Didymochlaena truncatula</i> (Sw.) J. Sm.	2	-
<i>Lastreopsis boivinii</i> (Baker) Tardieu	1	-
<i>Rumohra adiantiformis</i> (G. Forst.) Ching	1	-
<i>Rumohra madagascariensis</i> (J. Sm.) Tardieu	1	-
Gleicheniaceae		
<i>Dicranopteris linearis</i> (Burm. f.) Underw.	2	-
Grammitidaceae		
<i>Ctenopteris excaudata</i> (Bonap.) Tardieu	1	-
<i>Ctenopteris zenkeri</i> (Hieron.) Tardieu	3	-
<i>Grammitis cryptophlebia</i> (Baker) Copel.	1	-
<i>Grammitis holophlebia</i> (Baker) Copel.	2	-
<i>Xiphopteris serrulata</i> (Sw.) Kaulf.	1	-
Hymenophyllaceae		
<i>Hymenophyllum hirsutum</i> (L.) Sw.	1	-
<i>Hymenophyllum perrieri</i> Tardieu	2	-
<i>Hymenophyllum sibthorpioides</i> Mett.	2	-
<i>Trichomanes rigidum</i> Sw.	1	-
Lomariopsidaceae		
<i>Elaphoglossum conforme</i> (Sw.) Schott	7	-
<i>Elaphoglossum coriaceum</i> Bonap.	3	-
<i>Elaphoglossum coursii</i> Tardieu	6	-
<i>Elaphoglossum didynamum</i> (Fée) T. Moore	1	-
<i>Elaphoglossum lepervanchii</i> (Bory) T. Moore	14	-
<i>Elaphoglossum poolii</i> (Baker) H. Christ	1	-
<i>Elaphoglossum</i> sp. nov. A	1	1
<i>Elaphoglossum subsessile</i> (Baker) C. Chr.	9	-
<i>Lomariopsis pollicina</i> (Willemet) Mett. ex Kuhn	2	-
Lycopodiaceae		
<i>Huperzia megastachya</i> (Baker) Tardieu	8	-
<i>Huperzia phlegmaria</i> (L.) Rothm. (var. uncertain)	1	-
<i>Huperzia phlegmaria</i> (L.) Rothm. var. <i>tardieuae</i> (Herter) Tardieu	1	-
<i>Huperzia</i> sp. indet 1	1	-
<i>Huperzia xiphophylla</i> (Baker) Tardieu	1	-
<i>Lycopodiella cernua</i> (L.) Pic. Serm.	4	-
<i>Lycopodiella inundata</i> (L.) Holub	1	-
Oleandraceae		
<i>Arthropteris monocarpa</i> (Cordem.) C. Chr.	2	-
<i>Nephrolepis biserrata</i> (Sw.) Schott	3	-
<i>Nephrolepis tuberosa</i> (Bory ex Willd.) C. Presl	1	-
<i>Nephrolepis undulata</i> (Afzel. ex Sw.) J. Sm.	7	-
<i>Oleandra distenta</i> Kunze	2	-
Osmundaceae		
<i>Osmunda regalis</i> L.	4	-
Ophioglossaceae		
<i>Ophioglossum palmatum</i> L.	2	-
Pteridaceae		
<i>Pteris elongatiloba</i> var. <i>remotivenia</i> Bonap.	1	-
<i>Pteris lancaefolia</i> J. Agardh	1	-
<i>Pteris madagascariensis</i> J. Agardh	2	-
<i>Pteris pseudolonchitis</i> Bory	1	-
Schizaeaceae		
<i>Lygodium lanceolatum</i> Desv.	6	-
<i>Schizaea dichotoma</i> (L.) J. Sm.	4	-
Selaginellaceae		
<i>Selaginella fissidentoides</i> (Hook. & Grev.) Spring	1	-
<i>Selaginella lyallii</i> (Hook. & Grev.) Spring	3	-
<i>Selaginella polymorpha</i> Badré	1	-
Thelypteridaceae		
<i>Christella distans</i> (Hook.) Holttum	2	-

Table 1. (cont.)

	No. of specimens	SOC class
Part 1: Ferns and fern allies		
<i>Macrothelypteris torresiana</i> (Gaudich.) Ching	1	-
<i>Pneumatopteris subpennigera</i> (C. Chr.) Holttum	2	-
<i>Thelypteris interrupta</i> (Willd.) K. Iwats.	2	-
Vittariaceae		
<i>Vittaria humblotii</i> Hieron.	3	-
<i>Vittaria</i> sp. indet. 1	1	?
Part 2: Seed plants		
Acanthaceae		
<i>Asystasia gangetica</i> (L.) T. Anderson	3	-
<i>Boutonia cuspidata</i> DC.	6	-
<i>Brachystephanus lyallii</i> Nees	5	-
<i>Hypoestes diclipteroides</i> Nees	1	-
<i>Hypoestes pulchra</i> Nees	1	-
<i>Hypoestes</i> sp. indet.	6	?
<i>Hypoestes verticillaris</i> (L. f.) Sol. ex Roem. & Schult.	1	-
<i>Isoglossa gracillima</i> Baker	1	-
<i>Justicia campanulata</i> Benoist	1	?
<i>Justicia rhodoptera</i> Baker	2	-
<i>Justicia</i> sp. nov. A aff. <i>J. haplostachya</i> (Nees) T. Anderson	2	?
<i>Lepidagathis vulpina</i> Benoist	1	-
<i>Melittacanthus divaricatus</i> S. Moore	1	1
<i>Mendoncia cowanii</i> (S. Moore) Benoist	12	-
<i>Mendoncia flagellaris</i> (Baker) Benoist	16	-
<i>Mendoncia</i> sp. nov. A	4	1
<i>Mimulopsis lanceolata</i> Baker	4	?
<i>Peristrophe</i> sp. indet. 1	1	?
<i>Ruellia ansericollis</i> Benoist	1	?
<i>Ruellia cyanea</i> (Nees) T. Anderson	3	-
<i>Stenandrium amoenum</i> (Benoist) Vollesen	1	2
<i>Thunbergia alata</i> Bojer ex Sims	1	-
Amaranthaceae		
<i>Amaranthus tristis</i> L.	1	-
Anacardiaceae		
<i>Abrahamia ditimena</i> (H. Perrier) Randrianasolo & Lowry	25	-
<i>Abrahamia elongata</i> Randrianasolo & Lowry	1	-
<i>Abrahamia minutifolia</i> Randrianasolo & Lowry	4	-
<i>Micronychia tsiramiramy</i> H. Perrier	16	-
<i>Micronychia tsiramiramy</i> var. <i>minutiflora</i> H. Perrier	1	-
<i>Protorhus nitida</i> Engl.	1	-
<i>Protorhus thouvenotii</i> Lecomte	3	-
<i>Rhus taratana</i> (Baker) H. Perrier	21	-
<i>Rhus thouarsii</i> (Engl.) H. Perrier	3	-
Annonaceae		
<i>Artabotrys mabifolius</i> Diels	9	-
<i>Monanthes pilosa</i> (Baill.) Verdc.	1	-
<i>Monanthes sororia</i> (Diels) Verdc.	1	-
<i>Polyalthia capuronii</i> Cavaco & Keraudren	1	-
<i>Polyalthia chapelieri</i> Baill.	1	-
<i>Polyalthia humbertii</i> Cavaco & Keraudren	2	-
<i>Uvaria</i> sp. indet. 1	1	-
<i>Xylopia beananensis</i> Cavaco & Keraudren	3	-
<i>Xylopia buxifolia</i> Baill.	4	-
<i>Xylopia flexuosa</i> Diels	1	?
<i>Xylopia humblotiana</i> Baill.	1	-
<i>Xylopia lamii</i> Cavaco & Keraudren	1	-
<i>Xylopia lemurica</i> Diels	4	-
Aphloiaceae		
<i>Aphloia theiformis</i> (Vahl) Benn. (subsp. uncertain)	17	-
<i>Aphloia theiformis</i> (Vahl) Benn. subsp. <i>madagascariensis</i> (Clos) H. Perrier	3	-

Table 1. (cont.)

Part 2: Seed plants	No. of specimens	SOC class
Apiaceae		
<i>Centella asiatica</i> (L.) Urb.	4	-
<i>Pseudocarum laxiflorum</i> (Baker) B.-E. van Wyk	1	-
<i>Sanicula elata</i> Buch.-Ham. ex D. Don	1	-
Apocynaceae		
<i>Baroniella acuminata</i> (Choux) Bullock	10	2*
<i>Baroniella linearis</i> (Choux) Bullock	6	-
<i>Campitocarpus mauritianus</i> (Lam.) Decne.	5	-
<i>Carissa boiviniana</i> (Baill.) Leeuwenb.	1	-
<i>Carissa spinarum</i> L.	7	-
<i>Ceropegia</i> sp. nov. A aff. <i>C. racemosa</i> N.E. Br.	2	2
<i>Craspidospermum verticillatum</i> Bojer ex A. DC.	19	-
<i>Cynanchum eurychitoides</i> (K. Schum.) K. Schum.	4	-
<i>Cynanchum leucanthum</i> (K. Schum.) K. Schum. in Engl. & Prantl	1	3
<i>Cynanchum moramangense</i> Choux	2	1
<i>Cynanchum obovatum</i> (Decne. in A. DC.) Choux	2	-
<i>Cynanchum repandum</i>	4	-
<i>Cynanchum</i> sp. indet. 1	2	?
<i>Gomphocarpus fruticosus</i> (L.) R. Br.	1	-
<i>Landolphia myrtifolia</i> (Poir.) Markgr.	2	-
<i>Mascarenhasia arborescens</i> A. DC.	3	-
<i>Mascarenhasia lisianthiflora</i> A. DC.	1	-
<i>Muntafara sessilifolia</i> (Baker) Pichon	1	-
<i>Oncinotis tomentella</i> Radlk.	3	-
<i>Pentopetia androsaemifolia</i> Decne.	5	-
<i>Pentopetia cotoneaster</i> Decne.	9	2
<i>Pentopetia longipetala</i> Klack.	6	2
<i>Pentopetia pinnata</i> Costantin & Gallaud	2	3
<i>Pentopetia</i> sp. indet. 1	3	?
<i>Pentopetia</i> sp. indet. 2	2	?
<i>Pentopetia urceolata</i> Klack.	5	-
<i>Petchia cryptophlebia</i> (Baker) Leeuwenb.	6	-
<i>Petchia erythrocarpa</i> (Vatke) Leeuwenb.	1	-
<i>Petchia madagascariensis</i> (A. DC.) Leeuwenb.	4	-
<i>Plectaneia</i> sp. nov. A	7	-
<i>Plectaneia thoursii</i> Roem. & Schult.	9	-
<i>Secamone bicolor</i> Decne.	4	-
<i>Secamone buxifolia</i> Decne.	2	-
<i>Secamone castanea</i> Klack.	1	-
<i>Secamone cristata</i> Jum. & H. Perrier	1	-
<i>Secamone discolor</i> K. Schum. & Vatke	1	-
<i>Secamone geayi</i> Costantin & Gallaud	1	-
<i>Secamone glaberrima</i> K. Schum.	4	3
<i>Secamone linearifolia</i> Klack.	2	-
<i>Secamone marsupiata</i> Klack.	1	?
<i>Secamone obovata</i> Decne.	3	-
<i>Secamone oleaefolia</i> Decne.	9	-
<i>Secamone perrieri</i> Choux	17	-
<i>Secamone pinnata</i> Choux	1	-
<i>Secamone</i> sp. nov. A	1	1
<i>Secamone</i> sp. nov. B aff. <i>S. perrieri</i> Choux	2	2
<i>Secamone</i> sp. nov. C aff. <i>S. buxifolia</i> Decne.	1	?
<i>Secamone tenuifolia</i> Decne.	2	?
<i>Secamone varia</i> Klack. var. <i>varia</i>	1	?
<i>Tabernaemontana retusa</i> (Lam.) Palacky	2	-
<i>Tylophora sylvatica</i> Decne.	1	-
<i>Voacanga thoursii</i> Roem. & Schult.	3	-
Aquifoliaceae		
<i>Ilex mitis</i> (L.) Radlk.	14	-
Araceae		
<i>Pothos scandens</i> L.	3	-

Table 1. (cont.)

Part 2: Seed plants	No. of specimens	SOC class
Araliaceae		
<i>Polyscias amplifolia</i> (Baker) Harms	4	-
<i>Polyscias chapelieri</i> (Drake) Harms ex R. Vig.	27	-
<i>Polyscias fraxinifolia</i> (Baker) R. Vig.	1	-
<i>Polyscias madagascariensis</i> (Seem.) Harms	9	-
<i>Polyscias multibracteata</i> (Baker) Harms	2	-
<i>Polyscias myrsine</i> Bernardi	3	-
<i>Polyscias ornifolia</i> (Baker) Harms	12	-
<i>Polyscias pentamera</i> (Baker) Harms	31	-
<i>Polyscias</i> sp. indet. Thouars ex Baill.	3	?
<i>Polyscias</i> sp. nov. A ('abrahamiana' ined.)	7	3
<i>Polyscias</i> sp. nov. B ('ambatovyensis' ined.)	9	2*
<i>Polyscias</i> sp. nov. C ('anjorobensis' ined.)	2	2
<i>Polyscias</i> sp. nov. D ('bernardiana' ined.)	8	-
<i>Polyscias</i> sp. nov. E ('orientalis' ined.)	18	-
<i>Polyscias tripinnata</i> Harms	1	-
<i>Polyscias zanthoxyloides</i> (Baker) Harms	6	-
<i>Schefflera longipedicellata</i> (Lecomte) Bernardi	6	-
<i>Schefflera staufferana</i> Bernardi	1	-
<i>Schefflera vantsilana</i> (Baker) Bernardi	6	-
Areaceae		
<i>Dypsis baronii</i> (Becc.) Beentje & J. Dransf.	2	-
<i>Dypsis catatiana</i> (Baill.) Beentje & J. Dransf.	5	-
<i>Dypsis concinna</i> Baker	2	-
<i>Dypsis heterophylla</i> Baker	5	-
<i>Dypsis hildebrandtii</i> (Baill.) Becc.	1	-
<i>Dypsis nodifera</i> Mart.	8	-
<i>Dypsis pinnatifrons</i> Mart.	7	-
<i>Dypsis</i> sp. nov. A aff. <i>D. nodifera</i> Mart. & <i>D. pinnatifrons</i> Mart.	12	-
<i>Dypsis</i> sp. nov. B aff. <i>D. hildebrandtii</i> (Baill.) Becc.	10	2*
<i>Ravenea madagascariensis</i> Becc.	1	-
Asparagaceae		
<i>Arthropodium caesioides</i> H. Perrier	1	-
<i>Asparagus simulans</i> Baker	12	-
<i>Dracaena fontanesiana</i> Schult.	10	-
<i>Dracaena reflexa</i> Lam. var. <i>reflexa</i>	13	-
<i>Dracaena reflexa</i> Lam. var. <i>linearifolia</i> Baker	1	-
<i>Dracaena</i> sp. indet. 1	4	-
<i>Dracaena</i> sp. indet. 2	6	?
<i>Dracaena</i> sp. indet. 3	4	2*
<i>Dracaena</i> sp. indet. 4	3	?
<i>Dracaena xiphophylla</i> Baker	2	-
<i>Drimia urGINEOIDES</i> (Baker) J.C. Manning & Goldblatt	1	-
Asteraceae		
<i>Acmella caulirhiza</i> Delile	1	-
<i>Ageratum conyzoides</i> L.	1	-
<i>Anisopappus salviifolius</i> (DC.) Wild	9	-
<i>Apodocephala pauciflora</i> Baker	5	-
<i>Brachylaena merana</i> (Baker) Humbert	4	-
<i>Brachylaena ramiflora</i> (DC.) Humbert	7	-
<i>Centauroopsis fruticosa</i> Bojer ex DC.	1	-
<i>Centauroopsis</i> sp. indet. 1	1	?
<i>Crassocephalum sarcobasis</i> (DC.) S. Moore	1	-
<i>Distephanus</i> sp. nov. A aff. <i>garnieriana</i> (Klatt) H. Rob. & B. Kahn	2	2*
<i>Distephanus garnierianus</i> (Klatt) H. Rob. & B. Kahn	13	-
<i>Distephanus glutinosus</i> (DC.) H. Rob. & B. Kahn	2	-
<i>Distephanus lastellei</i> (Drake) H. Rob. & B. Kahn	1	-
<i>Emilia adscendens</i> DC.	2	-
<i>Emilia citrina</i> DC.	2	-
<i>Emilia humifusa</i> DC.	2	-
<i>Emilia integrifolia</i> Baker	6	-

Table 1. (cont.)

Part 2: Seed plants	No. of specimens	SOC class
<i>Ethulia conyzoides</i> L. f.	3	-
<i>Gerbera diversifolia</i> Humbert	1	-
<i>Gerbera piloselloides</i> (L.) Cass.	2	-
<i>Grangeopsis perrieri</i> Humbert	1	?
<i>Helichrysum fulvescens</i> DC.	3	-
<i>Helichrysum gymnocephalum</i> (DC.) Humbert	1	-
<i>Helichrysum mutisiaefolium</i> Less. (var. uncertain)	2	-
<i>Helichrysum mutisiaefolium</i> Less. var. <i>megalocephalum</i> Humbert	2	-
<i>Helichrysum plantago</i> DC.	1	-
<i>Helichrysum retrorsum</i> DC.	10	-
<i>Helichrysum selaginifolium</i> (DC.) R. Vig. & Humbert	1	-
<i>Helichrysum</i> sp. indet. 1	2	?
<i>Helichrysum</i> sp. nov. A. aff. <i>H. ambondrombeense</i> Humbert	1	1
<i>Inula speciosa</i> (DC.) O. Hoffm.	4	3
<i>Mikania scandens</i> (L.) Willd.	3	-
<i>Oliganthes lanuginosa</i> (Bojer ex DC.) Humbert	1	-
<i>Oliganthes meranoides</i> Humbert	10	-
<i>Psiadia altissima</i> (DC.) Drake	2	-
<i>Psiadia lucida</i> (Cass.) Drake	2	-
<i>Psiadia serrata</i> (Humbert) Humbert	2	-
<i>Senecio emirnensis</i> DC.	4	-
<i>Senecio faujasioides</i> Baker	6	-
<i>Senecio hypargyraeus</i> DC.	1	-
<i>Senecio multidenticulatus</i> Humbert	4	?
<i>Senecio myricaefolius</i> (Bojer ex DC.) Humbert	8	-
<i>Senecio</i> sp. indet. 1	3	?
<i>Senecio</i> sp. nov. A. aff. <i>S. multidenticulatus</i> Humbert	1	1
<i>Stenocline inuloides</i> DC.	1	-
<i>Vernonia alleizettei</i> Humbert	4	-
<i>Vernonia antanala</i> Humbert	1	-
<i>Vernonia appendiculata</i> Less.	1	-
<i>Vernonia chapelieri</i> Drake	1	-
<i>Vernonia cinerea</i> (L.) Less. subsp. <i>vialis</i> (DC.) Humbert	1	-
<i>Vernonia coursii</i> Humbert	1	-
<i>Vernonia dissoluta</i> Baker	2	-
<i>Vernonia garnieriana</i> Klatt	3	?
<i>Vernonia pachyclada</i> Baker	3	-
<i>Vernonia rubicunda</i> Klatt	1	-
<i>Vernonia secundifolia</i> Bojer ex DC. (subsp. uncertain)	10	-
<i>Vernonia secundifolia</i> Bojer ex DC. subsp. <i>secundifolia</i>	2	-
<i>Vernonia</i> sp. indet. 1	7	?
<i>Vernonia speiracephala</i> Baker	3	-
<i>Vernonia streptoclada</i> Baker	2	-
<i>Vernonia trichodesma</i> Baker	2	-
Asteropeiaceae		
<i>Asteropeia mcphersonii</i> G.E. Schatz, Lowry & A.-E. Wolf	19	-
<i>Asteropeia rhopaloides</i> (Baker) Baill.	14	-
<i>Asteropeia</i> sp. indet. 1	10	-
Balsaminaceae		
<i>Impatiens firmula</i> Baker	30	-
<i>Impatiens lyallii</i> Baker	1	-
<i>Impatiens manaharensis</i> Baill.	2	-
Basellaceae		
<i>Basella leandriana</i> H. Perrier	1	-
Bignoniaceae		
<i>Colea fusca</i> H. Perrier	8	2
<i>Colea lutescens</i> H. Perrier	1	-
<i>Colea</i> sp. nov. A	3	2*
<i>Ophiocolea floribunda</i> (Bojer ex Lindl.) H. Perrier	1	-
<i>Phyllarthron madagascariense</i> K. Schum.	1	-
<i>Rhodocolea</i> sp. nov. A	3	2*

Table 1. (cont.)

Part 2: Seed plants	No. of specimens	SOC class
<i>Stereospermum arcuatum</i> H. Perrier	1	?
Boraginaceae		
<i>Tournefortia puberula</i> Baker	1	-
Burmanniaceae		
<i>Gymnosiphon danguyanus</i> H. Perrier	1	-
Burseraceae		
<i>Canarium madagascariense</i> Engl. in A. DC. & C. DC.	3	-
<i>Canarium obtusifolium</i> Scott-Elliot	1	-
<i>Canarium</i> sp. nov. A	2	?
<i>Canarium</i> sp. nov. B ('egregium' ined.)	8	3
<i>Canarium</i> sp. nov. C ('scholasticum' ined.)	2	-
Buxaceae		
<i>Buxus monticola</i> G.E. Schatz & Lowry	1	-
Cactaceae		
<i>Rhipsalis baccifera</i> (J.S. Muell.) Stearn	13	-
Calophyllaceae		
<i>Calophyllum drouhardii</i> H. Perrier	4	-
<i>Calophyllum milvum</i> P.F. Stevens	8	-
<i>Calophyllum parviflorum</i> Bojer ex Baker	1	-
Campanulaceae		
<i>Lobelia agrestis</i> E. Wimm.	2	-
<i>Lobelia anceps</i> L. f.	1	-
<i>Lobelia filiformis</i> Lam.	1	-
<i>Lobelia hartlaubii</i> Buchenau	1	-
<i>Lobelia serpens</i> Lam.	2	-
<i>Wahlenbergia madagascariensis</i> A. DC.	1	-
Canellaceae		
<i>Cinnamosma fragrans</i> Baill.	7	-
Cannabaceae		
<i>Celtis gomphophylla</i> Baker	2	-
<i>Trema orientalis</i> (L.) Blume	1	-
Caryophyllaceae		
<i>Drymaria cordata</i> (L.) Willd. ex Schult.	1	-
Celastraceae		
<i>Brexia montana</i> H. Perrier	12	-
<i>Brexia illiifolia</i> H. Perrier	3	-
<i>Brexia longipes</i> H. Perrier	1	-
<i>Elaeodendron alluaudianum</i> H. Perrier	4	-
<i>Elaeodendron micranthum</i> Tul.	12	-
<i>Gymnosporia leptopus</i> (Tul.) Baker	1	-
<i>Hartogiopsis</i> sp. indet. 1	2	?
<i>Hartogiopsis trilobocarpa</i> (Baker) H. Perrier	20	-
<i>Loeseneriella</i> sp. indet. 1	1	?
<i>Mystroxyton aethiopicum</i> (Thunb.) Loes.	18	-
<i>Polycardia phyllanthoides</i> (Lam.) DC.	4	-
<i>Pristimera</i> sp. indet. 1	1	?
<i>Salacia madagascariensis</i> (Lam.) DC.	12	-
<i>Salacia</i> sp. indet. 1	0	?
<i>Salacia</i> sp. indet. 2	1	?
Clusiaceae		
<i>Garcinia chapelieri</i> (Planch. & Triana) H. Perrier	1	-
<i>Garcinia orthoclada</i> Baker	45	-
<i>Garcinia parvulus</i> (H. Perrier) P. Sweeney & Z.S. Rogers	1	-
<i>Garcinia</i> sp. nov. A	2	?
<i>Garcinia urschii</i> (H. Perrier) P. Sweeney & Z.S. Rogers	1	?
<i>Garcinia verrucosa</i> Jum. & H. Perrier	5	-
<i>Mammea</i> sp. indet. 1	12	?
<i>Mammea vatoensis</i> P.F. Stevens	1	-
<i>Ochrocarpos humblotii</i> Drake	8	-
<i>Ochrocarpos orthocladus</i> (Baker) H. Perrier	14	2*
<i>Ochrocarpos</i> sp. nov. A	2	?

Table 1. (cont.)

Part 2: Seed plants	No. of specimens	SOC class
<i>Ochrocarpos</i> sp. nov. B	9	?
<i>Ochrocarpos tsaratananae</i> H. Perrier	1	-
<i>Rheedia calcicola</i> Jum. & H. Perrier	4	-
<i>Symphonia eugenioides</i> Baker	1	-
<i>Symphonia fasciculata</i> (Noronha ex Thouars) Vesque in A. DC. & C. DC.	2	-
<i>Symphonia louvelii</i> Jum. & H. Perrier	3	-
<i>Symphonia macrocarpa</i> Jum. & H. Perrier	1	-
<i>Symphonia microphylla</i> (Hils. & Bojer ex Cambess.) Benth. & Hook. f. ex Vesque	1	-
<i>Symphonia nectarifera</i> Jum. & H. Perrier	3	-
<i>Symphonia pauciflora</i> Baker	11	-
<i>Symphonia</i> sp. indet. 1	5	?
<i>Symphonia</i> sp. nov. A ('spatulata' ined.)	1	?
<i>Symphonia tanalensis</i> Jum. & H. Perrier	1	-
<i>Symphonia urophylla</i> (Decne. ex Planch. & Triana) Benth. & Hook. f. ex Vesque	3	-
Combretaceae		
<i>Combretum</i> sp. nov. A	2	2
<i>Terminalia rufovestita</i> Capuron	10	-
<i>Terminalia tetrandra</i> (P. Danguy ex Lecomte) Capuron	4	-
Commelinaceae		
<i>Coleotrype baroni</i> Baker	1	-
<i>Coleotrype goudotii</i> C.B. Clarke	5	-
<i>Commelina lyallii</i> (C.B. Clarke) H. Perrier	8	-
<i>Commelina madagascariensis</i> C.B. Clarke	1	-
<i>Commelina nudiflora</i> L.	1	-
<i>Cyanotis speciosa</i> (L. f.) Hassk.	2	-
<i>Cyanotis</i> sp. indet. 1	1	-
<i>Floscopa glomerata</i> (Willd. ex Schult. & Schult. f.) Hassk.	4	-
<i>Pseudoparis cauliflora</i> H. Perrier	1	?
Connaraceae		
<i>Agelaea pentagyna</i> (Lam.) Baill.	2	-
<i>Cnestis polyphylla</i> Lam.	3	-
Cornaceae		
<i>Alangium grisolleoides</i> Capuron	6	-
Crassulaceae		
<i>Kalanchoe campanulata</i> (Baker) Baill.	2	-
<i>Kalanchoe gracilipes</i> (Baker) Baill.	1	-
<i>Kalanchoe peltata</i> (Baker) Baill.	4	-
<i>Kalanchoe porphyrocalyx</i> (Baker) Baill.	4	-
Cucurbitaceae		
<i>Ampelosycios humblotii</i> (Cogn.) Jum. & H. Perrier	1	?
<i>Zehneria emirnensis</i> (Baker) Keraudren	1	-
<i>Zehneria perrieri</i> Keraudren	1	-
Cunoniaceae		
<i>Weinmannia bojeriana</i> Tul.	14	-
<i>Weinmannia eriocarpa</i> Tul.	6	-
<i>Weinmannia hildebrandtii</i> Baill.	5	-
<i>Weinmannia humblotii</i> Baill.	2	-
<i>Weinmannia minutiflora</i> Baker	2	-
<i>Weinmannia rutenbergii</i> Engl.	21	-
<i>Weinmannia stenostachya</i> Baker	1	-
Cyperaceae		
<i>Baumea iridifolia</i> (Willd. ex Link) Boeck.	1	-
<i>Bulbostylis abortiva</i> (Steud.) C.B. Clarke	1	-
<i>Bulbostylis micranthera</i> Cherm.	2	-
<i>Bulbostylis renschii</i> (Boeck.) C.B. Clarke	1	-
<i>Carex elatior</i> Boeck.	1	-
<i>Carex euryphylla</i> Cherm.	4	-
<i>Carex graminifolia</i> Cherm.	1	-
<i>Carex hovarum</i> Cherm.	3	-
<i>Carex madagascariensis</i> Boeck.	2	-
<i>Carex pyramidalis</i> Kük.	1	-

Table 1. (cont.)

Part 2: Seed plants	No. of specimens	SOC class
<i>Carex renschiana</i> Boeck.	4	-
<i>Carex sphaerogyna</i> Baker	1	-
<i>Carex valbrayi</i> H. Lév.	7	-
<i>Costularia laxa</i> Cherm.	1	-
<i>Costularia leucocarpa</i> (Ridl.) H. Pfeiff.	10	-
<i>Costularia</i> sp. nov. A. aff. <i>C. baronii</i> C.B. Clarke	1	?
<i>Cyperus aequalis</i> Vahl	1	-
<i>Cyperus chamaecephalus</i> Cherm.	1	?
<i>Cyperus confusus</i> Cherm.	1	-
<i>Cyperus distans</i> L. f.	1	-
<i>Cyperus haspan</i> L.	1	-
<i>Cyperus longifolius</i> Poir.	1	-
<i>Cyperus obtusiflorus</i> Vahl	1	-
<i>Cyperus pectinatus</i> Hilsenberg & Bojer	2	-
<i>Cyperus plantaginifolius</i> Cherm.	8	?
<i>Cyperus psammophilus</i> Cherm.	6	-
<i>Cyperus rufostriatus</i> C.B. Clarke ex Cherm.	1	-
<i>Cyperus sciaphilus</i> Cherm.	1	-
<i>Cyperus</i> sp. indet. 1	3	?
<i>Cyperus subaequalis</i> Baker	5	-
<i>Eleocharis baronii</i> Baker	2	2*
<i>Eleocharis dulcis</i> (Burm. f.) Trin. ex Hensch.	1	-
<i>Eleocharis fistulosa</i> Link	1	-
<i>Eleocharis limosa</i> C.B. Clarke	1	-
<i>Eleocharis plantaginea</i> R. Br.	2	-
<i>Eleocharis variegata</i> (Poir.) C. Presl	1	-
<i>Fimbristylis madagascariensis</i> Boeck.	1	-
<i>Kyllinga elatior</i> Kunth	1	-
<i>Kyllinga erecta</i> Schumach.	1	-
<i>Kyllinga nemoralis</i> (J.R. Forst. & G. Forst.) Dandy ex Hutch.	2	-
<i>Lipocarpa chinensis</i> (Osbeck) Kern	2	-
<i>Pycreus ferrugineus</i> (Poir.) C.B. Clarke	3	2*
<i>Pycreus macrostachyos</i> (Lam.) J. Raynal subsp. <i>tremulus</i> (Poir.) Lye	3	-
<i>Pycreus nitidus</i> (Lam.) J. Raynal	1	-
<i>Pycreus polystachyos</i> (Rottb.) P. Beauv.	4	-
<i>Rhynchospora holoschoenoides</i> (Rich.) Herter	5	-
<i>Rhynchospora</i> sp. nov. A	4	2*
<i>Scirpus fluitans</i> L.	1	-
<i>Scleria baronii</i> C.B. Clarke ex Cherm.	2	-
<i>Scleria boivinii</i> Steud.	1	-
<i>Scleria lagoensis</i> Boeckeler subsp. <i>canaliculatotriquetra</i> (Boeckeler) Lye	1	-
<i>Scleria madagascariensis</i> Boeckeler	7	2*
<i>Scleria rutenbergiana</i> Boeckeler	1	-
Dichapetalaceae		
<i>Dichapetalum chlorinum</i> (Tul.) Engl.	3	-
<i>Dichapetalum leucosia</i> (Spreng.) Engl.	6	-
<i>Dichapetalum pachypus</i> (Tul.) Engl.	14	-
<i>Dichapetalum</i> sp. indet. 1	11	?
Dilleniaceae		
<i>Hibbertia coriacea</i> (Pers.) Baill.	9	-
Dioscoreaceae		
<i>Dioscorea arcuatineris</i> Hochr.	1	-
<i>Dioscorea bulbifera</i> L.	1	-
<i>Dioscorea seriflora</i> Jum. & H. Perrier	1	-
<i>Tacca artocarpifolia</i> Seem.	2	-
Droseraceae		
<i>Drosera madagascariensis</i> DC.	1	-
Ebenaceae		
<i>Diospyros gracilipes</i> Hiern	4	-

Table 1. (cont.)

Part 2: Seed plants	No. of specimens	SOC class
<i>Diospyros haplostylis</i> Boivin ex Hiern	11	-
<i>Diospyros myriophylla</i> (H. Perrier) ined.	18	-
<i>Diospyros</i> sp. indet. 1	22	?
<i>Diospyros</i> sp. nov. A ('macrophylla ined.')	1	-
<i>Diospyros</i> sp. nov. B	2	-
<i>Diospyros</i> sp. nov. C	1	?
<i>Diospyros sphaerosepala</i> Baker	7	-
<i>Diospyros viguieriana</i> H. Perrier	1	-
<i>Maba montigena</i> H. Perrier	2	2*
Elaeocarpaceae		
<i>Elaeocarpus capuronii</i> Tirel	1	-
<i>Elaeocarpus hildebrandtii</i> Baill.	3	-
<i>Elaeocarpus subserratus</i> Baker	9	-
<i>Sloanea rhodantha</i> (Baker) Capuron (var. uncertain)	5	-
<i>Sloanea rhodantha</i> (Baker) Capuron var. <i>rhodantha</i>	2	-
Ericaceae		
<i>Agarista salicifolia</i> (Comm. ex Lam.) Hook. f. ex Oliv.	1	-
<i>Agauria bojeri</i> (DC.) Benth.	10	-
<i>Agauria salicifolia</i> (Comm. ex Lam.) Hook. f. ex Oliv. var. <i>megalophylla</i> Sleumer	1	-
<i>Agauria</i> sp. indet. 1	5	?
<i>Erica cryptoclada</i> (Baker) Dorr & E.G.H. Oliv.	1	-
<i>Erica</i> sp. indet. 1 (cf. <i>E. goudotiana</i> (Klotzsch) Dorr & E.G.H. Oliv.)	1	-
<i>Erica</i> sp. indet. 2	2	?
<i>Erica</i> sp. nov. A. ('senescens' ined.)	8	2*
<i>Vaccinium emimense</i> Hook.	16	-
<i>Vaccinium secundiflorum</i> Hook.	9	-
<i>Vaccinium</i> sp. indet. 1	2	?
Eriocaulaceae		
<i>Eriocaulon bifistulosum</i> Van Heurck & Müll. Arg.	2	-
<i>Eriocaulon fenestratum</i> Bojer ex Körn.	5	-
<i>Eriocaulon longifolium</i> Nees ex Kunth	2	-
<i>Eriocaulon</i> sp. indet. 1	7	?
<i>Eriocaulon trilobatum</i> Ruhland	2	-
<i>Mesanthemum pubescens</i> (Lam.) Körn.	1	-
Erythroxylaceae		
<i>Erythroxylum capitatum</i> Baker	1	-
<i>Erythroxylum corymbosum</i> Boivin ex Baill.	4	-
<i>Erythroxylum ferrugineum</i> Cav.	16	-
<i>Erythroxylum ferrugineum</i> Cav. fo. <i>myrtoide</i> (Bojer) H. Perrier	1	-
<i>Erythroxylum nitidulum</i> Baker	4	-
<i>Erythroxylum pervillei</i> Baill.	1	-
<i>Erythroxylum pyrifolium</i> Baker	4	-
<i>Erythroxylum</i> sp. nov. A	1	2
<i>Erythroxylum</i> sp. nov. B	1	2
<i>Erythroxylum</i> sp. nov. C	4	2*
<i>Erythroxylum</i> sp. nov. D	13	2
<i>Erythroxylum</i> sp. nov. E	1	1
<i>Erythroxylum</i> sp. nov. F	1	1
<i>Erythroxylum</i> sp. nov. G	1	1
<i>Erythroxylum</i> sp. nov. H	1	1
<i>Erythroxylum</i> sp. indet. 1	28	?
<i>Erythroxylum sphaeranthum</i> H. Perrier	4	-
Euphorbiaceae		
<i>Acalypha filiformis</i> Poir.	5	-
<i>Acalypha reticulata</i> (Poir.) Müll. Arg.	3	-
<i>Amyrea humbertii</i> Leandri	6	-
<i>Amyrea stenocarpa</i> Radcl.-Sm.	3	1
<i>Benoistia orientalis</i> Radcl.-Sm.	5	-
<i>Claoxylon lancifolium</i> (Prain) Leandri	3	3
<i>Claoxylon perrieri</i> Leandri	2	-
<i>Claoxylopsis perrieri</i> Leandri	1	-

Table 1. (cont.)

Part 2: Seed plants	No. of specimens	SOC class
<i>Claoxylopsis purpurascens</i> Radcl.-Sm.	16	3*
<i>Conosapium madagascariense</i> Müll. Arg.	1	-
<i>Croton alceicornu</i> Radcl.-Sm.	2	2*
<i>Croton droguetioides</i> Radcl.-Sm.	3	2*
<i>Croton hovarum</i> Leandri	2	-
<i>Croton humbertii</i> Leandri	4	-
<i>Croton jennyanus</i> Gris. ex Baillon	7	-
<i>Croton lepidotooides</i> Radcl.-Sm.	13	2*
<i>Croton lichenisilvae</i> Leandri	16	-
<i>Croton macrobuxus</i> Baill. (var. uncertain)	5	-
<i>Croton macrobuxus</i> Baill. var. <i>glandulifer</i> Radcl.-Sm.	1	-
<i>Croton nitidulus</i> Baker	25	-
<i>Croton nitidulus</i> var. <i>cinereum</i> Radcl.-Sm.	1	-
<i>Croton noronhae</i> Baill.	1	-
<i>Croton</i> sp. nov. A aff. <i>C. nitidulus</i> Baker	6	2*
<i>Croton</i> sp. nov. B aff. <i>C. jenny anum</i> Gris. ex Baillon	1	1
<i>Croton submetallicus</i> Baill.	10	-
<i>Croton thouarsianus</i> Baill.	1	-
<i>Croton trichotomus</i> Geiseler	1	-
<i>Domohinea perrieri</i> Leandri	8	-
<i>Euphorbia bakeriana</i> Baill.	12	-
<i>Euphorbia rangovalensis</i> Leandri	10	2
<i>Euphorbia tetraptera</i> Baker	6	-
<i>Euphorbia verticillatum</i> L.	7	-
<i>Excoecaria goudotiana</i> (Baill.) Müll. Arg.	11	?
<i>Excoecaria madagascariensis</i> (Baill.) Müll. Arg.	2	-
<i>Lautenbergia coriacea</i> (Baill.) Pax	1	-
<i>Lobanilia bakeriana</i> (Baill.) Radcl.-Sm.	5	-
<i>Macaranga alnifolia</i> Baker	1	-
<i>Macaranga ankafinensis</i> Baill.	14	-
<i>Macaranga boutonioides</i> Baill.	7	-
<i>Macaranga echinocarpa</i> Baker	5	-
<i>Macaranga grillata</i> McPherson	1	-
<i>Macaranga macropoda</i> Baker	5	-
<i>Macaranga myriolepidea</i> Baker	3	-
<i>Macaranga oblongifolia</i> Baill.	1	-
<i>Macaranga perrieri</i> Leandri	1	-
<i>Macaranga racemosa</i> Baker	3	2*
<i>Macaranga</i> sp. indet. 1	9	?
<i>Macaranga sphaerophylla</i> Baker	2	-
<i>Mallotus capuronii</i> (Leandri) McPherson	12	-
<i>Mallotus spinulosus</i> McPherson	22	-
<i>Omphalandra oppositifolia</i> (Willd.) Kuntze	2	-
<i>Omphalea oppositifolia</i> (Willd.) L.J. Gillespie	18	-
<i>Orfilea coriacea</i> Baill.	8	-
<i>Suregada adenophora</i> Baill.	4	-
<i>Suregada boiviniana</i> Baill.	30	-
<i>Suregada boiviniana</i> var. <i>boiviniana</i> Baill.	2	-
<i>Suregada grandiflora</i> Radcl.-Sm.	1	-
<i>Suregada laurina</i> Baill.	1	-
<i>Suregada nigricaulis</i> Radcl.-Sm.	4	?
<i>Tannodia perrieri</i> (Leandri) Radcl.-Sm.	5	-
<i>Thecacoris</i> sp. nov. A	1	?
<i>Tragia cocculifolia</i> Prain (var. uncertain)	7	-
<i>Tragia cocculifolia</i> Prain var. <i>glabrescens</i> Leandri	1	1
<i>Tragia perrieri</i> Leandri	19	2*
Fabaceae		
<i>Abrus aureus</i> R. Vig. subsp. <i>aureus</i>	2	-
<i>Acacia pentagona</i> Schumach. & Thonn Hook. f.	4	-
<i>Adenanthera mantaroa</i> Villiers	1	-
<i>Albizia adianthifolia</i> (Schumach.) W. Wight (var. uncertain)	2	-

Table 1. (cont.)

Part 2: Seed plants	No. of specimens	SOC class
<i>Albizia adianthifolia</i> (Schumach.) W. Wight var. <i>adianthifolia</i>	3	-
<i>Albizia adianthifolia</i> (Schumach.) W. Wight var. <i>intermedia</i> De Wild. & T. Durand Villiers	3	-
<i>Caesalpinia delphinensis</i> Du Puy & R. Rabev.	1	-
<i>Chamaecrista latericola</i> (R. Vig.) Du Puy	1	-
<i>Chamaecrista pratensis</i> (R. Vig.) Du Puy	1	-
<i>Crotalaria grahamiana</i> Wight & Arn.	1	-
<i>Crotalaria lanceolata</i> E. Mey.	1	-
<i>Dalbergia baronii</i> Baker	1	-
<i>Dalbergia monticola</i> Bosser & R. Rabev.	4	-
<i>Desmodium adscendens</i> (Sw.) DC.	3	-
<i>Desmodium hirtum</i> Guill. & Perr.	1	-
<i>Desmodium incanum</i> DC.	1	-
<i>Dichrostachys tenuifolia</i> Benth.	10	-
<i>Entada louvelii</i> (R. Vig.) Brenan	7	-
<i>Entada pervillei</i> (Vatke) R. Vig.	1	-
<i>Eriosema procumbens</i> Benth. ex Baker	1	-
<i>Mundulea viridis</i> R. Vig.	5	-
<i>Ophrestia lyallii</i> (Benth.) Verdc. subsp. <i>orientalis</i> Du Puy & Labat	1	-
<i>Peltiera nitida</i> Du Puy & Labat	14	3
<i>Phylloxylon xylophylloides</i> (Baker) Du Puy, Labat & Schrire	9	-
<i>Senna petersiana</i> (Bolle) Lock	1	-
<i>Strongylodon craveniae</i> Baron & Baker	3	-
<i>Strongylodon madagascariensis</i> Baker	7	-
<i>Viguieranthus cylindricostachys</i> Villiers	7	-
<i>Viguieranthus kony</i> (R. Vig.) Villiers	1	-
<i>Viguieranthus subauriculatus</i> Villiers	1	-
<i>Zornia puberula</i> Mohlenbr.	1	-
Flagellariaceae		
<i>Flagellaria indica</i> L.	6	-
Gelsemiaceae		
<i>Mostuea brunonis</i> Didr.	21	-
Gentianaceae		
<i>Anthocleista amplexicaulis</i> Baker	4	-
<i>Anthocleista longifolia</i> (Lam.) Boiteau	1	-
<i>Anthocleista madagascariensis</i> Baker	25	-
<i>Anthocleista</i> sp. indet. 1	5	?
<i>Exacum bulbiferum</i> Baker	1	1
<i>Exacum exiguum</i> Klack.	1	-
<i>Exacum quinquenervium</i> Griseb.	2	-
<i>Ornichia lancifolia</i> (Baker) Klack.	1	-
<i>Tachiadenus carinatus</i> (Desr.) Griseb.	1	-
Hamamelidaceae		
<i>Dicoryphe laurina</i> Baill.	6	2
<i>Dicoryphe</i> sp. indet. 1	4	?
<i>Dicoryphe stipulacea</i> J. St.-Hil.	1	-
<i>Dicoryphe viticoides</i> Baker	1	-
Hydrocharitaceae		
<i>Ottelia ulvifolia</i> (Planch.) Walp.	3	-
Hypericaceae		
<i>Harungana madagascariensis</i> Lam. ex Poir.	4	-
<i>Psorospermum androsaemifolium</i> Baker	4	-
<i>Psorospermum cerasifolium</i> Baker	1	-
<i>Psorospermum fanerana</i> Baker	2	-
<i>Psorospermum ferrovestitum</i> Baker	1	-
<i>Psorospermum lanceolatum</i> (Choisy) Hochr.	1	-
<i>Psorospermum molluscum</i> (Pers.) Hochr.	10	?
<i>Psorospermum nervosum</i> H. Perrier	5	1
<i>Psorospermum</i> sp. nov. A aff. <i>P. rienanense</i> H. Perrier	2	2
<i>Psorospermum</i> sp. nov. B	4	2*
<i>Psorospermum trichophyllum</i> Baker	17	-
Hypoxidaceae		

Table 1. (cont.)

Part 2: Seed plants	No. of specimens	SOC class
<i>Hypoxis angustifolia</i> Lam.	3	-
Icacinaceae		
<i>Apodytes dimidiata</i> E. Mey. ex Arn.	19	-
<i>Cassinopsis madagascariensis</i> Baill.	16	-
<i>Cassinopsis</i> sp. nov. A	10	2*
<i>Leptaulus citroides</i> Baill.	1	-
<i>Pyrenacantha chlorantha</i> Baker	6	-
<i>Pyrenacantha humblotii</i> (Baill. ex Grandid.) Sleumer	3	3
<i>Pyrenacantha laetevirens</i> Sleumer	1	-
Iridaceae		
<i>Aristea cladocarpa</i> Baker	13	-
<i>Aristea kitchingii</i> Baker	1	-
<i>Crocoshmia x crocosmiiflora</i> (Lemoine) N.E. Br.	2	-
Juncaceae		
<i>Juncus effusus</i> L.	1	-
Lamiaceae		
<i>Clerodendrum arenarium</i> Baker	5	-
<i>Clerodendrum elliotii</i> Moldenke	1	-
<i>Clerodendrum macrocalycinum</i> Baker	2	-
<i>Clerodendrum petunioides</i> Baker	1	-
<i>Clerodendrum putre</i> Schau in A. DC.	3	-
<i>Clerodendrum</i> sp. indet. 1	6	?
<i>Plectranthus bojeri</i> (Benth.) Hedge	2	-
<i>Plectranthus emirnensis</i> (Baker) Hedge	2	-
<i>Plectranthus hexaphyllus</i> Baker	6	-
<i>Plectranthus melleri</i> Baker	2	-
<i>Plectranthus vestitus</i> Benth.	13	-
<i>Premna corymbosa</i> (Burm. f.) Rottler & Willd.	3	-
<i>Pycnostachys coerulea</i> Hook.	2	-
<i>Vitex befotakensis</i> Moldenke	2	-
<i>Vitex bojeri</i> Schau	13	-
<i>Vitex coursii</i> Moldenke	15	3
<i>Vitex oscitans</i> Moldenke	3	-
<i>Vitex pachyclada</i> Baker	21	-
<i>Vitex pulchra</i> Moldenke	3	-
<i>Vitex</i> sp. indet. 1	4	?
<i>Vitex</i> sp. nov. A	1	-
<i>Vitex</i> sp. nov. B	3	-
Lauraceae		
<i>Aspidostemon conoideum</i> Van der Werff	1	1
<i>Beilschmiedia opposita</i> Kosterm.	1	-
<i>Beilschmiedia pedicellata</i> van der Werff	6	-
<i>Cryptocarya aromatica</i> (Becc.) Kosterm.	1	-
<i>Cryptocarya crassifolia</i> Baker	5	-
<i>Cryptocarya dealbata</i> Baker	3	-
<i>Cryptocarya fulva</i> Kosterm.	1	?
<i>Cryptocarya helicina</i> Kosterm.	1	?
<i>Cryptocarya myristicoides</i> Baker	3	2*
<i>Cryptocarya ovalifolia</i> (Danguy) van der Werff	1	-
<i>Cryptocarya pervillei</i> Baill.	31	2*
<i>Cryptocarya</i> sp. indet. 1	20	?
<i>Cryptocarya</i> sp. nov. A ('acuminata' ined.)	1	-
<i>Cryptocarya</i> sp. nov. B ('elliptica' ined.)	4	-
<i>Cryptocarya</i> sp. nov. C ('gracilis' ined.)	1	-
<i>Cryptocarya spathulata</i> Kosterm.	10	-
<i>Ocotea cymosa</i> (Nees) Palacky	2	-
<i>Ocotea foveolata</i> Kosterm.	6	?
<i>Ocotea humberitii</i> Kosterm.	1	?
<i>Ocotea laevis</i> Kosterm.	7	-
<i>Ocotea macrocarpa</i> Kosterm.	1	-
<i>Ocotea madagascariensis</i> (Meisn.) Palacky	1	-

Table 1. (cont.)

Part 2: Seed plants	No. of specimens	SOC class
<i>Ocotea perforata</i> Kosterm.	1	-
<i>Ocotea racemosa</i> (P. Danguy) Kosterm.	7	-
<i>Ocotea</i> sp. indet. 1	1	?
<i>Ocotea</i> sp. indet. 2	1	?
<i>Ocotea</i> sp. indet. 3	22	?
<i>Ocotea</i> sp. indet. 4 cf. <i>O. laevis</i> Kosterm.	2	?
<i>Ocotea thouvenotii</i> (P. Danguy) Kosterm.	2	-
<i>Ocotea zahamenensis</i> van der Werff	3	-
<i>Potameia thouarsiana</i> (Baill.) Capuron	1	-
<i>Ravensara aromatica</i> Sonn.	1	?
Lentibulariaceae		
<i>Utricularia ibarensis</i> Baker	1	?
<i>Utricularia prehensilis</i> E. Mey.	1	-
Linderniaceae		
<i>Torenia stolonifera</i> Bojer ex Benth.	12	-
<i>Torenia tenuifolia</i> Philcox	1	-
Loganiaceae		
<i>Strychnos diplotricha</i> Leeuwenb.	4	-
<i>Strychnos myrtoides</i> Gilg & Busse	1	-
<i>Strychnos panganensis</i> Gilg	1	-
<i>Strychnos</i> sp. indet. 1	1	?
<i>Strychnos</i> sp. nov. A aff. <i>myrtoides</i> Gilg & Busse	2	?
Loranthaceae		
<i>Bakerella clavata</i> (Desr.) Balle	17	-
<i>Bakerella diplocrater</i> (Baker) Tiegh.	1	-
<i>Bakerella grisea</i> (Scott-Elliot) Balle	2	-
<i>Bakerella hoyifolia</i> (Baker) Balle	9	-
<i>Bakerella microcuspis</i> (Baker) Tiegh.	4	?
<i>Bakerella poissonii</i> (Lecomte) Balle	1	-
<i>Bakerella poissonii</i> subsp. <i>parvibracteata</i> (Lecomte) Balle	1	?
<i>Bakerella viguieri</i> (Lecomte) Balle	2	-
Malpighiaceae		
<i>Acridocarpus adenophorus</i> A. Juss.	3	-
<i>Acridocarpus vivy</i> Arènes (var. uncertain)	21	-
<i>Acridocarpus vivy</i> Arènes var. <i>glanduliferus</i> Arènes	2	-
<i>Microsteira axillaris</i> (Baker) Nied.	12	?
<i>Sphedamnocarpus dubardii</i> R. Vig. & Humbert ex Arènes	5	-
<i>Tristellateia grandiflora</i> Arènes	5	2*
<i>Tristellateia madagascariensis</i> Poir.	13	-
Malvaceae		
<i>Byttneria heteromorpha</i> Arènes	3	3
<i>Byttneria melleri</i> Baker	1	-
<i>Dombeya antsianakensis</i> Baill.	1	-
<i>Dombeya biumbellata</i> Baker	2	3
<i>Dombeya erythroclada</i> Bojer	1	?
<i>Dombeya greveana</i> Baill.	1	-
<i>Dombeya hilsenbergii</i> Baill.	1	-
<i>Dombeya laurifolia</i> (Bojer) Baill.	9	-
<i>Dombeya lucida</i> Baill.	3	-
<i>Dombeya marojejyensis</i> Arènes	1	-
<i>Dombeya megaphylla</i> Baker	2	3
<i>Dombeya sahatavyensis</i> Arènes	1	-
<i>Dombeya</i> sp. indet. 1	13	?
<i>Dombeya spectabilis</i> Bojer	2	2
<i>Grewia apetala</i> Juss.	2	-
<i>Grewia cuneifolia</i> Juss.	28	-
<i>Grewia humblotii</i> Baill.	1	-
<i>Grewia</i> sp. indet. 1 cf. <i>G. radula</i> Baker	2	?
<i>Grewia</i> sp. indet. 2	21	?
<i>Grewia thouvenotii</i> Danguy	2	-

Table 1. (cont.)

Part 2: Seed plants	No. of specimens	SOC class
<i>Hibiscus oxaliflorus</i> Bojer ex Baker	1	-
<i>Keraudrenia macrantha</i> (Baill.) Arènes	3	1
<i>Nesogordonia abrahamii</i> L.C. Barnett	1	-
<i>Rulingia madagascariensis</i> Baker	11	-
<i>Sida</i> sp. indet. 1	1	?
<i>Sida urens</i> L.	1	-
<i>Triumfetta annua</i> L.	1	-
<i>Urena lobata</i> L.	2	-
Melastomataceae		
<i>Clidemia hirta</i> (L.) D. Don	3	-
<i>Dichaetanthera arborea</i> Baker	1	-
<i>Dichaetanthera cordifolia</i> Baker	7	-
<i>Dichaetanthera oblongifolia</i> Baker	5	-
<i>Dichaetanthera</i> sp. indet. 1	1	?
<i>Gravesia baroni</i> H. Perrier	4	-
<i>Gravesia laxiflora</i> (Naudin) Baill.	2	-
<i>Gravesia setifera</i> H. Perrier	6	3
<i>Gravesia</i> sp. indet. 1	2	?
<i>Gravesia</i> sp. nov. A aff. <i>baronii</i> H. Perrier	1	1
<i>Gravesia</i> sp. nov. B aff. <i>G. setifera</i> H. Perrier	1	2
<i>Gravesia tanalensis</i> H. Perrier	1	2
<i>Medinilla angustifolia</i> Jum. & H. Perrier	6	-
<i>Medinilla baronii</i> Baker	7	-
<i>Medinilla chermesonii</i> H. Perrier	19	2*
<i>Medinilla cucullata</i> H. Perrier	1	?
<i>Medinilla humbertiana</i> H. Perrier	2	-
<i>Medinilla lophoclada</i> Baker	18	2*
<i>Medinilla mandrakensis</i> H. Perrier	19	2*
<i>Medinilla micrantha</i> Jum. & H. Perrier	5	2
<i>Medinilla papillosa</i> Baker	2	-
<i>Medinilla rubrinervia</i> Jum. & H. Perrier	1	-
<i>Medinilla sedifolia</i> Jum. & H. Perrier	2	-
<i>Medinilla</i> sp. nov. A aff. <i>M. oblongifolia</i> Cogn.	1	1
<i>Medinilla</i> sp. nov. B.	1	1
<i>Medinilla</i> sp. nov. C	3	2*
<i>Medinilla sphaerocarpa</i> Hochr.	1	-
<i>Medinilla viguieri</i> H. Perrier	1	-
<i>Memecylon bakerianum</i> Cogn.	1	-
<i>Memecylon cotinifolioides</i> (H. Perrier) Jacq.-Fél.	1	-
<i>Memecylon faucherei</i> Danguy	4	2
<i>Memecylon</i> sp. indet. 1	1	-
<i>Memecylon</i> sp. nov. A aff. <i>M. vaccinioides</i> Jacq.-Fél.	9	2*
<i>Memecylon subsessile</i> H. Perrier	1	-
<i>Memecylon ulopterum</i> DC.	1	-
<i>Memecylon vaccinioides</i> Jacq.-Fél.	6	-
<i>Tristemma mauritanum</i> J.F. Gmel.	1	-
<i>Tristemma virusanum</i> Juss.	4	-
Meliaceae		
<i>Astrotrichilia parvifolia</i> J.-F. Leroy & Lescot	12	-
<i>Khaya madagascariensis</i> Jum. & H. Perrier	1	-
<i>Turraea</i> sp. indet. 1	1	-
Menispermaceae		
<i>Burasaia apetela</i> Capuron ex Westerhaus	2	-
<i>Burasaia madagascariensis</i> DC.	1	-
<i>Burasaia</i> sp. nov. A	1	1
<i>Cissampelos madagascariensis</i> (Baker) Diels	4	?
<i>Cissampelos pareira</i> L.	3	-
<i>Cissampelos perrierii</i> Diels	1	-
<i>Cyclea</i> sp. indet. 1	1	?
<i>Spirospermum penduliflorum</i> DC.	6	-
<i>Strychnopsis thouarsii</i> Baill.	5	-

Table 1. (cont.)

Part 2: Seed plants	No. of specimens	SOC class
Menyanthaceae		
<i>Nymphoides indica</i> (L.) Kuntze	2	-
Molluginaceae		
<i>Mollugo nudicaulis</i> Lam.	3	-
Monimiaceae		
<i>Decarydendron ranomafanensis</i> Lorence & Razafim.	2	-
<i>Ehippiandra myrtoidea</i> Decne.	4	-
<i>Tambourissa capuronii</i> Cavaco	2	-
<i>Tambourissa mandrarensis</i> Jérémie & Lorence	2	-
<i>Tambourissa purpurea</i> (Tul.) A. DC.	10	-
<i>Tambourissa</i> sp. indet. 1 cf. <i>T. purpurea</i> (Tul.) A. DC.	1	?
<i>Tambourissa</i> sp. indet. 2	12	?
<i>Tambourissa</i> sp. nov. A	5	2*
<i>Tambourissa</i> sp. nov. B aff. <i>mandrarensis</i> Jérémie & Lorence	2	2*
<i>Tambourissa thouvenotii</i> Danguy	2	-
<i>Tambourissa trichophylla</i> Baker	1	-
<i>Tambourissa uapacifolia</i> Cavaco	4	-
Moraceae		
<i>Ficus ampana</i> C.C. Berg	1	-
<i>Ficus antandronarum</i> (H. Perrier) C.C. Berg	11	-
<i>Ficus brachyclada</i> Baker	3	-
<i>Ficus lutea</i> Vahl	5	-
<i>Ficus pachyclada</i> Baker	2	-
<i>Ficus politoria</i> Lam.	23	-
<i>Ficus polyphlebia</i> Baker	1	-
<i>Ficus reflexa</i> Thunb. (var. uncertain)	7	-
<i>Ficus reflexa</i> Thunb. subsp. <i>reflexa</i>	1	-
<i>Ficus soroceoides</i> Baker	4	-
<i>Ficus</i> sp. indet. 1	21	?
<i>Ficus tiliifolia</i> Baker	1	-
<i>Maillardia montana</i> Leandri	1	-
<i>Streblus dimepate</i> (Bureau) C.C. Berg	9	-
<i>Treculia africana</i> Decne. ex Trécul var. <i>africana</i>	4	-
<i>Treculia madagascariensis</i> N.E. Br.	1	-
<i>Trilepisium madagascariense</i> Thouars ex DC.	4	-
<i>Trophis montana</i> (Leandri) C.C. Berg	5	-
Myrtaceae		
<i>Eugenia alaotrensis</i> H. Perrier	6	2*
<i>Eugenia antongilensis</i> H. Perrier	1	-
<i>Eugenia arthroopoda</i> Drake (var. uncertain)	1	-
<i>Eugenia arthroopoda</i> Drake var. <i>angustata</i> H. Perrier	1	2
<i>Eugenia bernieri</i> Drake	1	-
<i>Eugenia danguyana</i> H. Perrier	2	-
<i>Eugenia emimensis</i> Baker	3	-
<i>Eugenia goviala</i> H. Perrier	7	3
<i>Eugenia oligantha</i> Baker	13	-
<i>Eugenia parkeri</i> Baker	1	-
<i>Eugenia</i> sp. indet. 1	74	?
<i>Eugenia</i> sp. nov. A	3	1
<i>Eugenia</i> sp. nov. B	5	2*
<i>Eugenia</i> sp. nov. C	1	2
<i>Eugenia</i> sp. nov. D	1	1
<i>Eugenia thouvenotiana</i> H. Perrier	2	-
<i>Syzygium bernieri</i> (Drake) Labat & G.E. Schatz	20	-
<i>Syzygium condensatum</i> (Baker) Labat & G.E. Schatz	13	3
<i>Syzygium danguyanum</i> (H. Perrier) Labat & G.E. Schatz	1	-
<i>Syzygium emimense</i> (Baker) Labat & G.E. Schatz	11	-
<i>Syzygium lugubre</i> (H. Perrier) Labat & G.E. Schatz	4	2
<i>Syzygium micropodum</i> (Baker) Labat & G.E. Schatz	1	-
<i>Syzygium onivense</i> (H. Perrier) Labat & G.E. Schatz	5	3
<i>Syzygium parkeri</i> (Baker) Labat & G.E. Schatz	5	-

Table 1. (cont.)

Part 2: Seed plants	No. of specimens	SOC class
<i>Syzygium</i> sp. indet. 1	37	?
<i>Syzygium</i> sp. nov. A	1	2
<i>Syzygium</i> sp. nov. B	2	2*
<i>Syzygium</i> sp. nov. C	3	2*
Nymphaeaceae		
<i>Nymphaea stellata</i> Willd.	2	-
Ochnaceae		
<i>Diporidium louvelii</i> H. Perrier	13	2*
<i>Ochna</i> sp. indet. 1	3	?
<i>Ochna</i> sp. nov. A	2	?
<i>Ochna vaccinioides</i> Baker	10	-
<i>Ouratea deltoidea</i> (Baker) Gilg.	14	-
<i>Ouratea dependens</i> (DC.) Baill.	4	-
<i>Ouratea obtusifolia</i> (Lam.) Gilg	1	-
Olacaceae		
<i>Olax emirnenensis</i> Baker	7	-
<i>Olax glabriflora</i> Danguy	4	-
<i>Olax thouarsii</i> (DC.) Valetton	1	-
Oleaceae		
<i>Chionanthus obtusifolius</i> (Lam.) Stearn	1	-
<i>Jasminum kitchingii</i> Baker	6	-
<i>Noronhia brevītuba</i> H. Perrier	1	-
<i>Noronhia emarginata</i> (Lam.) Thouars (var. uncertain)	6	-
<i>Noronhia emarginata</i> (Lam.) Thouars var. <i>edentata</i> H. Perrier	2	2*
<i>Noronhia gracilipes</i> H. Perrier	5	-
<i>Noronhia linocerioides</i> H. Perrier	2	-
<i>Noronhia louvelii</i> H. Perrier	1	2
<i>Noronhia mangorensis</i> H. Perrier	10	-
<i>Noronhia</i> sp. nov. A	4	2
<i>Noronhia</i> sp. nov. B	3	2*
<i>Noronhia</i> sp. nov. C	1	-
<i>Noronhia tetrandra</i> H. Perrier	1	?
<i>Olea madagascariensis</i> Boivin ex H. Perrier	10	-
Onagraceae		
<i>Ludwigia erecta</i> (L.) H. Hara	1	-
<i>Ludwigia stolonifera</i> (Guill. & Perr.) P.H. Raven	1	-
Orchidaceae		
<i>Aerangis citrata</i> (Thouars) Schltr.	12	-
<i>Aerangis cryptodon</i> (Rchb. f.) Schltr.	1	-
<i>Aerangis fastuosa</i> (Rchb. f.) Schltr.	7	-
<i>Aerangis macrocentra</i> (Schltr.) Schltr.	9	-
<i>Aerangis seegeri</i> Senghas	1	-
<i>Aerangis stylosa</i> (Rolfe) Schltr.	23	-
<i>Aeranthes adenopoda</i> H. Perrier	9	-
<i>Aeranthes angustidens</i> H. Perrier	1	-
<i>Aeranthes antennophora</i> H. Perrier	12	2*
<i>Aeranthes ecalcarata</i> H. Perrier	2	-
<i>Aeranthes fasciola</i> (Lindl.) Rchb. f.	1	-
<i>Aeranthes gracilis</i> Schltr.	1	-
<i>Aeranthes longipes</i> Schltr.	12	-
<i>Aeranthes neoperrieri</i> Toill.-Gen., Ursch & Bosser	1	-
<i>Aeranthes nidus</i> Schltr.	2	-
<i>Aeranthes peyrotii</i> Bosser	4	-
<i>Aeranthes ramosa</i> Rolfe	1	-
<i>Aeranthes schlechteri</i> Bosser	1	-
<i>Angraecum calceolus</i> Thouars	4	-
<i>Angraecum caricifolium</i> H. Perrier	14	-
<i>Angraecum chaetopodium</i> Schltr.	1	-
<i>Angraecum chloranthum</i> Schltr.	10	-
<i>Angraecum comorense</i> P. Durand & Schinz	1	-
<i>Angraecum compactum</i> Schltr.	18	-

Table 1. (cont.)

Part 2: Seed plants	No. of specimens	SOC class
<i>Angraecum danguyanum</i> H. Perrier	1	-
<i>Angraecum didieri</i> (Baill. ex Finet) Schltr.	1	-
<i>Angraecum elephantinum</i> Schltr.	1	-
<i>Angraecum equitans</i> Schltr.	6	-
<i>Angraecum filicornu</i> Thouars	1	-
<i>Angraecum finetianum</i> Schltr.	14	-
<i>Angraecum germinyianum</i> Hook. f.	3	-
<i>Angraecum graminifolium</i> (Ridl.) Schltr.	3	-
<i>Angraecum humblotianum</i> Schltr.	11	-
<i>Angraecum lecomtei</i> H. Perrier	1	-
<i>Angraecum linearifolium</i> Garay	5	-
<i>Angraecum madagascariense</i> (Finet) Schltr.	6	-
<i>Angraecum mauritianum</i> (Poir.) Frapp.	21	-
<i>Angraecum obesum</i> H. Perrier	1	-
<i>Angraecum panicifolium</i> H. Perrier	17	-
<i>Angraecum pauciramosum</i> Schltr.	1	?
<i>Angraecum pinifolium</i> Bosser	1	-
<i>Angraecum rhynchoglossum</i> Schltr.	18	-
<i>Angraecum rostratum</i> Ridl.	13	-
<i>Angraecum sedifolium</i> Schltr.	7	-
<i>Angraecum setipes</i> Schltr.	7	2*
<i>Angraecum</i> sp. indet. 2	44	?
<i>Angraecum superbum</i> Thouars	1	-
<i>Angraecum teretifolium</i> Ridl.	19	-
<i>Angraecum urschianum</i> Toill.-Gen. & Bosser	11	-
<i>Angraecum viguieri</i> Schltr.	5	-
<i>Benthamia</i> sp. indet. 1	1	-
<i>Bulbophyllum alexandrae</i> Schltr.	3	-
<i>Bulbophyllum analamazoatrae</i> Schltr.	9	2*
<i>Bulbophyllum ankaizinense</i> (Jum. & H. Perrier) Schltr.	1	-
<i>Bulbophyllum aubrevillei</i> Bosser	4	-
<i>Bulbophyllum auriflorum</i> H. Perrier	13	-
<i>Bulbophyllum baronii</i> Ridl.	12	-
<i>Bulbophyllum callosum</i> Bosser	2	-
<i>Bulbophyllum complanatum</i> H. Perrier	8	-
<i>Bulbophyllum coriophorum</i> Ridl.	24	-
<i>Bulbophyllum francoisii</i> H. Perrier	10	-
<i>Bulbophyllum leandrianum</i> H. Perrier	8	-
<i>Bulbophyllum longiflorum</i> Thouars	15	-
<i>Bulbophyllum lyperocephalum</i> Schltr.	1	-
<i>Bulbophyllum mimiense</i> Schltr.	1	-
<i>Bulbophyllum molossus</i> Rchb. f.	11	-
<i>Bulbophyllum multiflorum</i> Ridl.	12	2*
<i>Bulbophyllum occlusum</i> Ridl.	13	-
<i>Bulbophyllum occultum</i> Thouars	11	-
<i>Bulbophyllum oxycalyx</i> Schltr.	4	-
<i>Bulbophyllum pachypus</i> Schltr.	7	-
<i>Bulbophyllum peyrotii</i> Bosser	4	1
<i>Bulbophyllum platypodium</i> H. Perrier	1	1
<i>Bulbophyllum rhizomatosum</i> Schltr.	1	-
<i>Bulbophyllum sandrangatense</i> Bosser	2	1
<i>Bulbophyllum</i> sp. indet. 1	84	-
<i>Bulbophyllum</i> sp. indet. 2	1	-
<i>Bulbophyllum</i> sp. indet. 3	1	-
<i>Bulbophyllum</i> sp. indet. 4	1	-
<i>Bulbophyllum subcrenulatum</i> Schltr.	1	-
<i>Bulbophyllum sulfureum</i> Schltr.	3	2*
<i>Bulbostylis</i> sp. indet. 1	2	?
<i>Cheirostylis gymnochiloides</i> (Ridl.) Rchb. f.	11	-
<i>Cirrhopetalum longiflorum</i> (Thouars) Schltr.	1	-
<i>Cryptopus brachiatus</i> H. Perrier	1	1

Table 1. (cont.)

Part 2: Seed plants	No. of specimens	SOC class
<i>Cryptopus elatus</i> Lindl.	1	-
<i>Cryptopus paniculatus</i> H. Perrier	2	-
<i>Cynorkis angustipetala</i> Ridl.	1	-
<i>Cynorkis aurantiaca</i> Ridl.	3	2*
<i>Cynorkis fastigiata</i> Thouars	3	-
<i>Cynorkis flexuosa</i> Lindl.	1	-
<i>Cynorkis gibbosa</i> Ridl.	1	-
<i>Cynorkis graminea</i> (Thouars) Schltr.	2	-
<i>Cynorkis jumelleana</i> Schltr.	1	-
<i>Cynorkis lilacina</i> Ridl.	6	-
<i>Cynorkis lowiana</i> Rchb. f.	5	-
<i>Cynorkis purpurascens</i> Thouars	8	-
<i>Cynorkis ridleyi</i> T. Durand & Schinz	2	-
<i>Cynorkis</i> sp. indet. 1	14	-
<i>Cynorkis uncinata</i> H. Perrier	1	-
<i>Disperis oppositifolia</i> Sm.	1	-
<i>Disperis similis</i> Schltr.	2	-
<i>Gastrorchis francoisii</i> Schltr.	2	-
<i>Gastrorchis humblotii</i> (Rchb. f.) Schltr.	2	-
<i>Gastrorchis pulchra</i> Humbert & H. Perrier	3	-
<i>Gastrorchis pulchra</i> var. <i>perrieri</i> (Bossler) Bossler & P.J. Cribb	1	-
<i>Gastrorchis tuberculosa</i> (Thouars) Schltr.	1	-
<i>Grammangis ellisii</i> (Lindl.) Rchb. f.	1	-
<i>Grammangis</i> sp. indet. 1	1	-
<i>Gussonea gilpinae</i> Ridl.	1	-
<i>Habenaria cirrhata</i> (Lindl.) Rchb. f.	1	-
<i>Habenaria</i> sp. indet. 1	3	-
<i>Jumellea arborescens</i> H. Perrier	4	-
<i>Jumellea brachycentra</i> Schltr.	7	-
<i>Jumellea cyrtoceras</i> Schltr.	1	-
<i>Jumellea francoisii</i> Schltr.	6	-
<i>Jumellea gracilipes</i> Schltr.	11	3
<i>Jumellea lignosa</i> (Schltr.) Schltr.	1	-
<i>Jumellea punctata</i> H. Perrier	11	-
<i>Jumellea sagittata</i> H. Perrier	1	-
<i>Jumellea teretifolia</i> Schltr.	3	-
<i>Lemurella virescens</i> H. Perrier	1	-
<i>Liparis bulbophylloides</i> H. Perrier	4	-
<i>Liparis hildebrandtiana</i> Schltr.	3	-
<i>Liparis jumelleana</i> Schltr.	1	-
<i>Liparis listeroides</i> Schltr.	4	-
<i>Liparis longicaulis</i> Ridl.	13	3
<i>Liparis</i> sp. indet. 1.	11	-
<i>Microcoelia gilpinae</i> (Rchb. f. & S. Moore in Baker) Summerh.	3	-
<i>Microcoelia macrantha</i> (H. Perrier) Summerh.	6	-
<i>Neobathiea filicornu</i> Schltr.	2	-
<i>Nervilia bicarinata</i> (Blume) Schltr.	1	-
<i>Oberonia disticha</i> (Lam.) Schltr.	5	-
<i>Oeonia oncidiiflora</i> Kraenzl.	5	-
<i>Oeonia rosea</i> Ridl.	7	-
<i>Oeonia volucris</i> (Thouars) Spreng.	20	-
<i>Oeoniella polystachys</i> (Thouars) Schltr.	1	-
<i>Phaius pulchellus</i> Kraenzl.	2	-
<i>Phaius pulcher</i> (Humbert & H. Perrier) Summerh.	2	-
<i>Platylepis polyadenia</i> Rchb. f.	1	-
<i>Polystachya aurantiaca</i> Schltr.	7	-
<i>Polystachya concreta</i> (Jacq.) Garay & H.R. Sweet	2	-
<i>Polystachya cornigera</i> Schltr.	1	-
<i>Polystachya cultriformis</i> (Thouars) Lindl. ex Spreng.	4	-
<i>Polystachya fusiformis</i> (Thouars) Lindl.	7	-
<i>Polystachya humberti</i> H. Perrier	4	-

Table 1. (cont.)

Part 2: Seed plants	No. of specimens	SOC class
<i>Polystachya mauritiana</i> Spreng.	7	-
<i>Polystachya rosea</i> Ridl.	4	-
<i>Polystachya rosellata</i> Ridl.	7	-
<i>Polystachya</i> sp. indet. 1	16	-
<i>Polystachya tsinjoarivensis</i> H. Perrier	2	-
Orobanchaceae		
<i>Alectra sessiliflora</i> (Vahl) Kuntze	1	-
<i>Radamaea montana</i> Benth.	14	-
<i>Sopubia trifida</i> var. <i>madagascariensis</i> Benth.	1	-
Oxalidaceae		
<i>Biophytum</i> sp. indet. 1	1	-
<i>Biophytum</i> sp. indet. 2	7	?
<i>Biophytum</i> sp. nov. A	4	2*
<i>Oxalis anthelmintica</i> A. Rich.	1	-
<i>Oxalis corniculata</i> L.	2	-
Pandanaceae		
<i>Pandanus acanthostylus</i> Martelli	1	-
<i>Pandanus analamazaotrensis</i> Martelli	1	-
<i>Pandanus dyckioides</i> Baker	2	-
<i>Pandanus freycinetioides</i> (Gaudich.) Kurz	2	-
<i>Pandanus longissimipedunculatus</i> Martelli	1	-
<i>Pandanus mangokensis</i> Martelli	2	-
<i>Pandanus</i> sp. indet. 1	6	?
<i>Pandanus tectorius</i> Parkinson	1	-
Passifloraceae		
<i>Adenia acuta</i> W.J. de Wilde	7	2*
<i>Deidamia bicolor</i> H. Perrier	6	-
<i>Passiflora</i> sp. indet. 1	1	-
<i>Passiflora subpeltata</i> Ortega	1	-
Phyllanthaceae		
<i>Antidesma madagascariense</i> Lam.	3	-
<i>Antidesma petiolare</i> Tul.	1	-
<i>Blotia bemarensis</i> (Leandri) Leandri	1	-
<i>Blotia mimosoides</i> (Baill.) Petra Hoffm. & McPherson	1	-
<i>Blotia tanalorum</i> Leandri	1	-
<i>Bridelia tulasneana</i> Baill.	1	-
<i>Cleistanthus</i> sp. nov. A	1	2
<i>Leptonema glabrum</i> (Leandri) Leandri	9	-
<i>Margaritaria rhomboidalis</i> (Baill.) G.L. Webster	1	-
<i>Margaritaria</i> sp. indet. 1	1	?
<i>Margaritaria</i> sp. nov. A	4	2*
<i>Meineckia madagascariensis</i> (Leandri ex Humbert) G.L. Webster	6	?
<i>Meineckia orientalis</i> (Leandri) G.L. Webster	18	2
<i>Phyllanthus ambatovolana</i> Leandri	2	-
<i>Phyllanthus fuscoluridus</i> Müll. Arg. (var. uncertain)	1	-
<i>Phyllanthus fuscoluridus</i> Müll. Arg. subsp. <i>villosus</i> Leandri	2	-
<i>Phyllanthus matitanensis</i> Leandri	19	-
<i>Phyllanthus moramangicus</i> (Leandri) Leandri	4	2
<i>Phyllanthus oreichtitus</i> Leandri	1	-
<i>Phyllanthus</i> sp. indet. 3	1	?
<i>Phyllanthus</i> sp. nov. A	1	1
<i>Phyllanthus</i> sp. nov. B 'ankazobensis' ined.	1	?
<i>Securinega durissima</i> J.F. Gmel.	2	-
<i>Thecacoris cometia</i> (Baill.) Leandri	1	-
<i>Thecacoris madagascariensis</i> A. Juss. (var. uncertain)	19	-
<i>Thecacoris madagascariensis</i> A. Juss. var. <i>montana</i> Leandri	3	-
<i>Thecacoris perrieri</i> Leandri	28	-
<i>Uapaca densifolia</i> Baker	42	-
<i>Uapaca</i> sp. indet. 1	5	?
<i>Wielandia bojeriana</i> (Baill.) Petra Hoffm. & McPherson	7	-
<i>Wielandia elegans</i> Baill.	2	-

Table 1. (cont.)

Part 2: Seed plants	No. of specimens	SOC class
<i>Wielandia leandriana</i> Petra Hoffm. & McPherson	1	-
<i>Wielandia oblongifolia</i> (Baill.) Petra Hoffm. & McPherson	18	-
<i>Wielandia platyrachis</i> Baill. Petra Hoffm. & McPherson	6	-
<i>Wielandia</i> sp. indet. 1	1	-
Phytolaccaceae		
<i>Phytolacca dodecandra</i> L'Hér.	1	-
Piperaceae		
<i>Peperomia mantadiana</i> G. Mathieu	1	-
<i>Peperomia pubipetiola</i> C. DC.	1	-
<i>Peperomia rotundilimba</i> C. DC.	5	-
<i>Peperomia</i> sp. indet. 1	29	2*
<i>Peperomia trichophylla</i> Baker	6	-
<i>Peperomia villilimba</i> C. DC.	2	-
<i>Piper borbonense</i> (Miq.) C. DC.	6	-
<i>Piper</i> sp. nov. A	3	0
<i>Piper umbellatum</i> L.	1	-
Pittosporaceae		
<i>Pittosporum ochrosiifolium</i> Bojer (var. uncertain)	2	-
<i>Pittosporum ochrosiifolium</i> Bojer var. <i>ochrosiifolium</i>	3	-
<i>Pittosporum polyspermum</i> Tul.	5	-
<i>Pittosporum</i> sp. indet. 1	6	?
<i>Pittosporum verticillatum</i> Bojer (var. uncertain)	21	-
<i>Pittosporum verticillatum</i> Bojer subsp. <i>verticillatum</i>	2	-
Plantaginaceae		
<i>Bacopa monnieri</i> (L.) Kunth	1	-
<i>Lindernia rotundifolia</i> (L.) Alston in R. Trimen	1	-
<i>Scoparia dulcis</i> L.	3	-
Poaceae		
<i>Andropogon eucomus</i> Nees	1	-
<i>Centotheca mucronata</i> (P. Beauv.) Hack.	4	-
<i>Coelachne madagascariensis</i> Baker	1	-
<i>Coelachne</i> sp. indet. 1	1	?
<i>Decaryochloa diadelpha</i> A. Camus	1	-
<i>Digitaria debilis</i> (Desf.) Willd.	4	-
<i>Digitaria madagascariensis</i> Bosser	1	-
<i>Digitaria sanguinalis</i> (L.) Scop.	1	-
<i>Eleusine indica</i> (L.) Gaertn.	1	-
<i>Eragrostis atrovirens</i> (Desf.) Trin. ex Steud.	1	-
<i>Eragrostis chalarantha</i> Gilli	1	-
<i>Eragrostis lateritica</i> Bosser	1	-
<i>Hemarthria</i> sp. indet. 1	1	?
<i>Isachne mauritiana</i> Kunth	1	-
<i>Leersia hexandra</i> Sw.	1	-
<i>Nastus aristatus</i> A. Camus	4	-
<i>Nastus elongatus</i> A. Camus	2	-
<i>Nastus madagascariensis</i> A. Camus	1	-
<i>Panicum ambositrense</i> A. Camus	3	-
<i>Panicum brevisfolium</i> Jahn	3	-
<i>Panicum luridum</i> Hack.	3	-
<i>Panicum parviflorum</i> R. Br.	2	-
<i>Panicum umbellatum</i> Trin.	1	-
<i>Panicum uvulatum</i> Stapf	1	-
<i>Paspalum conjugatum</i> P.J. Bergius	1	-
<i>Paspalum multinodum</i> B.K. Simon	2	-
<i>Paspalum nutans</i> Lam.	1	-
<i>Paspalum paniculatum</i> L.	1	-
<i>Poecilostachys baronis</i> Stapf	1	-
<i>Rhynchelytrum repens</i> (Willd.) C.E. Hubb.	1	-
<i>Sacciolepis africana</i> C.E. Hubb. & Snowden	1	-
<i>Sacciolepis auriculata</i> Stapf	3	-
<i>Setaria palmifolia</i> (J. König) Stapf	1	-

Table 1. (cont.)

Part 2: Seed plants	No. of specimens	SOC class
<i>Sporobolus festivus</i> Hochst. ex A. Rich.	1	-
<i>Sporobolus mauritanus</i> (Steud.) T. Durand & Schinz	2	-
<i>Sporobolus pyramidalis</i> P. Beauv.	1	-
<i>Stenotaphrum dimidiatum</i> (L.) Brongn.	1	-
Podocarpaceae		
<i>Podocarpus madagascariensis</i> Baker	12	-
Polygonaceae		
<i>Polygonum mite</i> Schrank	2	-
Polypodiaceae		
<i>Belvisia spicata</i> (L. f.) Mirb.	2	-
<i>Lepisorus excavatus</i> (Bory ex Willd.) Ching	6	-
<i>Loxogramme lanceolata</i> (Sw.) C. Presl	4	-
<i>Microsorium punctatum</i> (L.) Copel.	6	-
<i>Phymatosorus scolopendria</i> (Burm. f.) Pic. Serm.	2	-
<i>Pleopeltis macrocarpa</i> (Bory ex Willd.) Kaulf.	1	-
<i>Pyrrosia madagascariensis</i> (C. Chr.) Schelpe	1	-
<i>Pyrrosia rhodesiana</i> (C. Chr.) Schelpe	3	-
Primulaceae		
<i>Anagallis tenuicaulis</i> Baker	2	-
<i>Embelia madagascariensis</i> A. DC.	1	-
<i>Embelia nummulariifolia</i> Baker	8	2
<i>Maesa lanceolata</i> Forssk.	3	-
<i>Monoporus bipinnatus</i> (Baker) Mez	2	-
<i>Monoporus clusiifolius</i> H. Perrier	8	-
<i>Monoporus floribundus</i> (Roem. & Schult.) Mez	6	-
<i>Monoporus myrianthus</i> (Baker) Mez	1	-
<i>Monoporus spathulatus</i> Mez	1	-
<i>Oncostemum acuminatum</i> Mez	1	-
<i>Oncostemum ankifiense</i> Mez	6	-
<i>Oncostemum bojerianum</i> A. DC.	1	-
<i>Oncostemum botryoides</i> Baker	2	-
<i>Oncostemum brevipedatum</i> Mez	2	-
<i>Oncostemum buxifolium</i> H. Perrier	7	-
<i>Oncostemum cauliflorum</i> H. Perrier	3	-
<i>Oncostemum elephantipes</i> H. Perrier	5	-
<i>Oncostemum evonymoides</i> Mez	6	2
<i>Oncostemum filicinum</i> Mez in Engl.	16	2
<i>Oncostemum hildebrandtii</i> Mez	4	-
<i>Oncostemum humbertianum</i> H. Perrier	1	1
<i>Oncostemum laevigatum</i> Mez	2	-
<i>Oncostemum laurifolium</i> (Bojer ex A. DC.) Mez	1	-
<i>Oncostemum leprosum</i> Mez	13	-
<i>Oncostemum linearisepalum</i> H. Perrier	10	2
<i>Oncostemum lucens</i> H. Perrier	1	-
<i>Oncostemum neriifolium</i> Baker	2	2
<i>Oncostemum nitidulum</i> (Baker) Mez	11	2
<i>Oncostemum palmiforme</i> H. Perrier	4	-
<i>Oncostemum paniculatum</i> H. Perrier	3	3
<i>Oncostemum reflexum</i> Mez	2	-
<i>Oncostemum</i> sp. indet. 1	58	?
<i>Oncostemum</i> sp. indet. 2	2	?
<i>Oncostemum</i> sp. indet. 3	1	?
<i>Oncostemum</i> sp. indet. 4	1	?
<i>Oncostemum</i> sp. indet. 5 cf. <i>O. elephantipes</i> H. Perrier	1	?
<i>Oncostemum</i> sp. indet. 6	6	2
<i>Oncostemum</i> sp. nov. A aff. <i>O. triflorum</i> H. Perrier	1	2
<i>Oncostemum</i> sp. nov. B	1	?
<i>Oncostemum</i> sp. nov. C aff. <i>O. leprosum</i> Mez	1	1
<i>Oncostemum</i> sp. nov. D	4	2*
<i>Oncostemum</i> sp. nov. E	1	?
<i>Oncostemum</i> sp. nov. F	2	?

Table 1. (cont.)

Part 2: Seed plants	No. of specimens	SOC class
<i>Oncostemum subcuspidatum</i> H. Perrier	1	-
<i>Oncostemum triflorum</i> H. Perrier	5	-
<i>Oncostemum umbellatum</i> (Baker) Mez	1	-
<i>Oncostemum venulosum</i> Baker	16	-
Proteaceae		
<i>Dilobeia thouarsii</i> Roem. & Schult.	7	-
<i>Faurea forficuliflora</i> Baker	7	-
Putranjivaceae		
<i>Drypetes madagascariensis</i> (Lam.) Humbert & Leandri	23	-
<i>Drypetes perrieri</i> Leandri	4	-
<i>Drypetes thouarsii</i> (Baill.) Leandri	1	-
Ranunculaceae		
<i>Clematis mauritiana</i> Lam.	3	-
<i>Clematis microcuspis</i> Baker	3	-
<i>Ranunculus pinnatus</i> Poir.	1	-
Rhamnaceae		
<i>Bathiorhamnus louvelii</i> (H. Perrier) Capuron	3	-
<i>Colubrina faraloatra</i> (H. Perrier) Capuron (subsp. uncertain)	1	-
<i>Colubrina faraloatra</i> subsp. <i>sinuata</i> (H. Perrier) Capuron	1	-
<i>Gouania myriocarpa</i> Tul.	2	-
<i>Gouania</i> sp. nov. A ('phillipsonii' ined.)	19	-
<i>Phylica emirnensis</i> (Tul.) Pillans	3	2
<i>Scutia myrtina</i> (Burm. f.) Kurz	3	-
Rhizophoraceae		
<i>Carallia brachiata</i> (Lour.) Merr.	5	-
<i>Cassipourea lanceolata</i> Tul.	2	-
<i>Cassipourea microphylla</i> Tul.	1	-
<i>Cassipourea myriocarpa</i> Tul.	2	-
<i>Cassipourea</i> sp. indet. 1	3	?
<i>Macarisia</i> sp. indet. 1	5	?
Rosaceae		
<i>Prunus africana</i> (Hook. f.) Kalkman	9	-
<i>Rubus apetalus</i> Poir.	2	-
<i>Rubus myrianthus</i> Baker	7	-
Rubiaceae		
<i>Alberta humblotii</i> Drake	18	-
<i>Alberta minor</i> Baill.	2	-
<i>Anthospermum emirnense</i> Baker	3	-
<i>Antirhea borbonica</i> J.F. Gmel.	2	-
<i>Antirhea borbonica</i> var. <i>borbonica</i> J.F. Gmel.	8	3
<i>Antirhea</i> sp. indet. 1	3	?
<i>Bremeria hymenopogonoides</i> Baker, Razafim. & Alejandro	12	-
<i>Bremeria trichophlebia</i> Baker	2	-
<i>Breonadia microcephala</i> (Delile) Ridsdale	1	-
<i>Breonia chinensis</i> (Lam.) Capuron	2	-
<i>Breonia decaryana</i> Homolle	3	-
<i>Breonia havilandiana</i> Homolle	2	-
<i>Canthium bosseri</i> Cavaco	6	-
<i>Canthium buxifolium</i> (Baker) Cavaco	4	-
<i>Canthium humbertianum</i> Cavaco	1	-
<i>Canthium latiflorum</i> Homolle ex Cavaco	19	-
<i>Canthium major</i> (A. Rich. ex DC.) Cavaco	1	-
<i>Canthium mandrareense</i> Cavaco	2	-
<i>Canthium medium</i> (A. Rich. ex DC.) Capuron	3	-
<i>Canthium micranthum</i> (Baker) comb. ined.	13	-
<i>Canthium</i> sp. indet. 1	5	?
<i>Canthium</i> sp. indet. 2 cf. <i>C. tamatavense</i> Cavaco	1	?
<i>Canthium</i> sp. indet. 3	4	?
<i>Canthium</i> sp. indet. 4	3	?
<i>Canthium</i> sp. indet. 5	1	?
<i>Canthium</i> sp. indet. 6	1	?

Table 1. (cont.)

Part 2: Seed plants	No. of specimens	SOC class
<i>Canthium</i> sp. indet. 7	61	?
<i>Canthium tamatavense</i> Cavaco	9	-
<i>Chapellieria madagascariensis</i> A. Rich.	1	-
<i>Chassalia acutiflora</i> Bremek.	1	-
<i>Chassalia betsilensis</i> Bremek.	2	-
<i>Chassalia bojeri</i> Bremek. (var. uncertain)	1	-
<i>Chassalia bojeri</i> Bremek. var. <i>bojeri</i>	9	-
<i>Chassalia bojeri</i> Bremek. var. <i>longifolia</i> Bremek.	1	3
<i>Chassalia catati</i> Bremek.	16	-
<i>Chassalia leptothyrsa</i> Bremek.	6	3
<i>Chassalia</i> sp. nov. A	1	?
<i>Chassalia</i> sp. indet. 1 cf. <i>C. acutiflora</i> Bremek.	1	?
<i>Chassalia</i> sp. indet. 2 cf. <i>C. magnifolia</i> Bremek.	4	?
<i>Chassalia</i> sp. indet. 3	10	?
<i>Chassalia stenantha</i> Bremek.	5	3
<i>Chassalia ternifolia</i> (Baker) Bremek.	1	-
<i>Coffea liaudii</i> J.-F. Leroy ex A.P. Davis	7	2
<i>Coffea mangoroensis</i> Portères	23	3
<i>Coffea millotii</i> J.F. Leroy	2	-
<i>Coffea resinosa</i> (Hook. f.) Radlk.	2	-
<i>Coffea</i> sp. indet. 1	8	?
<i>Coptosperma pachyphylla</i> (Baker) De Block	6	-
<i>Coptosperma</i> sp. indet. 1	55	?
<i>Coptosperma</i> sp. nov. A	1	1
<i>Coptosperma</i> sp. nov. B	1	-
<i>Coptosperma</i> sp. nov. C	1	2
<i>Coptosperma supra-axillare</i> Hemsl. Degreeef	2	-
<i>Craterispermum laurinum</i> (Poiret) Benth.	26	-
<i>Danais andribensis</i> Homolle	8	2
<i>Danais cernua</i> Baker	13	-
<i>Danais fragrans</i> (Comm. ex Lam.) Pers.	6	-
<i>Danais humblotii</i> Homolle	14	3
<i>Danais ligustrifolia</i> Baker	2	3
<i>Danais microcarpa</i> Baker	10	-
<i>Danais pauciflora</i> Baker	4	2
<i>Danais perrieri</i> Homolle	3	-
<i>Danais pubescens</i> Baker	11	3
<i>Danais volubilis</i> Baker	4	-
<i>Diodella sarmentosa</i> (Sw.) Bacigalupo & E.L. Cabral	1	-
<i>Diodia breviseta</i> Benth.	2	-
<i>Enterospermum</i> sp. nov. A ('calyculatum' ined.)	1	-
<i>Enterospermum humblotii</i> (Drake) Homolle	1	-
<i>Enterospermum</i> sp. indet. 1	6	?
<i>Gaertnera</i> sp. indet. 1 cf. <i>G. pauciflora</i> Malcomber & A.P. Davis	1	2
<i>Gaertnera madagascariensis</i> (Hook. f.) Malcomber & A.P. Davis	7	-
<i>Gaertnera obovata</i> Baker (subsp. uncertain)	35	-
<i>Gaertnera obovata</i> Baker subsp. <i>obovata</i>	13	3
<i>Gaertnera obovata</i> Baker subsp. <i>sphaerocarpa</i> (Baker) Malcomber	15	3
<i>Gaertnera pauciflora</i> Malcomber & A.P. Davis	1	-
<i>Gaertnera phanerophlebia</i> Baker	26	-
<i>Gaertnera phyllostachya</i> Baker	18	-
<i>Gaertnera sphaerocarpa</i> Baker	3	-
<i>Gallienia sclerophylla</i> Dubard & Dop	3	-
<i>Gardenia</i> sp. indet. 1	2	?
<i>Genipa poivreii</i> Drake	1	-
<i>Genipa talangnignia</i> (DC.) Drake	1	-
<i>Hedyotis trichoglossa</i> Baker	1	?
<i>Homolliella sericea</i> Arènes	35	3
<i>Homolliella</i> sp. nov. ('pauciflora' ined.)	13	3
<i>Hyperacanthus</i> sp. indet. 1	37	3
<i>Hyperacanthus</i> sp. indet. 2	1	?

Table 1. (cont.)

Part 2: Seed plants	No. of specimens	SOC class
<i>Hyperacanthus</i> sp. nov. A ('mangoroensis' ined.)	1	1
<i>Hyperacanthus</i> sp. nov. B ('glabriflorus' ined.)	1	-
<i>Hyperacanthus</i> sp. nov. C ('superbus' ined.)	1	-
<i>Hyperacanthus</i> sp. nov. D ('thouvenotii' ined.)	11	-
<i>Ixora cremixora</i> Drake	1	-
<i>Ixora regalis</i> De Block	1	-
<i>Ixora</i> sp. nov. A	17	2*
<i>Ixora</i> sp. nov. B	10	2*
<i>Ixora trichocalyx</i> Hochr.	18	3
<i>Lemyrea</i> sp. indet. 1	1	3
<i>Mapouria manampanihensis</i> Bremek.	1	-
<i>Mapouria menalohensis</i> Bremek.	4	-
<i>Mapouria parkeri</i> (Baker) Bremek.	8	-
<i>Mapouria</i> sp. indet. 1 cf. <i>M. parkeri</i> (Baker) Bremek.	9	?
<i>Mapouria</i> sp. indet. 2	1	-
<i>Mapouria</i> sp. indet. 3 cf. <i>M. macrochlamys</i> Bremek.	29	2*
<i>Morinda retusa</i> Poir.	24	-
<i>Morinda rigida</i> Miq.	5	-
<i>Morinda</i> sp. indet. 1	23	?
<i>Morinda</i> sp. nov. A	6	3
<i>Morinda umbellata</i> L.	5	?
<i>Mussaenda arcuata</i> Lam. ex Poir.	15	-
<i>Mussaenda decaryi</i> Homolle	1	-
<i>Mussaenda</i> sp. indet. 1	5	?
<i>Nematostylis anthophylla</i> (A. Rich.) Baill.	1	-
<i>Oldenlandia herbacea</i> (L.) DC.	6	-
<i>Oldenlandia lancifolia</i> (Schumach.) DC.	4	3
<i>Oldenlandia trinervia</i> Hiern	3	3
<i>Otiophora parviflora</i> Verdc.	1	-
<i>Otiophora pauciflora</i> Baker	15	-
<i>Otiophora</i> sp. indet. 1	1	?
<i>Paederia mandrarenensis</i> Homolle ex Puff	5	3
<i>Pauridiantha lyallii</i> (Baker) Bremek.	2	-
<i>Pauridiantha paucinervis</i> (Hiern) Bremek. (subsp. uncertain)	24	-
<i>Pauridiantha paucinervis</i> (Hiern) Bremek. (Hiern) Bremek. subsp. <i>lyallii</i> (Baker) Verdc.	12	-
<i>Pentas ionolaena</i> subsp. <i>madagascariensis</i> Verdc.	1	-
<i>Pentas mussaendoides</i> Baker	1	-
<i>Psychotria alaotrensis</i> Bremek.	2	-
<i>Psychotria andevorantensis</i> Bremek.	12	-
<i>Psychotria anjanaharibensis</i> A.P. Davis & Govaerts	4	-
<i>Psychotria ankafinensis</i> (K. Schum.) A.P. Davis & Govaerts	34	-
<i>Psychotria bullulata</i> Bremek.	1	-
<i>Psychotria haplantha</i> Bremek.	2	?
<i>Psychotria linearifolia</i> Bremek.	2	-
<i>Psychotria lucidula</i> Baker	1	-
<i>Psychotria macrochlamys</i> (Bremek.) A.P. Davis & Govaerts	15	-
<i>Psychotria menalohensis</i> (Bremek.) A.P. Davis & Govaerts	18	2*
<i>Psychotria obtusifolia</i> Poir.	1	-
<i>Psychotria onivensis</i> (Bremek.) A.P. Davis & Govaerts	7	?
<i>Psychotria parkeri</i> Baker	5	-
<i>Psychotria rakotoniaina</i> A.P. Davis & Govaerts	2	?
<i>Psychotria ratovoarisonii</i> A.P. Davis & Govaerts	3	-
<i>Psychotria</i> sp. indet. 1	50	2*
<i>Psychotria</i> sp. indet. 2	4	2*
<i>Psychotria subcapitata</i> Bremek.	2	-
<i>Psychotria subnubila</i> Bremek.	14	-
<i>Psychotria taxifolia</i> Bremek.	32	-
<i>Pyrostria analamazaotrensis</i> Arènes ex Cavaco	7	3
<i>Pyrostria</i> sp. indet. 1 cf. <i>P. ankazobeensis</i> Arènes ex Cavaco	4	?
<i>Pyrostria</i> sp. indet. 2	15	2*
<i>Pyrostria variistipula</i> Arènes ex Cavaco	1	-

Table 1. (cont.)

Part 2: Seed plants	No. of specimens	SOC class
<i>Richardia brasiliensis</i> B.A. Gomes	2	-
<i>Richardsonia</i> sp. indet. 1	1	?
<i>Robbrechtia grandifolia</i> De Block	8	-
<i>Saldinia acuminata</i> Bremek.	1	-
<i>Saldinia aegialodes</i> Bremek.	1	-
<i>Saldinia bullata</i> Bremek.	1	-
<i>Saldinia coursiana</i> Bremek.	11	2
<i>Saldinia dasyclada</i> Bremek.	1	?
<i>Saldinia mandracensis</i> Bremek.	1	3
<i>Saldinia myrtilloides</i> Bremek.	24	-
<i>Saldinia myrtilloides</i> var. <i>myrtilloides</i> Bremek.	18	-
<i>Saldinia proboscidea</i> Hochr.	12	-
<i>Saldinia proboscidea</i> var. <i>proboscidea</i> Hochr.	1	3
<i>Saldinia</i> sp. indet. 1	18	?
<i>Schismatoclada aurea</i> Homolle	3	3
<i>Schismatoclada concinna</i> Baker	10	3
<i>Schismatoclada psychotrioides</i> Baker	32	-
<i>Schismatoclada</i> sp. indet. 1 aff. <i>S. rupestris</i> Homolle	1	-
<i>Schismatoclada</i> sp. indet. 2	14	?
<i>Spermacoce tenuior</i> L.	1	-
<i>Tarenna alleizettei</i> (Dubard & Dop) De Block	21	-
<i>Tarenna</i> sp. nov. aff. <i>spiranthera</i>	9	-
<i>Tarenna spiranthera</i> (Drake) Homolle	13	-
<i>Tarenna uniflora</i> (Drake) Homolle	1	-
<i>Tricalysia</i> sp. indet. 1	16	?
<i>Tricalysia analamazaotensis</i> Homolle ex Randriamb. & De Block	20	3
Rutaceae		
<i>Citrus aurantium</i> L.	1	-
<i>Melicope discolor</i> (Baker) T.G. Hartley	11	2
<i>Melicope</i> sp. indet. 1	6	?
<i>Melicope</i> sp. nov. A	7	2*
<i>Teclea punctata</i> I. Verd.	1	-
<i>Toddalia asiatica</i> (L.) Lam.	10	-
<i>Vepris nitida</i> (Baker) I. Verd.	6	-
<i>Vepris pilosa</i> (Baker) I. Verd.	11	-
<i>Vepris punctata</i> (I. Verd.) Mziray	2	-
<i>Vepris sclerophylla</i> H. Perrier	1	-
<i>Zanthoxylum madagascariense</i> Baker	1	-
<i>Zanthoxylum mananarensis</i> H. Perrier	1	-
<i>Zanthoxylum thouvenotii</i> H. Perrier	2	-
Salicaceae		
<i>Bembicia axillaris</i> Oliv.	2	-
<i>Bembicia uniflora</i> (H. Perrier) Capuron	1	-
<i>Calantica</i> sp. nov. A	8	2*
<i>Casearia nigrescens</i> Tul.	2	-
<i>Homalium albiflorum</i> (Boivin ex Tul.) O. Hoffm.	1	-
<i>Homalium axillare</i> (Lam.) Benth.	14	?
<i>Homalium erianthum</i> (Tul.) Baill.	1	-
<i>Homalium lucidum</i> Scott-Elliot	1	-
<i>Homalium maringitra</i> H. Perrier	18	2*
<i>Homalium nudiflorum</i> (DC.) Baill.	9	-
<i>Homalium parkeri</i> Baker	2	-
<i>Ludia antanosarum</i> Capuron & Sleumer	6	-
<i>Ludia madagascariensis</i> Clos	24	3
<i>Ludia mauritiana</i> J.F. Gmel.	1	-
<i>Ludia pinnatinervia</i> (H. Perrier) Capuron & Sleumer	8	-
<i>Ludia scolopioides</i> Capuron & Sleumer	1	-
<i>Ludia</i> sp. nov. A. aff. <i>L. scolopioides</i> Capuron & Sleumer	1	3
<i>Ludia</i> sp. nov. B	1	2
<i>Ludia</i> sp. nov. C	1	2
<i>Scolopia madagascariensis</i> Sleumer	5	-

Table 1. (cont.)

Part 2: Seed plants	No. of specimens	SOC class
<i>Scolopia</i> sp. indet. 2 cf. <i>S. erythrocarpa</i> H. Perrier	1	?
<i>Scolopia</i> sp. indet. 1	7	?
<i>Scolopia taimbarina</i> H. Perrier	8	2*
<i>Scolopia thouvenoti</i> H. Perrier	2	2*
<i>Tisonia coriacea</i> Scott-Elliot	2	-
<i>Tisonia coursii</i> H. Perrier	1	-
<i>Tisonia rubescens</i> Danguy	1	-
Santalaceae		
<i>Korthalsella taenioides</i> (Comm. ex DC.) Engl.	2	-
<i>Thesium leandrianum</i> Cavaco & Keraudren	6	-
<i>Viscum cuneifolium</i> Baker	9	-
<i>Viscum decaryi</i> Lecomte	1	-
<i>Viscum grandifolium</i> Engl.	4	-
<i>Viscum multicostatum</i> Baker	3	2
<i>Viscum multiflorum</i> Lecomte	4	-
<i>Viscum radula</i> Baker	2	-
<i>Viscum</i> sp. indet. 1	1	?
<i>Viscum</i> sp. indet. 2	1	?
<i>Viscum</i> sp. indet. 3	1	?
<i>Viscum</i> sp. indet. 4	7	?
<i>Viscum</i> sp. nov. A	1	2
<i>Viscum</i> sp. nov. B	1	2
Sapindaceae		
<i>Allophylus arboreus</i> Choux	1	-
<i>Allophylus cobbe</i> (L.) Raeusch.	4	-
<i>Allophylus macrocarpus</i> Danguy & Choux	2	-
<i>Allophylus pinnatus</i> Choux	1	-
<i>Allophylus</i> sp. nov. A ('arboreus' ined.)	1	?
<i>Allophylus</i> sp. nov. B	4	?
<i>Allophylus</i> sp. nov. C	1	1
<i>Allophylus</i> sp. nov. D	1	?
<i>Allophylus</i> sp. nov. E	1	?
<i>Allophylus trichodesmus</i> Radlk.	1	-
<i>Beguea apetala</i> Capuron	7	-
<i>Deinbollia macrocarpa</i> Capuron	3	-
<i>Dodonaea viscosa</i> (L.) Jacq.	6	-
<i>Doratoxylon apetalum</i> (Poir.) Radlk.	2	-
<i>Doratoxylon chouxii</i> Capuron	1	-
<i>Filicium decipiens</i> (Wight & Arn.) Thwaites	3	-
<i>Gereaua perrieri</i> (Capuron) Buerki & Callm.	1	-
<i>Molinaea sessilifolia</i> Capuron	1	-
<i>Molinaea</i> sp. indet. 1	1	-
<i>Molinaea</i> sp. nov. A	6	2*
<i>Neotina coursii</i> Capuron	8	-
<i>Neotina isoneura</i> (Radlk.) Capuron	4	-
<i>Tina chapelieriana</i> (Cambess.) Kalkman	7	-
<i>Tina dasycarpa</i> Radlk.	1	-
<i>Tina striata</i> Radlk.	30	-
<i>Tina trijuga</i> Radlk.	1	-
<i>Tinopsis apiculata</i> Radlk.	1	-
<i>Tinopsis conjugata</i> (Thouars ex Radlk.) Capuron	3	-
<i>Tinopsis dissitiflora</i> (Baker) Capuron	1	?
<i>Tinopsis macrocarpa</i> Capuron	1	-
<i>Tinopsis phellocarpa</i> Capuron	2	-
<i>Tinopsis urschii</i> Capuron	12	-
Sapotaceae		
<i>Chrysophyllum boivinianum</i> (Pierre) Baehni	7	-
<i>Faucherea ambrensis</i> Capuron ex Aubrév.	2	-
<i>Faucherea laciniata</i> Lecomte	3	-
<i>Faucherea parvifolia</i> Lecomte	9	-
<i>Faucherea</i> sp. indet. 1	1	?

Table 1. (cont.)

Part 2: Seed plants	No. of specimens	SOC class
<i>Sideroxylon capuronii</i> Aubrév.	1	-
Sarcolaenaceae		
<i>Leptolaena abrahamii</i> G.E. Schatz & Lowry	11	-
<i>Leptolaena gautieri</i> G.E. Schatz & Lowry	24	-
<i>Leptolaena multiflora</i> Thouars	1	-
<i>Leptolaena</i> sp. indet. 1	3	-
<i>Rhodolaena bakeriana</i> Baill.	15	-
<i>Sarcolaena eriophora</i> Thouars	8	-
<i>Sarcolaena oblongifolia</i> F. Gérard	3	-
<i>Sarcolaena</i> sp. indet. 1	6	?
Scrophulariaceae		
<i>Buddleja indica</i> Lam.	5	-
<i>Buddleja madagascariensis</i> Lam.	1	-
Smilacaceae		
<i>Smilax kraussiana</i> Meisn.	4	-
Solanaceae		
<i>Solanum erythracanthum</i> Bojer ex Dunal in DC.	2	-
<i>Solanum humblotii</i> Dammer	1	-
<i>Solanum madagascariense</i> Dammer	2	-
<i>Solanum madagascariense</i> Dunal in A. DC.	3	-
<i>Solanum mauritianum</i> Scop.	1	-
<i>Solanum</i> sp. indet. 1	3	?
Stilbaceae		
<i>Nuxia sphaerocephala</i> (Baker) Baker	5	-
Thymelaeaceae		
<i>Atemnosiphon coriaceus</i> (Leandri) Leandri	15	-
<i>Peddiea involucreta</i> Baker	7	-
<i>Stephanodaphne geminata</i> H. Perrier ex Leandri	3	-
Triuridaceae		
<i>Seychellaria madagascariensis</i> C.H. Wright	1	-
Typhaceae		
<i>Typha angustifolia</i> L.	1	-
Ulmaceae		
<i>Chaetachme madagascariensis</i> E. Mey. ex Planch.	3	-
Urticaceae		
<i>Pilea alaotrae</i> Leandri	1	-
<i>Procris pedunculata</i> (J.R. Forst. & G. Forst.) Wedd.	4	-
<i>Urera acuminata</i> (Poir.) Gaudich. ex Decne.	2	-
<i>Urera longifolia</i> Wedd.	1	-
Verbenaceae		
<i>Verbena brasiliensis</i> Vell.	2	-
Violaceae		
<i>Hybanthus heterophyllus</i> (Vent.) Baill.	1	-
<i>Rinorea microphylla</i> H. Perrier	5	-
<i>Rinorea</i> sp. indet. 1	3	?
<i>Rinorea urschii</i> H. Perrier	5	-
Vitaceae		
<i>Cayratia triternata</i> (Baker) Desc.	1	-
<i>Cissus floribunda</i> (Baker) Planch.	2	-
<i>Cissus lemurica</i> Desc.	1	-
<i>Cissus microdonta</i> (Baker) Planch.	1	-
<i>Cyphostemma microdiptera</i> (Baker) Desc.	11	-
Xanthorrhoeaceae		
<i>Aloe leandrii</i> Bosser	12	2*
<i>Dianella ensifolia</i> (L.) DC.	19	-
Xyridaceae		
<i>Xyris anceps</i> Lam.	2	-
<i>Xyris congensis</i> Büttner	1	-
<i>Xyris hildebrandtii</i> L.A. Nilsson	4	-
<i>Xyris semifuscata</i> Bojer ex Baker	2	-

A provisional identification was made for each collection in the field, and then checked and validated with reference to the relevant literature, and by comparison with specimens including nomenclatural types deposited in key reference herbaria (MO, TAN, and P) as well as nomenclatural types from other institutions which have recently become available online (Aluka, 2010). Specialists provided authoritative identification/validation for certain groups. In some cases, specimens could not be identified with a named species because they belonged to a taxon that has not yet been formally named, or could not be determined with certainty because the material was inadequate or the taxa in question were not adequately delimited and in need of taxonomic revision. Such specimens were provisionally assigned to a “morphospecies”, referred to by using the generic name followed by either the term “sp. nov.” and a letter (in the case of a probable new species) e.g., “*Croton* sp. nov. A”, or the term “sp. indet.” and a number (in the case of specimens that could not be properly identified) e.g. “*Croton* sp. indet. 1”. In some cases the morphospecies are qualified by provisional unpublished ‘working’ names (e.g. “*Cryptocarya* sp. nov. A (‘acuminata’ ined.)”), or by reference to a related but distinct species for new species (e.g. “*Croton* sp. nov. B aff. *C. jenny anum* Gris. ex Baillon”), or by the name of a tentative identification for indeterminate morphospecies (e.g. “*Ocotea* sp. indet. 4 cf. *O. laevis* Kosterm.”).

An analysis of geographical distribution was conducted for each species in order to provide data for the environmental impact assessment and to guide the mining company in developing and implementing appropriate conservation measures. This involved examining relevant taxonomic literature, databases, and the specimens available in the key herbaria mentioned above to ascertain geographical range

and known presence in protected areas, as well as recording dates of collection. In plant groups known only from out-dated taxonomic treatments, new working hypotheses for species delimitation had to be developed through a critical examination of currently available specimens. With this information, species (including morphospecies) recorded at the mine site that are known from no more than three other locations were identified. These are referred to as “Species of Concern” (SOC), and fall into one of three subtypes:

- SOC1 = species recorded only from the mine footprint,
- SOC2 = species recorded from the mine footprint and one other site, and
- SOC3 = species recorded from the mine footprint and two or three other sites.

The definition of “other sites” includes any location outside the mine footprint. Therefore, “other sites” includes populations recorded from the proposed conservation zone within the mine lease area. For this part of the work, we required the species to be known from specimens collected during the past 25 years because these are likely to represent populations that are still in existence, unlike older collections many of which are known to represent extinct populations.

Results and discussion

A list of the species (including morphospecies) recorded to date from the Ambatovy-Analamay site is provided in Table 1. It comprises a part for the ferns and fern allies and a part for the seed plants. The assignment of genera to plant families follows Smith *et al.* (2006) for ferns and fern allies, and the Angiosperm Phylogeny Group III (2009) system for flowering plants (angiosperms). The single family

Table 2. Comparison of the botanical inventory of the Ambatovy-Analamay site with a sample of humid forest protected areas.

Site	Area (ha)	Number of specimens collected and data-based	Number of plant families	Number of plant genera
Ambatovy-Analamay site ^a	7,026	7747	151	629
Andasibe/Mantadia National Park ^a	15,480	1157	101	302
Anjanaharibe-Sud Special Reserve ^a	32,090	1758	111	317
Makira National Park ^a	371,217	3329	123	406
Manongarivo Special Reserve ^b	32,735	4620	^c 145	657
Marojejy National Park ^a	60,050	3441	145	574
Masoala National Park ^a	230,000	4668	137	508
Zahamena National Park ^a	64,370	3205	120	453

^a Botanical data from Missouri Botanical Garden (2010).

^b Botanical data from Gautier (2002) and Rakotondrainibe (2002).

^c Family data for Manongarivo Reserve lacking for ferns and fern allies.

of the gymnosperms in the study (Podocarpaceae) is included alphabetically among the angiosperms. This inventory, based on data from a total of 7,747 herbarium specimens, includes 1,580 species or morphospecies (out of a total native flora of Madagascar estimated to contain ca. 14,000 species; Phillipson *et al.*, 2006), distributed among 151 families and 629 genera (out of 253 families and ca. 1,630 genera in totals currently recognised as native or naturalised; Madagascar Catalogue, 2010). Each

Table 3. Inventory of species and infraspecific taxa known only from the Ambatovy-Analamay mine footprint (SOC1).

Family name	Species name
Acanthaceae	<i>Melittacanthus divaricatus</i> S. Moore <i>Mendoncia</i> sp. nov. A
Apocynaceae	<i>Cynanchum moramangense</i> Choux <i>Secamone</i> sp. nov. A
Asteraceae	<i>Helichrysum</i> sp. nov. A aff. <i>H. ambondrombeense</i> Humbert <i>Senecio</i> sp. nov. A. aff. <i>S. multidenticulatus</i> Humbert
Erythroxylaceae	<i>Erythroxylum</i> sp. nov. E <i>Erythroxylum</i> sp. nov. F <i>Erythroxylum</i> sp. nov. G <i>Erythroxylum</i> sp. nov. H
Euphorbiaceae	<i>Amyrea stenocarpa</i> Radcl.-Sm. <i>Croton</i> sp. nov. B aff. <i>C. jenny anum</i> Gris. ex Baillon <i>Tragia cocculifolia</i> var. <i>glabrescens</i> Leandri
Gentianaceae	<i>Exacum bulbilliferum</i> Baker
Hypericaceae	<i>Psorospermum nervosum</i> H. Perrier
Lauraceae	<i>Aspidostemon conoideum</i> Van der Werff
Lomariopsidaceae	<i>Elaphoglossum</i> sp. nov. A
Malvaceae	<i>Keraudrenia macrantha</i> (Baill.) Arènes
Melastomataceae	<i>Gravesia</i> sp. nov. A aff. <i>G. baronii</i> H. Perrier <i>Medinilla</i> sp. nov. A aff. <i>M. oblongifolia</i> Cogn. <i>Medinilla</i> sp. nov. B
Menispermaceae	<i>Burasaia</i> sp. nov. A
Myrtaceae	<i>Eugenia</i> sp. nov. A <i>Eugenia</i> sp. nov. D
Orchidaceae	<i>Bulbophyllum peyrotii</i> Bosser <i>Bulbophyllum platypodum</i> H. Perrier <i>Bulbophyllum sandrangatense</i> Bosser <i>Cryptopus brachiatus</i> H. Perrier
Phyllanthaceae	<i>Phyllanthus</i> sp. nov. A
Primulaceae	<i>Oncostemum humbertianum</i> H. Perrier <i>Oncostemum</i> sp. nov. C aff. <i>O. leprosum</i> Mez
Rubiaceae	<i>Coptosperma</i> sp. nov. A <i>Hyperacanthus</i> sp. nov. A ('mangoroensis' ined.)
Sapindaceae	<i>Allophylus</i> sp. nov. C

species in the list is annotated with the total number of collections made at the Ambatovy-Analamay site, which serves as a crude indication of the abundance of the species, as well as its SOC class.

Table 2 compares the results of the botanical inventory of the Ambatovy-Analamay site with information on the flora of several of Madagascar's most well-documented humid forest protected areas obtained from the botanical database TROPICOS (Missouri Botanical Garden, 2010) and from Gautier (2002) and Rakotondrainibe (2002) for the Manongarivo Special Reserve. The table shows that many more families and genera have been recorded from the Ambatovy-Analamay site than from most of these protected areas despite its smaller size, a finding that suggests Ambatovy-Analamay has a notably rich flora. It would, however, be premature to conclude that the flora of this site is more diverse than the others listed in Table 2 for the following reasons: 1) significantly more specimens have been collected at the mine site than elsewhere; 2) material has been collected from Ambatovy-Analamay according to protocols intentionally favoring the sampling of often-neglected groups; and 3) there has been large investment of time in the critical identification of herbarium specimens originating from the mine site, which is not true for all of the other sites listed. Hence, on the basis of these points, Ambatovy-Analamay is one of Madagascar's best known sites with regard to botanical diversity. Comparison between the Ambatovy-Analamay site and data reported for the Manongarivo Special Reserve by Gautier (2002) and Rakotondrainibe (2002) is particularly interesting. This protected area covers an area just over 4.5 times that of the Ambatovy-Analamay site, but contains a similar level of taxon diversity (1,645 species and 657 genera) based on the analysis of a somewhat smaller dataset (4,620 available specimens).

The inventory includes 252 morphospecies. Many of these are taxa new to science and their formal scientific description and naming in scientific articles will constitute a significant and important contribution resulting from this field research. The large number of "new" species discovered by this project demonstrates how our knowledge of the Malagasy flora is far from complete (also see Goodman, p. 17, for this same aspect concerning other groups of organisms besides vascular plants).

Among the species inventoried at the Ambatovy-Analamay site, 196 are classified as SOC. Of these, 34 species or morphospecies are known only from the mine footprint (i.e., they are classified as SOC1, see

Table 3), 114 are known only from the footprint and one other site (SOC2), and 48 have been recorded from the footprint and two or three other sites (SOC3). A total of 100 species or morphospecies are known only from the mine footprint and the surrounding area. Moreover, 141 morphospecies have not yet been fully identified and therefore their SOC status is unknown.

Conclusion

The Ambatovy-Analamay site now has perhaps the most complete botanical inventory of any location in Madagascar. This research demonstrates that the site has a diverse flora that includes a significant number of locally endemic species and a large number of taxa that are new to science.

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