The ecology of North island

J. Gerlach¹, J. Willi² & R. Gerlach¹

PO Box 207, Vicotira, mahe, SEYCHELLES [npts@seychelles.net]

1 Imperial College of Science & Technology, Alexander Fleming Building, London, UK

Abstract: North island, Seychelles was the first island of the group to be explored in 1609 but has no accounts of the ecology of the island have been published previously. This paper describes the current state of the ecology of the island, which is dominated by alien habitats and supports a much reduced fauna and flora. The potetial for restoration ond reintrodctuion of threatened species is very high. Species lists for fungi, plants and animals are given.

Keywords: Cocos nucifera, conservation, Lantana camara, restoration, Seychelles

Introduction

North island was the first island in the Seychelles group to be explored when a landing was made on 20th January 1609. John Jourdain's journal of the time records this event and the first biological observations from the group: "the boate reourned and brought soe many land toerells as they could carrie... and soe greate that eight of them did almost lande our skiffe (sic)." (Foster 1905). Unfortunately there are no further records of the early history of the island, beyond a note of an extensive fire (de Malavois in Fauvel 1909). During the 19th and 20th centuries the remaining natural forest habitats were replaced by an extensive coconut plantation and all of the island was managed for agriculture. In the late 20th century there were visits to the island to collect plants (Robertson 1989; Friedmann 1994) and reptiles (Cheke 1984; Gardner 1987). The first general ecological observations were made during a short visit by RSPB staff in 1997 when the low diversity of the fauna was noted and introduced mammals recorded (dogs, cats, cows, goats and rats). This visit paid particular attention to the land-birds but failed to locate some of the commoner species (e.g. sunbirds and kestrels) that are present on the island. A more thorough study was made in November 1997. although only Odonata were recorded (Wain et al. 1999). Collections of invertebrates were made in 1999 but have not been made available for study, the only extensive faunal surveys were made in July 2000 by the authors.

Physical geography and habitats

North island is situated in the north-west of the granitic Seychelles islands and shares a distinctive geology with Silhouette, the nearest island. Although it has three hills over 100m high (Grand Paloss 180m, Bernica 110m, Congoment 102m) almost half the island can be categorised as plateau (42ha), an exceptionally high proportion for the granitic islands. This plateau includes a significant marsh (1.5ha), grass areas (mostly around the settlement) but is mainly covered with woodland. The great majority of this is abandoned coconut plantation which has been invaded by Lantana camara and Psidum cattleianum. There is a

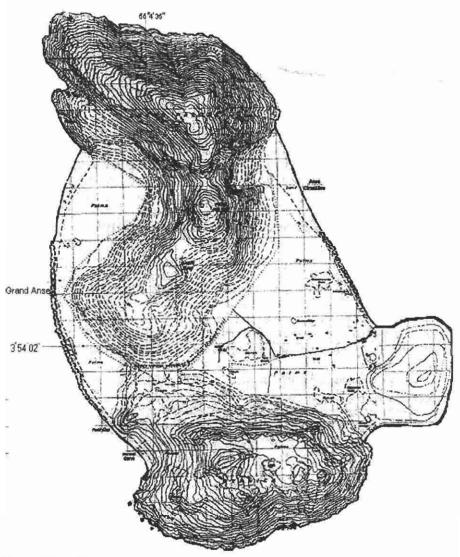


Fig. 1. Map of North island

central area of mixed woodland, composed of Cocos nucifera, P. guavava and Anona muricata. To the north-west end of the plateau an area of Calophyllum inophyllum woodland was present, with patches of Terminalia catappa. The C. inophyllum are now largely dead due to infection by vascular wilt. Coastal vegetation is dominated by grass on the east coast and by coastal trees (Guettarda speciosa, Thespesia populnea, Hibiscus tiliaceus and Casuarina

equisetifolia) on the west coast. Glacis areas appear to support semi-natural glacis vegetation, with abundant Pandanus multispicatus.

Flora

136 species of angiosperm and 3 ferns have been recorded from North island (see Appendix). Bryophytes appear to be restricted to a single species. The proportion of alien species is exceptionally high (57%) and the only Seychelles endemic plant recorded from the island is *Pandanus balfouri*.

Fauna

The fauna is very poor for an island of its size as has been noted previously (Lucking et al. 1997), previous reports have attributed this to predation by rats but this is unsubstantiated and probably reflects the impact of alien habitats rather than predation. The present study recorded a wide range of animal classes but little species diversity, notably poor groups include Isopoda, of which only a single specimen could be found. Despite the paucity of invertebrates, reptiles are relatively abundant with significant populations of skinks (Mabuya seychellensis), geckos (mainly Phelsuma sundbergi and Urocotyldeon inexpactatus) and snakes (Rhamphotyphlops braminus). Of the species expected to be present but not recorded to date the gecko Ailuronyx seychellensis may survive in small numbers in the crowns of the coconut trees. The skink Pamelascincus gardineri appears to be absent. There are no Wright's skinks (Mabuya wrightii) but the historical presence of a guano sifting plant on the island indicates that a seabird colony was present in the past and this would have been likely to support a M. wrightii population. Introduced Aldabran tortoises (Dipsochelys dussumieri) are present although the number has declined over recent years and the present population seems to be restricted to four individuals (of which only one is female). Tortoises were present historically (Foster 1905) but which species was represented is not known. The Mascarene frog Ptychadena mascariensis is locally abundant in the marsh but caecilians appear to be absent.

The avifauna of the island may have included a tern colony in historical times but there are no records of species composition of any such colony. A diverse land-bird fauna was probably present in the past but is now restricted to the common, adaptable species and a significant population of Seychelles kestrel (Falco araea). Kestrels appear to be present all year round but they may not represent a significant breeding population at present. It is possible that there is a high level of immigration of young birds from the major population on Silhouette. North island may represent a population sink for this species although the juxtaposition of nesting cliffs and extensive feeding habitat should allow for the establishment of an important breeding population.

The marsh area has been occupied by migratory garganey (Anas querquerula), black-crowned night herons (Nycticorax nycticorax) and green-backed herons (Butorotides striatus). No breeding has been recorded by any herons on North island but the marsh could support important breeding populations of night herons and yellow bitterns (Ixobrychus sinensis) if a more extensive area of permanent water developed.

Although the invertebrate fauna appears to be very restricted it does include some taxa of note; only three species of terrestrial mollusc have been recorded but these do not

include any introduced species that are so common on most other islands and includes one Seychelles endemic species. The lowland habitats would be expected to support abundant and diverse dipteran flies but comparatively few species have been collected. Of these one species of Psychodidae is identifiable as an undescribed species. Although it was expected that new species would be found in the most natural habitat areas and that the alien habitat would be occupied by cosmopolitan species this new fly has been found in the Lantana camara scrub under the coconut plantation.

The Lepidoptera are similarly restricted but the presence of the bee hawkmoth Cephonodes hylas virescens is notable. A report of the butterfly Euploea mitra was included in the Environmental Impact Assessment document for the island development but this is in error for Hypolimnas missipius.

Conservation

North island supports a highly degraded flora and predictably the fauna is very restricted. Notable points are the high diversity of dragonflies and damselflies, the absence of alien snails and the presence of at least 2 Seychelles endemic cockroaches. The most valuable habitats on the island appear to be the central marsh area and the Calophyllum woodland. The rock areas are probably also of conservation significance although their contribution to general biodiversity appears to be low. The value of the Calophyllum woodland may be reduced by its lack of floral diversity and the rapid spread of takamaka wilt across the island. This disease was not apparent in 1999 but was causing significant mortality by July 2000. The presence of the endemic slug Vaginula seychellensis may indicate that the island originally supported a wider range of molluscs. A record of the original mollusc and vertebrate fauna may be preserved in the soils of the plateau and marsh. Investigation of these would be a valuable source of information for use in planning any future animal reintroductions.

The main causes of the present low-diversity fauna and flora are probably historical fires, invasion by alien plants (particularly Lantana camara, Psidium spp. and Anona muricata) and disturbance of specific habitats by introduced mammals. Of the mammals the goats were removed in recent years and the primary disturbance has recently been caused by cows. In the marsh area and adjacent woodland their impact has been very great with selective grazing and trampling. The removal of the cows should help native vegetation to become reestablished. Naturally tortoises would have disturbed the marsh area and grazed selectively on some plants but the impact is likely to have been less.

The biological value of North island would be considerably enhanced with some control of the more dominant alien species and removal of much of the old coconut plantation. The extensive marsh area should facilitate the restoration of good quality lowland forest. Following habitat restoration North island could provide a valuable locality for the reintroduction of threatened species. The potential for reintroduced land-birds such as the Seychelles magpie robin (Copsychus sechellarum), Seychelles black paradise flycatcher (Terpsiphone corvina) and Seychelles warbler (Acrocephalus sechellensis) is clear and has been referred to in numerous reports and in the press. The critically endangered Seychelles population of yellow bittern could also develop a valuable population around the marsh (Gerlach & Skerrett 2001). There is also clear potential for other taxa such as the Seychelles giant tortoises (in particular the grazing species Dipsochelys hololissa) and black terrapin

(Pelusios subniger intergularis) (Gerlach & Canning 2001). Less obvious candidates for reintroduction include invertebrates which will have existed on the island until their habitat was lost by fire, these include the giant millipede Seychelleptus seychellarum and the giant tenebrionid beetle (Pulposipes herculeanus), which remains of conservation concern.

Any conservation management of North island will almost certainly wish to increase the plant diversity on the island by planting native and endemic species. There are several areas on the island which could support endemic palm forest and it would be desirable to encourage the re-growth of *Pandanus* groves in these areas. Wright's gardenia (*Rothmannia annae*) could be established in restored woodland and should prove to be of aesthetic benefit to the island and conservation benefit to this endangered species.

The topography of North island would appear to be well suited to the development of a large butterfly population as is seasonally present on the flat, sandy islands of Bird and the Amirantes (J.G. pers. obs.). The current poor fauna could easily be encouraged by increasing the abundance of favoured food plants, such as *Intsia bijuga* for nectar production and *Portulaca oleracea* for the larvae of *Hypolimnas missipius*. This is the only conspicuous butterfly likely to be recorded regularly on the island. The bee hawkmoths (*Cephonodes* spp.) could be encouraged by planting *Canthium bibracteatum* and *Morinda citrifolia* may encourage the hummingbird hawkmoth (*Macroglossum alluaudi*). These are all abundant on Silhouette (Gerlach 1998 & 2000) and natural recolonisation is highly probable.

Any reintroduction plans for North island should consider the biogeographical patter of the islands. Both Silhouette and north islands are relatively isolated from the rest of the granitic group and significant gene flow between these islands is more likely than between either of them and from other islands. Consequently where possible Silhouette should be used as the source of animals or plants used on North island.

References

- Cheke, A. 1984. Lizards of the Seychelles. In: Stoddart, D.R. (ed.) Biogeography and Ecology of the Seychelles Islands. Dr. W. Junk, the Hague.
- Fauvel, A.A. 1909. Unpublished documents on the history of the Seychelles Islands before 1880. Public Library, Mahe, Seychelles.
- Gardner, A. 1987. The systematics of the *Phelsuma madagascariensis* species group of day geckos (Reptilia: Gekkonidae) in the Seychelles. *Zool. J. Linn. Soc.* 91; 93-105
- Foster, W. (ed.) 1905. The journal of John Jourdain 1608-1617, describing his experiences in Arabia, Indian and the Malay Archipelago. Hakluyt Society, London. 394pp.
- Friedman, F. 1994. Flore des Seychelles. ORSTOM, Paris.
- Gerlach, J. 1998. New and rediscovered animals in Seychelles. *Phelsuma* 6; 74-76 2000. The rediscovery of the Seychelles hummingbird hawkmoth *Macroglossum alluaudi* Joannis, 1893 (Lepidoptera: Sphingidae). *Phelsuma* 8; 79-80
- Gerlach, J. & Canning, L. 2001 (in press). Declines in the Critically Endangered Seychelles terrapins *Pelusios castanoides intergularis* and *P. subniger parietalis*. Oryx.
- Robertson, S.A. 1989. The Flowering Plants of Seychelles. Royal Botanic Gardens, Kew. Wain, W.H., Wain, C.B. & Lambert, T. 1999. Odonata of North Island, Seychelles archipelago. Notul. Odonatologica 5, 47-50

Appendix. North island species list

| | | | Species recorded |
|----------|---------------|--------------------------|------------------|
| FUNGI | | | 2 |
| PLANTAE | Bryophyta | | 1 |
| | Pteridophyta | | 3 |
| | Spermatophyta | | |
| ANIMALIA | Annelida | Oligochaeta | 1 |
| | Mollusca | Gastropoda | 3 |
| | Crustacea | Isopoda | ī |
| | | Decapoda | 3 |
| | Arachnida | Scizomida | 1 |
| | | Araneae | 20 |
| | | Acari | 7 |
| | | Ablipygii | 1 |
| | Myriapoda | Diplopoda | 3 |
| | 0 15 | Chilopoda | 2 |
| | Apterygota | | 2 ? 4 |
| | Hexapoda | Odonata | 4 |
| | 3: | Orthoptera | 4 |
| | | Dictyoptera (Blattoidea) | 4 |
| | | Isoptera | 1 |
| | | Dermaptera | 2 |
| | | Hemiptera | 1 |
| | | Psocoptera | ? |
| | | Thysanoptera | 1 |
| | | Neuroptera | 1 |
| | | Lepidoptera | 8 |
| | | Diptera | >1 |
| | | Hymenoptera | >5 |
| | | Coleoptera | >4 |
| | Chordata | Amphibia | 1 |
| | | Reptilia | 6 |
| | | Aves | 6 |
| | | Mammalia | 4 |

FUNGI

Ganoderma australe

PLANTAE

BRYOPHYTA - 2 sp.

PTERIDOPHYTA

PTERIDACEAE Pteris friesii Hieron - Afr., western Indian Ocean; M, S, N & P.

DAVALLIACEAE Nephrolepis cf. biserrata - ?, widespread

ASPLENIACEAE Diplazium sechellarum (Baker) C.Chr. - Mad., M & N.

SPERMATOPHYTA

ACANTHACEAE Asystasia sp. B? - widespread

AGAVACEAE Agave sisalana Intr.; widespread

AMARANTHACEAE Achyranthes aspera Indo-Pacific; widespread. Amaranthus dubius Indo-Pacific; widespread. spread.

ANACARDIACEAE Anacardium occidentale - Intr.; widespread. Manguifera indica. - Intr.; widespread Spondias cytherea - Intr.; widespread.

ANNONACEAE Annona cherimoya - Intr., N. Annona muricata - Intr., M, N, P & Co. Annona reticulata, -Intr.; N. Annona squamosa, - Intr.; N

APOCYNACEAE Catharanthus roseus - Intr., widespread. Ochrosia oppositifolia - Indo-Pacific, widespread.

ARACEAE Philodendron sp. - Intr.; M, S, N, P

RIGNONIACEAE Tabebuia pallida - Intr.; widespread

BORAGINACEAE Cordia subcordata Indo-Pacific, widespread. Heliotropium indicum - Intr., widespread.

CAESALPINIACEAE Senna occidentalis - Intr., widespread. Tamarindus indica. - Intr., widespread.

CAPPARACEAE Cleome viscosa - Intr.; widespread.

CARICACEAE Carica papaya Intr.; widespread

CARYOPHYLLACEAE Drymaria cordata Intr.; M, S, N, F.

CASUARINACEAE Casuarina equisetifolia - SE Asia; widespread

CHRYSOBALANACEAE Chrysobalanus icaco - Intr.; widespread. COMBRETACEAE Terminalia catappa Indo-Pacific; widespread.

COMMELINACEAE Commelina benghalensis - Intr.; N, Cur & A. C. diffusa - Intr.; N & Co.

COMPOSITAE Emilia sonchifolia Intr.; M, S, N & F. Synedrella nodiflora Intr.; M, S, N, Co, F & B. Tridax procumbens Intr.; M, S & N. Vernonia cinerea, Intr.; widespread.

CONVOLVULACEAE Ipomoea aquatica - Intr.; M, S, N, Cur & A. I. mauritiana - Masc.; M. SA, S & N. I. pes-caprae - Indo-Pacific; widespread.

CYPERACEAE Cyperus articulatus Pantrop.; M, S, N, P & L.D. C. compressus M, S, N, A & F Fimbristylis complanata Intr?; widespread. F. cymosa Pantrop.; widespread. Kyllinga monocephala M, S, N, Co & F. K. polyphylla Indian-Ocean; widespread. Mariscus dubius Pantrop; widespread. Pycreus polystachyos Indian Ocean; widespread.

EUPHORBIACEAE Euphorbia hirta Intr. widespread. E. thymifolia Intr.; widespread. Jatropha curca Intr.; M, S, N, P & F. Phyllanthus amarus Intr., widespread. Phyllanthus urinaria Intr.; M, S, N & F.

GOODENACEAE Scaevola sericea Indo-Pacific, widespread.

GUTTIFERAE Calophyllum inophyllum - Indo-Pacific; widespread.

HERNANDIACEAE Hernandia nymphaeifolia Indo-Pacific; widespread.

LABIATAE, Leucas lavandulifolia Intr.; M. S. N. & F. Ocimum gratissimum Intr. - M. S. & N. Plectranthus amboinicus Intr. - M. S. N. P & A.

LECYTHIDACEAE Barringtonia asiataica Indo-Pacific; widespread.

LILIACEAE Dracaena reflexa Mad.; widespread.

MALVACEAE Abutilon fruticosum Intr.; S & N. Hibiscus tiliacaeus Indo-Pacific, widespread. Sida rhombifolia Intr.; S & N. S. stipulata Intr.; widespread. Thespesia populnea Indo-Pacific, widespread. Urena lobata Intr.; widespread.

MARANTACEAE Maranta arundinacea Intr.; widespread.

MELIACEAE Sandoricum koetjape, Intr., M, S, N & P. Xylocarpus moluccensis Indo-Pacific, M, S, N, P & Cur.

MIMOSACEAE Albizia lebbeck, Intr.; widespread. Paraserianthes falcataria, Intr.; widespread.

MORACEAE Artocarpus altilis, Intr.; widespread. A. utilis, Intr.; widespread. Ficus lutea, Western Indian Ocean; widespread.

MUSACEAE Musa spp., Intr.; widespread.

MYRTACEAE Eugenia uniflora, Intr.; M. N. P & Co. Psidium cattleianum, Intr.; widespread. P.guajava, Intr.; widespread.

ONAGRACEAE Ludwigia erecta Afr.; widespread. Ludwigia octovalvis Intr.; widespread.

ORCHIDACEAE Vanilla planifolia Intr.; widespread.

OXYLIDACEAE Averrhoa bilimbi Intr.; widespread.

PALMAE Cocos nucifera Indian Ocean; widespread. Latania lontoroides, Intr.; N.

PANDANACEAE Pandanus balfourii, End.; widespread. P. multispicatus, End.; widespread. P. utilis, Intr., M. S. N. P & F.

PAPILIONACEAE Abrus precatorius Afr.-Asia, widespread. Canavalia cathartica Indo-Pacific, widespread. Desmodium incanum Intr.; widespread. D. triflorum Intro.; widespread. Indigofera suffruticosa Intr.; M, S, N & F. Teramnus labialis Pantrop.; widespread.

PASSIFLORACEAE Passiflora edulis, Intr., M, S, N & B. P. foetida, Intr., widespread. P. suberosa, Intr., widespread

POACEAE Axonopus compressus Intr?; M, S, N & F. Chloris barbata Intr.; M, L, N & F. Dactyloctenium ctenoides Pantrop; widespread. Digitaria radicosa Indo-Pacífic; widespread. Echinochloa colonum, M, S, N, A. Elusine indica Intr?, widespread. Eragrostis tenella Intr?, widespread. Lepturus radicans,

M, S, N, P, F. Oplismenus compositus Indo-Pacific; widespread. Panicum brevifolium Indo-Pacific; widespread. Paspalidium geminatum Palaeotrop.; M, S, N & F. Paspalum scrobiculatum Palaeotrop.; M, L, S, N & F. Pennisetum purpureum Intr.; M, S, N, A & F. Saccharum officinarum, Intr.; S & N. Setaria barbata Intr?; M, S, N, A & F. Stenotaphrum dimidiatum Indo-Pacific; widespread. Urochtoa paspaloides M, S, N

POLYGONACEAE Polygonum senegalense - Afr.; widespread.

PORTULACACEAE Portulaca oleracea - Indo-Pacific; widespread,

RUBIACEAE Guettarda speciosa Indo-Pacific, widespread. Morinda citrifolia Indo-Pacific, widespread. Pentodon pentandrus Afr., widespread. Vangueria madagascariensis Intr., M, S & N.

RUTACEAE Citrus reticulata, Intr. - M. S. N. P & B.

SAPINDACEAE Cardiospermum halicacabum Intr., widespread.

SOLANACEAE Datura metel, Intr.; widespread.

STERCULIACEAE Heritiera littoralis Indo-Pacific; widespread.

TILIACEAE Triumfetta rhomboidea - Intr.; widespread.

TURNERACEAE Turnera angustifolia - Intr.; widespread.

TYPHACEAE Typha javanica Indo-Pacific, M, S, N, P & Cur.

UMBELLIFERAE Centella asiatica Intr.; widespread.

VERBENACEAE Lantana camara, Intr., widespread. Phyla nodiflora Indo-Pacific, widespread. Stachytarpheta jamaicensis, Intr., widespread. S. urticifolia, Intr., widespread,

ANIMALIA

ANNELIDA

OLIGOCHAETA Sp.

MOLLUSCA

Family SUBULINIDAE Paropeas achatinaceum...... Pantr.; most islands, Subulina octona Bruguiere - Pantrop.; most islands.

Family VAGINULODAE Vanigula seychellensis Fischer, 1871 - End.; M, S, N & P.

CRUSTACEA

DECAPODA

Family GRAPSIDAE Grapsus tenuicrustatus (Herbst, 1783) - Indo-Pacific; M, S, N & A.

Family OCYPODIDAE Ocypode ceratopthalma (Pallas) - Indo-Pacific, M, S, N, P, A, Co, Coe. O. cordimana (Desmarest, 1825) - Indo-Pacific, M,S, N, A, Co & Bird.

ISOPODA Sp.

ARACHNIDA

SCHIZOMIDA - sp.

ARANEAE

Family CLUBIONIDAE Clubiona sp.

Family CORINNIDAE Corinnidae sp. Oedignatha mogamoga Marples

Family CRYPTOTHELIDAE Cryptothele alluaudi Simon, 1893

Family GNAPHOSIDAE Xeropheus? espoir Platnick, 1981

Family LYCOSIDAE Trochosa urbana (O. Pickard-Cambridge, 1878)

Family OCHYROCERATIDAE Theotima minutissima (Petrunkevitch, 1929)

Family OONOPIDAE Ischnothyreus peltifer (Simon, 1891). "Orchestina" seychellorum

Family SALTICIDAE Myrmarachne constricta (Blackwall, 1877). Sadies ? fulgida Wanless, 1984

Family SCYTODIDAE "Scytodes" fusca (Walckenaer, 1837)

Family SELENOPIDAE Selenops secretus Hirst, 1911

Family TETRAGNATHIDAE Nephila inaurata (Walckenaer, 1841)

Family THERIDIIDAE Argyrodes cognatus (Blackwall, 1877). A. rostaratus Blackwall, 1877. Coleosoma floridana (Banks, 1900). "Theridion" clabnum Roberts, 1978

Family THOMISIDAE "Thomisus" stenningi Pocock, 1900

Family ULOBORIDAE Uloborus plumipes Lucas, 1846

ACARI - not identified

AMBLIPYGI

Family TARANTULIDAE Charinus seychellarum Krapelin, 1898 - End.; M, Long, S, N, P, Fel & F

MYRIAPODA

DIPLOPODA

Family PACHYBOLIDAE Trigoniulus corallinus (Eydoux & Souleyet, 1841) - Pantrop.; M. S. N. P. A. Fel.

Family PARADOXOSOMIDAE Orthomorpha coarctata

Family PSEUDOSPIROBOLELLIDAE Paraspirobolus dictyonotus (Latzel, 1895) - Intro.; M, S & N.

CHILOPODA

Family GEOPHILIDAE Nesogeophilus leptochilus (Brölemann, 1931) - Asia; M, N, P, Cur, A. Family SCOLOPENDRIDAE Scolopendra subspnipes Leach Pantrop., M, S, N, P, A, Freg.

APTERYGOTA - spp.

HEXAPODA

ODONATA

Family AGRIONIDAE Ceriagrion glabrum (Burm., 1839) - Afr., S, N, P & A.

Family LIBELLULIDAE Orthtrum stemmale (Selys, 1877) - Afr.; widespread. Pantala flavescens (Fabricius. 1798) - Afr.; widespread. Tramea limbata (Desjardins, 1832) - Indian Ocean, M, S, N, P & A.

ORTHOPTERA

Family ACRYDIDAE Paratettix histricus

Family PHASGONURIDAE Conocephalus conocephalus Linnaeus, 1758; Afr.; widespread.

Family GRYLLOTALPIDAE Gryllotalpa africana, Afr., M, S, N & P.

Family GRYLLIDAE Trigonidium perpusillum Bolivar, 1912 - End.; M, S & N. Zarceus fallaciosus Bolivar. 1895 - End.; M. L. Anon, S. N & A.

Family TRIDACTYLIDAE - sp.

DICTYOPTERA

Family BLATTIDAE Lobopterella dimidiatipes (Bouvier, 1890) - Asia; M, L, S, N & A. Miriamrothschildea labrynthica (Bolivar, 1924) - End., M. S & N. Periplaneta americana and Pycnoscelus indicus - Pantrop.; widespread.

ISOPTERA

Nasuitermes nigritus Mad; widespread

DERMAPTERA

Family CARCINOPHORIDAE Euborellia annulipes (Lucas) - Intr.; M, S, N, A, LD & F.

Family LABIIDAE Gonolabis electra Burr - Intr., M. S. N. P. C. A & LD.

HEMIPTERA

Family PENTATOMIDAE Chinavia spicata.

PSOCOPTERA - spp.

THYSANOPTERA - sp.

NEUROPTERA

Family MYRMELEONIDAE Myrmeleon obscurus Rambur, 1853 - Afr.; M, S, N & Bird.

LEPIDOPTERA

Family ARCTIIDAE Argina cribraria (Clerk, 1759) - Palaetrop.; M, S & N.

Family LYCAENIDAE Zizerina knysa (Trimen, 1862) - Afr., M, S, N, P, Bird & D.

Family LYONETIIDAE Opogona sacchari (Bojer, 1856) - Intr.; M, S, N & A.

Family NOCTUIDAE Callopistria maillardi (Guenee, 1863) - Afr., M, R, S, N & F.

Family PYRALIDAE Cirrochrista mulleralis Legrand, 1957 - End.; M, S, N & P.

Family PYRAUSTIDAE, Marasmia poeyalis (Boisduval, 1833) - Palaeotrop.; M, S & N. Pycnarmon diaphana Palaeotrop.; widespread. Syngamia abruptalis Palaeotrop; widespread.

Family SPHINGIDAE Cephonodes hylas (Linnaeus, 1771) - Afr.; M, S & N. Amphixystis lactiflua.

DIPTERA

Family ANTHOMYIIDAE sp.

HYMENOPTERA

Family VESPIDAE Delta alluadui (Perez, 1895) - End.; M, S, N, P & D. Euodynerus seychellensis (Dalla Torre, 1904) - Masc.; M, S, N & P. Polistes olivaceus (De Geer, 1773) - Indo-Pacific, M, Moy, S, N, P, A & LD Family FORMICOIDEA Odontomachus similis - Mad.; widespread. Technomyrmex albipes (Smith, 1861) - Intr.?; widespread.

COLEOPTERA

Family BUPRESTIDAE Dicercomorpha alluaudi Kerremans, 1893 - End.; M, S, N & LD.

Family CERAMBYCIDAE Coptops humerosa Fairmaire - End., M, S & N.

Family CURCULIONIDAE Cratops aureostriatus C. griseovestitus Linell, 1897 - End.; widespread.

CHORDATA

AMPHIBIA

Family RANIDAE *Ptychadena mascariensis* (Dumeril & Bibron, 1836) - Afr.; M, S, N, P, LD & F. REPTILIA

Family GEKKONIDAE Gehyra mutilata (Wiegmann, 1835) - Intr.; widespread. Phelsuma sundbergi Rendahl. 1939 - End.; widespread. Urocotyledon inexpectata (Stein) - End.; widespread.

Family SCINCIDAE Mabuya seychellensis (Dumeril & Bibron, 1836) - End.; widespread.

Family TESTUDINIDAE *Dipsochelys* sp. - End.; formerly widespread. *D. dussumieri* (Gray, 1835) - Intr.; Cerf, N, Co, Coe, Cu & F.

Family TYPHLOPIDAE Rhamphotyphlops braminus (Daudin) - Intr, M, S, N, P, A, LD, F & Bird.

AVES

Family ARDEIDAE Butoroides striatus (ILinnaeus, 1758) - Pantrop.; widespread.

Family FALCONIDAE Falco araea Oberholser, 1904 - End., M. Cerf, S. N. P. Fel, Mar & LD.

Family RALLIDAE Gallinula chloropusd (linn, 1758) - Cosmo.; widespread.

Family NECTARIDAE Nectarinia dussumieri (Hartlaub, 1860) - End, widespread.

Family PLOCEIDAE Foudia madagascariensis (Linnaeus, 1758) - Mad.; widespread.

Family STURNIDAE Acridotheres tristis (Linnaues 1766) - Intro.; widespread

MAMMALIA - CHIROPTERA

Family PTEROPIDAE Pteropus seychellensis Milne Edwards, 1887 - Com.; M, S, N, P & LD.

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Family MURIDAE Rattus sp. - Intr ; widespread

Family BOVIDAE Bos taurus Linnaeus 1758 - Intr.; N. Capra hircus Linnaeus, 1758 - Intr.; N.