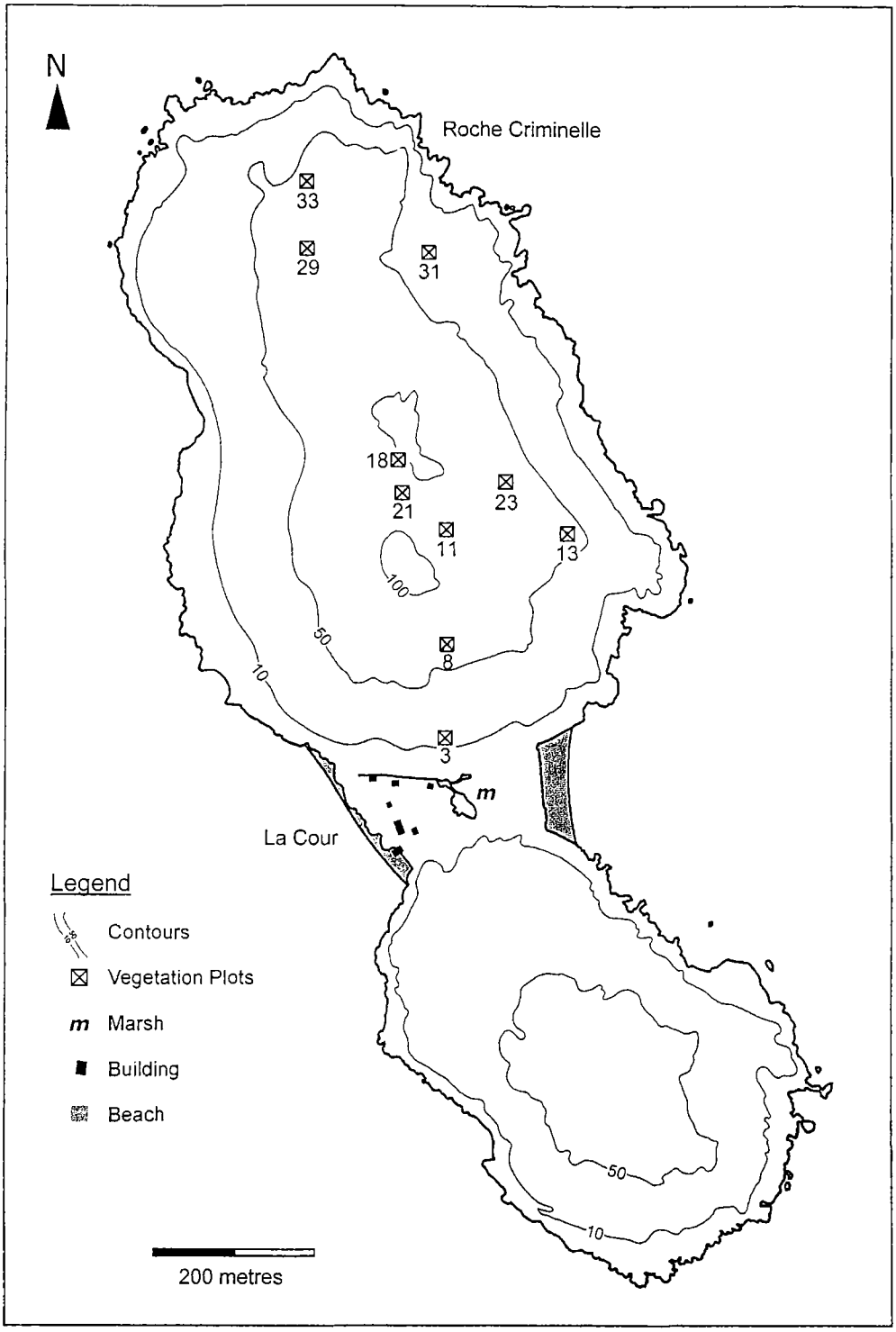

Figure 1. Grande Soeur: Physical, showing location of vegetation plots.

GRANDE SOEUR

BY

MICHAEL J. HILL[1], TERENCE M. VEL[1], STEVEN J. PARR[2] and NIRMAL J. SHAH[1]

GEOLOGY, TOPOGRAPHY AND CLIMATE

Grande Soeur is an island of approximately 84 ha situated 6 km from La Digue. Its nearest neighbouring island is Petite Soeur (34 ha), little over 700 m distant. Grande Soeur consists of two granite hills rising steeply to 111.5 m and 89 m above sea level, separated by a low-lying area of "plateau" (Table 1).

Much of the island is high and rocky made up of reddish-grey granites similar to those of Praslin (Braithwaite, 1984). In the North, at Roche Criminelle (CL 7445 2673) these rocks form a dramatic cliff-like outcrop. In places phosphate rocks have formed by the action of seabird guano on granite soils (Baker, 1963). The plateau area is made up of recent calcareous sediments and weathering products from the hill areas.

Large parts of the upland area (including all the southern hill) are rocky with poor conditions for soil creation and retention. In glacis and rocky areas, soils are restricted to pockets between boulders. On the northern hill, areas of red earth soils are present, with a broad band of these soils from north west to south east of the northern hill, and a second main area at low altitudes on the eastern side of this hill where the gradient is shallow (D.O.S., 1966). There are also small areas of alluvial soil associated with temporary stream beds. The plateau has eroded red earth soils, with organic deposits in the marsh.

The granite hills are rather dry with no permanent fresh water although seasonal stream beds exist. On the plateau, there is a small marsh, which is permanent but has a marine influence, having a drainage ditch which almost connects it to the sea. There is evidence for a gradient of salinity within the marsh although it is only 200 m from the sea at most. Close to the sea along the drainage ditch the salt tolerant fern *Acrostichum aureum* grows. However, the main body of the marsh supports a number of other species more common in fresh water (for example, *Ceratopteris cornuta, Cyperus halpan*).

No weather records exist for Grande Soeur but it is probable that the island's weather patterns follow those of the other La Digue satellite islands, Marianne and Félicité.

Table 1. Area of Grande Soeur by altitude (calculated from maps published by Directorate of Overseas Survey(UK)/Seychelles Government).

Altitude range (m. asl.)	Area (ha)	Percentage total area
100 - 150	1.3	1.5
50 - 100	27.8	33.1
10 - 50	37.1	44.2
0 - 10	17.8	21.2

[1] Nature Seychelles, PO Box 1310, Mahé, Seychelles. Email: birdlife@seychelles.net

[2] Royal Society for the Protection of Birds, The Lodge, Sandy, Bedfordshire, UK.

HISTORY

In 1768, the Marion Dufresne expedition only noted that Grande Soeur had little woodland with small trees (Lionnet, 1984). At that time, the central plateau was probably largely marshland and the western beach (now used for landing at La Cour) protected by a fringing reef. Giant land tortoises were present until at least 1787 (Malavois, 1787 in Fauvel, 1909), and breeding populations of seabirds (probably tree-nesting species) occurred.

Coconut plantations were not begun on the island until the late nineteenth-early twentieth century. A lease for Grande Soeur and neighbouring Petite Soeur was acquired in 1910 by Lanier and Lemarchand, who also held the lease for nearby Félicité Island.

The existing coconut palms were planted on the plateau from the 1930s onward and were said to vary in age from 25 to 40 years in 1976. Presumably, plantations on the granite hill date from the same period. In 1976, productivity of palms on the hill was said to be low as the palms were closely spaced and often infected with termites. However, 187,000 nuts (23.7 tons of copra) were collected in 1975 from Grand and Petite Soeur together (Düvel, 1976).

At the time of the survey, most of the former plantation had been abandoned. The plateau area, and the western side of the larger northern hill, retained the appearance of coconut plantations but were not economically exploited. There was a small human population (less than 10 people) all living on the plateau and the island was a popular destination for tourist day-trips from La Digue and Praslin.

FLORA AND VEGETATION

Flora

A total of 120 plant species were recorded on Grande Soeur, including four ferns and 116 angiosperms (Appendix 1). Of the angiosperms, 67 (57.8%) were introduced and 38 (32.8%) native. The native species included six endemic to Seychelles (5.2% of the flora were endemic). The proportion of the flora made up of introduced species was slightly higher than that for the Seychelles as a whole and the proportion of endemics smaller (for the total Seychelles flora, around 54% was introduced and 9% endemic; Procter, 1984). The small number of endemic species recorded is probably due to the island's relatively small size. Of the introduced plants established on Grande Soeur, 12 are invasive weedy species. Among the most widespread and abundant alien plants on Grande Soeur were cocoplum *Chrysobalanus icaco* and cinnamon *Cinnamomum verum*, which are the most widespread and invasive woody weeds on smaller islands.

Vegetation

The extents of major vegetation types on Grande Soeur are shown in Table 2 and Figure 2. In the twentieth century, coconuts and fruit trees were planted throughout the island wherever soil conditions would allow. These plantations are now largely abandoned and the vegetation is in a state of change. The hills are dominated by open

rock, hill woodland (primarily takamaka *Calophyllum inophyllum*) and scrub (mainly the introduced *Chrysobalanus icaco*), with many coconut palms and fruit trees surviving. On the plateau and west of the northern hill, coconut plantations are maintained with close-mown grassland under palms on the plateau. Marsh vegetation is restricted to the edges of the open water, although it was probably more extensive in the past. The beach crest of the eastern beach (Grand'Anse) supports a narrow strip of beach crest vegetation including the introduced *Agave sisalana* and native *Scaevola sericea* and *Tournefourtia argentea*. The latter species is uncommon on the granitic islands but abundant on the coralline Seychelles (Friedmann, 1994). On the western beach, large takamaka and *Terminalia catappa* trees occur with *Cordia subcordata* and *Hibiscus tiliaceus*.

The 10 vegetation plots completed were carried out in hill woodland/scrub (glacis was avoided). Only 1,000 m^2 of the island fell within the vegetation plots (0.001% of the total island area, 0.2% of Grande Soeur's upland woodland/scrub). A total of 27 species were recorded (0.027 species m^{-2}), of which the majority were native.

In the tree layer, 10 species were recorded. Tree density varied greatly between plots, from one tree (equivalent density of 100 trees ha^{-1}) to 23 trees (equivalent density of 2300 trees ha^{-1}) per plot. The mean density was 570 trees ha^{-1}. The tree layer was dominated by introduced species; the majority of trees (31 individuals, 54.4% of trees) were of introduced species. The single most abundant tree species was *Cinnamomum verum* (introduced). Of the trees, 36.8% were *Cinnamomum*; 21.0% were *Calophyllum inophyllum* (native); and 15.8% were *Cocos nucifera* (coconut palms remaining from former plantations).

In the shrub layer (0.5-5 m), plots had an average cover of 58%. Fourteen species were represented in this layer, five of which were introduced. The most widespread species (both in eight of 10 plots) were *Cocos nucifera* and *Chyrysobalanus icaco. Cocos* was widespread and abundant but did not dominate the plots in terms of percentage cover (mean coverage of *Cocos* in plots where it occurred was 12.9%), whereas *Chrysobalanus* showed greater dominance of space in the shrub layer (mean coverage of *Chrysobalanus* in plots where it occurred was 49.9%).

Table 2. Extent of major vegetation types, Grande Soeur.

	Vegetation type	Approx. area (ha)
Hill	Woodland (predominantly native)	18.7
(>10 m asl.)	Woodland (predominantly introduced)	0.7
	Scrub (mixed)	28.0
	Scrub (introduced)	3.1
	Beach crest vegetation (*Scaevola* scrub)	0.2
	Grassland/garden	0.3
	Bare rock	8.6
Plateau	Woodland (predominantly native)	1.8
(<10 m asl.)	Coconut with regeneration	2.8
	Coconut plantation	2.6
	Scrub (mixed)	0.6
	Beach crest vegetation	0.9
	Freshwater marsh	0.2
	Grassland/garden	0.5
	Bare rock	7.9

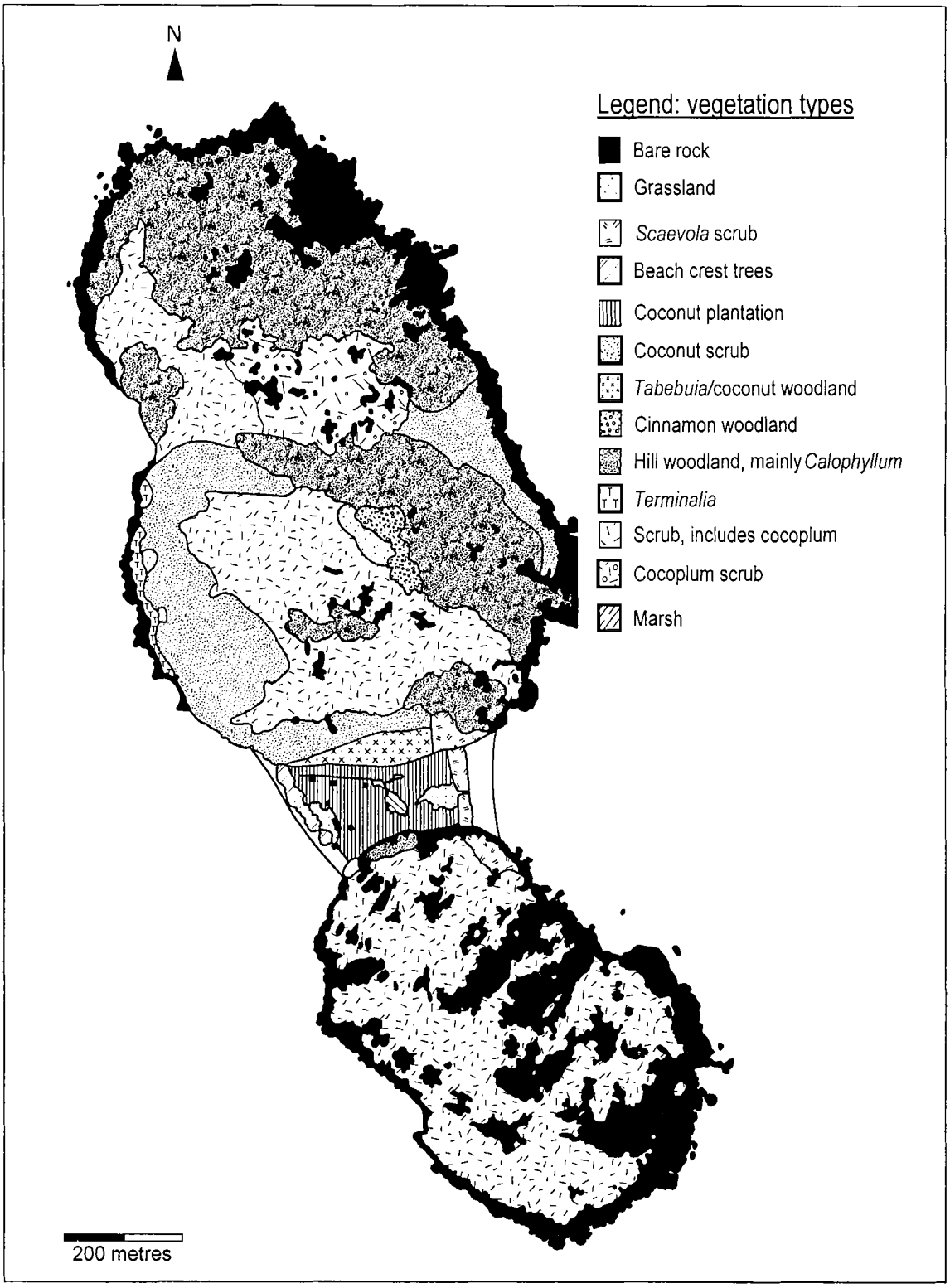

Figure 2. Grande Soeur: vegetation.

The herb layer (<0.5 m) included 21 species, of which the most frequent were the native ferns *Phymatosorus scolopendria* (in seven plots) and *Nephrolepis biserrata* (in six plots). Vegetation cover in this layer was rather sparse (mean cover 30.1%) with similar proportions of open leaf litter (38.5%) and bare rock (31.8%).

INVERTEBRATES

Pitfall trapping

Pitfall trap assemblages were very small. The mean number of individuals per five traps was 20.5, compared to mean for season (all islands) of 68.18 individuals per five traps. Assemblages were dominated by ants (78% of all invertebrate individuals were ants), the most abundant species being *Odontomachus troglodytes* (78 individuals; 38.0% of total). *Technomyrmex albipes,* the dominant ant species in collections from Grande Soeur made by Mühlenberg *et al.* (1977), was also collected (25 individuals, 12.2% of total). Other taxonomic groups represented included Orthoptera (7.8% of total individuals), Dermaptera (6.3%), Isoptera and Blattodea (each 2.0%), molluscs and Coleoptera (each 1.0%) and four other groups represented by only one individual each. The crazy ant *Anoplolepis gracilipes,* which has been introduced to other agricultural islands, was not collected.

Leaf-insect Counts

Leaf-insect counts were carried out for seven tree and shrub species. Results are shown in Table 3. The highest leaf counts were on the native tree *Terminalia catappa.* However, invertebrates were also abundant on the introduced cinnamon. Most invertebrates on cinnamon were ants (22%) and soft bugs Sternorrhyncha (75%).

Table 3. Density of invertebrates on foliage, Grande Soeur.

Species	No. leaves counted	Mean inverts leaf^{-1}	Mean insects m^{-2}
Introduced			
Chrysobalanus icaco	150	0.107	29.82
Cinnamomum verum	200	0.495	72.74
Tabebuia pallida	100	0.030	4.19
Native			
Calophyllum inophyllum	450	0.609	51.79
Canthium bibracteatum	340	0.079	27.89
Terminalia catappa	160	1.588	81.65
?Status unknown			
Morinda citrifolia	160	0.525	37.34

Malaise Trapping

Three malaise traps were in place for three nights each in hill woodland habitats. Malaise trap assemblages were very large (mean number of invertebrates was 762), and included members of 10 invertebrate orders. The dominant orders were the Lepidoptera (53.4% of all individuals), Diptera (18.2%) and Hemiptera (14.5%). The majority of taxa collected have yet to be identified to species level. A number of invertebrate species were observed (Table 4).

Table 4. Invertebrate species identified.

Order	Family	Species	Notes
Mollusca:			
Gastropoda	Achatinidae	*Achatina ?fulica* (Bowditch, 1822)	Many empty shells, hill woodland
	Helicinidae	*Helicina theobaldiana* Nevill, 1871	Endemic. In pitfall traps
	Subulinidae	*Subulina striatella* (Rang, 1831)	Introduced. in pitfall traps
	Thiaridae	*Melanoides tuberculata* (Müller, 1774)	One specimen
Crustacea:			
Decapoda	Coenobitidae	*Coenobita brevimanus* Dana, 1852	Commonly caught in rat traps
	Grapsidae	*Grapsus crinipes* (Dana, 1851)	
	Ocypodidae	*Ocypode ceratophthalmus* (Pallas, 1772)	Abundant on Grande Anse
		Ocypode cordimana Desmarest, 1825	
Myriapoda:			
Chilopoda	Scolopendridae	*Scolopendra subspinipes* Leach, 1918	One individual observed
Diplopoda	Spirostreptidae	*Seychelleptus seychellarum* (Desjardins, 1834)	Several individuals seen (by day) in hill woodland
	Trigoniulidae	*Spiromanes braueri* (Attems, 1900)	In pitfall traps
Insecta:			
Blattodea	Blattidae	*Periplanata* sp.	Abundant on plateau
Lepidoptera	Lycaenidae	*Leptotes pirithous* Linnaeus, 1767	Several specimens caught
		Zizeeria knysna (Trimen, 1862)	Several specimens caught
	Hesperiidae	*Borbo* sp.	One individual observed
Odonata	Libellulidae	*Diplocodes trivialis* (Rambur, 1842)	Observed at plateau marsh
		Orthetrum stemmale wrightii (Selys, 1877)	Observed flying over hill
		Tholymis tillarga (Fabricius, 1798)	Over marsh at dusk
Hymenoptera	Anthophoridae	*Xylocopa caffra* (Linnaeus, 1767)	
	Apidae	*Apis mellifera adansoni* Latreille 1804	
	Formicidae	*?Pachycondyla melanaria* (Emery, 1894)	In pitfall traps
		Camponotus grandieri Forel, 1886	In pitfall traps
		Cardiocondyla emeryi Forel, 1881	In pitfall traps
		Odontomachus troglodytes Santschi, 1914	In pitfall traps
		Technomyrmex albipes (Smith, 1861)	In pitfall traps
	Vespidae	*Polistes olivaceus* (de Geer 1773)	

VERTEBRATES

Amphibians, Reptiles and Fish

A total of six species (one amphibian, three lizards, one tortoise and one freshwater fish) was observed (Table 5); several other species have been recorded in the past (Cheke, 1984) and are probably still present. The status of terrapins *Pelusios* sp., introduced from La Digue in the mid-late 1990s, is unknown. Two species recorded by earlier workers were not observed in the current survey: the gecko *Urocotyledon inexpectata,* and the burrowing skink *Pamelaescincus gardineri* (Cheke, 1984). Both of these lizards are easily overlooked and probably survive on the island. Giant tortoises, presumably one of the species of the granitic islands, were present on 'Les Soeurs') in the late eighteenth century (Bour, 1984); the date of their extinction is unknown. A herd of giant tortoises, probably the Aldabra species, was noted by General Gordon in 1881 (Stoddart and Peake, 1979). In 1999, a small group of Aldabra giant tortoises was kept in a pen on the plateau.

The exposed eastern beach of Grande Soeur is reportedly used for nesting by Hawksbill sea turtles *Eretmochelys imbricata* (Frazier, 1984).

Table 5. Amphibians, reptiles and fish observed.
Status: E =endemic, I = introduced, N = native (in central Seychelles).

Family	Species		Status
Amphibians			
Raniidae	*Ptychadaena mascareniensis* (Dumeril & Bibron, 1836)	Mascarene frog	?I
Reptiles			
Gekkonidae	*Gehyra mutilata* (Wiegmann, 1835)	Pacific house gecko	I
	Phelsuma sp. (*?P. astriata* Tornier, 1901)	day gecko	E
Scincidae	*Mabuya sechellensis* (Dumeril & Bibron, 1836)	Seychelles skink	E
Testudinidae	*Geochelone gigantea* (Schweigger, 1812)	Aldabra giant tortoise	I
Fishes			
Rivulidae	*Pachypanchax playfairii* Günther, 1866	Seychelles killifish	E

Birds

In total, 15 land birds and waders were recorded (Table 6). Only two endemic species were observed. In addition to sight records, tape playback was used to determine presence/absence of three endemic species: Seychelles white-eye *Zosterops modestus,* Seychelles scops owl *Otus insularis* and Seychelles black paradise flycatcher *Terpsiphone corvina.* There were no positive responses.

At the time of the survey, domestic fowl were a notable feature of Grande Soeur; the plateau area supported a large number of domestic birds (over 150 individuals) of six species, the most abundant being ducks and chickens. The birds were fed regularly but eggs were not collected and (apparently) birds are rarely, if ever, killed for human

consumption. There appeared to be few checks on population growth. The birds roamed freely on the plateau and had a major impact on plateau ecosystems (especially the marsh), although they rarely appeared to enter semi-natural habitats on the hills.

Few endemic land bird species have ever been recorded on Grande Soeur; the island appears to have been little-visited by naturalists before extensive habitat change. Endemic birds that may have occurred on Grande Soeur in the past include the chestnut-flanked white-eye *Zosterops mayottensis semiflava* (only known from Marianne and now extinct), Seychelles magpie-robin *Copsychus sechellarum* and Seychelles black paradise flycatcher *Terpsiphone corvina.* All these species have formerly been recorded on satellite islands of La Digue (Newton, 1867; Collar and Stuart, 1985).

The presence of phosphatic rocks on parts of the island (Baker, 1963) suggests that seabird colonies must have been a prominent feature of the island's past biota, but today only one or two species appear to breed, at low densities.

Table 6. Wild terrestrial birds and waders observed on Grande Soeur.
M = migrant species; V = vagrant species; E = Seychelles endemic species.

Species		Notes
Butorides striatus	green-backed heron	Seen regularly around the plateau marsh, in both July and December.
Ixobrychus sinensis	yellow bittern	Seen once at plateau marsh, 19/7/99
Gallinula chloropus	common moorhen	A small number occur at the plateau marsh
Pluvialis squatarola M	grey plover	Seen on reconnaissance trip May 1999 (LD). Two individuals seen on Grand' Anse and marsh, 14/12/99.
Gallinago ?gallinago V	snipe	One individual seen feeding in plateau marsh, 15/12/99.
Numenius phaeopus M	whimbrel	Seen once, at Grand Anse 22/7/99
Tringa nebularia M	common greenshank	One individual seen feeding in plateau marsh, 15/12/99.
Calidris alba M	sanderling	Flock of 5-6 seen on Grand' Anse, 14/12/99
Arenaria interpres M	ruddy turnstone	Flock of 10 seen on plateau, 15/12/99.
Streptopelia picturata ssp.	turtle dove	Very common on the plateau: flock of around 30 individuals seen around buildings 18/7/99
Geopelia striata	barred ground dove	Occasional on plateau
Alectroenas pulcherrima E	Seychelles blue pigeon	Seen regularly in hill woodland, and on the plateau
Nectarinia dussumieri E	Seychelles sunbird	Very common in hill woodland and on the plateau
Acridotheres tristis	common mynah	Very common on the plateau, feeding around houses and on the beach
Foudia madagascariensis	Madagascar fody	A few birds were seen, on plateau-edge/glacis habitats

Table 7. Seabirds recorded on Grande Soeur.

Species		Notes
Puffinus pacificus	wedge-tailed shearwater	Calls heard at night
Puffinus lherminieri	Audubon's shearwater	Calls heard at night
Phaeton lepturus	white-tailed tropicbird	A few individuals seen, flying close to the island by day. On occasion, flew around trees on plateau.
Gygis alba	fairy tern	Breeding birds present in trees in hill woodland July 1999.

Mammals

Mammals observed in the course of fieldwork were recorded (Table 8). In addition, rodent trapping was carried out with two traplines, both in plateau scrub habitat. A total of 140 trap-nights were carried out and 91 individual rats caught, giving a capture rate of 65 rats per 100 trap-nights (unadjusted) or 99.45 per 100 trap-nights (adjusted to account for the effects of closed traps; Cunningham and Moors, 1996). This rate of trapping was the highest for any island throughout the survey (overall mean for all islands in season was 33.64 rats per 100 trap-nights unadjusted). The exceptionally high capture rate was probably an indication of a high population density but was also likely to be a function of seasonal effects. During the south east season, and particularly in July, rats were under greater food and water stress than at other times and were therefore more likely to be caught. Rodent eradication programmes in 2000 were deliberately carried out at that time of year to exploit the increased uptake of bait then (Don Merton, *pers. comm*). The only rodent species recorded on the island was the ship rat *Rattus rattus,* a widespread species in Seychelles that can have significant impacts on bird populations as it is a proficient climber (Racey and Nicoll, 1984).

Table 8. Mammals observed, Grand Soeur.

Species	Status
Canis familiaris L.	Three domestic dogs were kept at the settlement
Felis catus L.	Feral cats were reported by people living on the island, and cat scat was observed on rocks at the edge of the plateau, although the animals were not seen
Oryctolagus cuniculus L.	At least one rabbit kept (caged) at the settlement
Pteropus seychellensis Milne Edwards	In July 1999, a roost of at least 40 individuals was found close to the North-East coast of the island at L'Enclos (Grid reference CL 7465 2645)
Rattus rattus L.	Widespread

CONSERVATION RECOMMENDATIONS

At the time of the survey, Grande Soeur had little conservation interest. Some endemic species of plant and invertebrate were recorded. However, a high density of rats and the presence of cats appeared to have destroyed any endangered endemic land birds

that may have once survived on the island, and probably had a negative impact on reptile species. The presence of a large population of domestic fowl probably caused enhanced rat populations and influenced the biodiversity of the marsh ecosystem. Invasive alien plant species, most introduced during the plantation period, undoubtedly displaced native and endemic species, although the number of endemic plants present was probably always rather small due to the island's size.

Because of the lack of biological records of the island in the past, any attempt to reconstruct island ecosystems is based largely on conjecture. From written records, it seems that the island was probably never well-wooded, and that large areas of open rock and shrubby forest may have supported breeding colonies of seabird species. Endemic birds in addition to the two species recorded in the current survey were probably present. With correct management, the island could be rehabilitated to an extent. The most urgent action for endemic vertebrates is the eradication of mammalian predators. Removal of predators would allow the introduction of endemic land birds and allow breeding colonies of seabirds to develop. The reduction of populations of domestic birds would enhance the conservation value of the freshwater marsh, reducing disturbance and eutrophication. The removal or control of invasive weed species would be desirable, although eradication of some species is probably impossible due to the broken terrain. However, some introduced species (especially cinnamon) have relatively high densities of invertebrates on their foliage, and removal of these species would not be necessary for the introduction of small insectivorous birds such as Seychelles white-eye *Zosterops modestus* and Seychelles warbler *Acrocephalus sechellensis*. The Seychelles black paradise flycatcher may have occurred on the island in the past (records exist for nearby Praslin, La Digue, Félicité and Marianne; Collar and Stuart, 1995), but the limited area of woodland vegetation on the island would probably support only a small population.

The small pitfall trap assemblages suggest that the potential food supply for Seychelles magpie-robins is poor, at least on the hill. While the plateau area (and possibly, areas of the hill with particularly fertile soils) could be managed to form suitable habitat, the total population of birds that the island could support is small. Grande Soeur is not a priority island for Seychelles magpie-robin management.

Appendix 1. Plant species recorded from Grande Soeur

Taxonomy of dicotyledons as given by Friedmann (1994). Of monocotyledons, as in Robertson (1989). Families arranged in alphabetical order.

Status: E = Endemic; N = Native; I = Introduced.
Abundance: A = Abundant (>1000 individuals observed); C = Common (100 - 1000 individuals observed); F = Frequent (10 - 100 individuals observed); Occasional (3 - 10 individuals observed); R = Rare (1 or 2 individuals observed).
Habitats: Cu = Cultivated; PG = Plateau grassland; HW = Hill Woodland; Sc = Hill Scrub; Gl = Glacis; BC = Beach Crest; Ma = Marsh.

Species	Status	Abund.	Habitats	Notes
PTERIDOPHYTA				
Adiantaceae				
1 *Acrostichum aureum* L.	N	F	Ma	
Davalliaceae				
2 *Nephrolepis biserrata* (Sw.) Schott	N	A	HW	
Polypodiaceae				
3 *Phymatosorus scolopendria* (Burm. f.)	N	A	HW	
Psilotaceae				
4 *Psilotum ?nudum* Sw.	N	C	HW	
ANGIOSPERMAE: Dicotyledons				
Acanthaceae				
5 *Asystasia* sp. B (*sensu* Friedmann)	?I	A	Sc, Gl, HW	
Amaranthaceae				
6 *Alternanthera sessilis* (L.) DC.	I	C	Ma	
Anacardiaceae				
7 *Anacardium occidentale* L.	I	O	HW	
8 *Mangifera indica* L.	I	F	PG, HW	
9 *Spondias cytherea* Sonn.	I	R	HW	
Apocynaceae				
10 *Catharanthus roseus* (L.) G. Don.	I	F	PG	
11 *Plumeria rubra* L.	I	R	PG	Only in garden
Araliaceae				
12 *Gastonia ?sechellarum* (Baker) Harms.	E	R	HW	
Bignoniaceae				
13 *Tabebuia pallida* (Lindl.) Miers.	I	C	HW, [PG]	
Boraginaceae				
14 *Tournefortia argentea* L. f.	N	O	BC	
Cactaceae				
15 *?Hylocereus undatus* (Haw.) Britt. et Rose	I	R	Cu	Only in garden
16 *Opuntia* sp.	I	O	PG	
Caesalpiniaceae				
17 *Intsia bijuga* (Colebr.) O. Kuntze	N	O	HW	
18 *Senna occidentalis* (L.) Link	I	F	HW, PG	
Caricaceae				
19 *Carica papaya* L.	I	R	PG	
Casuarinaceae				
20 *Casuarina equisetifolia* J. R. & G. Foster	I	F	HW	
Chrysobalanaceae				
21 *Chrysobalanus icaco* L.	I	A	Sc, HW, Gl	

	Species	Status	Abund.	Habitats	Notes
Combretaceae					
22	*Terminalia catappa* L.	?N	C	PG, HW	
Compositae					
23	*Emilia sonchifolia* (L.) Wight	I	O	PG, Sc	
24	*Tridax procumbens* L.	I	R	PG	
25	*Vernonia cinerea* (L.) Less.	I	A	PG, Sc	
Convulvulaceae					
26	*Ipomoea aquatica* Forssk.	I	F	Ma	
27	*Ipomoea batatas* (L.) Lam.	I	O	Cu	
28	*Ipomoea macrantha* Roem. & Schultes	N	O	HW	
29	*Ipomoea obscura* (L.) Ker Gawl.	I	R	PG	
30	*Ipomoea pes-caprae* (L.) R. Br.	N	C	BC, Gl	
Crassulaceae					
31	*Kalanchoe pinnata* (Lam.) Pers.	I	R	PG	
Euphorbiaceae					
32	*Euphorbia hirta* L.	I	C	PG, Sc	
33	*Euphorbia thymifolia* L.	I	O	Cu	
34	*Pedilanthus tithymaloides* (L.) Poit.	I	O	Cu	Only in garden
35	*Phyllanthus acidus* (L.) Skeels	I	R	PG	
36	*Phyllanthus amarus* Schumach. & Thonn.	I	F	PG, HW	
Goodeniaceae					
37	*Scaevola sericea* Vahl.	N	C	BC	
Guttiferae					
38	*Calophyllum inophyllum* L.	N	A	HW, PG	
Hernandiaceae					
39	*Hernandia nymphaeifolia* (Presl) Kubitzki	N	O	BC	
Labiatae					
40	*Plectranthus amboinicus* (Lour.) Spreng.	?I	R	PG	
Lauraceae					
41	*Cassythea filiformis* L.	N	R	BC	
42	*Cinnamomum verum* Presl.	I	A	HW	
43	*Persea americana* Mill.	I	R	PG	Only in garden
Malvaceae					
44	*Hibiscus tiliaceus* L.	N	F	BC	
45	*Thespesia populnea* (L.) Soland. Ex Correa	N	R	BC	
Meliaceae					
46	*Xylocarpus moluccensis* (Lam.) Roem.	N	R	BC	
Mimosaceae					
47	*Adenanthera pavonina* L.	I	C	HW	
48	*Leucaena leucocephala* (Lam.) de Wit	I	F	HW	
Moraceae					
49	*Artocarpus altilis* (Parkins.) Fosb.	I	O	PG	
50	*Ficus lutea* Vahl.	N	C	HW, Gl	
51	*Ficus reflexa* Thunb. Ssp. *Seychellensis* (Baker) Berg	E (ss)	F	HW, Gl	
52	*Ficus rubra* Vahl.	N	R	HW	
Moringaceae					
53	*Moringa oleifera* Lam.	I	R	PG**	
Myrtaceae					
54	*Eucalyptus* sp.	I	F	PW	
55	*Psidium guajava* L.	I	O	Cu	
56	*Syzygium wrightii* (Baker) A. J. Scott	E	R	HW	

	Species	Status	Abund.	Habitats	Notes
Onagraceae					
57	*Ludwigia octovalvis* (Jacquin) Raven	?I	F	Ma	
58	*Ludwigia erecta* (L.) Hara	I	O	Ma	
Oxalidaceae					
59	*Averrhoa bilimbi* L.	I	F	HW	
Papilionaceae					
60	*Abrus precatorius* L.	?N	C	HW, Sc	
61	*Canavalia cathartica* Thouars.	N	O	BC	
62	*Centrosema pubescens* Benth.	I	A	HW, PG	
63	*Crotalaria pallida* Ait.	?I	F	PG	
64	*Desmodium incanum* DC.	I	C	HW	
65	*Desmodium triflorum* (L.) DC.	I	A	HW	
66	*Indigofera tinctoria* L.	I	F	PG, HW	
67	*Tephrosia noctiflora* Bojer ex Baker	I	O	HW	
68	*Teramnus labialis* (L.) Spreng.	I	F	PG	
Passifloraceae					
69	*Passiflora edulis* Sims	I	R	Cu	
70	*Passiflora suberosa* L.	I	C	PG, HW	
Portulacaceae					
71	*Portulaca oleracea* L.	N	F	Ma, PG	
Rubiaceae					
72	*Canthium bibractatum* (Baker) Hiem.	N	A	HW [PG]	
73	*Coffea canephora* Froehner	I	O	HW	
74	*Guettarda speciosa* L.	N	O	HW	
75	*Morinda citrifolia* L.	?I	F	HW, Gl	
76	*Paragenipa wrightii* (Baker) F. Friedmann	E	F	HW	
Rutaceae					
77	*Citrus sinensis* (L.) Osbeck	I	F	HW, PG	
Scrophulariaceae					
78	*Striga asiatica* (L.) O. Kuntze	?I	F	PG	
Tiliaceae					
79	*Triumphetta rhomboidea* Jacq.	I	O	HW	
Turneraceae					
80	*Turnera angustifolia* Miller	I	A	PG	
Umbelliferae					
81	*Centella asiatica* (L.) Urb.	?I	O	Ma	
Verbenaceae					
82	*Phyla nodiflora* (L.) Greene	I	A	PG	
83	*Premna serratifolia* L.	N	F	HW	
84	*Stachytarpheta jamaicensis* (L.) Vahl.	I	F	PG, HW	
85	*Stachytarpheta urticifolia* (Salisb.) Sims.	I	A	PG, HW	
86	*Vitex trifolia* L.	I	R	PG	
ANGIOSPERMAE: Monotyledons					
Agavaceae					
87	*Agave sisalana* (Perr. Ex. Engelm.) Drumm. & Prain	I	F	PG, Gl	
88	*Furcraea foetida* (L.) Haw.	I	R	PG, Gl	
Amaryllidaceae					
89	*Hymenocallis littoralis* L.	?I	F	PG	
Bromeliaceae					
90	*Ananas comosus* (L.) Merr.	I	R	PG	
Cyperaceae					
91	*Cyperus halpan* L.	?	F	Ma	

	Species	Status	Abund.	Habitats	Notes
92	*?Cyperus* sp.	?	R	HW	
93	*Fimbristylis cymosa* R. Br.	?	F	Gl, HW	
94	*Fimbristyis dichotoma* (L.) Vahl.	?	C	PG	
95	*Kyllinga polyphylla* Willd. ex Kunth	N	C	PG, Ma	
96	*Mariscus dubius* (Rottb.) Fischer	N	C	PG	
97	*Mariscus pennatus* (Lam.) Domin.	N	F	Ma	
98	*Pycreus polystachyos* (Rottb.) P. Beauv.	?	F	Ma	
99	*Thoracostachyum floribundum* (Nees) C.B.Cl.	E	O	HW	
Gramineae					
100	*Brachiara umbellata* (Trin.) W. D. Clayton	N	A	HW	
101	*Dactyloctenium ctenoides* (Steud.) Bosser	?	F	BC, PG	
102	*Digitaria* sp.	?	A	PG, HSc	
103	*Echinochloa colonum* (L.) Link	?	O	PG	
104	*Enteropogon sechellensis* (Baker) Dur. & Schinz	N	C	PG, HSc	
105	*Eragrostis tenella* var. *insularis* Hubb.	?	O	PG	
106	*Panicum brevifolium* L.	N	A	HW	
107	*Panicum maximum* L.	?	F	HW, Gl	
108	*Paspalum conjugatum* Berg	N	F	PG	
109	*Pennisetum polystachyon* (L.) Schult.	?	O	Gl	
110	*Saccharum officinarum* L.	I	O	PG	
111	*Sporobolus ?virginicus* (L.) Kunth.	N	A	BC, PG	
112	*Stenotaphrum dimidiatum* (L.) Brogn.	N	A	PG	
Liliaceae					
113	*Cordyline fruticosa* (L.) A. Chev.	I	R	PG	
114	*Dracaena reflexa* Lam. var. *angustifolia* Baker	N	A	HW, Gl	
Musaceae					
115	*Musa* sp.	I	R	Cu	
Orchidaceae					
116	*Disperis tripetaloides* (Thouars)Lindl.	N	R	HW	
117	*Vanilla planifolia* Andrews	I	C	HW	
Palmae					
118	*Cocos nucifera* L.	N	A	PG, HW	
Pandanaceae					
119	*Pandanus balfourii* Mart.	E	C	Gl, HW	
120	*Pandanus utilis* Bory	I	C	Cu	