

Figure 1. Curieuse Island: physical, with locations of vegetation plots.

CURIEUSE

BY

MICHAEL J. HILL¹, TERENCE M. VEL¹, STEVEN J. PARR² and NIRMAL J. SHAH¹

GEOLOGY, TOPOGRAPHY AND CLIMATE OF CURIEUSE

Curieuse has an area of 286 ha and is the fifth largest of the granitic Seychelles Islands. It is situated little over 1 km from Praslin, the second largest of the islands. At its highest point (Curieuse Peak), it reaches 172 m above sea level. The island consists of two ranges of high ground enclosing a shallow bay (Baie La Raie). Most of the land is sloping ground between 10 and 100 m above sea level (Table 1). The periphery of the island has low-lying coastal areas. There are four main areas of low-lying ground:

- 1. North (Anse Badamier)
- 2. Centre-east plateau (around National Park HQ)
- 3. Central (Baie La Raie mangrove, partially inundated)
- 4. South (Leper colonies)

Geologically, the island is similar to the nearby island of Praslin. The central hills are made up of reddish-grey granite (Braithwaite, 1984). Surrounding lowland areas consist of weathering products of granite, together with more recent calcareous deposits. The soils of Curieuse are mainly lateritic red earths. On the central range of hills, these have been severely eroded (Piggott, 1968), reduced to bare sub-soil and quartz gravel (Baker, 1963). In some flatter areas (for example, the northern plain) these soils have been less eroded. Some areas of the hill have river valley soils. The soils of the coastal lowlands include red earths (northern plain), marsh and mangrove deposits (central mangrove area, parts of centre-east plateau), and soils of the Shioya series (parts of centre-east plateau, south) (D.O.S., 1966).

The island has a large number of marsh areas in the coastal lowlands, most with a marine influence, but there are at least two freshwater wetlands, one at the Doctor's House (at the eastern end of the leprosarium plateau) and one at the western end of the leprosarium plateau. There are five permanent freshwater streams (IUCN, 1993).

The Seychelles islands experience a seasonal humid tropical climate (Walsh, 1984). While no weather data exist for Curieuse, it could be predicted that the climate of the island follows a similar pattern to that of nearby Praslin. Praslin is one of the driest of the large granitic islands with mean annual rainfall of 1,842.8 mm for the periods 1946-58 and 1977-99 (records from Praslin Grand Anse and Airstrip; unpublished data, National Meteorological Services, Seychelles).

¹ Nature Seychelles, PO Box 1310, Mahé, Seychelles. Email: <u>birdlife@seychelles.net</u>

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

Altitude range (m. asl.)	Area (ha)	Percentage total area
>150	2	0.7
100 - 150	32	11.1
50 - 100	67	23.4
10 - 50	111	38.8
0 - 10	74	25.9

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

HISTORY

Curieuse was first named Ile Rouge (after its exposed red earth soils) but its name was changed to that of one of the vessels of the Marion Dufresne expedition of 1768 (prior to settlement of the Seychelles). The same expedition noted little timber on the island, and very few land tortoises (this population later became extinct). Both coconut and Coco-de-Mer *Lodoicea maldivica* were recorded (Lionnet, 1984). Malavois (1787) recorded that the hill was covered with Coco-de-Mer (in Fauvel, 1909).

In October 1817, the island was leased, but it reverted to the control of the colonial government in 1827. A leper colony was established in 1829 for lepers from Mauritius and Seychelles, and 78 people were housed there by 1830 (McAteer, 2001). Lepers were later joined by old and infirm paupers, but by the late 1860s the colony was dwindling. When Edward Newton visited in 1866, there were only three lepers and "a few old decrepit paupers" remaining (Newton, 1867). The settlement was not closed until 1900, when the few remaining lepers and paupers were moved to new facilities on Round Island, Praslin, and Curieuse was commercially leased again. Coconut plantations were established, production reaching 300,000 nuts per year in 1930 (Anon, n.d.). Vanilla was introduced as a commercial crop in the early twentieth century; production ceased in the 1930s (IUCN, 1993). In 1909-10, a 500 m wall was constructed across Baie La Raie, enclosing the bay which was used for rearing sea turtles for meat. However, the project failed in 1914 when most of the turtles died of disease (Anon, n.d.).

In 1937, the government regained control of the island and reopened the leper colony to replace overcrowded facilities on Round Island, Praslin, and Round Island, Mahé (McAteer, 2001). The colony was abandoned in 1965 and the island and 1,370 ha of the surrounding seas were declared a Marine National Park in 1979 (IUCN, 1993). The island is still managed by the Seychelles Marine Parks Authority. The population is small (around 10 people). A large number of tourists make day visits from Praslin. In July 2000, a project of rat and cat eradication was undertaken on Curieuse, to eliminate alien mammals and enhance the conservation value of the island. Aerial application of pelleted bait was used for rats, and poisoning/trapping for cats.

FLORA AND VEGETATION

Flora

A total of 242 plant species was recorded on Curieuse, including 11 ferns, one gymnosperm (introduced) and 230 angiosperms (Appendix 1). Of the angiosperms, 131 (57.0%) species are regarded as introduced (Friedmann, 1994) and 81 (35.2%) native. Of the native plants, 23 taxa are endemic to the Seychelles (10.0% of the total flora). At least 43 species of introduced angiosperm (18.7% of the flora) recorded on Curieuse were restricted to gardens around houses and were not found away from cultivation. Most would probably become extinct were cultivation to cease.

The proportions of the total flora made up of introduced species and Seychelles endemics were similar to those for the Seychelles as a whole (of the total Seychelles flora, around 54% is introduced and 9% endemic; Procter, 1984). Compared to the flora of smaller islands, Curieuse is relatively rich in endemic plants. Several endemic species are abundant on Curieuse, notably the Coco-de-Mer palm *Lodoicea maldivica*; Curieuse and Praslin have the only natural populations of the species although planted specimens exist on many other islands (Procter, 1974). In addition, some of the endemic species recorded by previous observers but not in the current survey may still survive on the island (see Appendix 1). Two are known to be extinct there: wild vanilla *Vanilla phalaenopsis* has not been recorded on the island since the nineteenth century, and the parasitic shrub *Bakerella clavata* ssp. *sechellensis* is apparently completely extinct (Carlström, 1996a). Ten species recorded by previous observers may still survive on the island, bringing the total number of plants on the island to 252, with 25 Seychelles endemics.

Of the introduced plants established on Curieuse, 15 are invasive weedy species. Several of the woody weeds which are most invasive on the smaller islands of Seychelles are present, including cocoplum *Chrysobalanus icaco* and cinnamon *Cinnamomum verum*, both of which are abundant. Coconuts *Cocos nucifera* were not widely planted on the island and, although abundant in the north of the island, they are less common elsewhere; Curieuse has far fewer coconuts than most other small islands in Seychelles.

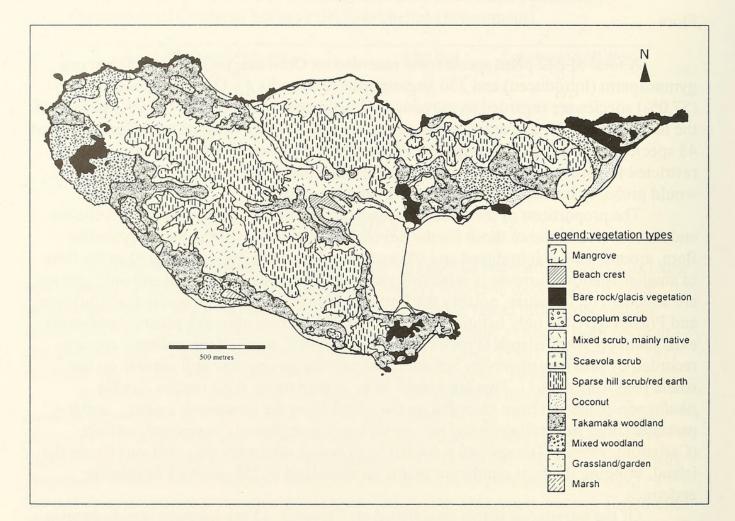


Figure 2. Curieuse Island: vegetation

Vegetation

The extents of major vegetation types on Curieuse are shown in Table 2 and Figure 2. Curieuse has a wide range of vegetation types and several were not studied in detail. Upland areas of Curieuse are dominated by scrublands that have a variety of endemic species together with one abundant introduced species, cocoplum *Chrysobalanus icaco*. There are some areas of open rock, and the plateaux have wetland vegetation including mangrove and freshwater marsh. The vegetation survey concentrated on areas of greatest value for endemic bird conservation: the woodland and scrub of plateaux and low hills.

	Vegetation type	Approx. area (ha)
Hill	Woodland (predominantly native)	27.4
(>10 m asl.)	Woodland (mixed)	17.6
	Scrub (native spp.)	85.8
	Scrub (mixed)	73.9
	Scrub (Introduced: predominantly	2.1
	Chrysobalanus)	can cover of 13, 9% A
	Bare rock	4.9
Plateau	Woodland (predominantly native)	27.9
(<10 m asl.)	Woodland (mixed)	6.8
	Coconut with regeneration	3.4
	Scrub (native spp.)	0.7
	Scrub (mixed)	8.8
	Scrub (Introduced: predominantly	1.4
	Chrysobalanus)	
	Mangrove	4.8
	Freshwater marsh	0.7
	Beach crest vegetation	4.7
	Grassland/garden	1.4
	Bare rock	13.6

Table 2. Extent of major vegetation types, Curieuse Island

Twenty-five plots were carried out in plateau woodland with a combined area of 2,500 m² (approximately 0.7% of the total area of this vegetation type), and 15 in low hill woodland covering 1,500 m² or 0.3% of the total area of the habitat. A summary of results is shown in Table 3.

Habitat	Plots	Mean altitude (m asl)	Mean trees ha ⁻¹	Mean shrub layer cover (%)	Mean herb layer cover (%)	Open leaf litter cover (%)	Bare rock (%)	Dead wood (pieces per plot)
Plateau	25	<5	744	53.0	42.6	50.0	9.2	1.3
Hill	15	21	653	46.0	34.0	41.0	26.6	1.1

Table 3. Curieuse vegetation plot summary

Plateau plots had a relatively high density of trees and a relatively complete canopy (mean canopy cover = 72%). At ground level, vegetation cover was less than 50% and there was a high proportion of open leaf litter. The tree layer was dominated by a native species, takamaka *Calophyllum inophyllum* (127 trees, 68% of total trees), although the introduced cinnamon *Cinnamomum verum* was also abundant (31 trees, 17% of total trees). The shrub layer was dominated by the invasive introduced shrub *Chrysobalanus icaco*, which was present in 18 of 25 plots and covered 25% of the shrub layer in plots where it occurred. Other widespread species of the shrub layer included cinnamon (in 17 plots, forming on average 14.2% cover), *Phoenicophorium borsigianum* (in 11 plots, mean 9.1% cover) and takamaka (10 plots, mean 2.6% cover).

Plots in low hill woodland had a lower density of stems and a less complete canopy (mean canopy cover=62%). Vegetation of the herb layer was less dense than that in plateau plots, but a larger proportion of the ground was outcrops of bare rock. The tree layer contained less natives than that in plateau woodland; 30.6% of stems were

introduced species. However, the most abundant single species was takamaka (28 trees, 28.6% of total trees). Cinnamon was again the second most abundant tree species (17 trees, 17.3% of total trees). Tree species diversity was higher in hill plots than in plateau plots, and the hill woodland contained a number of endemic shrub species including *Paragenipa wrightii, Erythroxlum sechellarum* and *Syzygium wrightii*. The shrub layer of low hill woodland was again dominated by *Chrysobalanus icaco,* found in 14 of 15 plots, with a mean cover of 23.6%. *Phoenicophorium borsigianum* was as widespread as *Chrysobalanus,* but contributed less to the shrub cover within plots where it occurred (mean cover was 13.9%). *Canthium bibracteatum* occurred in 13 of 15 plots, with mean cover of 7.8%. Cinnamon was found in 11 of 15 plots forming 11.5% cover in those plots in which it occurred.

The woodland of plateaux and low hills showed great similarity. In both cases, most of the trees present belonged to native species. The presence of native and endemic shrubs in hill woodland indicated that high woodland vegetation appeared to be advancing up-slope into areas previously occupied by native scrub.

In early 2000, several *Calophyllum* trees on the eastern plateau were suffering from symptoms of takamaka wilt disease caused by the fungus *Leptographium* (Verticillium) *calophylli* (Ivory *et al.*, 1996: Wainhouse *et al*, 1998). This disease has caused extensive death of *Calophyllum* trees on several other islands including North Island and Mahé and could threaten all high forest on Curieuse, which is dominated by this species.

INVERTEBRATES

Pitfall Trapping

Pitfall trap assemblages were smaller than average for granitic islands (Table 4); in part, this reflects the lower abundance of ants on Curieuse compared to some other islands, notably those infested with crazy ant *Anoplolepis gracilipes* such as Marianne and Félicité In fact, plateau sites were rather rich in invertebrates other than ants.

In both habitats, invertebrate assemblages were larger during the north west monsoon season, and on the plateau. Lowest invertebrate counts came from hill woodland in the dry south east season. The composition of assemblages also differed between the plateau and hill woodland, although both were dominated by ants (Hymenoptera: Formicidae). Ants formed a larger proportion of the total assemblage in hill woodland than in plateau woodland sites (Fig. 3). Plateau woodland contained greater numbers of earwigs (Dermaptera), beetles (Coleoptera) and woodlice (Crustacea: Isopoda). Woodlice were absent in hill plots.

In both hill and plateau woodland, the most abundant invertebrate was the ant *Odontomachus troglodytes*, which formed 39.1% of all individuals in the plateau woodland and 41.3% of all individuals in hill woodland. In hill woodland, the four most commonly trapped species were all ants. The most abundant invertebrate other than ants was an earwig (4.9% of individual invertebrates belonged to this species). In plateau plots, the two most abundant species were ants, and the third was an earwig (making up

8.3% of individuals). Cockroaches (a favoured food item of magpie-robins) were found on both hill and plateau; only two individuals (0.5% of total individuals) were trapped on the hill, while 14 (1.4% of total individuals) were trapped in plateau plots.

Table 4. Pitfall assemblages from Curieuse.

Only invertebrates of body length >2 mm included.

(Number in parentheses = number of invertebrates excluding ants).

	Habitat	Mean no. individuals per 5 traps		
All the second second second	A DE CONTRACTORIO DE CONTRACTORICO DE CONTRACTORICO DE CONTRACTORICO DE CONTRACTORICO DE CONTRACTORICO DE CONTRACTORIC	SE season	NW season	
Curieuse	Plateau woodland	38.4 (10.7)	42.1 (22.5)	
	Low hill woodland	17.0 (1.0)	32.2 (5.6)	
Mean for all granitic islands		61.8 (9.4)	61.1 (16.0)	

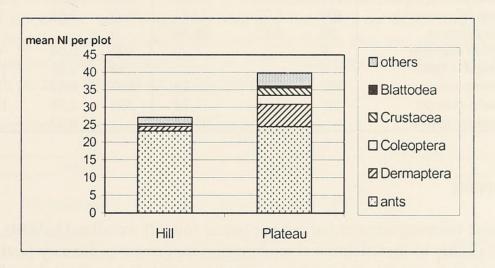


Figure 3. Total pitfall assemblages from Curieuse.

Leaf-insect Counts

Leaf-insect counts were carried out for 11 tree and shrub species, eight of these in both seasons (Table 5). In both seasons, the highest densities of invertebrates (both in terms of individuals per leaf and individuals per square metre of leaf) were on native plant species. *Terminalia catappa* and *Paragenipa wrightii* had particularly high invertebrate densities. However, the introduced *Cinnamomum verum* also had high invertebrate counts. Most invertebrates on cinnamon were soft bugs (Hemiptera: Sternorrhyncha) or ants (together these groups comprised 94% of invertebrates on cinnamon in August, 88% in January). In general, mangrove species (*Avicennia marina* and *Rhizophora mucronata*) had a low density of invertebrates but that for *A. marina* in August was particularly high. For five species, leaf counts were higher in January than in August. Three species had higher leaf counts in January.

	S	SE season (A	ugust)	N	W season (Ja	inuary)
Species	N	mean NI	mean NI	n	mean NI	mean NI
	-	leaf	m ⁻²		leaf ¹	m ⁻²
Introduced species						
Anacardium occidentale	50	0.18	24.21	100	0.11	20.73
Chrysobalanus icaco	300	0.08	21.06	800	0.04	11.58
Cinnamomum verum	650	0.59	85.23	960	0.22	34.03
Mean value: introduced		0.42	62.93	all and the	0.14	23.66
	1.3					
Native species						
Avicennia marina	500	0.16	117.21	1099	0.02	9.68
Calophyllum inophyllum	900	0.43	46.69	750	0.27	33.94
Canthium bibracteatum	800	0.07	22.54	1010	0.08	27.82
Hibiscus tiliaceus	50	0.52	28.44	0		
Memecylon elaeagni	0			300	0.06	43.65
Paragenipa wrightii	0			350	1.08	168.11
Rhizophora mucronata	500	0.05	5.40	1000	0.12	15.21
Terminalia catappa	50	1.54	71.28	200	2.55	126.22
Mean value: native		0.21	45.12		0.27	34.72

Table 5. Density of invertebrates on foliage, Curieuse. n = no. of leaves counted; NI = number of individual invertebrates.

Malaise Trapping

Malaise trapping was carried out in plateau and hill woodland habitats, during both seasons (Table 6). Invertebrate assemblages were greater in January (wet season) than in August (dry season). Assemblages were larger in hill woodland than plateau woodland, probably due to the greater air movement in hill plots where trees are more well-spaced, and herb and shrub layers less dense. The most abundant invertebrates in traps were the Diptera, Lepidoptera and Hymenoptera (wasps and ants); the relative importance of these groups varied between habitats and seasons. The majority of taxa collected have yet to be identified to species level.

Table 6. Malaise trap assemblages, Curieuse.

NI = number of individuals.

	SE (August)		NW (January)	
	Hill	Plateau	Hill	Plateau
No. traps	1	4	3	3
Mean NI trap ⁻¹	157	148	325	262
Mean NI Diptera	89	57.3	159.0	126.7
Mean NI Hymenoptera	9	23.0	59.3	34.0
Mean NI Lepidoptera	28	46.3	55.0	69.3

Observation

Many of the invertebrates observed were introduced or cosmopolitan species (Table 7). However, given the number of endemic plants present on the island, Curieuse probably also supports a number of endemic invertebrates. A more complete survey would be necessary to identify endemic taxa; microhabitats that could harbour endemic insects, not collected in the current survey, include the leaf bases of endemic palms and *Pandanus* species. Seventy-five species of insect in Seychelles are associated with the leaf bases of native palms and *Pandanus*, and half the beetle fauna of Praslin are associated with *Lodoicea* (Stoddart, 1984). Curieuse probably shares many or most of these species.

While many of the marshes of the plateaux showed a marine influence, that by the Doctor's House was entirely fresh and appeared permanently wet. Several species of Odonata were observed around this pool and collections in January included several species of water beetle, water bugs (Gerridae and Veliidae), ostracods and tadpoles of the Mascarene frog *Ptychadaena mascareniensis*. This marsh area and surrounding takamaka woodland was surveyed by Stevenson *et al.* (1997) who recommended it as a potential site for black paradise flycatchers on Curieuse.

Order	Family	Species	Notes
Arachnida: Araneae	Tetragnathidae	Nephila inaurita (Walckenaer, 1841)	temploten Help
Crustacea: Decapoda	Coenobitidae	Coenobita brevimanus Dana, 1852	Land hermit crab
Decapoda	coencontidue	Coenobita sp. 2	Mangrove hermit crab
	Gecarcinidae	Cardisoma carnifex (Herbst, 1784)	In mangrove
	Grapsidae	Grapsus tenuicrustatus (Herbst, 1783)	On coastal rocks
	•	Neosarmatium ?meinerti (De Man, 1887)	In mangrove
	Ocypodidae	Ocypode ceratophthalmus (Pallas, 1772)	Beach ghost crab
	ulate age, Sevenda	Ocypode cordimana Desmarest, 1825	Beach crest ghost crab
	Palaemonidae	Macrobrachium sp.	Crayfish; in stream above leprosarium plateau
Mollusca	Achatinidae	Achatina fulica (Bowditch, 1822) Achatina ?panthera Ferrusac, 1822	In pitfall traps In pitfall traps
	Cyclophoridae	Cyathopoma blanfordi Adams, 1868	In pitfall traps
	Littorinidae	Littoraria ?scabra (L., 1758)	Mangrove periwinkle
	Subulinidae	Subulina octona Bruguière, 1792	In pitfall traps
Myriapoda:		0,	1 1
Chilopoda	Scolopendridae	Scolopendra subspinipes (Leach, 1918)	
Diplopoda	Paradoxosomatidae	<i>Oxidus</i> (Orthomorpha) <i>gracilis</i> (K. Koch, 1847)	In pitfall traps
	Spirostreptidae	Seychelleptus seychellarum (Desjardins, 1834)	Giant millipede
	Trigoniulidae	Spiromanes ?braueri (Attems, 1900)	In pitfall traps
		Spiromanes seychellarum Saussure & Zehntner, 1902	In pitfall traps

Table 7. Invertebrates observed and collected, Curieuse.

Table 7 (cont.)

eros (Olivier, 1789) enescens Waterhouse, In freshwater marsh In freshwater marsh (Linnaeus, 1767) edansoni Latreille, 1804 andidieri Forel, 1886 In pitfall traps
In freshwater marsh In freshwater marsh In freshwater marsh In freshwater marsh In freshwater marsh In freshwater marsh In freshwater marsh
In freshwater marsh In freshwater marsh In freshwater marsh In freshwater marsh In freshwater marsh In freshwater marsh In freshwater marsh
In freshwater marsh In freshwater marsh In freshwater marsh In freshwater marsh In freshwater marsh In freshwater marsh In freshwater marsh
In freshwater marsh In freshwater marsh In freshwater marsh In freshwater marsh In freshwater marsh In freshwater marsh In freshwater marsh
In freshwater marsh (Linnaeus, 1767) <i>adansoni</i> Latreille, 1804
In freshwater marsh (Linnaeus, 1767) <i>adansoni</i> Latreille, 1804
u (Linnaeus, 1767) <i>Idansoni</i> Latreille, 1804
adansoni Latreille, 1804
adansoni Latreille, 1804
wa Forel, 1891 In pitfall traps
homasetti Forel, 1912 In pitfall traps
emeryi Forel, 1881 In pitfall traps
troglodytes Santschi, In pitfall traps
D. In pitfall traps
luaudi Emery, 1894 In pitfall traps
<i>igua</i> Forel, 1894 In pitfall traps
<i>albipes</i> (Smith, 1861) In pitfall traps
<i>us</i> (De Geer, 1773)
Mabille, 1884
us Linnaeus, 1767
(Trimen, 1862)
brum (Burmeister, 1839) Around marshes
gmaea (Rambur, 1842) Around marshes
<i>ialis</i> (Rambur, 1842) Around marshes
male wrightii (Selys, Around marshes
mate wright (berys, ribuild matshes
cens (Fabricius, 1798) Around marshes
<i>nihyalina</i> (Desjardins, Around marshes
myanna (Desjardins, Mound marshes
Around marshes
<i>latum</i> Rambur, 1842 Around marshes
ellensis (Bolivar, 1895)
EL = a o I E / I a o

VERTEBRATES

Reptiles, Amphibians and Fish

Reptiles, amphibians and fish observed during the course of fieldwork are listed in Table 8. The list includes five lizards, one tortoise and one frog. None of the three snakes known from Seychelles (Nussbaum, 1984a) were recorded, although these are rarely seen and may occur there. The endemic caecilian *Hypogeophis rostratus* has been recorded on Curieuse (Nussbaum, 1984b), but was not observed in the current survey. Given the relatively large size of Curieuse, and its proximity to the large island of Praslin, it is possible that other endemic amphibians and reptiles survive on the island and an extensive survey is recommended.

Giant tortoises were present in the late eighteenth century, but the population (presumably one of the endemic granitic Seychelles species) became extinct before 1875 (Bour, 1984). 42 Aldabra giant tortoises were brought to the island from Mahé in 1890-1902; these also became extinct. 252 tortoises were brought from Aldabra in 1978-82. Although the species breeds on the island, subsequent studies have revealed that the population is declining, probably due to poaching (Stoddart *et al.*, 1982; Samour *et al.*, 1987; Hambler, 1994; IUCN, 1993).

Table 8. Amphibians, reptiles and freshwater fish on Curieuse. Status: E =endemic, I = introduced, N = native (in central Seychelles).

Family	Species	an contraction	Status
Amphibians			
Raniidae	Ptychadaena mascareniensis (Dumeril & Bibron, 1836)	Mascarene frog	?I
Reptiles			
Gekkonidae	Gehyra mutilata (Wiegmann, 1835)	Pacific house gecko	Ι
	Phelsuma sundbergi Rendahl, 1939	day gecko	Е
	Phelsuma sp. (?P. astriata Tornier, 1901)	day gecko	Е
	Urocotyledon inexpectata (Steiner, 1893)	sucker-tailed gecko	Е
Scincidae	Mabuya sechellensis (Dumeril & Bibron, 1836)	Seychelles skink	Е
	Pamelaescincus gardineri (Boulenger, 1909)	burrowing skink	Е
Testudinidae	Geochelone gigantea (Schweigger, 1812)	Aldabra giant tortoise	Ι
Fishes			
Anguillidae	Anguilla sp.	eel	Ν
Rivulidae	Pachypanchax playfairii Günther, 1866	Seychelles Killifish	Е

Birds

Land birds and seabirds were identified by sight and, in addition, tape playback was used to give data on presence or absence of four species (black paradise flycatcher, Seychelles white-eye, Seychelles scops owl and barn owl). There was a positive response for only one of these species, the barn owl. In total, 14 land birds and waders were recorded (Table 10). Three of these were Seychelles endemics, but two of these endemic species are currently widespread and common within the granitic islands. One, the black parrot, is endangered.

Perhaps because of the early introduction of predators to the island, and destruction of natural vegetation, few endemic species have ever been recorded on Curieuse; only Seychelles kestrel and Seychelles sunbird were reported by Newton (1867). Despite the presence of apparently suitable takamaka *Calophyllum inophyllum* woodland on the plateaux, the Seychelles black paradise flycatcher *Terpsiphone corvina* has never been recorded (Collar and Stuart, 1985).

Only two species of seabird were recorded (Table 9); one of these (fairy tern) breeds on the island.

Species	a victorial l'approvation	Notes
Sterna anaethetus	bridled tern	One individual seen regularly on beaches and
		flying offshore, January
Gygis alba	fairy tern	Breeding birds present in trees near headquarters
		buildings (chick seen, 6/8/99)

Table 9. Seabirds observed on Curieuse Island.

Table 10. Land birds and waders observed on Curieuse M =migrant species

E = Seychelles endemic species; E(ss) = Seychelles endemic subspecies

Species		Notes
Butorides striatus	green-backed heron	Seen regularly around the marshes and mangrove, August and January
Gallinula chloropus	common moorhen	A small number occur at the plateau marshes: not common. Heard occasionally in August, only once in January
Gallus gallus	chicken	A few individuals free-ranging around houses on plateau
Arenaria interpres M	ruddy turnstone	Several birds seen in mangrove on two occasions (August). Many birds seen in mangrove areas and beaches (January)
Pluvialis squatarola M	grey plover	A few birds on beaches, January.
Numenius phaeopus M	whimbrel	One or two individuals seen regularly in mangrove, beaches: August and January
Streptopelia picturata ssp.	turtle dove	Regularly seen in lowland habitats
Geopelia striata	barred ground dove	Mainly around inhabited areas and gardens. Seen regularly
Alectroenas pulcherrima E	Seychelles blue pigeon	Seen regularly in woodland habitats (e.g., feeding on <i>Ficus reflexa</i> figs, January)
Coracopsis nigra barklyi E(ss)	Seychelles black parrot	Reported by park staff: population of around size birds, some of which appear to fly from Praslin but others possibly resident
Tyto alba	barn owl	A bird heard in lowland forest, January
Nectarinia dussumieri E	Seychelles sunbird	Very common in all habitats
Acridotheres tristis	common mynah	Common, especially in lowland habitats and beaches
Foudia madagascariensis	Madagascar fody	Fairly common around inhabited areas

Mammals

Four mammal species were recorded during the course of fieldwork: Seychelles fruit bat *Pteropus seychellensis*, feral domestic cat *Felis catus*, a small number of domestic dogs *Canis familiaris*, and ship rat *Rattus rattus* In addition, a fifth species, the house mouse *Mus domesticus*, was reported by residents.

Rodent trapping was carried out in August 1999 and January 2000 (Table 11). Two traplines were established, one in plateau woodland close to the Doctor's House and ruins of the leper colony and one in hill scrub dominated by cocoplum *Chrysobalanus icaco*. Only one species of rodent, the ship rat *Rattus rattus*, was trapped. Capture rates were relatively low, although higher in August (a period of food and water stress) than in January. Curieuse has abundant fruit trees and shrubs (including mangoes and cocoplum) with fruit in season on both visits. The availability of alternative food sources could influence the readiness of rats to enter traps.

Dates	Trap-nights	No. of rats	Rats per 100	Rats per 100
			trap-nights	trap-nights
			(uncorrected)	(corrected)*
8 - 13/8/99	140	33	23.57	30.14
13 - 18/1/00	112	18	16.07	20.57
Total (SE)			35.34	
Total (NW)			25.56	

Table 11. Results of rat trapping, Curieuse

*Corrected to account for the effect of closed traps; Cunningham and Moors, 1996.

DISCUSSION

Curieuse is a relatively large island with a great diversity of habitats. Today its central hills have very eroded red earth soils and support sparse scrub which is rich in endemic species (including Coco-de-Mer) and cocoplum scrub. Repeated forest fires have exacerbated erosion on these slopes and caused degradation of the vegetation (Carlström, 1996). The coastal plains support high forest dominated by native takamaka but with many introduced invasive species. Takamaka typically forms dense stands with little undergrowth of shrubs or herbs but these have been invaded by cinnamon and cocoplum, especially where the canopy is interrupted. Some of these invasive aliens support high densities of invertebrates on their foliage but the most important trees for invertebrate communities (and, therefore, insectivorous birds) are native species. The native takamaka forest is threatened by takamaka wilt disease.

The island supports a rich endemic flora including important populations of several species of endemic plant (Carlström, 1996) and is likely to be of importance for conservation of endemic invertebrates. Although few species of endemic bird have been recorded here, the proximity of the island to Praslin suggests that several would once have been present before eradication by introduced predators (and, possibly, habitat change).

CONSERVATION RECOMMENDATIONS

In July-August 2000, a rat- and cat-eradication programme was undertaken on the island by staff of the New Zealand Department of Conservation in a project co-ordinated by the Seychelles Ministry of Environment and Transport. Initially, eradication appeared to have been achieved for rats and mice, although a single cat was caught in early 2001,

and it is possible that further individuals remain. However, in August 2001, ship rats were again trapped on the island and at this time a well-established population appeared to be present (M. Hill pers. obs.). It is unclear whether animals survived the eradication attempt or have subsequently re-invaded. Like the original population, rats captured in 2001 all had grey underparts and were relatively small, although significantly larger than the rats present in 2000. Given the high costs of mammal eradications, it is unclear whether further attempts will be made to remove rats. If alien mammals can be eradicated, the island has potential to support populations of several Seychelles endemic birds, in particular the Seychelles magpie-robin and black paradise flycatcher. Both of these species, but particularly the paradise flycatcher, are associated with coastal plateau areas. While the magpie-robin inhabits upland areas on islands such as Cousin and Frégate, hill territories are generally larger than coastal ones, indicating that they are less productive.

In order to enhance the suitability of the island for these endemic land birds, actions that must be taken include the control of cocoplum on plateau areas. This spreading shrub has been widely planted on Curieuse to control erosion on the hills. However, it has also spread to plateau areas where it can form dense monospecific stands. These areas are poor in invertebrate food for most bird species, and the density of stems would prevent foraging by the magpie-robin. The takamaka wilt disease threatens the success of paradise flycatcher introduction; this bird inhabits takamaka-badamier woodland on La Digue's plateau (Collar and Stuart, 1985). Takamaka is common on Curieuse but badamier (*Terminalia catappa*) relatively rare. Extensive planting of badamier and other native trees should be carried out to mitigate the effects of takamaka wilt disease on coastal forests.

Appendix 1. Plant species recorded from Curieuse (excluding seagrasses)

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 area (including weeds and crops, and garden ornamentals); PG = Plateau grassland; PW = Plateau woodland; HW = Hill Woodland; HSc = Hill Scrub; Gl = Glacis; BC = Beach Crest; Ma = Marsh; Mg = Mangrove.

Species	Status	Abund.	Habitats	Notes
PTERIDOPHYTA		a martin	(Indiana and a second	
Adiantaceae				
1 Acrostichum aureum L.	Ν	С	Ma, Mg	
Davalliaceae				
2 Nephrolepis biserrata (Sw.) Schott	Ν	А	HW	
3 Nephrolepis cordifolia Schott	?	0	Cu	
4 Nephrolepis multiflora (Roxb.) Jarrett	Ν	С	PW	
Gleicheniaceae				
5 Dicranopteris linearis Burm.	Ν	А	HSc	
Hymenophyllaceae				
6 Trichomanes sp.	Ν	0	HW	
Lycopodiaceae				
7 Lycopodium cernuum L.	Ν	F	HSc	
Parkeriaceae				
8 <i>Ceratopteris cornuta</i> (Pal.) Lepr.	Ν	0	Ma	
Polypodiaceae				
9 Phymatosorus scolopendria (Burm. f.)	Ν	А	PW, HW	
Psilotaceae				
10 Psilotum nudum Sw.	Ν	С	PW, HW	
Thelypteridaceae				
11 Thelypteris sp.	?N	F	PW	
GYMNOSPERMAE				
12 Cycas thuarsii Gaud.	Ι	R	PG	
ANGIOSPERMAE: Dicotyledons				
Acanthaceae	~			
13 Asystasia sp. B (sensu Friedmann)	?I	А	HW, Gl,	
A Construction of the second s			PG	
14 Justicia gendarussa Burm. f.	?I	F	PW	
Amaranthaceae				
15 Amaranthus viridis L.	Ι	F	Cu	
16 <i>Alternanthera brasiliana</i> (L.) O. Kuntze.	Ι	0	Cu	Only in gardens
17 Alternanthera sessilis (L.) DC.	Ι	0	Ma	
Anacardiaceae				
18 Anacardium occidentale L.	Ι	С	HW, HSc	
19 Mangifera indica L.	Ι	С	PW, [HW]	
20 Schinus terebinthifolius Raddi	Ι	R	Cu	Only in gardens
21 Spondias cytherea Sonn.	Ι	F	PW	

	Species	Status	Abund.	Habitats	Notes
Anno	onaceae			and the second second	design 1 h h hannah di
22	Annona muricata L.	Ι	0	PW, HW	
23	Annona reticulata L.	Ι	F	PW	
24	Annona squamosa L.	Ι	0	PW	
Apoc	zynaceae				
25	Allamanda cathartica L.	Ι	R	Cu	Only in gardens
26	Alstonia macrophylla Wall ex G. Don.	Ι	F	HW, PW	
27	Catharanthus roseus (L.) G. Don.	Ι	F	HW, Cu	
28	Cerbera manghas L.	Ν	0	Mg	
29	Nerium oleander L.	Ι	R	Cu	Only in gardens
30	Ochrosia oppositifolia (L.) K. Schum.	Ν	R	BC	, ,
31	Plumeria rubra L.	I	R	Cu	Only in gardens
	aceae			cu	omj m gardono
32	Gastonia sechellarum (Baker) Harms.	Е	0	HSc	
33	Polyscias sp.	I	Õ	Cu	Only in gardens
	epiadaceae	1	U	Cu	Only in gardens
34	Sarcostemma viminale (L.) Alton	Ν	R	HW	
35	Secamone schimperiana (Hemsl.) Klack.	E	R	HSc	
	enniaceae	Ľ	K	nse	
36		Ν	С	Ma	
	Avicennia marina (Forssk.) Vierh.	IN	C	Mg	
		т	D	Cu	Only in gordong
37	Impatiens balsamina L.	I	R	Cu	Only in gardens
38	Impatiens wallerana Hook. F.	Ι	R	Cu	Only in gardens
	niaceae		D	G	0.1.
39	Begonia semperflorens	I	R	Cu	Only in gardens
40	<i>Begonia</i> sp.	Ι	R	Cu	Only in gardens
-	oniaceae		-		
41	Tabebuia pallida (Lindl.) Miers.	Ι	С	HW, HSc	
	ginaceae				
42	Cordia subcordata Lam.	N	F	BC	
43	Tournefourtia argentea L. f	N	0	Mg/BC	
Caesa	alpiniaceae				
44	Caesalpinia pulcherrima (L.) Sw.	Ι	0	Cu	Only in gardens
45	Delonix regia (Hook.) Raf.	Ι	R	PG	
46	Intsia bijuga (Coleb.) O. Kuntze	N	F	Hsc, G	
47	Senna occidentalis (L.) Link	Ι	0	PG	
48	Tamarindus indica L.	Ι	F	PW, HW	
Cam	panulaceae				
49	Hippobroma longiflora (L.) G. Don	Ι	0	PGr	
Caric	caceae				
50	Carica papaya L.	Ι	С	PW, Cu	
	ophyllaceae			-	
51	Drymaria cordata (L.) Roem. & Schult.	Ι	0	Cu	
	arinaceae				
52	Casuarina equisetifolia J. R. & G. Foster	Ι	А	BC, HW	
	sobalanaceae			-,	
53	Chrysobalanus icaco L.	Ι	А	HSc, HW,	
	chi juu unin luu uu u			PW	
Com	bretaceae			1.11	
54	Lumnitzera racemosa Willd.	Ν	F	Mg	
55	Quisqualis indica L.	I	0	PW	
55	Terminalia catappa L.	?N	C	PW, HW	

	Species	Status	Abund.	Habitats	Notes
Comp	oositae	2000 200		Street and Street	
57	Dahlia x hortensis Guillaumin	Ι	R	Cu	Only in gardens
58	Dendranthema sp.	Ι	0	Cu	Only in gardens
59	Emilia sonchifolia (L.) Wight	Ι	F	Cu, PG	
60	Tagetes patula L.	Ι	F	Cu	Only in gardens
61	Tridax procumbens L.	Ι	0	PG, Cu	, 5
62	Vernonia cinerea (L.) Less.	Ī	Ā	PG, Cu	
63	Zinnia sp. cv.	Ī	R	Cu	Only in gardens
	ulvulaceae			Cu	omy in gardens
conre	Ipomoea aquatica Forssk.	Ι			Listed in Robertson
	ipomocu uquanca i orssk.	1			(1989), not seen
64	Ipomoea batatas (L.) Lam.	Ι	0	Cu	Only in gardens
65	<i>Ipomoea macrantha</i> Roem. & Schult.	N	F	BC, PW	Only in gardens
66	-	I	F	PG	
	<i>Ipomoea obscura</i> (L.) Ker Gaw!.				
67 Сторо	<i>Ipomoea pes-caprae</i> (L.) R. Br.	N	А	BC	
	ulaceae		Г	DC/DC	
68	Kalanchoe pinnata (Lam.) Pers.	Ι	F	BC/PG	0.1.1.1
69	Kalanchoe sp.	Ι	R	Cu	Only in gardens
	bitaceae			all a platest	and the second second second
70	Cucurbita sp.	Ι	0	Cu	Only in gardens
71	Trichosanthes cucumerina L.	Ι	0	Cu	Only in gardens
	iaceae				
72	Dillenia ferruginea (Bailon) Gilg.	E	А	HSc, HW	
Eryth	oxylaceae				
73	Erythroxylum sechellarum O. E. Schultz	E	А	HSc, HW	
Eupho	orbiaceae				
74	Acalypha indica L.	Ι	F	Cu	
75	Acalypha wilkesiana Mull. Arg.	Ι	0	Cu, PW	
76	Codiaeum variegatum L.	Ι	0	Cu, PW	
77	Euphorbia hirta L.	Ι	А	PG	
78	Euphorbia ?hypericifolia L.	Ι	R	Cu	
79	Euphorbia prostrata Ait.	Ι	С	Cu	
80	Euphorbia pyrifolia Lam.	Ν	F	Gl	
81	Jatropha pandurifolia L.	Ι	0	Cu	Only in gardens
82	Manihot esculenta Crantz	I	F	Cu, PW	only in gardens
	Phyllanthus acidus (L.) Skeels	I	-	-	Listed in Robertson
					(1989); not seen
83	Phyllanthus amarus Schumach. &	Ι	А	PG	(1909), not seen
00	Thonn.			10	
84	<i>Phyllanthus pervilleanus</i> (Baillon) Mull.	Ν	0	HSc	
01	Arg.		0	noe	
	Ricinus communis L.	Ι			Listed in Robertson
	Riemus communis E.	1	-		
Flaco	urtiaceae				(1989); not seen
85		T	D	PW	
05	<i>Flacourtia jangomas</i> (Lour.) Räuschel	I	R	P W	Listad in Dahartaan
	Hydnocarpus pentandra (BuchHam.)	Ι	-	-	Listed in Robertson
97	Oken.	F()	D		(1989); not seen
86	Ludia mauritiana Gmel. Var.	E (var.)	R	HW	
0	sechellensis F. Friedmann				
	riaceae				2.1.1
87	Episcia cupreata (Hook.) Hanst.	Ι	R	Cu	Only in gardens
	eniaceae				
88	Scaevola sericea Vahl.	N	С	BC	

	Species	Status	Abund.	Habitats	Notes
Guttif	A			neolection of	
89	Calophyllum inophyllum L.	Ν	А	PW, BC, HW	
	ndiaceae				
00	<i>Hernandia nymphaeifolia</i> (Presl) Kubitzki	N	R	PW	
Labia					
)1	Ocimum ?canum Sims.	Ι	R	Cu	Only in gardens
02 Laura	Plectranthus amboinicus (Lour.) Spreng.	?I	R	PG	
3	Cassythea filiformis L.	Ν	0	BC	
94	Cinnamomum verum Presl.	Ι	A	PW, HW	
5	Persea americana Mill.	Ī	0	PW	
	hidaceae		Ū	B A CLIMM	
06	Barringtonia asiatica (L.) Kurtz	Ν	R	BC	
	thaceae			50	
	Bakerella clavata (Desrouss.) S. Balle ssp. sechellensis (Baker) S. Balle	E(ss)	-	Hin -	Listed in Robertson (1989); now possibly extinct
Malva	nceae				
97	Hibiscus rosa-sinensis L.	Ι	0	Cu	Only in gardens
8	Hibiscus schizopetalus (Mast.) Hook.	Ι	R	Cu	Only in gardens
9	Hibiscus tiliaceus L.	N	F	BC, PW	
00	Sida acuta Burm. f.	Ι	F	PG, Cu	
01	Sida cordifolia L.	?N	0	Gl	
.02	<i>Thespesia populnea</i> (L.) Soland. ex Correa	N	F	PW, BC	
	tomataceae				
03	Memecylon elaeagni Blume	E	F	HW	
Melia					
04	Swietenia sp.	Ι	F	PW	
05	Xylocarpus granatum Koenig	N	0	Mg	
06 Aimo	<i>Xylocarpus moluccensis</i> (Lam.) Roem. saceae	N	F	Mg, BC	
viinio	Acacia confusa Merr.	Ι	-	1990 <u>-</u> 1995	Listed in Robertson
07	Adenanthera pavonina L.	Ι	А	PW, HW	(1989); not seen
08	Leucaena leucocephala (Lam.) de Wit	I	A	PW, HW	
09	Mimosa pudica L.	I	C	PG	
10	Paraserianthes falcataria (L.) Niels.	I	C	PW, HW	
11	Pithecollobium unguis-cati (L.) Benth.	I	C	PW	
Aora		1	C	r vv	
12	Artocarpus altilis (Parkins.) Fosb.	Ι	0	PW	
12	Artocarpus heterophyllus Lam.	I	0	PW	
14	Ficus lutea Vahl.	N	F	HW, Gl	
15	Ficus reflexa Thunb. seychellensis	E (ss)	R	PW	
	(Baker)				
16	Ficus rubra Vahl	N	0	PW	
	ngaceae	I	0	DIV	
l 17 Myrta	<i>Moringa oleifera</i> Lam.	Ι	0	PW	
118	<i>Eucalyptus</i> sp.	Ι	R	HW	
119	Psidium guajava L.	I	R	PW	
	Syzygium malaccense (L.) Merr. & Perry		0	PW	

Care-180	Species	Status	Abund.	Habitats	Notes
	zygium samarangense (Bl.) Merr. &	Ι	0	PW	
	zygium wrightii (Baker) A. J. Scott	Е	F	HW, HSc	
Nyctagina	aceae				
	<i>ougainvillea</i> cultivars	Ι	R	PW, Cu	
Onagrace					
-	udwigia octovalvis (Jacquin) Raven	?I	F	Ma	
Oxalidace	-				
	verrhoa bilimbi L.	Ι	0	Cu, PW	
Papiliona					
-	prus precatorius L.	?N	А	HW, HSc	
	anavalia cathartica Thouars.	Ν	F	BC	
	<i>otalaria pallida</i> Ait.	?I	0	PG	
	endrolobium umbellatum (L.) Benth.	N	F	BC	
	esmodium incanum DC.	I	Ċ	PW, PG,	
150 20	ismourum meanum De.		C	HSc HSc	
131 De	esmodium triflorum (L.) DC.	Ι	F	PG	
	ythrina ?variegata L.	?N	R	PG	
	<i>iricidia sepium</i> (Jacq.) Walp.	I	F	PG	
	erocarpus indicus Willd.	I	R	HW	
			0 N	Gl	
	phrosia noctiflora Bojer ex Baker	I			
	ramnus labialis (L.) Spreng.	I	C F	PG	
	gna marina (Burm.) Merr.	Ν	F	BC	
Passiflora				DC	
	ssiflora foetida L.	I	F	PG	
	ssiflora suberosa L.	Ι	F	PG, PW	
Plantagina		_	-		
	antago major L.	Ι	0	Cu	Only in gardens
Portulaca				an adding a con	
	ortulaca grandiflora Hook.	Ι	0	Cu	Only in gardens
	ortulaca oleracea L.	Ν	F	PG	
	ortulaca ?pilosa L.	Ι	0	Gl	
Punicacea					
	inica granatum L.	Ι	R	Cu	Only in gardens
Rhamnaco					
	olubrina asiatica (L.) Brogn.	Ν	F	PG	
Rhizopho	raceae				
146 Br	uguiera gymnorrhiza (L.) Lam.	Ν	F	Mg	
147 Ce	eriops tagal (Perrotet) C. B. Robins.	Ν	F	Mg	
148 RH	<i>izophora mucronata</i> Lam.	Ν	А	Mg	
Rosaceae					
149 Ra	<i>bsa</i> sp.	Ι	R	Cu	Only in gardens
Rubiaceae	mingtingly than the Lighter pro- Lighter				
150 Ca	unthium bibractatum (Baker) Hiem.	N	А	PW, HW,	
	and the second stands of the second se			[BC]	
151 Gi	iettarda speciosa L.	Ν	0	BC	
	ora coccinea L.	Ι	0	Cu	Only in gardens
	itracarpus hirtus (L.) DC.	Î	0	PG	,
	prinda citrifolia L.	?I	F	PW	
	renna sechellensis (Baker) Summerh.	E	Ó	HW	
	aragenipa wrightii (Baker) F.	E	A	HW, HSc	
	agempa mighti (Dater)1.		11	1111, 1100	

Species	Status	Abund.	Habitats	Notes
Psychotria pervillei Baker	Е			Listed in Carlström (1996a, b); not seen
57 Tarenna sechellensis (Baker) Summerh.	Е	0	HW	(
Rutaceae				
58 Citrus reticulata Blanco	Ι	R	PW	
59 Citrus sinensis (L.) Osbeck	Ι	F	PW	
Sapindaceae				
160 Dodonea viscosa Jacq.	Ν	F	HSc	
Sapotaceae				
61 Mimusops sechellarum (Oliv.) Hemsl.	E	0	PW	
62 Northea hornei (M. M. Hartog) Pierre	E	F	HSc	
Scrophulariaceae				
Striga asiatica (L.) Kuntze	Ι	1.	- in A do	Listed in Robertson
				(1989); not seen
Solanaceae				an anna anna anna
163 Capsicum frutescens L.	Ι	0	Cu	Only in gardens
64 Solanum lycopersicum L.	Ι	0	Cu	Only in gardens
165 Solanum melongena L.	Ι	0	Cu	Only in gardens
Sterculiaceae				, ,
166 Heritiera littoralis Ait.	Ν	С	BC	
Surianaceae				
Suriana maritima L.	Ν	-	inter - The	Listed in Robertson
				(1989); not seen
Furneraceae				
167 Turnera angustifolia Miller	Ι	С	HSc, HW	
Verbenaceae	-			
168 Premna serratifolia L.	Ν	0	BC	
169 Stachytarpheta jamaicensis (L.) Vahl.	I	A	PG, PW	
70 <i>Stachytarpheta urticifolia</i> (Salisb.) Sims.	Ī	A	PG, PW	
171 <i>Vitex trifolia</i> L.	Î	R	PG	
ANGIOSPERMAE: Monotyledons				
Agavaceae				
172 Agave sisalana (Perr. ex Engelm.) Drum.	Ι	С	PW, HSc	
& Prain		C	1 11, 1100	
173 <i>Furcraea foetida</i> (L.) Haw.	Ι	F	PW	
Amaryllidaceae	-	1	1	
Crimum amabile KerGawl.	?I			Listed in Robertson
Criman andone KeiGawi.	.1			(1989); not seen
174 Hymenocallis littoralis Salisb.	?I	С	PW	(1909), not seen
Araceae	.1	C	1 11	
175 Alocasia macrorrhiza (L.) G. Don.	Ι	С	PW	
175 Anthurium sp.	I	R	Cu	Only in gardens
177 <i>Caladium bicolor</i> (Dryand.) Vent	I	R	Cu	Only in gardens
178 <i>Colocasia esculenta</i> (L.) Schott.	I	0 N	PW	Only in gardens
178 Colorasta esculenta (L.) Schott. 179 Dieffenbachia sequine (Jacq.) Schott	I	R	Cu	Only in gardens
<i>Syngonium ?podophyllum</i> Schott.	I	R	Cu	Only in gardens
Bromeliaceae	1	K	Cu	Only in galuens
	Ι	F	PW	
181 Ananas comosus (L.) Merr.	1	Г	r vv	
Cannaceae	I	0	Cu	Only in cordona
182 Canna hybrids	Ι	0	Cu	Only in gardens
Commelinaceae	- 10	F	Ma	
183 <i>Commelina</i> sp.	?I	F	Ma	Only in and
184 Tradescantia spathacea Swartz	1	0	Cu	Only in gardens

0	Species	Status	Abund.	Habitats	Notes
Cyper 185	aceae Bulbostylis barbata (Rottb.) C. B. Cl.	N	С	HSc	
185	Cyperus halpan L.	?	F	Ma, HSc	
187	Cyperus ratipan L. Cyperus?rotundus L.	?	г С	Ma, HSC Ma	
		, N	0	Ma, HSc	
188	<i>Eleocharis dulcis</i> (Burm. f.) Trin.	?	C		
189	Fimbristylis cymosa R. Br.	:	C	BC, PW,	
100	Finchaist lis on 2 (slasis andre)	9	Б	Gl	
190	<i>Fimbristylis</i> sp. 2 (glacis sedge)	?	F	HSc	
191	<i>Kyllinga polyphylla</i> Willd. ex Kunth	N	C	PG	
192	<i>Kyllinga</i> sp. 2	?	0	PW	
193	Lophoschoenus hornei (C. B. Cl.) Stapf.	E	A	HSc	
194	Mariscus dubius (Rottb.) Fischer	Ν	А	PG	
195	Mariscus pennatus (Lam.) Domin.	Ν	F	Ma	
196	Scleria sumatrensis Retz.	Ν	С	Ma	
197	Scleria sp. 2	?	С	PW	
198	Thoracostachyum floribundum (Nees) C.	E	F	HW, PW	
	B. Cl.				
Diosco	oreaceae				
199	Dioscorea alata L.	Ι	0	PW	
Flagel	lariaceae				
200	Flagellaria indica L.	Ν	F	PW	
Grami					
201	Bambusa vulgaris Schrad. Ex Wendl.	Ι	R	PG	
202	Brachiara umbellata (Trin.) W. D.	N	A	HW, HSc,	
202	Clayton		11	PW	
203	Chloris barbata (L.) Sw.	?	F	PG	
203		I	R	Cu, PW	
	<i>Cymbopogon</i> sp.	1 ?	F		
205	Dactyloctenium ctenoides (Steud.)	:	Г	PG	
201	Bosser	0	C	DC	
206	Digitaria ?horizontalis Willd.	?	С	PG	
207	<i>Eleusine indica</i> (L.) Gaertn.	?	F	PG	
208	Enteropogon sechellensis (Baker) Dur. &	Ν	С	Gl	
	Schinz				
209	Eragrostis tenella (L.) P. Beuv.	?	F	BC, Mg	
210	Heteropogon contortus (L.) P. Beuv.	?	С	Gl	
211	Hyparrhenia rufa (Nees) Stapf.	?	F	HSc, Gl	
212	Ischaenum heterotrichum Hack.	?	F	BC	
213	Oplismenus compositus (L.) P. Beuv.	Ν	С	PW	
214	Panicum brevifolium L.	Ν	С	PG, PW	
215	Panicum maximum L.	?	0	PG	
216	Paspalum conjugatum Berg	Ν	F	PG	
217	Pennisetum polystachyon (L.) Schult.	?	F	Gl	
218	Saccharum officinarum L.	Ι	0	Cu	Only in gardens
219	Sporobolus diander (Retz.) P. Beuv.	?	F	Gl, BC	
220	Sporobolus virginicus (L.) Kunth.	N	A	BC, PG	
221	Stenotaphrum dimidiatum (L.) Brogn.	N	A	PG	
	kidaceae	14	11	10	
		F	C	HSc	
222	Curculigo sechellensis Boj.	E	C C		
223	<i>Hypoxidia rhizophylla</i> (Baker) Dur. & Schinz	E	C	HW, HSc	
Lilace					
224	Cordyline fruticosa L. (A. Chev.)	Ι	R	Cu	Only in gardens
	Dianella sp. (varieg.)	T	R	Cu	Only in gardens

	Species	Status	Abund.	Habitats	Notes
226	<i>Dracaena reflexa</i> Lam. var. <i>angustifolia</i> Baker	N	А	HW, PW	HISON MUNICIPALITY AND
227	Sansevieria trifasciata Hort. ex Prain	Ι	R	Cu	Only in gardens
Mara	ntaceae				158 Engelsergeling
228	Maranta arundinacea L.	Ι	0	PW	
Musa	ceae				
229	Musa sp.	Ι	F	Cu, PW	
Orchi	daceae				
230	Cynorkis ?fastigiata Thouars	Ν	R	HSc	
231	Disperis tripetaloides (Thouars) Lindl.	N	F	HW	
	Vanilla phalaenopsis Reichb. f.	Е	1- 1 1	r (Kon-Oli Pies) an (Lana J Da mar Ricas	One 19 th century record (M. North; in Carlström, 1996; now locally extinct
232	Vanilla planifolia Andrews	Ι	С	HW, PW	198 Taonacontricity
Palma	ne				
233	Cocos nucifera L.	Ν	С	BC, PG	
234	Deckenia nobilis Wendl	E	F	HSc	
235	Lodoicea maldivica (Gmel.) Pers	Е	А	HSc, HW, [HW]	
	Nephrosperma vanhoutteanum (Wendl. ex van-Houtt.) Balf.	E	in the second	Will Liendold von	Listed in Robertson (1989), Carlström (1996a, b); not seen
236	<i>Phoenicophorium borsigianum</i> (K. Koch) Stuntz	Е	А	HW, PW	Capyring Call
Panda	naceae				
237	Pandanus balfourii Mart.	Е	0	BC, PW	
238	Pandanus hornei Balf. f.	Е	F	BC, PW	
239	Pandanus multispicatus Balf. f.	Е	А	HSc	
240	Pandanus utilis Bory	Ι	R	PW	
Typha					
241	<i>Typha javanica</i> Schnitzl. ex Zoll. beraceae	N	С	Ма	
242	Alpinia purpurata (Vieill.) Schumann	Ι	0	Cu	Only in gardens



Hill, Michael J et al. 2002. "Curieuse." Atoll research bulletin 495, 72–94.

View This Item Online: <u>https://www.biodiversitylibrary.org/item/123664</u> Permalink: <u>https://www.biodiversitylibrary.org/partpdf/83105</u>

Holding Institution Smithsonian Libraries and Archives

Sponsored by Biodiversity Heritage Library

Copyright & Reuse

Copyright Status: In Copyright. Digitized with the permission of the rights holder Rights Holder: National Museum of Natural History, Smithsonian Institution License: <u>https://creativecommons.org/licenses/by-nc-sa/4.0/</u> Rights: <u>http://www.biodiversitylibrary.org/permissions/</u>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at https://www.biodiversitylibrary.org.