Abstract - A total of 282 plant taxa have been recorded from five major vegetation units on Koolan Island at the head of the Yampi Peninsula. This represents over a quarter of the flora recorded for the Fitzgerald Botanical District. A total of 12 new naturalised weeds were recorded from the island. The closure of the iron ore mine on Koolan Island and the removal of the town will provide opportunities to study both weed invasion and persistence and the establishment of a large permanent wetland in a sub-humid tropical environment.

INTRODUCTION
A biological survey of Koolan Island was undertaken over a week during the wet season of February 1993. This survey was supplemented by herbarium records and previous collections by KFK and AAM. This paper describes the flora and vegetation of the island, while a subsequent paper will describe the island's fauna. This work will provide a benchmark against which to measure the rehabilitation of the island following closure of the major iron ore mine in October 1993 after 29 years of operation. Despite a long history of exploration and mining on the island its flora and vegetation have been little studied, with the earliest collections in the Western Australian Herbarium (PERTH) dating from the mid 1960s (also see Beard 1979).

STUDY AREA
Koolan Island is located 130 km north of Derby at the northern end of the Yampi Peninsula. It is separated from the mainland by a channel 1 km wide. The island is 13 km long and 5.5 km wide at its widest point, with the long axis of the island orientated NW – SE (Figure 1). Koolan is one of the many islands of the Buccaneer Archipelago. This area experiences a monsoonal climate with an annual rainfall of about 960 mm with most falling between December and March. Mean summer temperatures for Derby (some 130 km to the south) range from 35 to 37 degrees with high relative humidities (Bureau of Meteorology 1975).

The island is essentially a series of parallel flat-topped ridges formed from steeply dipping beds of the resistant Warton and Pentecost Sandstones and a series of deeply incised creeks through softer Elgee Siltstone (Tyler and Griffin 1993). The adjacent mainland has essentially similar geology and geomorphology. The basal part of the Pentecost Sandstone on Koolan Island is composed of high grade haematite (iron ore) and was mined from 1965 until 1993. This ore proved to be of very high grade (average 65% iron) with over 50 million tonnes having been extracted. A smaller mine operated on nearby Cockatoo Island between 1957 and 1986. The main pit on Koolan Island is 1.5 km long, 45 m wide and was mined at the eastern end to a depth of 80 m below sea level. This pit will fill with fresh water from a natural aquifer once mining operations cease.

The town associated with this mine was located at the eastern end of the island and had a population of 850 people. Most of the towns people left in October 1992 with complete closure planned by October 1993. It is planned that all buildings will be removed and all road surfaces removed and ripped. Only the airstrip will be left intact.

METHODS
During the wet season survey most of the field work was concentrated on the eastern two thirds of the island along roads and down creek lines. The area of Warton Sandstone along the southern edge of the island, supporting very open eucalypt woodland (Figure 1), was not visited due to time
Figure 1 Map of Koolan Island, showing major vegetation types and location of town, airstrip and mine.

and access limitations. Voucher collections were made of all fertile plants found and notes made on their distribution and abundance. While detailed searches were undertaken for naturalised weed taxa, due to time limitations no attempt was made to record all exotic taxa found in the townsite. Vouchers were lodged in PERTH. Nomenclature largely follows Wheeler et al. (1992). Additional records were available from previous visits by KFK and AAM as well as other collections lodged in PERTH.

A structural vegetation map was compiled from field notes and a 1:30 000 colour mosaic based on August 1992 photography (Figure 1).

RESULTS AND DISCUSSION

Flora

Two hundred and eighty-two taxa (species, subspecies and varieties) were recorded from 79 families. Forty-three of these were exotic taxa from 19 different families; three of these families (Moringaceae, Solanaceae and Turneraceae) were only represented by introduced taxa. The most well represented families were the Poaceae (22 native, 11 naturalised taxa), Papilionaceae (15 native, 5 naturalised taxa), Euphorbiaceae (15 native, 3 naturalised taxa), and Myrtaceae (11 native taxa) (Appendix 1). Species composition clearly shows the tropical nature of the flora with high proportions of grasses and Euphorbiaceae. It is, however, a sub-humid tropical flora sharing only 12% of the evergreen tropical flora of Christmas Island (Gentilli 1972, Du Puy 1993). Approximately half of the species co-occurring between the two islands are pan-tropical weeds.

Koolan Island falls on the western margin of the Fitzgerald Botanical District which covers some 83,330 km² (Beard 1979). The flora of this area is still poorly known. Hnatiuk (1990) recorded 842 taxa from this region while the recently completed Kimberley Flora (Wheeler et al. 1992) record 1030 taxa. The present survey has added a further 24 taxa. Thus, 27% of the flora of the entire Fitzgerald Botanical District has been recorded on Koolan Island although the island represents less than 0.1% of the land area of this District.

Weeds

Several weed taxa were largely restricted to the six steep gullies north and south of the townsite down which the treated sewage was discharged (Figure 2). In particular Euphorbia cyathophora and Clitoria ternatea were common and locally dominant in the bottoms of these gullies. In Creeks 1 and 2 on the north side of the settlement Sesma alata, a garden escape, has become widespread, reaching heights of 4 m. This is the first record of this species naturalised in Western Australia. It is also naturalised in the Darwin area. Another garden escape which has become widespread along the road verges and in the creeks is Turnera...
ulmifolia, a small yellow flowering herb. This taxa has also not previously been recorded elsewhere in Western Australia.

In a vegetated valley near the southern boundary of the town site, a small but vigorous population of rubber vine (*Cryptostegia madagascariensis*) was found. The creek line running south from this valley (Creek 4) was dominated by *Leucaena leucocephala*. The Poinciana (*Delonix regia*) was also found in this area and is the first time this taxon has been recorded as naturalised in Western Australia. The *Leucaena leucocephala* and *Delonix regia* were also found in the two smaller creek lines (Creeks 5 and 6) at the south west end of town.

Eleven species of grass have become naturalised including buffel grass (*Cenchrus ciliaris*). This species has become a very serious weed at Cape Range (near Exmouth) where it was planted along the coastal flats as improved pasture and has subsequently spread through most of the plant communities of the area (Keighery and Gibson 1993).

Currently all the weeds are restricted to the settlement area (including creek lines and sewerage outfalls) and road verges. With closure of the town supplementary irrigation and sewerage output will cease. This is likely to lead to long term loss of weed taxa given the extended dry season in this area. Weedy tree species may persist but success of further recruitment is uncertain. Experience in areas such as Cape Range suggests some of the exotic grasses will persist. The current distribution of *Cryptostegia madagascariensis* elsewhere in Australia suggests that this species will also persist and spread unless efforts are made to eradicate it. It should be noted that of the several hundred taxa present in the town gardens, only 44 have become naturalised (Appendix 1).

**Vegetation**

Five major vegetation units were found on the island. There were also several minor units but these occupied areas too small to map (Figure 1).

The most widespread community was the *Eucalyptus miniata* - *Eucalyptus confertiflora* open woodlands generally over *Triodia* hummock grassland. The understorey was composed of a diverse herb layer with species such as *Tacca leontopetaloides* and *T. maculata* being common. The density of shrubs in this community is variable but several species of *Terminalia* and *Acacia* are common (Appendix 1). This vegetation type covers about 80% of the non-disturbed area of the island and is the common vegetation type on the adjacent mainland (Beard 1979). The floristics of this community are fairly consistent, however there is considerable local change in dominance across the island. This floristic variation did not appear to be

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**Figure 2** Map of the townsite showing location of creek lines and sewerage outfalls.
correlated to slope or aspect and occurred on both the Pentecost Sandstone and the Elgee Siltstone. In places it gave way to small groves of Callitris intratropica with understoreys dominated by Calytrix extipulata. This community type has previously been recorded on the nearby Cockatoo, Irvine, Bathurst and Kingfisher Islands (previously known as the Wood Islands) some 30 km to the east on the same lithologies (Burbidge et al. 1978; K.F. Kenneally, unpub).

Aerial photographs show a very open eucalypt woodland along the southern edge of the island coincident with the Warton Sandstone (Tyler and Griffin 1993). This area was not surveyed due to both time and access limitations. Woodlands on this substrate type have been described for Augustus, Heywood, Champagny, Unwins and Saint Andrew Islands of the Bonaparte Archipelago lying some 130 km to the north east (Burbidge et al. 1978) and for an area in the proposed Prince Regent National Park (Miles et al. 1975). The composition of the woodlands on the Warton Sandstone is similar to the Eucalyptus miniata - Eucalyptus confertiflora open woodlands described above, but commonly also including Eucalyptus polypyllata, Plectrachne pungens, and less commonly Eucalyptus ferruginea and Acacia stipulosa. Large mangrove communities occur in two sheltered bays south of the settlement. In addition, much of the coastline of the island supports a narrow mangrove fringe (Figure 1). Four species of mangrove were recorded from the large stand immediately south of the settlement: Avicennia marina, Camptostemon schultzi, Excoecaria agallocha and Rhizophora stylosa. The mangrove communities are small and species poor compared to the much more extensive mangrove stands on the nearby mainland (Kenneally 1982).

Small patches of vine forest dominated by Canarium australianum were found in the steep creek lines on the eastern end of the island (Figure 1). Patch size ranges from just a few trees to several hectares in extent. The patches shown in Figure 1 are those that were visited on the ground and / or were discernible on the photo-mosaic. There are undoubtedly more smaller patches than could be mapped at this scale. Koolan Island is at the south western edge of the main area of occurrence of rainforest in the Kimberley. The only patches further to the south west are those on the northern shore of King Sound and the coastal areas of the Dampier Peninsula (McKenzie 1991).

More than 1500 patches of rainforest are scattered across the Kimberley. These range in size from a few tree crowns to more than 100 ha (McKenzie 1991). Kenneally et al. (1991) in a study of 99 Kimberley rainforests (largely vine forest) recorded 575 species. Only one of these species was endemic to the rainforest, with most species occurring widely in a number of habitats across northern Australia. The reason for the widespread nature of most of these species appears to be both their ability to cope with nutrient-poor substrates and propagule dispersal by birds and bats (McKenzie 1991). Our data are consistent with this hypothesis. One hundred and one of the 575 species recorded from Kimberley rainforest patches are found on Koolan Island.

Koolan Island shares 45.5 and 52.1% of the taxa recorded from the two closest rainforest patches studied by Kenneally et al. (1991) (02/3 and 25/3 on Yampi Peninsula, some 50 km to the east south east, with 33 and 46 species respectively). These data further indicate the widespread nature of the Kimberley rainforest flora.

Twelve small beaches occurred in protected bays around Koolan Island. Most of the beaches are adjacent to mangrove community but, in addition, a distinct community develops on the mobile sands. Common components of these beach communities include Spinifex longifolius, Commelina ensifolia, Ipomoea pes-caprae and Abrus precatorius. Two beaches to the south east of the settlement and another north of the airfield were frequently used by the residents for recreation and were serviced by gravel roads.

Minor vegetation units include the narrow fringing vegetation of Melaleuca viridiflora along some of the larger creek lines, and the Callitris intratropica stands. Species-poor haematite scree communities, seen at several locations. These were dominated by combinations of trees and / or shrubs. Common species included Callitris intratropica, Canarium australianum, Pouteria sericea, Vitex acuminata and Pavetta kimberleyana. All of these units are restricted to a few hectares in extent.

DISCUSSION

The flora and vegetation of Koolan Island is very similar to both the adjacent mainland and nearby Cockatoo Island. It is a sub-humid tropical sandstone flora which is widespread across northern Australia. Twelve new naturalised weeds for Western Australia were recorded from the island (Allamanda cathartica, Antigon leptopus, Cascabela thevetia, Cassia fistula, Delonix regia, Gliricidia sepium, Moringa oleifera, Peltophorum pterocarpum, Ruellia tuberosa, Senna alata, Tecoma stans, Turnera ulmifolia). Antigon leptopus, Delonix regia, Tecoma stans, and Turnera ulmifolia are also common weeds on Christmas Island.

One native species was found to be restricted to Koolan Island. This was an apparently undescribed species of smooth, white barked eucalypt (E. aff. cadophora) Keighery and Gibson 15 and 95). This taxon was found occasionally across the island.
None of the native taxa reached their range ends on Koolan Island.

Koolan Island presents an excellent opportunity for long term monitoring of weed invasion and persistence following major disturbance in an isolated sub-humid tropical environment. The townsite will also allow an opportunity to study the fate of the introduced garden species following the removal of town infrastructure and supplementary watering.

One major new habitat created by the mine will be an extensive, deep permanent freshwater wetland in the bottom of the major pit (next to the loading jetty, Figure 1) which has intersected a shallow aquifer. We are unaware of any similar habitat on the sandstone areas of the adjacent mainland. The colonisation of this wetland will add significant numbers of new taxa to the flora of the island. At the date of the present survey the pit was bare of all vegetation and water levels were being kept artificially low by continuous pumping.

ACKNOWLEDGEMENTS

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REFERENCES


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APPENDIX 1

Flora list of 282 taxa recorded from Koolan Island, Western Australia. Collection numbers refer to specimens lodged in PERTH. * indicates a naturalised weed and "sr" indicates a sight record.

Family Acanthaceae

Dichotoma armata F.Muell. Vernon 40
Hypoxestes sp. Vernon 51
* Ruellia tuberosa L. Mitchell 3118
Family Adiantaceae
Cheilanthes brownii (Kuhn)Domin
Cheilanthes caudata R.Br.
Cheilanthes sieberi Kunze
Cheilanthes tenuifolia (Burm.f.)Sw.

Family Aizoaceae
Sesuvium portulacastrum (L.)L.
Zaleya galericulata (Melville)H.Eichler

Family Amaranthaceae
Achyranthes aspera L.
Amaranthus pallidiflorus F.Muell.
* Amaranthus viridis L.
Gomphrena sp.
Ptilotus exaltatus Nees in Lehm.
Ptilotus fusiformis (R.Br.) Steud.
Steud. var. gracilis (R.Br.) Benl.

Family Anacardiaceae
Buchanania obovata Engl.

Family Apocynaceae
* Allamanda cathartica L.
* Cascabela thevetia L.
* Catharanthus roseus (L.)G.Don
Tabernaemontana pandacaqui Lam.
Wrightia saligna (RBr.)Benth.

Family Asclepiadaceae
Cynanchum carnosum (R.Br.)Schltr.
Cynanchum puberulum F.Muell.ex Benth.
Gymnema stenophyllum A.Gray
Marsdenia viridiflora R.Br.
Sarcostemma viminale subsp. australe
(R.Br.) P.I. Forst.
Secamone timoriensis Decne.
Tylophora flexuosa R.Br.
* Cryptostegia madagascariensis Bojer ex Decne.

Family Asparagaceae
Protasparagus racemosus (Willd.)Oberm.

Family Asteraceae
* Bidens bipinnata L.
Chrysocephalum eclipoides (F.Muell.)F.Muell.
Pierocaulon sphaecelatum (Labill.)F.Muell.
* Tridax procumbens L.
Vernonia cinerea (L.)Less.

Family Avicenniaceae
Avicennia marina (Forssk.)Vierh.

Family Bignoniaceae
Dolichandrone heterophylla (R.Br.)F.Muell.
* Tecoma stans (L.) Juss. ex Kunth

Family Bombacaceae
Camptostemon schultzii Mast.

Family Boraginaceae
Heliotropium glabellum "yellow variant"
Heliotropium glabellum R.Br.
Trichodesma zeylancicum (Burm.f.)R.Br.

Family Apiaceae
Trachymene didiscoides (F.Muell.)B.L.Burtt

Family Apocynaceae
* Allamanda cathartica L.
* Cascabela thevetia L.
* Catharanthus roseus (L.)G.Don
Tabernaemontana pandacaqui Lam.
Wrightia saligna (RBr.)Benth.

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Heliotropium glabellum R.Br.
Trichodesma zeylancicum (Burm.f.)R.Br.

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Family Burseraceae
  Canarium australianum F.Muell. Keighery/Gibson 48, 68, 136
  Canarium pubescens (F.Muell.) Baill. Vernon 31

Family Byblidaceae
  Byblis liniflora Salisb. Mitchell sr

Family Caesalpiniaceae
  * Cassia fistula L. Keighery/Gibson 213
  Chamaecrista mimosoides (L).Greene Keighery/Gibson 59
  * Delonix regia (Bojer ex Hook.) Rafin. Vernon 12
  Erythrophleum chlorostachys (F.Muell.) Baill. Vernon 04
  Lysiphyllum cunninghamii (Benth.) de Wit Keighery sr
  * Peltophorum pterocarpa (DC) Backer ex K. Heyner Keighery/Gibson 77, Mitchell 3111
  Senna alata (L.) Roxb. Vernon 42, Keighery/Gibson 109
  Senna goniodes (A.Cunn.ex Benth.) Randell

Family Capparaceae
  Capparis lasiantha R.Br.ex DC. Keighery/Gibson 214, 248
  Capparis sepiaria L. Keighery sr
  Capparis spinosa L. var. mammularia (DC). Bailey Vernon 64
  Cleome viscosa L. Keighery sr

Family Caryophyllaceae
  Polycarpaea spirostylis F.Muell. Keighery sr

Family Celastraceae

Family Chenopodiaceae
  Salsola kali L. Keenally sr
  Suaeda arbusculoides L.S.Sm. Keighery sr

Family Combretaceae
  Terminalia canescens (DC.) Radlk. Vernon 27, Keighery/Gibson 41
  Terminalia latipes Benth. subsp. psilocarpa Pedley Vernon 10, Keighery/Gibson 87
  Terminalia platyphylla F.Muell. Keighery sr

Family Commelinaceae
  Cartonema spicatum (R.Br. Vernon 30, Keighery/Gibson 247
  Cominelina ensifolia R.Br. Vernon 29, Keighery/Gibson 37
  Murdannia graminea (R.Br.)G.Brueckn. Vernon 38

Family Convolvulaceae
  Evolvulus alsinoides (L).L. Vernon 33
  Ipomoea sp. Keighery 48
  Ipomoea pes-caprae (L).R.Br. Mitchell 2272, Keighery/Gibson 05, Vernon 47, Fryxell 4598,
  * Ipomoea quamoclit L. Keighery/Gibson 119
  Jacquemontia paniculata (Burm.f).Hallier Keighery/Gibson 50
  * Merremia dissecta (Jacq.) Hallier Fryxell 4607
  Operculina brownii Ooststr. Keighery/Gibson 113
  Polymeria ambiguus R.Br. Keighery/Gibson 216
  Xenostegia tridentata (L.) D.Austin et Staples

Family Cucurbitaceae
  * Cucumis melo L. subsp. agrestis (Naudin) Grebensc. Keighery/Gibson 57
  Mukia maderaspitana (L.).M.Roem. Keighery sr
  Trichosanthes cucumerina L. var. cucumerina Keighery/Gibson 135

Family Cupressaceae
  Callichira intratropica (F.Muell.).R.T.Baker and H.G.Sm. Keighery/Gibson 67

Family Cyperaceae
  Cyperus bulbosus M.Vahl Keighery/Gibson 217
  Fimbristylis cymosa R.Br. Keighery/Gibson 94, 150
Family Dilleniaceae
   *Hibbertia oblongata* R.Br.ex DC.

Family Dioscoreaceae
   *Dioscorea bulbifera* L.

Family Droseraceae
   *Drosera lanata* Kondo
   *Drosera petiolaris* R.Br.ex DC.

Family Ebenaceae
   *Diospyros maritima* Blume

Family Elatinaceae
   *Bergia pusilla* Benth.

Family Euphorbiaceae
   *Croton* sp.
   *Breynia cernua* (Poir.)Muell.Arg.
   *Bridelia tomentosa* Blume
   *Euphorbia australis* Boiss.
   *Euphorbia caglaniit Bailey*
   *Euphorbia cyathophora* Murray
   *Euphorbia drummondii* Boiss.
   *Euphorbia hirta* L.
   *Euphorbia Kimberleyensis* B.G.Thomson
   *Excoecaria agallocha* L.
   *Fleuggea virosa* (Willd.)F.Voigt subsp. *melanthesoides* (F.Muell.)G.L.Webster
   *Jatropha gossypifolia* L.
   *Petallestigma pubescens* Domin
   *Phyllanthus amarus* Schumach.
   *Phyllanthus maderaspatensis* L.
   *Phyllanthus virgatus* G.Forst.
   *Sebastiania chamelea* (L.)Muell.Arg.
   *Jimophyllum genuinum* (L.)Poit.

Family Goodeniaceae
   *Goodenia sepalosa* F.Muell.ex Benth.

Family Gyrocarpaceae
   *Gyrocarpus americanus* Jacq.

Family Haloragaceae
   *Gonocarpus leptothecus* (F.Muell.)Orchard

Family Lamiaceae
   *Anisomeles malabaricum* (L.)R.Br.ex Sims
   *Hyptis suaveolens* (L.)Poit.

Family Lauraceae
   *Cassitha aurea* J.Z.Weber
   *Cassitha capillaris* Meisn.
   *Cassitha filiformis* L.

Family Loganiaceae
   *Mitrascace convoluta* R.Br.
   *Strychnos lucida* R.Br.

Family Loranthaceae
   *Amyema bifurcata* (Benth.)Tiegh.
   *Amyema miquelli* (Lehm.ex Miq.)Tiegh.
   *Amyema thalassium* Barlow
   *Decaisnita* sp.
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Dendrophthoe acacioides (Benth.)Tiegh.
Diplatia grandibractea (F. Muell.) Tiegh.
Lysiana spathulata (Blakely) Barlow subsp. spathulata

Family Lythraceae
Lagerstroemia archeriana Bailey

Family Malvaceae
Abutilon aff. oxyacarpum (F. Muell) F. Muell. ex Benth.
Abutilon andrewsianum W. Fitzg
Abutilon indicum (L.) Sweet
Gossypium costulatum Tod.
* Gossypium hirsutum L.
Hibiscus aff. fryxellii Mabb.
Hibiscus leptocladus Benth.
Thebesia thespesioides (Benth.) Fryxell

Family Meliaceae
Owenia vernicosa F. Muell.

Family Menispermaceae
Tinospora smilacina Benth.

Family Mimosaceae
Acacia amplyps Maslin
Acacia hippuroides Heward ex Benth.
Acacia holosericea A. Cunn. ex G. Don
Acacia multisiliqua (Benth.) Maconochie
Acacia sp. (sec. juliflorae)
Acacia stigmaphylla A. Cunn. ex Benth.
* Acacia tumida F. Muell. ex Benth.
* Leucaena leucocephala (Lam.) de Wit
Neptunia gracilis Benth.

Family Moraceae
Ficus opposita Miq.
Ficus virens Aiton

Family Moringaceae
* Moringa oleifera Lam.

Family Myrtaceae
Calotropis browii (Schauer) Craven
Calotropis exstipulata DC.
Eucalyptus aff. adolphora
Eucalyptus confertiflora F. Muell.
Eucalyptus dampsier D. J. Carr and S. G. M. Carr
Eucalyptus miniata A. Cunn. ex Schauer
Eucalyptus perfoliata R. Br. ex Benth.
Eucalyptus rupestris Brooker and Done
Eucalyptus sp. B (Kimb flora)
Eucalyptus testifica F. Muell.
Melaleuca viridiflora Sol. ex Gaertn.

Family Nyctaginaceae
Boerhavia sp.
Boerhavia dominii Meikle and Hewson

Family Oleaceae
Jasminum didymum G. Forst.

Family Papilionaceae
Abras procatorium L.
Alysicarpus vaginalis (L.) DC.

Keighery/Gibson 65, 106A
Keighery/Gibson 25
Keighery/Gibson 155
Keighery sr
Keighery/Gibson 158
Vernon 54
Keighery/Gibson 33
Vernon 28, Fryxell 3861, 4619,
Mitchell 2278, Lullfitz sn
Mitchell sr
Mitchell 3115
Vernon 55, Keighery/Gibson 53, 159
Keighery sr
Keighery/Gibson 111
Keighery sr
Keighery/Gibson 108
Vernon 04, Vernon 55, Sands 4973
Keenally sr
Vernon 01, Fryxell 4605, Sands 4975,
Lakeman 2, Keighery/Gibson 45
Done 730, Keighery/Gibson 106, 219
Vernon 09, White 09, Keighery/Gibson
142, Sands 4946
Vernon 70, Keenally 8531, Sands 4950
Keighery/Gibson 18
Keighery/Gibson 12
Keighery/Gibson 49
Keenally sr
Keighery/Gibson 230
Vernon 69, Fryxell 4601
Keighery/Gibson 09
Keighery/Gibson 15, 95
Vernon 14, Keighery/Gibson 148
White 11
Keenally sr
Keenally sr
Done 737
Keighery/Gibson 10
Vernon 18
Keighery/Gibson 11
Keighery sr
Keighery/Gibson 83, 146
Fryxell 4585
Keighery sr
Keighery/Gibson 52
Family Passifloraceae

* Adenia heterophylla (Blume) Koord.
  var. hispida (DC. ex Triana and Planchon) Killip

Family Philydraceae

* Philydrum lanuginosum Gaertn.

Family Poaceae

Alloteropsis semialata (R.Br.) Hitchc.
  Bothriochloa pertusa (L.) A. Camus
  * Cenchrus ciliaris L.
  * Cenchrus echinatus L.
  * Cenchrus eymoides F. Muell.
  * Cenchrus setiger
  * Chloris barbata (L.) Sw.
  * Chloris gayana Kunth
  Chloris sp.
  Chrysopogon latifolius S. T. Blake
  Chrysopogon sp.
  Cynodon dactylon (L.) Pers.
  * Dactyloctenium aegyptium (L.) Wild.
  Digitaria barberi (L.) Lam. Roem. and Schult.
  * Echinochloa colona (L.) Link
  * Eleusine indica (L.) Gaertn.
  Eragrostis tenella (L.) Roem. and Schult.
  Eriachne arenacea R. Br.
  Eriachne sulcata Hartley
  Heteropogon contortus (L.) P. Beauv. ex Roem. and Schult.
  Panicum decompositum R. Br.
  Paspalum scrobiculatum L.
  Plectrachne bynoei C. E. Hubbard.
  * Rhynchelytrum repens (Willd.) C. E. Hubbard.
  * Setaria plumilea (Poir.) Roem. and Schult.
  Sorghum ecarinatum Lazarides
  Sorghum plumosum (R. Br.) P. Beauv.
  Spinifex longifolius R. Br.
  Sporobolus virginicus (L.) Kunth
  Triodia sp.
  * Urochloa mosambicensis (Hack.) Dandy
  Urochloa subquadripila (Trin.) R. D. Webster
  Whiteochloa cymbiformis (Hughes) B. K. Simon

Family Polygalaceae

Comesperma secundum Banks ex DC.
Koolan Island Flora and vegetation

Family Polygonaceae
  * Antigon leptopus Hook. and Arnd.

Family Portulacaceae
  Calandrinia uniflora F.Muell.
  Portulaca oleracea L.
  Portulaca pilosa L.

Family Proteaceae
  Grevillea agrifolia Cunn. ex R. Br.
  Grevillea cunninghamii R.Br.
  Grevillea pyramidalis A.Cunn.ex R.Br.
  Grevillea refracta R.Br.
  Persoonia falcata R.Br.
  Stenocarpus sp. A (Kimb Flora)

Family Rhizophoraceae
  Ceriops tagal (Perr.)C.B.Rob.
  Rhizophora stylosa Griff.

Family Rubiaceae
  Aidia racemosa (Cav.)D.D.Tirveng.
  Canthium sp. A (Kimb Flora)
  Oldenlandia corymbosa L. var. corymbosa
  Pavetta kimberleyana ST Reynolds
  Spermacoce leptoloba Benth.

Family Rutaceae
  Boronia lanuginosa Endl.

Family Santalaceae
  Exocarpos latifolius R.Br.
  Santalum lanceolatum R.Br.

Family Sapindaceae
  Atalaya hemiglauca (F.Muell.)F.Muell.ex Benth.
  Distichostemon hispidulus (Endl.)S.T.Reynolds
  var. phyllopteris (F.Muell.)ST.Reynolds
  Dodonea lanceolata F.Muell. var. lanceolata

Family Sapotaceae
  Mimusops elengi L.
  Pouteria sericea (Aiton)Baehni

Family Scrophulariaceae
  Lindernia aff. clausa (F. Muell.)F. Muell.
  Stemodia lythrifolia F.Muell.ex Benth.
  Striga curviflora (R.Br.)Benth.

Family Solanaceae
  * Physalis minima L.

Family Sonneratiaceae
  Sonneratia alba Sm.

Family Stackhousiaceae
  Stackhousia intermedia Bailey

Family Sterculiaceae
  Brachychiton diversifolius R.Br.
  Brachychiton viridiflorus (W.Fitzg.)Guymer
  Brachychiton osidilus (W.Fitzg.)Guymer
  Melochia oblongifolia F.Muell.
  Melochia umbellata (Houtt.)Stapf
  Waltheria indica L.

[Contributors: Mitchell 3113, Keighery sr, Keighery sr, Keighery sr, Keighery sr, Keighery sr, Keighery sr, Keighery sr]

Family Stylidiaceae
  *Stylium aff. leptorrhizum* F. Muell.

Family Taccaceae
  *Taenia leontopetaloides* (L.) Kuntze
  *Taenia maculata* Seem.

Family Tiliaceae
  *Corchorus leptocarpus* (A. Cunn.) Benth.
  *Grewia breviflora* Benth.
  *Grewia retusa* Kurz
  *Triumfetta plumigera* F. Muell.
  *Triumfetta sp.*
  *Triumfetta sp.*
  *Triumfetta sp.* O (Kimb Flora)
  *Triumfetta sp.* S (Kimb Flora)

Family Turneraceae
  *Turnera ulmifolia* L.

Family Typhaceae
  *Typha domingensis* Pers.

Family Ulmaceae
  *Celtis philippensis* Blanco

Family Verbenaceae
  *Callitropis candicans* (Burm.f.) Hochr.
  *Clerodendrum floribundum* R. Br. var. *coriaceum* (R. Br.) Mold.
  *Clerodendrum tomentosum* (Vent.) R. Br. var. *lanceolatum* (F. Muell) Munir
  *Premna acuminata* R. Br.
  *Stackyatarpha cayennensis* (Rich.) Vahl
  *Vitex acuminata* R. Br.
  *Vitex glabra* R. Br.

Family Violaceae
  *Hybanthus aurantiacus* (F. Muell.ex Benth.) F. Muell.
  *Hybanthus enneaspermus* (L.) F. Muell.

Family Vitaceae
  *Ampelocissus acetosa* (F. Muell.) Planch.
  *Cayratia trifolia* (L.) Domín
  *Cissus adnata* Roxb.

Family Zygophyllaceae
  *Tribolopis angustifolia* R. Br.