RESULTS OF A RAPID BIOCULTURAL SURVEY

AUREED, AUKANE, BAK, IGAB, KABBIKANE, MAUAR, MEMAY, UMAGAR AND YAUK ISLANDS, CENTRAL TORRES STRAIT, QUEENSLAND

APRIL 2017

Prepared by David Fell Environmental Pty Ltd for
Torres Strait Regional Authority, Land & Sea Management Unit, the Masigalgal (Torres Strait Islanders) Corporation Registered Native Title Body Corporate
and the Kulkalgal (Torres Strait Islanders) Corporation.

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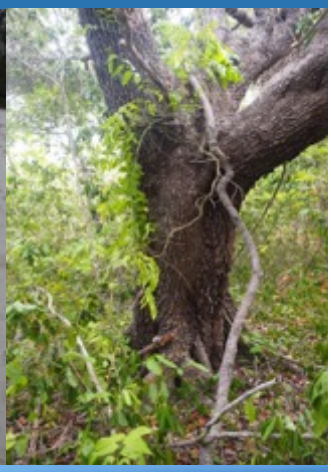

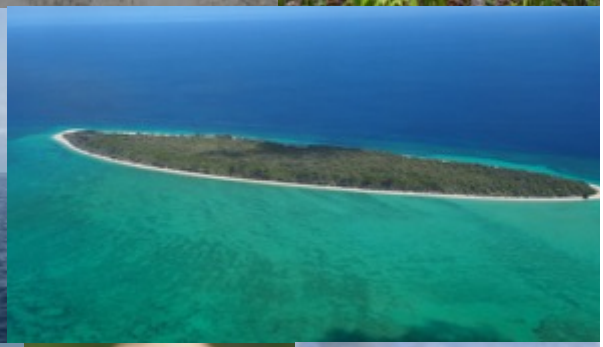

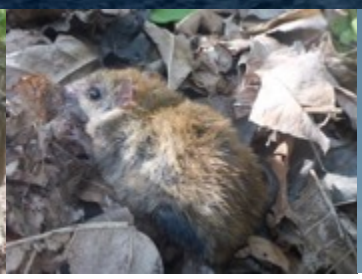
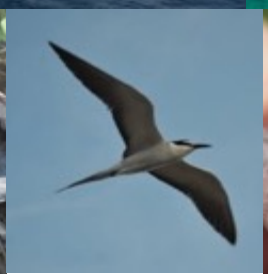
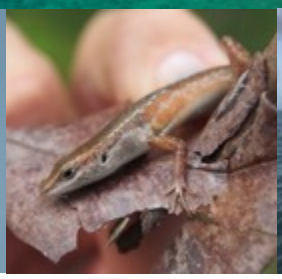


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A project coordination team of Mark Geyle, Belinda Norris, John Lynn, Melinda McLean and Laura Pearson developed and coordinated the project scope and led the field survey teams. Appreciation is extended to the TSRA Rangers who participated in the survey Edna Nai (Ranger-Masig), Loice Naawi (Ranger-Masig), Young Billy (Ranger Warraber), Mark Pearson (Senior Ranger Warraber), Des David (Ranger Poruma) and Richard Kepa (Ranger Iama). Thanks are also extended to Belinda Norris (Senior NRMO - Sea) for provision of information regarding sea turtles.

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Map figures have been prepared by Susannah Leahy and John Lynn of TSRA. The Queensland Herbarium assisted with drying, storing and identification of plant specimens. Great thanks also to the owner, skipper and crew of the survey vessel, MV Flying Fish V for logistical support throughout the survey and most particularly thanks are extended to the hard work and skill of the Land and Sea Rangers who skippered and were deckhands of the two TSRA Ranger Vessels *Kuki* and *Malu Urui*.

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Record of Review

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EXECUTIVE SUMMARY

This report presents the results of a rapid assessment of biocultural values of Aureed, Aukane, Bak, Igab, Mauar, Memay, Kabbikane, Umagar and Yaok Islands carried out in November 2016. The islands are part of the land and sea country of the Masigalgal (Torres Strait Islanders) Corporation Registered Native Title Body Corporate (RNTBC) and the Kulkalgal (Torres Strait Islanders) Corporation administers the native title rights and interests recognised over Aureed Island. These are small uninhabited coral cay islands located in Central Torres Strait and varying in size between four and 52 hectares.

The field surveys were conducted by Land and Sea Rangers and land team managers from the Land and Sea Management Unit (LSMU) of the Torres Strait Regional Authority (TSRA) with the support of a consultant botanist. The primary objective of the survey was to document the plant and animal diversity of this remote part of Torres Strait. The purpose of the information gathered will be used to inform Registered Native Title Body Corporations (RNTBC) and Traditional Owners about not only the biocultural significance of the islands but also to inform future decisions about protecting and managing values. Rangers gained further experience in flora survey methods, plant identification, fauna survey techniques and bird identification. The sharing of Traditional Ecological Knowledge (TEK) by a Senior Traditional Owner through video interviews and notetaking by Land and Sea Rangers was a great asset to the survey. It underscored the importance and value that traditional knowledge plays in undertaking biocultural surveys.

No formal biodiversity surveys have previously been undertaken on the islands and the results contribute to the body of data from surrounding uninhabited Central Island coral cays complied during previous TSRA funded biodiversity surveys. Fauna surveys aimed to provide a rapid assessment of the assemblage of birds and animals of the islands with a focus to determine if any invasive species were present. Survey methods used Elliott (box) traps, camera stations, an anabat, and active diurnal and nocturnal searches supplemented by opportunistic observations from the tender vessels around the margins of the islands. Surveys of Hawksbill turtles were also carried out as part of the Turtle and Dugong Management Project aimed to improve understanding of Hawksbill turtle nesting, and to increase community understanding, capacity and skills to manage marine turtles in the region. Vegetation and flora surveys utilized aerial imagery to identify vegetation patterns and collected site based data on vegetation structure, floristics and cultural use.

KEY LEARNINGS

The survey results provide base line information toward improving understanding of the cultural and ecological values, condition and management requirements of the island terrestrial ecosystems. Key learnings are summarized as follows:

Traditional Ecological Knowledge

- The islands are cultural landscapes.
- Seasonal resource use and exploitation of land and sea resources has been ongoing and evidence of cultural sites such as old wells, baler shells used for water storage, rock piles and garden areas was recorded.
- Access to land resources such as Gasi and Ubar, sea bird eggs, turtle eggs and marine resources such sea turtles, fish, shellfish, crustaceans (crabs and crayfish on reefs), trochus and dugong, continues to occur in surrounding reefs and waters. The availability of resources is determined by seasonal conditions which also influences variation in quality and abundance of certain resources.
- Across the islands there are 72 species of plants recognised as culturally significant and this represents 53% of the total flora.

Animals

- Fauna surveys were rapid in nature yet provide a preliminary assessment of values and management issues.
- The total fauna recorded for the survey incorporating existing records from database searches is 62 species. This consists of 53 birds. six reptiles and one mammal.

- Five species of birds listed as threatened on either Federal or State legislation and 21 migratory species were recorded.
- A robust and significant population of Makas (the native Grassland Melomys-*Melomys burtoni*) was recorded on Umagar.
- There was no non-native (*Rattus* spp.) rodents or Feral Cats found on any of the islands surveyed.
- Tracks and nesting of Green and Hawksbill turtles were recorded on beaches of all islands.
- An unidentified Moegay (skink) was photographed on Aureed.

Vegetation

- The islands support 12 vegetation types. Most are characteristic of coral cays in the Torres Strait and northern Great Barrier Reef which experience seasonal water stress.
- The occurrence of Piner (Bird lime tree-*Pisonia grandis*) forest on Memay, Bak, Yauk and Igab islands is a significant finding of the survey. This vegetation type is rare in Torres Strait and otherwise known from Atub (in the Warraberagal and Porumagal IPA) and the Warul Kawa IPA.
- Evidence of past modification to vegetation is present on all islands because of cultural traditional gardening practices.
- Vegetation on Aureed was drastically altered in the 1870-1880s by the demands of Bech de Mer and Trepang industries. The characteristic low scrub and Wongai scrub typical of other vegetated islands in the central group has been replaced by grasslands dominated by the tall native grass (*Cenchrus brevisetosus)* and by scattered regrowth of native trees and shrubs.

Plants

- The plant assemblage is characteristic of coral cay islands in the Torres Strait region and the northern Great Barrier Reef islands.
- The flora represents approximately 10% of the known flora of the Torres Strait region and 35% of the known flora of all Torres Straits coral cay islands.
- The combined flora of nine islands consists of 135 species (123 native species).
- There are 12 species (9% of the total flora) which are non-native. Seven weeds are considered invasive (Lantana, Snake Weed, Mint Weed, Corky Passionfruit, Manila Rope, Stylo and Painted Spurge).
- No species of Commonwealth or State significance were recorded and two species are important at the local and bioregional scale.

MANAGEMENT FOCUS

Issues for management focus are identified toward maintaining the biocultural health of the islands.

Invasive Species

Further survey work is required following the growing season to assess the distribution of the following weeds. Specific pest management plans can then be developed to achieve control. This to include appropriate methods of control and ongoing monitoring for the introduction and spread of pest species, both fauna and flora.

- Lantana – Scattered infestations on Mauar and Igab.
- Snake Weed – Scattered infestations on Mauar.
- Corky passionfruit – Sporadic occurrences on Aukane, Bak and Igab.
- Manilla Rope – Dense infestation on north eastern end of Aureed.
- Townsville Stylo – Scattered infestations on Mauar.
- Painted Spurge - Sporadic occurrences on Igab and Kabbikane.
- Exotic rats have not been recorded on the island however it is possible that they may occur in the future. Monitoring programs identified above should include methods to determine the presence of rats.

Fire

- The dense grasslands of Aureed are highly flammable in the late dray season. Irregular burning has had a significant impact on biodiversity values, in particular the regeneration of native bush and culturally important plants such as *Ubar, Ak, Bodo, Auboi, Duwah and Usarkun*.
- Existing management of other islands which excludes fire is complimentary to maintaining biocultural values.

TEK

- Working in partnership with RNTBCs and Traditional Owners to continue documentation of TEK particularly seasonal knowledge and of plants and animals with cultural significance.
- Further survey and documentation of the cultural heritage values of the island such as well sites, old settlements and garden areas.
- Incorporation of information with the TSRA TEK system and continue to develop opportunities toward dissemination of information to the community.

Vegetation and Habitat Monitoring

- Piner forests are known to be subject threatened on Great Barrier Reef islands because of threatening processes. Design and implementation of long term monitoring to determine trends in condition is recommended.
- Regular monitoring of shorelines and collection of rubbish washed up on beaches.

Plants

- Carry out follow up surveys of all islands in growing season. Because surveys have only been carried out in the late dry season it is likely that additional species of herbs and vines will be recorded.
- Utilise flora data in combination with existing data sets to undertake regional biogeographic analysis of coral cay islands.

Animals

- Surveys have only been carried out in the late dry season and were rapid in nature. Further survey effort in other seasons is required particularly for islands where no trapping was carried out (Yauk and Bak) and for islands where time spent undertaking bird survey was constrained due to logistical constraints.
- Targeted surveys to identify (possible) breeding sites and foraging habitat for beach stone-curlew. The location of any breeding sites for the beach stone-curlew should be recorded so that these sites can be monitored and afforded protection from threatening processes.
- Targeted surveys to identify (possible) breeding sites for Little Tern. The location of any breeding sites for should be recorded so that these sites can be monitored and afforded protection from threatening processes. Uncertainty as to the movements and breeding of populations in the Torres Strait means that surveys should be conducted in both summer and winter.
- Surveys of waders should be conducted whenever possible (in summer or during times of passage) to determine the importance of the islands and the region to these species.
- Seasons monitoring of Black Noddy nesting on Pisonia islands.
- Targeted survey on Aureed to collect the unidentified Moegay (skink) and to determine identity.
- Monitoring of significant population of Makas (*Melomys burtoni*) on Umagar. Collection on DNA sample and analysis to determine genetics in relation to populations on Damud and other islands.

Data

- Storage and management of data sets for ready access for future surveys, management needs and for incorporation into the TSRA GIS, Fulcrum or other tools used by Rangers.

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1. INTRODUCTION

1.1 Project Scope & Objectives

During 2016, the Torres Strait Regional Authority (TSRA), Land and Sea Management Unit (LSMU) identified a lack of biodiversity information on many of the uninhabited islands within the Central Islands of the Torres Strait. To address this LSMU combined funding from several project streams to deliver a program of biocultural survey in the island group. The initiative combined resources from the Invasive Species project, the Biodiversity project, the Dugong and Turtle Management project and the Indigenous Protected Area (IPA) project, to undertake a range of biocultural survey activities on 16 uninhabited islands throughout the Central Islands cluster.

This report presents the results of a Rapid Biocultural Assessment (RBA) of flora, fauna and Traditional Ecological Knowledge (TEK) carried out on nine islands in central Torres Strait. These surveys on Aureed, Aukane, Bak, Igab, Mauar, Memay, Kabbikane, Umagar and Yaok Islands followed similar work on Sassie, Uttu and Yarpar and were performed during November 2016 by TSRA Land and Sea Rangers and staff, with support from a flora ecologist with experience in the Torres Strait region.

The specific objectives of the field investigations were as follows:

- Document relevant aspects of traditional ecological knowledge with the support of Traditional Owners;
- Produce an overview of the diversity and conservation significance of the islands vegetation, plants and animals;
- Assess and evaluate any threats to the islands biodiversity and cultural values;
- Recommend management strategies to mitigate impacts relevant to RNTBCs, Traditional Owners, local communities, and government agencies;
- Provide on-site training and mentoring in biodiversity survey and identification techniques; and
- Provide data collected during the RBA into the TSRA GIS system and for Registered Native Title Bodies (RNTB), local communities and government agencies where appropriate.

Traditional owners worked with Rangers to identify key cultural and natural values that will assist Traditional Owners with future management of the islands. Rangers were also supported in western science survey techniques in plant, animal and shorebird identification and identification.

1.2 Location & Environmental Setting

The islands are all uninhabited coral cays ranging in size from 3.9 to 51.8 ha (**Table 1, Figure 1**). Umagar is the smaller island of 3.9 ha and Aureed is the largest at 51.8 ha (refer **Figure 2**). They occur within the Central Island group of Torres Strait which includes the inhabited islands of Warraber, Masig (Yorke), Poruma (Coconut), Iama (Yam), several large uninhabited islands such as Gebbar and Naghir (Mt Ernest), and a host of smaller uninhabited coral cays.

Recognition of seasonality is a core aspect of Kulkalgal traditional knowledge. and resource use and a number of different seasons are known to reflect subtle seasonal variations in tides, wind direction and type, clouds, rain and resource availability. In general, terms the climate is tropical monsoonal in character. Ninety percent of rainfall occurs between December and April in 'Kuki', a pronounced wet season influenced by the monsoonal trough. 'Sager' is a pronounced dry season between May and September characterised by southeasterly trade winds. Mean annual rainfall of Poruma (the nearest recording station 32km northeast of Warraber) is 1 469mm (BoM 2016).

Table 1. Island size and type

Island	Area (ha)	Island Type
Umagar (Keats Islet)	3.9	Cay
Yauok (Yauk or Layoak Island)	9	Cay

Island	Area (ha)	Island Type
Memay (Mimi Islet)	11.1	Cay
Kabbikane	12.8	Cay
Bak (Bourke)	15.4	Cay
Igab (Marsden Island)	19.4	Cay
Aukane	24.8	Cay
Mauar (Rennel Island)	46.8	Cay
Aureed	51.8	Cay

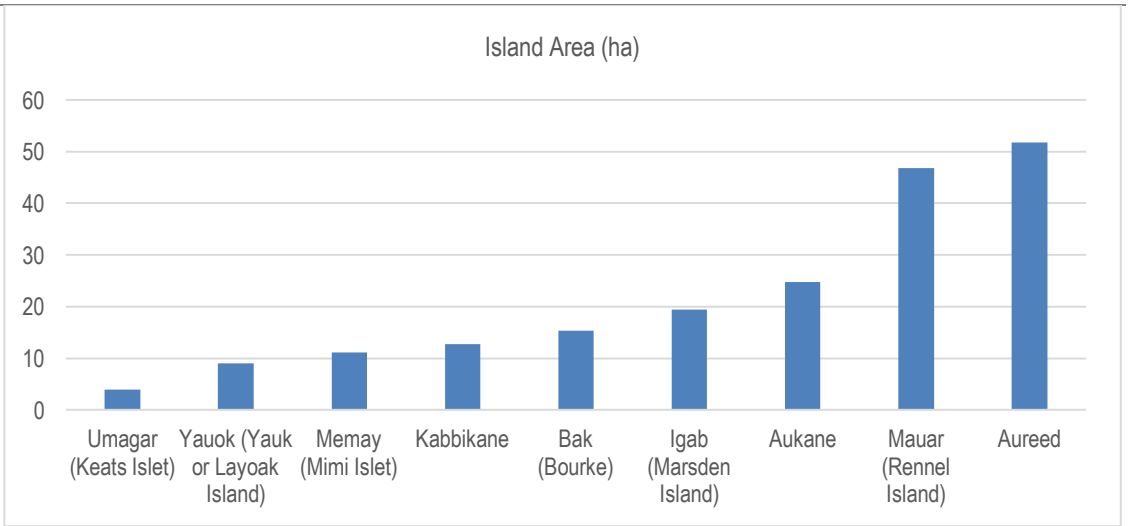


Figure 1. Island areas

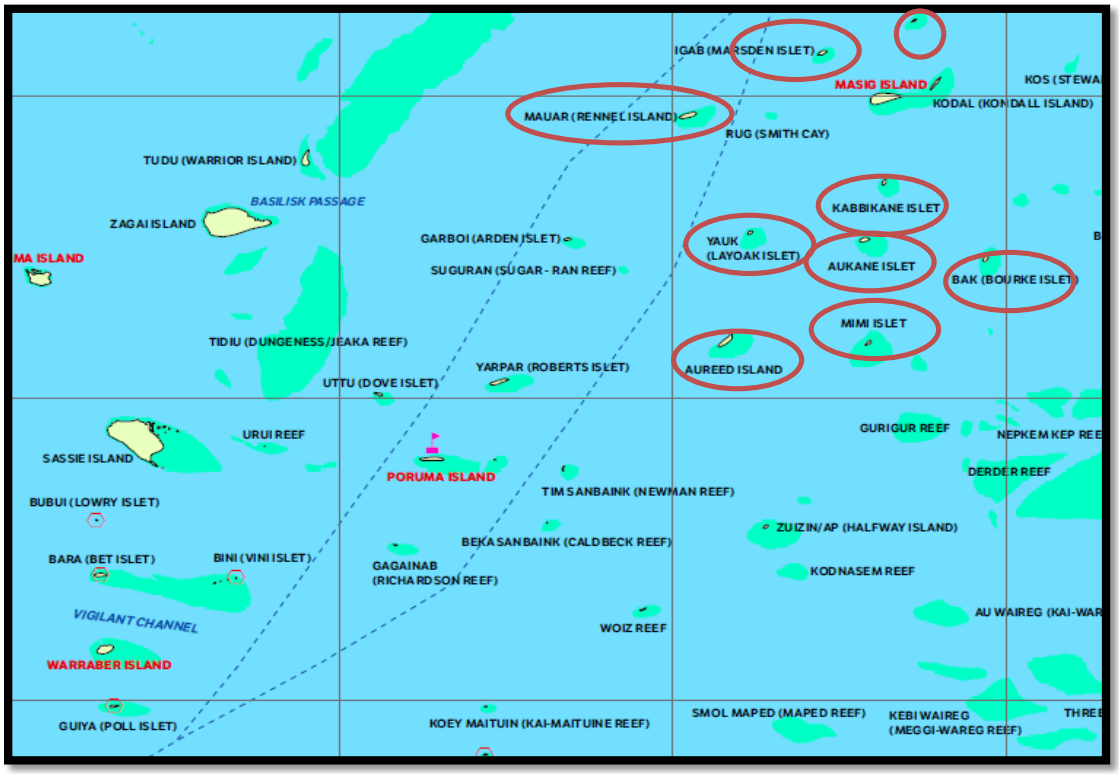


Figure 2. Location Map

1.3 Cultural Setting

The people of the Central Island Group of Torres Strait are recognized as 'Kulkalgal' and the local language is Kulkalgal Ya, a dialect of Kalaw Lagaw Ya (a language from the near western cluster of Mabuiag, Mua and Badu). Traditional Owner principles for management are based on indigenous approaches to stewardship of their lands and waters with conservation philosophy founded on '*mina pawa'* (appropriate and respectful ways) with respect of traditional values and the collective knowledge and wisdom of Elders (Hitchcock *et al.* 2009). This respect extends to the responsibility of ongoing active management of islands and sea territory, to ensure the collective wellbeing of current and future generations of Torres Strait Islanders (Hitchcock *et al.* 2009).

The Kulkalgal (Torres Strait Islanders) Corporation administers the native title rights and interests recognised over Aureed Island in December 2004 on behalf of its members located on Poruma, Warraber and Masig Islands. The application leading to the Kulkalgal determination was lodged in February 2001 and native title rights were determined to recognise rights to exclusive possession, occupation and use of the land, and non-exclusive right to use the water and things within it for personal, domestic and non-commercial communal needs (Native Title Research Unit 2015).

Native title is also held by the Masigalgal (Torres Strait Islanders) Corporation RNTBC in relation to the land and inland waters of Masig (Yorke) Island which include Umagar (Keats) Island, Igaba (Marsden) Island, Kabbikane Islet, Memay (Mimi) Islet, Aukane Islet, Yauk (Layoak) Islet, Mauar (Rennel) Island and Bak (Bourke) Island (Native Title Research Unit 2015).

A broad perspective of the cultural values of the Kulkalgal and their islands have been documented by Shnukal (2004) who notes that *"The Central Islands are intervisible and almost every vertical projection — whether island, cay, atoll, reef, rock or sandbank—is named, owned and serves some material or symbolic purpose. Ownership resides with specific Islander communities, even down to the level of clans".*

2. METHODS

2.1 Consultation

The foundation of the projects success was the approval from Traditional Owner representative bodies to access the islands and carry out the planned activities. This was achieved by the Project Coordination team through correspondence, and receipt of written permissions from RNTBC's to survey the islands for flora and fauna and invasive species, monitoring for Hawksbill turtles, and IPA management planning.

Initial project findings and feedback was provided via email to the Masigalgal (Torres Strait Islanders) Corporation RNTBC and the Kulkalgal (Torres Strait Islanders) Corporation (Aureed) in the days following the survey in the form of an outline of the key findings and provision of the detailed results subject to this report.

The information compiled within this report and the associated reporting of the Sea team, will also be summarised into a community report and community notices which highlight the activities and findings of the field trip. Discussions have also been held with Traditional Owners about the outcomes of the trip, particularly regarding significant native or introduced species and management implications.

2.2 Background

The field surveys were conducted between the 25th-30th of November 2016 by LSMU Land and Sea Rangers and staff with the support of a consultant botanist. The teams were based on the research charter vessel 'MV Flying Fish V' and were part of a larger survey of a total of 16 islands. Access to site locations were achieved by TSRA Ranger vessels the 'Kuki' and 'Malu Urui' and by foot traverses once on the island.

The survey applied hands-on training in flora survey methods, plant identification, fauna survey techniques, bird identification, invasive species survey and consideration of management issues. The presence of Masigalgal Senior Traditional Owner and PBC Chair Mr. John Morris offered an opportunity for Land and Sea Rangers to

capture Traditional Ecological Knowledge (TEK) through video interviews and note taking for incorporation into the Masig TEK system. Participating Rangers and Ranger Supervisors are identified in **Table 2**.

Table 2. Central IPA TSRA Survey Participants November 2016

TSRA Staff	Position
Mark Geyle	Senior NRMO ISD Terrestrial
John Lynn	Senior NRM – Invasive Species
Laura Pearson	A/ Senior Supervisor
Melinda Mclean	Project Officer IPA/TEK
Belinda Norris	Senior NRMO (Sea)
Young Billy	Ranger Warraber
Richard Kepa	Ranger Iama
Mark Pearson	Ranger Warraber
Edna Nai	Ranger Masig
Loice Naawi	Ranger Masig
Des David	Ranger Poruma
David Fell	Lead Ecologist/Botanist

2.3 Desktop Reviews

A review of past reporting, mapping and databases which were utilised include:

- Queensland Herbarium (HERBRECS) database. (A review of all previous plant records held as voucher specimens in the State Government database);
- Wildlife Online (Wild Net) database extracts (DSITIA 2017). (A review of all previous plant and animal records held as voucher specimens and validated observation records in the State Government database);
- Vegetation Communities and Regional Ecosystems of the Torres Strait Islands (Stanton *et al.* 2008);
- Biodiversity profiles for inhabited coral cay islands of Warraber, Poruma and Masig (3D Environmental 2013a, b, c, d), and the uninhabited islands of Campbell, Dalrymple and Nepean (Fell & Gynther 2014a, 2014b, 2014c), Warraber and Poruma IPA (Watson 2012, Fell & Watson 2014);
- The Warraber and Poruma IPA Management Plan (Hitchcock *et al*. 2013);
- Technical papers and identification guides and texts relating to cultural background, flora and fauna species.

2.4 Conservation and Cultural Significance

The significance of flora and fauna has been assessed per the following criteria:

- Cultural significance: traditional, historic and/or contemporary value associated with usage and/or belief;
- Nationally significant: Species listed on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) as critically endangered, endangered, or vulnerable;
- State significant: Species listed on the Queensland *Nature Conservation Act 1992* (NCA Act) as endangered, vulnerable and near threatened;
- Queensland Back on Track species prioritisation framework;
- Regional significance: local, regional and State endemics, disjunct species and those occupying a narrow ecological niche, species at the limit of their geographical range, and undescribed species;
- Migratory species recognised under several bipartisan agreements including the Japan-Australia Migratory Bird Agreement (JAMBA), China-Australia Migratory Bird Agreement (CAMBA), the agreement between the government of Australia and the government of the Republic of Korea on the protection of migratory birds ROKAMBA), and the EPBC Act. Species are also referred to as Migratory Marine, Migratory Terrestrial, Migratory Wetland and Marine.

2.5 Traditional Ecological Knowledge Recording Methods

Traditional Owners and Rangers undertook TEK recordings on the islands to represent their perspectives, worldview, and recording of traditional knowledge, lore and stories. Unstructured interviews and video recordings with Senior Traditional Owner Mr. John Morris were captured on the TSRA TEK camera and language names for plants and animals were compiled. Concepts and approaches for further work on seasonality and resource availability and mapping of old cultural sites such as gardens and wells were also developed. This information will guide future management and research activities on the islands within the framework of the Masig TEK system.

2.6 Flora Methods

The vegetation and flora of the islands utilized recent aerial imagery to identify vegetation patterns and locate sampling sites. Field survey sites recorded data on vegetation structure and floristics sufficient to classify vegetation according to Torres Strait vegetation communities of Stanton *et al.* (2008). Site data on vegetation structure and floristics as well as the location of weed species and cultural sites were entered into an excel spreadsheet and provided to the TSRA GIS unit for incorporation into the TSRA database and dissemination to RNTBCs. A summary of the numbers and locations of vegetation survey sites (Quaternary sites) are provided in **Figure 2** and site locations are shown in **Figures 3-10**. Vegetation site data is provided in **Appendix A** with vegetation community maps in **Appendix B.**

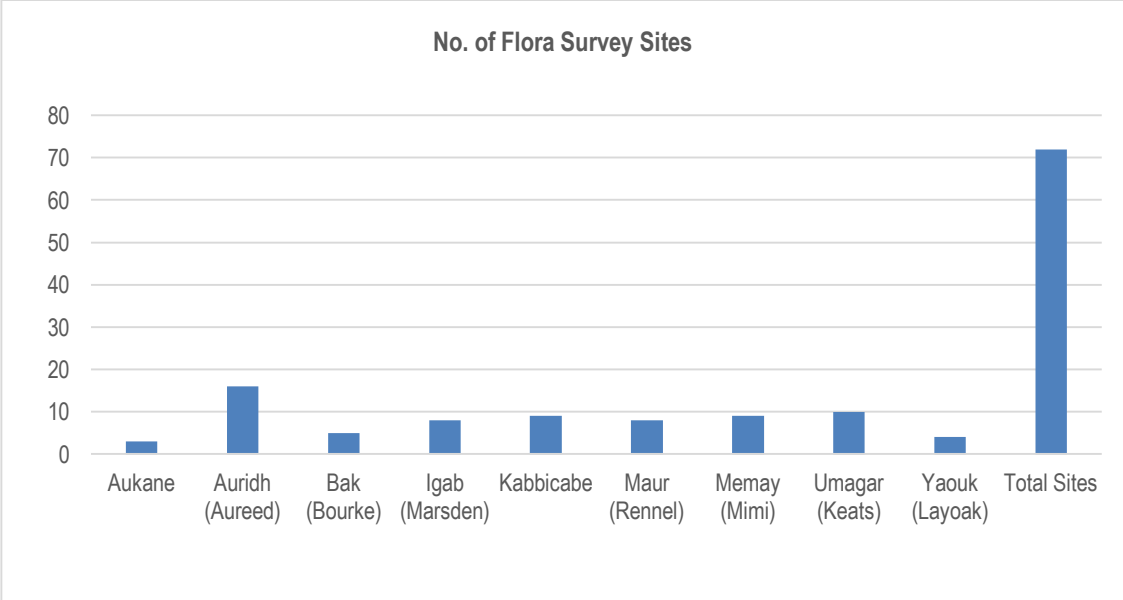


Figure 3. Number of flora sites per island

The composition of the flora (refer **Appendix C**) was accumulated from site assessments during walking traverses and shoreline observations from the tender vessel. The timing of the survey in the late dry season allowed for identification of the trees and shrubs however grasses, herbs and vines were mostly desiccated. Photographs of vegetation sites and plant species were labeled and compiled for provision to the RNTBC and into the TSRA file management system.

Flora species not identified in the field were collected, treated and imported to the mainland under AQIS Permit IP001945. Problematic taxa were identified in the laboratory with assistance from staff of the Queensland Herbarium. Vouchers specimens were lodged with the Queensland Herbarium (Brisbane) with duplicates identified for the Australian Tropical Herbarium (Cairns), (see **Appendix E)**.

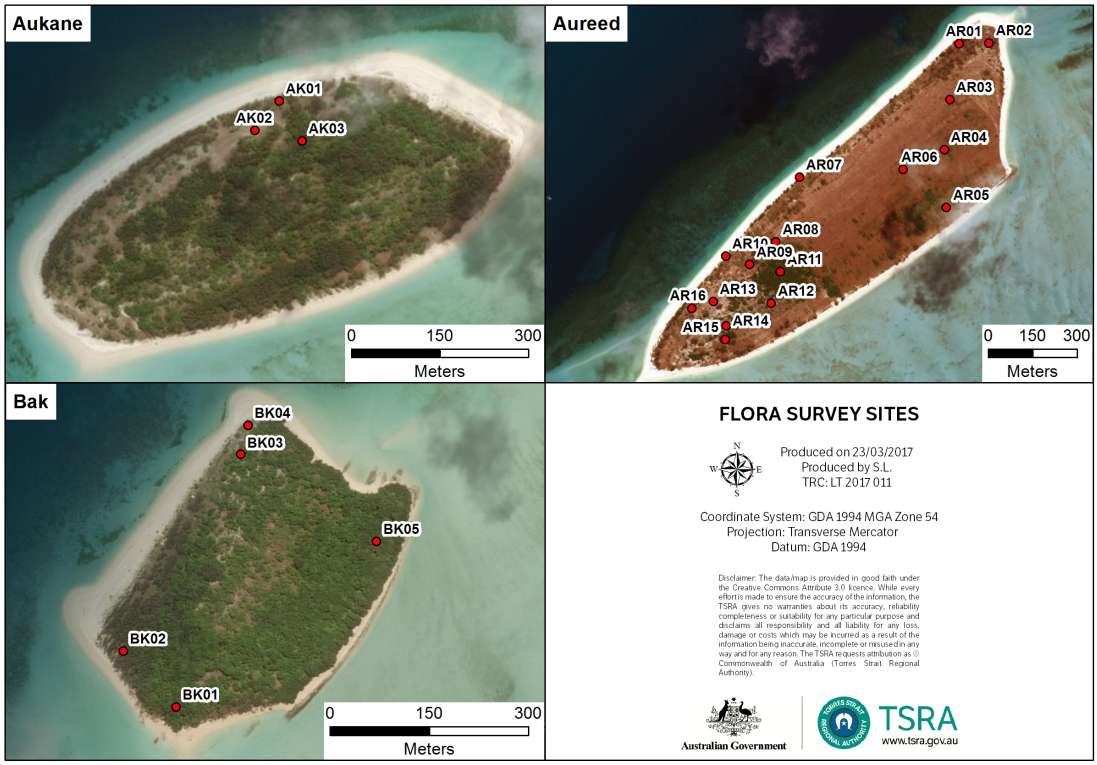


Figure 4. Flora Survey Sites - Aukane, Aureed and Bak

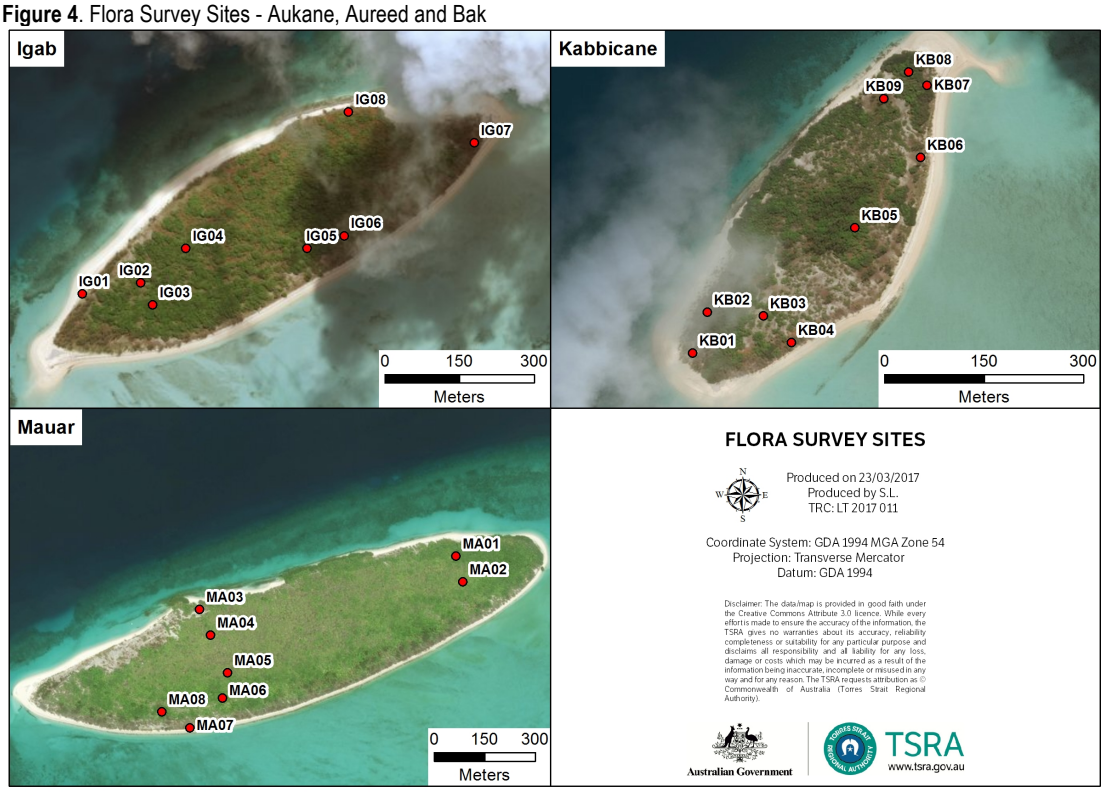


Figure 5. Flora Survey Sites - Igab, Kabbikane and Mauar

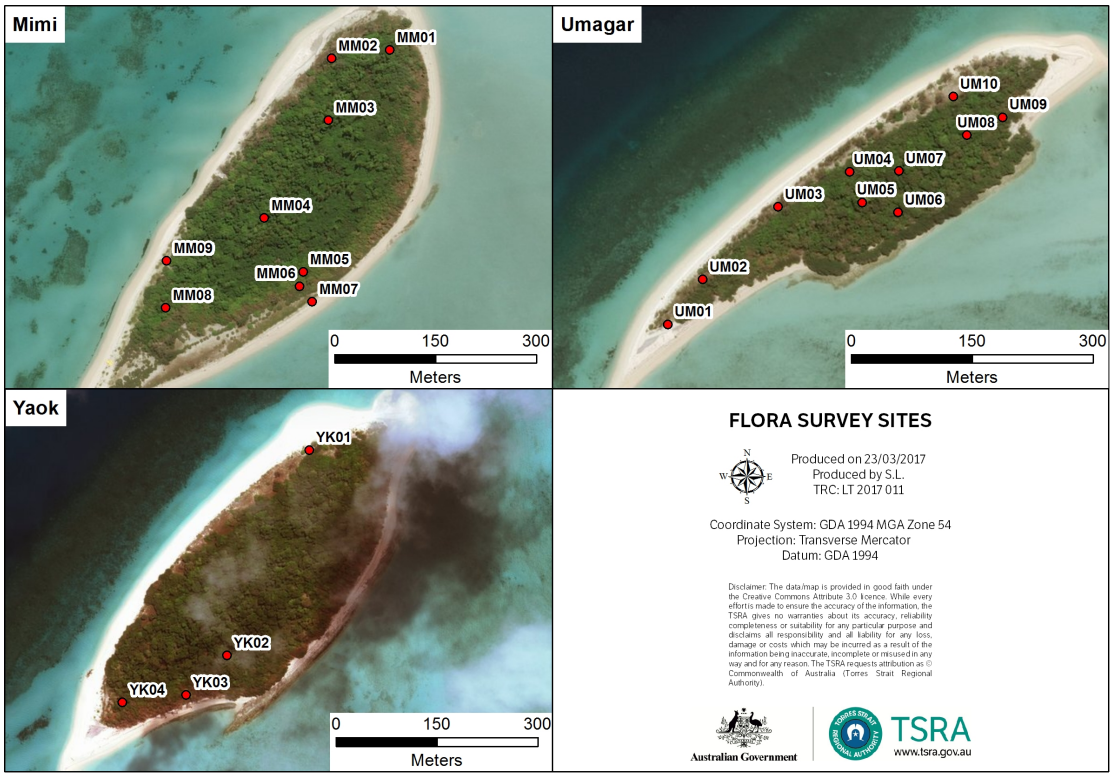


Figure 6. Flora Survey Sites Memay (Mimi), Umagar and Yauk

2.7 Fauna Methods

A desktop review of the DITSIA Wild Net (Wildlife Online) database, Online Zoological Collections of Australian Museums (OZCAM), the EPBC Online Protected Matters Search Tool, and the Atlas of Living Australia database was supported by analysis of the survey results of several TSRA Land and Sea Management surveys in the Central Island group and broader regional surveys.

A three-night trapping exercise was carried out on Aukane, Aureed, Kabbikane and Memay whilst Igab, Mauar and Umagar were subject to two nights trapping. No traps were placed on Bak or Yauk islands. This variation in survey effort was governed by logistics associated with tides and access. Active searches and relatively high trap effort (numbers of traps) were employed to mitigate this issue where possible. Weather conditions were hot, humid and dry with no rain events recorded during the survey. Elliott (box traps), a bat detector, baited motion detector cameras and cat call speakers were used to record/capture potentially occurring animals. Searches and sand padding observation were also performed throughout the day during traverses, and nocturnal (spotlighting) searches were carried out on the ground and from the tender vessels. A summary of the fauna survey effort for each island is provided in **Table 3** and site locations are shown in **Figures 7-13**.

Table 3. Summary of fauna survey effort

Island	Nights	No. Elliots set	Elliot (trap nights)	Camera (trap nights)	Anabat (nights)	Cat Call speakers	Spotlighting Nights	Diurnal Searches
Aukane	3	25	72 (3 lost)	9	0	3	1 (2 p/1.5hrs)	Yes
Aureed	3	25	75	8	3	3	0	Yes
Bak	0	0	0	0	0	0	0	Yes
Igab	2	25	50	6	0	3	0	Yes
Kebbikane	3	25	74 (1 lost)	9	0	3	0	Yes
Mauar	2	25	50	6	0	3	0	Yes
Memay	3	25	64 (11 lost)	8	0	3	0	Yes
Umagar	2	50	81 (19 lost)	12	2	6	0	Yes
Yauk	0	0	0	0	0	0	0	Yes

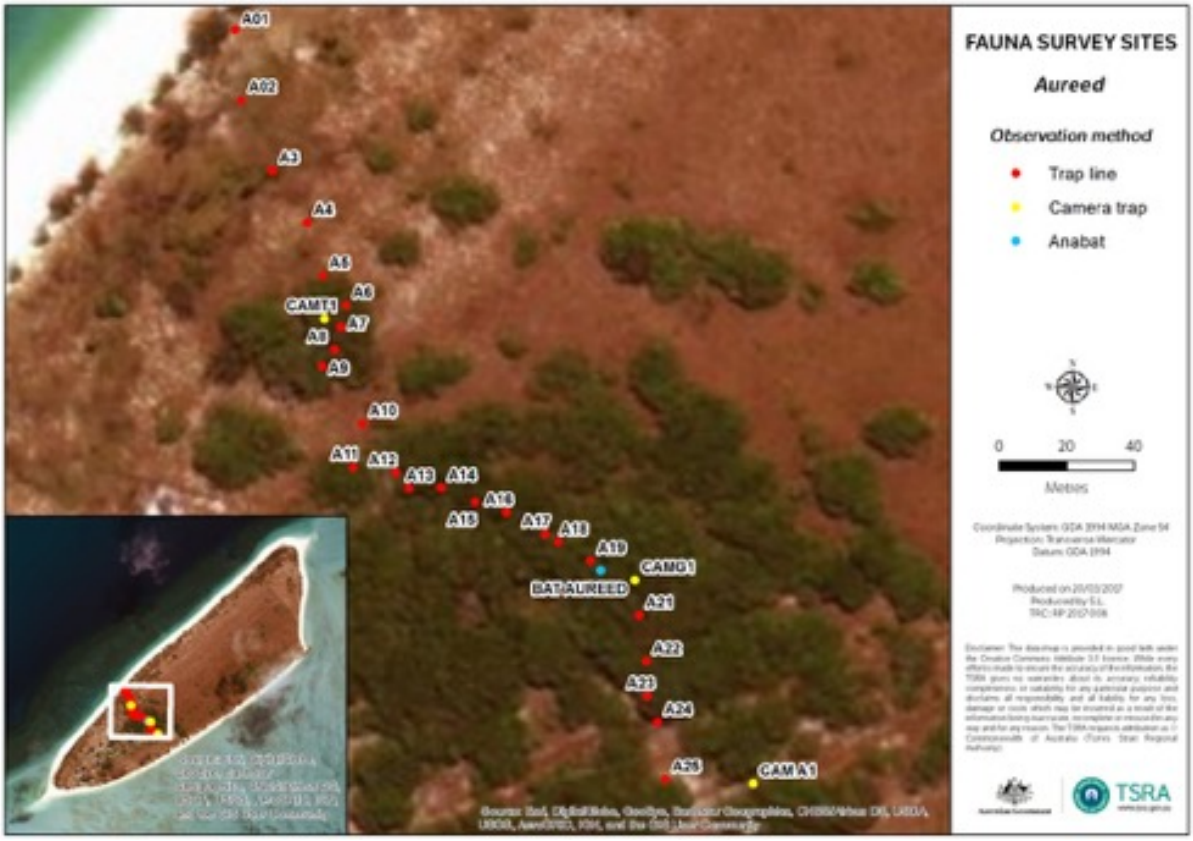


Figure 7. Fauna survey sites - Aureed

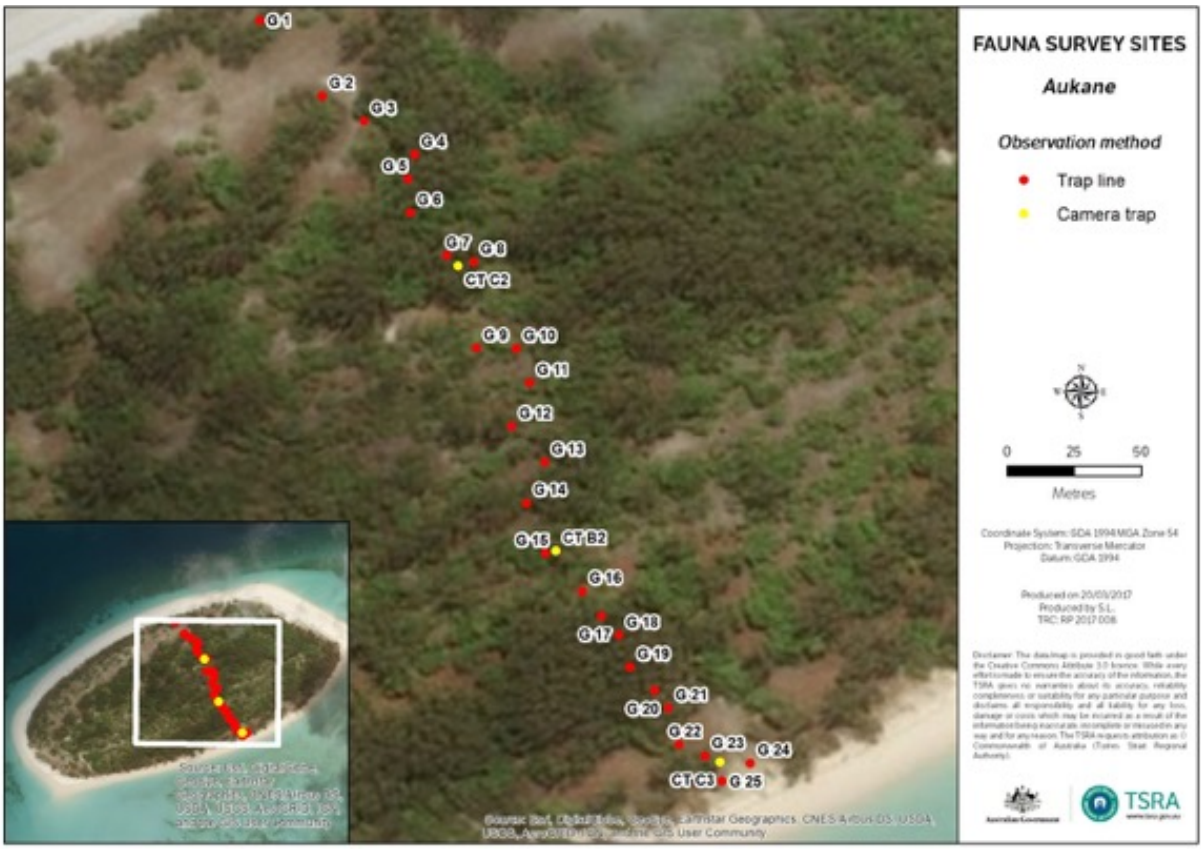


Figure 8. Fauna survey sites - Aukane

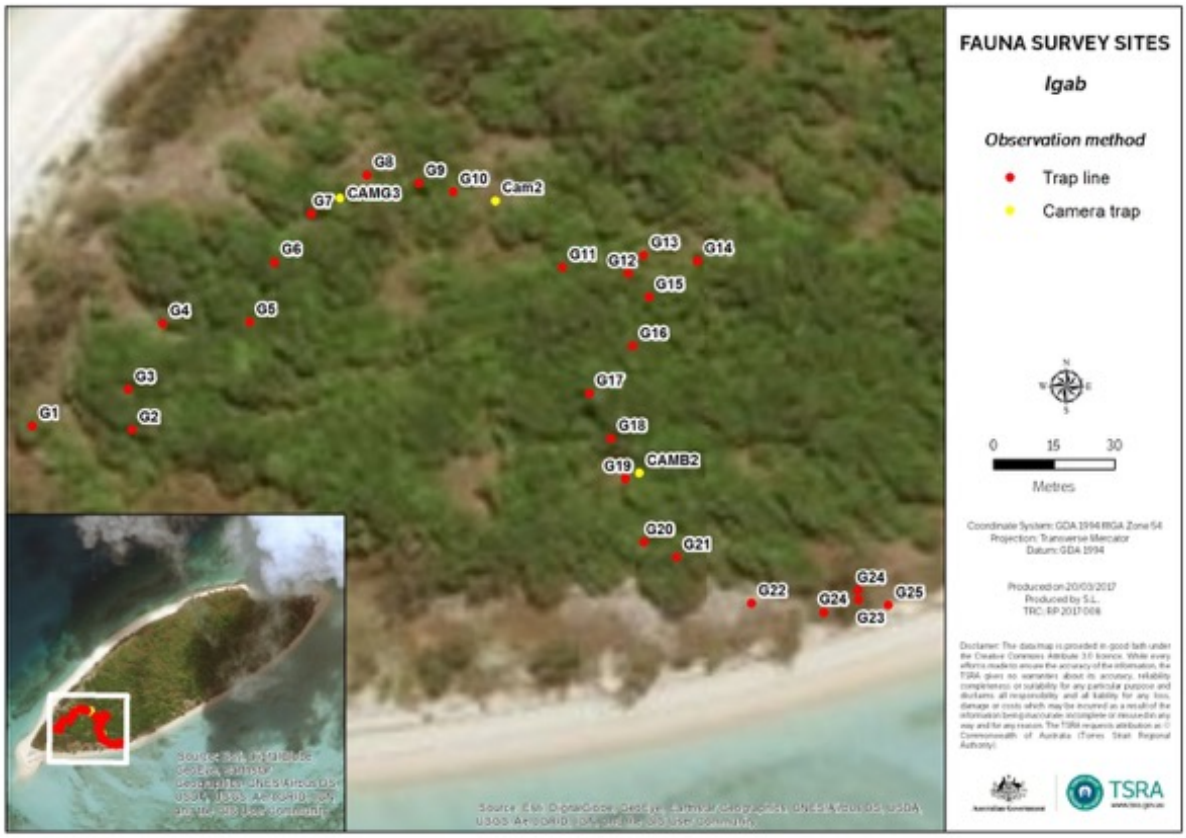


Figure 9. Fauna survey sites - Igab

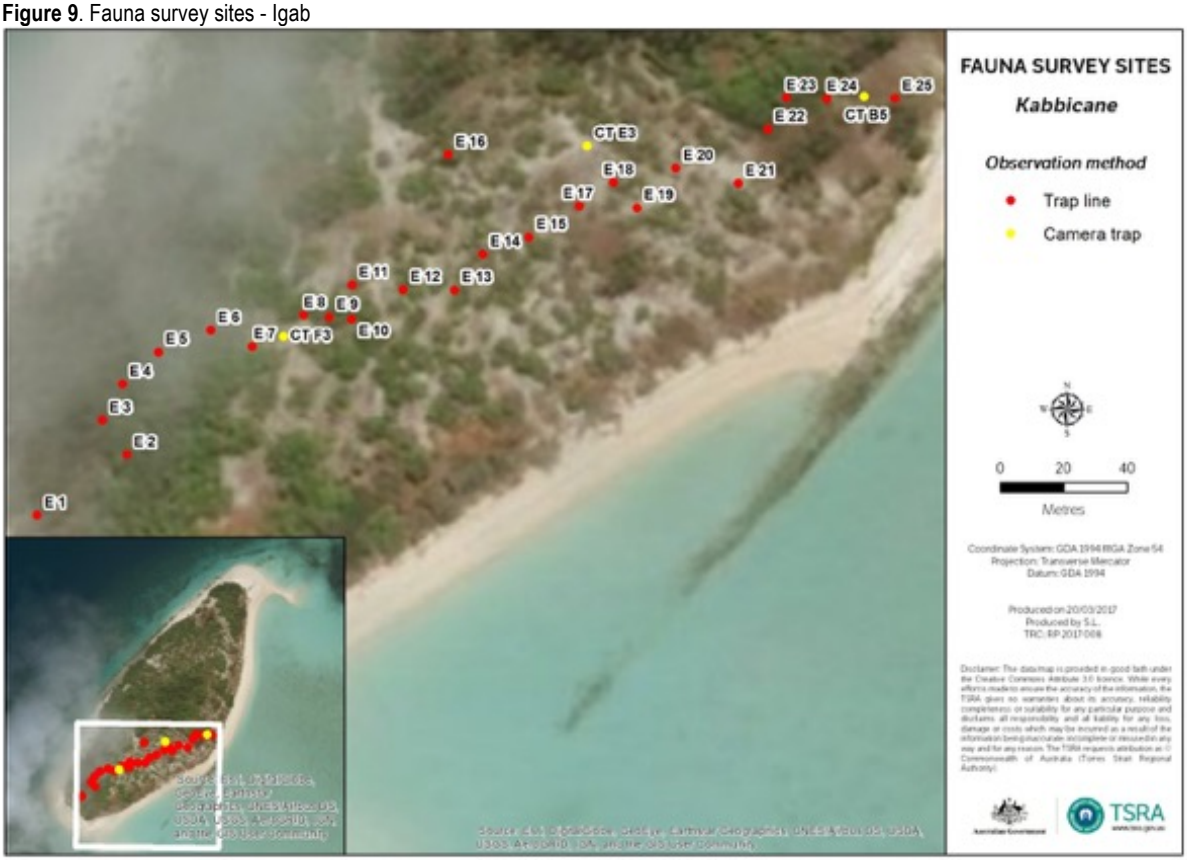


Figure 10. Fauna survey sites - Kabbikane

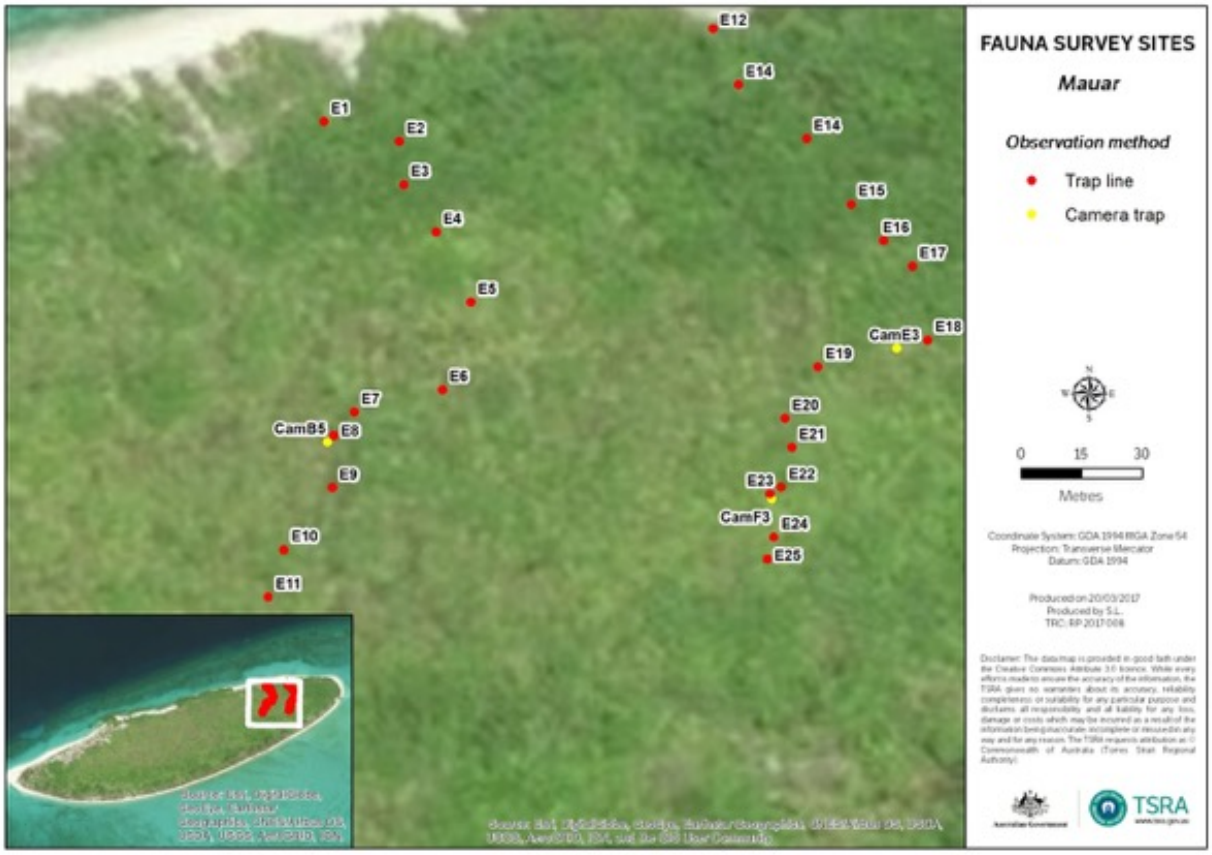


Figure 11. Fauna survey sites - Mauar

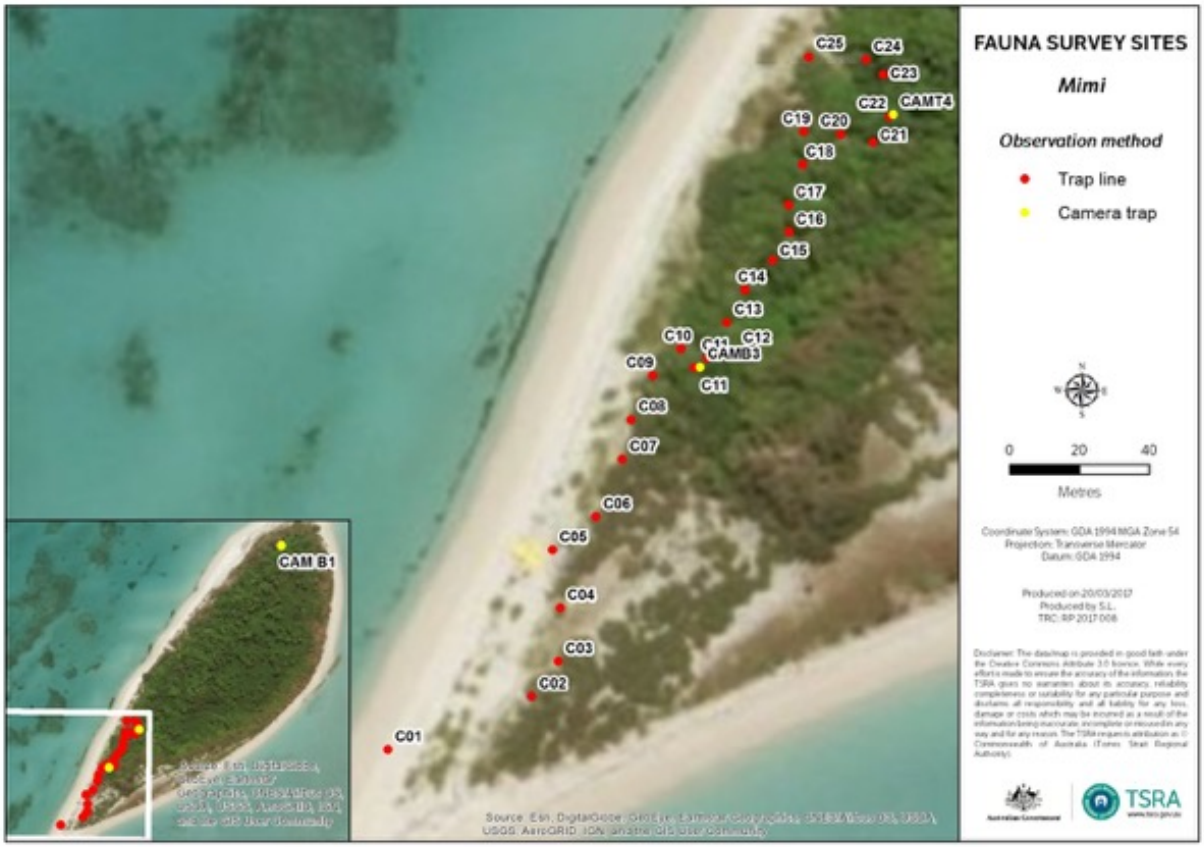


Figure 12. Fauna survey sites – Memay (Mimi)

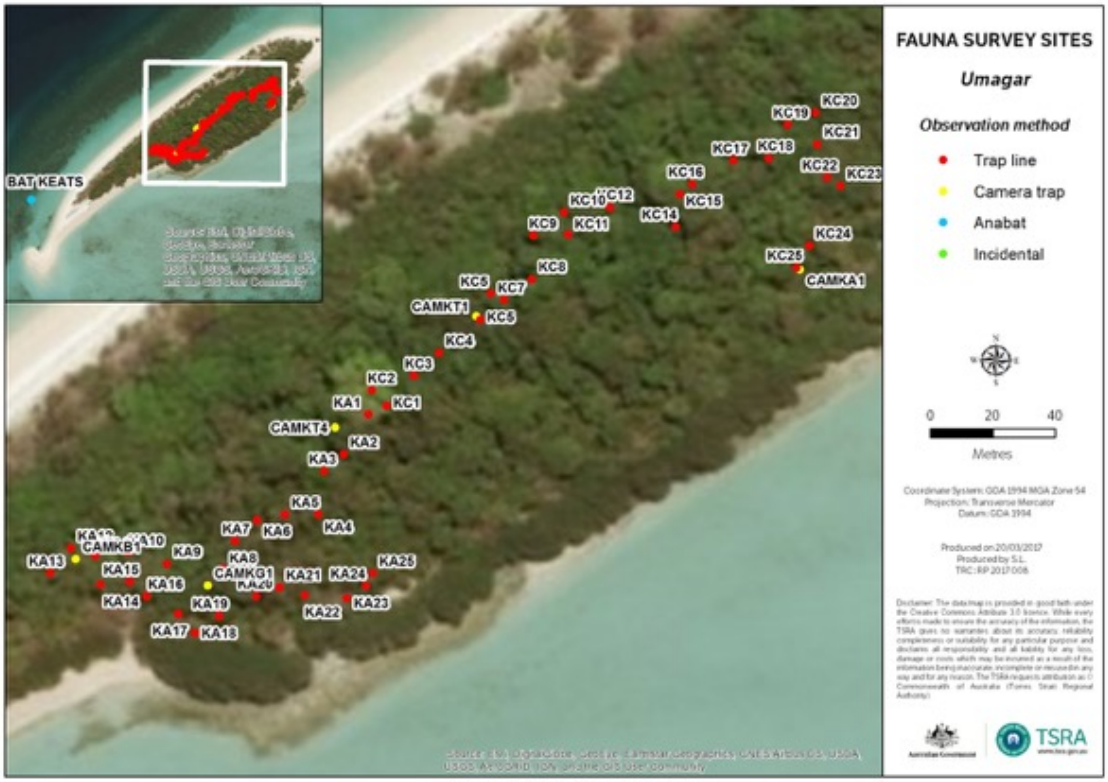


Figure 13. Fauna survey sites - Umagar

3. Regional Context

3.1 Flora and Fauna

The Torres Strait region is situated between the tip of Cape York Peninsula and the south-western coast of Papua New Guinea, and is recognised for its cultural and ecological uniqueness and diversity. The islands cover a combined land area of approximately 990 square kilometres and support a rich cultural landscape and diverse ecology. The outstanding biodiversity values include bioregional endemic types, restricted rainforests, grasslands, wetlands and mangroves (Stanton *et al.* 2008). These biotic features are evidence of the evolving and ongoing fragmentation of the biomes of northern Australia and Papua New Guinea and the influence of resource use and exploitation by Torres Strait islanders. The region supports a depauperate Australo-Papuan fauna and island size is the most effective predictor of species richness with geographically related islands support similar suites of species (Lavery *et al.* 2012). Islands provide a range of habitat depending on vegetation cover and structure although universally provide foraging resources and roosting, nesting and resting sites for birds. Shorelines and intertidal reef flats provide forage and roost habitat for birds including migratory waders.

Torres Strait accounts for approximately one third of the total ecosystem diversity present in the bioregion and this is found in a land area which is less than 0.01% to the bioregions total area (Stanton *et al*. 2008). There is a high diversity of the vegetation cover with 27 broad vegetation groups, 158 vegetation communities and 76 REs recognised for the region, 10 of which are unique to not only Torres Strait and the Cape York Peninsula Bioregion (Stanton *et al.* 2008). A diverse vascular flora with over 1 330 approximates some 40% of the species known for the Cape York Peninsula bioregion and 13% of the Queensland vascular flora (Stanton *et al*. 2008).

Baseline surveys of uninhabited islands are continuing as part of the TSRA Biodiversity Program. There are nine islands within the Central Islands IPA group ranging in size from less than 1 ha to greater than 20 ha that have been subject to previous plant and animal surveys (Watson 2012, Fell and Watson 2014). The IPA islands comprise three well-vegetated sandy coral cays (i.e. Atub, Guiya and Bara), two small sparsely vegetated sand cays (Maza Guiya and Bubui), two small unvegetated sandy cays (Miggi Maituin and Kai Maituin), one vegetated coralline shelf (Bini), and a large vegetated continental island (Ulu). Other coral cay islands which have been subject to previous assessments are Campbell, Nepean, Damud and Mazub (Bramble Cay) in the central and

east, and Warul Kawa in the far western group. The vegetation of several other uninhabited coral cay and continental islands has been mapped by Stanton *et al*. (2008) and as part of the Pulu IPA program. These include Naghir, Gebar, Waral, Widyul, Pulu, Mipa, Tudu, Zagai, Dauar, Aureed, Muri, and Wednesday Islands.

Coral cay islands support vegetation types and flora species characteristic of similar island landforms within the Torres Strait region and the northern Great Barrier Reef islands. Typical vegetation cover includes grasslands and herblands on dunes, dune shrublands, Casuarina woodlands, and vine thickets and forests. Species composition within the latter comprise a flora tolerant of seasonal water stress. Significant stands of Piner (*Pisonia grandis*) on Atub are known to be unique to the Central Islands group, and are otherwise within Torres Strait from Waral Kawa in the far northwest (Fell 2010). Cays such as Guiya and Bara support excellent representations of grasslands, shrublands and Ubar forests. Ulu (Saddle) is the only continental island in the IPA group and features steep hills formed on granitic and acid volcanic basement rocks, well developed dune formations and fringing estuarine sediments. The diversity of landscapes support several vegetation communities that are more common on larger continental islands in the Central Group such as Naghir and Gebar. These include grasslands, shrublands, deciduous and semi deciduous vine forests and thickets, and mangroves (Fell & Watson 2014).

3.2 Previous Flora and Fauna Surveys

Previous surveys on the nine islands in the study area are limited with only a few plant and animals collections or observations held within State Herbarium or in databases such as Wildnet and the Atlas of Living Australia. Flora records are limited to 18 records (13 from Aureed) and five from Memay, with only three fauna records from Umagar. Review of Draffan *et al.* (1983) reveals 34 records (23 from Aureed, 9 from Yauk and 2 from Umagar), (see **Table 4**).

Table 4. Summary of fauna survey effort

Island	Flora Records (Wildnet)	Fauna Records (Wildnet)	Bird Records (Draffan *et al.* 1983)
Aukane	0	0	0
Aureed	13	0	23
Bak	0	0	0
Igab	0	0	0
Kabbikane	0	0	0
Mauar	0	0	0
Memay	5	0	0
Umagar	0	3	2
Yauk	0	0	9

Previous vegetation mapping over the study area is limited to that of Stanton *et al.* (2008) over Aureed. Interpretation of aerial photography and observation by helicopter was used to describe four vegetation types and two REs. The vegetation communities are: 2m-Semi-deciduous notophyll vine forest + *Milletia pinnata* + *Terminalia* spp. + *Diospyros maritima* + *Manilkara kauki* + *Aglaia elaeagnoidea* + *Planchonella obovata* + *Drypetes deplanchei* +/- *Erythrin*a spp. (Dunes); 10b-*Casuarina equisetifolia* woodland and open forest +/- *Terminalia catappa* woodland and open forest (Dunes); Cl-Cleared; and Re-Regrowth.

4. Summary of Results

4.1 Vegetation and Flora

4.1.1 Summary of the Vegetation

The vegetation types recognized for the islands are summarized in **Appendix A**. The islands support 12 vegetation types within seven Broad Vegetation Groups. Most are characteristic of coral cays in the Torres Strait and northern Great Barrier Reef. The occurrence of Piner (Bird lime tree-*Pisonia grandis*) forest on Memay, Bak, Yauk and Igab islands is a significant finding of the survey. This vegetation type is rare in Torres Strait and otherwise known from Atub (in the Warraberagal and Porumagal IPA) and the Warul Kawa IPA.

Evidence of past modification to vegetation is present on all islands because of cultural traditional gardening practices and a number of the islands were settled in traditional times. Vegetation on Aureed was drastically altered in the 1870-1880s by the demands of Bech de Mer and Trepang industries. The characteristic low scrub and Wongai scrub typical of other vegetated islands in the central group has been replaced by grasslands dominated by the tall native grass (*Cenchrus brevisetosus)* and by scattered native trees and shrubs. Descriptions of each island in **Section 6** includes a summary of vegetation types, flora and fauna species and management issues.

4.2 Flora

4.2.1 Summary of the Flora

The combined flora of nine islands surveyed consists of 135 species (**Appendix C**). This represents approximately 10% of the known flora of the Torres Strait region and 35% of the known flora of all Torres Straits coral cay islands. There are 123 native species and 12 species (9% of the total flora) which are non-native. Four of these are invasive. Because surveys have only been carried out in the late dry season it is likely that additional species of herbs and vines will be recorded in the growing season during and after 'Kuki' (north-west/wet season).

Table 6. Number of Flora Species and Island Size

Aureed	Aukane	Bak	Igab	Kabbikane	Mauar	Mimi	Umagar	Yaok	Total Species
76	43	47	69	50	65	48	44	41	135

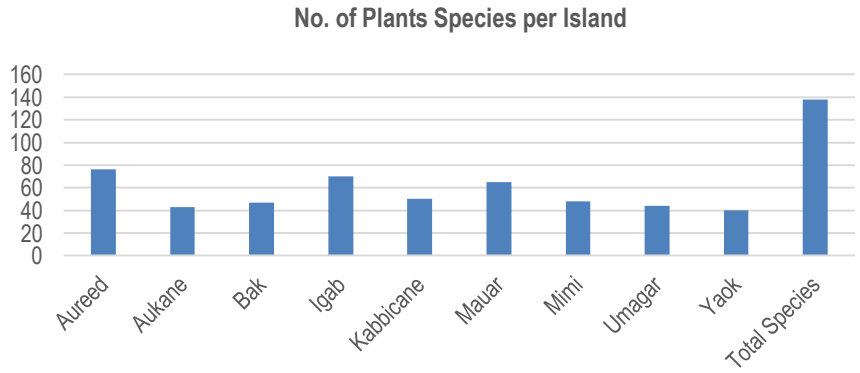


Figure 14. Number of plants recorded for each island.

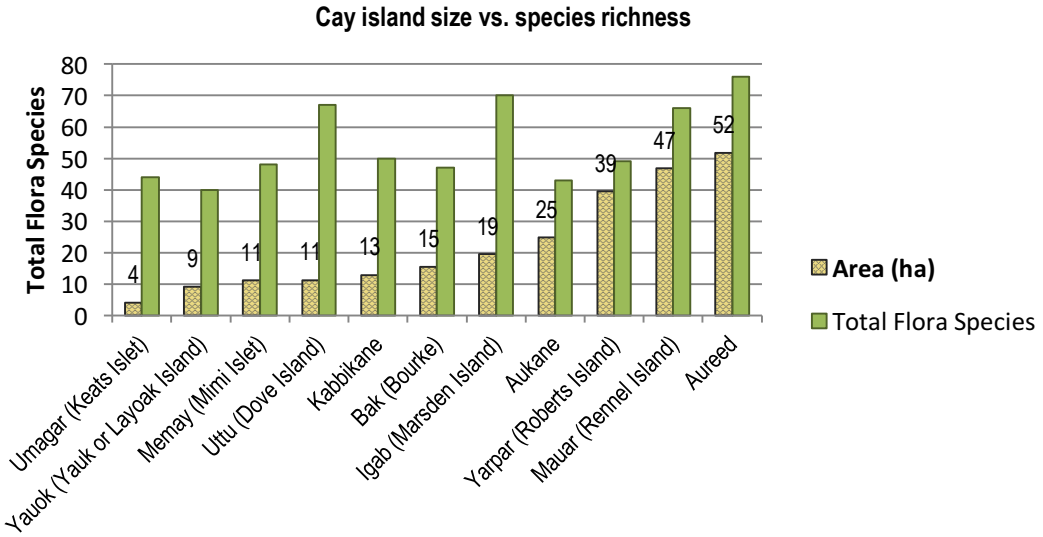


Figure 15. Island Size and species richness (includes Uttu and Yarpar).

4.2.2 Culturally Significant Plant Species

The traditional ecological plant knowledge of the islands was documented by Rangers for delivery into the Masig TEK system. Culturally significance is based upon information on usage and value provided by Traditional Owners and Rangers and through recorded usage from surrounding islands in the Central Islands group. This process derived 72 useful species of a combined island flora of total of 135 plant species. The 52% of the flora which has cultural significance is evidence of the robust extent of traditional plant knowledge held by Traditional Owners. A summary of the plants and broad use categories is provided in **Appendix D**.

4.2.3 Conservation Significant Species

No flora listed as threatened under the Commonwealth EPBC Act 1999 or the schedules of the NCA Act 1992 were recorded. Two plants that are considered Locally and Regionally Significant were recorded.

***Tephrosia* sp. (Muddy Bay P.I. Forster+PIF15313)** is an undescribed species found on Aureed, Mauar and Igab. It is a small woody plant that grows in grasslands often between low thickets of native vegetation. It was first collected from Muddy Bay north of Bamaga and has also been recorded from Tudu island by Barbara Waterhouse. The only other area it has been recorded from is in the Northern Territory. The plant was also recorded on Uttu and Yarpar. Species within the Tephrosia genus have been used for fish poisons in other areas of northern Australia and it is possible that the undescribed one was also traditionally used. Further surveys on small coral cays in the Central islands are important to understand the distribution of this species. Dried specimens of flowers and fruits will also be valuable to allow taxonomists to describe this species and name it according to western scientific terminology.

Piner – Bird Lime Tree (*Pisonia grandis*): *Pisonia grandis is* a large-leafed woody shrub or tree is found almost exclusively on Indo-Pacific islands. The occurrence of the Piner (*Pisonia grandis*) on Bak, Memay and Yauk represents part of its disjunct distribution within Torres Strait and Australian territory. Within Torres Strait, well developed *Pisonia grandis* forests were previously known from Masig (Walker 1991; 3D Environmental, 2013a), Warul Kara (Deliverance Is.) (Fell 2012a) and on Atub (Dugong Is.) (Fell & Watson, 2014). There is also an historic report of Pisonia trees from Gaibui (Arden Island) by MacGillivray (1852) that have been discounted by Walker (1991). A report of a single tree from Utu (Dove Island) by Walker has also been discounted by this survey effort. Elsewhere in the Great Barrier Reef (GBR), *Pisonia grandis* has been recorded on 44 islands with most occurrences located on coral cays in the southern parts of the reef in the Capricorn-Bunker group (Walker 1991). The total distribution of Pisonia forest on GBR islands is 160 ha of which 94% is concentrated on the southern cays (Walker 1991). It is otherwise almost entirely confined, in the wild state, to small scattered and often uninhabited islands from as far east as the Tuamotu Archipelago in the Pacific, and as far west as the Mascarene Islands and Seychelles in the Indian Ocean (Airy-Shaw 1952). Pisonia forests have a biodiversity status in Qld as Critically Endangered because of several threatening processes. These include climate change, El Nino (drought) events and rising sea levels, and outbreaks of scale insects. In the Indo Pacific region, it is impacted by clearing for plantation agriculture, development, and the mining of guano (bird droppings used for fertilizer (Airy Shaw 1952). These threats and the rarity of Pisonia in Torres Strait underlies the significance of Piner within Torres Strait.

4.2.4 Introduced Species

Of a total recorded flora of 135 species there are 11 which are introduced. Of these (Medicine Grass, *Tridax procumbens*) and Urab (Coconut) and Button Grass (*Dactyloctuneum aegyptum*) are widespread and naturalized and pose no threats to biodiversity. There are eight species which are invasive.

Lantana (Lantana camara): Lantana is a declared weed and listed as Weed of National Significance (WONS). It was recorded on Igab and Mauar. Infestations were scattered throughout the islands usually in open grassy patches between vine thicket patches. Lantana plants were difficult to detect given the late dry season survey timing and all plants were deciduous. Further survey is required after the wet season to establish the extent of infestations.

Snake Weed (*Stachytarpheta jamaicensis*): This low erect perennial herb has opposite leaves, toothed margins and blue flowers on stiff spikes. It is naturalised throughout Qld where it invades disturbed

roadsides, creek lines and vine forests. Snake Weed is known to be common on Masig (3D Environmental, 2013a). It was recorded on the survey on Mauar where infestations were scattered throughout the island usually in open grassy patches between vine thicket patches. Plants were difficult to detect given the late dry season survey timing were mostly deciduous. Further survey is required after the wet season to establish the extent of infestations.

Corky Passionfruit (*Passiflora suberosa*): This slender vine was recorded from Aukane, Igab and Memay as scattered individuals in foredune and grassland/shrubland habitat. The fleshy seeds are dispersed by birds. Surveys after wet season are required to determine the extent of populations as plants were dried off at the time of survey.

Manilla Rope *(Agave sisalana):* A large patch of Manilla Rope was recorded at the eastern end of Aureed. It is a robust succulent plant, widely cultivated as a garden ornamental and which was traditionally used in the Torres Strait Islands for its natural source of fibre. It occurs in coastal areas where it has the potential to form dense impenetrable thickets which impact native regeneration. It is listed as one of the 35 most troublesome weed species in the state (Queensland Government 2012).

Mint weed (*Hyptis suaveolens*): Mint weed is a perennial herb to 1 m high which is now widely naturalised across northern Australia. It is common on inhabited islands such as Masig throughout disturbed areas. A small patch of Mint weed was recorded on Mauar. Infestations were difficult to detect and were located at one site on the island in open grassy patches between vine thicket patches. Further survey is required after the wet season to establish the extent of infestations.

Painted Spurge (*Euphorbia cyanophora* and *E. heterophylla*): A few scattered individuals were recorded in foredune habitat on Kabbkane and Igab. It is an introduced weed originally from tropical America which is naturalised in Queensland and NSW. It is widespread throughout Torres Strait in particular on sand dunes and coral cays and has the potential to invade dune habitats.

Townsville Stylo (*Stylosanthes hamata*): A small patch of Mint weed was recorded on Mauar. It is a perennial herb to 1 m high which was introduced as a pasture species in northern Australia and now widely naturalised. Stylo is common on Masig occurring throughout disturbed areas.

Photograph 1. Infestation of Snake Weed on Mauar.

Photograph 2. Deciduous infestation of Lantana on Igab.

Photograph 3. Corky Passionfruit on Igab

Photograph 4. Deciduous Lantana on Mauar

Photograph 5. Manilla rope on Aureed

Photograph 6. Young plants of Manilla rope on Aureed

5. FAUNA

Recent TSRA led surveys and associated data reviews have significantly improved the baseline information about the terrestrial vertebrate fauna of the Torres Strait including the fauna of remote uninhabited islands. The lack of knowledge of the fauna of the islands surveyed however is demonstrated by the fact that 10 of the 62 species were not documented prior to the November 2016 survey. No terrestrial reptile and mammal species had previously been documented.

The results of the data base reviews and the rapid field assessments have identified 62 fauna species for the nine islands (**Appendix F**). There are 53 bird species, six reptiles and one mammal. None of the animals reported are introduced. Nesting activity of two species of Hawksbill and Green turtles were recorded on all islands. The islands fauna assemblage can be compared with the 384 terrestrial fauna species that have been reported for the broader Torres Strait Island group (3D Environmental 2013a).

The major value of the island habitats is as a foraging resource, and a roosting and nesting site for birds. Of the 62 fauna species recorded 53 (85%) are birds, many of which are transient or migratory species. The habitats present are providing resources for both insectivorous and frugivorous bird species. Littoral margins of the islands

provide a temporary stop-over for 21 migratory species and together with intertidal reef flats offer an important habitat for a number of waders and terns including the Little Tern, Eastern Curlew and Beach Stone-Curlew. Forested islands with Piner stands also provide nesting habitat for Black Noddy and White Breasted Sea Eagle.

A very significant population of Makas (*Melomys burtoni*) was found on Umagar (**Photograph 102)**. Trapping success was phenomenal with 74 Makas captured in Elliot traps (37 each night from 49 traps set). One species of Moegay (skink) (see **Photograph 23**) remains unidentified. Identification by photographs sent to three specialists were inconclusive with advice received that a voucher specimen would be required to achieve an accurate identification (I. Gynther pers. comm. February 2017). That all three specialists had different views on the identity of the skink suggests that the species is worthy of further investigation.

Aureed has a highly-modified habitat where remnant vegetation is restricted to a small patch of closed forest and areas of grassland/shrubland fringing the margins of the island and patches of regrowth shrubland dominated by native species. However, the documented fauna species assemblage is larger than the other islands surveyed. It is possible that the larger size of Aureed and the addition of Wildnet records to the fauna list are a factor here and further surveys are likely to increase the number of birds species on other islands. A summary of conservation significant fauna is provided in **Tables 9** and **10.** Fauna habitats and species assemblages have been further summarised in **Section 6**.

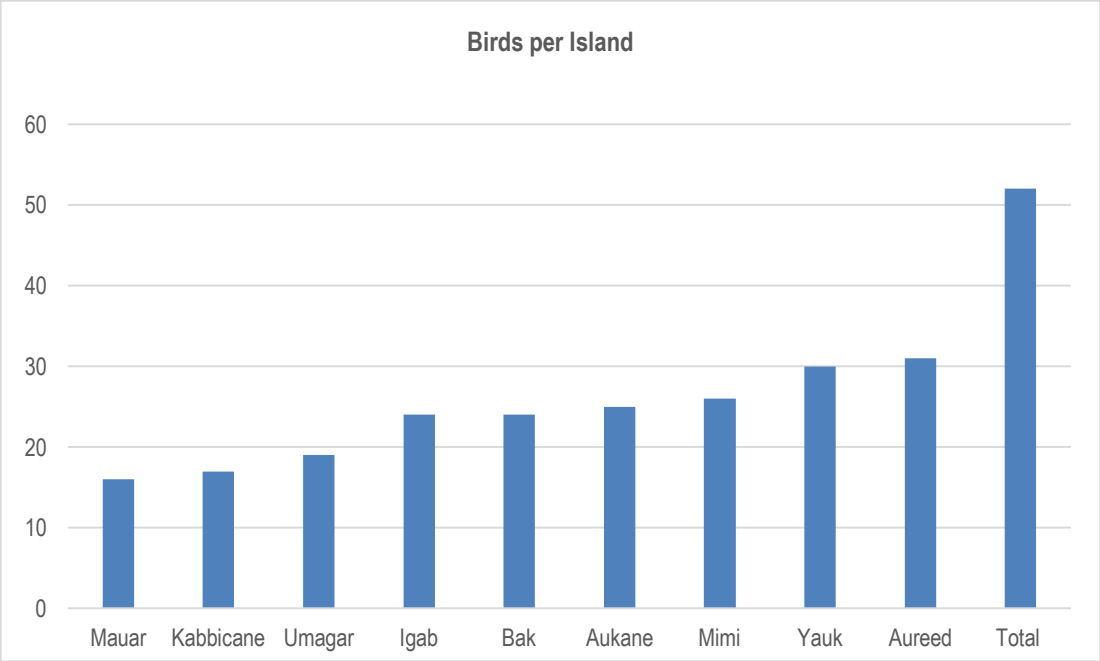


Figure 16. Number of birds per island

5.1 Animals of Cultural Significance

Traditional knowledge was recorded by Rangers during unstructured discussions with Mr John Morris and information was collated within the Masig TEK system. Discussions covered a range of topics such as the names of animals, seasonal indicators and behavior of certain animals.

The region's birds, mammals and reptiles have cultural significance for Torres Strait Islanders and many feature in local myths, legends, and as clan totems (augadh). The calls of some birds are recognized as omens, foretelling events such as weather, the arrival of a ship or the death of a relative (e.g. Haddon 1908:260-261), others are 'calendar species' which alert people to the fact that a particular food resource is now available.

5.2 Animals of Conservation Significance

5.2.1 Endangered, Vulnerable and Near Threatened Species

A total of five species of conservation significance (threatened species) at either State or Federal level are now known for the island (see **Table 7**). There are 21 migratory species which have significance at Federal level and under National and International conventions and the EPBC Act 1999 (see **Table 9** and **Appendix F).**

Table 9. Summary of Endangered, Vulnerable and Near-Threatened fauna species[1]

Common Name	Species Name	Status[2]		Habitat	Aureed	Aukane	Bak	Igab	Kabbikane	Mauar	Memay	Umagar	Yauk
		EPBC Act	NCA Act										
Beach Stone Curlew	*Esacus magnirostris*	-	V	Shoreline and intertidal zones	X	X	X	X	X	X	X	X	X
Eastern Curlew	*Numenius madagascariensis*	CE	V	Shorelines and intertidal zones		X		X			X		
Greater Sand Plover	*Charadrius leschenaultia*	V, Migr.	LC	Shoreline and intertidal.	X	X	X	X	X	X	X	X	X
Lesser Sand Plover	*Charadrius mongolus*	E, Migr.	LC	Shoreline and intertidal.	X								
Little Tern	*Sternula albifrons*	Migr.	E	Shoreline and intertidal.				X		X			X

Table 10. Summary of Migratory Birds

Species	Species Name	Language Name	Aureed	Aukane	Bak	Igab	Kabbikane	Mauar	Memay	Umagar	Yauk
Pacific Golden Plover	*Pluvialis fulva*	sui	1X	1		1		1	1	1	1
Grey Plover	*Pluvialis squatarola*	sui	1						1		
Lesser Sand Plover	*Charadrius mongolus*	sui	X								
Greater Sand Plover	*Charadrius leschenaultii*	sui	1	1	1	1	1	1	1	1	1
Bar-tailed Godwit	*Limosa lapponica*	kay kalu	1X	1		1		1	1		1
Whimbrel	*Numenius phaeopus*	kay kalu	1X	1		1	1	1	1	1	1X
Eastern Curlew	*Numenius madagascariensis*	kay kalu	1X	1		1			1		
Grey-tailed Tattler	*Tringa brevipes*	kalu	1X	1	1	1		1	1		
Common Greenshank	*Tringa nebularia*	kalu	1		1	1	1		1		1
Eastern Reef Egret	*Egretta sacra*	kunai	1X	1	1	1	1	1	1	1X	1X
Eastern Osprey	*Pandion cristatus*	kuya	1	1							

[1] Listed as Endangered, Vulnerable, Near-Threatened or Migratory under the EPBC Act 1999 and/or the NC Act 1992 or of critical or high priority under the Back on Track prioritisation framework (DERM 2011a).
[2] Status: E = Endangered, V = Vulnerable, NT = Near-Threatened, M = Migratory, LC = Least Concern (Common).

Species	Species Name	Language Name	Aureed	Aukane	Bak	Igab	Kabbikane	Mauar	Memay	Umagar	Yauk
White-bellied Sea-Eagle	*Haliaeetus leucogaster*	kuzi	1		1	1	1		1	1	1X
Ruddy Turnstone	*Arenaria interpres*	sui	1X			1	1		1		1
Red-necked Stint	*Calidris ruficollis*	sui	X								
Common Noddy	*Anous stolidus*	dua			1						
Bridled Tern	*Onychoprion anaethetus*	sara	1X	1	1		1		1	1	1X
Little Tern	*Sternula albifrons*	silaw				1		1			1
Roseate Tern	*Sterna dougallii*	silaw				1					
Black-naped Tern	*Sterna sumatrana*	silaw	1X	1	1	1	1	1	1	1	1X
Rufous Fantail	*Rhipidura rufifrons*	kupgig			1						1
Spectacled Monarch	*Symposiarchus trivirgatus*	sisari		1							1
			16	11	9	13	8	8	13	7	13

Photograph 7. TSRA Rangers David Baragud (Iama), Laura Pearson (Warraber) and Freddy David (Poruma) in 'Kuki' departing to island survey. MV Flying Fish V in background.

6. Island Descriptions

6.1 Aureed

6.1.1 General Description

Aureed is a low elongated sandy island of 51.8 ha in area and is the largest island surveyed in the group. It is located 25 km SSW of Masig and approximately 136 km NE of Thursday Island. Historical accounts from Traditional Owners and Shnukal (2004) provide evidence that the vegetation of Aureed has been modified from its natural state. Shnukal (2004) refers to the arrival of the bech de mer and trochus industry in the 1870's which effectively deforested Aureed, Utu and Yarpar; "*The amount of wood needed to cure the trepang and boil the trochus shell deforested Uthu, Yarpar and Aureed and people left those islands*" (Teske, 1991: 3, in Shnukal 2004: 329). Vegetation which represents the original forest cover is restricted to a small patch of Ubar forest and grassland and herblands of the foredunes. The remainder has been modified by man with patches of low thickets

and shrublands which are regenerating. The island has also been subject to periodic high intensity fires which have heavily impacted regeneration. It is therefore considered to be in a stable but degraded condition in terms of its vegetation cover and condition.

Photograph 8. Large areas of grassland with patches of low forest and thicket (Photo D. Stanton Nov 2007).

6.1.2 *Vegetation and Flora*

Anthropogenic Grasslands

The dominant vegetation cover of the island is native grassland with scattered native shrubs occurring in low thickets and groves. The main grass is Dune Grass (*Cenchrus brevisetosus*) with *Themeda arguens* and Pacific Island Thintail (*Lepturus repens)* occurring throughout. Additional species are vines and herbs such as Grass Medicine (*Tridax procumbens**), Pulla (*Ipomoea pes-capre* subsp. *brasiliensis),* Duth *(Vigna marina)*, Ipi (*Boerhavia mutabilis*), Muzarrugh (*Cassytha pubescens*), Gasi (*Tacca leontopetaloides)* and *Evolvulus alsinoides*).

The low scattered shrubs which occur throughout sometimes in dense patches or groves are mainly Komak (*Premna serratifolia*) with Kupi (*Flueggia virosa* subsp. *melanthesioides*), Bik (*Breynia oblongifolia)* and *Bridelia tomentosa*). These grasslands have infestations of Manilla Rope (*Agave sisalana*) located at the eastern end of the island with scattered Erab (*Cocos nucifera*) along the coastal fringe. The island was very dry at the time of the survey and additional herbs are likely to be present.

Photograph 9. Dense dry grassland at Site AR06 with regenerating shrubs of Komak. (photo DF).

Photograph 10. Sparse grassland vegetation cover with stump in foreground showing evidence of past burning (photo DF).

Grasslands and Herblands

Sparse herbland and grassland occurs on newly formed fore dunes of the island margins. characteristic species are Gurrawad (*Sesuvium portulacastrum*), Pulla, Pacific Island Thintail, Grass Medicine, It Marrh/Susul Pui (*Euphorbia pallens*), with occasional scattered shrubs to 1m of Dell (*Scaevola taccada*). This vegetation forms a complex with Gaibui (Casuarina) woodlands and Komak shrublands.

Photograph 11. Foredune vegetation with trailing stems of Pulla and Gaibui and Erab in background (photo DF).

Photograph 12. Typical shoreline with thin band of grassland and herbland with Gaibui woodlands (photo DF)

Gaibui (Casuarina) woodlands

Open woodland of Gaibui (*Casuarina equisetifolia* var*. incana*) occurs on the margins of the island and is often associated with scattered Erab and regenerating shrubs of Komak and Casuarina saplings in the understorey (**Photograph x**). Trees range from between 4-12m in height. The groundcover is dominated by grasses and sedges such as *Spinifex longifolius, Thurrea involuta,* Dune Grass. Pacific Island Thintail, *Bulbostylis barbarta* and *Cyperus tetracuspis* with herbs and vines of Pulla, Muzarrugh, Marrh/Susul Pui, *Mukia maderaspatata*, Puti (*Josephinia imperatricis*), Spider Flower (*Cleome viscosa)*, Medicine Grass and *Rynchosia minima* var*. australis.* There is evidence that the vegetation has been disturbed by fire with dead trunks and some fire scars (**Photograph 15**).

Small areas of Gaibui woodland to 8-12m in height also may occur over a dense subcanopy and understorey of Ubar (*Manilkara kauki*), *Cyclophyllum maritimum*, Naiwa (*Erythrina insularis*), Kubil Gim (*Diospyros maritima*), Api (*Micromelum minutum*), Usarkun (*Aglaia eleagnoidea*), Kurad (*Eugenia reinwardtiana*), Komak, Pitader (*Gymnosporia inermis*) and Thinicupu (*Abrus precatorius*) (**Photograph 14**).

Photograph 13. Gaibui (Casuarina) woodland fringing northern shoreline (photo D. Stanton Nov 2007).

Photograph 14. Gaibui (Casuarina) woodland with understorey (photo DF).

Photograph 15. Degraded example of Gaibui (Casuarina) woodland with evidence of impacts from fire (photo DF).

Photograph 16. Regenerating Gaibui *(*Casuarina) in heavily disturbed woodlands (photo DF).

Regenerating Shrubland and Thicket

Irregular clumps of shrubland 1-4m in height are scattered throughout open areas and are often surrounded by areas of grassland and bare sand. These are regenerating after disturbance and consist of often multi-stemmed shrubs and small trees. Typical species are Ubar (*Manilkara kauki*), Kubil Gim (*Diospyros maritima*), Coast Canthium (*Cyclophyllum maritimum)*, Ak (*Drypetes deplanchei*), Komak (*Premna serratifolia*), Pitader (*Gymnosporia inermis*), Auboi (*Morinda citrifolia*), Ebaith (*Planchonella obovata*), Gnib Gnib (*Smilax australis*), Mipa (*Terminalia muelleri*), Kurad (*Eugenia reinwardtiana*), Bodo (*Guettarda speciosa*), Szar Szar (*Ficus opposita*), Usarkun (*Aglaia eleagnoidea*), *Celtis paniculata* and Api (*Micromelum minutum*). Better developed thicket marginal to remnant forest is dominated by Wapada (*Bombax ceiba)* with Ebaith, Wana (*Thespesia populnioides*) and Bibi (*Macaranga tanarius*), (**Photographs 17 and 18**).

Photograph 17. Regenerating shrubland of Bibi (Macaranga)

Photograph 18. Regenerating Wapada (Bombax) tree

Photograph 19. Patches of low shrubland with interspersed grasses (photo DF).

Photograph 20. Typical mosaic of grassland and low shrubland (photo DF).

Low closed Ubar (Wongai) forest

There is only a small patch of this forest located in the south west of the island. It is thought to best represent the original forest type of Aureed. This is a low closed forest (6-10m) dominated by Ubar with Naiwa, Ebaith, Usarkun, Kubi (*Diospyros compacta*), *Celtis paniculata*, Ak, Kubil Gim, Mipa, Bodo, and Mukmai (*Cordia subcordata*). The understorey comprises similar species with the addition of Api, Uoi Doi (*Capparis sepiaria*), Boman (*Polyscias macgillivraei*), Kurad, Tait Pat (*Cansjera leptostachya*), Buzz (*Pleomele angustifolia*), Pitader, Muzarugh, Szar Szar and Kowsar (*Pandanus* sp.). The groundcover has abundant seedlings throughout (**Photographs 21 and 22**).

Photograph 21. Dense understorey of Ubar forest with the flaky trunk of Usarkun in background left (photo DF).

Photograph 22. Margin of remnant forest with adjoining grassland (photo DF).

6.1.3 *Flora Species*

There are now 76 plant species recorded on the island (refer **Appendix C**). This is composed of 73 natives (96% of total species) and three (3%) which are naturalised. The only plant considered to be invasive is Manilla Rope (*Agave sisalana*). The Aureed flora represents approximately 5% of the known flora for the Torres Strait Island group. No plant species are considered threatened and one species (*Tephrosia* sp. Muddy Bay) is significant at the regional level.

Forty plant types (52%) are locally and/or culturally significant. The main species are Gaibui, Erab, Pulla, Muzarugh, Susul Pui, Auboi, Manilla Rope, Komak, Ubar, Irrh Whirrh, Boman, Gnib Gnib, Ebaith, Boman, Medicine grass, Szar Szar, Ak, Kubi, Mipa, Pitader, Kubil Gim, Api, Buzz, Usarkun, Bodo, Kurad, Naiwa, Thinicupu and Kowsar.

6.1.4 *Fauna*

Aureed was surveyed for fauna over three days and three nights. Trap lines were concentrated in the small patch of remnant forest located in the south-western part of the island. The islands present a limited habitat diversity in comparison to vegetated islands in the central group. The most widespread habitat is grassland which covers over 80% of the island area. Strand vegetation surround the shorelines and intertidal areas occur on extensive reef flats. The small area of remnant vine forest offers a seasonal foraging resource for migratory terrestrial and resident fruit eating birds as well as roosting sites and nesting sites. Shorelines and intertidal reef flats provide forage and roost habitat for birds including migratory waders.

The results of the data base reviews and the rapid field assessment have identified 35 fauna species for Aureed (**Appendix F**). This includes four reptiles (including two species of nesting marine turtle and three Moegay - skinks) and 31 birds. No mammal species were recorded. Four of the bird species have been added to the list based on the records of Draffan *et al*. (1983).

One species of Moegay (see **Photograph 23**) is unidentified. Identification by photographs sent to three specialists were inconclusive with advice received that a voucher specimen would be required to achieve an

accurate identification. That all three specialists had different views on the identity of the skink suggests that the species is worthy of further investigation. The islands fauna assemblage can be compared with the 384 terrestrial fauna species that have been reported for the broader Torres Strait Island group (3D Environmental 2013a). None of the animals reported are introduced.

Photograph 23. Unidentified Moegay (photo DF).

Photograph 24. Robust Litter Skink (photo M. McLean).

Photograph 25. Flock of Away (Pelican) and shorebirds on the north-eastern spit of Aureed (photo DF).

6.2 Aukane

6.2.1 General Description

Aukane is a small low sandy wooded island of 24.8 ha in area. It is 0.8 km along its longest axis and 0.35 km at its widest point. It is located 12 km south of Masig Island and approximately 151 km NE of Thursday Island. The dominant vegetation cover is Gaibui (*Casuarina equisetifolia* var. *incana*) woodland with interspersed shrubland and grassland. The island is in good condition in terms of its vegetation cover.

6.2.2 *Vegetation and Flora*

Grasslands and Herblands

Small areas of sparse herbland and grassland occurs on the island margins (**Photograph 26)**. Characteristic species are Gurrawad (*Sesuvium portulacastrum*), Pulla, Pacific Island Thintail and It Marrh/Susul Pui (*Euphorbia pallens*). This vegetation forms a complex with Gaibui (Casuarina) woodlands.

Photograph 26. Limited areas of herblands and grassland with emergents such as Kowsar and Gaibui occur along the margins of the island (Photo DF).

Grasslands – Shrubland Complex

Grasslands occur within a complex of shrubland and thicket mapped as 16a. They are dominated by Pacific Island Thintail (*Lepturus repens)* and *Themeda arguens* with *Bulbostylis barbarta, Cleome viscosa, Euphorbia tannensis, Mukia maderaspatata, Evolvulus alsinoides* and *Spermacoce* sp. (Lorim Point A. Morton AM1237). They occur around scattered clumps of low shrubs 1-3m with abundant Komak (*Premna serratifolia*), and with Ebaith (*Planchonella obovata*), Auboi (*Morinda citrifolia*), Gnib Gnib (*Smilax australis*), Mipa (*Terminalia muelleri*), *Pittosporum ferrugineum, Celtis paniculata*, Ak (*Drypetes deplanchei*), Muzarugh (*Cassytha pubescens*), Kurad (*Eugenia reinwardtiana*), Api (*Micromelum minutum*), Szar Szar (*Ficus opposita*), Stinking Passionfruit (*Passiflora suberosa**), Irr Whirr (*Scolopia braunii*) and *Cyclophyllum maritimum*.

Photograph 27. Grassland at Site AK02 with shrubs of Komak and Gaibui woodland in background. (photo DF).

Photograph 28. Patches of dense shrubland on edge of Gaibui woodland (photo M. McLean).

Gaibui (Casuarina) woodlands

Woodlands dominated by Gaibui form the main vegetation cover on the island (VC10b). These extend to the shoreline where occasional Kowsar (*Pandanus spiralis*) and Erab (*Cocos nucifera*) may occur. On the margins of the island the understorey is very sparse with scattered shrubs of Murr (*Suriana maritima*), Zeger Zegar (*Caesalpinea bonduc*), *Phyllanthus novae-hollandaei*, Mipa (*Terminalia muelleri*) and Komak (*Premna serratifolia*). Groundcover is Gurrawad (Sesuvium portulacastrum), Chaff Flower (*Achyranthes aspera*), Pulla (*Ipomoea pes-capre* subsp*. brasiliensis*), Button Grass (*Dactyloctineum aegyptum*) and Cucumber vine (*Mukia maderaspatata*).

Gaibui is better developed throughout the centre of the island forming open forest between 8-15m in height. In some areas, the vine thicket understorey is well developed with species of Kubi (*Diospyros compacta*), Mipa (*Terminalia muelleri*), Ak (*Drypetes deplanchei*), Ebaith (*Planchonella obovata*), Uru (*Salacia disepala*), Irr Whirr (*Scolopia braunii*), Api (*Micromelum minutum*), *Phyllanthus novae-hollandaei, Wickstroemia indica*, Thinicupu (*Abrus precatorius*) and Auboi (*Morinda citrifolia*). The Gaibui leaves form a deep leaf litter to 5-10cm with scattered ferns of Kargh Kargh (*Microsorum grossum)*, as well as *Salsola australis*, *Spermacocce* sp. (Lorim Point) and the weedy vine Corky Passionfruit (*Passiflora suberosa**).

Photograph 29. Gaibui woodland with grassy groundcover.

Photograph 30. Gaibui woodland on foredune.

Photograph 31. Canopy of well-developed Gaibui open forest. (photo DF).

Photograph 32. Dense vine thicket understorey under Gaibui open forest with Kubil Gim in foreground. (photo DF).

6.2.3 *Flora Species*

There are 43 plant species recorded for the island (refer **Appendix C**). Forty are natives (93% of total species) and three (7%) which are naturalised. Of the three naturalised plants, Corky Passionfruit (*Passiflora suberosa*), is invasive. The Aukane flora represents approximately 3% of the known flora for the Torres Strait Island group. No plant species are threatened or regionally significant.

Twenty-one plants (49%) are locally and/or culturally significant. The main culturally significant plants are Gaibui, Urab, Pulla, Murr, Kowsar, Zegar Zegar, Mipa, Gurrawad, Mukmai, Murr, Susul pui, Komak, Ebaith, Auboi, Ak, Muzarugh, Kurad, Api, Szar Szar and Irrh Whir.

6.2.4 *Fauna*

The results of the data base reviews and the rapid field assessment have identified 29 fauna species for Aukane (**Appendix F**). This includes three reptiles (Moegay – *Carlia sexdentata*) and two nesting sea turtles (Hawksbill and Green Turtle), and 25 birds. No mammal species were recorded. The islands fauna assemblage can be compared with the 384 terrestrial fauna species that have been reported for the broader Torres Strait Island group (3D Environmental 2013a). None of the animals reported are introduced.

6.3 Bak

6.3.1 General Description

Bak is a small low sandy forested island of 15.4 ha in area. It is oblong in shape and 0.5 km long and 0.35 km at its widest point. It is located 18 km south south east of Masig Island and approximately 159 km NE of Thursday Island. The island supports areas of dense closed forest with stands of Piner (*Pisonia grandis*), Gaibui (*Casuarina equisetifolia* var. *incana*) woodland, Low closed shrubland of Murr (*Pemphis acidula*), mixed shrubland/thicket/grassland complex and herbland/grassland. The island is in excellent condition state in terms of its vegetation cover.

6.3.2 *Vegetation and Flora*

Grasslands and Herblands

Small areas of herbland occur on exposed frontal dune with occasional low shrubs <1m of Murr (*Suriana maritima*), Pitader (*Ximenia americana*), Zeger Zeger (*Caesalpinia bonduc*), Guraguir (*Colubrina asiatica*) and Mukmai (*Cordia subcordata*). Herbs of Puti (*Josephinia imperatricis* and *Tribulus cistoides*), Gurrawad (*Sesuvium portulacastrum*), Susul Pui (*Euphorbia tannensis*), *Vitex* sp., *Salsola australis, Thurrea involuta* and Muzarugh **(Photograph 33 & 34).**

Photograph 33. Herbland and Grassland with scattered shrubs at Site BK04 (photo DF).

Photograph 34. Shrub of Mukmai in foreground in Herbland and Grassland, Site BK04 (photo DF).

Grassland – Shrubland Complex

Grasslands within a complex of shrubland and thicket occur in the centre of the island and are mapped as 16a. The open shrubland or thicket (2-4m) has bare sand areas throughout and dominated by Pulla (*Ipomoea pes capre* subsp. *brasiliensis*). Thicket patches with Ubar (*Manilkara kauki*), Ebaith (*Planchonella obovata*), Kubil Gim (*Diospyros maritima*), Mipa (*Terminalia muelleri*), Komak (*Premna serratifolia*), Kurad (*Eugenia reinwardtiana*), Ak (*Drypetes deplanchei*), Api (*Micromelum minutum*), Kubi (*Diospyros compacta*), Auboi (*Morinda citrifolia*), Pitader (*Gymnosporia inermis* and *Ximenia americana*) and Thinicupu (*Abrus precatorius*).

Gaibui (Casuarina) woodlands

The south-western side of the island supports woodlands dominated by Gaibui. Low open forest (7-9m) of is dominated by Gaibui with a sparse understorey of Murr (*Suriana maritima*), Gabul Rus (*Sophora tomentosa*), Auboi (*Morinda ctrifolia*), Zeger Zeger (*Caesalpinia bonduc*), Mukmai (*Cordia subcordata*), Gabul Dell (*Argusia argentea*) and Dell (*Scaevola taccada*). The groundcover is sparse of Pulla (*Ipomoea pes capre* subsp. *brasiliensis*), with Medicine Grass (*Tridax procumbens**), Beach Bean (*Canavalia rosea*) and Chaff Flower (*Achyranthes aspera*).

Photograph 35. Gaibui woodland, Site BK02 (photo DF).

Photograph 36. Canopy of Gaibui, Site BK02 (photo DF).

Closed Forest

Closed littoral vine forest on the island is well developed and widespread on Bak. The canopy is 8-12m in height and dominated by Ubar (*Manilkara kauki*) with Mipa (*Terminalia muelleri*), Ebaith (*Planchonella obovata)* and *Celtis paniculata*. A subcanopy of Mukmai (*Cordia subcordata*), Ak (*Drypetes deplanchei*), Kubil Gim (*Diospyros maritima*), Bodo (*Guettarda speciosa*) and Uru (*Salacia disepala*) occurs over a dense understorey of Kurad (*Eugenia reinwardtiana*), Makamai (*Cordia subcordata*), Api (*Micromelum minutum*), Ak, Ubar, Usarkun (*Aglaia eleagnoidea*), Gnib Gnib (Smilax australis), Uoi Boi (*Capparis lucida*), Crawling Buzz (*Flagellaria indica*), Kubi (*Diospyros compacta*) and Muzarugh (*Cassytha pubescens*). The groundcover has dense leaf litter with abundant seedlings of Usarkun and Kubil Gim. Very well developed examples of closed forest 12-16m in height are also dominated by Ubar but feature Naiwa (*Erythrina insularis*) with Piner (*Pisonia grandis*) and Mukmai in the canopy.

Photograph 37. Trunk of Mipa in closed forest Site BK01.

Photograph 38. Deciduous crown of Mipa, Site BK01.

Photograph 39. Piner forest on Bak. Trunk on left is Piner with characteristic coppice shoots from base (photo DF).

Photograph 40. Well-developed closed forest impacted by coastal erosion on south western shoreline (photo DF).

Murr (Pemphis) Shrubland

Stands of Murr (*Pemphis acidula*) occur along the south eastern and northern coastlines of the island forming dense closed shrubland.

Photograph 41. Murr fringing northern edge of island, (photo DF).

Photograph 42. Towards north eastern point of Bak with exposed beach rock and dense Murr (photo DF).

6.3.3 *Flora Species*

The survey recorded 47 plant species on the island (refer **Appendix C**). This is composed of 46 natives (93% of total species) and a single introduced plant (Medicine Grass). The Bak flora represents approximately 3% of the known flora for the Torres Strait Island group. None of the plant species are threatened or regionally significant.

Thirty plants (64%) are locally and/or culturally significant. The main culturally significant plants are Ubar, Naiwa, Piner, Bodo, Mipa, Ak, Usarkun, Kurad, Api, Komak, Mukmai, Ebaith, Kubil Gim, Gnib Gnib, Crawling buzz, Kubi, Muzarrugh, Gaibui, Gabul Del, Del, Murr, Auboi, Komak, Pulla, Zeger Zeger, Medicine Grass, Kubi, Auboi, Pitader, Thinicup, Pagal Bui, Gurraghir, Gurrawad, Susul Pui and Crawling Buzz.

Photograph 43. Ripe fruit of Pitader (*XImenia americana*), (photo DF).

Photograph 44. Leaves of Pitader (photo DF).

6.3.4 *Fauna*

The results of the data base reviews and the rapid field assessment have identified 26 fauna species for Bak. This comprises 24 birds and two nesting sea turtles (Hawksbill and Green Turtle). No trapping or spotlighting surveys were carried out on the island with limited opportunity for diurnal survey. As such no mammal or terrestrial reptile species were recorded and additional survey effort is recommended. The well-developed closed forest habitat would be expected to provide habitat for Moegay (*Carlia sexdentata*) with some potential for native Makas (*Melomys burtonii*). None of the animals reported are introduced.

Colour Weeba (Superb fruit Dove) and Gynow (Pied Imperial Pigeon) were recorded in this forest as were the Wili (Red headed Honeyeater), Kupgig (Rufous Fantail), Elu (Buff banded Rail) and Mut (Pale White Eye). The dense Murr fringing parts of the island offers roosting habitat and shelter for Gau (Nankeen Night Heron) and Kunai (Eastern Reef Egret), and the Whistle Duck (Beach Stone Curlew), Piteo (Pied Oystercatcher) and Sui (Greater Sand Plover) were recorded along shorelines. The Black Noddy was recorded from Piner forest areas. Other Silaw (terns) included the Bridled Tern (see **Photograph 45**), Black Naped Tern and Lesser Crested Tern. The Kuzi (White Breasted Sea Eagle) was recorded nesting in tall Piner trees (see **Photograph 46**).

Photograph 45. Silaw (Bridled Tern), (photos M. McLean).

Photograph 46. Nest of Kuzi in tall deciduous Piner tree (photo DF).

6.4 Igab

6.4.1 General Description

Igab is a small forested island of 19.4 ha in area. It is oblong in shape and 0.95 km long and 0.3 km at its widest point. It is located six km northwest east of Masig Island and approximately 158 km NE of Thursday Island. The island supports extensive areas of low vine thicket and mixed shrubland/thicket/grassland complex with well-developed closed forest, Gaibui (*Casuarina equisetifolia* var. *incana*) woodland, and herbland/grassland. The island is in excellent condition state in terms of its vegetation cover.

6.4.2 *Vegetation and Flora*

Grasslands and Herblands

Small areas of grassland and herbland on exposed frontal dunes are dominated by the grasses *Themeda arguens*, *Lepturus repens, Spinifex longifolius* and *Thurrea involuta* with herbs of *Vigna marina* and *Achyranthes aspera*. Scattered shrubs include Pitader (*Ximenia americana),* Dell *(Scaevola taccada)* and Gaibui. Grasslands extend throughout the fringing thickets clumps which occur on the landward side **(Photograph 47 & 48).**

Photograph 47. Themeda grassland on frontal dune Site IG08 (photo DF).

Photograph 48. Themeda grassland on frontal dune with fringing shrubland complex (photo DF).

Gaibui (Casuarina) open woodland/woodland

Small areas of Gaibui woodland occur on the foredunes along the northern side of the island and at the south-western end. Gaibui is the dominant tree with a sparse understorey of shrubs such as Murr (*Suriana maritima*), Mukmai, and Guraigur (*Colubrina asiatica*). Characteristic herbs are Susul Pui (*Euphorbia tannensis*), *Lepturus repens*, Putti (*Josephinia imperatricis*), Pulla (*Ipomoea pes capre* subsp. *brasiliensis*) and Gurrawad (*Sesuvium portulacastrum*), *Thurrea involuta,* Susul Pui (*Euphorbia pallens*), and Muzarugh (*Cassytha pubescens*). The introduced Medicine Grass (*Tridax procumbens**) occurs throughout with scattered plants of Painted Spurge (*Euphorbia heterophylla**).

Photograph 49. Gaibui open woodland on frontal dune, Site IG01 (photo DF).

Photograph 50. Localised infestation of Painted Spurge on frontal dune, (Site IG01) (photo DF).

Vine thicket/Grassland/Shrubland Complex

Low vine thicket/shrubland (4-8m) with grassland occurs throughout the centre of the island often with scattered emergents of Gaibui (*Casuarina equisetifolia* var*. incana*). Common trees and shrubs are Ubar (*Manilkara kauki*), Naiwa (*Erythrina insularis*), Mipa (*Terminalia muelleri*), Kubi (*Diospyros compacta*), Kurad (*Eugenia reinwardtiana*), Komak (*Premna serratifolia*), Native Ixora (*Ixora timorensis)*, Ebaith (*Planchonella obovata*), Usarkun (*Aglaia eleagnoidea*), Irr Whirr (*Scolopia braunii*), *Cyclophyllum maritimum*, Northern Olive (*Chionanthus ramiflorus*), Ak (*Drypetes deplanchei*), Api (*Micromelum minutum*), Patal Pui (*Carrisa laxiflora*), Gnib Gnib (*Smilax australis*), Yellapui/Sapai (*Dodonaea viscosa*) and Pitader (*Gymnosporia inermis*). The open grassy patches between the thickets comprises a grassland/herbland of *Cyperus tetracuspis, Eragrostis* sp., Spider Flower *(Cleome viscosa),* Medicine Grass *(Tridax procumbens*),* Muzarugh *(Cassytha pubescens)*, *Mukia maderaspatata, Rynchosia minima* var*. australis,* Putti *(Tribulus cistoides),* Susul Pui *(Euphorbia pallens)* and *Spermacocce* sp. (Lorim Point).

Photograph 51. Low vine thicket with grassy patches and emergent Gaibui in background (photo DF).

Photograph 52. typical example of low vine thicket with climbing Muzarugh on edges (photo DF).

Closed Forest

The closed littoral vine forest is well developed forming a dense canopy of 10-15m and dominated by Ubar (*Manilkara kauki*) with Kubil Gim (*Diospyros maritima*), Usarkun (*Aglaia eleagnoidea*) and Ak (*Drypetes deplanchei*). A subcanopy and lower tree layer is present also featuring Ubar, Kubil Gim and Usarkun. A sparse to dense understorey comprises the typical species such as Kurad (*Eugenia reinwardtiana),* Api *(Micromelum minutum),* Buzz *(Pleomele angustifolia),* Mipa *(Terminalia muelleri),* Buzz *(Flagellaria indica),* Muzarugh *(Cassytha pubescens)* and Kubi *(Diospyros compacta).* Scattered emergents of Gaibui may also occur.

Photograph 53. Trunk of large Ubar tree in well-developed closed forest site IG03, (photo DF).

Photograph 54 (above). Canopy of closed forest at Site IG05 (photo DF). **Photograph 55.** Dense understorey in closed forest.

6.4.3 *Flora Species*

The survey recorded 69 plant species on the island (refer **Appendix C**). This is composed of 64 natives (92% of total species) and a four-introduced species. Lantana (*Lantana camara*), Painted Spurge (*Euphorbia heterophylla*) and Corky Passionfruit (*Passiflora suberosa**) are invasive and require further assessment to determine levels of infestations after the wet season. The flora represents approximately 5% of the known flora for the Torres Strait Islands. None of the plant species are threatened and one undescribed species (*Tephrosia* sp. Muddy Bay PI Forster +PIF15313) is considered regionally significant.

Uncertainty remains on the identity of several palm seedlings which were recorded in well-developed Ubar forest (see **Photograph 56**). The seedlings have also been observed on Damud and Warul Kawa in similar vegetation

(DF pers. obs.). There are no mature native palms on the island or for that matter on any of the central coral cay islands surveyed to date however species such as *Ptychosperma macarthurii, Livistona benthamii, Livistona muelleri, Licula ramsayi* var. *tuckeri* and *Arenga australasica* occur on continental islands such as Naghir, Gebbar, Moa, Badu, and Dauan, and exotic palms occur on inhabited coral cays such as Poruma, Masig and Warraber. It is possible that the seeds have been dispersed by birds from nearby islands. Material was collected and provided to the Qld Herbarium.

Thirty-seven plants (58%) are locally and/or culturally significant. The main culturally significant plants are Ubar, Kubi, Gaibui, Mukmai, Murr, Pulla, Gurrawad, Muzarrugh, Susul Pui, Pagal Pui, Kurad, Komak, Pitader, Ebaith, Usarkun, Ak, Api, Muzarrugh, Gaibui, Kubil Gim, Mipa, Api, Buzz, Pitader, Usarkun, Irrrh Whiirh, Naiwa, Gnib Gnib and Gurraghir.

Photograph 56. Unidentified palm seedlings in small clusters are suggestive that the seeds have germinated after dispersal by birds such as Gynow and Colour Weiba (photo DF).

Photograph 57. Warraber Ranger Young Billy with Lantana plants on Igab in grassy patches and on the edges of thicket. At the end of the dry season they are leafless and difficult to detect (photo DF).

6.4.4 *Fauna*

Surveys effort comprised 50 trap nights (25 Elliots x 2 nights) with six camera trap nights and three cat caller nights. The traps were focusses on the south-western part of the island in closed forest and shrubland/thicket habitat. No spotlighting surveys were carried out.

The results of the data base reviews and the rapid field assessment have identified 27 fauna species for Igab (**Appendix F**). This comprises 24 birds, one terrestrial reptile, Sis (Black-tailed Bar-lipped Skink), and two nesting sea turtles (Hawksbill and Green Turtle). None of the animals reported are introduced.

Bird species recorded in forest and thicket habitat were the Bar-shouldered Dove, Pied Imperial-Pigeon, Buff-banded, Rail Red-headed Honeyeater, Mangrove Golden Whistler, White-breasted Woodswallow, Pale White-eye and Olive-backed Sunbird. The White-bellied Sea-Eagle was observed nesting in closed forest. The remaining birds were recorded on the shoreline or on intertidal areas as follows: Eastern Reef Egret, Beach Stone-curlew, Pacific Golden Plover, Greater Sand Plover, Bar-tailed Godwit, Whimbrel, Eastern Curlew, Grey-tailed Tattler, Common Greenshank, Ruddy Turnstone, Little Tern, Roseate Tern, Black-naped Tern and Crested Tern.

6.5 Kabbikane

6.5.1 General Description

Kabbikane is a small forested island of 12.8 ha in area. It is oblong in shape and 0.65 km long and 0.25 km at its widest point. It is located seven km south of Masig Island and approximately 167 km NE of Thursday Island. The island supports extensive areas of low vine thicket and mixed shrubland/thicket/grassland complex with well-developed closed forest, Gaibui (*Casuarina equisetifolia* var. *incana*) woodland, and herbland/grassland. The island vegetation is in excellent condition however the presence of scattered infestation of Lantana throughout the centre of the island requires further assessment and management action.

6.5.2 *Vegetation and Flora*

Shrubland/Thicket Complex

Most the island supports a low shrubland/thicket complex with interspersed grassland. On exposed shorelines, the dominant species is Murr (*Suriana maritima* with *Pemphis acidula)*, Auboi (*Morinda cirtifolia), Komak (Premna serratifolia)* and Dell (*Scaevola taccada)*. Scattered dead trunks of Gaibui (*Casuarina equisetifolia* var. *incana)* and occasional live emergents occur throughout.

Photograph 58. Murr shrubland with dead Gaibui on exposed frontal dune, Site KB01 (photo DF).

Photograph 59. Foredune with Murr shrubland and dense thicket (photo DF).

Open shrublands also include scattered emergents of Erab (*Cocos nucifera)*. Areas of scattered low copses 3-5m in height are surrounded by bare sandy areas. Dense shrubby clumps are of Kubil Gim (*Diospyros maritima),* Komak *(Premna serratifolia),* Auboi *(Morinda cirtifolia),* Mukmai *(Cordia subcordata),* Ak *(Drypetes deplanchei),* Kubi *(Diospyros compacta),* Ubar *(Manilkara kauki),* Kurath *(Eugenia reinwardtiana),* Murr *(Pemphis acidula),* Kowsar *(Pandanus* sp.) and Bodo (*Guettarda speciosa)*. Vines of Gnib Gnib (*Smilax australis*), Striped Cucumber (*Diplocyclos palmatus)* and Corky Passionfruit (*Passiflora suberosa**) are common and typical groundcover species are Pacific Needle Grass (*Lepturus repens), Bulbostylis barbarta, Euphorbia tannensis* subsp*. tannensis, Rychnosia minima* var*. australis* and Spider Flower (*Cleome viscosa)*.

Closed littoral vine thicket has a canopy dominated by Irrh Whirr (*Scolopia braunii*) with associated Kubil Gim (*Diospyros maritima),* Ubar *(Manilkara kauki),* Ak *(Drypetes deplanchei),* Gnib Gnib *(Smilax australis),* Ebaith *(Planchonella obovata),* Kubi *(Diopsyros compacta),* Duwah *(Semecarpus australiensis),* Usarkun *(Aglaia eleagnoidea),* Kowsar *(Pandanus* sp.*)* and Mipa *(Terminalia muelleri*). Lower shrubs of Auboi (*Morinda citrifolia),* Api *(Micromelum minutum),* Kurath *(Eugenia reinwardtiana)* and Uru (*Salacia disepala)*. Very sparse groundcover of *Drynaria quercifolia* with dense leaf litter.

A more deciduous shrubland (3-5m) is dominated by *Terminalia muelleri, Pandanus* sp.*, Premna serratifolia* with *Casuarina equisetifolia* var*. incana*. Better developed examples form a deciduous littoral vine thicket (5-8m) dominated by *Terminalia muelleri* with occasional *Manilkara kauki, Guettarda speciosa, Diospyros maritima* and Aglaia *eleagnoidea.* Understorey of *Eugenia reinwardtiana, Diospyros compacta, Capparis nummularia, Micromelum* minutum and *Manilkara kauki*.

Photograph 60. Deciduous trees of Mipa (photo DF).

Photograph 61. Open patches between dense shrubland/thicket (Site KB02) (photo DF)

Gaibui (Casuarina) open woodland/woodland

Low open forest and woodlands of Gaibui (*Casuarina equisetifolia* var*. incana*) with occasional Kowsar (*Pandanus spiralis*) fringe the south-western shoreline and have a sparse understorey of Dell (*Scaevola taccada),* Gurraguir *(Colubrina asiatica),* Mukmai *(Cordia subcordata),* Murr *(Suriana maritima),* Sapai *(Dodonaea viscosa)* and Auboi *(Morinda cirtifolia)*.

Photograph 62. Gaibui open woodland on frontal dune, (photo DF).

Photograph 63. Gaibui woodland (Site KB02) (photo DF)

Murr (Pemphis) Shrubland

Stands of Murr (*Pemphis acidula*) occur along the south eastern and northern coastlines of the island forming dense closed shrubland.

6.5.3 *Flora Species*

The survey recorded 50 plant species on the island (refer **Appendix C**). This is composed of 64 natives (92% of total species) and a four-introduced species. Painted Spurge (*Euphorbia heterophylla*) and Corky Passionfruit (*Passiflora suberosa**) are invasive and require further assessment to determine levels of infestations after the wet season. The flora represents approximately 3.5% of the known flora for the Torres Strait Islands. None of the plant species are threatened or regionally significant.

Thirty-one plants (62%) are locally and/or culturally significant. The main culturally significant plants are Aka, Api, Auboi, Bodo, Del, Duwah, Ebaith, Erab, Gaibui, Gasi, Gnib Gnib, Guraigur, Gurrawad, Irhh Whirr, Komak, Kowsar, Kubi, Kubil Gim, Kurath, Mipa, Mukmai Murr, Muzarugh, Pulla, Ubar and Usarkun.

6.5.4 *Fauna*

Surveys effort comprised 75 trap nights (25 Elliots x 3 nights) with nine camera trap nights and three cat caller nights. No spotlighting surveys were carried out. The survey effort did not produce any captures within traps or camera stations. The results of the rapid field assessment have identified 19 fauna species for Kabbikane (**Appendix F**). This comprises 17 birds, and two nesting sea turtles (Hawksbill and Green Turtle). None of the animals reported are introduced.

Bird species recorded in forest and thicket habitat were the limited to the Olive-backed Sunbird suggesting further survey effort may be required. Dense fringing Murr habitat provide roosting habitat for the Eastern Reef Egret and Nankeen Night-Heron and the White-bellied Sea-Eagle was observed overflying the island as was the Lesser Frigatebird. The remaining birds were recorded on the shoreline or on intertidal areas as follows: Beach Stone-curlew, Australian Pied Oystercatcher, Greater Sand Plover, Whimbrel, Common Greenshank, Ruddy Turnstone, Black Noddy, Bridled Tern, Black-naped Tern, Lesser Crested Tern, Crested Tern and Silver Gull.

6.6 Mauar

6.6.1 General Description

Mauar is a densely-vegetated island of xx ha in area. It is elongated east west with long exposed beaches facing north and south. The island is 0.85 km long and 0.2 km at its widest point and is located 15 km west east of Masig Island and approximately 146 km NE of Thursday Island. There are extensive areas of low vine thicket and well-developed Ubar forest with fringing margins of mixed shrubland/thicket/grassland complex and Gaibui (*Casuarina equisetifolia* var. *incana*) woodland, and herbland/grassland. Ubar forests are some of the best developed on coral cay islands and support a diverse flora. This includes highly disjunct population of the epiphytic orchid *Dendrobium bifalce* **(Photograph 73).** The presence of a historic settlement has been the likely source of invasive weed species such as Lantana (*Lantana camara**), Snakeweed (*Stachytarpheta jamaicensis**) **(Photograph 74)** and Mintweed (*Hyptis suaveolens**) which occur near the old settlement area and in gaps between dense vine thicket throughout the island.

Photograph 64. Aerial view of Mauar looking south to north (photo DF).

6.6.2 *Vegetation and Flora*

Dune woodland/shrubland/grassland complex

Dune woodland/shrubland/grassland complex occurs in a narrow band along the majority of the southern coastline. The community features scattered Gaibui (*Casuarina equisetifolia var. incana*) and Erab (*Cocos*

nucifera) over dense shrubby thickets of Komak (*Premna serratifolia*), Murr (*Suriana maritima*), Muzarugh (*Cassytha pubescens*), Mukmai (*Cordia subcordata*), Ubar (*Manilkara kauki*) and Pitader (*Gymnosporia inermis*).

The groundcover of Pulla (*Ipomoea pes-capre* subsp. *brasiliensis*) and Pacific Island Thintail (*Lepturus repens*). Very limited areas of grassland occur within the margins of low vine thickets and these are dominated by *Imperata cylindrica* and *Themeda arguens* with *Tridax procumbens*, Eragrostis* sp., *Tephrosia* sp. (Muddy Bay), Muzarugh (*Cassytha pubescens)* and Townsville Stylo *(Stylosanthes hamata**).

Photograph 65. Grassland/shrubland complex (photo DF).

Photograph 66. Open grasslands with Blady Grass (photo DF).

Gaibui woodland

A small patch of Gaibui dominant woodland occurs on the western extremity of the island.

Photograph 67. Gaibui is dominant in a small area on the western point of the island and as an emergent over vine thicket/shrubland (photo DF).

Shrubland/Thicket Complex

Most the island supports a low shrubland/thicket complex with interspersed grassland. The shrubland/thicket ranges between 3-8m in height and has occasional taller trees of Bodo (*Guettarda speciosa)* scattered throughout. The characteristic trees and shrubs are Irr Whirr (*Scolopia braunii),* Usarkun *(Aglaia eleagnoidea),* Ak *(Drypetes deplanchei),* Ebaith *(Planchonella obovata),* Uru *(Salacia disepala),* Mipa *(Terminalia muelleri),* Ubar *(Manilkara*

kauki), Psychotria poliostemma, Ixora timorensis, Pitader *(Gymnosporia inermis), Pittosporum ferrugineum, Chionanthus ramiflorus,* Kurad *(Eugenia reinwardtiana), Breynia oblongifolia,* Patal Pui *(Carissa laxiflora)*, Kubil Gim *(Diospyros maritima), Celtis philippensis* and Api (*Micromelum minutum)*. Dense leaf litter under thickets. Groundcover of open areas is *Eragrostis brownii, Evolvulus alsinoides, Spermacocce* sp. (Lorim Point), *Rynchosia minima* var*. australis, Bulbostylis barbarta, Cyperus tetracuspis* and Snake Weed (*Stachytarpheta jamaicensis*).* Emergents of Mekay (*Terminalia catappa)* and Erab (*Cocos nucifera)* also occur and open grassy areas are dominated by *Themeda arguens, Imperata cylindrica, Cyperus tetracuspis, Drynaria quercifolia, Cassytha pubescens, Evolvulus alsinoides* and *Tridax procumbens*. Weeds such as Snake weed (*Stachytarpheta jamaicensis**), and Townsville Stylo are scattered throughout.

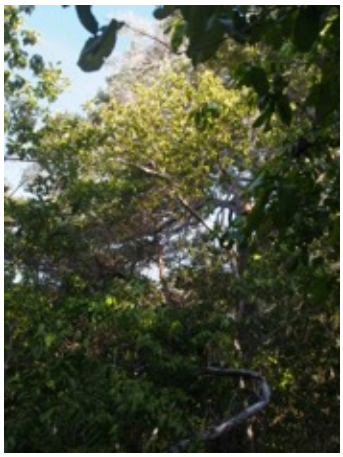
Photograph 68. Grassland patch (photo DF).

Photograph 69. Grassland merging into dense thicket (photo DF

Closed Forest

Excellent examples of closed forest are dominated by Ubar (*Manilkara kauki)* with Usrakan *(Aglaia eleagnoidea),* Kubil Gim *(Diospyros maritima)* and Irr Whirr *(Scolopia braunii).* The understorey is sparse with Kubi (*Diospyros compacta),* Buzz *(Pleomele angustifolia),* Ak *(Drypetes deplanchei),* Uoi Boi *(Capparis lucida), Jasminum elongatum, Ixora timorensis, Diospyros geminata, Vavaea amicorum,* Patal Pui *(*Carissa laxiflora*), Scolopia braunii, Planchonella obovata, Capparis nummularia, Chionanthus ramiflorus, Pittosporum ferrugineum,* Bodo *(Guettarda speciosa),* Gnib Gnib *(Smilax australis),* Pitader *(Gymnosporia inermis)* and Bomer *(Polyscias macgillivraei)* and Kurath *(Eugenia reinwardtiana)*. Clustered epiphytes of *Dendrobium bifalce* occur in the best developed Wongai forest with the climbing fern *Pyrrosia confluens*.

Photograph 70. Large fallen Ubar in well-developed forest



Photograph 71. Canopy view of Ubar forest.

Murr (Pemphis) Shrubland

Stands of Murr (*Pemphis acidula*) occur along the south eastern and northern coastlines of the island forming dense closed shrubland (**Photograph 72**).

Photograph 72. Dense stands of Murr fringing northern edge of island (photo DF).

6.6.3 *Flora Species*

The survey recorded 64 plant species on the island (refer **Appendix C**). This is composed of 58 natives (90% of total species) and a six-introduced species. Lantana, Snake weed and Hyptis are invasive and require further assessment to determine levels of infestations after the wet season. These weeds are leafless in late dry season and difficult to detect. Snakeweed occurs as low multi-stemmed herb to 0.25m which is scattered on margins of low shrubland/thicket or within open grassy areas. It is likely that weeds seeds have been dispersed from planted specimens around the old settlement area and there is a high likelihood of more robust infestations.

The flora represents approximately 4.5% of the known flora for the Torres Strait Islands. None of the plant species are threatened. The record of *Dendrobium bifalce* is regionally and locally significant. Its occurrence on Mauar is disjunct. In Torres Strait t is known also from well-developed Manilkara forest on Damud (Dalrymple) Island with records from Moa and Dauan. It is more common on CYP in the Iron Range/McIlwraith Range and Cooktown regions and in PNG.

Thirty plants (47%) are locally and/or culturally significant. The culturally significant plants are Ak, Api, Auboi, Bodo, Boman, Buz, Ebaith, Erab, Gaibui, Gnib Gnib, Grass Medicine, Gurrawad, Ivwir, Kamut, Komak, Kowsar, Kub, Kubil Gim, Kurad, Mekay, Mipa, Mukmai, Murr, Nguzuru, Oui Doui, Patal Pui, Pitader, Pulla, Sapai, Thinicup, Ubar, Uru and Usarkun.

Photograph 73. Fallen clump of the orchid *Dendrobium bifalce* in well-developed Ubar forest (photo DF).

Photograph 74. Leafless Snakeweed in open patches on vine thicket margins is difficult to detect in late dry season.

Photograph 75. Spines on the stems and branches of Irr whirr (*Scolopia braunii*) (photo DF).

Photograph 76. Leaves of Irr Whirr (*Scolopia braunii*) (photo DF).

6.6.4 *Fauna*

The survey effort on Mauar comprised 50 trap nights (25 Elliots x 2 nights) with six camera trap nights and three cat caller nights. No microbat surveys were carried out. The survey identified 17 fauna species comprising 15 birds, and two nesting sea turtles (Hawksbill and Green Turtle) (**Appendix F**). None of the animals reported are introduced.

Bird species recorded in forest and thicket habitat were limited to the Grey Fantail suggesting further survey effort is required within the dense vegetation of the islands interior. Dense fringing Murr habitat provide roosting habitat for the Eastern Reef Egret and Nankeen Night-Heron and the Lesser Frigatebird was observed overflying the island. The remaining birds were recorded on the shoreline or on intertidal areas as follows: Beach Stone-curlew,

Greater Sand Plover, Whimbrel, Black Noddy, Black-naped Tern, Crested Tern, Brown Booby, Pacific Golden Plover, Bar-tailed Godwit, Grey-tailed Tattler, Little Tern and Australian Pelican.

6.7 Memay

6.7.1 General Description

Memay is a densely-vegetated island of 11.1 ha in area. It is elongated east west with long exposed beaches facing north and south. The island is 0.8 km long and 0.25 km at its widest point and is located 25 km south of Masig Island and approximately 147 km NE of Thursday Island.

There most significant feature of the island is the presence of well-developed Piner (*Pisonia grandis*) forest and resident nesting population of Black Noddy. Piner occurs throughout the centre of the island and is surrounded by dense vine thicket and deciduous shrublands. The margins of the island support mixed shrubland/thicket/grassland complex and Gaibui (*Casuarina equisetifolia* var. *incana*) woodland, and herbland/grassland.

6.7.2 *Vegetation and Flora*

Dune Herbland

Herbland dominated by Gurrawad (*Sesuvium portulacastrum*) and with Susul Pui (*Euphorbia pallens, Euphorbia tannensis*), Pulla (*Ipomoea pes capre* subsp. brasiliensis), Pacific Island Thintail (*Lepturus repens*), *Cyperus pedunculatus* and Muzarugh (*Cassytha pubescens*), occurs on sand spits and accreting foredunes **(Photograph 77)**. There are occasional low shrubs of Mur (*Suriana maritima, Pemphis acidula*), Urakar (*Hibiscus tiliaceus*), Gabul Ras (*Sophora tomentosa*), Gabul Dell (*Argusia argentea*), Sapai (*Dodonaea viscosa*) and Dell (*Scaevola taccada*. The landward side features linear strips of Murr (*Pemphis acidula)* and Komak (*Premna serratifolia*).

Photograph 77. Dense herbland of Gurrawad on frontal dune, fringed with low shrubs of Murr (photo DF).

Photograph 78. Gurrawad and scattered young Gaibui trees south western end of island at seasonal camp (photo DF).

Dune woodland/shrubland/grassland complex

Dune woodland/shrubland/grassland complex occurs in a narrow band along most the northern coastline. Scattered Gaibui (Casuarina) and Urab (*Cocos nucifera**) occur over dense shrubby thickets of Komak (*Premna serratifolia),* Murr *(Suriana maritima, Pemphis acidula),* Muzarugh *(Cassytha pubescens),* Mukmai *(Cordia subcordata),* Ubar *(Manilkara kauki*) and Pitader (*Gymnosporia inermis)*. The groundcover is Pulla (*Ipomoea pes-capre* subsp. *brasiliensis*) and *Lepturus repens*.

Photograph 79. Gaibui open woodland on frontal dune, Site IG01 (photo DF).

Photograph 80. Dense patches of shrubland/thicket under Gaibui (photo DF).

Shrubland/Thicket

Dense deciduous thicket (4-8m) occurs as an almost continuous band around the island. It is dominated by Komak (*Premna serratifolia)* with *Capparis lucida* and vines of *Ipomoea macrantha* throughout. Groundcover very sparse with dense leaf litter, pumice stone and scattered herbs of *Achyranthes aspera*. Capparis also forms dense sprawling thickets on the edges of the Piner forest.

Photograph 81. Deciduous thicket dominated by Komak (Site MM06) (photo DF).

Photograph 82. Zonation from foredune to deciduous thicket (Site MM06) (photo DF

Open forest of Piner

Excellent examples of Piner forest occur throughout the islands interior **(Photograph 83 & 84)**. The best developed examples are 12-22m in height with an open forest structure and simple species assemblage. Piner is dominant throughout with subordinate *Celtis paniculata, Cordia subcordata* and *Manilkara kauki*. The understorey is dense with C*apparis lucida* forming sprawling thickets and low shrubs such as *Morinda citrifolia, Diospyros maritima, Capparis nummularia,* Wayli *(Pipturus argenteus*) and *Phyllanthus novae-hollandaei*. Leaf litter is dense with a few herbs of *Achyranthes aspera* and vines of *Ipomoea macrantha* and *Diplocyclos palmatus*. Lower stature Piner open forest 8-12m in height occurs on margins with Mipa (*Terminalia muelleri*,) occasional Urab (*Cocos nucifera)* and dense understorey of *Capparis lucida*.

Photograph 83. Well-developed Piner tree with pale trunk and buttressing (photo DF).

Photograph 84. Deciduous crowns of Piner with open forest structure and dense understorey (photo DF).

6.7.3 *Flora Species*

The survey recorded 48 plant species on the island (refer **Appendix C**). There are 46 natives (96% of total species) and a two-introduced species. No invasive weeds were recorded. The flora represents approximately 3.5% of the known flora for the Torres Strait Islands. None of the plant species are threatened, and one species Piner is considered disjunct in the Torres Strait and locally and regionally significant.

Thirty-one plants (65%) are locally and/or culturally significant. The culturally significant plants are: Aipi, Ak, Api, Auboi, Bodo, Buman, Del, Ebaith, Erab, Gaibui, Gabul Dell, Gubau Ras, Guraigur, Gurrawad, Komak, Kubi, Kubil Gim, Kurad, Mipa, Mukmai, Murr, Murr (yellow flower), Naiwa, Muzuru, Oui Doui, Piner, Pulla, Ubar, Urakar, Usarkun and Wayli.

Photograph 85. Flowers and juvenile fruit of Piner *Pisonia grandis* on Memay (photo DF).

Photograph 86. Leaf specimen of Piner (photo M. Mclean).

6.7.4 *Fauna*

The survey effort on Memay comprised 75 trap nights (25 Elliots x 3 nights) with eight camera trap nights and three cat caller nights. Eleven of the trap nights were lost due to trap closure by crabs or unknown causes. No microbat surveys or spotlighting were carried out. Trap lines were located in the south-western part of the island and camera trap placed in the north east in dense Piner forest.

The survey identified 20 fauna species comprising 16 birds, two Moegay (the Rainbow Skink *Carlia sexdentata* and the Wall Skink *Cryptoblepharus virgatus*) and two nesting sea turtles (Hawksbill and Green Turtle) (**Appendix F**). None of the animals reported are introduced. The Piner forest provided roosting and nesting habitat for a significant number of Black Noddy. Bird species recorded in forest and thicket habitat were the Bar-shouldered Dove, Pied Imperial-Pigeon, Buff-banded Rail, Olive-backed Sunbird, Red-headed Honeyeater*, Mangrove Golden Whistler and the Pale White-eye..

Photograph 87. Naturally deceased Buff banded rail (photo DF).

Photograph 88. Deceased Black Noddy because of being covered with sticky Piner fruit (photo DF).

Photograph 89. Crested Terns on shoreline (photo DF).

Photograph 90. Bird survey of shorelines from TSRA vessel Kuki (photo DF).

6.8 Umagar

6.8.1 General Description

Umagar is a densely-vegetated island of xx ha in area. The island is 0.6 km long and 0.15 km at its widest point and is located eight km north of Masig and approximately 168 km NE of Thursday Island. The island also supports well developed Piner (*Pisonia grandis*) forest and resident nesting population of Black Noddy. Piner occurs throughout the centre of the island and is surrounded by dense vine thicket and deciduous shrublands. The northern margins of the island support mixed shrubland/thicket/grassland complex and Gaibui (*Casuarina equisetifolia* var. *incana*) woodland, and herbland/grassland. The southern shoreline is vegetated by a dense band of Murr (*Pemphis acidula*). Anecdotal reports by Traditional Owners of rodents on the island were confirmed by the fauna trapping effort which verified robust population of Makas (Grassland Melomys, *Melomys burtonii*).

6.8.2 *Vegetation and Flora*

Coastal Strand

Exposed sand spits and front dunes support herbland dominated by Pulla (*Ipomoea pes capre* subsp. *brasiliensis*) and Gurrawad (*Sesuvium portulacastrum*). Scattered emergents include saplings of Gaibui (*Casuarina equisetifolia* var. *incana*) to 1-4m and low shrubs of Murr (*Pemphis acidula*), Gurraigur (*Colubrina asiatica*), Gabul Dell (*Argusia argentea*) and Mukmai (*Cordia subcordata*).

Frontal dunes also feature grasslands of *Spinifex longifolius, Thurrea involuta* and *Lepturus repens* with vines and herbs of Muzarugh (*Cassytha pubescens*), Pulla (*Ipomoea pes-capre* subsp. *brasiliensis*), Puti (*Josephinia imperatricis*), Aipi (*Boerhavia mutabilis*), Medicine Grass (*Tridax procumbens**) and Susul Pui (*Euphorbia pallens*). Gaibui (*Casuarina equisetifolia* var. *incana*) and planted Erab (*Cocos nucifera*) are scattered as emergents with low shrubs of Murr (*Suriana maritima*) and Guraigur (*Colubrina asiatica*). Where Gaibui becomes more abundant it forms an open shrubland (4-6m) with occasional shrubs of Bodo (*Guettarda speciosa*), Kapai (*Gyrocarpus americanus*), Komak *(Premna serratifolia*) and *Vitex trifolia*. The landward margins of grassland merge into a dense shrubland of Murr (*Pemphis acidula*), Mukmai (*Cordia subcordata*), Guraigur (*Colubrina asiatica*), Pitader (*Ximenia americana*) and Bodo (*Guettarda speciosa*) with emergent Gaibui (*Casuarina equisitifolia*).

Photograph 91. Regenerating Gaibui trees on accreting dune

Photograph 92. Typical foredune with scattered Gaibui and Urab (photo DF).

Closed forest

The interior of the island supports well developed closed forest. Low closed forest 8-14m in height has a canopy of Piner (*Pisonia grandis*) (**Photograph 93**), Kubil Gim (*Diospyros maritima*) and Ubar (*Manilkara kauki*), with emergents to 25m of Piner and Darni Tree (*Ficus virens*) (**Photograph 9**4). A sparse subcanopy has Kubil Gim and *Celtis philippensis* and the open understorey comprises Oui Doui (*Capparis lucida*), Uru (*Salacia disepala*), *Capparis nummularia, Cayratia saponaria,* Mipa (*Terminalia muelleri*) and Kurad (*Eugenia reinwardtiana*). Leaf litter is dense throughout with no herbs in the groundcover.

Where Piner is absent, parts of the forest are semi deciduous in nature through the abundance of Kapai (*Gyrocarpus americanus*) and Mipa (*Terminalia muelleri*) in the canopy with subordinate *Celtis paniculata*, *Celtis philippensis* and Oui Doui (*Capparis lucida*). Vines such as *Cayratia saponaria*, *Ipomoea macrantha* and Five leaf Yam (*Dioscorea pentaphylla*) are occasional and the groundcover has abundant seedlings of Usarkun (*Aglaia eleagnoidea*) and Kurad (*Eugenia reinwardtiana*).

Photograph 93. Large Piner tree with deciduous crown in well-developed forest (photo DF).

Photograph 94. The occurrence of Darni Tree (right) on Umagar was the only record for the islands surveyed (photo DF).

Photograph 95. Smooth cylindrical trunk of Kapai (photo DF).

Photograph 96. Canopy of Kapai tree with new leaves starting to appear (photo DF).

Low closed Murr forest

Low closed forest (7-8m) dominated by Murr (*Pemphis acidula*) forms a dense fringe to the islands southern shoreline. The understorey is sparse with Kubi (*Diopsyros geminata*), Kubil Gim (*Diospyros maritima*), Apai (*Micromelum minutum*) and Usrakun (*Aglaia eleagnoidea*).

Photograph 97. Dense shrubland of Murr (photo DF).

Photograph 98. Tangled trunks and branches of Murr (photo DF

6.8.3 *Flora Species*

The survey recorded 44 plant species on the island (refer **Appendix C**). There are 43 natives and one naturalised species. No invasive weeds were recorded. The flora represents approximately 3% of the known flora for the Torres Strait Islands. None of the plant species are threatened, and one species (Piner) is considered disjunct in the Torres Strait and locally and regionally significant.

Twenty-five plants (54%) are locally and/or culturally significant. The culturally significant plants are: Aipi, Ak, Api, Auboi, Bodo, Buman, Ebaith, Erab, Gaibui, Gabul Dell, Guraigur, Gurrawad, Komak, Kubi, Kubil Gim, Kurad, Mipa, Mukmai, Murr, Muzurugh, Oui Doui, Pulla, Ubar and Usarkun.

Photograph 99. Buttressed trunk of Celtis paniculata in canopy of closed forest (photo DF).

Photograph 100. Flowering specimen of Uru (*Salacia disepala*) (photo M. McLean).

6.8.4 *Fauna*

The survey effort on Umagar was complemented by the presence and assistance of PBC Chair John Morris who set and checked al Elliot traps along with Rangers (**Photograph 101**). Anecdotal records by Traditional Owners of a species of rat on the island was verified by a more intensive trapping effort which comprised 100 trap nights over two nights with 12 camera trap nights and six cat caller nights. Nineteen trap nights were lost from either loss of bait or closed with no animal. No microbat surveys or spotlighting were carried out.

A very significant population of Makas (*Melomys burtoni)* was found on Umagar (**Photograph 102**). Trapping success was phenomenal with 74 *Melomys burtoni* captured in Elliot traps (37 each night from 49 traps set). One Buff-banded Rail, and one Moegay (Rainbow Skink *Carlia sexdentata)* were also captured in the traps. The 12 camera trap nights also recorded images of the Buff Banded rail and Makas.

The survey identified 23 birds and an additional species has been added from Wildnet records. Two Moegay (the Rainbow Skink and the Robust Skink (*Glaphyromorphus nigricaudus*) and two nesting sea turtles (Hawksbill and Green Turtle) were also recorded (**Appendix F**). None of the animals reported are introduced.

The closed Piner forest and dense fringing thickets provided roosting and nesting habitat for the Bar-shouldered Dove, Pied Imperial-Pigeon, Buff-banded Rail, Olive-backed Sunbird, Red-headed Honeyeater, White-breasted Woodswallow and the Noisy Pitta, and the White-bellied Sea-Eagle was nesting in large Piner trees. The Waumer (Lesser and Greater Frigate Birds) were observed overlying the island. The Kunai (Eastern Reef Egret) and Gau (Nankeen Night-Heron) were present in dense Murr habitat and on shorelines. Additional birds recorded in shoreline and intra tidal zones were: Beach Stone-curlew, Greater Sand Plover, Whimbrel, Black-naped Tern, Crested Tern, Pacific Golden Plover, Australian Pied Oystercatcher and Bridled Tern.

Photograph 101. Traditional Owners and PBC Chair Mr John Morris setting small animal traps with TSDRA Rangers on Umagar (photo M. Geyle).

Photograph 102. Makas (Grassland Melomys-*Melomys burtonii*), Umagar Island (photo M. Geyle).

6.9 Yaok

6.9.1 General Description

Yaok is a small densely vegetated island of nine hectares **(Photograph 103).** The island is 0.6 km long and 0.25 km at its widest point and is located 17 km southwest east of Masig and approximately 143 km NE of Thursday Island. Well-developed stands of Piner (*Pisonia grandis*) occurs throughout the centre of the island and is surrounded by dense vine thicket and deciduous shrublands. The margins of the island support mixed shrubland/thicket/grassland complex and Gaibui (*Casuarina equisetifolia* var. *incana*) woodland, herbland/grassland and dense bands of Murr (*Pemphis acidula*).

Photograph 103. Yauk Island (photo M. McLean).

6.9.2 *Vegetation*

Dune woodland/shrubland/grassland complex

Dune woodland/shrubland/grassland complex occurs in a narrow band along the northern side of the island. It is dominated by Pacific Island Thintail (*Lepturus repens*) with herbs and vines of Gurrawad (*Sesuvium portulacastrum*), Susul Pui (*Euphorbia pallens, Euphorbia tannensis*), Pulla (*Ipomoea pes capre* subsp. *brasiliensis*), *Cyperus pedunculatus* and Muzarugh (*Cassytha pubescens*). There are occasional low shrubs of Mur (*Suriana maritima, Pemphis acidula*), Gabul Dell (*Argusia argentea*), and Dell (*Scaevola taccada*).

Low open shrublands on frontal dunes feature Wana (*Thespesia populnioides),* Murr *(Pemphis acidula* and *Suriana maritima),* Mukmai *(Cordia subcordata), Clerodendrum inerme, Capparis lucida,* Gaibui *(Casuarina equisetifolia var. incana),* Gabul Dell *(Argusia argentea),* Dell *(Scaevola taccada),* Ebi *(Phyllanthus novae-hollandaei),* Mekay *(Terminalia catappa)* and Bodo *(Guettarda speciosa)*. The typical groundcover is *Lepturus repens,* Susul Poi *(Euphorbia tannensis* subsp. *tannensis, Euphorbia pallens),* Pulla *(Vigna marina),* Chaff Flower *(Achyranthes aspera), Spinifex longifolius,* Putti *(Josephinia imperatricis* and *Tribulus cistoides),* Aipi *(Boerhavia mutabilis),* and Gurawad *(Sesuvium portulcasatrum)*.

Photograph 104. Shrubs of Gabul Dell on foredunes (photo DF).

Photograph 105. Deciduous Piner trees fringing grassland-herbland (photo DF).

Shrubland/Thicket

Dense thickets of deciduous low closed (3-6m) is dominated by Mipa (*Terminalia muelleri*) with *Capparis lucida*, Murr (*Pemphis acidula*), Komak (*Premna serratifolia*) and Piner (*Pisonia grandis*).

Photograph 106. Deciduous thicket dominated by Komak (photo DF).

Photograph 107. Deciduous thicket with deciduous trees of Piner forest in background (photo DF).

Open forest of Piner

Excellent examples of Piner forest occur throughout the islands interior (**Photographs 108, 109, 110**). The open forest (12-22m) is dominated by Piner (*Pisonia grandis*) with subordinate *Celtis paniculata,* Mukmai (*Cordia subcordata*) and associated Ubar (*Manilkara kauki*). The understorey is sparse with shrubs of Auboi (*Morinda citrifolia*) and Uoi Boi (*Capparis lucida*) and Kubil Gim (*Diospyros maritima).*

Murr Shrublands

Shrubland dominated by Murr (*Pemphis acidula*) forms a dense fringe to the islands southern shoreline (see **Photograph 111**).

Photograph 108. Well-developed buttressing of Piner tree which was deciduous in late November 2017 (photo DF).

Photograph 109. Piner forest (photo M. McLean).

Photograph 110. Piner forest with transect tape (photo M. McLean).

Photograph 111. Dense shrubland of Murr with deciduous Piner trees in background (photo DF).

6.9.3 *Flora Species*

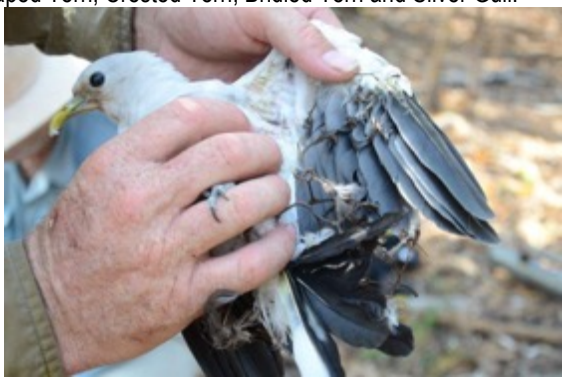
The survey recorded 49 plant species on the island (refer **Appendix C**). There are 47 natives (96% of total species) and a two-introduced species. No invasive weeds were recorded. The flora represents approximately 3.5% of the known flora for the Torres Strait Islands. None of the plant species are threatened, and one species Piner is considered disjunct in the Torres Strait and locally and regionally significant. Thirty-one plants (65%) are locally and/or culturally significant. The culturally significant plants are: Aipi, Ak, Api, Auboi, Bodo, Buman, Del, Ebaith, Erab, Gaibui, Gabul Dell, Gubau Ras, Guraigur, Gurrawad, Komak, Kubi, Kubil Gim, Kurad, Mipa, Mukmai, Murr, Murr, Naiwa, Muzurugh, Oui Doui, Piner, Pulla, Putti, Ubar, Urakar, Usarkun and Wayli.

6.9.4 *Fauna*

The survey effort on Yauk was constrained due to logistics and no Elliot or camera traps were set. Surveys were therefore limited to a rapid habitat assessment and day time bird and reptile observations. The survey identified 35 bird species comprising 31 birds, two Moegay (the Wall Skink *Cryptoblepharus virgatus* and the Spotted Tree Monitor *Varanus scalaris*), and two nesting sea turtles (Hawksbill and Green Turtle) (**Appendix F**). None of the animals reported are introduced. An unidentified black robust skink was observed but not caught under bark of dead tree near veg monitoring site. Eight of the birds have also been recorded in Wildnet and one bird recorded by Draffan *et al*. (1983).

The Piner forest provided roosting and nesting habitat for a significant number of Black Noddy **(Photograph 112**). Bird species recorded in forest and thicket habitat were the Bar-shouldered Dove, Pied Imperial-Pigeon, Buff-banded Rail, Olive-backed Sunbird, Red-headed Honeyeater, Mangrove Golden Whistler, Pale White-eye, Varied Honeyeater, Brown-backed Honeyeater, Rufous Fantail and Spectacled Monarch. White-bellied Sea-Eagle was nesting on the island in a large Piner tree. The Waumer (Lesser Frigate Birds) was observed overlying the island. The Kunai (Eastern Reef Egret) and Gau (Nankeen Night-Heron) were present in dense shrubland and Murr and on shorelines. Additional birds recorded in shoreline and intra tidal zones were: Beach Stone-curlew, Greater Sand Plover, Pacific Golden Plover, Bar-tailed Godwit, Common Greenshank, Ruddy Turnstone, Little Tern, Lesser Crested Tern, Common Noddy, Whimbrel, Black-naped Tern, Crested Tern, Bridled Tern and Silver Gull.

Photograph 112. Black Noddies nesting in Piner trees (photo M. McLean).



Photograph 113. Gynow with sticky Piner seeds on feathers (photo M. McLean).

7. OPPORTUNITIES & RECOMMENDATIONS

The initiatives relevant to the management of the natural and cultural values identified in this report are suggested to assist to further understanding and education (knowledge exchange) and management of these values. These opportunities include, but are not restricted to:

Invasive Species

Further survey work is required following the growing season to assess the distribution of the following weeds. Specific pest management plans can then be developed to achieve control. This to include appropriate methods of control and ongoing monitoring for the introduction and spread of pest species, both fauna and flora.

- Lantana – Scattered infestations on Mauar and Igab.
- Snake Weed – Scattered infestations on Mauar.
- Corky passionfruit – Sporadic occurrences on Aukane, Bak and Igab.
- Manilla Rope – Dense infestation on north eastern end of Aureed.
- Townsville Stylo – Scattered infestations on Mauar.
- Painted Spurge - Sporadic occurrences on Igab and Kabbikane.
- Exotic rats have not been recorded on the island however it is possible that they may occur in the future. Monitoring programs identified above should include methods to determine the presence of rats.

Fire

- The dense grasslands of Aureed are highly flammable in the late dray season. Irregular burning has had a significant impact on biodiversity values, in particular the regeneration of native bush and culturally important plants such as Ubar, Gaibui, Ak, Bodo, Auboi, Duwah and Usarkun.
- Existing management of other islands which excludes fire is complimentary to maintaining biocultural values.

TEK

- Working in partnership with RNTBCs and Traditional Owners to continue documentation of TEK particularly seasonal knowledge and of plants and animals with cultural significance.
- Further survey and documentation of the cultural heritage values of the island such as well sites, old settlements and garden areas.
- Incorporation of information with the TSRA TEK system and continue to develop opportunities toward dissemination of information to the community.

Vegetation and Habitat Monitoring

- Piner forests are known to be subject threatened on Great Barrier Reef islands because of threatening processes. Design and implementation of long term monitoring to determine trends in condition is recommended.
- Regular monitoring of shorelines and collection of rubbish washed up on beaches.

Plants

- Carry out follow up surveys of all islands in growing season. Because surveys have only been carried out in the late dry season it is likely that additional species of herbs and vines will be recorded.
- Utilise flora data in combination with existing data sets to undertake regional biogeographic analysis of coral cay islands.

Animals

- Surveys have only been carried out in the late dry season and were rapid in nature. Further survey effort in other seasons is required particularly for islands where no trapping was carried out (Yauk and Bak) and for islands where time spent undertaking terrestrial birds survey was constrained due to logistical constraints.
- Targeted surveys to identify (possible) breeding sites and foraging habitat for beach stone-curlew. The location of any breeding sites for the beach stone-curlew should be recorded so that these sites can be monitored and afforded protection from threatening processes.
- Targeted surveys to identify (possible) breeding sites for little tern. The location of any breeding sites for little tern should be recorded so that these sites can be monitored and afforded protection from threatening processes. Uncertainty as to the movements and breeding of populations in the Torres Strait means that surveys should be conducted in both summer and winter.
- Surveys of waders should be conducted whenever possible (in summer or during times of passage) to determine the importance of the islands and the region to these species.
- Seasons monitoring of Black Noddy nesting on Pisonia islands.
- Targeted survey on Aureed to collect the unidentified Moegay (skink) and to determine identity.
- Monitoring of significant population of Makas (*Melomys burtoni*) on Umagar. Collection on DNA sample and analysis to determine genetics in relation to populations on Damud and other islands.

Data

- Storage and management of data sets for ready access for future surveys, management needs and for incorporation into the TSRA GIS, Fulcrum or other tools used by Rangers.

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APPENDICES

Appendix A. Summary of Vegetation Communities and Regional Ecosystems

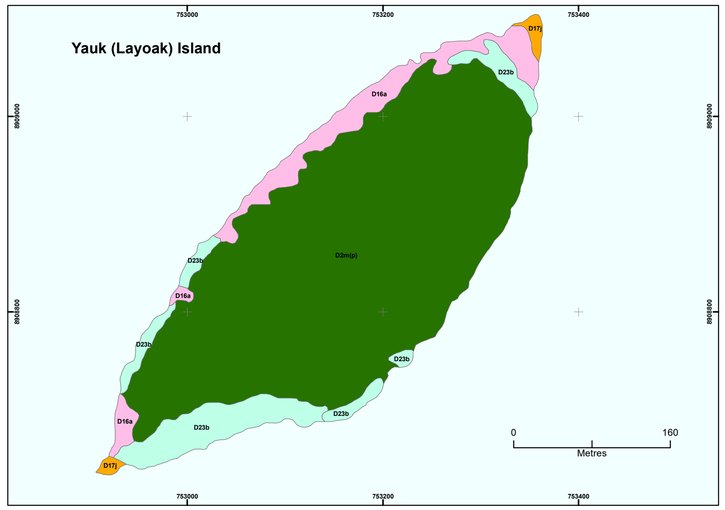
TSI Veg. Com.	Local Description	Technical Description	Geology & Landform	Regional Ecosystem	Conservation Status[3]		Aureed	Aukane	Bak	Igab	Kabbikane	Mauar	Mimi	Umagar	Yaok
					Remnant	Biodiversity									
		Deciduous/Semi deciduous vine forest and vine thicket													
2m	Ubar, Kubil Gim, Ak, Usarkun, Bodo, Naiwa, Kubi +/- Piner	Semi-deciduous notophyll vine forest +/- *Pisonia grandis*					X		X	X		X	X	X	
2m (p)	Piner	Semi-deciduous notophyll vine forest of *Pisonia grandis*							X				X	X	X
		Grasslands & grassland complexes													
17j	Pulla, Gurrawad, Susul Pui	Low *Spinifex sericeus* + *Vigna marina* + *Ipomoea pes-caprae* subsp. *brasiliensis* + *Sesuvium portulacastrum* grassland and forbland complex.	Foredune	3.2.24	Of Concern	Of Concern	X	X	X	X		X	X	X	X
		Coastal Dune Complexes													
16a	Komak, Mukmai, Ak, Dell, Gabul Dell, Gabau Rus, Kowsar, Pulla, Urab	Coastal foredune grassland, herbland and shrubland complex. (17j/14y).	Foredune	3.2.24/3.2.25	Of Concern	Of Concern	X	X		X	X	X	X		X
16h		Low groved notophyll vine thicket + *Terminalia muelleri* + *Diospyros maritima* + *Premna serratifolia* + *Thespesia populneoides* + *Manilkara kauki* (2y/17j							X	X	X	X	X		

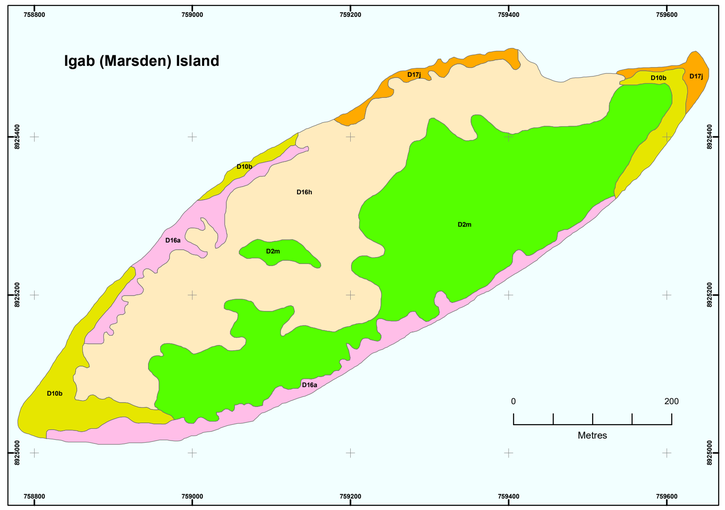
[3] Conservation status follows the remnant status of vegetation under the *Vegetation Management Act 1999*. The Biodiversity Status is based on an assessment of the condition of remnant vegetation in addition to the criteria used to determine the class under the *Vegetation Management Act 1999*. It is used for a range of planning and management applications.

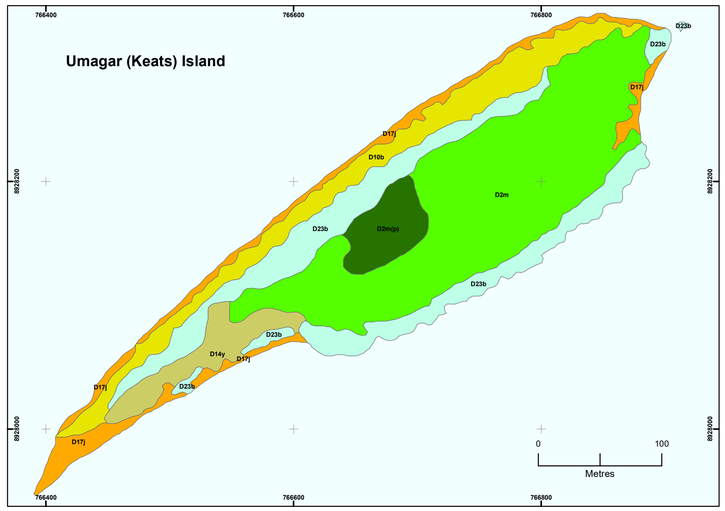
TSI Veg. Com.	Local Description	Technical Description	Geology & Landform	Regional Ecosystem	Conservation Status[3]		Aureed	Aukane	Bak	Igab	Kabbikane	Mauar	Mimi	Umagar	Yaok
					Remnant	Biodiversity									
		– 80/20).													
		Shrublands & shrubland complexes													
14y	Komak, Mukmai, Ak, Dell, Gabul Dell, Kowsar, Pulla	Low *Premna serratifolia* + *Cordia subcordata* +/- *Pemphis acidula* +/- *Drypetes deplanchei* shrubland.	Foredune	3.2.25	Of Concern	Of Concern		X	X				X	X	
		Regrowth Shrublands													
Re	Komak	Regrowth low open/closed shrubland of *Premna serratifolia* and *Salacia disepala*	Dune	Non-remnant	-	-	X								
		Casuarina dominant woodland and open forest													
10a`	Gaibui	*Casuarina equisetifolia* open forest + *Diospyros maritima* + *Premna serratifolia* + *Milletia pinnata*.						X	X		X	X			
10b	Gaibui	*Casuarina equisetifolia* woodland and open forest +/- *Terminalia catappa* woodland and open forest.					X	X	X	X	X		X	X	
		Anthropogenically altered (secondary) vine forest and thicket													
22b		Semi deciduous vine thicket (secondary) + *Buchanania arborescens* + *Manilkara kauki* + *Scolopia braunii* + *Drypetes deplanchei* + *Terminalia muelleri*					X								
23b	Murr	*Pemphis acidula* +/- *Suriana maritima* +/- *Osbornia octodonta* shrubland							X		X	X	X	X	X

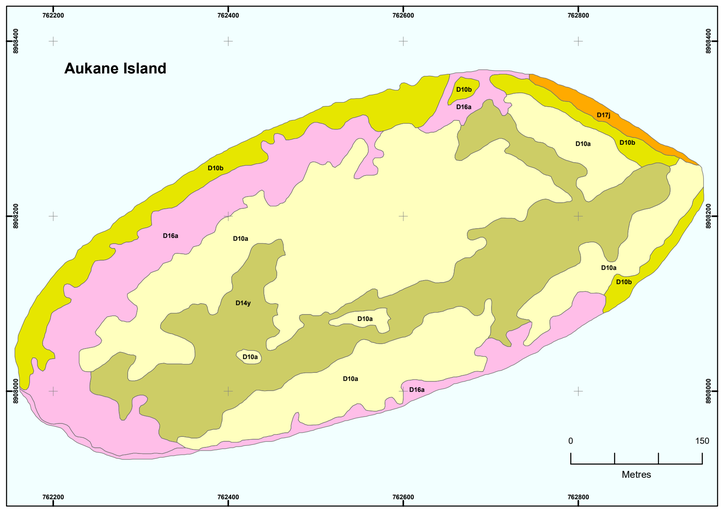
TSI Veg. Com.	Local Description	Technical Description	Geology & Landform	Regional Ecosystem	Conservation Status[3]		Aureed	Aukane	Bak	Igab	Kabbikane	Mauar	Mimi	Umagar	Yaok
					Remnant	Biodiversity									
		Anthropogenic Grasslands													
Cl	Sand Beach-Pulla. Gurrawad, Grass medicine, Gasi, Dell, Gabul Dell, Komak, Kowsar, Gaibui, Urab	Grasslands dominated by *Cenchrus brevisetosus* with *Ipomoea pes-capre* subsp. *brasiliensis, Bulbostylis barbarta, Cyperus pedunculata*, *Tridax procumbens**, *Themeda arguens* and *Tacca leontopetaloides*. Scattered emergent shrubs.	Dune	Non-remnant	-	-	X					X			

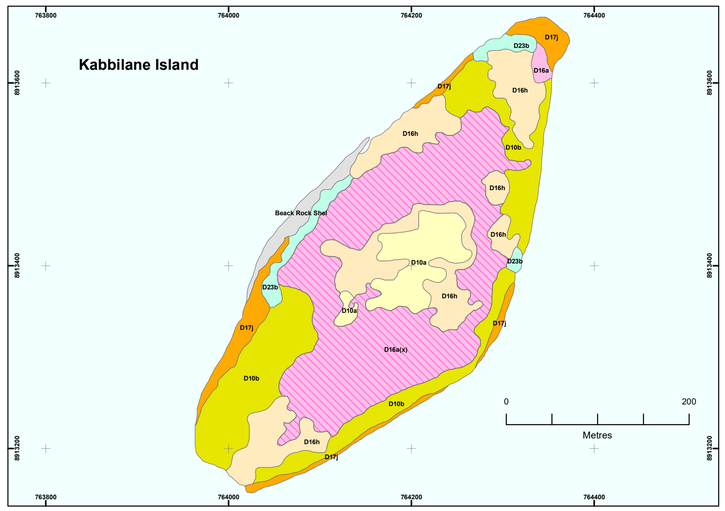
Appendix B. Vegetation Communities Mapping

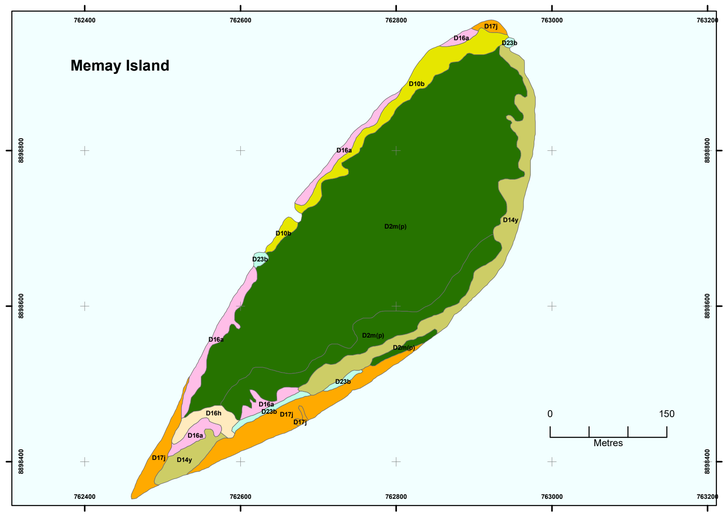


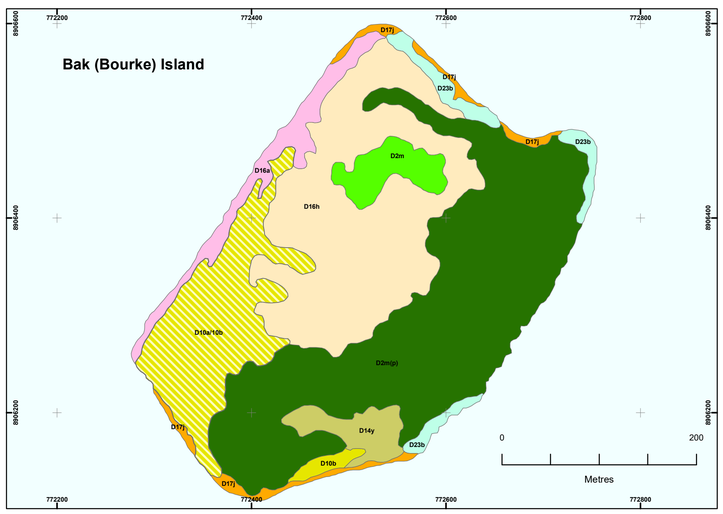


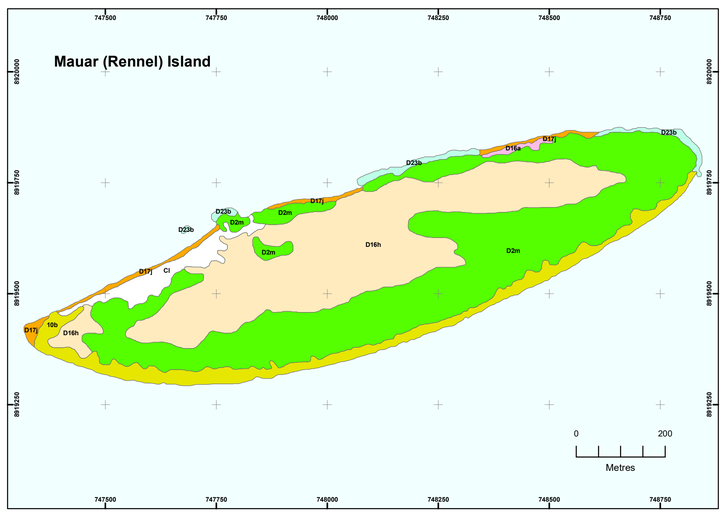












Legend

Vegcode

Cleared

D10a

D10a/D10b

D10b

D14y

D16a

D16a(x)

D16h

D17j

D23b

D2m

D2m(p)

Beach Rock

Re

Appendix C. Vegetation Survey Site Data

AUREED

Site #	Lat	Long	Vegetation Description	Cultural Plants	VC	RE	Emergent, Canopy, Subcanopy, Understorey, Groundcover
AR01	9.94737	143.29331	Open woodland (6-10m) of *Casuarina equisetifolia* with scattered *Cocos nucif*era and shrubs of *Premna serratifolia*. Dense grassy groundcover of *Spinifex longifolius, Lepturus repens, Ipomoea pes-capre subsp. brasiliensis, Cassytha pubescens, Euphorbia pallens, Mukia maderaspatata, Josephinia imperatricis, Cenchrus brevisetosus, Rynchosia minima* var. *australis, Bulbostylis barbarta, Cyperus tetracuspis*	Gaibui, Erab, Pulla, Muzarugh, Susul Pui	10b	3.2.6a	Emergent; 0 Canopy: Ht 6-10m, PCC 30%; *Casuarina equisetifolia var. incana* (95%), *Cocos nucifera* (5%) Subcanopy: 0 Understorey: 0 Groundcover: Ht 0-0.5m; PCC 90%. *Spinifex longifolius* (40%), *Lepturus repens* (30%), *Ipomoea pes-capre subsp. brasiliensis* (10%), *Cassytha pubescens* (5%), *Euphorbia pallens* (5%), *Mukia maderaspatata* (5%), *Josephinia imperatricis* (1%), *Cenchrus brevisetosus* (1%), *Rynchosia minima var. australis* (1%), *Bulbostylis barbarta* (1%), *Cyperus tetracuspis* (1%)
AR02	9.94735	143.29422	Grassland dominated by *Cenchrus brevisetosus* with infestations of *Agave sisalana*,* scattered *Cocos nucifera* and shrubs of *Premna serratifolia*. Groundcover with *Ipomoea pes-capre* subsp. *brasiliensis* and *Cassytha pubescens*. An anthropogenic community following clearing of Wongai scrub and subsequent infrequent burning. Heavy invasion of Agave spreading throughout this tip of the island. Past settlement area with plants spreading from original plantings. Control effort recommended.	Manilla Rope, Erab, Komak, Pulla, Muzarugh	G (a)	Non-R	Emergent: Ht 1-5m, PCC 10%; *Agave sisalana* (90%), *Cocos nucifera* (5%), *Premna serratifolia* (5%) Canopy: 0 Subcanopy: 0 Understorey: 0 Groundcover: Ht 0-1m, PCC 100%; *Cenchrus brevisetosus* (90%), *Cassytha pubescens* (5%), *Ipomoea pes-capre subsp. brasiliensis* (5%),
AR03	9.94907	143.29303	Grassland dominated by *Cenchrus brevisetosus* with shrubs of *Premna serratifolia.* Copses of shrubs throughout. An anthropogenic community following clearing of Wongai scrub and subsequent infrequent burning.	Komak, Muzarugh.	G (a)	Non-R	Emergent: Ht 1-2m, PCC <5%; *Premna serratifolia* (100%), *Cyclophyllum maritimum, Terminalia muelleri* Canopy: 0 Subcanopy: 0 Understorey: 0 Groundcover; Ht 0-1m, PCC 100%; *Cenchrus brevisetosus* (95%), *Wahlenbergia caryophylloides* (1%), *Eragrostis* sp. (1%), *Themeda arguens* (3%)

Site #	Lat	Long	Vegetation Description	Cultural Plants	VC	RE	Emergent, Canopy, Subcanopy, Understorey, Groundcover
AR04	9.95058	143.29287	Thicket dominated by *Scolopia braunii* with *Scaevola taccada, Premna serratifolia, Psychotria poliostemma, Litsea glutinosa, Thespesia populnea, Smilax australis, Bombax ceiba* and *Polyscias macgillivraei*. Copses of shrubs throughout. An anthropogenic community following clearing of Wongai scrub and subsequent infrequent burning.	Irrh Whirrh, Komak, Boman, Gnib Gnib, Wana, Wapada	14y	Non-R	Emergent; Ht 5-10m, PCC <5%; *Cocos nucifera* Canopy: 0 Subcanopy: 0 Understorey: Ht 2-4m, PCC 90%; *Scolopia braunii* (50%) *Scaevola taccada* (5%), *Premna serratifolia* (15%), *Psychotria poliostemma* (5%), *Litsea glutinosa* (5%), *Thespesia populnioides* (5%), *Smilax australis* (5%) *Bombax ceiba* (5%), *Polyscias macgillivarei* (5%). Groundcover: Ht 0-1m, Leaf litter 100%
AR05	9.95233	143.29293	Thicket dominated by *Bombax ceiba, Planchonella obovata, Thespesia populnea, Morinda citrifolia, Smilax australis* and *Macaranga tanarius*. Copses throughout with bare grassy areas between.	Wapada, Ebaith, Boman, Gnib Gnib, Bibi	14y	Non-R	Emergent: 0 Canopy: 0 Subcanopy: 0 Understorey: Ht 2-5m, PCC 90%; *Bombax ceiba* (20%), *Planchonella obovata* (10%), *Thespesia populnioides* (10%), *Morinda citrifolia* (10%), *Smilax australis* (10%), *Macaranga tanarius* (10%), *Diospyros maritima* (10%), *Diospyros compacta* (10%), *Diospyros geminata* (10%) Groundcover: Ht 0-1m, Leaf litter 100%
AR06	9.95118	143.29162	Grassland dominated by *Cenchrus brevisetosus* and *Themeda arguens* with scattered low shrubs 1-2m of *Flueggia virosa* subsp. *melanthesioides, Bridelia tomentosa* and *Breynia oblongifolia*. Additional groundcovers of *Ipomoea pes-capre* subsp. *brasiliensis, Tridax procumbens*, Evolvulus alsinoides, Cassytha pubescens* and *Boerhavia mutabilis.*	Pulla, Muzarugh, Medicine grass, Kupi	G (a)	Non-R	Emergent: 0 Canopy: 0 Subcanopy: 0 Understorey: Ht 1-2m, PCC 10%; *Flueggia virosa* subsp. *melanthesioides* (50%), *Bridelia tomentosa* (25%), *Breynia oblongifolia* (25%) Groundcover: Ht 0-1m, PCC 95%. *Cenchrus brevisetosus* (80%), *Themeda arguens* (15%), *Ipomoea pes-capre* subsp. *brasiliensis* (1%), *Tridax procumbens** (1%), *Evolvulus alsinoides* (1%), *Cassytha pubescens* (1%), *Boerhavia mutabilis* (1%)
AR07	9.95141	143.28848	Linear woodland (4-6m) on foredunes with *Casuarina equisetifolia* var. *incana* and scattered emergents of *Cocos nucifera*. Degraded Casuarina woodland with likely impacts from irregular fires.	Gaibui, Erab, Puti, Gurrawad, Pulla, Aipi, Muzarugh, Susul Pui	10b	3.2.6a	Emergent; Ht 5-10m, PCC <5%; *Cocos nucifera* Canopy: Ht 4-6m, PCC 30%; *Casuarina equisetifolia* var. *incana* (100%), Subcanopy: 0 Understorey: Ht 1-2m, PCC 10%; *Flueggia virosa* subsp. *melanthesioides* (50%), *Bridelia tomentosa* (25%), *Breynia oblongifolia* (25%) Groundcover: Ht 0-1m, PCC 95%. *Euphorbia pallens* (25%), *Thurrea involuta* (20%), *Josephinia imperatricis* (15%), *Sesuvium portulcastrum* (10%), *Achyranthes aspera* (1%), *Salsola australis* (5%), *Ipomoea pes-capre* subsp. *brasiliensis* (15%), *Tridax procumbens** (1%), *Cassytha pubescens* (1%), *Boerhavia mutabilis* (1%)

Site #	Lat	Long	Vegetation Description	Cultural Plants	VC	RE	Emergent, Canopy, Subcanopy, Understorey, Groundcover
AR08	9.95337	143.28776	Copses of low shrubland/thicket (2-3m) of *Ficus opposita, Drypetes deplanchei, Diospyros compacta, Terminalia muelleri* and *Gymnosporia inermis* with sprawling *Cassytha pubescens*. Groundcover bare sand and grassland/herbland with *Cenchrus brevisetosus*. Copses throughout with bare grassy areas between.	Szar Szar, Ak, Kubi, Mipa, Pitader, Muzarugh	14y	Non-R	Emergent: Canopy: 0 Subcanopy: 0 Understorey: Ht 2-4m, PCC 30%; *Ficus opposita* (5%), *Drypetes deplanchei* (40%), *Diospyros compacta* (30%), *Terminalia muelleri* (10%), *Gymnosporia inermis* (10%), *Cassytha pubescens* (5%) Groundcover: Ht 0-1m, PCC 30%
AR09	9.95405	143.28697	Low closed forest (5-8m) dominated by Manilkara kauki with *Diospyros maritima, Celtis philippensis, Terminalia muelleri, Cyclophyllum maritimum, Guettarda speciosa* and *Capparis lucida*. Understorey of *Micromelum minutum, Salacia disepala, Aristolochia chalmersii, Pleomele angustifolia, Diospyros compacta, Gymnosporia inermis* and *Eugenia reinwardtiana.* Near Telecommunications Tower	Ubar, Kubil Gim, Mipa, Api, Buzz, Pitader, Muzarugh, Usarkun, Ak, Kubi, Bodo, Kurad	2m	3.2.28	Emergent: 0 Canopy: Ht 5-8m, PCC 90%; *Manilkara kauki* (70%), *Diospyros maritima* (10%), *Celtis philippensis* (5%), *Terminalia muelleri* (5%), *Cyclophyllum maritimum* (5%), *Capparis lucida* (5%). Subcanopy: 0 Understorey: Ht 2-4m, PCC 30%; *Ficus opposita* (5%), *Drypetes deplanchei* (40%), *Diospyros compacta* (30%), *Terminalia muelleri* (10%), *Gymnosporia inermis* (10%), *Cassytha pubescens* (5%) Groundcover: Ht 0-1m, PCC <5%, leaf litter 95%.
AR10	9.9538	143.28624	Woodland of *Casuarina equisetifolia* var. *incana* with grassland / herbland groundcover of *Ipomoea pes-capre* subsp. *brasiliensis, Lepturus repens, Tridax procumbens*, Euphorbia pallens* and *Cassytha pubescens*. Casuarina trees are senescing throughout foredune areas.	Gaibui, Pulla, Muzarugh, Susul Pui	10b	3.2.6a	Emergent: 0 Canopy: Ht 4-8m, PCC 30%; *Casuarina equisetifolia* var. *incana* (100%) Subcanopy: 0 Understorey: 0 Groundcover: Ht 0-1m, PCC 20%, *Ipomoea pes-capre* subsp. *brasiliensis* (60%), *Lepturus repens* (20%), *Tridax procumbens** (10%), *Euphorbia pallens* (5%), *Cassytha pubescens* (5%)

Site #	Lat	Long	Vegetation Description	Cultural Plants	VC	RE	Emergent, Canopy, Subcanopy, Understorey, Groundcover
AR11	9.95427°	143.2879	Low closed forest (6-10m) dominated by *Manilkara* kauki with *Erythrina insularis, Planchonella obovata, Aglaia eleagnoidea, Diospyros compacta, Celtis paniculata, Drypetes deplanchei, Diospyros maritima* and *Cordia subcordata. Understorey of Drypetes deplanchei, Micromelum minutum, Capparis sepiaria, Polyscias macgillivraei, Diospyros maritima, Eugenia reinwardtiana, Cansjera leptostachya, Pleomele angustifolia, Gymnosporia inermis, Cassytha pubescens, Ficus* opposita *and Pandanus* sp. Groundcover with abundant seedlings throughout. Remnant example of Wongai forest. Note abundance of seedlings in groundcover.	Ubar, Naiwa, Ebaith, Usarkun, Kubi, Ak, Kubil Gim, Mukmai, Api, Bom, Kurad, Buzz, Pitader, Muzarrugh, Szar Szar, Kowsar	2m	3.2.28	Emergent: 0 Canopy: Ht 6-10m, PCC 90%; *Manilkara kauki* (40%), *Erythrina insularis* (5%), *Planchonella obovata* (5%), *Aglaia eleagnoidea* (10%), *Diospyros compacta* (5%), *Celtis paniculata* (5%), *Drypetes deplanchei* (10%), *Diospyros maritima* (10%), *Cordia subcordata* (5%), *Guettarda speciosa* (5%) Subcanopy: 0 Understorey: Ht 1-3m, PCC 30%; *Drypetes deplanchei* (35%), M*icromelum minutum* (10%), *Capparis sepiaria* (10%), *Polyscias macgillivraei* (1%), *Diospyros maritima* (20%), *Eugenia reinwardtiana* (20%), *Cansjera leptostachya* (5%), *Pleomele angustifolia* (5%), *Gymnosporia inermis* (1%), *Cassytha pubescens* (1%), *Ficus opposita* (1%), *Pandanus sp.* (1%) Ground: Ht 0-1m, PCC 30%, Leaf litter 70%; *Aglaia eleagnoidea, Micromelum minutum, Guettarda speciosa*
AR12	9.95524	143.28762	Shrubland clumps 1-4m scattered throughout open areas of grassland dominated *Cenchrus brevisetosus* with *Bulbostylis barbarta, Cyperus tatracuspis, Evolvulus alsinoides, Spermacocce* sp. (Lorim Point), *Cleome viscosa, Cassytha pubescens* and *Rynchosia minima* var. *australis*. Clumps of *Manilkara kauki, Diospyros maritima, Cyclophyllum maritimum, Drypetes deplanchei, Premna serratifolia, Gymnosporia inermis, Morinda citrifolia, Planchonella obovata, Smilax australis, Terminalia muelleri, Eugenia reinwardtiana, Breynia oblongifolia* and *Guettarda speciosa* with sprawling *Cassytha pubescens*. Self-regeneration following historic deforestation.	Muzarrugh, Ubar, Kubil Gim, Ak, Komak, Pitader, Auboi, Ebaith, Gnib Gnib, Mipa, Kurad, Bodo	16a	3.2.24	Emergent: 0 Canopy: 0 Subcanopy: 0 Understorey: Ht 1-3m, PCC 30%; *Manilkara kauki* (10%), *Diospyros maritima* (10%), *Cyclophyllum maritimum* (10%), *Drypetes deplanchei* (10%), *Premna serratifolia* (10%), *Gymnosporia inermis* (5%), *Morinda citrifolia* (10%), *Planchonella obovata* (10%), *Smilax australis* (5%), *Terminalia muelleri* (5%), *Eugenia reinwardtiana* (5%), *Breynia oblongifolia* (5%), *Guettarda speciosa* (5%) Groundcover: Ht 0-1m, PCC 50%, Leaf litter 50%*; Cenchrus brevisetosus* (60%), *Bulbostylis barbarta* (5%), *Cyperus tatracuspis* (5%), *Evolvulus alsinoides* (5%), *Spermacocce* sp. (Lorim Point) (5%), *Cleome viscosa* (5%), *Cassytha pubescens* (10%), *Rynchosia minima* var. *australis* (5%)
AR13	9.95518	143.28586	Open grassland dominated by tussocks of *Cenchrus brevisetosus* with bare sand area throughout. Likely derived grassland following historic deforestation. Additional groundcover species likely post wet season.	0	G (a)	Non-R	Emergent: 0 Canopy: 0 Subcanopy: 0 Understorey: 0 Groundcover: Ht 0 -0.5m, PCC 20%; *Cenchrus brevisetosus* (100%)

Site #	Lat	Long	Vegetation Description	Cultural Plants	VC	RE	Emergent, Canopy, Subcanopy, Understorey, Groundcover
AR14	9.95591	143.28625	Shrubland clumps 3-8m scattered throughout open areas of grassland with occasional large trees of *Manilkara kauki* and *Guettarda speciosa*. Clumps of *Terminalia muelleri, Drypetes deplanchei, Aglaia eleagnoidea, Eugenia reinwardtiana, Cyclophyllum maritimum, Celtis paniculata, Micromelum minutum, Premna serratifolia* and *Gymnosporia inermis*. Bare sand open areas dominated by *Eragrostis brownii, Bulbostylis barbarta, Cleome viscosa, Spermacocce* sp. (Lorim Point), *Wickstroemia indica* and occasional *Cenchrus brevisetosus*. Likely self-regeneration following historic deforestation. Additional groundcover species likely post wet season.	Ubar, Bodo, Mipa, Ak, Usarkun, Kurad, Api, Komak, Pitader	14y	Non-R	Emergent: 0 Canopy: 0 Subcanopy: 0 Understorey: Ht 3-8m, PCC 40%; *Manilkara kauki* (15%), *Guettarda speciosa* (10%), *Terminalia muelleri* (10%), *Drypetes deplanchei* (10%), *Aglaia eleagnoidea* (10%), *Eugenia reinwardtiana* (10%), *Cyclophyllum maritimum* (5%), *Celtis paniculata* (5%), *Micromelum minutum* (5%), *Premna serratifolia* (10%), *Gymnosporia inermis* (10%) Groundcover: Ht 0-0.5m, PCC 50%; *Eragrostis brownii* (70%), *Bulbostylis barbarta* (10%), *Cleome viscosa* (5%), *Spermacocce* sp. (Lorim Point) (5%), *Wickstroemia indica* (5%), *Cenchrus brevisetosus* (5%)
AR15	9.95633	143.28623	Woodland of *Casuarina equisetifolia* var. *incana* (8-12m) with dense subcanopy and understorey of *Manilkara kauki, Cyclophyllum maritimum, Erythrina insularis, Diospyros maritima, Micromelum minutum, Aglaia eleagnoidea, Eugenia reinwardtiana, Premna serratifolia, Gymnosporia inermis* and *Abrus precatorius.*	Gaibui, Ubar, Naiwa, Kubil Gim, Api, Usarkun, Kurad, Komak, Pitader, Thinicupu	10b	3.2.6a	Emergent: 0 Canopy: Ht 8-12m; PCC 30%; *Casuarina equisetifolia* var. *incana* (100%) Subcanopy: Ht 4-7m, PCC 60%; *Manilkara kauki* (60%), *Cyclophyllum maritimum* (10%), *Erythrina insularis* (10%), *Diospyros maritima* (10%), *Aglaia eleagnoidea* (10%) Understorey: Ht 1-3m, PCC 30%; *Drypetes deplanchei* (20%), *Aglaia eleagnoidea* (20%), *Eugenia reinwardtiana* (20%), *Cyclophyllum maritimum* (5%), *Micromelum minutum* (5%), *Premna serratifolia* (20%), *Gymnosporia inermis* (9%), *Abrus precatorius* (1%) Groundcover: Ht 0-0.5m, Leaf litter (100%)
AR16	9.95538	143.28522	Woodland of *Casuarina equisetifolia* var. *incana* (8-12m) with numerous dead Casuarina trees. Sparse shrub layer of *Premna serratifolia* with occasional regenerating Casuarina saplings. Dense groundcover dominated by *Ipomoea pes-capre* subsp. *brasiliensis* with *Cleome viscosa, Thurrea involuta, Lepturus repens, Rynchosia minima* var. *australis* and *Mukia maderaspatata.* Monitoring site. In GPS as monitoring site AR Monitor 1	Gaibui, Pulla	10b	3.2.6a	Emergent: 0 Canopy: Ht 8-12m; PCC 10%; *Casuarina equisetifolia* var. *incana* (100%) Subcanopy: 0 Understorey: Ht 1-4m, PCC 30%; *Premna serratifolia* (100%) Groundcover: Ht 0-0.5m, PCC 70%; *Ipomoea pes-capre* subsp. *brasiliensis* (75%), *Cleome viscosa* (5%), *Thurrea involuta* (5%), *Lepturus repens* (5%), *Rynchosia minima* var. *australis* (5%), *Mukia maderaspatata* (5%)

AUKANE

Site #	Lat	Long	Vegetation Description	Cultural Plants	VC	RE	Emergent, Canopy, Subcanopy, Understorey, Groundcover
AK01	9.86720°	143.39409	Woodland of *Casuarina equisetifolia* var. *incana* with occasional *Pandanus spiralis* and *Cocos nucifera*. Very sparse understorey 1-2m of *Suriana maritima, Caesalpinea bonduc, Phyllanthus novae-hollandiae, Terminalia muelleri* and *Premna serratifolia*. Groundcover of *Sesuvium portulacastrum, Achyranthes aspera, Ipomoea pes-capre* subsp. *brasiliensis, Dactyloctineum aegyptum* and *Mukia maderaspatata.* Minor infestation of *Passiflora suberosa** climbing up lower trunks of Casuarina trees on foredune. It is likely that infestation will be more robust after '*kuki*' season. Assessment including detailed mapping of population after wet season is recommended.	Gaibui, Urab, Pulla, Murr, Kowsar, Zegar Zegar, Mipa, Gurrawad, Mukmai	10b	3.2.6a	Emergent: 0 Canopy: Ht 7-12m, PCC 30%; Casuarina equisetifolia var. incana (90%), Pandanus sp. (5%), Cocos nucifera (5%) Subcanopy: 0 Understorey: Ht 1-2m, PCC <10%; Suriana maritima (60%), Caesalpinea bonduc (5%), < Cordia subcordata (5%), Phyllanthus novae-hollandiae (5%), Terminalia muelleri (5%), Premna serratifolia (20%) Groundcover: Ht 0-0.5m; PCC 30%. Sesuvium portulacastrum (70%), Ipomoea pes-capre subsp. brasiliensis (10%), Achyranthes aspera (5%), Dactyloctineum aegyptum (5%), Mukia maderaspatata (5%), Passiflora suberosa* (5%)
AK02	9.86765	143.39372	Grassland dominated by *Lepturus repens* and *Themeda arguens* with *Bulbostylis barbarta, Cleome viscosa, Euphorbia tannensis subsp. tannensis, Mukia maderaspatata, Evolvulus alsinoides, Desmodium* sp., *Spermacocce* sp. (Lorim Point) with scattered clumps of low shrubs 1-3m of *Premna serratifolia, Planchonella obovata, Morinda citrifolia, Smilax australis, Terminalia muelleri, Pittosporum ferrugineum, Celtis paniculata, Drypetes deplanchei, Cassytha pubescens, Eugenia reinwardtiana, Micromelum minutum, Ficus opposita, Passiflora suberosa*, Scolopia braunii* and *Cyclophyllum maritimum.*	Gaibui, Urab, Pulla, Murr, Kowsar, Zegar Zegar, Mipa, Gurrawad, Mukmai, Susul pui, Komak, Ebaith, Auboi, Mipa, Ak, Muzarugh, Kurad, Api, Szar Szar	16a	3.2.24	Emergent: 0 Canopy: Ht 7-12m, PCC 30%; *Casuarina equisetifolia var. incana* (90%), *Pandanus* sp. (5%), *Cocos nucifera* (5%) Subcanopy: 0 Understorey: Ht 1-2m, PCC <10%; *Suriana maritima (*60%), *Caesalpinea bonduc* (5%), *Cordia subcordata* (5%), *Phyllanthus novae-hollandaei* (5%), *Terminalia muelleri* (5%), *Premna serratifolia* (20%) Groundcover: Ht 0-0.5m; PCC 30%. *Sesuvium portulacastrum* (70%), *Ipomoea pes-capre subsp. brasiliensis* (10%), *Achyranthes aspera* (5%), *Dactyloctineum aegyptum* (5%), *Mukia maderaspatata* (5%), *Passiflora suberosa** (5%)

Site #	Lat	Long	Vegetation Description	Cultural Plants	VC	RE	Emergent, Canopy, Subcanopy, Understorey, Groundcover
AK03	9.86781	143.39444	Open forest/woodland (8-15m) of *Casuarina equisetifolia var. incana* with vine thicket species understorey of *Diospyros maritima, Terminalia muelleri, Drypetes deplanchei, Planchonella obovata, Salacia disepala, Scolopia braunii, Micromelum minutum, Phyllanthus novae-hollandaei, Wickstroemia indica, Abrus precatorius* and *Morinda citrifolia*. Deep leaf litter 0f 5-10cm with scattered *Microsorum grossum, Salsola australis, Passiflora suberosa** and *Spermacocce* sp. (Lorim Point). Minor infestation of *Passiflora suberosa** climbing up lower trunks of Casuarina trees and on ground. It is likely that infestation will be more robust after kuki season. Assessment including detailed mapping of population after wet season is recommended.	Gaibui, Mipa, Ebaith, Auboi, Ak, Irrh Whirrh, Api	10b	3.2.6b	Emergent: 0 Canopy: Ht 7-12m, PCC 30%; *Casuarina equisetifolia var. incana* (100%) Subcanopy: 0 Understorey: Ht 1-2m, PCC 30%; *Diospyros maritima* (20%), *Terminalia muelleri* (20%), *Drypetes deplanchei* (20%), *Planchonella obovata* (15%), *Salacia disepala* (10%), *Scolopia braunii* (10%), *Micromelum minutum* (1%), *Phyllanthus novae-hollandaei* (1%), *Wickstroemia indica* (1%), *Abrus precatorius* (1%), *Morinda citrifolia* (1%). Groundcover: Ht 0-0.5m; PCC 5%. *Microsorum grossum* (50%), *Salsola australis* (40%), Passiflora suberosa* (5%), *Spermacocce* sp. (Lorim Point) (5%)

BAK

Site #	Lat	Long	Vegetation Description	Cultural Plants	VC	RE	Emergent, Canopy, Subcanopy, Understorey, Groundcover
BK01	9.88622	143.4839	Closed littoral vine forest (8-12m) dominated by *Manilkara kauki* with *Terminalia muelleri, Planchonella obovata* and *Celtis paniculata*. Subcanopy with *Cordia subcordata, Drypetes deplanchei, Diospyros maritima, Guettarda speciosa* and *Salacia disepala.* Understorey of *Eugenia reinwardtiana, Cordia subcordata, Micromelum minutum, Drypetes deplanchei, Manilkara kauki, Aglaia eleagnoidea, Smilax australis, Capparis lucida, Flagellaria indica, Diospyros compacta* and *Cassytha pubescens*. Groundcover with abundant seedlings of *Aglaia eleagnoidea* and *Diospyros maritima*. Dense recruitment of seedlings in groundcover of *Aglaia eleagnoidea* and *Diospyros maritima.*	Ubar, Bodo, Mipa, Ak, Usarkun, Kurad, Api, Komak, Mukmai, Ebaith, Kubil Gim, Gnib Gnib, Crawling buzz, Kubi, Muzarrugh	2m	3.2.28	Emergent: 0 Upper: Ht 8-12m; PCC 90%; Manilkara kauki (70%); Terminalia muelleri, (10%), Planchonella obovata (10%), Celtis paniculata (10%) Subcanopy: Ht 4-7m, PCC 20%; Cordia subcordata (40%), Drypetes deplanchei (30%), Diospyros maritima (20%), Guettarda speciosa (5%), Salacia disepala (5%) Understorey: Ht 1-3m, PCC 20%; Eugenia reinwardtiana (35%), Cordia subcordata (5%), Micromelum minutum (5%), Drypetes deplanchei (10%), Manilkara kauki (5%), Aglaia eleagnoidea (5%), Smilax australis (5%), Capparis lucida (5%), Flagellaria indica (5%), Diospyros compacta (5%), Cassytha pubescens (5%) Groundlayer: Ht 0-0.5m, PCC 20%; Aglaia eleagnoidea (50%), Diospyros maritima (50%) seedlings
BK02	9.88546	143.48318	Low open forest (7-9m) of *Casuarina equisetifolia* var. *incana* with a sparse understorey of *Suriana maritima, Sophora tomentosa, Morinda ctrifolia, Caesalpinia bonduc, Cordia subcordata, Argusia argentea* and *Scaevola taccada*. Sparse groundcover of *Ipomoea pes capre* subsp. brasiliensis, *Tridax procumbens**, *Canavalia rosea* and *Achyranthes aspera*. MONITORING SITE. In GPS as Bak Monitoring 1	Gaibui, Gabul Del, Del, Mukmai, Murr, Auboi, Komak, Gaibui, Pulla, Zeger Zeger, Medicine Grass	10b	3.2.6a	Emergent: 0 Upper: Ht 7-9m, PCC 30%; Casuarina equisetifolia var. incana (100%) Subcanopy: 0 Understorey: Ht 0.5-3m, PCC 10%; Suriana maritima (50%), Sophora tomentosa (10%), Morinda citrifolia (10%), Caesalpinia bonduc (10%), Cordia subcordata (5%), Argusia argentea (5%), Scaevola taccada (10%) Groundcover: Ht 0-0.5m, PCC <5%;

Site #	Lat	Long	Vegetation Description	Cultural Plants	VC	RE	Emergent, Canopy, Subcanopy, Understorey, Groundcover
BK03	9.88278	143.48478	Open shrubland or thicket (2-4m) with bare sand areas dominated by *Ipomoea pes capre subsp. brasiliensi*s. Thicket patches with *Manilkara kauki, Planchonella obovata, Diospyros maritima, Terminalia muelleri, Premna serratifolia, Eugenia reinwardtiana, Drypetes deplanchei, Micromelum minutum, Diospyros compacta, Morinda citrifolia, Gymnosporia inermis, Ximenia americana, Abrus precatorius*.	Pulla, Ubar, Ebaith, Kubil Gim, Mipa, Komak, Kurad, Ak, Api, Kubi, Auboi, Pitader, Thinicup	14y	Non-R	Emergent: 0 Upper: 0 Subcanopy: 0 Understorey: Ht 2-4m, PCC 30%; *Manilkara kauki* (30%), *Planchonella obovata* (20%), *Diospyros maritima* (10%), *Terminalia muelleri* (10%), *Premna serratifolia* (5%), *Eugenia reinwardtiana* (5%), *Drypetes deplanchei* (5%), *Micromelum minutum* (1%) *Diospyros compacta* (5%), *Morinda citrifolia* (1%), *Gymnosporia inermis* (5%), *Ximenia americana* (1%), *Abrus precatorius* (1%), *Smilax australis* (1%) Groundcover: Ht 0-0.5m, PCC 20%; *Ipomoea pes capre subsp. brasiliensis* (80%), *Canavalia rosea* (5%), *Cyperus tetracuspis* (5%), *Xenostegia tridentata* (10%).
BK04	9.88239°	143.48488	Herbland on frontal dune with occasional low shrubs <1m of *Suriana maritima, Ximenia americana, Caesalpinea bonduc, Colubrina asiatica* and *Cordia subcordata*. Herbs of *Josephinia imperatricis, Sesuvium portulacastrum, Euphorbia tannensis* subsp. *tannensis, Tribulus cistoides, Vitex* sp., *Salsola australis, Thurrea involuta* and *Cassytha pubescens*	Murr, Pulla, Pitader, Zeger Zeger, Mukmai. Pagal Bui, Gurraghir, Gurrawad, Susul Pui, Muzarrugh	16a	3.2.24	Emergent: 0 Upper: 0 Subcanopy: 0 Understorey: Ht 0.5-1m, PCC 10%; *Suriana maritima* (70%), *Ximenia americana (5%), Caesalpinia bonduc (5%), Colubrina asiatica (5%), Cordia subcordata (10%), Vitex sp. (5%)* Groundcover: Ht 0-0.5m, PCC 20%; *Sesuvium portulacastrum (50%), Josephinia imperatricis (10%), Cassytha pubescens (10%), Lepturus repens (10%), Euphorbia tannensis subsp. tannensis (5%), Tribulus cistoides (5%), Salsola australis (5%), Thurrea involuta (5%)*
BK05	9.88397	143.48663	Closed forest (12-16m) dominated by *Manilkara kauki* and *Erythrina insularis* with *Pisonia grandis* and *Diospyros maritima*. Subcanopy and lower tree layer dominated by *M. kauki* with *D. maritima* and *Aglaia eleagnoidea*. Sparse understorey of *Eugenia reinwardtiana, Flagellaria indica* and *Capparis lucida*. Dense leaf litter. Very simple forest where *Pisonia grandis* is a minor canopy component.	Ubar, Naiwa, Piner, Kubil Gim, Usarkun, Kurad, Crawling Buzz,	2aa	3.2.29	Emergent: 0 Upper: Ht 12-16m, PCC 80%; *Manilkara kauki* (40%), *Erythrina insularis* (40%), *Pisonia grandis* (10%) Subcanopy: Ht 6-9m, PCC 20%; *Manilkara kauki* (40%), Diospyros maritima (40%), *Aglaia eleagnoidea* (20%) Understorey: Ht 1-3m, PCC 10%; *Eugenia reinwardtiana* (60%), *Flagellaria indica* (10%), *Capparis lucida* (30%) Groundcover: Ht 0-0.5m, Leaf litter (100%)

IGAB

Site #	Lat	Long	Vegetation Description	Cultural Plants	VC	RE	Emergent, Canopy, Subcanopy, Understorey, Groundcover
IG01	9.71558	143.35903	Dune woodland (5-9m) of Casuarina equisetifolia var. incana with scattered low shrubs of Cordia subcordata and Suriana maritima. Groundcover of Ipomoea pes capre subsp. brasiliensis, Sesuvium portulcastrum, Tridax procumbens*, Cassytha pubescens, Thurrea involuta, Euphorbia pallens, Euphorbia heterophylla*, Lepturus repens and Josephinia imperatricis. Scattered Painted Spurge on dune	Gaibui, Mukmai, Murr, Pulla, Gurrawad, Muzarrugh, Susul Pui, Pagal Pui	10b	3.2.6a	Emergent: 0 Upper: Ht 5-9m, PCC 30%; Casuarina equisetifolia var. incana (100%) Subcanopy: 0 Understorey: Ht 1-3m, PCC 30%; Suriana maritima (50%), Cordia subcordata (50%) Groundcover: Ht 0-0.5m, PCC 30%; Ipomoea pes capre subsp. brasiliensis (40%), Sesuvium portulcastrum (20%), Tridax procumbens* (5%), Cassytha pubescens (5%), Thurrea involuta (5%), Euphorbia pallens (5%), Euphorbia heterophylla* (5%), Lepturus repens (10%), Josephinia imperatricis (5%)
IG02	9.71538	143.36008	Low vine thicket/shrubland (4-8m) of Manilkara kauki, Diospyros compacta, Eugenia reinwardtiana, Premna serratifolia, Ixora timorensis, Planchonella obovata, Aglaia eleagnoidea, Cyclophyllum maritimum, Chionanthus ramiflorus, Drypetes deplanchei, Micromelum minutum and Gymnosporia inermis. Open grassy groundcover between thickets with Cyperus tetracuspis, Cleome viscosa, Eragrostis sp., Spermacocce sp. (Lorim Point) and Cassytha pubescens. Scattered emergents of Casuarina equisetifolia var. incana.	Ubar, Kubi, Kurad, Komak, Pitader, Ebaith, Usarkun, Ak, Api, Muzarrugh, Gaibui	14y	3.2.25	Emergent: Ht 8-10m, PCC <5%; Casuarina equisetifolia var. incana (100%) Upper: 0 Subcanopy: 0 Understorey: Ht 4-8m, PCC 60%; Manilkara kauki (30%), Diospyros compacta (10%), Eugenia reinwardtiana (10%), Premna serratifolia (10%), Ixora timorensis (10%), Planchonella obovata (10%), Aglaia eleagnoidea (10%), Cyclophyllum maritimum (5%), Chionanthus ramiflorus (5%), Drypetes deplanchei (5%), Micromelum minutum (5%), Gymnosporia inermis (5%) Groundcover: Ht 0-0.5m, PCC 30%; Cyperus tetracuspis (20%), Cleome viscosa (20%), Eragrostis sp. (40%), Spermacocce sp. (Lorim Point) (5%), Cassytha pubescens (10%)
IG03	9.71578	143.3603	Closed forest (12-15m) dominated by Manilkara kauki with Diospyros maritima. Subcanopy and lower tree layer dominated by Manilkara kauki with Diospyros maritima and Aglaia eleagnoidea. Sparse understorey of Eugenia reinwardtiana, Micromelum minutum, Pleomele angustifolia, Terminalia muelleri, Flagellaria indica, Cassytha pubescens and Diospyros compacta. Scattered emergents of Casuarina equisetifolia var. incana.	Ubar, Kubil Gim, Mipa, Api, Buzz, Pitader, Muzarugh, Usarkun, Ak, Kubi, Kurad, Gaibui	2m	3.2.28	Emergent: Ht 15-18m, PCC <5%; Casuarina equisetifolia var. incana (100%) Upper: Ht 10-16m, PCC 80%; Manilkara kauki (70%), Diospyros maritima (20%), Celtis paniculata (5%), Erythrina insularis (5%) Subcanopy: Ht 8-12m; PCC 20%; Manilkara kauki (60%), Diospyros maritima (20%), Aglaia eleagnoidea (20%) Understorey: Ht 1-4m, PCC 30%; Manilkara kauki (10%), Diospyros compacta (10%), Eugenia reinwardtiana (10%), Premna serratifolia (10%), Ixora timorensis (10%), Pleomele angustifolia (1%), Aglaia eleagnoidea (10%), Drypetes deplanchei (10%), Micromelum minutum (5%), Carissa laxiflora (5%), Scolopia braunii (5%), Cansjera leptostachya (1%), Diospyros maritima (5%), Psychotria poliostemma (1%), Jacquemontia paniculata (1%), Smilax australis (1%), Salacia disepala (5%) Groundcover: Ht 0-0.5m, 60%; Themeda arguens (85%), Bulbostylis barbarta (5%), Evolvulus alsinoides (5%), Cassytha pubescens (5%), unknown Palm seedling (DGF IG03)

Site #	Lat	Long	Vegetation Description	Cultural Plants	VC	RE	Emergent, Canopy, Subcanopy, Understorey, Groundcover
IG04	9.71476°	143.3609	Low vine thicket/shrubland (5-9m) with open patches throughout. Dominated by Manilkara kauki, Scolopia braunii, Aglaia eleagnoidea, Drypetes deplanchei, Erythrina insularis, Terminalia muelleri and Diospyros compacta. Understorey of Chionanthus ramiflorus, Carissa laxiflora and Smilax australis. Groundcover of dense leaf litter and Themeda arguens, Eragrostis sp., Evolvulus alsinoides, Tridax procumbens*, Cassytha pubescens and Spermacocce sp. (Lorim Point).	Ubar, Irrrh Whiirh, Usarkun, Ak, Naiwa, Mipa, Kubi, Patal Pui, Gnib Gnib, Muzarugh	14y	3.2.25	Emergent: 0 Upper: Ht 5-9m, PCC 70%; Manilkara kauki (50%), Scolopia braunii (10%) Aglaia eleagnoidea (10%), Drypetes deplanchei (10%), Erythrina insularis (5%), Terminalia muelleri (10%), Diospyros compacta (10%) Subcanopy: 0 Understorey: Ht 1-3m, 30%; Chionanthus ramiflorus (10%), Carissa laxiflora (10%), Smilax australis (5%), Scolopia braunii (30%) Aglaia eleagnoidea (10%), Drypetes deplanchei (20%), Diospyros compacta (15%) Groundcover: Ht 0-0.5m, 40%; Themeda arguens (50%), Eragrostis sp. (30%), Evolvulus alsinoides (5%), Tridax procumbens* (5%), Cassytha pubescens (5%), Spermacocce sp. (Lorim Point) (5%)
IG05	9.71476°	143.36309	Closed forest (10-12m) dominated by Manilkara kauki with Aglaia eleagnoidea and Drypetes deplanchei. Subcanopy and lower tree layer dominated by Manilkara kauki with Diospyros maritima and Aglaia eleagnoidea. Understorey with abundant saplings of Diospyros maritima, Aglaia eleagnoidea with Capparis lucida.	Ubar, Usarkun, Kubil Gim, Ak	2m	3.2.28	Emergent: 0 Upper: Ht 10-12m; 80%; Manilkara kauki (50%), Aglaia eleagnoidea (25%), Drypetes deplanchei (25%) Subcanopy: Ht 5-8m; PCC 20%; Manilkara kauki (60%), Diospyros maritima (20%), Aglaia eleagnoidea (20%) Understorey: Ht 1-3m, PCC 20%; Manilkara kauki (10%), Diospyros compacta (10%), Capparis lucida (10%), Eugenia reinwardtiana (10%), Premna serratifolia (10%), Aglaia eleagnoidea (10%), Drypetes deplanchei (10%), Micromelum minutum (5%), Carissa laxiflora (5%), Scolopia braunii (5%), Cansjera leptostachya (1%), Diospyros maritima (5%), Psychotria poliostemma (1%), Jacquemontia paniculata (1%), Smilax australis (1%), Salacia disepala (5%) Groundcover: Ht 0-0.5m, <5%; Leaf litter (99%), Drynaria quercifolia (1%)
IG06	9.71453	143.36376	Low vine thicket/shrubland (5-9m) with open patches throughout. Dominated by Manilkara kauki, Scolopia braunii, Casuarina equisetifolia var. incana, Aglaia eleagnoidea, Pittosporum ferrugineum, Drypetes deplanchei, Erythrina insularis, Terminalia muelleri, Diospyros compacta, Carrisa laxiflora, Dodonaea viscosa and Smilax australis. Groundcover of Eragrostis sp., Mukia maderaspatata, Rynchosia minima var. australis, Tribulus cistoides, Euphorbia pallens, Tridax procumbens*, Cassytha pubescens and Spermacocce sp. (Lorim Point). Small clump of Passiflora at base of Erythrina insularis tree. Possibly more common. Requires post wet season surveys and targeted control.	Ubar, Irrrh Whiirh, Usarkun, Ak, Naiwa, Mipa, Kubi, Gnib Gnib, Muzarrugh	14y	3.2.25	Emergent: 0 Upper: 0 Subcanopy: 0 Understorey: Ht 1-4m; PCC 50%; Manilkara kauki (30%), Scolopia braunii (10%), Casuarina equisetifolia var. incana (5%), Aglaia eleagnoidea, (10%), Pittosporum ferrugineum (5%), Drypetes deplanchei (10%), Erythrina insularis (5%), Terminalia muelleri (5%), Diospyros compacta, Carissa laxiflora, Dodonaea viscosa (5%), Smilax australis (5%) Groundcover: Ht 0-0.5m, PCC 30%; Eragrostis sp. (75%), Mukia maderaspatata (1%), Rynchosia minima var. australis (5%), Tribulus cistoides (5%), Euphorbia pallens (1%), Tridax procumbens* (1%), Cassytha pubescens (10%), Spermacocce sp. (Lorim Point) (1%), Passiflora suberosa* (1%)

Site #	Lat	Long	Vegetation Description	Cultural Plants	VC	RE	Emergent, Canopy, Subcanopy, Understorey, Groundcover
IG07	9.71285	143.36611	Low woodland of Casuarina equisetifolia var. incana with sparse understorey shrubs of Suriana maritima and Colubrina asiatica. Herbs of Euphorbia tannensis subsp. tannensis, Lepturus repens, Josephinia imperatricis, Euphorbia heterophylla*, Sesuvium portulacastrum and Tridax procumbens*. Scattered Painted Spurge on dune.	Gaibui, Murr, Gurraghir, Susul Pui, Gurrawad	10b	3.2.6a	Emergent: 0 Upper: Ht 4-8m, PCC 20%; Casuarina equisetifolia var. incana (100%) Subcanopy: 0 Understorey: Ht 0.5-1m; PCC 15%; Suriana maritima (60%), Colubrina asiatica (40%) Groundcover: Ht 0-0.5m, PCC 10%; Euphorbia tannensis subsp. tannensis (5%), Lepturus repens (25%), Josephinia imperatricis (5%), Euphorbia heterophylla* (5%), Sesuvium portulacastrum (50%), Tridax procumbens* (10%)
IG08	9.71229	143.36384	Grassland of Themeda arguens with clumping thickets on landward side and Ximenia americana. Additional species include Spinifex longifolius, Vigna marina, Thurrea involuta and Achyranthes aspera.	Pitader	16a	3.2.24	Emergent: 0 Upper: 0 Subcanopy: 0 Understorey: 0 Groundcover: Ht 0-0.5m, PCC 80%; Themeda arguens (70%), Spinifex longifolius (10%), Vigna marina (5%), Thurrea involuta (5%), Achyranthes aspera (5%)

KABBIKANE

Site #	Lat	Long	Vegetation Description	Cultural Plants	VC	RE	Emergent, Canopy, Subcanopy, Understorey, Groundcover
KB01	9.82307	143.40675	Low shrubland (1-1.5m) of Suriana maritima and occasional Pemphis acidula, Morinda citrifolia and Premna serratifolia. Scattered dead trunks of Casuarina equisetifolia var. incana to 6m throughout. Very sparse groundcover of Ipomoea pes-capre subsp. brasiliensis, Spinifex longifolius, Lepturus repens, Euphorbia tannensis subsp. tannensis, Euphorbia pallens, Mukia maderaspatata, Dactyloctineum aegyptum and Tribulus cistoides. Scattered dead trunks of Casuarina equisetifolia var. incana to 6m killed by high tide incursion in kuki season.	Murr, Auboi, Komak, Gaibui, Pulla, Susul Pui	23b	3.2.30	Emergent: 0 Upper: 0 Subcanopy: 0 Understorey: Ht 1-1.5m, PCC 300%; Suriana maritima (60%), Pemphis acidula (30%), Morinda citrifolia (5%), Premna serratifolia (5%) Groundcover: Ht 0-0.5m, PCC 5%; Ipomoea pes-capre subsp. brasiliensis (60%), Spinifex longifolius (15%), Lepturus repens (20%), Euphorbia tannensis subsp. tannensis (1%), Euphorbia pallens (1%), Mukia maderaspatata (1%), Dactyloctineum aegyptum (1%), Tribulus cistoides (1%)
KB02	9.82252	143.40695	Low open forest of Casuarina equisetifolia var. incana with a sparse understorey of Scaevola taccada, Colubrina asiatica, Cordia subcordata, Suriana maritima, Dodonaea viscosa and Morinda cirtifolia. Sparse groundcover of Euphorbia pallens, Achyranthes aspera, Mukia maderaspatata, Ipomoea pes-capre subsp. brasiliensis and Lepturus repens.	Gaibui, Gabul Del, Gurraghir, Mukmai, Murr, Auboi, Komak, Gaibui, Pulla, Susul Pui	10b	3.2.6a	Emergent: 0 Upper: Ht 4-8m, PCC 70%; Casuarina equisetifolia var. incana (100%) Subcanopy: 0 Understorey: Ht 0.5-1.5m, PCC 30%; Scaevola taccada (50%), Colubrina asiatica (20%), Cordia subcordata (15%), Suriana maritima (5%), Dodonaea viscosa (5%), Morinda cirtifolia (5%) Groundcover: Ht 0-0.5m, PCC 5%; Ipomoea pes-capre subsp. brasiliensis (40%), Lepturus repens (40%), Euphorbia pallens (10%), Mukia maderaspatata (10%)
KB03	9.82257	143.40771	Open shrubland with scattered emergents of Cocos nucifera. Scattered dense low copses 3-5m surrounded by bare sandy areas. Shrubs are Diospyros maritima, Premna serratifolia, Morinda citrifolia, Cordia subcordata, Drypetes deplanchei, Diospyros compacta, Manilkara kauki, Eugenia reinwardtiana, Pemphis acidula, Pandanus sp. and Guettarda speciosa. Vines of Smilax australis, Diplocyclos palmatus and Passiflora suberosa*. Groundcover with Lepturus repens, Bulbostylis barbarta, Euphorbia tannensis subsp. tannensis, Rychnosia minima var. australis and Cleome viscosa. Additional groundcover species are expected to be present in growing season. Possible historic gardening in this habitat.	Urab, Kubil Gim, Komak, Auboi, Mukmai, Ak, Ubar, Kubi, Kurad, Murr, Kowsar, Bodo, Gnib Gnib, Susul Pui	16a	3.2.25	Emergent: Ht 5-10m, PCC <5%; Cocos nucifera Upper: 0 Subcanopy: 0 Understorey: Ht 2-5m, PCC 40%; Diospyros maritima (15%), Premna serratifolia (15%), Morinda citrifolia (10%), Cordia subcordata (10%), Drypetes deplanchei (10%), Diospyros compacta (10%), Manilkara kauki (10%), Eugenia reinwardtiana (5%), Pemphis acidula (5%), Pandanus sp, (5%) Guettarda speciosa, Smilax australis (3%), Diplocylcos palmatus (1%), Passiflora suberosa* (1%) Groundcover: Ht 0-0.5m, PCC 20%; Lepturus repens (70%), Bulbostylis barbarta (5%), Euphorbia tannensis subsp. tannensis (10%), Rychnosia minima var. australis (5%), Cleome viscosa (10%).

Site #	Lat	Long	Vegetation Description	Cultural Plants	VC	RE	Emergent, Canopy, Subcanopy, Understorey, Groundcover
KB04	9.82293	143.40809	Deciduous shrubland (3-5m) dominated by Terminalia muelleri, Pandanus sp., Premna serratifolia with Casuarina equisetifolia var. incana. Very sparse groundcover of Spinifex longifolius and Sesuvium portulacastrum.	Mipa, Komak, Kowsar, Gaibui, Gurrawad	14y	3.2.25	Emergent: 0 Upper: 0 Subcanopy: 0 Understorey: Ht 1-3m, PCC 30%; Terminalia muelleri (25%), Pandanus sp. (25%), Premna serratifolia (25%), Casuarina equisetifolia var. incana (25%) Groundcover: HT 0-0.5m, PCC 20%, 80% leaf litter; Spinifex longifolius (50%), Sesuvium portulacastrum (50%)
KB05	9.82137	143.40895	Closed littoral vine thicket with occasional emergents of Casuarina equisetifolia var. incana. Canopy dominated by Scolopia braunii with associated Diospyros maritima, Manilkara kauki, Drypetes deplanchei, Smilax australis, Planchonella obovata, Diopsyros compacta, Semecarpus australiensis, Aglaia eleagnoidea, Pandanus sp. and Terminalia muelleri. Lower shrubs of Morinda citrifolia, Micromelum minutum, Eugenia reinwardtiana and Salacia disepala. Very sparse groundcover of Drynaria quercifolia with dense leaf litter.	Gaibui, Kowsar, Komak, Ebaith, Auboi, Mipa, Ak, Kurad, Api, Irrh Whirrh, Kubil Gim, Ubar, Gnib Gnib, Kubi, Duwarh, Usarkun, Auboi, Api, Kurad	10b	3.2.6b	Emergent: Ht 8-10m, PCC <5%; Casuarina equisetifolia var. incana Upper: Ht 3-5m, PCC 80%; Scolopia braunii (50%), Diospyros maritima (10%), Manilkara kauki (5%), Drypetes deplanchei (5%), Planchonella obovata (5%), Diopsyros compacta (5%), Semecarpus australiensis (5%), Aglaia eleagnoidea (5%), Pandanus sp. (5%), Terminalia muelleri (5%) Subcanopy: 0 Understorey: Ht 1-2m, PCC 10%; Morinda citrifolia (20%), Micromelum minutum (20%), Eugenia reinwardtiana (20%), Salacia disepala (20%), Smilax australis (20%) Groundcover: Ht 0-0.5m, <5%; Leaf litter (99%), Drynaria quercifolia (1%)
KB06	9.82042	143.40984	Open woodland/shrubland (5-7m) of Casuarina equisetifolia with shrubs of Suriana maritima and Pandanus spirilis. Sparse groundcover of Ipomoea pes-capre subsp. brasiliensis, Vigna marina, Lepturus repens and Tacca leontopetaloides. Extends to shoreline with low clumps of shrubs adjoining inland.	Gaibui, Kowsar, Murr, Kowsar, Pulla, Gasi	10b	3.2.6a	Emergent: 0 Upper: Ht 5-7m, PCC 15%; Casuarina equisetifolia var. incana Subcanopy: 0 Understorey: Ht 0.5-1.5m, PCC 30%; Suriana maritima (60%), Pandanus spirilis (40%). Groundcover: Ht 0-0.5m, <5%; Leaf litter (99%), Drynaria quercifolia (1%)
KB07	9.81944	143.40993	Low shrubland of Suriana maritima and occasional Scaevola taccada with scattered emergents of Casuarina equisetifolia var. incana. Sparse groundcover of Ipomoea pes-capre subsp. brasiliensis, Lepturus repens Mukia maderaspatata.	Murr, Del, Gaibui, Pulla	16a	3.2.25	Emergent: Ht 4-6m, PCC <5%; Casuarina equisetifolia var. incana Upper: 0 Subcanopy: 0 Understorey: Ht 0.5-1.5m, PCC 30%; Suriana maritima (60%), Scaevola taccada (40%). Groundcover: Ht 0-0.5m, <5%; Ipomoea pes-capre subsp. brasiliensis (80%), Lepturus repens (15%), Mukia maderaspatata (5%)

Site #	Lat	Long	Vegetation Description	Cultural Plants	VC	RE	Emergent, Canopy, Subcanopy, Understorey, Groundcover
KB08	9.81926	143.40968	Deciduous littoral vine thicket (5-8m) dominated by Terminalia muelleri with occasional Manilkara kauki, Guettarda speciosa, Diospyros maritima and Aglaia eleagnoidea. Understorey of Eugenia reinwardtiana, Diospyros compacta, Capparis nummularia, Micromelum minutum and Manilkara kauki. Sparse groundcover of Tacca leontopetaloides, Euphorbia cyathophora* and Xenostegia tridentata. Large dead senescent Wongai trees with canopy gaps from fallen trees. Recruitment of Wongai in understorey.	Murr, Ubar, Bodo, Kubil Gim, Usarkun, Kurad, Kubi, Api, Gasi,	2m	3.2.28	Emergent: 0 Upper: Ht 5-8m, PCC 90%; Terminalia muelleri (50%), Manilkara kauki (20%), Guettarda speciosa (10%), Diospyros maritima (10%), Aglaia eleagnoidea (10%) Subcanopy: 0 Understorey: Ht 0.5-1.5m, PCC 30%; Eugenia reinwardtiana (60%), Diospyros compacta (25%), Capparis nummularia (5%), Micromelum minutum (5%), Manilkara kauki (5%) Groundcover: Ht 0-0.5m, PCC <5%; Tacca leontopetaloides (70%), Euphorbia cyathophora* (10%), Xenostegia tridentata (20%)
KB09	9.81962	143.40934	Woodland of Casuarina equisetifolia var. incana with occasional Pandanus sp. Very sparse understorey 1-2m of Eugenia reinwardtiana and Aglaia eleagnoidea. Grassy groundcover dominated by Spinifex longifolius and Thurrea involuta with Ipomoea pes-capre subsp. brasiliensis and Cassytha pubescens.	Gaibui, Kowsar, Kurad, Pulla, Muzarugh	10b	3.2.6a	Emergent: 0 Upper: Ht 5-8m, PCC 30%; Casuarina equisetifolia var. incana (95%), Pandanus sp. (5%) Subcanopy: 0 Understorey: Ht 0.5-1.5m, PCC 30%; Eugenia reinwardtiana (80%), Aglaia eleagnoidea (20%) Groundcover: Ht 0-0.5m, <5%; Spinifex longifolius (70%), Thurrea involuta (10%), Ipomoea pes-capre subsp. brasiliensis (10%), Cassytha pubescens (10%).

MAUAR

Site #	Lat	Long	Vegetation Description	Cultural Plants	VC	RE	Emergent, Canopy, Subcanopy, Understorey, Groundcover
MA01	9.76433	143.26604	Closed forest (8-15m) dominated by Manilkara kauki with Aglaia eleagnoidea, Diospyros maritima and Scolopia braunii. Sparse understorey of Diospyros compacta, Pleomele angustifolia, Drypetes deplanchei, Capparis lucida, Jasminum elongatum, Ixora timorensis, Diospyros geminata, Vavaea amicorum, Carissa laxiflora, Scolopia braunii, Planchonella obovata, Capparis nummularia, Chionanthus ramiflorus, Pittosporum ferrugineum, Guettarda speciosa, Smilax australis, Gymnosporia inermis and Eugenia reinwardtiana. Abundant epiphytes of Dendrobium bifalce in large Manilkara trees with Pyrrosia confluens.	Ubar, Usarkun, Kubil Gim, Irrh Whirrh, Kubi, Buzz, Ak, Kurad, Ebaith	2m	3.2.28	Emergent: 0 Canopy: Ht 8-15m, PCC 90%; Manilkara kauki (80%), Aglaia eleagnoidea 910%), Diospyros maritima (5%), Scolopia braunii (5%) Subcanopy; Ht 5-8m, PCC 20%; Drypetes deplanchei (60%), Aglaia eleagnoidea (20%), Diospyros maritima (20%), Dendrobium bifalce (<1%), Pyrrosia confluens (<1%) (epiphytes). Understorey: Ht 1-3m, PCC 10%; Diospyros compacta (5%), Pleomele angustifolia (5%), Drypetes deplanchei (5%), Capparis lucida (10%), Jasminum elongatum (5%), Ixora timorensis (5%), Diospyros geminata (5%), Eugenia reinwardtiana (5%), Vavaea amicorum (5%), Carissa laxiflora (5%), Scolopia braunii (5%), Planchonella obovata (5%), Capparis nummularia (5%), Chionanthus ramiflorus (5%), Pittosporum ferrugineum (5%), Guettarda speciosa (5%), Smilax australis (5%), Gymnosporia inermis (5%) Groundcover: Ht 0-0.5m, Drynaria quercifolia (20%), Aglaia eleagnoidea (40%), Diospyros maritima (40%) (seedlings)
MA02	9.76502	143.26623	Low shrubland/thicket (3-8m) with occasional taller Guettarda speciosa scattered throughout and open gaps. Dominated by Scolopia braunii, with Aglaia eleagnoidea, Drypetes deplanchei, Planchonella obovata, Salacia disepala, Terminalia subacroptera, Manilkara kauki, Psychotria poliostemma, Ixora timorensis, Gymnosporia inermis, Pittosporum ferrugineum, Chionanthus ramiflorus, Eugenia reinwardtiana, Breynia oblongifolia, Carissa laxiflora, Diospyros maritima, Celtis philippensis and Micromelum minutum. Dense leaf litter under thickets. Groundcover of open areas is Eragrostis brownii, Evolvulus alsinoides, Spermacocce sp. (Lorim Point), Rynchosia minima var. australis, Bulbostylis barbarta, Cyperus tetracuspis and Stachytarpheta jamaicensis*.	Bodo, Irrwh Whirrh, Usarkun, Ak, Ebaith, Mipa, Ubar, Pitader, Kurad, Patal Pui, Kubil Gim, Api	16h	3.2.2a	Emergent: 0 Canopy: 0 Subcanopy: 0 Understorey: Ht 1-3m, PCC 50%; Scolopia braunii (10%), Aglaia eleagnoidea (10%), Drypetes deplanchei (5%), Planchonella obovata (5%), Salacia disepala (5%), Terminalia subacroptera (5%), Manilkara kauki (5%), Psychotria poliostemma (5%), Ixora timorensis (5%), Gymnosporia inermis (5%), Pittosporum ferrugineum (5%), Chionanthus ramiflorus (5%), Eugenia reinwardtiana (5%), Breynia oblongifolia (5%), Carissa laxiflora (5%), Diospyros maritima (5%), Celtis philippensis (5%), Micromelum minutum (5%) Groundcover: Ht 0-0.5m, 50%; Eragrostis brownii (80%), Evolvulus alsinoides (5%), Spermacocce sp. (Lorim Point) (5%), Rynchosia minima var. australis (5%), Bulbostylis barbarta (5%), Cyperus tetracuspis (5%), Stachytarpheta jamaicensis* (5%). Dense leaf litter under thickets.
MA03	9.76576	143.25917	Grassland dominated by Imperata cylindrica and Themeda arguens with Tridax procumbens*, Eragrostis sp., Tephrosia sp. (Muddy Bay), Cassytha pubescens, Stylosanthes hamata*. Scattered shrubs of Gymnosporia inermis, Diospyros compacta, Salacia disepala and Ixora timorensis.	House grass, Muzarrugh, Kubi	17j	3.2.24	Emergent: Ht 1-2m, PCC <5%; Diospyros compacta (70%), Gymnosporia inermis (20%), Salacia disepala (5%), Ixora timorensis (5%) Canopy: 0 Subcanopy: 0 Understorey: 0 Groundcover: Ht 0-0.5m, PCC 80%: Imperata cylindrica (60%), Themeda arguens (20%), Tridax procumbens* (5%), Eragrostis sp., (5%), Tephrosia sp. (Muddy Bay) (5%), Cassytha pubescens (5%), Stylosanthes hamata* (5%)

Site #	Lat	Long	Vegetation Description	Cultural Plants	VC	RE	Emergent, Canopy, Subcanopy, Understorey, Groundcover
MA04	9.76645	143.25947	Low shrubland/thicket (3-5m) of Capparis lucida, Aglaia eleagnoidea, Scolopia braunii, Planchonella obovata, Dodonaea viscosa, Chionanthus ramiflorus, Morinda citrifolia with emergent of Terminalia catappa. Open grassy areas dominated by Themeda arguens with Imperata cylindrica, Cyperus tetracuspis, Tridax procumbens* and Drynaria quercifolia.	Usarkun, Irrh Whirr, Ebiath, Auboi, Mekay	16h	3.2.2a	Emergent Ht 6-8m, PCC <5%; Terminalia catappa (100%) Canopy: 0 Subcanopy: 0 Understorey: HT 3-5m, PCC 50%; Capparis lucida (60%), Aglaia eleagnoidea (10%), Scolopia braunii (10%), Planchonella obovata (5%), Dodonaea viscosa (5%), Chionanthus ramiflorus (5%), Morinda citrifolia (5%) Groundcover: Ht 0-0.5m; PCC 90%; Themeda arguens (70%), Imperata cylindrica (15%), Cyperus tetracuspis (5%), Tridax procumbens* (5%), Drynaria quercifolia (5%)
MA05	9.76746	143.25993	Low shrubland/thicket (3-6m) dominated by Scolopia braunii with Aglaia eleagnoidea, Diospyros compacta, Gymnosporia inermis, Terminalia muelleri, Smilax australis and Cassytha pubescens. Emergent Terminalia catappa and a Cocos nucifera. Open grassy areas dominated by Themeda arguens with Stachytarpheta jamaicensis*, Cassytha pubescens, Evolvulus alsinoides and Tridax procumbens*. Scattered infestations of Snake Weed throughout	Irrh Whirrh, Usarkun, Pitader, Mipa, Gnib Gnib, Muzarrugh, Mekay	16h	3.2.2a	Emergent Ht 6-8m, PCC <5%; Terminalia catappa (100%), Cocos nucifera* (5%) Canopy: 0 Subcanopy: 0 Understorey: HT 3-5m, PCC 50%; Scolopia braunii (60%), Aglaia eleagnoidea (10%), Diospyros compacta (10%), Gymnosporia inermis, (5%), Terminalia muelleri (5%), Smilax australis (5%), Cassytha pubescens (5%) Groundcover: Ht 0-0.5m; PCC 90%; Themeda arguens (70%), Stachytarpheta jamaicensis* (5%), Cassytha pubescens (5%), Evolvulus alsinoides (5%), Tridax procumbens* (5%)
MA06	9.76814	143.25979	Low shrubland/thicket (4-7m) with emergent of Cocos nucifera*. Old climbing scars on coconut trunks. Possibly once clear. Shrubland thicket likely to be advanced regrowth.	Erab	16h	3.2.2a	Emergent Ht 8-14m, PCC 5%; Cocos nucifera Canopy: 0 Subcanopy: 0 Understorey: Ht 1-3m, PCC 60%; Eugenia reinwardtiana (60%), Gymnosporia inermis (20%), Capparis lucida (20%) Groundcover: Ht 0-0.5m; PCC 90%; Lepturus repens (80%), Ipomoea pes-capre subsp. brasileinsis (5%), Cassytha pubescens (10%), Tridax procumbens* (5%)
MA07	9.76894	143.25892	Dune woodland/shrubland/grassland complex with Casuarina equisetifolia var. incana and dense shrubby thickets of Premna serratifolia, Suriana maritima, Cassytha pubescens, Cordia subcordata, Manilkara kauki and Gymnosporia inermis. Scattered emergents of Cocos nucifera*. Groundcover of Ipomoea pes-capre subsp. brasiliensis and Lepturus repens.	Gaboy, Komak, Murr, Muzarrugh, Ubar, Pitader, Erab, Pulla	10b	3.2.6b	Emergent: Ht 8-10m, PCC <5%; Cocos nucifera (100%) Canopy: Ht 4-8m, PCC 30%; Casuarina equisetifolia var. incana (100%) Subcanopy: 0 Understorey: Ht 1-3m, PCC 30%; Premna serratifolia (60%), Suriana maritima (10%), Cassytha pubescens (5%), Cordia subcordata (10%), Manilkara kauki (5%), Gymnosporia inermis (10%) Groundcover: Ht 0-0.5m, 10%; Ipomoea pes-capre subsp. brasiliensis (60%), Lepturus repens (40%)

Site #	Lat	Long	Vegetation Description	Cultural Plants	VC	RE	Emergent, Canopy, Subcanopy, Understorey, Groundcover
MA08	9.76851	143.25816	Closed forest (15-18m) dominated by Manilkara kauki with scattered large Terminalia catappa and occasional Diospyros maritima. Subcanopy and lower tree layer dominated by M. kauki with D. maritima and Aglaia eleagnoidea. Sparse understorey of Eugenia reinwardtiana with Polyscias macgillivraei.	Ubar, Mekay, Kubil Gim, Usarkun, Kurad, Bom	2m	3.2.28	Emergent: 0 Canopy: Ht 15-18m; PCC 80%; Manilkara kauki (70%), Terminalia catappa (20%), Diospyros maritima (10%) Subcanopy: Ht 15-18m; PCC 80%; Manilkara kauki (60%), Diospyros maritima (20%), Aglaia eleagnoidea (20%) Understorey: Ht 3-5m, PCC 50%; Aglaia eleagnoidea (40%), Diospyros compacta (30%), Gymnosporia inermis (10%), Smilax australis (5%), Eugenia reinwardtiana (10%), Polyscias macgillivraei (5%) Groundcover: Ht 0-0.5m, Leaf litter (100%)

MEMAY

Site #	Lat	Long	Vegetation_Description	Cultural Plants	VC	RE	Emergent, Canopy, Subcanopy, Understorey, Groundcover
MM01	9.95240°	143.39799	Open forest (12-22m) dominated by Pisonia grandis with subordinate Celtis paniculata, Cordia subcordata and associated Manilkara kauki. Dense understorey of Capparis lucida, Capparis nummularia and Phyllanthus novae-hollandiae. Dense leaf litter with a few herbs of Achryanthes aspera and senescent vines of Diplocyclos palmatus. Black noddies nesting throughout. Pisonia with old fruit and buds. New leaf flush in Pisonia with evidence of deciduousness.	Piner, Mukmai, Ubar	2a(P)	3.2.29	Emergent: 0 Canopy: Ht 12-22m, PCC 60%; Pisonia grandis (85%), Celtis paniculata (5%), Cordia subcordata (5%), Manilkara kauki (5%). 0 Subcanopy: 0 Understorey: Ht 1-4m, PCC 50%; Capparis lucida (80%), Capparis nummularia (10%), Manilkara kauki (5%), Phyllanthus novae-hollandiae (5%). Groundcover: Ht 0-0.5m, <5%; Leaf litter (99%), Achyranthes aspera (1%)
MM02	9.95251	143.39721	Woodland of Casuarina equisetifolia var. incana with grassland / herbland groundcover of Ipomoea pes-capre subsp. brasiliensis, Lepturus repens, Tridax procumbens*, Euphorbia pallens and Cassytha pubescens. Grassy groundcover on seaward margin. Inland margin lined with Pemphis acidula and Cordia subcordata.	Gaboy, Pulla, Muzarugh, Susul Pui	10b	3.2.6a	Emergent: 0 Canopy: Ht 12-18m, PCC 40%; Casuarina equisetifolia var. incana (100%) Subcanopy: 0 Understorey: 0 Groundcover: Ht 0-0.5m, <5%; Leaf litter (99%), Achyranthes aspera (1%)
MM03	9.95334	143.39717	Open forest (12-22m) dominated by Pisonia grandis with subordinate Celtis paniculata, Cordia subcordata and associated Manilkara kauki. Sparse understorey of Morinda citrifolia. MONITORING SITE	Piner, Mukmai, Ubar	2a(P)	3.2.29	Emergent: 0 Canopy: Ht 12-22m, PCC 60%; Pisonia grandis (70%), Celtis paniculata (20%), Cordia subcordata (5%), Manilkara kauki (5%) Subcanopy: 0 Understorey: Morinda cirtifolia Groundcover: Ht 0-0.5m, <5%; Leaf litter (99%), Achyranthes aspera (1%)
MM04	9.95465	143.39631	Open forest (12-22m) dominated by Pisonia grandis with subordinate Cordia subcordata and dense understorey of Cordia subcordata, Diospyros maritima, Celtis paniculata and Pipturus argenteus. Occasional coconut palm senesceing in canopy.	Piner, Mukmai, Kubil Gim, Wayli	2a(P)	3.2.29	Emergent: 0 Canopy: Ht 8-15m, PCC 50%; Pisonia grandis (95%), Cordia subcordata (5%) Subcanopy: 0 Understorey: Ht 6-8m, PCC 60%; Cordia subcordata (60%), Diospyros maritima (20%), Celtis paniculata (15%), Pipturus argenteus (5%) Groundcover: Ht 0-1m, Leaf litter 100%

Site #	Lat	Long	Vegetation_Description	Cultural Plants	VC	RE	Emergent, Canopy, Subcanopy, Understorey, Groundcover
MM05	9.95537	143.39683	Low open forest (8-12m) dominated by Pisonia grandis and Celtis philippensis, and occasional Cocos nucifera. Thickets of Capparis lucida throughout with scattered shrubs of Phyllanthus novae-hollandaei and occasional vines of Ipomoea macrantha. Coconut palm stumps.	Piner, Mukmai	2a(P)	3.2.29	Emergent: 0 Canopy: Ht 8-15m, PCC 50%; Pisonia grandis (90%), Celtis philippensis (5%), Cocos nucifera (5%) Subcanopy: 0 Understorey: Ht 1-3m, PCC 10%; Capparis lucida (90%), Ipomoea macrantha (5%), Pyllanthus novae-hollandaei Groundcover: Ht 0-1m, Leaf litter 100%
MM06	9.95556	143.39678	Deciduous thicket (4-8m) dominated by Premna serratifolia with vines of Ipomoea macrantha. Groundcover very sparse with dense leaf litter, pumice stone and scattered herbs of Achyranthes aspera.	Komak	14y	3.2.25	Emergent: 0 Canopy: Ht 4-8m, PCC 90%; Premna serratifolia (95%), Ipomoea macrantha (5%) Subcanopy: 0 Understorey: 0 Groundcover: Ht 0-1m, Leaf litter 98%; Achyranthes aspera (2%)
MM07	9.95577	143.39695	Herbland dominated by Sesuvium portulacastrum with occasional low shrubs of Suriana maritima, Hibiscus tiliaceus, Pemphis acidula, Sophora tomentosa, Argusia argentea, Dodonaea viscosa and Scaevola taccada. Fringed on landward side by linear band of Pemphis acidula to 1.5m. Groundcover of Euphorbia pallens, Euphorbia tannensis subsp. tannensis, Ipomoea pes capre subsp. brasiliensis, Lepturus repens, Cyperus pedunculatus and Cassytha pubescens,	Gurrawad, Murr, Urakar, Gabul Del, Del, Susul Pui, Pulla, Muzarrugh	17j	3.2.24	Emergent: 0 Canopy: 0 Subcanopy: 0 Understorey: Ht 0.5-1m; PCC 10%; Suriana maritima (30%), Hibiscus tiliaceus (20%), Pemphis acidula (20%), Sophora tomentosa (5%), Argusia argentea (10%), Dodonaea viscosa (5%), Scaevola taccada (10%). Groundcover: Ht 0-0.5m, PCC 30%; Euphorbia pallens (10%), Euphorbia tannensis subsp. tannensis (10%), Ipomoea pes capre subsp. brasiliensis (50%), Lepturus repens (20%), Cyperus pedunculatus (5%), Cassytha pubescens (10%),
MM08	9.95585	143.39499	Low closed forest (8-12m) dominated by Pisonia grandis, Cordia subcordata, Terminalia muelleri, Capparis lucida, Celtis paniculata. Understorey of sprawling Capparis lucida and occasional saplings of Manilkara kauki. Black Noddies nesting throughout.	Piner, Mukmai, Mipa, Ubar	2a(P)	3.2.29	Emergent: 0 Canopy: Ht 8-12m; 80%; Pisonia grandis (50%), Cordia subcordata (10%), Terminalia muelleri (10%), Capparis lucida (10%), Celtis paniculata (10%), Diospyros maritima (10%) Subcanopy: 0 Understorey: Ht 1-3m, PCC 30%; Capparis lucida (90%), Manilkara kauki (5%), Cansjera leptostachya (5%), Capparis nummularia (5%), Groundcover: Ht 0-0.5m, Leaf litter (100%),
MM09	9.95522	143.395	Herbland dominated by Sesuvium portulacastrum with occasional low shrubs of Suriana maritima. Fringed on landward side by linear band of Premna serratifolia merging into Pisonia scrub. Fringed on landward side by linear band of Premna serratifolia merging into Pisonia scrub.	Gurrawad, Murr	16a	3.2.24	Emergent: 0 Canopy: 0 Subcanopy: 0 Understorey: Ht 0.5-1m; PCC <10%; Suriana maritima (95%), Colubrina asiatica (5%) Groundcover: Ht 0-0.5m, PCC 30%; Sesuvium portulcasastrum (95%), Euphorbia pallens (1%), Ipomoea pes capre subsp. brasiliensis (2%), Lepturus repens (1%), Cyperus pedunculatus (1%)

UMAGAR

Site #	Lat	Long	Vegetation_Description	Cultural Plants	VC	RE	Emergent, Canopy, Subcanopy, Understorey, Groundcover
UM01	9.6892	143.42813	Herbland on sand spit dominated by Ipomoea pes capre subsp. brasiliensis and Sesuvium portulacastrum. Scattered emergent saplings of Casuarina equisetifolia var. incana to 1-4m with Pemphis acidula, Colubrina asiatica, Argusia argentea and Cordia subcordata. Newly formed sand spit colonising.	Pulla, Gurrawad, Gaboy, Murr, Gurrighir, Gabul Del, Mukmai	17j	3.2.25	Emergent: Ht 1-4m, PCC <10%; Casuarina equisetifolia var. incana (60%), Pemphis acidula (10%), Colubrina asiatica (10%), Argusia argentea (10%), Cordia subcordata (10%) Canopy: 0 Subcanopy: 0 Understorey: 0 Groundcover: Ht 0.0.25m, PCC 10%; Ipomoea pes capre subsp. brasiliensis (50%), Sesuvium portulacastrum (50%)
UM02	9.6887	143.42852	Margin of linear grassland of Lepturus repens and dense shrubland of Pemphis acidula, Cordia subcordata, Colubrina asiatica, Ximenia americana and Guettarda speciosa with emergent Casuarina equisitifolia. Groundcover of Josephinia imperatricis and Euphorbia pallens.	Murr, Mukmai, Gurraghir, Pitader, Bodo, Gaboy, Pagal pui, Susul Pui	10b	3.2.6b	Emergent: Ht 2-4m, PCC <5%; Casuarina equisetifolia Canopy: 0 Subcanopy: 0 Understorey: Ht 1-2m, PCC 60% Pemphis acidula, Cordia subcordata Colubrina asiatica, Ximenia americana, Guettarda speciosa Groundcover: Ht 0-0.5m, <5%; Lepturus repens (70%), Josephinia imperatricis (40%), Euphorbia pallens (10%),
UM03	9.68789	143.42936	Open shrubland (4-6m) of Casuarina equisetifolia var. incana with occasional shrubs of Guettarda speciosa, Gyrocarpus americanus, Premna serratifolia and Vitex trifolia. Sparse groundcover of Thurrea involuta and Boerhavia mutabilis.	Gaboy, Bodo, Komak	10b	3.2.6b	Emergent: 0 Canopy: 0 Subcanopy: 0 Understorey: Ht 4-6m, PCC 30%; Casuarina equisetifolia var. incana (70%), Guettarda speciosa (10%) Gyrocarpus americanus (5%), Premna serratifolia (10%), Vitex trifolia (5%) Groundcover: Ht 0-0.5, PCC 5%; Thurrea involuta (90%), Boerhavia mutabilis (10%)
UM04	9.6875	143.43016	Low closed forest (7-8m) dominated by Pemphis acidula with sparse understorey of Diopsyros geminata, Diospyros maritima, Micromelum minutum and Aglaia eleagnoidea.	Murr, Kubil Gim, Api, Usarkun	23b	3.2.30	Emergent: 0 Canopy: Ht 7-8m, PCC 90%; Pemphis acidula (100%) Subcanopy: 0 Ht 0.5-1.5m, PCC 5%; Diopsyros geminata (25%), Diospyros maritima (25%), Micromelum minutum (25%), Aglaia eleagnoidea (25%) Ht 0-0.5m, Leaf litter (100%)

Site #	Lat	Long	Vegetation_Description	Cultural Plants	VC	RE	Emergent, Canopy, Subcanopy, Understorey, Groundcover
UM05	9.68784	143.4303	Low closed forest (8-14m) of Pisonia grandis, Diospyros maritima, Manilkara kauki, with emergents to 25m of Pisonia grandis and Ficus virens. Sparse subcanopy of D. maritima and Celtis philippensis. Sparse understorey of Capparis lucida, Salacia disepala, Capparis nummularia, Cayratia saponaria, Terminalia muelleri and Eugenia reinwardtiana. Dense leaf litter. MONITORING site.	Piner, Kubil Gim, Ubar, Darni, Mipa, Kurad	2a(P)	3.2.29	Emergent: Ht 20-25m, PCC 10%; Pisonia grandis and Ficus virens. Canopy: Ht 8-14m (80%); Pisonia grandis (50%), Diospyros maritima (30%), Manilkara kauki (20%) Subcanopy: 0 Understorey: Ht 1-2m, PCC <5%; Capparis lucida (70%), Salacia disepala (10%), Capparis nummularia (5%), Cayratia saponaria (5%), Terminalia muelleri (5%), Eugenia reinwardtiana (5%) Groundcover: Ht 0-0.5m, Leaf litter (100%)
UM06	9.68795	143.4307	Semi deciduous littoral forest (8-12m) of Celtis paniculata, Gyrocarpus americanus, Capparis lucida, Celtis philippensis and Terminalia muelleri. Vines of Cayratia saponaria and Dioscorea pentaphylla. Abundant seedlings of Aglaia eleagnoidea and Eugenia reinwardtiana.	Kuper, Mipa	2m	3.2.28	Emergent: 0 Canopy: Ht 8-12m, PCC 80%; Celtis paniculata (50%), Gyrocarpus americanus (30%), Capparis lucida (10%), Celtis philippensis (5%), Terminalia muelleri (5%) Subcanopy: 0 Understorey: Ht 1-3m, PCC 32%; Capparis lucida (60%), Diospyros maritima (20%), Eugenia reinwardtiana (20%) Groundcover: Ht 0-0.5m, Aglaia eleagnoidea (60%), Eugenia reinwardtiana (40%), seedlings
UM07	9.68749	143.43071	Closed littoral vine forest (10-16m) dominated by Manilkara kauki with Celtis paniculata, Terminalia muelleri and Gyrocarpus americanus.	Ubar, Mipa	2m	3.2.28	Emergent: 0 Canopy: Ht 10-16m, PCC 80%; Manilkara kauki (70%), Celtis paniculata (10%), Terminalia muelleri (10%), Gyrocarpus americanus (10%) Subcanopy: 0 Understorey: Ht 0.5-1.5m, PCC 10%; Eugenia reinwardtiana (60%), Diospyros compacta (25%), Capparis luvida (5%), Micromelum minutum (5%), Manilkara kauki (5%) Groundcover: Ht 0-0.5m, Leaf litter (100%)
UM08	9.68709	143.43147	Semi deciduous littoral vine thicket /forest (8-12m) of Terminalia muelleri, Celtis philippensis, Manilkara kauki and occasional Gyrocarpus americanus. Understorey of Micromelum minutum, Aglaia eleagnoidea, Diospyros maritima and abundant wiry vines.	Mipa, Ubar, Api, Usarkun, Kubil Gim	2m	3.2.28	Emergent: 0 Canopy: Ht 8-12m, PCC 60%; Terminalia muelleri (70%), Manilkara kauki (20%), Celtis philippensis (5%), Gyrocarpus americanus (5%) Subcanopy: 0 Understorey: Ht 0.5-1.5m, PCC 10%; Micromelum minutum (30%), Aglaia eleagnoidea (20%), Eugenia reinwardtiana (10%), Diospyros maritima (10%), Capparis lucida (10%), Manilkara kauki (10%), Cayratia saponaria (5%), Smilax australis (5%) Groundcover: Ht 0-0.5m, Leaf litter (100%)

Site #	Lat	Long	Vegetation_Description	Cultural Plants	VC	RE	Emergent, Canopy, Subcanopy, Understorey, Groundcover
UM09	9.68689	143.43187	Low closed forest (5-8m) dominated by Manilkara kauki with Pemphis acidula and Capparis lucida. Understorey of Capparis lucida, Morinda citrifolia, with vines of Ipomoea macrantha and Dioscorea pentaphylla.	Ubar, Murr, Auboi	2m	3.2.28	Emergent: 0 Canopy: Ht 5-8m, PCC 90%; Manilkara kauki (70%), Pemphis acidula (20%), Capparis lucida (10%). Subcanopy: 0 Understorey: Ht 1-3m, 30%; Capparis lucida (80%), Morinda citrifolia (10%), Ipomoea macrantha (5%), Dioscorea pentaphylla (5%) Groundcover: Ht 0-0.5m, Leaf litter (100%)
UM10	9.68666	143.43132	Dune grassland of Spinifex longifolius, Cassytha pubescens, Ipomoea pes-capre subsp. brasiliensis, Josephinia imperatricis, Boerhavia mutabilis, Tridax procumbens*, Euphorbia pallens and Thurrea involuta with emergent Casuarina equisetifolia var. incana to 8m. Occasional planted Cocos nucifera and scattered low shrubs of Suriana maritima and Colubrina asiatica.	Muzarrugh, Pagal Pui, Pulla, Medicine Grass, Susul Pui, Gaboy, Erab, Murr, Gurrighirr	10b	3.2.6b	Emergent: Ht 4-8m, PCC <5%; Casuarina equisetifolia var. incana (95%), Cocos nucifera (5%) Canopy: 0 Subcanopy: 0 Understorey: 0 Groundcover: Ht 0-1m, PCC 30%; Spinifex longifolius (40%), Cassytha pubescens (10%), Ipomoea pes-capre subsp. brasiliensis (10%), Josephinia imperatricis (10%), Boerhavia mutabilis (5%), Tridax procumbens* (5%), Euphorbia pallens (5%), Thurrea involuta, (5%), Suriana maritima (5%), Colubrina asiatica (5%)

YAOK

Site #	Lat	Long	Vegetation_Description	Cultural Plants	VC	RE	Emergent, Canopy, Subcanopy, Understorey, Groundcover
YK01	9.86126	143.30907	Low open shrubland on frontal dune of Thespesia populnea, Pemphis acidula, Cordia subcordata, Clerodendrum inerme, Capparis lucida, Casuarina equisetifolia var. incana, Argusia argentea, Suriana maritima, Scaevola taccada, Phyllanthus novae-hollandiae, Terminalia catappa and Guettarda speciosa. Groundcover of Lepturus repens, Euphorbia tannensis subsp. tannensis, Euphorbia pallens, Vigna marina, Achyranthes aspera, Spinifex longifolius, Josephinia imperatricis, Boerhavia mutabilis, Tribulus cistoides and Sesuvium portulcasatrum.	Murr, Mukmai, Boi Boi, Gaboy, Gabul Del, Murr, Del, Mekay, Bodo, Pagal Bui, Gurawad	16a	3.2.6	Emergent: 0 Canopy: 0 Subcanopy: 0 Understorey: Ht 2-4m, PCC 30%; Thespesia populnea (10%), Pemphis acidula (10%), Cordia subcordata (10%), Clerodendrum inerme (10%), Capparis lucida (10%), Casuarina equisetifolia var. incana (10%), Argusia argentea (10%), Suriana maritima (10%), Scaevola taccada (5%), Phyllanthus novae-hollandiae (5%), Terminalia catappa (5%), Guettarda speciosa (5%) Groundcover: Ht 0-0.5m, PCC 30%; Lepturus repens (40%), Spinifex longifolius (20%), Euphorbia tannensis subsp. tannensis (5%), Euphorbia pallens (5%), Vigna marina (5%), Achyranthes aspera (5%), Josephinia imperatricis (5%), Boerhavia mutabilis (5%), Tribulus cistoides (5%), Sesuvium portulcasatrum (5%)
YK02	9.86401°	143.30797	Open forest (12-22m) dominated by Pisonia grandis with subordinate Celtis paniculata, Cordia subcordata and associated Manilkara kauki. Sparse understorey of Morinda citrifolia. MONITORING SITE	Piner	2a(P)	3.2.29	Emergent: 0 Canopy: Ht 12-22m; PCC 50%; Pisonia grandis (80%), Celtis paniculata (10%), Cordia subcordata (5%), Manilkara kauki (5%)
YK03	9.86454	143.30742	Deciduous low closed forest/thicket (3-6m) of Terminalia muelleri with Capparis lucida, Pemphis acidula, Premna serratifolia and Pisonia grandis. Vines of Ipomoea macrantha and Diplocyclos palmatus on margins.	Mipa, Murr, Komak, Piner	23b	3.2.30	Emergent: 0 Canopy: Ht 3-6m, PCC 80%; Terminalia muelleri (50%), Capparis lucida (20%), Pemphis acidula (10%), Premna serratifolia (10%), Pisonia grandis (10%) Subcanopy: 0 Understorey: 0 Groundcover: Ht 0-0.5m, Leaf litter (100%),
YK04	9.86464	143.30657	Low open woodland (5-8m) of Terminalia muelleri with Capparis lucida, Suriana maritima, Cordia subcordata, and sparse groundcover of Lepturus repens and Achyranthes aspera.	Mipa, Murr, Mukmai	23b	3.2.30	Emergent: 0 Canopy: Ht 3-8m, PCC 30%; Terminalia muelleri (50%), Capparis lucida (20%), Suriana maritima (20%), Cordia subcordata (10%) Subcanopy: 0 Understorey: 0 Groundcover: Ht 0-0.5m, PCC 20%; Lepturus repens (90%), Achyranthes aspera (10%)

Appendix D. Combined Flora Species List

Family Name	Species Name	Life Form	Cultural Significance	Language Name	Common Name	Aureed	Aukane	Bak	Igab	Kabbikane	Mauar	Memay	Umagar	Yaok
Acanthaceae	*Achyranthes aspera*	Herb	1	TBD	Chaff Flower	1	1	1	1	1	0	1	0	1
Agavaceae	*Agave sisalana**	Succulent	1		Manilla Rope	1	0	0	0	0	0	0	0	0
Aizoaceae	*Sesuvium portulacastrum*	Herb	1	Gurrawad	Sea Purslane	1	1	1	1	1	1	1	1	1
Anacardiaceae	*Semecarpus australiensis*	Tree	1	Duwar	Tar Tree	1	0	0	0	1	0	0	0	0
Apocynaceae	*Carissa laxiflora*	Shrub	1	Patal Pui	Northern Conkle Berry	0	0	0	1	0	1	0	0	0
Araliaceae	*Polyscias macgillivraei*	Shrub	1	Boman, Buman	Whistle Tree	1	0	0	0	0	1	1	0	0
Arecaceae	*Arecaceae* (indet. DGF 10783, DGF IG3)	Palm	0			0	0	0	1	0	0	0	0	0
Arecaceae	*Cocos nucifera**	Palm	1	Urab	Coconut	1	1	0	0	1	1	1	1	0
Arecaceae	*Nypa fruticans* (seed wash up only)	Palm	0		Nypa Palm	0	0	0	1	0	0	0	0	0
Asteraceae	*Tridax procumbens**	Herb	1	Grass Medicine	Tridax Daisy	1	0	1	1	0	1	0	1	0
Bombacaceae	*Bombax ceiba var. leiocarpum*	Tree	1	Wapada	Bombax, Canoe Tree	1	0	0	0	0	0	0	0	0
Boraginaceae	*Argusea argentea*	Shrub	1	Gabul Dell	Octopus Tree	0	0	1	1	0	0	1	1	1
Boraginaceae	*Cordia subcordata*	Tree	1	Mukmai	Sea Trumpet	1	1	1	1	1	1	1	1	1
Caesalpiniaceae	*Caesalpinea bonduc*	Shrub	1	Zeger Zeger	Nicker Nut	0	1	1	0	0	0	0	0	0
Campanulaceae	*Evolvulus alsinoides* var. *decumbens*	Herb	0		Dwarf Morning Glory	1	1	0	1	0	1	0	0	0
Campanulaceae	*Wahlenbergia caryophylloides*	Herb	0		Native Bluebells	1	0	0	0	0	0	0	0	0
Capparaceae	*Capparis lucida*	Shrub	0	Oui Boi	Coast Caper	1	0	1	1	0	1	1	1	1
Capparaceae	*Capparis nummularia*	Shrub	0			0	0	1	0	1	1	1	1	0

Family Name	Species Name	Life Form	Cultural Significance	Language Name	Common Name	Aureed	Aukane	Bak	Igab	Kabbikane	Mauar	Memay	Umagar	Yaok
Capparaceae	*Capparis sepiaria*	Shrub	1	Patal Pui	Wild Orange	1	0	1	0	0	0	1	1	1
Casuarinaceae	*Casuarina equisetifolia* var. *incana*	Tree	1	Gaibui	Horestail Oak	1	1	1	1	1	1	1	1	1
Celastraceae	*Gymnosporia inermis*	Shrub	1	Pitader		1	0	0	1	0	1	0	0	0
Celastraceae	*Salacia chinensis*	Shrub	1	Uru	Lolly Vine	1	1	1	1	1	1	0	1	0
Chenopodiaceae	*Salsola australis*	Herb	0		Prickly Saltwort	1	1	1	0	0	1	0	0	1
Cleomaceae	*Cleome viscosa*	Herb	0		Spider Flower	1	1	0	1	1	1	0	0	1
Combretaceae	*Terminalia catappa*	Tree	1	Mekay	Beach Almond	0	0	0	0	0	1	0	0	1
Combretaceae	*Terminalia muelleri*	Tree	1	Mipa	Australian Almond	1	0	0	0	0	0	0	0	0
Combretaceae	*Terminalia subacroptera*	Tree	1	Mipa	Terminalia	1	1	1	1	1	1	1	1	1
Convolvulaceae	*Ipomoea macrantha*	Vine	0		Morning Glory	0	0	0	0	0	0	1	1	1
Convolvulaceae	*Ipomoea pes-capre* subsp. *brasiliensis*	Vine	1	Pulla	Goats Foot Convolvulus	1	1	1	1	1	1	1	1	1
Convolvulaceae	*Jacquemontia paniculata*	Vine	0		Jacquemontia	1	0	0	1	0	1	0	0	0
Convolvulaceae	*Xenostegia tridentata*	Herb	0		African Morning Vine	0	0	1	0	1	0	0	0	0
Cucurbitaceae	*Cucumis maderaspatanus*	Vine	0		Sea Pumpkin	1	1	0	1	1	0	0	0	0
Cucurbitaceae	*Diplocyclos palmatus* subsp. *affinus*	Vine	1		Striped Cucumber	0	0	0	0	1	0	1	0	1
Cyperaceae	*Bulbostylis barbata*	Sedge	0		Watergrass	1	1	0	1	1	1	0	0	0
Cyperaceae	*Cyperus pedunculatus*	Aroid	0			0	0	0	0	0	0	1	1	0
Cyperaceae	*Cyperus tetracuspis*	Sedge	0			1	0	1	0	0	1	0	0	0
Dioscoreaceae	*Dioscorea pentaphylla*	Vine	0		Five Leaf Yam	0	0	0	0	0	0	0	1	0
Dracaenaceae	*Pleomele angustifolia*	Shrub	1	Buzz	Native Dracaena	1	0	0	1	0	1	0	0	0
Ebenaceae	*Diospyros compacta*	Tree	1	Kubi	Australian Ebony	1	0	1	1	1	1	1	0	0
Ebenaceae	*Diospyros geminata*	Tree	0		Scrub Ebony	1	0	0	**1**	0	1	0	1	0

Family Name	Species Name	Life Form	Cultural Significance	Language Name	Common Name	Aureed	Aukane	Bak	Igab	Kabbikane	Mauar	Memay	Umagar	Yaok
Ebenaceae	*Diospyros maritima*	Tree	1	Kubil Gim	Broad Leaved Ebony	1	1	1	1	1	1	1	1	0
Euphorbiaceae	*Claoxylon hillii*	Shrub	0		Northern Brittle Wood	0	0	0	0	0	0	0	1	0
Euphorbiaceae	*Euphorbia cyathophora**	Herb	0		Painted Spurge	0	0	0	0	1	0	0	0	0
Euphorbiaceae	*Euphorbia heterophylla**	Herb	0		Painted Spurge	0	0	0	1	0	0	0	0	0
Euphorbiaceae	*Euphorbia pallens*	Herb	1	Susul Pui		1	0	0	1	1	0	1	1	1
Euphorbiaceae	*Euphorbia tannensis* subsp. *tannensis*	Herb	0	Susul Pui		0	1	1	1	1	0	1	0	1
Euphorbiaceae	*Macaranga tanarius*	Shrub	1	Bibi	Macaranga	1	0	0	0	0	0	0	0	0
Fabaceae	*Abrus precatorius* subsp. *precatorius*	Vine	1	Thinicupu	Crabs Eye, Gidee Gidee	1	1	1	1	0	1	0	0	0
Fabaceae	*Canavalia papuana*	Vine	0	Pulla	Beach Bean	0	0	1	0	0	0	0	0	0
Fabaceae	*Desmodium* sp. (DGF UTTU11 +)	Herb	0			0	1	0	0	0	0	0	0	0
Fabaceae	*Erythrina insularis*	Tree	1	Naiwa	Coral Tree	1	0	0	1	0	0	1	0	0
Fabaceae	*Rynchosia minima* var. *australis*	Herb	0			1	0	0	1	1	1	0	0	0
Fabaceae	*Sophora tomentosa* subsp. *australis*	Shrub	1	Gabul Rus	Silver Bush	0	0	1	0	0	0	1	0	0
Fabaceae	*Stylosanthes hamata**	Herb	0		Stylo	0	0	0	0	0	1	0	0	0
Fabaceae	*Tephrosia* sp. (Muddy Bay P.I. Forster+PIF15313)	Herb	1	Ebarrb		1	0	0	1	0	1	0	0	0
Fabaceae	*Vigna marina*	Vine	1	Pulla	Beach Bean	0	0	1	1	1	0	0	0	1
Flacourtiaceae	*Scolopia braunii*	Tree	0	Irrh Whirr	Flintwood	1	1	1	1	1	1	0	0	0
Flagellariaceae	*Flagellaria indica*	Vine	1	Crawling Buzz	Whip Vine	0	0	1	1	0	0	0	0	0
Goodeniaceae	*Scaevola taccada*	Shrub	1	Del	Sea Cabbage	1	0	1	1	1	0	1	0	1

Family Name	Species Name	Life Form	Cultural Significance	Language Name	Common Name	Aureed	Aukane	Bak	Igab	Kabbikane	Mauar	Memay	Umagar	Yaok
Hernandiaceae	*Gyrocarpus americanus* subsp. *americanus*	Tree	1	Kapai	Helicopter Tree	0	0	0	0	0	0	0	1	0
Lamiaceae	*Anisomeles papuana*	Herb	0	Kibur	Chodhava	1	0	0	0	0	0	0	0	0
Lamiaceae	*Clerodendrum inerme*	Shrub	1	Boi Boi	Scrambling Clerodendrum	0	0	0	1	0	0	0	0	1
Lamiaceae	*Hyptis suaveolens**	Herb	0		Mint Bush	0	0	0	0	0	1	0	0	0
Lamiaceae	*Premna serratifolia*	Shrub	1	Komak		1	1	0	0	1	1	1	1	1
Lamiaceae	*Vitex negundo*	Shrub	0			0	0	0	0	0	0	0	1	0
Lamiaceae	*Vitex trifolia*	Shub	0			0	0	1	0	0	0	0	1	1
Lauraceae	*Cassytha pubescens*	Vine	1	Muzaru	Dodder	1	1	1	1	1	1	1	1	1
Lythraceae	*Pemphis acidula*	Shrub	1	Murr	Digging Stick Tree	0	0	1	1	1	0	1	1	1
Malvaceae	*Hibiscus tiliaceus*	Tree	1	Urakar	Cottonwood, Beach Hibiscus	0	0	0	0	0	0	1	0	0
Malvaceae	*Thespesia populnea*	Tree	1	Wana	Pacific Rosewood	1	0	0	1	0	0	0	0	1
Meliaceae	*Aglaia eleagnoidea*	Tree	1	Usarkun	Coastal Boodyara	1	0	1	1	1	1	1	1	0
Meliaceae	*Vavaea amicorum*	Tree	0			0	0	0	0	0	1	0	0	0
Meliaceae	*Xylocarpus granatum*	Tree	1		Cedar Mangrove, Monkey Puzzle	0	0	0	1	0	0	0	0	0
Menispermaceae	*Tinospora smilacina*	Vine	0		Snake Vine	0	0	0	0	0	0	0	0	1
Moraceae	*Ficus opposita*	Shrub	1	Szar Szar	Sandpaper Fig	1	1	0	0	0	0	0	0	0
Moraceae	*Ficus virens* var. *sublanceolata*	Tree	1	Darni Tree	White Fig	0	0	0	0	0	0	0	1	0
Myrtaceae	*Eugenia reinwardtiana*	Shrub	1	Kurath	Beach Cherry	1	1	1	1	1	1	1	1	0
Nyctaginaceae	*Boerhavia mutabilis*	Herb	0	Aipi	Tar Vine	0	0	0	0	0	0	1	1	1
Nyctaginaceae	*Pisonia grandis*	Tree	1	Piner, Pinarh	Bird Lime Tree	0	0	1	0	0	0	1	0	1
Olacaceae	*Ximenia americana*	Shub	1	Pitader	Yellow Plum	0	0	1	1	0	0	0	1	0

Family Name	Species Name	Life Form	Cultural Significance	Language Name	Common Name	Aureed	Aukane	Bak	Igab	Kabbikane	Mauar	Memay	Umagar	Yaok
Oleaceae	*Chionanthus ramiflorus*	Tree	0		Native Olive	0	0	0	1	0	1	0	0	0
Oleaceae	*Jasminum elongatum*	Vine	0		Native Jasmine	0	0	0	0	0	1	0	0	0
Opiliaceae	*Cansjera leptostachya*	Vine	0	Tait Pat		1	0	1	1	0	0	1	0	1
Orchidaceae	*Dendrobium bifalce*	Orchid	0		Bracted Dendrobium	0	0	0	0	0	1	0	0	0
Pandanaceae	*Pandanus spirilis*	Pandanus	1	Kowsar	Pandanus	1	1	0	0	1	1	0	0	0
Passifloraceae	*Passiflora suberosa**	Vine	0		Corky Passionfruit	0	1	0	1	1	0	0	0	0
Pedaliaceae	*Josephinia imperatricis*	Herb	0	Puti		1	0	1	1	0	0	0	1	1
Phyllanthaceae	*Breynia cernua*	Shrub	0	Imer		1	0	0	0	0	0	0	0	0
Phyllanthaceae	*Breynia oblongifolia*	Shrub	0		Coffee Bush	1	0	0	0	0	0	0	0	0
Phyllanthaceae	*Bridelia tomentosa*	Shrub	0			1	0	0	0	0	0	0	0	0
Phyllanthaceae	*Flueggea virosa* subsp. *melanthesoides*	Shrub	1	Kupi	White Fruit	1	0	0	0	0	0	0	0	0
Phyllanthaceae	*Glochidion apodogynum*	Shrub	0	Pelieth	Buttonwood	1	0	0	0	0	0	0	0	0
Phyllanthaceae	*Phyllanthus novae-hollandiae*	Shrub	1	Ebi		0	1	0	0	0	0	1	0	1
Pittosporaceae	*Pittosporum ferrugineum* subsp. *ferrugineum*	Shrub	0			0	1	0	1	0	1	0	0	0
Poaceae	*Cenchrus brevisetosus*	Grass	0			1	0	0	0	0	0	1	0	0
Poaceae	*Dactyloctenium aegyptium**	Grass	0		Button Grass	1	1	0	0	1	0	1	0	0
Poaceae	*Eragrostis amabilis*	Grass	0		Love Grass	0	0	0	1	0	**1**	0	0	0
Poaceae	*Eragrostis pubescens*	Grass	0		Love Grass	1	0	0	0	0	0	0	0	0
Poaceae	*Imperata cylindica*	Grass	1		Blady Grass, House Grass	0	0	0	1	0	1	0	0	0
Poaceae	*Lepturus repens*	Grass	0		Pacific Island Thintail	1	1	0	1	1	1	1	1	1
Poaceae	*Melinus repens**	Grass	0		Red Natal Grass	0	1	0	0	0	0	0	0	0
Poaceae	*Mensithea formosa*	Grass	0			0	1	0	0	1	0	0	1	0
Poaceae	*Spinifex longifolius*	Grass	0		Beach Spinifex	1	0	0	1	1	0	0	1	1

Family Name	Species Name	Life Form	Cultural Significance	Language Name	Common Name	Aureed	Aukane	Bak	Igab	Kabbikane	Mauar	Memay	Umagar	Yaok
Poaceae	*Themeda arguens*	Grass	0		Kangaroo Grass	1	1	0	1	0	1	0	0	0
Poaceae	*Thuarea involuta*	Grass	0			1	0	0	1	1	0	1	1	0
Polypodiaceae	*Drynaria quercifolia*	Fern	1		Basket Fern	0	0	0	1	1	1	0	0	0
Polypodiaceae	*Microsorum grossum*	Fern	1	Kargh Kargh		0	1	0	0	1	0	0	0	0
Polypodiaceae	*Pyrossia lanceolata*	Fern	0		Felt Fern	0	0	0	0	0	1	0	0	0
Portulacaceae	*Portulaca australis*	Herb	0			1	0	0	0	0	0	0	0	1
Putranjivaceae	*Drypetes deplanchei*	Tree	1	Ak, Aka Tree	Yellow Boxwood	1	1	1	1	1	1	1	1	0
Rhamnaceae	*Colubrina asiatica*	Shrub	1	Guraigur	Shampoo Bush	0	0	1	1	1	0	1	1	0
Rubiaceae	*Cyclophyllum maritimum*	Tree	0		Coastal Canthium	1	1	1	1	0	1	0	0	0
Rubiaceae	*Guettarda speciosa*	Tree	1	Bodo	Beach Gardenia	1	0	1	0	1	1	1	1	1
Rubiaceae	*Ixora timorensis*	Shrub	1		Native Ixora	0	0	0	1	0	1	0	0	0
Rubiaceae	*Morinda citrifolia*	Shrub	1	Auboi	Cheese Fruit	1	1	1	1	1	1	1	1	0
Rubiaceae	*Psychotria poliostemma*	Shrub	0			1	0	0	1	0	1	0	0	0
Rubiaceae	*Spermacoce papuana*	Herb	0			1	0	0	1	0	1	0	0	0
Rubiaceae	*Spermacocce* sp. (Lorim Point A. Morton AM1237)	Herb	0			0	1	0	0	0	0	0	0	0
Rutaceae	*Micromelum minutum*	Tree	1	Api	Lime Berry	1	1	1	1	1	1	1	1	1
Sapindaceae	*Dodonaea viscosa* subsp. *viscosa*	Shrub	0	Sapai	Native Hop Bush	0	0	0	1	1	1	0	0	0
Sapotaceae	*Manilkara kauki*	Tree	1	Ubar	Wongai	1	0	1	0	1	1	1	1	1
Sapotaceae	*Planchonella obovata*	Tree	0	Ebaith		1	1	1	1	1	1	1	0	0
Smilacaceae	*Smilax australis*	Vine	0	Gnib Gnib	Barb Wire Vine	1	1	1	1	1	1	0	0	0
Sparrmanniaceae	*Triumpheta procumbens*	Herb	0	Puti		0	0	0	0	0	0	1	0	0
Stackhousiaceae	*Stackhousia intermedia*	Herb	0			1	0	0	0	0	0	0	0	0
Surianaceae	*Suriana maritima*	Shrub	0	Murr		1	1	1	1	1	1	1	1	1
Taccaceae	*Tacca leontopetaloides*	Herb	1	Gasi	Native Arrowroot	1	0	0	0	1	0	0	0	0

Family Name	Species Name	Life Form	Cultural Significance	Language Name	Common Name	Aureed	Aukane	Bak	Igab	Kabbikane	Mauar	Memay	Umagar	Yaok
Thymelaeaceae	*Wikstroemia indica*	Shub	0		Tie Bush	0	1	0	0	0	0	0	0	0
Ulmaceae	*Celtis paniculata*	Tree	0			1	1	1	1	0	0	1	1	1
Ulmaceae	*Celtis philippensis*	Tree	0			0	0	0	0	0	1	1	0	1
Urticaceae	*Pipturus argenteus*	Shrub	1	Wayli	Native Mulberry	0	0	0	0	0	0	1	0	0
Verbenaceae	*Lantana camara**	Shrub	0		Lantana	0	0	0	1	0	1	0	0	0
Verbenaceae	*Stachytarpheta jamaicensis**	Herb	0		Snake Weed	0	0	0	0	0	1	0	0	0
Vitaceae	*Cayratia saponaria*	Vine	0			0	0	0	0	0	0	0	1	1
Vitaceae	*Cissus maritima*	Vine	0			0	0	0	1	0	0	0	0	0
Zygophyllaceae	*Tribulus cistoides*	Herb	0	Puti		0	0	1	1	1	0	0	0	1
	136[4]			**72**		**74**	**43**	**47**	**69**[5]	**50**	**66**	**48**	**44**	**41**

[4] Includes record of Nypa fruticans recorded as a drift seed on Igab
[5] Includes record of Nypa fruticans recorded as a drift seed on Igab

Appendix E. Culturally Significant Plant List

Language Name	Common Name	Family Name	Species Name	Life Form	Aureed	Aukane	Bak	Igab	Kabbikane	Mauar	Memay	Umagar	Yauok	Broad Use Category[6]
Aipi	Tar Vine	Nyctaginaceae	*Boerhavia mutabilis*	Herb	0	0	0	0	0	0	1	1	1	Me
Ak, Aka Tree	Yellow Boxwood	Putranjivaceae	*Drypetes deplanchei*	Tree	1	1	1	1	1	1	1	1	0	Ma
Api	Lime Berry	Rutaceae	*Micromelum minutum*	Tree	1	1	1	1	1	1	1	1	1	Un
Auboi	Cheese Fruit	Rubiaceae	*Morinda citrifolia*	Shrub	1	1	1	1	1	1	1	1	0	Ma, Me
Bibi	Macaranga	Euphorbiaceae	*Macaranga tanarius*	Shrub	1	0	0	0	0	0	0	0	0	Ma
Bodo	Beach Gardenia	Rubiaceae	*Guettarda speciosa*	Tree	1	0	1	0	1	1	1	1	1	Ma
Boi Boi	Scrambling Clerodendrum	Lamiaceae	*Clerodendrum inerme*	Shrub	0	0	0	1	0	0	0	0	1	Ma
Buman, Boman	Whistle Tree	Araliaceae	*Polyscias macgillivraei*	Shrub	1	0	0	0	0	1	1	0	0	Ma
Buzz	Native Dracaena	Dracaenaceae	*Pleomele angustifolia*	Shrub	1	0	0	1	0	1	0	0	0	Ma
Crawling Buzz	Whip Vine	Flagellariaceae	*Flagellaria indica*	Vine	0	0	1	1	0	0	0	0	0	Ma
Darni Tree	White Fig	Moraceae	*Ficus virens* var. *sublanceolata*	Tree	0	0	0	0	0	0	0	1	0	Ma, Cu
Del	Sea Cabbage	Goodeniaceae	*Scaevola taccada*	Shrub	1	0	1	1	1	0	1	0	1	Cu
Duwar	Tar Tree	Anacardiaceae	*Semecarpus australiensis*	Tree	1	0	0	0	1	0	0	0	0	F
Ebaith		Sapotaceae	*Planchonella obovata*	Tree	1	1	1	1	1	1	1	0	0	Ma
Ebarrb		Fabaceae	*Tephrosia* sp. (Muddy Bay P.I. Forster+PIF15313)	Herb	1	0	0	1	0	1	0	0	0	Ma
Ebi		Phyllanthaceae	*Phyllanthus novae-hollandiae*	Shrub	0	1	0	0	0	0	1	0	1	Ma
Erab	Coconut	Arecaceae	*Cocos nucifera**	Palm	1	1	0	0	1	1	1	1	0	F, Ma
Gaibui	Horestail Oak	Casuarinaceae	*Casuarina equisetifolia* var. *incana*	Tree	1	1	1	1	1	1	1	1	1	Ma
Gabul Dell	Octopus Tree	Boraginaceae	*Argusea argentea*	Shrub	0	0	1	1	0	0	1	1	1	Cu
Gabul Rus	Silver Bush	Fabaceae	*Sophora tomentosa* subsp. *australis*	Shrub	0	0	1	0	0	0	1	0	0	Cu

[6] Broad Use Categories: Cu=Customary; F=Food; Ma=Material; Me=Medicinal; Unk=Unknown

Language Name	Common Name	Family Name	Species Name	Life Form	Aureed	Aukane	Bak	Igab	Kabbikane	Mauar	Memay	Umagar	Yauok	Broad Use Category[6]
Gasi	Native Arrowroot	Taccaceae	*Tacca leontopetaloides*	Herb	1	0	0	0	1	0	0	0	0	F
Gnib Gnib	Barb Wire Vine	Smilacaceae	*Smilax australis*	Vine	1	1	1	1	1	1	0	0	0	Ma
Grass Medicine	Tridax Daisy	Asteraceae	*Tridax procumbens**	Herb	1	0	1	1	0	1	0	1	0	Me
Guraigur	Shampoo Bush	Rhamnaceae	*Colubrina asiatica*	Shrub	0	0	1	1	1	0	1	1	0	Ma, Me
Gurrawad	Sea Purslane	Aizoaceae	*Sesuvium portulacastrum*	Herb	1	1	1	1	1	1	1	1	1	Ma
Imer		Phyllanthaceae	*Breynia cernua*	Shrub	1	0	0	0	0	0	0	0	0	Unk
Irrh Whirr	Flintwood	Flacourtiaceae	*Scolopia braunii*	Tree	1	1	1	1	1	1	0	0	0	Ma
Kapai	Helicopter Tree	Hernandiaceae	*Gyrocarpus americanus* subsp. *americanus*	Tree	0	0	0	0	0	0	0	1	0	Ma
Kargh Kargh		Polypodiaceae	*Microsorum grossum*	Fern	0	1	0	0	1	0	0	0	0	Me
Kibur	Chodhava	Lamiaceae	*Anisomeles papuana*	Herb	1	0	0	0	0	0	0	0	0	Unk
Komak		Lamiaceae	*Premna serratifolia*	Shrub	1	1	0	0	1	1	1	1	1	F, Ma
Kowsar	Pandanus	Pandanaceae	*Pandanus spirilis*	Pandanus	1	1	0	0	1	1	0	0	0	Ma
Kubi	Australian Ebony	Ebenaceae	*Diospyros compacta*	Tree	1	0	1	1	1	1	1	0	0	Ma
Kubil Gim	Broad Leaved Ebony	Ebenaceae	*Diospyros maritima*	Tree	1	1	1	1	1	1	1	1	0	Cu
Kupi	White Fruit	Phyllanthaceae	*Flueggea virosa* subsp. *melanthesoides*	Shrub	1	0	0	0	0	0	0	0	0	F
Kurath	Beach Cherry	Myrtaceae	*Eugenia reinwardtiana*	Shrub	1	1	1	1	1	1	1	1	0	F
Mekay	Beach Almond	Combretaceae	*Terminalia catappa*	Tree	0	0	0	0	0	1	0	0	1	F, Ma
Mipa	Australian Almond	Combretaceae	*Terminalia muelleri*	Tree	1	0	0	0	0	0	0	0	0	F, Ma
Mipa	Terminalia	Combretaceae	*Terminalia subacroptera*	Tree	1	1	1	1	1	1	1	1	1	F, Ma
Mukmai, Mukmai	Sea Trumpet	Boraginaceae	*Cordia subcordata*	Tree	1	1	1	1	1	1	1	1	1	F, Ma
Murr	Digging Stick Tree	Lythraceae	*Pemphis acidula*	Shrub	0	0	1	1	1	0	1	1	1	Ma
Murr		Surianaceae	*Suriana maritima*	Shrub	1	1	1	1	1	1	1	1	1	Ma

Language Name	Common Name	Family Name	Species Name	Life Form	Aureed	Aukane	Bak	Igab	Kabbikane	Mauar	Memay	Umagar	Yauok	Broad Use Category[6]
Muzaru	Dodder	Lauraceae	*Cassytha pubescens*	Vine	1	1	1	1	1	1	1	1	1	F, Ma
Naiwa	Coral Tree	Fabaceae	*Erythrina insularis*	Tree	1	0	0	1	0	0	1	0	0	Ma
Oui Boi	Coast Caper	Capparaceae	*Capparis lucida*	Shrub	1	0	1	1	0	1	1	1	1	Unk
Oui Boi	Wild Orange	Capparaceae	*Capparis sepiaria*	Shrub	1	0	1	0	0	0	1	1	1	Unk
Patal Pui	Northern Conkle Berry	Apocynaceae	*Carissa laxiflora*	Shrub	0	0	0	1	0	1	0	0	0	F
Pelieth	Buttonwood	Phyllanthaceae	*Glochidion apodogynum*	Shrub	1	0	0	0	0	0	0	0	0	Ma
Piner, Pinarh	Bird Lime Tree	Nyctaginaceae	*Pisonia grandis*	Tree	0	0	1	0	0	0	1	0	1	Ma
Pitader		Celastraceae	*Gymnosporia inermis*	Shrub	1	0	0	1	0	1	0	0	0	Ma
Pitader	Yellow Plum	Olacaceae	*Ximenia americana*	Shub	0	0	1	1	0	0	0	1	0	F
Pulla	Goats Foot Convolvulus	Convolvulaceae	*Ipomoea pes-capre subsp. brasiliensis*	Vine	1	1	1	1	1	1	1	1	1	Ma, Me
Pulla	Beach Bean	Fabaceae	*Canavalia papuana*	Vine	0	0	1	0	0	0	0	0	0	Ma
Pulla	Beach Bean	Fabaceae	*Vigna marina*	Vine	0	0	1	1	1	0	0	0	1	Ma
Puti		Pedaliaceae	*Josephinia imperatricis*	Herb	1	0	1	1	0	0	0	1	1	Unk
Puti		Sparrmanniaceae	*Triumpheta procumbens*	Herb	0	0	0	0	0	0	1	0	0	Unk
Puti	Caltrope	Zygophyllaceae	*Tribulus cistoides*	Herb	0	0	1	1	1	0	0	0	1	Unk
Sapai	Native Hop Bush	Sapindaceae	*Dodonaea viscosa* subsp. *viscosa*	Shrub	0	0	0	1	1	1	0	0	0	Ma
Sisal Hemp	Manilla Rope	Agavaceae	*Agave sisalana**	Succulent	1	0	0	0	0	0	0	0	0	Ma
Susul Pui		Euphorbiaceae	*Euphorbia pallens*	Herb	1	0	0	1	1	0	1	1	1	Unk
Susul Pui		Euphorbiaceae	*Euphorbia tannensis* subsp. *tannensis*	Herb	0	1	1	1	1	0	1	0	1	Unk
Szar Szar	Sandpaper Fig	Moraceae	*Ficus opposita*	Shrub	1	1	0	0	0	0	0	0	0	F, Ma
Tait Pat		Opiliaceae	*Cansjera leptostachya*	Vine	1	0	1	1	0	0	1	0	1	Ma

Language Name	Common Name	Family Name	Species Name	Life Form	Aureed	Aukane	Bak	Igab	Kabbikane	Mauar	Memay	Umagar	Yauok	Broad Use Category[6]
Thinicupu	Crabs Eye, Gidee Gidee	Fabaceae	*Abrus precatorius subsp. precatorius*	Vine	1	1	1	1	0	1	0	0	0	Ma
Ubar	Wongai	Sapotaceae	*Manilkara kauki*	Tree	1	0	1	0	1	1	1	1	1	F, Ma
Urakar	Cottonwood, Beach Hibiscus	Malvaceae	*Hibiscus tiliaceus*	Tree	0	0	0	0	0	0	1	0	0	Ma
Uru	Lolly Vine	Celastraceae	*Salacia chinensis, S. disepala*	Shrub	1	1	1	1	1	1	0	1	0	Unk
Usarkun	Coastal Boodyara	Meliaceae	*Aglaia eleagnoidea*	Tree	1	0	1	1	1	1	1	1	0	Ma
Wana	Pacific Rosewood	Malvaceae	*Thespesia populnea*	Tree	1	0	0	1	0	0	0	0	1	Ma
Wapada	Bombax, Canoe Tree	Bombacaceae	*Bombax ceiba var. leiocarpum*	Tree	1	0	0	0	0	0	0	0	0	Ma
Wayli	Native Mulberry	Urticaceae	*Pipturus argenteus*	Shrub	0	0	0	0	0	0	1	0	0	Ma
Zeger Zeger	Nicker Nut	Caesalpiniaceae	*Caesalpinea bonduc*	Shrub	0	1	1	0	0	0	0	0	0	Ma
TBD	Chaff Flower	Acanthaceae	*Achyranthes aspera*	Herb	1	1	1	1	1	0	1	0	1	Me
TBD	Five Leaf Yam	Dioscoreaceae	*Dioscorea pentaphylla*	Vine	0	0	0	0	0	0	0	1	0	F
TBD	Coastal Canthium	Rubiaceae	*Cyclophyllum maritimum*	Tree	1	1	1	1	0	1	0	0	0	Ma

Appendix F. Botanical Voucher Specimens[7]

AUREED

Coll #	Coll_Date	Genus_Species	Family	GDA	Lat	Long	Flw	Bud	Fruit	Photo	Habitat	Habit	Other Notes
DGF AR01	25th November 2016	*Euphorbia pallens*	Euphorbiaceae	GDA 94	9 56.842	143 17.598		x		X, DF	Open woodland of Casuarina equisetifolia (6-10m) with scattered coconut on foredune	Erect herb to 6cm.	Leaves opposite, milky exudate, red stems. Abundant in ground cover
DGF AR02	25th November 2016	*Mukia maderaspetata*	Cucurbitaceae	GDA 94	9 56.842	143 17.598				X, DF	Open woodland of Casuarina equisetifolia (6-10m) with scattered coconut on foredune	Prostrate herbaceous vine.	Leaf margins wavy, leaf surface scabrous. Occasional in ground cover.
DGF AR03	25th November 2016	*Planchonella obovata*	Sapotaceae	GDA 94	9 56.841	143 17.653				X, DF	Grassland dominated by Cenchrus brevisetosus scattered coconut, agave and shrubs of Premna serratifolia.	Small tree to 4m.	Occasional to common.
DGF AR04	25th November 2016	*Anisomeles malabrica*	Lamiaceae	GDA 94	9 56.841	143 17.653	x			X, DF	Grassland dominated by Cenchrus brevisetosus scattered coconut, agave and shrubs of Premna serratifolia	Erect herb to 40cm.	Flowers mauve, occasional.
DGF AR05	25th November 2016	*Ficus opposita*	Moraceae	GDA 94	9 56.841	143 17.653			x	X, DF	Grassland dominated by Cenchrus brevisetosus scattered coconut, agave and shrubs of Premna serratifolia.	Shrub 2m.	Leaves opposite, sand papery. Fruit green ripening to black. Kulkalgal name 'Sarzar'.
DGF AR06	25th November 2016	*Scolopia braunii*	Flacourtiaceae	GDA 94	9 57.035	143 17.572				X, DF	Dense littoral thicket of Scolopia braunii, Scaevola taccada, Smilax australis, Premna serratifolia with emergent coconut.	Small tree to 4m.	Kulkalgal name 'Irrh wirrh'.
DGF AR07	25th November 2016	*Tephrosia sp.*	Fabaceae	GDA 94	9 57.035	143 17.572			x	X, DF	Dense littoral thicket of Scolopia braunii, Scaevola taccada, Smilax australis, Premna serratifolia with emergent coconut.	Low perennial shrub to 1m.	Flowers pink, dry fruit pods twisted. Occasional on edge of thicket.
DGF AR08	25th November 2016	*Bombax ceiba var. leicclada*	Bombacaceae	GDA 94	9 57.140	143 17.576				X, DF	Low closed forest/thicket of Bombax ceiba, Planchonella obovata and Thespesia populnea.	Small tree to 6m.	Fruit present, Uncommon.

[7] Vouchers lodged with Queensland Herbarium (BRI) with duplicates to Australian Tropical Herbarium (ATH) in Cairns.

DGF AR09	25th November 2016	*Macaranga tanarius*	Euphorbiaceae	GDA 94	9 57.140	143 17.576			X, DF	Low closed forest/thicket of Bombax ceiba, Planchonella obovata and Thespesia populnea.	Small tree 5m.	Occasional on edge of thicket.
DGF AR10	25th November 2016	*Terminalia muelleri*	Combretaceae	GDA 94	9 57.202	143 17.266	x		X, DF	Low (2-4m) Copses/thicket of Ficus opposita, Drypetes deplanchei and Diospyros compacta.	Small tree 3m.	Flowers in terminal spikes.
DGF AR11	25th November 2016	*Casuarina equisetifolia var. incana*	Casuarinaceae	GDA 94	9 57.228	143 17.174		x	X, DF	Dune woodland of Casuarina equisetifolia.	Tree to 6m.	Common on frontal dunes.
DGF AR12	25th November 2016	*Lepturus repens*	Poaceae	GDA 94	9 57.228	143 17.174		x	X, DF	Dune woodland of Casuarina equisetifolia.	Erect grass.	Common on dune.
DGF AR13	25th November 2016	*Dactyloctineum aegyptum*	Poaceae	GDA 94	9 57.228	143 17.174		x	X, DF	Dune woodland of Casuarina equisetifolia.	Clumped grass	Uncommon.
DGF AR14	25th November 2016	*Cenchrus brevisetosus*	Poaceae	GDA 94	9 57.228	143 17.174	x		X, DF	Dune woodland of Casuarina equisetifolia.	Tall clumped grass to 1m.	Dominant grass
DGF AR15	25th November 2016	*Drypetes deplanchei*	Putrangivaceae	GDA 94	9 57.256	143 17.274		x	X, DF	Low closed forest (6-10m) with Manilkara kauki, Erythrina insularis, Aglaia eleagnoidea and Celtis paniculata.	Compact shrub 2.2m.	Fruits red..
DGF AR16	25th November 2016	*Ficus opposita*	Moraceae	GDA 94	9 57.256	143 17.274		x	X, DF	Low closed forest (6-10m) with Manilkara kauki, Erythrina insularis, Aglaia eleagnoidea and Celtis paniculata.	Shrub 2m.	Fruits ripening black.
DGF AR17	25th November 2016	*Evolvulus alsinoides*	Convolvulaceae	GDA 94	9 57.314	143 17.258	x		X, DF	Shrubland/grassland complex with low 1-4m thickets of Manilkara kauki, Diospyros maritima, Morinda citrifolia and Premna serratifolia.	Prostrate herb.	Flowers blue. Occasional in groundcover.
DGF AR18	25th November 2016	*Rhynchosia minima*	Fabaceae	GDA 94	9 57.314	143 17.258		x	X, DF	Shrubland/grassland complex with low 1-4m thickets of Manilkara kauki, Diospyros maritima, Morinda citrifolia and Premna serratifolia.	Sprawling leguminous vine.	Leaves trifoliate, with dry pods.
DGF AR19	25th November 2016	*Celtis paniculata*	Ulmaceae	GDA 94	9 57.355	143 17.175		x Juvenile fruits	X, DF	Clumping shrubland with open areas of bare sand and grasses.	Small tree 3m.	Juvenile fruit green. Uncommon.
DGF AR20	25th November 2016	*Gymnosporia inermis*	Celastraceae	GDA 94	9 57.380	143 17.174		x	X, DF	Woodland of Casuarina equisetifolia 8-12m with dense understory	Low spreading shrub 2m.	Fruits red.
DGF AR21	25th November 2016	*Erythrina insularis*	Fabaceae	GDA 94	9 57.380	143 17.174		x	X, DF	Woodland of Casuarina equisetifolia 8-12m with dense understorey	Small deciduous tree 6m.	Leaves trifoliate. Seeds bright red.

AUKANE

Coll #	Coll_Date	Genus_Species	Family	GDA	Lat	Long	Flw	Bud	Fruit	Photo	Habitat	Habit	Other Notes
DGF AK01	26th November 2016	*Scolopia braunii*	Flacourtiaceae	GDA 94	9 52.623	143 23.623				x, DF	Grassland on low dune rise with scattered clumps of shrubs (1-3m) including Planchonella obovata, Diospyros maritima, Morinda citrifolia, Terminalia muelleri, Smilax australis, and Drypetes deplanchei.	Small tree 4m.	Leaves with angled margins. Occasional.
DGF AK02	26th November 2016	*Smilax australis*	Smilacaceae	GDA 94	9 52.623	143 23.623			x	x, DF	Grassland on low dune rise with scattered clumps of shrubs (1-3m) including Planchonella obovata, Diospyros maritima, Morinda citrifolia, Terminalia muelleri, Smilax australis, and Drypetes deplanchei.	Robust vine with spines/thorns.	Common. Fruit ripening black.
DGF AK03	26th November 2016	*Micromelum minutum*	Rutaceae	GDA 94	9 52.623	143 23.623		x	x Juv fruit	x, DF	Grassland on low dune rise with scattered clumps of shrubs (1-3m) including Planchonella obovata, Diospyros maritima, Morinda citrifolia, Terminalia muelleri, Smilax australis, and Drypetes deplanchei.	Single stemmed shrub to 2.5m.	Occasional.
DGF AK04	26th November 2016	*Cyclophyllum maritimum*	Rubiaceae	GDA 94	9 52.623	143 23.623			x	x, DF	Grassland on low dune rise with scattered clumps of shrubs (1-3m) including Planchonella obovata, Diospyros maritima, Morinda citrifolia, Terminalia muelleri, Smilax australis, and Drypetes deplanchei.	Small tree 4m.	Juvenile fruit green ripening to pink/red. Occasional.
DGF AK05	26th November 2016	*Celtis paniculata*	Ulmaceae	GDA 94	9 52.623	143 23.623				x, DF	Grassland on low dune rise with scattered clumps of shrubs (1-3m) including Planchonella obovata, Diospyros maritima, Morinda citrifolia, Terminalia muelleri, Smilax australis, and Drypetes deplanchei.	Small evergreen tree to 3m.	Uncommon.
DGF AK06	26th November 2016	*Drynaria quercifolia*	Polypodiaceae	GDA 94	9 52.070	143 23.666				x, DF	Open forest/woodland (8-15m) with Casuarina equisetifolia and vine thicket understory of Planchonella obovata, Diospyros maritima, Morinda citrifolia, Terminalia muelleri, Smilax australis, and Drypetes deplanchei.	Rhizomatous terrestrial fern.	Occasional in ground cover. Medicinal plant.
DGF AK07	26th November 2016	*Morinda citrifolia*	Rubiaceae	GDA 94	9 52.070	143 23.666	x			x, DF	Open forest/woodland (8-15m) with Casuarina equisetifolia and vine thicket understory of Planchonella obovata, Diospyros maritima, Morinda citrifolia, Terminalia subacroptera, Smilax australis, and Drypetes deplanchei.	Bushy shrub 3m.	Leaves opposite, flowers white. Uncommon.

Coll #	Coll_Date	Genus_Species	Family	GDA	Lat	Long	Flw	Bud	Fruit	Photo	Habitat	Habit	Other Notes
DGF AK08	26th November 2016	*Phyllanthus novae-hollandiae*	Phyllanthaceae	GDA 94	9 52.070	143 23.666				x, DF	Open forest/woodland (8-15m) with Casuarina equisetifolia and vine thicket understory of Planchonella obovata, Diospyros maritima, Morinda citrifolia, Terminalia subacroptera, Smilax australis, and Drypetes deplanchei.	Shrub 2m.	Leaves alternate, discolorous. Uncommon.
DGF AK09	26th November 2016	*Terminalia muelleri*	Combretaceae	GDA 94	9 52.070	143 23.666		x		x, DF	Open forest/woodland (8-15m) with Casuarina equisetifolia and vine thicket understory of Planchonella obovata, Diospyros maritima, Morinda citrifolia, Terminalia subacroptera, Smilax australis, and Drypetes deplanchei.	Small tree 3m.	Juvenile flowers in terminal spikes. Common.
DGF AK10	26th November 2016	*Wickstroemia indica*	Thymeliaceae	GDA 94	9 52.070	143 23.666		x		x, DF	Open forest/woodland (8-15m) with Casuarina equisetifolia and vine thicket understory of Planchonella obovata, Diospyros maritima, Morinda citrifolia, Terminalia subacroptera, Smilax australis, and Drypetes deplanchei.	Low shrub to 1m.	Twig bark fibrous, flower buds green. Uncommon.
DGF AK11	26th November 2016	*Salsola australis*	Chenopodiaceae	GDA 94	9 52.032	143 23.645			x	x, DF	Open forest/woodland (8-15m) with Casuarina equisetifolia on foredune.	Low compact herb to 15cm.	Lower stems reddish. Uncommon.
DGF AK12	26th November 2016	*Spermacocce papuana*	Rubiaceae	GDA 94	9 52.032	143 23.645	x			x, DF	Open forest/woodland (8-15m) with Casuarina equisetifolia on foredune.	Erect single stemmed herb to 15cm.	Leaves opposite, flowers clustered in axils. Uncommon on foredune. Likely more abundant after wet season.

BAK

Coll #	Coll_Date	Genus_Species	Family	Zone	Lat	Long	Flw	Bud	Fruit	Photo	Habitat	Habit	Other Notes
DGF BK01	27th November 2016	*Pemphis acidula*	Lythraceae	54	9 53.173	143 29.034	x			x, DF	Closed forest (8-12m) dominated by Manilkara kauki with Terminalia subacroptera, Planchonella obovata and Celtis paniculata.	Shrub 2m.	Flowers white. Common on margin of foreshore and closed forest.
DGF BK02	27th November 2016	*Manilkara kauki*	Sapotaceae	54	9 53.173	143 29.034				x, DF	Closed forest (8-12m) dominated by Manilkara kauki with Terminalia subacroptera, Planchonella obovata and Celtis paniculata.	Small tree 8m.	Uncommon.
DGF BK03	27th November 2016	*Pisonia grandis*	Nyctaginaceae	54	9 53.173	143 29.034			x	x, DF	Closed forest (8-12m) dominated by Manilkara kauki with Terminalia subacroptera, Planchonella obovata and Celtis paniculata.	Tree 12m.	Outer bark pale and smooth. Sticky seeds on ground. Black noddies nesting.
DGF BK04	27th November 2016	*Ximenia americana*	Olaceae	54	9 53.173	143 29.034			x	x, DF	Closed forest (8-12m) dominated by Manilkara kauki with Terminalia subacroptera, Planchonella obovata and Celtis paniculata.	Shrub 2m.	Fruits ripening yellow, edible when ripe. Uncommon.
DGF BK05	27th November 2016	*Vigna or Canavalia*	Fabaceae	54	9 53.967	143 29.037			x	x, DF	Open shrubland/thicket (2-4m) with bare sand areas.	Vine with trifoliate leaves.	Common on sandy ground surface. Dry seed pods twisted. Seeds brown.
DGF BK06	27th November 2016	*Sophora tomentosa*	Fabaceae	54	9 52.944	143 29.093			x	x, DF	Frontal dune and swale herbland with occasional low shrubs.	Shrub 2.5m.	Leaves pinnate. Branchlets softly hairy. Uncommon on foredune.
DGF BK07	27th November 2016	*Pittosporum ferruginuem*	Pittosporaceae	54	9 53.038	143 29.098			x	x, DF	Closed forest (8-12m) dominated by Manilkara kauki with Terminalia subacroptera, Planchonella obovata and Celtis paniculata.	Small tree 2.5m.	Fruits orange clustered at ends of branchlets. Seeds sticky. Uncommon.
DGF BK08	27th November 2016	*Cassytha pubescens*	Lauraceae	54	9 53.038	143 29.098		x		x, DF	Closed forest (8-12m) dominated by Manilkara kauki with Terminalia subacroptera, Planchonella obovata and Celtis paniculata.	Sprawling vine.	Rusty orange stems. Common.
DGF BK09	27th November 2016	*Micromelum minutum*	Rutaceae	54	9 53.038	143 29.098			x	x, DF	Closed forest (8-12m) dominated by Manilkara kauki with Terminalia subacroptera, Planchonella obovata and Celtis paniculata.	Shrub to 3m.	Fruits ripening orange in terminal clusters. Occasional in understory.

Coll #	Coll_Date	Genus_Species	Family	Zone	Lat	Long	Flw	Bud	Fruit	Photo	Habitat	Habit	Other Notes
DGF BK10	27th November 2016	*Guettarda speciosa*	Rubiaceae	54	9 53.038	143 29.098	x			x, DF	Closed forest (8-12m) dominated by Manilkara kauki with Terminalia subacroptera, Planchonella obovata and Celtis paniculata.	Small tree to 5m.	Leaves opposite, flowers white.
DGF BK11	27th November 2016	*Capparis sepiaria*	Capparaceae	54	9 53.038	143 29.098	x	x		x, DF	Closed forest (8-12m) dominated by Manilkara kauki with Terminalia subacroptera, Planchonella obovata and Celtis paniculata.	Sprawling vine/shrub.	Spines on stems. Flowers white. Common.
DGF BK12	27th November 2016	*Vitex* sp.	Lamiaceae	54	9 52.944	143 29.093				x, DF	Frontal dune and swale herbland with occasional low shrubs.	Multi stemmed shrub 1.5m	Leaves trifoliate. Uncommon on foredune.
DGF BK13	27th November 2016	*Scolopia braunii*	Flacourtiaceae	54	9 53.038	143 29.098				x, DF	Closed forest (8-12m) dominated by Manilkara kauki with Terminalia subacroptera, Planchonella obovata and Celtis paniculata.	Small tree to 6m.	Occasional.
DGF BK14	27th November 2016	*Diospyros compacta*	Ebenaceae	54	9 53.038	143 29.098				x, DF	Closed forest (8-12m) dominated by Manilkara kauki with Terminalia subacroptera, Planchonella obovata and Celtis paniculata.	Shrub to 3m.	Occasional.
DGF BK15	27th November 2016	*Cyclophyllum maritimum*	Rubiaceae	54	9 53.038	143 29.098			x	x, DF	Closed forest (8-12m) dominated by Manilkara kauki with Terminalia subacroptera, Planchonella obovata and Celtis paniculata.	Small tree to 5m.	Leaves opposite, fruits ripening red. Occasional
DGF BK16	27th November 2016	*Cansjera leptostachya*	Opiliaceae	54	9 53.038	143 29.098				x, DF	Closed forest (8-12m) dominated by Manilkara kauki with Terminalia subacroptera, Planchonella obovata and Celtis paniculata.	Slender vine.	Uncommon in understory.
DGF BK17	27th November 2016	*Colubrina asiatica*	Rhamnaceae	54	9 52.944	143 29.093			x	x, DF	Frontal dune and swale herbland with occasional low shrubs.	Shrub 2m.	Sprawling stems, dry fruits in clusters. Occasional.
DGF BK18	27th November 2016	*Capparis sp.*	Capparaceae	54	9 53.038	143 29.098		x		x, DF	Closed forest (8-12m) dominated by Manilkara kauki with Terminalia subacroptera, Planchonella obovata and Celtis paniculata.	Evergreen small tree to 6m.	Flower buds present. Abundant.

IGAB

Coll #	Coll_Date	Genus_Species	Family	GDA	Lat	Long	Flw	Bud	Fruit	Photo	Habitat	Habit	Other Notes
DGF IG01	29/11/2016	*Euphorbia cyathophora*	Euphorbiaceae	GDA 94	9.71559	143.35904		x		x, DF	Dune woodland (5-9m) of Casuarina equisetifolia of scattered low shrubs of Cordia subcordata and Suriana maritima	Erect herb to 50cm.	Red bracts. Occasional on dune.
DGF IG02	29/11/2016	*Diospyros sp.*	Ebenaceae	GDA 94	9.71559	143.35904			x	x, DF	Dune woodland (5-9m) of Casuarina equisetifolia of scattered low shrubs of Cordia subcordata and Suriana maritima	Small tree 7m.	Leaves small, fruit green ripening orange.
DGF IG03	29/11/2016	*Unknown*	Arecaceae	GDA 94	9 42.947	142 21.618				x, DF	Closed littoral forest dominated my Manilkara kauki.	Palm seedling.	Scattered seedlings. Rare in groundcover. No mature plants.
DGF IG04	29/11/2016	*Exocarpus latifolius*	Santalaceae	GDA 94	9 42.947	142 21.618				x, DF	Closed littoral forest dominated my Manilkara kauki.	Low shrub 1.5m.	Uncommon.
DGF IG06	29/11/2016	*Erythrina insularis*	Fabaceae	GDA 94	9 42.885	142 21.654			x Juv fruit	x, DF	Low vine thicket (5-9m) with small open patches. Dominant trees of Manilkara kauki, Scolopia braunii, Aglaia eleagnoidea, Drypetes deplanchei and Erythrina insularis.	Small tree 7m.	Small deciduous tree. Leaves starting to sprout. Juvenile fruit.
DGF IG07	29/11/2016	*Tephrosia sp.*	Fabaceae	GDA 94	9 42.885	142 21.654				x, DF	Low vine thicket (5-9m) with small open patches. Dominant trees of Manilkara kauki, Scolopia braunii, Aglaia eleagnoidea, Drypetes deplanchei and Erythrina insularis.	Erect woody low shrub 0.5m.	Occasional.
DGF IG08	29/11/2016	*Lantana camara**	Verbenaceae	GDA 94	9 42.747	142 21.809				x, DF	Dune grassland dominated by Themeda with clumps of shrubs on inland side.	Low multi-stemmed shrub to 0.5m.	Almost leafless at end of dry season. Patchy occurrence throughout the island.

KABBIKANE

Coll #	Coll_Date	Genus_Species	Family	GDA	Lat	Long	Flw	Bud	Fruit	Photo	Habitat	Habit	Other Notes
DGF KB01	26th November 2016	*Euphorbia tannensis subsp. tannensis*	Euphorbiaceae	GDA 94	9 49.384	143 24.405		x		x, DF	Dune shrub land (1-1.5m) dominated by Suriana maritima with occasional Pemphis acidula with senescent Casuarina equisitifolia.	Erect herb to 30cm.	Leaves opposite. Milky exudate present. Leaf scars prominent.
DGF KB02	26th November 2016	*Pemphis acidula*	Lythraceae	GDA 94	9 49.384	143 24.405	x			x, DF	Dune shrub land (1-1.5m) dominated by Suriana maritima with occasional Pemphis acidula with senescent Casuarina equisitifolia.	Robust shrub to 2m.	Flowers white. Common. Kulkalgal Name: 'Murr'
DGF KB03	26th November 2016	*Morinda citrifolia*	Rubiaceae	GDA 94	9 49.384	143 24.405	x		x Juv fruit	x, DF	Dune shrub land (1-1.5m) dominated by Suriana maritima with occasional Pemphis acidula with senescent Casuarina equisitifolia.	Shrub 2m.	Flowers white. Leaves opposite. Uncommon.
DGF KB04	26th November 2016	*Euphorbia pallens*	Euphorbiaceae	GDA 94	9 49.384	143 24.405		x		x, DF	Dune shrub land (1-1.5m) dominated by Suriana maritima with occasional Pemphis acidula with senescent Casuarina equisitifolia.	Erect herb to 30cm.	Leaves opposite. Milky exudate present.
DGF KB05	26th November 2016	*Dodonaea polyandra*	Sapindaceae	GDA 94	9 49.351	143 24.417			x	x, DF	Dune shrub land (1-1.5m) dominated by Suriana maritima with occasional Pemphis acidula	Shrub 1.5m.	Seeds with paper wings. Uncommon.
DGF KB06	26th November 2016	*Drypetes deplanchei*	Putrangivaceae	GDA 94	9 49.354	143 24.463			x	x, DF	Open shrubland/thicket with clumps of small trees and shrubs (3-5m) with sandy open areas.	Small tree 5m.	Fruit ripening orange to red. Common.
DGF KB07	26th November 2016	*Semecarpus australiensis*	Anacardiaceae	GDA 94	9 49.282	143 24.537				x, DF	Closed vine thicket (4-7m) with occasional emergents of Casuarina equisetifolia.	Small tree 6m.	Uncommon.
DGF KB08	26th November 2016	*Casuarina equisetifolia* var. *incama*	Casuarinaceae	GDA 94	9 49.282	143 24.537			x	x, DF	Dune woodland of Casuarina equisetifolia with grassy ground cover and occasional Pandanus.	Tree to 8m.	Common.
DGF KB09	26th November 2016	*Aglaia eleagnoidia*	Meliaceae	GDA 94	9.81926	143.40968				x, DF	Low deciduous vine thicket dominated by Terminalia subacroptera with occasional Manilkara kauki and Guettarda speciosa.	Small tree 4m.	Uncommon.
DGF KB10	26th November 2016	*Cassytha pubescens*	Lauraceae	GDA 94	9.81926	143.40968	x	x	x	x, DF	Low deciduous vine thicket dominated by Terminalia subacroptera with occasional Manilkara kauki and Guettarda speciosa.	Sprawling vine.	Stems rusty brown in colour. Abundant.

MAUAR

Coll #	Coll_Date	Genus_Species	Family	GDA	Lat	Long	Flw	Bud	Fruit	Photo	Habitat	Habit	Other Notes
DGF MA01	29/11/2016	*Jasminium elongatum*	Oleaceae	GDA 94	9 45.860	143 15.962				x, DF	Closed forest (8-15m) with canopy dominated by Manilkara kauki with Aglaia eleagnoidea, Diospyros maritima, and subcanopy/understorey of Diospyros compacta, Pleomele angustifolia, Drypetes deplanchei and Capparis sp.	Slender vine.	Leaves opposite. Occasional in understorey of Wongai forest.
DGF MA02	29/11/2016	*Dendrobium bifalce*	Orchidaceae	GDA 94	9 45.860	143 15.962				x, DF	Closed forest (8-15m) with canopy dominated by Manilkara kauki with Aglaia eleagnoidea, Diospyros maritima, and subcanopy/understorey of Diospyros compacta, Pleomele angustifolia, Drypetes deplanchei and Capparis sp.	Epiphytic orchid. Pseudobulbs longitudinally ridged, constricted at base with small swelling.	Occasional in upper branches of large Manilkara kauki trees and on ground on fallen branches.
DGF MA03	29/11/2016	*Carissa laxiflora*	Apocynaceae	GDA 94	9 45.860	143 15.962				x, DF	Closed forest (8-15m) with canopy dominated by Manilkara kauki with Aglaia eleagnoidea, Diospyros maritima, and subcanopy/understorey of Diospyros compacta, Pleomele angustifolia, Drypetes deplanchei and Capparis sp.	Low shrub 1m.	Leaves opposite, axillary spines, milky exudate. Occasional in understorey.
DGF MA04	29/11/2016	*Pyrrosia lanceolata*	Polypodiaceae	GDA 94	9 45.860	143 15.962				x, DF	Closed forest (8-15m) with canopy dominated by Manilkara kauki with Aglaia eleagnoidea, Diospyros maritima, and subcanopy/understorey of Diospyros compacta, Pleomele angustifolia, Drypetes deplanchei and Capparis sp.	Climbing fern.	Occasional in better developed Wongai forest on logs and trunks.
DGF MA05	29/11/2016	*Vavaea amicorum*	Meliaceae	GDA 94	9 45.860	143 15.962				x, DF	Closed forest (8-15m) with canopy dominated by Manilkara kauki with Aglaia eleagnoidea, Diospyros maritima, and subcanopy/understorey of Diospyros compacta, Pleomele angustifolia, Drypetes deplanchei and Capparis sp.	Single stem sapling shrub 3m.	Leaves whorled at end of branchlets. Uncommon in understorey.

Coll #	Coll_Date	Genus_Species	Family	GDA	Lat	Long	Flw	Bud	Fruit	Photo	Habitat	Habit	Other Notes
DGF MA06	29/11/2016	*Dendrobium bifalce*	Orchidaceae	GDA 94	9 45.860	143 15.962				x, DF	Closed forest (8-15m) with canopy dominated by Manilkara kauki with Aglaia eleagnoidea, Diospyros maritima, and subcanopy/understorey of Diospyros compacta, Pleomele angustifolia, Drypetes deplanchei and Capparis sp.	Epiphytic orchid.	Uncommon on Wongai tree. Dendrobium bifalce also on tree.
DGF MA07	29/11/2016	*Choinanthus ramiflora*	Oleaceae	GDA 94	9 45.860	143 15.962				x, DF	Closed forest (8-15m) with canopy dominated by Manilkara kauki with Aglaia eleagnoidea, Diospyros maritima, and subcanopy/understorey of Diospyros compacta, Pleomele angustifolia, Drypetes deplanchei and Capparis sp.	Sapling shrub 3m.	Leaves opposite. Uncommon in understorey.
DGF MA08	29/11/2016	*Pittosporum ferruginuem*	Pittosporaceae	GDA 94	9 45.860	143 15.962				x, DF	Closed forest (8-15m) with canopy dominated by Manilkara kauki with Aglaia eleagnoidea, Diospyros maritima, and subcanopy/understorey of Diospyros compacta, Pleomele angustifolia, Drypetes deplanchei and Capparis sp.	Shrub 3m.	Occasional in understorey.
DGF MA09	29/11/2016	*Scolopia braunii*	Flacourtiaceae	GDA 94	9 45.860	143 15.962				x, DF	Closed forest (8-15m) with canopy dominated by Manilkara kauki with Aglaia eleagnoidea, Diospyros maritima, and subcanopy/understorey of Diospyros compacta, Pleomele angustifolia, Drypetes deplanchei and Capparis sp.	Shrub 3m.	Occurs in understorey and subcanopy. Occasional.
DGF MA10	29/11/2016	*Psychotria poliostemna*	Rubiaceae	GDA 94	9 45.860	143 15.962				x, DF	Closed forest (8-15m) with canopy dominated by Manilkara kauki with Aglaia eleagnoidea, Diospyros maritima, and subcanopy/understorey of Diospyros compacta, Pleomele angustifolia, Drypetes deplanchei and Capparis sp.	Low shrub 2m.	Leaves opposite, prominent stipule scars, Occasional in understorey.
DGF MA11	29/11/2016	*Cyperus sp.*	Cyperaceae	GDA 94	9 45.860	143 15.962			x	x, DF	Closed forest (8-15m) with canopy dominated by Manilkara kauki with Aglaia eleagnoidea, Diospyros maritima, and subcanopy/understorey of Diospyros compacta, Pleomele angustifolia, Drypetes deplanchei and Capparis sp.	Slender clumped sedge to 20cm.	Occasional in open gaps on margins of wongai forest.

Coll #	Coll_Date	Genus_Species	Family	GDA	Lat	Long	Flw	Bud	Fruit	Photo	Habitat	Habit	Other Notes
DGF MA12	29/11/2016	*Jaquemontia paniculata*	Convolvulaceae	GDA 94	9 45.860	143 15.962			x	x, DF	Closed forest (8-15m) with canopy dominated by Manilkara kauki with Aglaia eleagnoidea, Diospyros maritima, and subcanopy/understorey of Diospyros compacta, Pleomele angustifolia, Drypetes deplanchei and Capparis sp.	Slender vine.	Occasional in open gaps on margins of wongai forest.
DGF MA13	29/11/2016	*Lantana camara**	Verbenaceae	GDA 94	9 45.877	145 15.976				x, DF	Low shrubland/thicket (3-8m) with occasional taller trees of Guettarda speciosa, otherwise with clumps of Scolopia braunii, Aglaia eleagnoidea, Drypetes deplanchei, Planchonella obovata, Salacia disepala and Terminalia subacroptera. Open grassy patches with bare sandy areas between.	Low shrub 0.5m.	Scattered throughout open grassy patches amongst the low thickets.
DGF MA14	29/11/2016	*Salacia disepala*	Celastraceae	GDA 94	9 45.901	143 15.974				x, DF	Low shrubland/thicket (3-8m) with occasional taller trees of Guettarda speciosa, otherwise with clumps of Scolopia braunii, Aglaia eleagnoidea, Drypetes deplanchei, Manilkara kauki, Planchonella obovata and Salacia disepala, Terminalia subacroptera. Open grassy patches with bare sandy areas between.	Sprawling vine/shrub.	Leaves opposite. Occasional in understorey of thicket and on margins.
DGF MA15	29/11/2016	*Gymnosporia inermis*	Celastraceae	GDA 94	9 45.901	143 15.974			x	x, DF	Low shrubland/thicket (3-8m) with occasional taller trees of Guettarda speciosa, otherwise with clumps of Scolopia braunii, Aglaia eleagnoidea, Drypetes deplanchei, Manilkara kauki, Planchonella obovata, Salacia disepala and Terminalia subacroptera. Open grassy patches with bare sandy areas between.	Sprawling shrub 2m.	Leaves finely toothed. Branchlets reddish. Fruits red. Common.
DGF MA16	29/11/2016	*Celtis phillipinensis*	Ulmaceae	GDA 94	9 45.901	143 15.974				x, DF	Low shrubland/thicket (3-8m) with occasional taller trees of Guettarda speciosa, otherwise with clumps of Scolopia braunii, Aglaia eleagnoidea, Drypetes deplanchei, Manilkara kauki, Planchonella obovata, Salacia disepala and Terminalia subacroptera. Open grassy patches with bare sandy areas between.	Shrub 2m.	Uncommon.

Coll #	Coll_Date	Genus_Species	Family	GDA	Lat	Long	Flw	Bud	Fruit	Photo	Habitat	Habit	Other Notes
DGF MA17	29/11/2016	*Scolopia braunii*	Flacourtiaceae	GDA 94	9 45.901	143 15.974				x, DF	Low shrubland/thicket (3-8m) with occasional taller trees of Guettarda speciosa, otherwise with clumps of Scolopia braunii, Aglaia eleagnoidea, Drypetes deplanchei, Manilkara kauki, Planchonella obovata, Salacia disepala and Terminalia subacroptera.	Shrub 4m.	Spines on stems. Common.
DGF MA18	29/11/2016	*Stachytarpheta jamaicensis**	Verbenaceae	GDA 94	9 45.945	143 15.550				x, DF	Low shrubland/thicket (3-8m) with occasional taller trees of Guettarda speciosa, otherwise with clumps of Scolopia braunii, Aglaia eleagnoidea, Drypetes deplanchei, Manilkara kauki, Planchonella obovata, Salacia disepala and Terminalia subacroptera.	Erect herb 40cm.	Scattered throughout open grassy patches amongst the low thickets. Almost leafless in late dry season.
DGF MA19	29/11/2016	*Tephrosia sp.*	Fabaceae	GDA 94	9 45.945	143 15.550			x	x, DF	Low shrubland/thicket (3-8m) with occasional taller trees of Guettarda speciosa, otherwise with clumps of Scolopia braunii, Aglaia eleagnoidea, Drypetes deplanchei, Manilkara kauki, Planchonella obovata, Salacia disepala and Terminalia subacroptera.	Perennial herb to 40cm.	Pods twisted. Occasional in grassland between thickets.
DGF MA20	29/11/2016	*Stylosanthes hamata **	Fabaceae	GDA 94	9 45.943	143 15.550				x, DF	Grassland of Imperata cylindrica, Themeda arguens, Eragrostis sp., Tridax procumbens*, Tephrosia sp. and Cassytha pubescens surrounded by low thickets of Diospyros compacta.	Herb to 15cm.	Uncommon in open grassy patches amongst the low thickets.
DGF MA21	29/11/2016	*Ixora timorensis*	Rubiaceae	GDA 94	9 45.943	143 15.550		x		x, DF	Grassland of Imperata cylindrica, Themeda arguens, Eragrostis sp., Tridax procumbens*, Tephrosia sp. and Cassytha pubescens surrounded by low thickets of Diospyros compacta.	Shrub 2m.	Occasional in shubby thickets.
DGF MA22	29/11/2016	*Scolopia braunii*	Flacourtiaceae	GDA 94	9 45.948	143 15.569		x		x, DF	Grassland of Imperata cylindrica, Themeda arguens, Eragrostis sp., Tridax procumbens*, Tephrosia sp. and Cassytha pubescens surrounded by low thickets of Diospyros compacta and Scolopia braunii.	Small tree 4m.	Abundant throughout thickets.

Coll #	Coll_Date	Genus_Species	Family	GDA	Lat	Long	Flw	Bud	Fruit	Photo	Habitat	Habit	Other Notes
DGF MA23	29/11/2016	*Salacia disepala*	Celastraceae	GDA 94	9 46.047	143 15.595			x	x, DF	Low shrubland/thicket (3-6m) dominated by Scolopia braunii with occasional emergent Terminalia catappa, Diospyros compacta and Aglaia eleagnoidea. Scattered coconut trees.	Shrub 2m.	Juvenile fruits green. Common.
DGF MA24	29/11/2016	*Psychotria poliostermna*	Rubiaceae	GDA 94	9 46.047	143 15.595		x		x, DF	Low shrubland/thicket (3-6m) dominated by Scolopia braunii with occasional emergent Terminalia catappa, Diospyros compacta and Aglaia eleagnoidea. Scattered coconut trees.	Shrub 3m.	Upper leaf surface glossy. Prominent stipules. Uncommon.
DGF MA26	29/11/2016	*Diospyros compacta*	Ebenaceae	GDA 94	9 46.047	143 15.595	x	x		x, DF	Low shrubland/thicket (3-6m) dominated by Scolopia braunii with occasional emergent Terminalia catappa, Diospyros compacta and Aglaia eleagnoidea. Scattered coconut trees.	Small tree 4m.	Finely reticulate venation. Flower buds present. Abundant.
DGF MA27	29/11/2016	*Diospyros compacta*	Ebenaceae	GDA 94	9 46.047	143 15.595			x	x, DF	Low shrubland/thicket (3-6m) dominated by Scolopia braunii with occasional emergent Terminalia catappa, Diospyros compacta and Aglaia eleagnoidea. Scattered coconut trees.	Small tree 4m.	Juvenile fruit green. Abundant.
DGF MA28	29/11/2016	*Asclepias curassavica*?*	Apocynaceae	GDA 94	9 46.047	143 15.595				x, DF	Low shrubland/thicket (3-6m) dominated by Scolopia braunii with occasional emergents.	Erect herb 40cm.	Leaves opposite. Uncommon in grassy areas.
DGF MA29	29/11/2016	*Scolopia braunii*	Flacourtiaceae	GDA 94	9 46.047	143 15.595				x, DF	Low shrubland/thicket (3-6m) dominated by Scolopia braunii with occasional emergents.	Small tree 4m.	Leaf margins coarsely toothed. Stout axillary spines
DGF MA30	29/11/2016	*Ipomea pes-capre subsp. brasiliensis*	Convolvulaceae	GDA 94	9 46.136	143 15.535	x			x, DF	Woodland/shrubland/herbland complex on foredune with Casuarina equisetifolia and occasional emergents of Coconut and Manilkara kauki.	Creeping vine.	Flowers mauve.
DGF MA31	29/11/2016	*Casuarina equisitifolia var. incana*	Casuarinaceae	GDA 94	9 46.136	143 15.535			x	x, DF	Woodland/shrubland/herbland complex on fore dune with Casuarina equisetifolia and occasional emergents of Coconut and Manilkara kauki.	Tree 6m	Scattered on eroding foredune on SE side of island.

MEMAY

Coll #	Coll_Date	Genus_Species	Family	GDA	Lat	Long	Flw	Bud	Fruit	Photo	Habitat	Habit	Other Notes
DGF MM01	27th November 2016	*Pisonia grandis*	Nyctaginaceae	GDA 94	09 57.144	143 23.879			x	x, DF	Open forest (12-22m), dominated by Pisonia grandis with associated Celtis paniculata and Cordia subcordata.	Tree 22m, deciduous.	Smooth, pale trunk. Dominant in open forests in centre of island. Black Noddies nesting throughout.
DGF MM02	25th November 2016	*Celtis paniculata*	Ulmaceae	GDA 94	09 57.144	143 23.879			x	x, DF	Open forest (12-22m), dominated by Pisonia grandis with associated Celtis paniculata and Cordia subcordata.	Tree 6m.	Juvenile fruit green, common in subcanopy.
DGF MM03	25th November 2016	*Berrya cordifolia or Cordia subcordata*	Boraginaceae	GDA 94	09 57.144	143 23.879				x, DF	Open forest (12-22m), dominated by Pisonia grandis with associated Celtis paniculata and Cordia subcordata.	Tree 9m.	Outer twig bark fibrous. Occasional in subcanopy and understory of Pisonia forest.
DGF MM04	26th November 2016	*Pipturus argentea*	Urticaceae	GDA 94	09 57.279	143 23.779				x, DF	Open forest (12-22m), dominated by Pisonia grandis with associated Celtis paniculata and Cordia subcordata.	Low multi stemmed shrub 4m	Uncommon.
DGF MM05	26th November 2016	*Sophora tormentosa*	Fabaceae	GDA 94	09 57.346	143 23.817			x	x, DF	Frontal dune of Sesuvium portulacastrum herbland with occasional shrubs to 1m of Scaevola taccada and Suriana maritima. Fringe on inland side by thin band of Pemphis acidula shrubland.	Multi-stemmed shrub 2.5m.	Mature seed pods. Uncommon on foredune.
DGF MM06	26th November 2016	*Dodonaea sp. polyandra?*	Sapindaceae	GDA 94	09 57.346	143 23.817			x	x, DF	Frontal dune of Sesuvium portulacastrum herbland with occasional shrubs to 1m of Scaevola taccada and Suriana maritima. Fringe on inland side by thin band of Pemphis acidula shrubland.	Shrub 2m.	Uncommon. With juvenile and mature fruit.
DGF MM07	27th November 2016	*Euphorbia pallens*	Euphorbiaceae	GDA 94	09 57.313	143 23.669			x Juv fruit.	x, DF	Frontal dune with thin band of herbland of with Sesuvium portulacastrum and Suriana maritima shrubs. Inland side fringed by dense thicket of Premna serratifolia.	Erect fleshy herb to 20cm.	Red stems, milky sap. Occasional on foredune.
DGF MM08	26th November 2016	*Cansjera leptostachya*	Opiliaceae	GDA 94	09 57.144	143 23.879				x, DF	Open forest (12-22m), dominated by Pisonia grandis with associated Celtis paniculata and Cordia subcordata.	Slender vine.	Uncommon in understorey of Pisonia forest.

Coll #	Coll_Date	Genus_Species	Family	GDA	Lat	Long	Flw	Bud	Fruit	Photo	Habitat	Habit	Other Notes
DGF MM09	26th November 2016	*Capparis nummularia*	Capparaceae	GDA 94	09 57.144	143 23.879				x, DF	Open forest (12-22m), dominated by Pisonia grandis with associated Celtis paniculata and Cordia subcordata.	Low shrub 2m.	Occasional in understorey of Pisonia forest.
DGF MM10	26th November 2016	*Diospyros maritima*	Ebenaceae	GDA 94	09 57.144	143 23.879			x	x, DF	Open forest (12-22m), dominated by Pisonia grandis with associated Celtis paniculata and Cordia subcordata.	Tree 12m.	Common in subcanopy of Pisonia forest. Fruits orange.
DGF MM11	26th November 2016	*Sesuvium portulacastrum*	Portulacaceae	GDA 94	09 57.346	143 23.817	x			x, DF	Frontal dune of Sesuvium portulacastrum herbland with occasional shrubs to 1m of Scaevola taccada and Suriana maritima.	Succulent herb.	Flowers pink. Abundant of foredune.
DGF MM12	26th November 2016	*Colubrina asiatica*	Rhamnaceae	GDA 94	09 57.346	143 23.817	x	x	x	x, DF	Frontal dune of Sesuvium portulacastrum herbland with occasional shrubs to 1m of Scaevola taccada, Suriana maritima, Premna serratifolia and Colubrina asiatica.	Shrub 1.5m	Juvenile fruits green. Occasional.
DGF MM13	26th November 2016	*Triumfetta procumbens*	Sparmanniaceae	GDA 94	09 57.346	143 23.817			x	x, DF	Frontal dune of Sesuvium portulacastrum herbland with occasional shrubs to 1m of Scaevola taccada, Suriana maritima, Premna serratifolia and Colubrina asiatica.	Prostrate herb.	Only occurs on SW spit of island behind camp. Locally regarded as a weed due to very sharp fruits. Local name 'puti'.
DGF MM14	25th November 2016	*Pisonia grandis*	Nyctaginaceae	GDA 94	09 57.198	143 23.837				x, DF	Open forest (12-22m), dominated by Pisonia grandis with associated Celtis paniculata and Cordia subcordata.	Tree 20m	Smooth, pale trunk. Black Noddies nesting throughout. Kulkalgal name 'Pinner'.
DGF MM15	26th November 2016	*Euphorbia pallens*	Euphorbiaceae	GDA 94	09 57.346	143 23.817			x	x, DF	Frontal dune of Sesuvium portulacastrum herbland with occasional shrubs to 1m of Scaevola taccada and Suriana maritima.	Erect fleshy herb to 20cm.	Stems red, milky exudate, Occasional.
DGF MM16	27th November 2016	*Euphorbia tannensis subsp. tannensis*	Euphorbiaceae	GDA 94	09 57.346	143 23.817			x	x, DF	Frontal dune of Sesuvium portulacastrum herbland with shrubs to 1m of Scaevola taccada & Suriana maritima.	Erect fleshy herb to 20cm.	Milky exudate. Occasional.
DGF MM17	26th November 2016	*Pipturus argentea*	Urticaceae	GDA 94	09 57.144	143 23.879				x, DF	Open forest (12-22m), dominated by Pisonia grandis with Celtis paniculata and Cordia subcordata.	Low multistemmed shrub 4m	Uncommon. Kulkalgal name 'Wayli'

UMAGAR

Coll #	Coll_Date	Genus_Species	Family	GDA	Lat	Long	Flw	Bud	Fruit	Photo	Habitat	Habit	Other Notes
DGF UM01	28th November 2016	*Colubrina asiatica*	Rhamnaceae	GDA 94	9 41.322	143 25.712			x	x, DF	Dense shrubland of Pemphis acidula with Cordia subcordata and emergent Casuarina equisetifolia.	Shrub to 3m.	Occasional on edge of foredune.
DGF UM02	28th November 2016	*Pemphis acidula*	Lythraceae	GDA 94	9 41.322	143 25.712	x			x, DF	Dense shrubland of Pemphis acidula with Cordia subcordata and emergent Casuarina equisetifolia.	Bushy shrub 3m.	Flowers white. Abundant on foredune.
DGF UM03	28th November 2016	*Cordia subcordata*	Boraginaceae	GDA 94	9 41.322	143 25.712				x, DF	Dense shrubland of Pemphis acidula with Cordia subcordata and emergent Casuarina equisetifolia.	Small tree 5m.	Occasional in thicket above foredune.
DGF UM04	28th November 2016	*Celtis paniculata*	Ulmaceae	GDA 94	9 41.322	143 25.712				x, DF	Dense shrubland of Pemphis acidula with Cordia subcordata and emergent Casuarina equisetifolia.	Small tree 4m.	Uncommon on edge of thicket.
DGF UM05	28th November 2016	*Ximenia americana*	Olacaceae	GDA 94	9 41.322	143 25.712			x	x, DF	Dense shrubland of Pemphis acidula with Cordia subcordata and emergent Casuarina equisetifolia.	Bushy shrub 2.5m.	Juvenile fruit green ripening to yellow. Stout auxillary spines on stem. Uncommon on foredune.
DGF UM06	28th November 2016	*Guettarda speciosa*	Rubiaceae	GDA 94	9 41.274	143 25.761		x		x, DF	Open shrubland of Casuarina equisetifolia and occasional shrubs on foredune.	Shrub 3m.	Flower buds present. Occasional on foredune.
DGF UM07	28th November 2016	*Vitex ovata*	Lamiaceae	GDA 94	9 41.274	143 25.761				x, DF	Open shrubland of Casuarina equisetifolia and occasional shrubs on foredune.	Prostrate perennial herb with long trailing stems from centre.	Uncommon on dune.
DGF UM08	28th November 2016	*Gyrocarpus americanus*	Gyrocarpaceae	GDA 94	9 41.274	143 25.761			x	x, DF	Open shrubland of Casuarina equisetifolia and occasional shrubs on foredune.	Small tree 2m.	New leaves sprouting. Uncommon on edge of foredune and thicket. Larger trees in closed forest in centre of forest.

Coll #	Coll_Date	Genus_Species	Family	GDA	Lat	Long	Flw	Bud	Fruit	Photo	Habitat	Habit	Other Notes
DGF UM09	28th November 2016	*Vitex negundo*	Lamiaceae	GDA 94	9 41.274	143 25.761	x	x		x, DF	Open shrubland of Casuarina equisetifolia and occasional shrubs on foredune.	Multi stemmed shrub 1.5m.	In bud and flower. Uncommon on northern shoreline on narrow foredune.
DGF UM10	28th November 2016	*Thurea involuta*	Poaceae	GDA 94	9 41.274	143 25.761	x			x, DF	Open shrubland of Casuarina equisetifolia and occasional shrubs on foredune.	Prostrate grass.	Common on foredune.
DGF UM11	28th November 2016	*Claoxylon hillii*	Euphorbiaceae	GDA 94	9 41.250	143 25.861		x		x, DF	Dense low closed forest (7-8m) dominated by Pemphis acidula with scattered saplings of Drypetes deplanchei, Diospyros geminata, Micromelum minutum and Aglaia eleagnoidea.	Single stemmed deciduous sapling shrub 3-4m.	Leaves finely toothed, terminal flower spike. Occasional in Pemphis thicket.
DGF UM12	28th November 2016	*Celtis phillipensis*	Ulmaceae	GDA 94	9 41.268	143 25.817				x, DF	Low closed forest (8-14m) with deciduous emergence of Pisonia grandis and Ficus virens to 25m.	Small tree 3m.	Occasional in understory.
DGF UM13	28th November 2016	*Diospyros geminata*	Ebenaceae	GDA 94	9 41.268	143 25.817				x, DF	Low closed forest (8-14m) with deciduous emergence of Pisonia grandis and Ficus virens to 25m.	Sapling tree 2m.	Occasional in understory.
DGF UM14	28th November 2016	*Capparis sp.*	Capparaceae	GDA 94	9 41.268	143 25.817	x			x, DF	Low closed forest (8-14m) with deciduous emergence of Pisonia grandis and Ficus virens to 25m.	Tall evergreen shrub 3m.	Flower stamen white. Abundant in understory.
DGF UM15	28th November 2016	*Cayratia sp.*	Vitaceae	GDA 94	9 41.199	143 25.879				x, DF	Dune grassland with emergent Casuarina equisetifolia to 8m.	Fleshy vine with trifoliate leaves.	Uncommon.
DGF UM16	28th November 2016	*Euphorbia pallens*	Euphorbiaceae	GDA 94	9 41.199	143 25.879				x, DF	Dune grassland with emergent Casuarina equisetifolia to 8m.	Erect perennial herb to 30cm.	Leaves opposite, discolorous, milky sap. Stems red with prominent leaf scars, long tap root.
DGF UM17	28th November 2016	*Sesuvium portulacastrum*	Portulacaceae	GDA 94						x, DF	Dune grassland with emergent Casuarina equestifolia to 8m.	Fleshy trailing herb.	Common on foredune.

YAUK

Coll #	Coll_Date	Genus_Species	Family	GDA	Lat	Long	Flw	Bud	Fruit	Photo	Habitat	Habit	Other Notes
DGF YK01	27th November 2016	*Pisonia grandis*	Nyctaginaceae	GDA 94	9 51.764	143 18.515			x	x, DF	Well-developed open forest of Pisonia grandis with Celtis paniculata and Diospyros maritima.	Deciduous tree 30m.	Outer bark pale smooth, coppicing from base, Juvenile fruit. Black noddies nesting throughout.
DGF YK02	27th November 2016	*Celtis paniculata*	Ulmaceae	GDA 94	9 51.764	143 18.515				x, DF	Well-developed open forest of Pisonia grandis with Celtis paniculata and Diospyros maritima.	Tree to 12m.	Occasional in subcanopy.
DGF YK03	27th November 2016	*Caryatia sp.*	Vitaceae	GDA 94	9 51.764	143 18.515				x, DF	Well-developed open forest of Pisonia grandis with Celtis paniculata and Diospyros maritima.	Slender vine.	Uncommon in understory.
DGF YK04	27th November 2016	*Capparis sepiaria*	Capparaceae	GDA 94	9 51.764	143 18.515				x, DF	Well-developed open forest of Pisonia grandis with Celtis paniculata and Diospyros maritima.	Scrambling vine/shrub.	Common on margins of Pisonia forests.
DGF YK05	27th November 2016	*Casuarina equisitifolia*	Casuarinaceae	GDA 94	9 51.879	143 18.392			x	x, DF	Woodland on foredune.	Tree 8m.	Occasional.
DGF YK06	27th November 2016	*Cleome viscosa*	Cleomaceae	GDA 94	9 51.879	143 18.392			x	x, DF	Woodland on foredune.	Herb to 40cm.	Occasional on dune.
DGF YK07	27th November 2016	*Vitex trifolia*	Lamiaceae	GDA 94	9 51.879	143 18.392	x			x, DF	Woodland on foredune.	Shrub 2.5m.	Leaves trifoliate, flowers mauve. Uncommon on dune.
DGF YK08	27th November 2016	*Euphorbia pallens*	Euphorbiaceae	GDA 94	9 51.879	143 18.392		x		x, DF	Woodland on foredune.	Erect herb to 40cm	Stems reddish, leaves discolored below, milky sap. Occasional on foredune.
DGF YK09	27th November 2016	*Terminalia catappa*	Combretaceae	GDA 94	9 51.879	143 18.392				x, DF	Woodland on foredune.	Young tree 2m.	Uncommon on island, only 1 observed.
DGF YK10	27th November 2016	*Cayratia sp.*	Vitaceae	GDA 94	9 51.764	143 18.515				x, DF	Well-developed open forest of Pisonia grandis with Celtis paniculata and Diospyros maritima.	Slender vine.	Uncommon in understory of Pisonia forest.
DGF YK11	27th November 2016	*Unknown sp.*	Portulaccaceae	GDA 94	9 51.879	143 18.392		x		x, DF	Woodland on foredune.	Fleshy herb.	Rare in groundcover on foredune.

Appendix G. Fauna List

Appendix G1. Combined Bird List

Family	Species	Species Name[8]	Language Name	Aureed	Aukane	Bak	Igab	Kabbikane	Mauar	Memay	Yauk	Umagar	EBBC[9]	NC Act	BoT
Columbidae	Bar-shouldered Dove	*Geopelia humeralis*	Kudluk	1X	1	1	1			1	1	1		LC	
Columbidae	Rose-crowned Fruit-Dove	*Ptilinopus regina*	Weeba		1									LC	
Columbidae	Superb Fruit Dove	*Ptilinopus superbus*	Colour Weeba	1		1								LC	
Columbidae	Pied Imperial-Pigeon	*Ducula bicolor*	Gynow	1		1	1			1	1X	1		LC	
Pelicanidae	Australian Pelican	*Pelecanus conspicillatus*	Away	1X	1				1					LC	
Ardeidae	Eastern Reef Egret	*Egretta sacra*	Kunai	1X	1	1	1	1	1	1	1X	1X	M	LC	
Ardeidae	Intermediate Egret	*Ardea intermedia*	Tooloo Karbai			1								LC	
Ardeidae	Nankeen Night-Heron	*Nycticorax caledonicus*	Gau	1X	1	1		1			1	1		LC	
Accipitridae	Eastern Osprey	*Pandion cristatus*[10]	Kuya	1	1								M	LC	
Accipitridae	White-bellied Sea-Eagle	*Haliaeetus leucogaster*[11]	Kuzi	1		1	1	1		1	1X	1	M	LC	
Fregatidae	Lesser Frigatebird	*Fregata ariel*	Waumer		1	1		1	1	1	1	1X		LC	
Fregatidae	Great Frigatebird	*Fregata minor*	Waumer	1X								X		LC	
Rallidae	Buff-banded Rail	*Gallirallus philippensis*	Elu			1	1			1	1	1		LC	
Burhinidae	Beach Stone-curlew	*Esacus magnirostris*	"Whistle-Duck"	1X	1	1	1	1	1	1	1	1		V	High
Haematopodidae	Australian Pied Oystercatcher	*Haematopus longirostris*	Piteo	1X	1	1		1		1		1		LC	
Sulidae	Brown Booby	*Sula leucogaster*	Dabay						1					LC	
Charadriidae	Pacific Golden Plover	*Pluvialis fulva*	Sui	1X	1		1		1	1	1	1	M		
Charadriidae	Grey Plover	*Pluvialis squatarola*	Sui	1						1			M		

[8] Nomenclature follows Nomenclature follows the Australian Faunal Directory maintained by DSEWPC. http://www.environment.gov.au/biodiversity/abrs/online-resources/fauna/afd/index.html;
Field records of M. Geyle and J. Lynn; X denotes Wildnet record; ^ denotes Draffan *et al*. (1983) record; * denotes introduced/non-native species. ^ small waders = sui, larger waders = kalu, long-billed waders = kay kalu. Input re migratory status by D. Charley.

[9] Status: CE = Critically Endangered, E = Endangered, V = Vulnerable, NT = Near-Threatened, M = Migratory, LC = Least Concern (Common), I = Introduced (Exotic) under the *Environment Protection and Biodiversity Conservation Act* 1999 (EPBC Act) and/or *Nature Conservation Act* 1992 (NC Act). BoT = species listed as critical or high priority under the Back on Track species prioritisation framework. Department of Environment and Resource Management, Brisbane.

[10] Listed under the Bonn Convention as Osprey *Pandion haliaetus*. Australian birds have been elevated to species level as *P. cristatus* (Wink *et al*. 2004; Christidis & Boles 2008). Not noted as migratory in Australia and generally sedentary around nest territory with young dispersing.

[11] Noted as non-migratory in Australia despite EPBC listing.

Family	Species	Species Name[8]	Language Name	Aureed	Aukane	Bak	Igab	Kabbikane	Mauar	Memay	Yauk	Umagar	EBBC[9]	NC Act	BoT
Charadriidae	Lesser Sand Plover	*Charadrius mongolus*	Sui	X									M		
Charadriidae	Greater Sand Plover	*Charadrius leschenaultii*	Sui	1	1	1	1	1	1	1	1	1	M		
Scolopacidae	Bar-tailed Godwit	*Limosa lapponica*	Kay Kalu	1X	1		1		1	1	1		M		
Scolopacidae	Whimbrel	*Numenius phaeopus*	Kay Kalu	1X	1		1	1	1	1	1X	1	M		
Scolopacidae	Eastern Curlew	*Numenius madagascariensis*	Kay Kalu	1X	1		1			1			M		NT
Scolopacidae	Grey-tailed Tattler	*Tringa brevipes*	Kalu	1X	1	1	1		1	1			M		
Scolopacidae	Common Greenshank	*Tringa nebularia*	Kalu	1		1	1	1		1	1		M		
Scolopacidae	Ruddy Turnstone	*Arenaria interpres*	Sui	1X			1	1		1	1		M	LC	
Scolopacidae	Red-necked Stint	*Calidris ruficollis*	Sui	X									M	LC	
Turnicidae	Red-chested Button-quail	*Turnix pyrrhothorax*	Bazi Guru	1										LC	
Laridae	Common Noddy	*Anous stolidus*[12]	Dua			1							M	LC	
Laridae	Black Noddy	*Anous minutus*	Dua			1^		1	1	1	1^			LC	
Laridae	Bridled Tern	*Onychoprion anaethetus*	Sara	1X	1	1		1		1	1X	1	M	LC	
Laridae	Little Tern	*Sternula albifrons*	Silaw				1		1		1		M	E	High
Laridae	Roseate Tern	*Sterna dougallii*[13]	Silaw				1						M	LC	
Laridae	Black-naped Tern	*Sterna sumatrana*[14]	Silaw	1X	1	1	1	1	1	1	1X	1	M	LC	
Laridae	Crested Tern	*Thalasseus bergii*	Sara	1X	1		1	1	1	1	1X	1		LC	
Laridae	Lesser Crested Tern	*Thalasseus bengalensis*	Silaw	1		1		1			1			LC	
Laridae	Silver Gull	*Chroicocephalus novaehollandiae*	Kiparu	X	1	1		1	1X	1	1X			LC	
Halcyonidae	Forest Kingfisher	*Todiramphus macleayii*	"Easter" Kew		1									LC	
Laridae	Gull-billed Tern	*Gelochelidon nilotica*[15]	Sara		1									LC	
Pittidae	Noisy Pitta	*Pitta versicolor*	Pawpaw									1		LC	
Meliphagidae	Varied Honeyeater	*Lichenostomus versicolor*	Kubuke		1						1			LC	
Meliphagidae	Brown-backed Honeyeater	*Ramsayornis modestus*	Wili?								1			LC	
Rallidae	Red-headed Honeyeater	*Myzomela erythrocephala infuscata*	Wili			1	1			1	1	1		LC	
Pachycephalidae	Mangrove Golden Whistler	*Pachycephala melanura*	Mangaro		1	1	1			1	1			LC	
Artamidae	White-breasted Woodswallow	*Artamus leucorynchus*	Sikibuli	1X			1					1		LC	

[12] Partly migratory or dispersive
[13] Known to be partially migratory as they move away from breeding grounds after breeding.
[14] Mostly sedentary at breeding grounds.
[15] Part of the population in Australia is migratory and part is resident. Subspecies *affinis* migrates. Subspecies *macrotarsa* is dispersive in Australia but not known to mimgrate as such.

Family	Species	Species Name[8]	Language Name	Aureed	Aukane	Bak	Igab	Kabbikane	Mauar	Memay	Yauk	Umagar	EBBC[9]	NC Act	BoT
Rhipiduridae	Rufous Fantail	*Rhipidura rufifrons*	Kupgig			1					1		M	LC	
Monarchidae	Spectacled Monarch	*Symposiarchus trivirgatus*	Sisari		1						1		M	LC	
Timaliidae	Pale White-eye	*Zosterops citrinella*	Mut	1X	1	1	1			1	1			LC	
Rhipiduridae	Mangrove Grey Fantail	*Rhipidura phasiana*							1					LC	
Nectariniidae	Olive-backed Sunbird	*Nectarinia jugularis*	Bimut?	1X			1	1		1	1	1X		LC	
Estrildidae	Chestnut-breasted Mannikin	*Lonchura castaneothorax*	Bimut		1									LC	

Appendix G2. Mammal and Reptile List

Family	Species Name	Language Name	Common Name	Aureed	Aukane	Bak	Igab	Kabbikane	Mauar	Mimi	Umagar	Yauk	EPBC Act	NC Act
REPTILES														
Scincidae	*Carlia sexdentata*	Moegay	rainbow skink	X	1					X	X			LC
Scincidae	*Cryptoblepharus virgatus*	Moegay	wall/tree skink							X		X		LC
Scincidae	*Eugongylus rufescens*	Moegay	robust skink	X							X			LC
Scincidae	Unidentified skink	Moegay		X										
Scincidae	*Glaphyromorphus nigricaudus*	Gaur	Black-tailed Bar-lipped Skink				X							LC
Varanidae	*Varanus scalaris*	Thamay	Spotted Tree Monitor									X		LC
Chelonidae	*Chelonia mydas*	Waru	Green Turtle	X^	X^	X^	X^	X^	X^	X^	X^	X^	V	LC
Chelonidae	*Eretmochelyx imbricata*	Unuwa	Hawksbill Turtle	X^	X^	X^	X^	X^	X^	X^	X^	X^	V, M	V
MAMMALS														
Muridae	*Melomys burtoni*	Makas	Grassland Melomys								1			LC
				5	**3**	**2**	**2**	**2**	**2**	**4**	**5**	**4**		