

# ***BIODIVERSITY CONSERVATION ON THE TIWI ISLANDS, NORTHERN TERRITORY:***

## *Part 1. Environments and plants*



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Cover photo: Tall forests dominated by Darwin stringybark *Eucalyptus tetradonta*, Darwin woollybutt *E. miniata* and Melville Island Bloodwood *Corymbia nesophila* are the principal landscape element across the Tiwi islands (photo: Craig Hempel).

## SUMMARY

The Tiwi Islands comprise two of Australia's largest offshore islands - Bathurst (with an area of 1693 km<sup>2</sup>) and Melville (5788 km<sup>2</sup>) Islands. These are Aboriginal lands lying about 20 km to the north of Darwin, Northern Territory. The islands are of generally low relief with relatively simple geological patterning. They have the highest rainfall in the Northern Territory (to about 2000 mm annual average rainfall in the far north-west of Melville and north of Bathurst). The human population of about 2000 people lives mainly in the three towns of Nguju, Milakapati and Pirlangimpi.

Tall forests dominated by *Eucalyptus miniata*, *E. tetradonta*, and *Corymbia nesophila* cover about 75% of the island area. These include the best developed eucalypt forests in the Northern Territory. The Tiwi Islands also include nearly 1300 rainforest patches, with floristic composition in many of these patches distinct from that of the Northern Territory mainland. Although the total extent of rainforest on the Tiwi Islands is small (around 160 km<sup>2</sup>), at an NT level this makes up an unusually high proportion of the landscape and comprises between 6 and 15% of the total NT rainforest extent. The Tiwi Islands also include nearly 200 km<sup>2</sup> of "treeless plains", a vegetation type largely restricted to these islands. Other main vegetation types present on these islands include eucalypt woodlands (95 km<sup>2</sup>: dominated principally by *Eucalyptus oligantha*); sedgeland, grasslands, and paperbark (*Melaleuca*) forests and woodlands (total area of 250 km<sup>2</sup>); mangroves, coastal dunes and saltmarsh (total area of 920 km<sup>2</sup>). Most vegetation is relatively extensive and intact, with a relatively small area of modifications associated with township areas (26 km<sup>2</sup>), but an increasing extent of forestry plantation (81 km<sup>2</sup>).

There are no formal conservation reserves on the Tiwi Islands, but some of the main environments are included within the large Garig Gunak Barlu (formerly Gurig) National Park, on Cobourg Peninsula of the nearby mainland. The similarity in the environments of the Tiwi Islands and Cobourg Peninsula is recognised in the inclusion together of these two areas into one (the "Tiwi-Cobourg" bioregion) of 85 nationally defined bioregions. However, not all environments present on the Tiwi Islands occur on Cobourg Peninsula, so some Tiwi environments are represented in no conservation reserves.

Based on collation of a range of different data bases, we list 1068 native and 127 exotic plant species from these islands. However, most of these exotics occur principally in townships, and relatively few are present in undisturbed bushland. The total species list is probably still far from comprehensive.

The Tiwi flora includes an unusually high number and proportion of listed threatened plant species: 20 species are regarded as Endangered or Vulnerable, and a further 44 species are regarded as Data Deficient. Detailed information is provided for every threatened plant species. Most of the threatened species are associated with rainforest, but threatened species are present in most habitats. The threatened species occur mainly in the north-west of Melville Island and the north of Bathurst Island, although this patterning may be somewhat influenced by uneven sampling effort. Only three of the 20 threatened plant species are known from any conservation reserves in the Northern Territory. The main factors affecting (or likely to affect) the listed

threatened plants are feral animals (principally pigs), changed hydrological regimes, and stochastic (chance) factors; but other threats include changed fire regimes, weeds, collecting, and clearing.

Eleven plant taxa are entirely endemic (restricted) to the Tiwi Islands, again an unusually high number and proportion. A further 19 taxa occur in the Northern Territory only on the Tiwi Islands, but also occur beyond the Northern Territory, typically in north-eastern Queensland, New Guinea and or Malesia. Again, most of these endemic species are associated with rainforest, but some endemic species also occur in most other habitats.

Consistent with its smaller land size, Bathurst Island has somewhat fewer total plant species, and numbers of threatened and Tiwi-endemic species. The plant species composition of the two islands is very similar.

At least 200 native plants are known to be used traditionally by Tiwi people for foods and construction material. Most of these plants are associated with rainforest and eucalypt open forests, but there are many utilised plants in all main habitats.

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## 1. INTRODUCTION

### *1.1. Purpose of this report*

This report presents an assessment of the terrestrial environments and flora of the Tiwi Islands, based on an intensive field survey and collation of previous documentation. It forms one part of a three part report, complemented by related sections on fauna and a section for synthesis and management.

This report builds from a previous and related assessment (Woinarski *et al.* 2000a) of the conservation values of the Tiwi Islands, and the extent to which these may be affected by a major forestry development proposal. A detailed description and mapping of Tiwi environments is currently in preparation (Hollingsworth 2003), so this report concentrates mostly on the occurrence of plant species, supplemented by a brief description of broad Tiwi environments.

### *1.2. Brief description of the Tiwi Islands*

The Tiwi Islands comprise Melville Island (with a land area of 5788km<sup>2</sup> – Australia's largest island other than Tasmania) and the abutting Bathurst Island (1693km<sup>2</sup> - Australia's fifth largest island), plus a few scattered much smaller islands close to these two large islands.

The islands lie just to the north of Darwin (Fig. 1.1), separated from the Northern Territory mainland by 20 km of the narrow Clarence Strait (between Beagle Gulf to the west and van Diemen Gulf to the east), in which lie the small Vernon Islands group. Clarence Strait and the Beagle Gulf are relatively shallow, such that a sea level fall of 30m would result in connection of the Tiwi Islands to the mainland.

The current isolation of the Tiwi Islands results from rapid sea level rise between about 12,000 and 8,000 years ago (Woodroffe *et al.* 1992), which split Melville from Bathurst along the very narrow (typically <500m) Apsley Strait and sundered both from the mainland. This was the most recent of a series of fluctuating isolation and connection cycles for the Tiwi Islands associated with the marked sea level changes over the course of the Pleistocene.

The Tiwi Islands are relatively low (highest point 102m) and topographically simple (Fig. 1.2). A series of moderately large creeks drain northward on Melville Island, and there is a small floodplain on Andranangoo Creek.

Both islands comprise a central plateau, mostly composed of Tertiary laterite and van Diemen sandstone, and Cretaceous sandstones, surrounded by more recent depositional material. Geological patterning is relatively simple (Fig. 1.3), with deep red and yellow sandy soils over most of the island extent. More detailed information on Tiwi Islands geology, geomorphology

and soils is given in Hughes (1976), Plumb (1977), Anon (1998), ForSci (1999) and Hollingsworth (2003).

The Tiwi Islands have the Territory's highest rainfall (to about 2000 mm annual average rainfall in the north of Bathurst Island and north-west of Melville Island: Fig. 1.4), with about 90% of this falling in a 5 month wet season (November to April). Temperatures are high year-round, with monthly minimum and maximum temperatures ranging from 25 to 36°C in October to 19 to 29°C in July (Plumb 1977). Tiwi people recognise three main seasons: **Kumunupunari**, the dry season; **Tiyari**, the build-up season; and **Jamutakari**, the wet season (Puruntatameri *et al.* 2001).

The islands support a population of around 1700 to 2000 (overwhelmingly comprising the traditional Aboriginal owners, the Tiwi people), mostly in the towns of Nguiu and Wurankuwu on Bathurst Island and Milikapiti (formerly Snake Bay) and Pirlangimpi (also known as Pularumpi and Garden Point) on Melville Island, with smaller scattered settlements and outstations. The entire area is Aboriginal freehold lands (held under the Tiwi Aboriginal Land Trust). The track network is best developed on Bathurst Island and the west of Melville Island: much of the eastern half of Melville Island is inaccessible by road. More detailed information on the history and people of the Tiwi Islands is given in Forrest (1998).

### *1.3. Conventions used in this report*

Plant nomenclature used in this report follows Anon (2003). Where other nomenclature has been used in previous references (most notably in the Northern Territory vegetation classification of Wilson *et al.* (1990)), we have attempted to cross-reference older names with their current ascriptions. This is particularly the case for the eucalypt bloodwoods, which were included within the genus *Eucalyptus* until recent revisions placed them within the genus *Corymbia*. On the Tiwi islands, the most important such species is the Melville Island Bloodwood *Corymbia nesophila*.



Figure 1.1. General location of the Tiwi Islands, and location of communities and main track networks



Figure 1.2 (a). Topographic relief (measure of the altitudinal variation) on the Tiwi Islands.

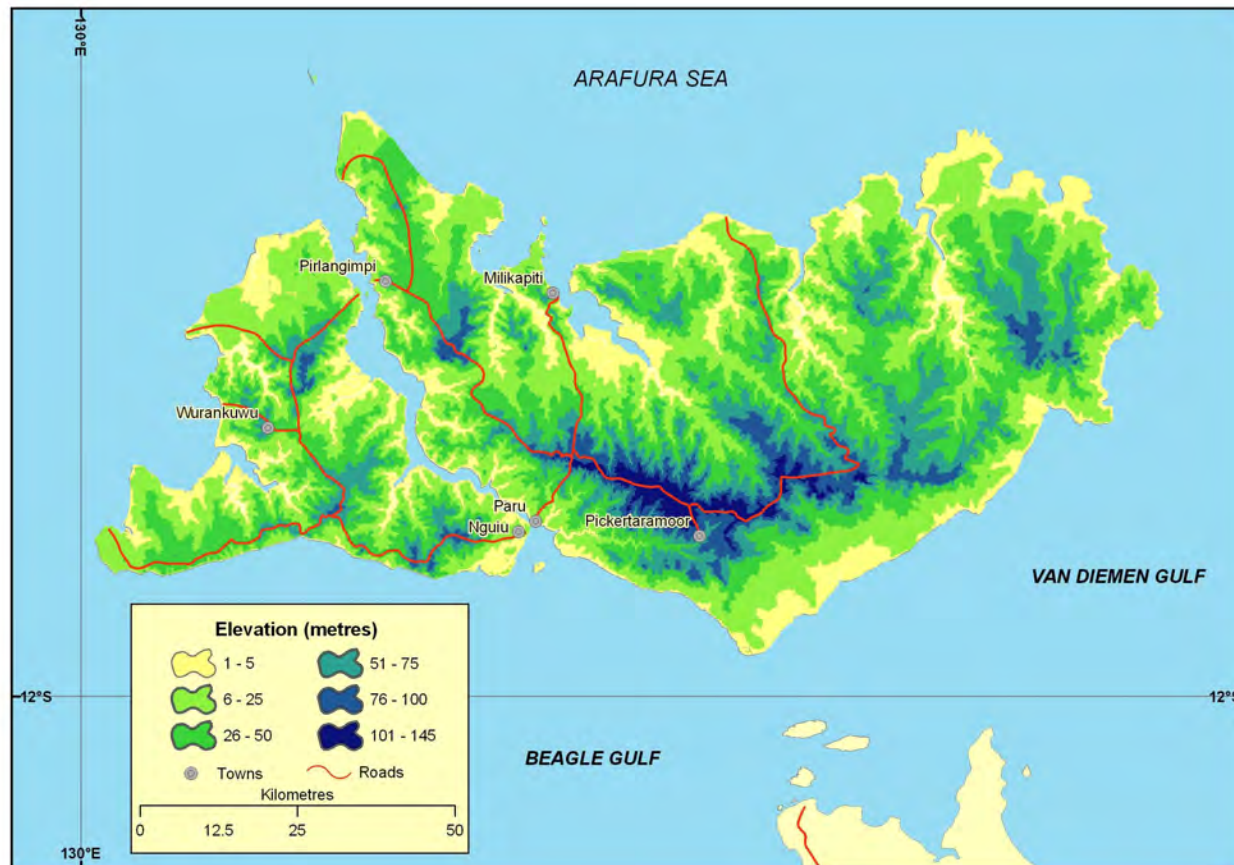


Figure 1.2 (b). Elevation on the Tiwi Islands.

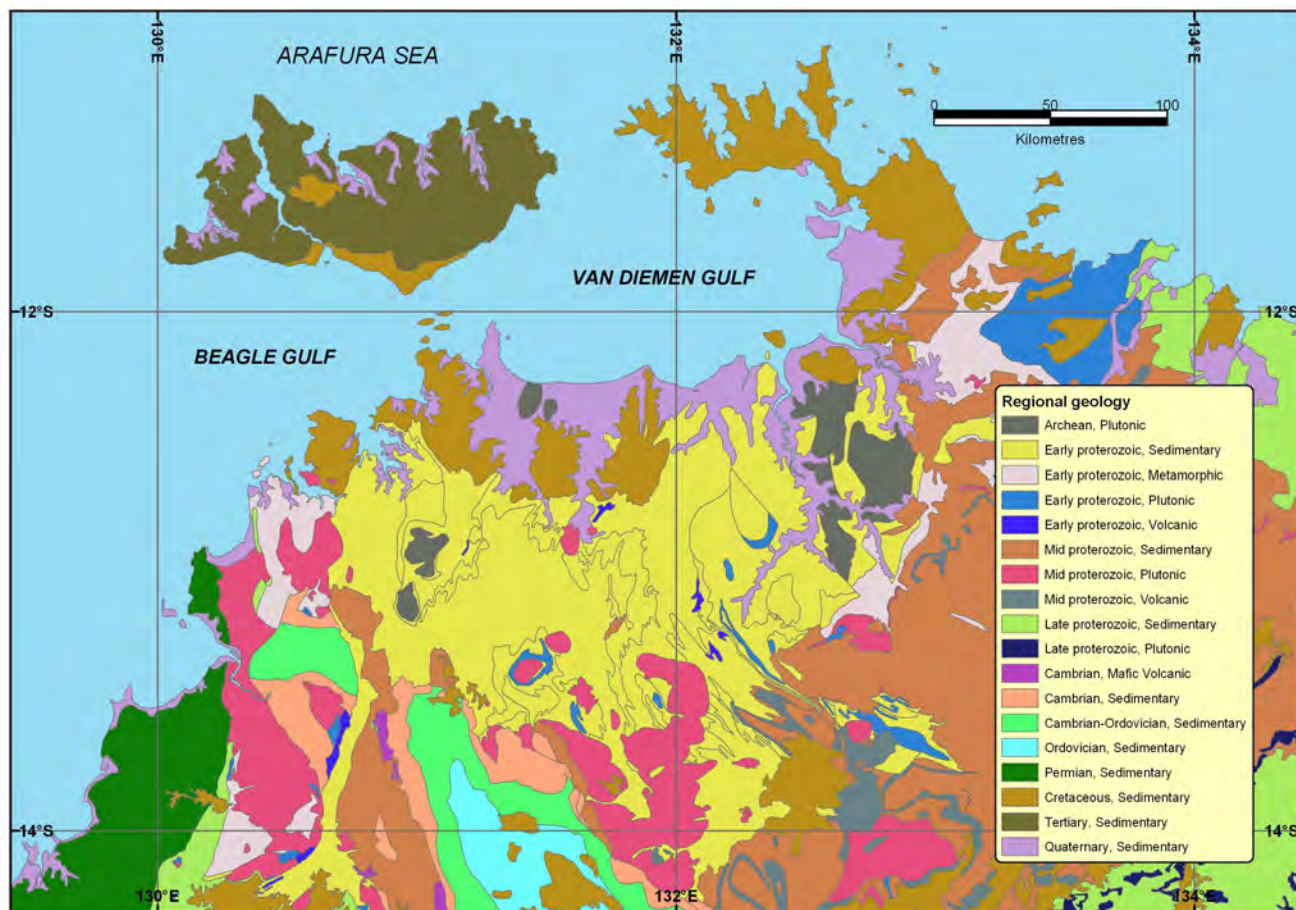


Fig. 1.3 (a). Geology of the Tiwi Islands and surrounding regions (from Ahmad 2000), indicating the relative simplicity of Tiwi geological patterning, and its similarity with Cobourg Peninsula.

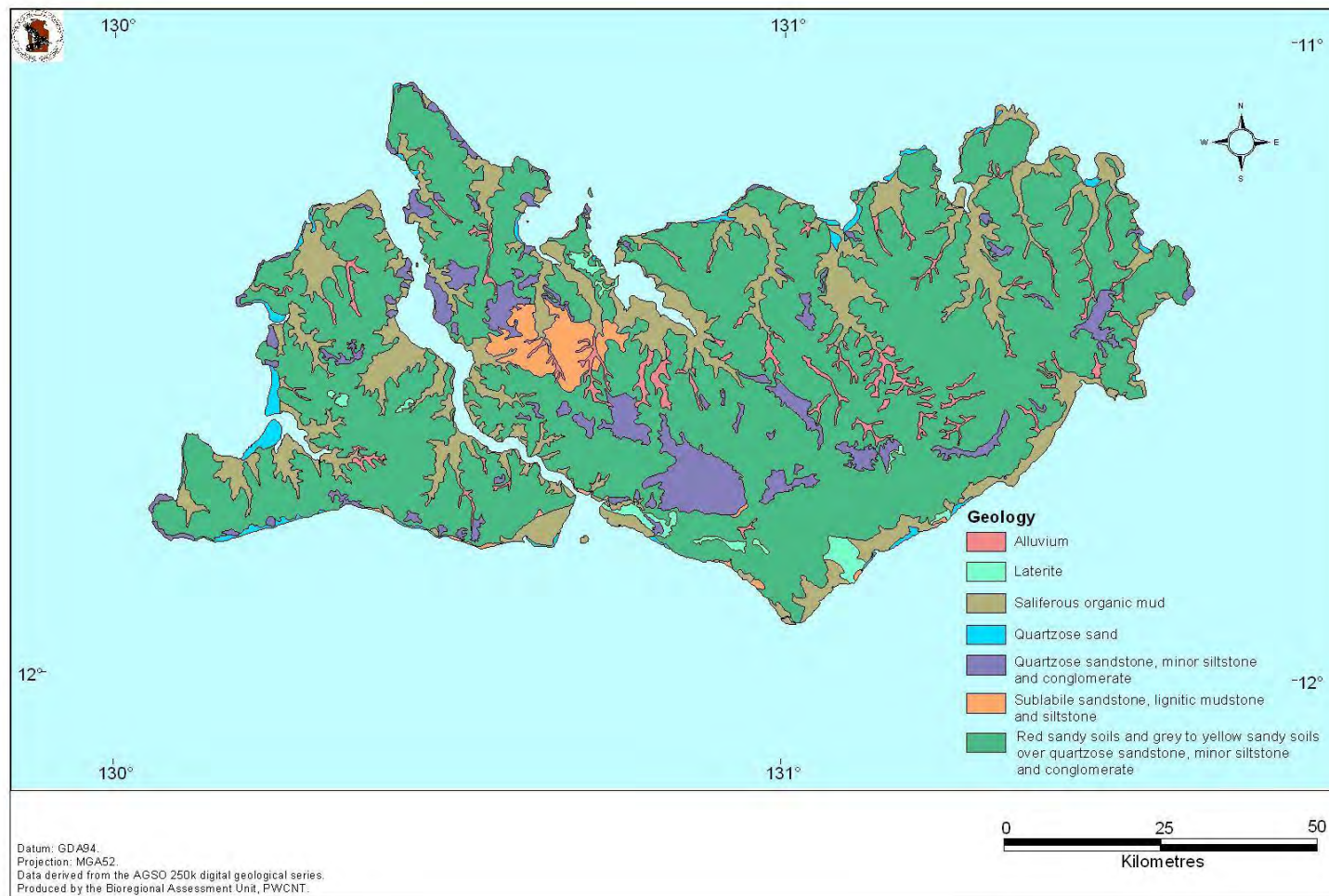


Figure 1.3 (b). Finer-resolution surficial geology of the Tiwi Islands.

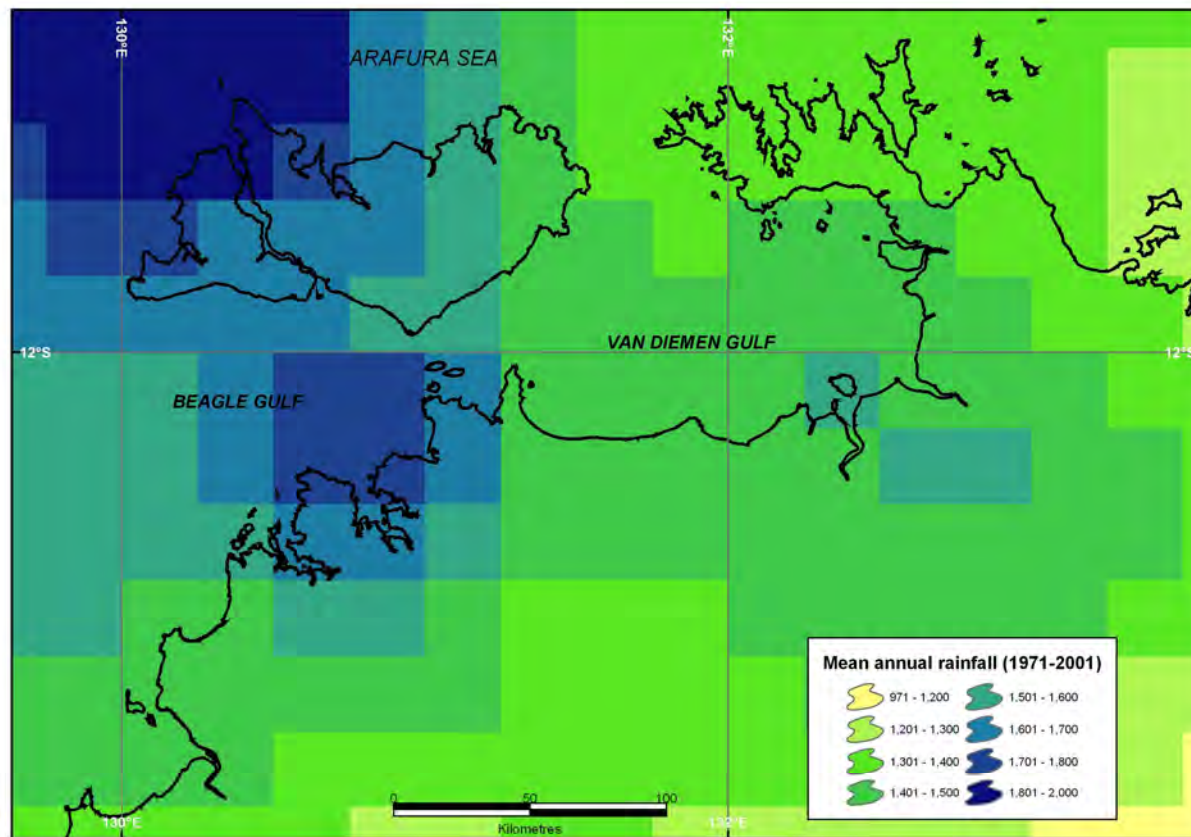


Figure 1.4. Mean annual rainfall on the Tiwi Islands and adjacent areas of the Top End of the Northern Territory.



## 2. TIWI ISLANDS ENVIRONMENTS AND VEGETATION TYPES

### 2.1. Biogeographic and conservation context

By virtue of their isolation, in having the Territory's highest rainfall, and in being at the northern extreme of the Territory, the Tiwi Islands support a distinctive biota, including a number of endemic species and subspecies of plants and animals. This places a conservation focus and onus on the Tiwi Islands, as axiomatically these taxa cannot be maintained in the wild anywhere but on the Tiwi Islands.

The distinctiveness of the Tiwi Islands is relative, and many of the Tiwi species and environments are shared with the Territory mainland, most notably with Cobourg Peninsula to the immediate east (Brocklehurst and Edmeades 1998). This is reflected in the national recognition of a "Tiwi-Cobourg" bioregion comprising the Tiwi Islands, Cobourg Peninsula and Croker Island (Woinarski and Baker 2002).

**Table 2.1. The occurrence of coarsely-defined vegetation types on the Tiwi Islands, and their representation within Northern Territory reserves (based on the 1:1 000 000 vegetation mapping of Wilson *et al.* 1990).**

| vegetation type  | area (km <sup>2</sup> )                                |  |                                 | % area reserved |
|--|--|--|---------------------------------|-----------------|
|  | on the Tiwi Islands<br>(% of total NT<br>distribution) | in Garig<br>Gunak<br>Barlu<br>National<br>Park | in the<br>Northern<br>Territory |                 |
| 1. mixed-species closed forest (monsoon vine-thicket)  | 36 (14.0%)   | -  | 258                             | 6.2             |
| 3. <i>Eucalyptus miniata</i> - <i>E. tetradonta</i> – <i>E. nesophila</i> (= <i>Corymbia nesophila</i> ) open forest with <i>Sorghum</i> grassland understorey | 6100 (71.4%)   | 1894   | 8546                            | 22.1            |
| 18. <i>Eucalyptus papuana</i> (= <i>Corymbia bella</i> ) – <i>E. polycarpa</i> (= <i>C. polycarpa</i> ) woodland with grassland understorey                    | 229 (9.4%)   | -  | 2435                            | 1.3             |
| 47. <i>Acacia</i> open shrubland with <i>Sorghum</i> grassland understorey ("treeless plains")   | 191 (100%)   | -  | 192                             | 0               |
| 53. <i>Melaleuca</i> open forest (paperbark swamp)   | 50 (3.1%)  | -  | 1590                            | 27.3            |
| 105. Mangal low closed-forest (mangroves)  | 598 (41.5%)  | 97   | 1440                            | 8.1             |
| 106. saline tidal flats with scattered chenopod low open shrubland (samphire)  | 146 (1.9%)   | 39   | 7815                            | 15.2            |

Because Cobourg Peninsula includes the large Garig Gunak Barlu (formerly Gurig) National Park, the Tiwi-Cobourg bioregion is among the most substantially reserved of all Territory bioregions: 20.5% of the bioregional area is within national park. Environmental representation of this reservation can be considered using the NT-wide vegetation map (Wilson *et al.* 1990). At the scale of this mapping (1:1,000,000) several of the broadly-defined

vegetation types that occur on the Tiwi Islands can be broadly considered to be represented within conservation reserves (elsewhere)(Table 2.1; Fig. 2.1).

But even at this coarse scale, one Tiwi vegetation type (unit 47: the “treeless plains”) is endemic, and cannot be protected other than on the Tiwi Islands. This assessment of representation elsewhere also suggests that, on a Territory-wide scale, the current reservation level of unit 18 (*Eucalyptus papuana* (= *Corymbia bella*) - *E. polycarpa* (= *C. polycarpa*) woodland) is meagre.

However the 1:1,000,000 scale of this vegetation mapping obscures much of the variability within vegetation types, and is far less detailed than that accepted (1:250,000 or 1:100,000) as appropriate for bioregional conservation planning (Environment Australia 1998). Finer-scale vegetation maps for the Tiwi Islands have recently been compiled or are in the process of compilation.

The Tiwi landscapes offer some challenges for vegetation classification, because environmental variation on the Tiwi islands is mostly gradational. With a few obvious exceptions there are no major contrasts and abrupt discontinuities in the Tiwi landscapes. Certainly, mangroves and monsoon rainforest patches are markedly distinct: but most of the rest of the Islands area comprises subtle variations on a dominant theme of eucalypt open forests, among which spatial changes in structural characteristics may be determined more by recent patterns of fire than by underlying edaphic differences. Differences in dominant tree species composition may not match well differences in understorey composition or amount (Fensham and Kirkpatrick 1992; Fensham and Bowman 1992; Wilson and Fensham 1994), and floristic variation may correspond very poorly with demarcation of land units (Wilson and Fensham 1994).

One exception to the subtle variations within most Tiwi environments is rainforest, which generally forms a spatially distinctive patchwork, readily identified by imagery. Rainforests occurring in the Top End of the Northern Territory were mapped from aerial photography (at scales between 1: 15,000 and 1: 80,000), by Russell-Smith and Lucas (in Russell-Smith *et al.* 1992). Mapped rainforests were broadly categorised into “wet” (generally spring-based or riparian) and “dry” (in coastal areas or in other sites topographically protected from fires). The coverage is illustrated in Fig. 2.2.

A 1:100,000 scale GIS-based coverage of *Melaleuca*-dominated vegetation was developed by Brocklehurst and Lynch (*unpubl.*), derived mainly from interpretation of aerial photography. This coverage is also illustrated in Fig. 2.2.

Hard-copy land unit maps of relatively small parts of western Melville Island were developed by van Cuylenburg and Dunlop (1973) and Wells and van Cuylenburg (1978) at scales ranging from 1:16,000 to 1:50,000, and a coarser-scale (1:100,000) map of land systems for the western half of Melville Island was produced by Wells *et al.* (1978).

Brocklehurst (1998) collated many of the above coverages into a composite 1:250,000 map of “generalised vegetation types” for the Tiwi Islands.

Woinarski *et al.* (2000a) derived a map of vegetation communities from interpretation of LANDSAT imagery complemented by an intensive field sampling study (see Section 3 of this

report). That map is illustrated in Fig. 2.3, and the extent of its major groups described in Table 2.2.

**Table 2.2. Vegetation types on the Tiwi Islands, and their relative extent.**

| class                          | description   | area (km <sup>2</sup> ) |          |        |
|--------------------------------|---|-------------------------|----------|--------|
|                                |   | Bathurst                | Melville | total  |
| wet rainforest                 | floristically diverse tall closed forests around springs and some sheltered watercourses.   | 4.4                     | 21.7     | 26.1   |
| dry rainforest                 | coastal thickets and dry slopes of broken plateau edge  | 29.7                    | 102.8    | 132.5  |
| mangroves                      | tall dense forests to low open woodlands in tidally inundated coastal areas, with a range of dominant species including <i>Sonneratia alba</i> , <i>Rhizophora stylosa</i> , <i>Bruguiera parviflora</i> , <i>Xylocarpus mekongensis</i> and <i>Ceriops tagal</i> .   | 275.6                   | 515.8    | 791.4  |
| sand & salt flats              | typically saline coastal areas intermixed with mangals, and supporting no vegetation, coastal dunefields, or grasslands dominated by <i>Sporobolus virginicus</i> .   | 14.8                    | 115.5    | 130.3  |
| sedgeland & grasslands         | mostly seasonally inundated areas, typically dominated by <i>Eleocharis dulcis</i> and <i>Scirpus litoralis</i> .   | 13.2                    | 159.7    | 172.9  |
| <i>Melaleuca</i> open forests  | forests dominated by a range of <i>Melaleuca</i> spp. (typically including <i>M. leucadendra</i> and <i>M. viridiflora</i> ) in riparian areas and swamplands   | 13.7                    | 47.1     | 60.8   |
| <i>Melaleuca</i> low woodlands | low woodlands or shrublands typically on poorly drained sites, dominated by <i>M. nervosa</i> and/or <i>M. viridiflora</i>  | 3.8                     | 12.5     | 16.3   |
| treeless plains                | low open woodlands typically dominated by <i>Acacia</i> spp., <i>Grevillea pteridifolia</i> and <i>Banksia dentata</i>  | 22.1                    | 160.7    | 182.8  |
| eucalypt forest (dense)        | tall forest dominated by <i>Eucalyptus miniata</i> , <i>E. tetradonta</i> and/or <i>Corymbia nesophila</i> (often with ironwood <i>Erythrophloeum chlorostachys</i> subdominant), typically with dense tall understorey (variably including <i>Acacia</i> spp., <i>Gronophyllum</i> , <i>Livistona</i> ); also including smaller areas of <i>Lophostemon lactifluus</i> and <i>Eucalyptus ptychocarpa</i> in drainage lines | 610.0                   | 1384.5   | 1994.5 |
| eucalypt forest (mid-open)     | tall forest dominated by <i>Eucalyptus miniata</i> , <i>E. tetradonta</i> and/or <i>Corymbia nesophila</i> , typically with grassy understorey  | 477.7                   | 2130.9   | 2608.6 |
| eucalypt forest (open)         | forest typically dominated by <i>Corymbia bleeseri</i> with open grassy understorey   | 152.6                   | 873.5    | 1026.1 |
| eucalypt woodland              | woodland dominated by <i>Eucalyptus oligantha</i> or <i>Corymbia latifolia</i> or <i>E. alba</i> with grass understorey   | 1.1                     | 94.8     | 94.8   |
| plantations                    |   | 2.2                     | 78.9     | 81.1   |
| built-up area                  |   | 18.4                    | 6.2      | 25.7   |

This analysis illustrates the dominant extent of eucalypt forests and woodlands, with such formations comprising a total of 5725km<sup>2</sup> (76% of the total area of the Tiwi Islands). These vegetation types are described in more detail in section 2.2 below. This classification and mapping also shows the currently relatively low proportion of the Tiwi Islands that has been affected by town developments, plantations and other disturbances. At least 98% of the Tiwi Islands retains extensive relatively intact vegetation.

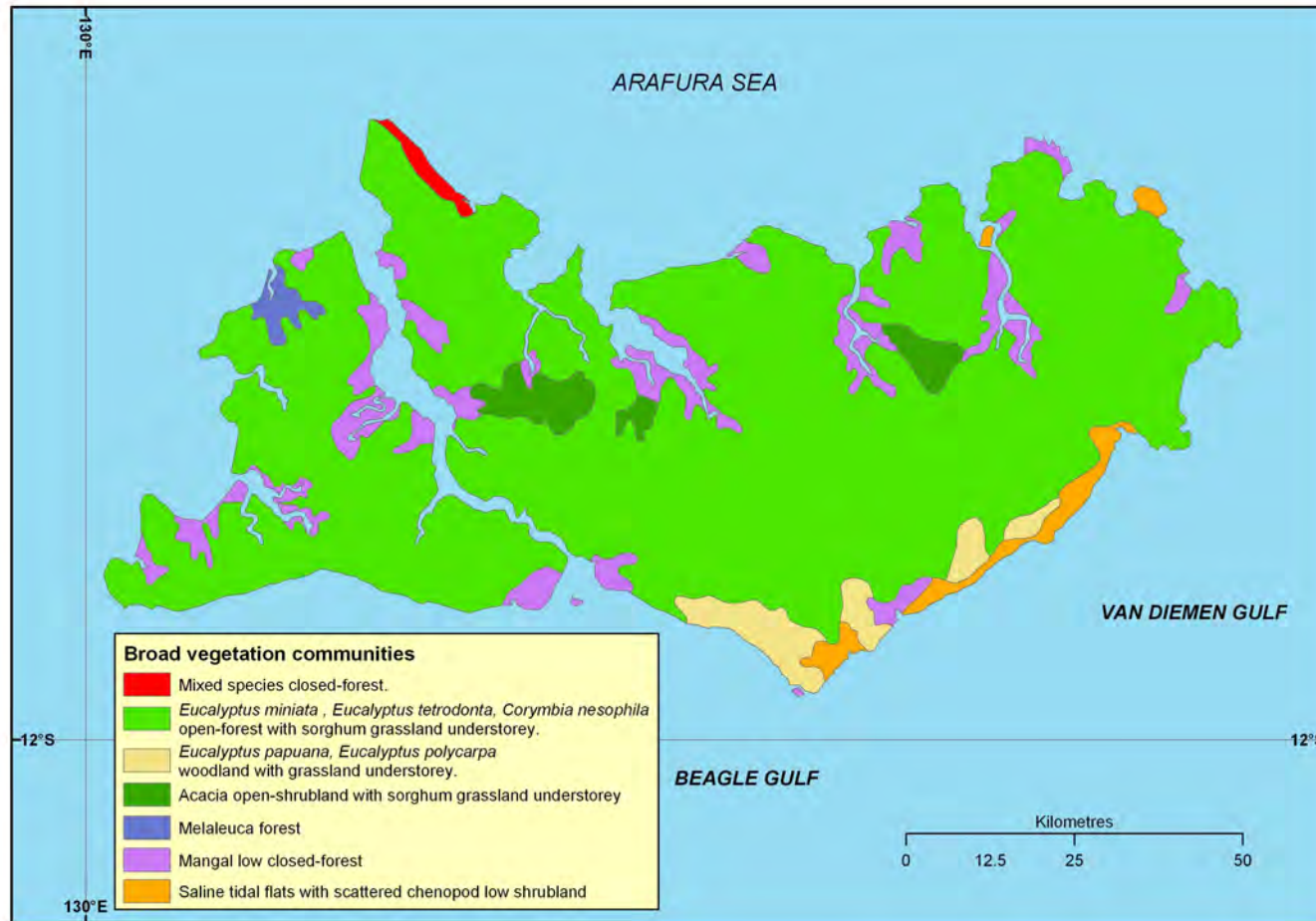


Figure 2.1. Broad classes of vegetation on the Tiwi Islands, as mapped for the 1: 1,000,000 vegetation map of the Northern Territory (Wilson *et al.* 1990).

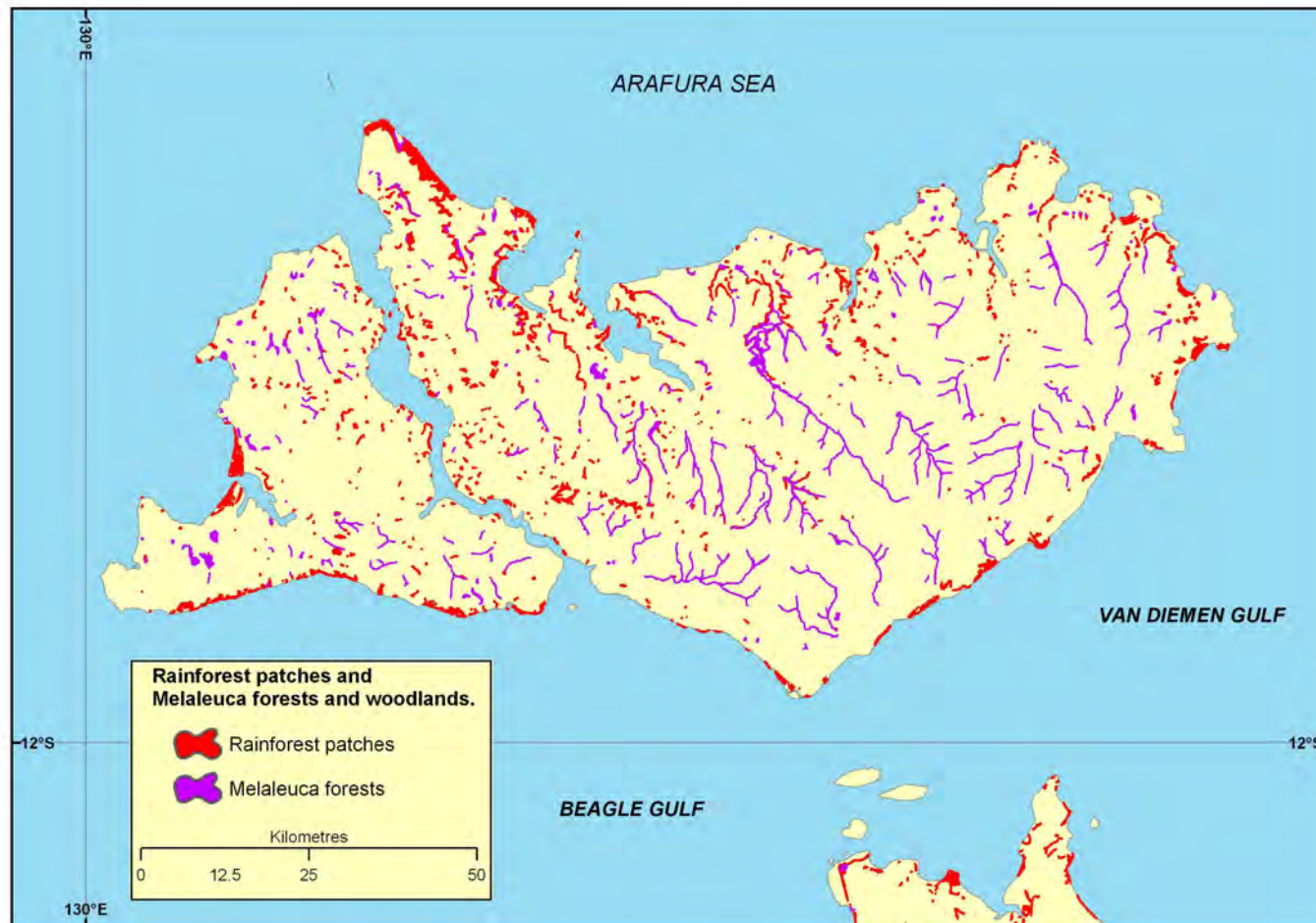


Figure 2.2. Location of rainforest patches and *Melaleuca* forests on the Tiwi Islands.

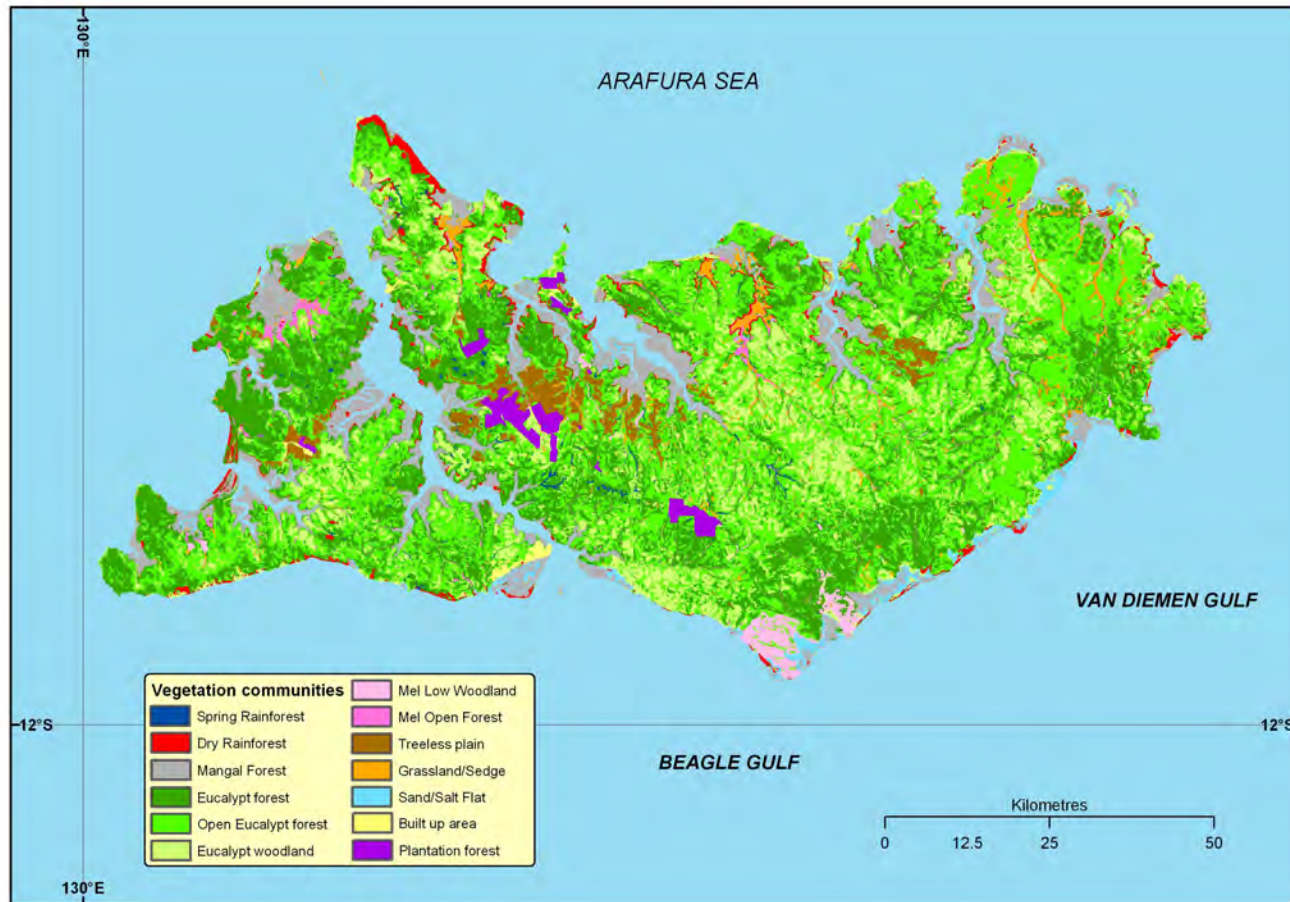


Figure 2.3. Map of vegetation communities on the Tiwi Islands, derived from satellite imagery and ground-truthing (Woinarski *et al.* 2000a).

## *2.2. Descriptions of major vegetation types.*



Note that the descriptions given in this section are brief. Far more detailed descriptions of Tiwi Island environments are given in a project run concurrently with this study (Hollingsworth 2003).

### ***rainforests generally***

“Wet” and “dry” rainforests on the Tiwi Islands are highly significant at the Northern Territory scale, comprising between 5.8 and 14.8% (depending upon the mapping scale) of the total NT extent of rainforest, many of the largest patches, many of the most floristically rich patches, and many patches with high numbers of endemic and threatened species (Fensham and Woinarski 1992; Woinarski *et al.* 2000a).

The total number of rainforest patches on the Tiwi Islands was estimated by Woinarski *et al.* (2000a) to be 1261, of which 302 patches occur on Bathurst Island and 959 on Melville Island.

### **wet rainforest**

Wet rainforests comprise many small patches of tall (canopy height 10-25m), dense (canopy cover 50-100%) and floristically diverse vegetation, typically occurring around springs and some sheltered watercourses. The most common canopy trees normally include *Calophyllum soulattri* and *Syzygium* spp.



These rainforests are floristically distinguished from other (drier) rainforest groups on the Tiwi Islands by the presence of the trees *Melicope elleryana*, *Fagraea racemosa*, *Planchonella xerocarpum*, *Rapanea* sp. DNA 45975, the palm *Hydriastele wendlendiana* and the ground fern *Dicranopteris linearis*.

More detailed descriptions are given in Russell-Smith (1991) and Fensham and Woinarski (1992). This class corresponds exactly to group 4b (“wet monsoon forests” of



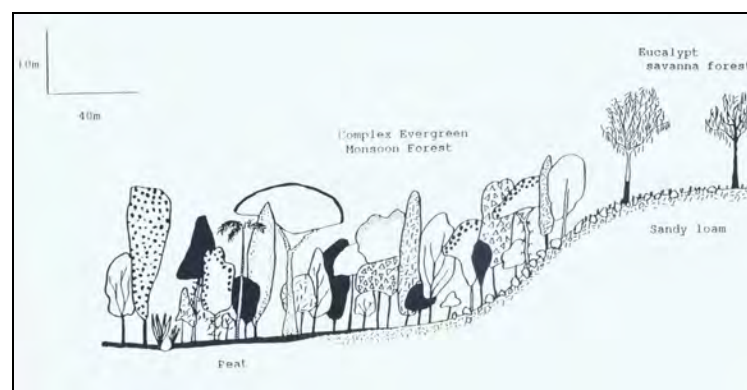
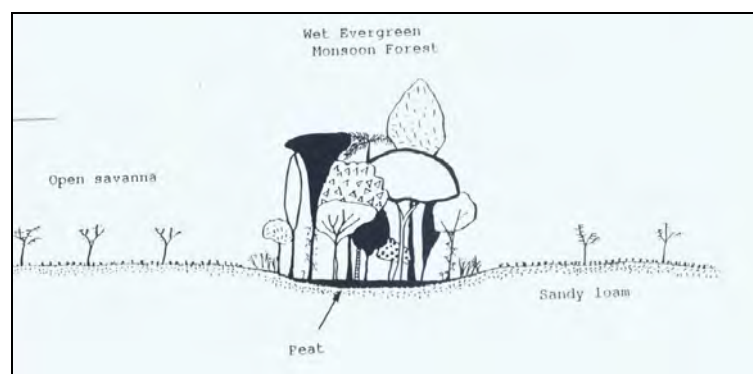
Brocklehurst 1998), and includes both groups 3 and 5 of Russell-Smith (1991), which match exactly “*Complex Evergreen Monsoon Forest*” and “*Wet Evergreen Monsoon Forest*” of Fensham and Woinarski (1992).

Patch sizes for these rainforest groups are typically small (mean=1.1 ha, range 3-45ha for Group 3; and mean=0.8ha, range=0.3-100ha for Group 5: Russell-Smith 1991).

*Group 3:* Rain forests are associated with springs emanating from the footslopes of low sandstone plateaux on Melville Island ... patches are centred on springs but extend also onto adjacent slopes with seasonally dry soils. Floristically they are distinguished from group 5 rainforest by their presence of *Canarium australianum*, *Litsea glutinosa* and *Sterculia quadrijida*. This rainforest group is restricted to the Tiwi Islands.

*Group 5:* Rain forests associated with drainage lines, and springs on open sandplain, Melville and Bathurst Islands. Soils are predominantly moist or waterlogged the year round ... This rainforest group is restricted to the Tiwi Islands, except for one patch on the mainland at Channel Point.

Typical environmental positions of these rainforest types are illustrated below (from Fensham and Woinarski 1992).



These rainforests face a number of threats associated with their small size, dependence upon continuous availability of water, and their environmental position embedded within a highly flammable savanna. Russell-Smith and Bowman (1992) noted that,

for group 3 rainforests, 38% of patches were “severely disturbed” by fire; 44% were “severely disturbed” by buffalo, and 6% were “severely disturbed” by exotic plants;

for group 5 rainforests, 39% of patches were “severely disturbed” by fire; 15% were “severely disturbed” by buffalo, and 9% were “severely disturbed” by pigs.

## dry rainforest

Dry rainforests include coastal thickets and patches on the dry slopes of broken plateau edge. They are floristically diverse, typically larger than for wet rainforest patches, generally have moderate to closed canopies (cover 30-100%) and vary in canopy height from 4 to 20m. Many plants in many patches are deciduous or semi-deciduous.

Characteristic tree species include *Glochidium xerocarpum*, *Mallotus nesophilus*, *Sterculia quadrifida*, *Croton habrophyllus*, *Hibiscus tiliaceus*, *Drypetes deplanchei*, *Ixora timorensis*, *Pouteria sericea*, *Strychnos lucida*, *Canarium australianum*, *Bombax ceiba*, *Polyalthia australis*, *Terminalia microcarpa* and *Syzygium forte*.

This vegetation type corresponds to group 9 of Russell-Smith (1991) and vegetation type 4a (*dry monsoon vine thicket*) in Brocklehurst (1998), and three types described by Fensham and Woinarski (1992): *dry deciduous monsoon thicket*, *dry semi-deciduous monsoon thicket* and *dry evergreen monsoon forest*.



While patch size for dry rainforests is also typically small (mean 1.0 ha: Russell-Smith 1991), there are some extensive strands of dry rainforest, most notably the coastal rainforest patch

extending over about 2000 ha in the far northwest of Melville Island (Cape van Diemen area). This is one of the largest rainforest patches in the Northern Territory.

Dry rainforests face many of the same threatening processes as wet rainforests, except that they may have less narrow hydrological requirements, and the absence of water reduces their attraction to pigs and buffalo. On Aboriginal lands generally, Russell-Smith and Bowman (1992) noted that 25% of dry rainforest patches were “severely affected” by fire, 10% by buffalo or cattle, 4% by pigs and 20% by exotic plants.

### **riparian vegetation**

Across the Tiwi Islands watercourses are flanked by typically relatively dense vegetation, dominated by mangroves in the lower reaches, paperbark *Melaleuca* forests and wet rainforests for much of their extent, but also including distinctive components such as thickets of bamboo *Bambusa arnhemica*, particularly on some watercourses in the south of Melville Island. The mangrove palm *Nypa fruticans* is another localised but distinctive component of Tiwi riparian vegetation. Partly because of its narrowly linear nature, and also because of its heterogeneity, riparian vegetation is neither mapped nor treated as a distinctive class in any broad classification of Tiwi vegetation patterns.



## mangroves

Mangrove vegetation (“mangal”) includes a mosaic of vegetation types varying from tall closed forests to low open woodlands, and with a range of dominant canopy species, occurring around much of the coast and lower reaches of waterways around the Tiwi Islands.



Variation in the floristic composition and structure of mangrove vegetation is described and mapped in Messel *et al.* (1979), and related to landscape position, particularly the frequency and extent of tidal inundation. Brocklehurst (1998) summarises the floristic

variation and considers 7 subdivisions of his group 3 (“*mangrove closed forests/ low closed forests*”):

- *Sonneratia alba* open forests and woodlands, as the most seaward zone, on accreting mudbanks and in downstream sections of tidal watercourses;
- *Rhizophora stylosa* closed forests, typically around river mouths;
- *Bruguiera parviflora* closed forests, along the banks of tidal creeks;
- *R. stylosa* - *Diospyros littorea* - *Xylocarpus moluccensis* open forests in the middle and upper reaches of tidal creeks;
- *R. stylosa* - *R. apiculata* open forests, in the upstream portions of tidal creeks;
- *Ceriops tagal* closed forests, on the landward side of mangrove complexes;
- *Sonneratia lanceolata* - *Lumnitzera racemosa* woodlands and low open forests, along tidal reaches and extending into freshwater creeks.



## sand & salt flats

Areas of saline clay flats occur intermixed with mangals in areas subjected to tidal inundation. Although typically denuded, some areas support a sparse cover of succulent herbs (saltbushes) including *Halosarcia indica* and *Tecticornia australasica*, and grasses (most commonly *Sporobolus virginicus*).

Within the broad community mapped in Fig. 2.3, we also include beach and relatively unvegetated sand dune complexes. The little vegetation typically present in these environments is dominated by *Ipomoea pes-caprae* and a range of creepers typically with floating propagules, readily dispersed by sea.



## sedgeland & grasslands

These are seasonally inundated floodplain and other wetland areas, typically dominated by the sedges *Eleocharis dulcis* and *Schoenoplectus litoralis* (in low-lying flats, such as around Goose Creek). There has been relatively little inventory of the wet grassland and sedgeland of the Tiwi Islands, but vegetation patterns general for this environment in the Top End are described by Cowie *et al.* (2000). The Tiwi wet grasslands and sedgelands are modest in area relative to the larger and more diverse floodplains of the Northern Territory mainland.

Threats to this community include grazing and physical destruction by buffalo, pigs, cattle and horses; altered hydrological processes, including saltwater intrusion; fires in the late dry season; and invasion by exotic plant species (potentially most damaging include mimosa *Mimosa pigra*, para grass *Urochloa mutica* and olive hymenachne *Hymenachne amplexicaulis*).



### **Melaleuca open forests**

Forests dominated by a range of *Melaleuca* spp. (typically including *M. leucadendra* and *M. viridiflora*) occur in riparian areas and swamplands. Typically these are tall (15-30m) and structurally relatively simple (little shrub layer). They occur on a range of soil types from alluvial sands to light clays and duplex soils. In some areas, they grade into wet rainforests, *Melaleuca* low woodlands or sedgelands/grasslands.

Threats to this community include grazing and physical destruction by buffalo, pigs, cattle and horses; altered hydrological processes, including saltwater intrusion; fires in the late dry season; and invasion by exotic plant species (potentially including mimosa *Mimosa pigra*, para grass *Urochloa mutica* and olive hymenachne *Hymenachne amplexicaulis*).





### ***Melaleuca* low woodlands**

This community includes woodlands, low woodlands and shrublands, typically on poorly drained, seasonally inundated clay or sand/clay duplex soils, dominated by *M. nervosa* and/or *M. viridiflora*. *Pandanus spiralis* may be common, and the ground layer typically includes sedges *Fimbristylis* spp. and the grass *Eriachne burkittii*.

This community may grade into treeless plains, sedgelands/grasslands, and *Melaleuca* open forest communities.

Threats to this community include grazing and physical destruction by buffalo, pigs, cattle and horses; altered hydrological processes; and fires in the late dry season.



## treeless plains

The distinctive treeless plains comprise low open woodlands typically dominated by *Acacia* spp., *Grevillea pteridifolia*, *Lophostemon lactifluus* and *Banksia dentata*, typically with a shrub layer including *Grevillea pleuricaulis* (formerly *G. goodii*), *Hibbertia cistifolia*, *Jacksonia dilatata*, , *Pachynema complanatum*, *Persoonia falcata*, *Planchonia careya* and *Syzygium eucalyptoides*, and a dense low understorey including *Alloteropsis semialata*, *Aristida holathera*, *Drosera petiolaris*, *Eragrostis cumingii*, *Eriachne avenacea*, *E. burkittii*, *E. ciliata*, *E. obtusa*, *E. squarrosa*, *E. triseta*, *Eulalia mackinlayi*, *Mitrasacme excerta*, *Polygala orbicularis*, *Rhychospora heterochaeta*, *Sorghum plumosum*, *Spermacoce breviflora* and *Thaumastochloa major*.

Variation in species composition and structure is subtle and follows minor variations in topography, moisture availability and soil texture (Wilson 1991; Wilson and Bowman 1994; Wilson and Fensham 1994; Brocklehurst 1998).



At the 1: 1 million scale of the Northern Territory vegetation map, the treeless plains of the Tiwi Islands are recognised as endemic (Wilson *et al.* 1990). Smaller areas of floristically related heathlands, swamplands, low open woodlands and grasslands occur scattered across the Top End, from near Port Keats to north-eastern Arnhem Land, but the Tiwi plains are by far the most extensive.

Intensive studies of the treeless plains in the Yapilika and Rola Plains areas of western Melville Island have been conducted by Wilson (1991) and Wilson and Fensham (1994), with fine-scale mapping of some of these areas by Wells and van Cuylenburg (1978) and

van Cuylenburg and Dunlop (1973). However, Wilson and Fensham (1994) noted that spatial variation in the floristics of this vegetation type was not well correlated with land unit mapping.

Wilson and Fensham (1994) noted more extensive variation between the treeless plains of western Melville Island and those of Bathurst Island (which are smaller and occur on relatively steep ridgelines with lateritic pisoliths overlying sandy soils) and of eastern Melville Island (which they considered to be less open, although they cautioned that these had not been sampled).

Threats to the treeless plains include conversion to forestry, inappropriate fire regimes, altered water regimes and feral animals. Wilson and Fensham (1994) noted that “since 1975 about 2000 ha (10 per cent) of the plains of western Melville Island have been cleared and replaced by plantations of the Central American tree *Pinus caribaea*.”. Relatively poor growth rates of plantation trees on (at least some) treeless plains has since discouraged this conversion (ForSci 1999).

## eucalypt forest

This community mostly comprises tall (canopy height 15 to 25m) relatively dense (canopy cover 15-30%) forest dominated by Darwin Woollybutt *Eucalyptus miniata*, Darwin Stringybark *E. tetradonta* and/or Melville Island Bloodwood *Corymbia nesophila* (often with ironwood *Erythrophleum chlorostachys* subdominant), typically with dense tall shrub understorey (variably including *Acacia* spp., *Gronophyllum*, *Livistona*) over a tussock grass ground layer. It occurs on sandy red earths to sandy loams. On shallower soils *Corymbia bleeseri* may be dominant and form monospecific stands.



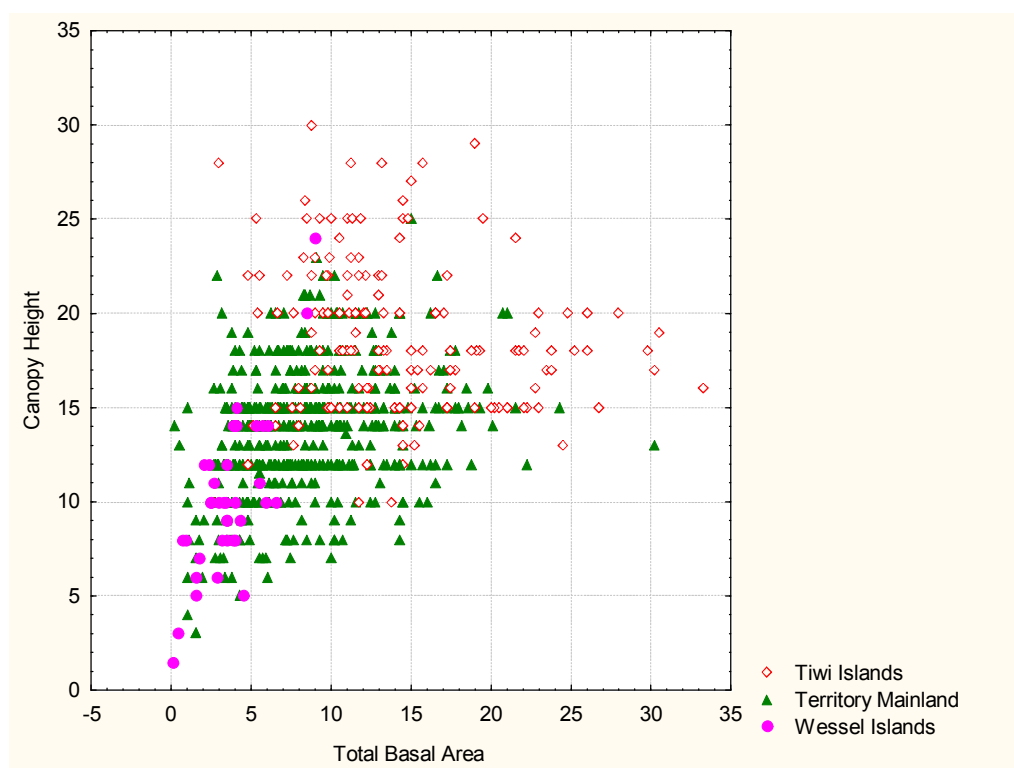
This community corresponds to vegetation types “1a. *E. miniata*, *E. tetradonta*, *E. nesophila* (= *Corymbia nesophila*) open-forest with *Chrysopogon fallax* grassland understorey”, “1b *E. miniata*, *E. tetradonta* open forest/woodland with tussock grassland understorey”, “1e. *E. miniata* woodland with *Eriachne trisetata* tussock grassland understorey”, and “1i *Callitris intratropica* open-forest/woodland with mixed eucalyptus species” of Brocklehurst (1998).

Tree height and canopy cover, and the floristics and density of understorey vary substantially depending upon fire history and soil depth and texture. These eucalypt forests are the dominant vegetation type on the Tiwi Islands, occupying about 76% of the area of Melville Island and 73% of Bathurst Island.

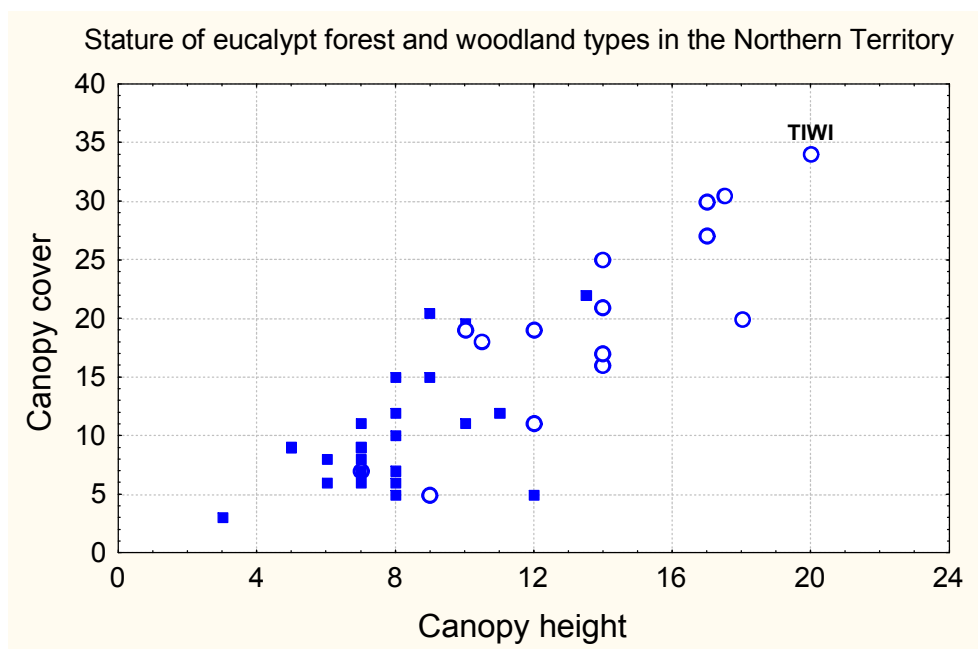
The Tiwi eucalypt forests are floristically distinctive from most other eucalypt forests in the Northern Territory, sharing only with eucalypt forests on Cobourg Peninsula the co-dominance by *Corymbia nesophila* (Wilson *et al.* 1990).

The Tiwi Island eucalypt forests include the best-developed eucalypt formations in the Northern Territory, typically with tallest trees and densest cover. This is illustrated in Figs 2.4 and 2.5. In Fig. 2.4, we plot actual values of canopy height and tree basal area recorded in more than 700 identically-sized quadrats dominated by *Eucalyptus miniata* and/or *E. tetradonta* on the Tiwi Islands, the Northern Territory mainland and on the Wessel and English Company Islands off north-eastern Arnhem Land. In Fig. 2.5, we graph the mean canopy height and canopy cover given for all eucalypt-dominated vegetation types in the Northern Territory by Wilson *et al.* (1990).

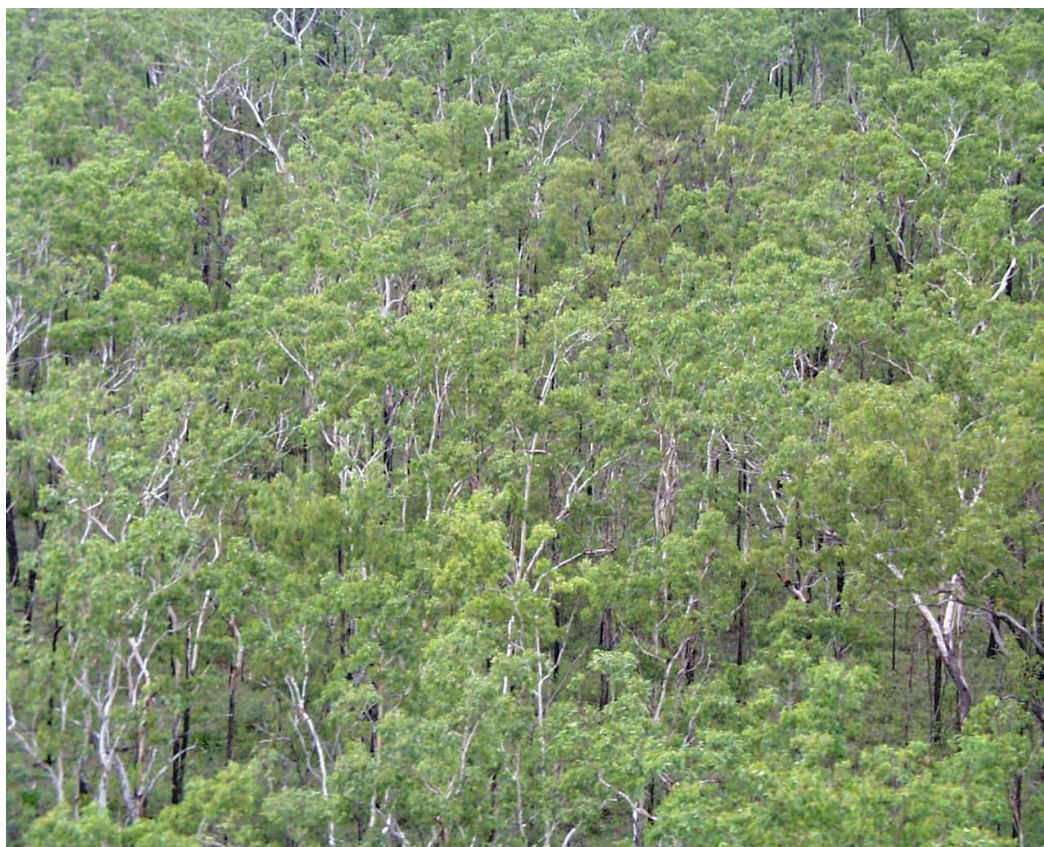
The Tiwi Island eucalypt forests are favoured for the development of plantation forestry (First Management Corporation 1999; ForSci 1999; Woinarski *et al.* 2000a), with prospects of 30,000 to 100,000 ha of clearing for the establishment of plantations of exotic tree species, particularly *Acacia mangium*. The eucalypt forests are also affected by feral buffalo, cattle and horses; may be undergoing change through altered fire regimes; and may be threatened by invasion or increase in a range of exotic plant species, particularly mission grass *Pennisetum polystachion*, and gamba grass *Andropogon gayanus* (Fensham and Cowie 1998).



**Figure 2.4.** Recorded tree basal area and canopy height at identically-sized quadrats within forests dominated by *Eucalyptus miniata* and/or *E. tetradonta* on the Tiwi Islands, mainland Northern Territory and the Wessel & English Company Islands off north-eastern Arnhem Land.



**Figure 2.5.** Mean canopy height and canopy cover given by Wilson *et al* (1990) for all eucalypt - dominated vegetation types in the Northern Territory. Vegetation types dominated by *Eucalyptus miniata* and/or *E. tetradonta* are depicted by open symbols; those dominated by other *Eucalyptus* or *Corymbia* species are depicted by filled squares. The Tiwi label represents Wilson *et al*'s (1990) vegetation class 3, which occurs predominantly on the Tiwi islands, but also occurs (although less extensively) on Cobourg Peninsula.



## eucalypt woodland

There are a range of eucalypt formations on the Tiwi Islands other than those dominated by *Eucalyptus miniata*, *E. tetradonta* and/or *Corymbia nesophila*. The most extensive are woodlands (canopy height typically 10-15m; canopy cover 10-20%) dominated variably by *Eucalyptus oligantha*, *Corymbia latifolia*, *E. alba* and/or *Corymbia* disjuncta (formerly *E. confertiflora*), typically with a grassy understorey (including *Eriachne* spp., *Chrysopogon fallax*, *Alloteropsis semialata*, *Aristida* spp, *Sorghum* spp and *Themeda triandra*), with scattered low shrubs (including *Planchonia careya*, *Acacia* spp., *Gardenia megasperma* and *Grevillea decurrens*). The community typically grows on loamy sand and gravelly clay loam soils, on lower slopes and drainage flats, particularly on the southern slopes and flats of Melville Island.

This community matches vegetation type “1g. *Eucalyptus oligantha*, *Erythrophleum chlorostachys* open forest/woodland with *Chrysopogon fallax* tussock grassland understorey” of Brocklehurst (1998).

These woodlands are typically heavily grazed by feral buffalo, cattle and horses; have relatively high levels of infestation by some exotic plants (notably including hyptis *Hyptis suaveolens*); and may be exposed to frequent fires (Fensham and Woinarski 1992; Fensham and Cowie 1998; Woinarski *et al.* 2000a). Although not well portrayed by the NT 1:1,000,000 scale vegetation map (Wilson *et al.* 1990), woodlands dominated by *Eucalyptus oligantha* are far more extensive on the Tiwi Islands than in mainland areas generally.



## plantations

This land cover type includes older plantations (>20 yrs old), typically of *Callitris intratropica* and *Pinus caribaea*, with smaller areas of *Eucalyptus* and *Acacia* spp. Haines (1986) and ForSci (1999) provide a history of the plantation forestry: this includes information on up to 200 species that were tested for growth potential. More recent plantations have been predominantly of *Acacia mangium*, with some smaller areas of other *Acacia* spp., and *Eucalyptus* spp. This community matches vegetation type “9. Plantations” of Brocklehurst (1998).





### 3. TIWI PLANTS

#### 3.1. Previous documentation

Until recently, European knowledge of Tiwi environments has been generally thin and fragmentary. A very early account of Tiwi environments and vegetation was provided by Holtze (1892). This narrative includes a list of about 150 plant species, although the identity of some of the names given is now ambiguous or lost in the fog of more than 100 years of taxonomic changes.

There was no further substantial scientific interest in Tiwi vegetation for nearly seventy years, until the development of forestry in the 1960s. This fuelled a series of environmental description and mapping studies, most notably relatively high resolution (1:50,000 scale or finer) mapping of land units of the Yapilika and Seventeen-Mile Plains areas of Melville Island (van Cuylenburg and Dunlop 1973; Wells and van Cuylenburg 1978), coarser-scale (1:100,000) mapping of land systems for the western half of Melville Island (Wells *et al.* 1978) and for parts of Bathurst Island (Olsen 1980). These reports included lists of plant species from the general study area.

The forestry industry also prompted some landmark studies of Tiwi vegetation ecology, most notably by Stocker (1968) at Karslake Peninsula, by Wilson on the dynamics of the eucalypt forest – “treeless plain” boundaries on western Melville Island (Wilson 1991; Wilson and Bowman 1994; Wilson and Fensham 1994); and by Fensham on patterning and regeneration of the eucalypt forests generally on western Melville Island (Fensham 1990*a*, 1994*a,b*; Fensham and Bowman 1992; Fensham and Kirkpatrick 1992). These studies remain the most substantial documentation of any aspects of Tiwi environments.

Tiwi rainforests were examined in detail by Russell-Smith (1991), who undertook floristic inventories of 98 rainforest patches on the Tiwi Islands, as part of a survey of Territory rainforest plant communities generally. He demonstrated that Tiwi rainforests were floristically distinct from those of the mainland. Subsequent work included information on Tiwi rainforests within Territory-wide consideration of the conservation status of rainforests (Russell-Smith and Bowman 1992; Price *et al.* 1995), the distribution of rainforest plants (Liddle *et al.* 1994), as well as additional, more specific and extensive sampling of plants and animals within Tiwi rainforest patches (Fensham and Woinarski 1992), and consideration of the conservation status of one Tiwi rainforest plant (Fensham 1993*a*).

Other Tiwi vegetation types have received some, but less comprehensive, attention in the last few decades. Messel *et al.* (1979) described the characteristics and distribution of mangrove and riparian vegetation along parts of the Johnston River, Andranangoo, Bath, Dongau and Tinganoo Creek systems and Pulloloo and Brenton Bay Lagoons. Fensham (1993*b*) described a mosaic of *Melaleuca* forest, monsoon rainforest and strand (coastal) vegetation at a Holocene beach ridge system on the west of Bathurst Island.

To some extent arising from this vegetation inventory and ecological research, a number of recent papers have focused on taxonomic descriptions of Tiwi plant species (e.g., Hay 1992; Barker 1998). Shapcott (1998, 2000) examined the genetic composition of a number

of rainforest plant species, and concluded that Melville Island was a significant rainforest refugium, based on an exceptionally high proportion of rare alleles and polymorphic loci for the rainforest palm *Carpentaria acuminata*.

Leach (1992) and Fensham and Cowie (1998) provided a review of the distribution of weeds on the Tiwi Island and recommendations for management; and a weed management program was developed within a plantation forestry strategic plan (Flanagan 2000; Tiwi Land Council 2000).

Parts of the rich Tiwi ethnobotanical store of knowledge were documented in Puruntatameri *et al.* (2001), who described the traditional use and other cultural significance of 216 plants occurring on the Tiwi Islands. Less detailed information on Tiwi ethnobotany was also presented in Davis (1983), Fensham and Woinarski (1992) and Anon (1998).

Knowledge of vegetation history of the Tiwi Islands is limited. There is one important plant fossil site near Cape van Diemen on the north-western tip of Melville Island. These fossils are presumed to be from the Tertiary period (between 1.8 and 65 million years ago), and have been described in Hughes (1976), Pole and Bowman (1996) and Pole (1998). Pole and Bowman (1996) considered that the fossil flora comprised mostly non-rainforest elements, and indicated a seasonal climate. Pole (1998) narrowed the dating of this fossil material to probably Paleocene or Eocene (53-65 million years ago), assigned many plant fossil fragments to genera, including the distinctive conifer *Araucaria*, and suggested that the vegetation during this period may have been dominated by this group.

Far more recently, the vegetation of the Tiwi Islands has been influenced by climatic oscillations in the Pleistocene and their timing relative to sea level changes and the periodic isolation of the islands from the Northern Territory mainland. At the time of their most recent isolation (around 8,000 years ago), regional climates were generally characterised by lower rainfall, so that the dominant vegetation type on the Tiwi islands at their isolation was probably more woodland than open forest (Fig. 3.1). Riparian areas, particularly those associated with the drowned river channel that is now Apsley Strait, would have provided refuge for many rainforest plants during periods of otherwise more inclement climate. Such riparian refugia would have been especially important on the Tiwi Islands because these islands generally lack the topographic complexity that has provided refuge elsewhere in the Top End (most particularly in the western Arnhem Land sandstone massif).

### 3.2. *Studies associated with this project*

For this project, we sampled plants at a large series of quadrats on Melville and Bathurst Island. These were sited to sample the range of environments and geographic areas on the Tiwi Islands, although with a bias towards eucalypt tall open forest, in acknowledgement of the focus on this environment for proposed forestry development.

In 2000, fieldwork was undertaken on Melville Island only, over the periods 31 January to 7 February and 1 July to 29 September (for a total of 410 person-days). This survey included sampling of plants and vertebrate animals in 204 50m x 50m quadrats (each sampled over a 3 night period). Survey results were reported in Brock *et al.* (2000) for the February fieldwork, and Woinarski *et al.* (2000a) for the subsequent fieldwork. In 2001, fieldwork was undertaken mainly on Bathurst Island (115 50m x 50m quadrats), over the periods 21

April to 9 June 2001 (for a total of 147 person-days). Sampling procedure was as for the 2000 fieldwork on Melville Island.

In addition to this broad-scale inventory sampling, in 2001 and 2002 we also conducted some additional sampling on Melville Island, in areas in and around the proposed forestry development.

Over the period 1999-2002, the NT Herbarium also undertook substantial fieldwork on both Bathurst and Melville Island, in part for collection of specimens for pharmaceutical evaluation and as contributions to this project. This sampling included complete floristic inventory in 421 20m x 20m plots.

### 3.3. Collation of existing information: species records

For conservation planning, the utility of data is related largely to locational precision and the extent of systematic sampling. The more useful data sets for conservation planning are listed in Table 3.1 below, and their coverage is mapped in Figs. 3.2.

There are some notable caveats in the interpretation of most of these data sets.

- The locational information for all data sets originating before about 1995 is generally lacking tight precision.
- The nomenclature used, especially for plants, has been variable, and there have been some major taxonomic changes since some of the data sets were collected. Wherever possible, we have updated and standardised this nomenclature - to that of Dunlop *et al.* (1995) (and unpublished updates since then by the NT Herbarium).
- Some quadrat-based data sets are far from comprehensive (e.g. recording only woody plants), and hence the non-recording of a particular species at a particular sampled site can't be interpreted unambiguously as an absence.
- There is generally a major geographic bias in data collection, with most records from the western half of Melville Island.
- The environmental information accompanying species records has been especially variable and inconsistent. Some data bases have no associated environmental data. In general, the inconsistencies in sample variables (and the ways in which these were measured) preclude the amalgamation of these across data sets.

Prior to this project, the floristic data sets were generally in idiosyncratic filing systems. All have now been collated to a consistent format (accessible either in Access or Excel).

Together, the 1999-2002 surveys associated with this project produced 1893 records of plants from those quadrats, and a further 7532 records of plants from 360 plots sampled by NT Herbarium staff (included within "herbarium quadrats" in Table 3.1). This survey effort substantially increased the amount of information documented for Tiwi flora.

**Table 3.1: The main floristic data sets available for the Tiwi islands.**

| data set                           | no. of sites | no. of records                                | total no. species | taxa recorded                                | quadrat-based? | period          | locational precision | reference  |
|------------------------------------|--------------|---|-------------------|--|----------------|-----------------|----------------------|--|
| rainforest patches                 | 120          | 7004  | 320               | all plant species                            | N              | 1989-92         | +/- 100m             | Russell-Smith (1991); Fensham & Woinarski (1992)   |
| NT 1:1,000,000 vegetation map      | 62           | 936   | 168               | all plant species (but generally incomplete) | Y              | 1987-91         | +/- 500m             | Wilson <i>et al.</i> (1990)                        |
| “treeless plain” – forest boundary | 123          | 2683  | 132               | all plant species                            | Y              | 1988-90         | +/- 100m             | Wilson (1991)                                      |
| eucalypt forest composition        | 193          | 4890  | 274               | all plant species                            | Y              | 1988-90         | +/- 100m             | Fensham (1990a)                                    |
| this survey: Melville Island       | 204          | 1022  | 120               | mostly woody species                         | Y              | 1999-2002       | +/- 10m              | Woinarski <i>et al.</i> (2000a).                   |
| this survey - Bathurst Island      | 115          | 762   | 98                | mostly woody species                         | Y              | 2001            | +/- 10m              | this report  |
| herbarium quadrats                 | 421          | 8697  | 821               | all plant species                            | Y              | 1995+           | +/- 10m              | NT Herbarium                                       |
| weeds                              | 50           | 716   | 188               | all plant species                            | Y              | 1988-92         | +/- 100m             | Fensham & Woinarski (1992); Fensham & Cowie (1998) |
| flora atlas/herbarium records      | -            | 4539*   | 1037              | individual records of individual species     | N              | 19th century on | variable             | NT Herbarium                                       |
| <b>Total</b>                       | <b>1288</b>  | <b>26706</b><br>(excluding Herbarium records) | 1215              |  |                |                 |                      |  |

\* note that this includes some duplication with the other data bases listed (e.g. where herbarium specimens were collected from sample sites).

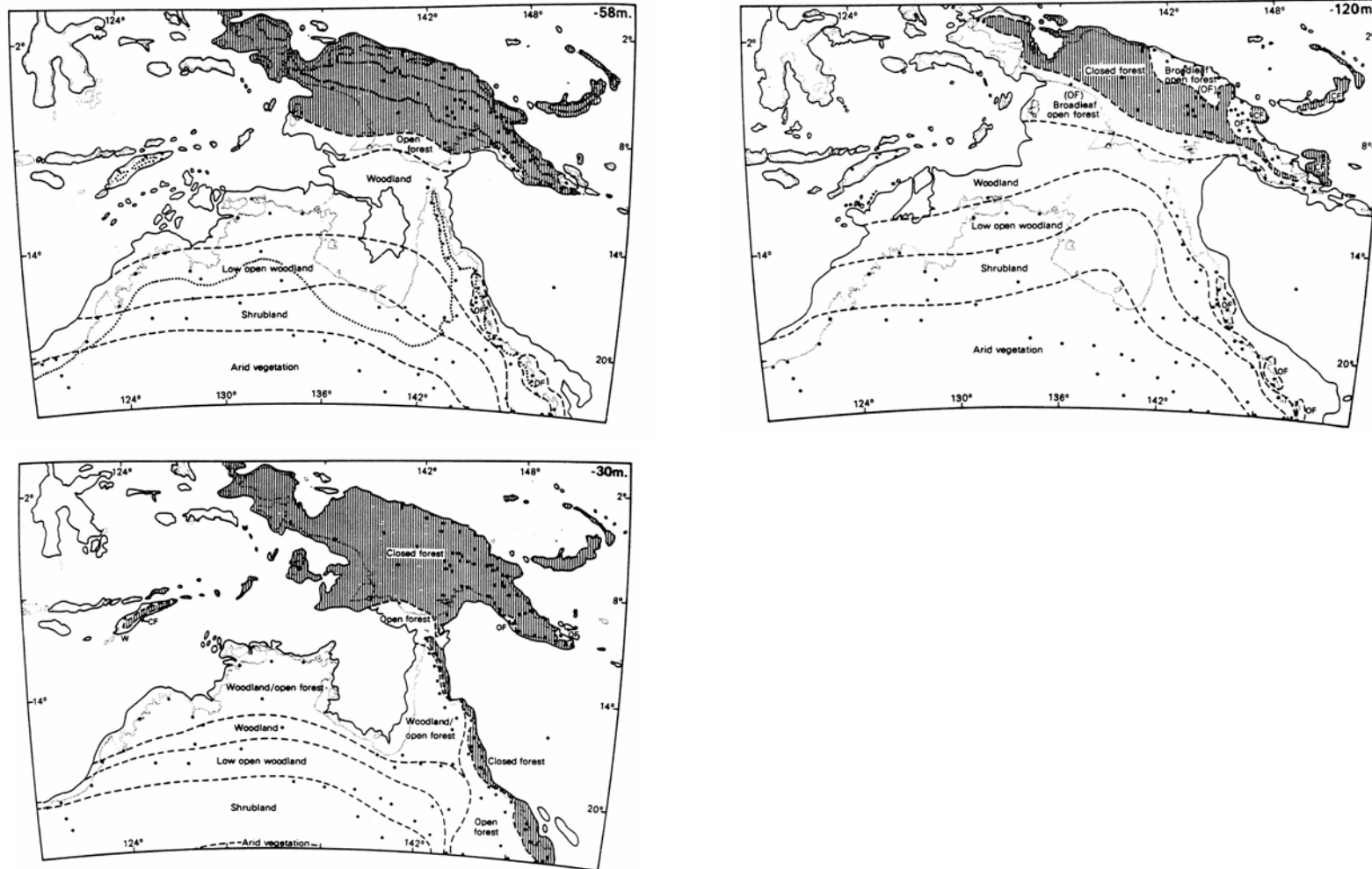


Figure 3.1. Reconstruction of shorelines and vegetation types at 20,000 years before present (top left), 15,000 years ago (top right) and 8,000 years ago (bottom left), showing extent of isolation of the Tiwi Islands. Current shorelines are indicated by light dotted lines (from Nix and Kalma 1972). Sea levels relative to present-day are given in top right of each figure.

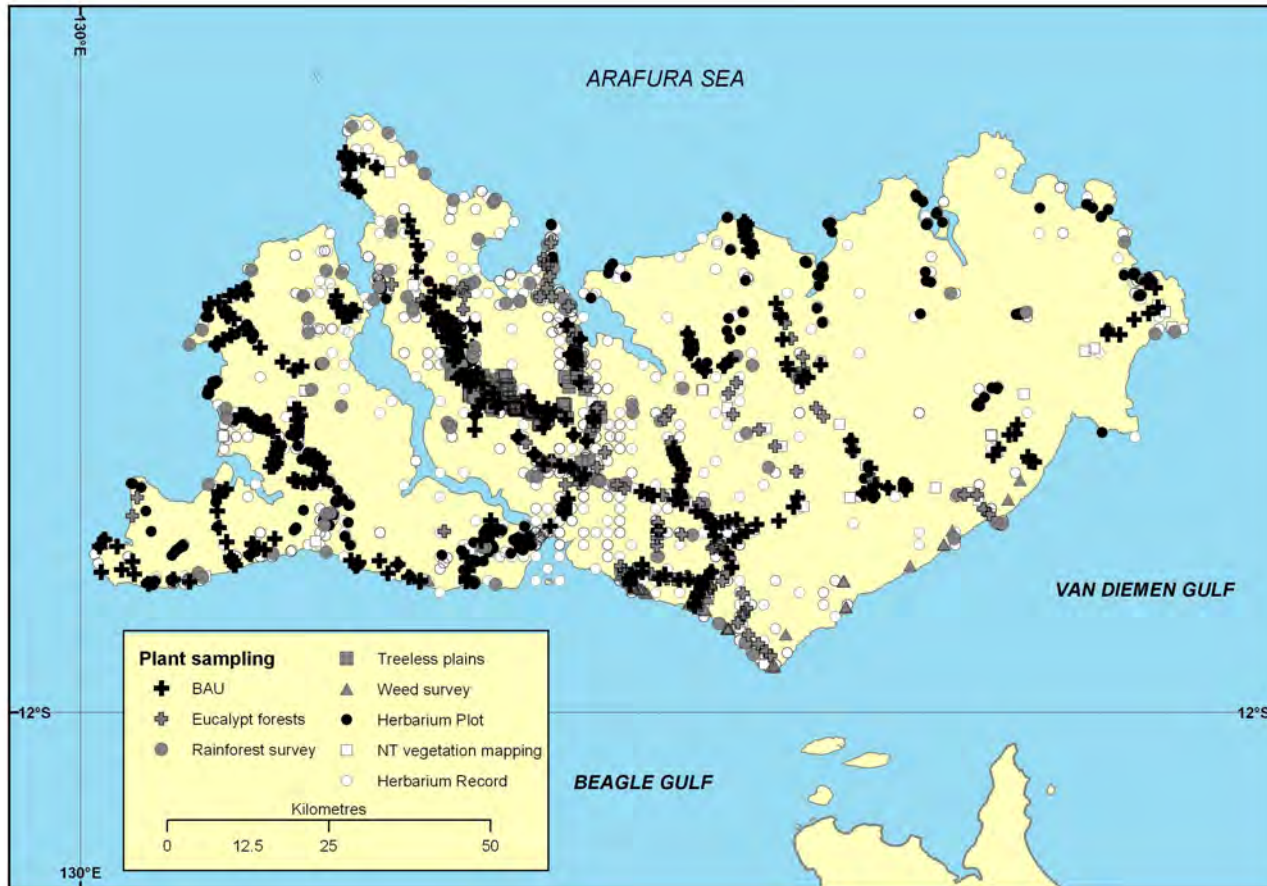
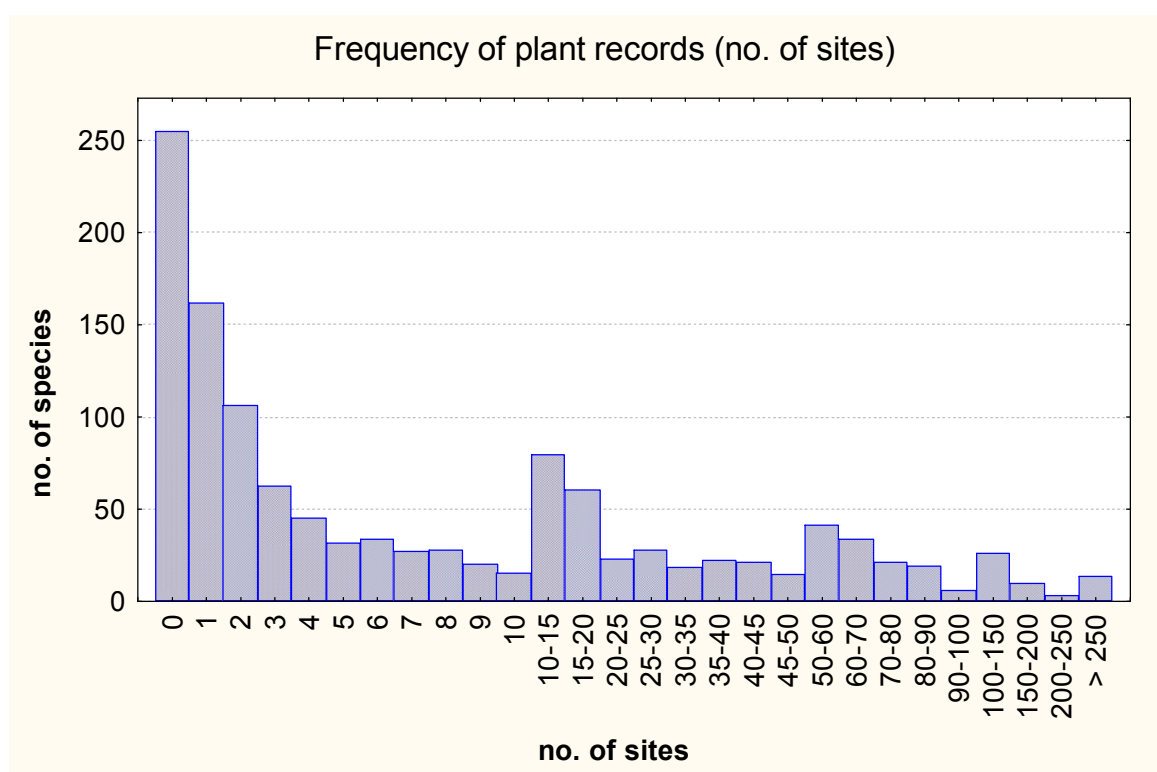


Figure 3.2. Location of sites sampled for plant species. Data sources: BAU (this survey); Eucalypt forests (Fensham 1990*a*); Rainforest survey (Russell-Smith 1991; Fensham and Woinarski 1992); Treeless plains (Wilson 1991); weed survey (Fensham and Cowie 1998); NT vegetation mapping (Wilson *et al.* 1990).

### 3.4. *Species composition*

Following aggregation of diverse data sets, melding a consistent nomenclature and deletion of dubious records, the species lists derived from the current survey and collation of previous records are included in Appendix A. This lists a total of 1195 plant species (1068 native and 127 exotic species). The contribution of recent work is evident in the substantial (48%) increase in the tally of native plant species, above the 722 species given by Fensham and Cowie (1998).

For the Tiwi Islands very many species have been recorded very infrequently (Fig. 3.3), with a total of 164 species known in the Tiwi flora from only one site, and a further 244 species known from between only two and five sites. This suggests that either (i) survey effort is still relatively inadequate (and that many more species are likely to be added with further survey); and/or (ii) that many species may have very localised distributions on the Tiwi Islands. Both of these explanations of this frequency distribution are possible, and both provide considerable constraints on conservation planning.



**Fig. 3.3. Frequency distribution of number of sites from which plant species have been recorded on the Tiwi Islands.** Note that the total number of sites for which we have data is 1288. Species recorded from 0 sites refer to those species known from the Tiwi Islands, but not recorded from any sampled plot (e.g. Herbarium records).

A comparison of the plant list of Holtze (1892) and that derived from recent surveys provides some suggestion of vegetation change, or alternatively provides further evidence

that plant sampling is still far from comprehensive. Notwithstanding the collection of more than 25,000 records and the addition of more than 1000 species to the Tiwi plant list since Holtze, there are no Tiwi records of one conspicuous species, the bullrush *Typha domingensis*, since Holtze's (1892) account, and there is still one specimen record only for two species recorded by Holtze: *Acanthus ilicifolius* and *Mimulus uvedaliae*.

In contrast to the high proportion of “singleton” species, a range of species are clearly widespread and abundant. The species recorded from the highest number of the 1288 sites sampled are *Livistona humilis* (448 sites), *Eucalyptus tetradonta* (431), *Corymbia nesophila* (412), *Eucalyptus miniata* (409), *Planchonia careya* (394), *Eriachne trisetata* (327), *Persoonia falcata* (322), *Buchanania obovata* (295), *Erythrophleum chlorostachys* (287), *Alphitonia excelsa* (286), *Eriachne avenacea* (285), *Pandanus spiralis* (262), *Grevillea pteridifolia* (254), *Hibbertia cistifolia* (235), *Acacia lamprocarpa* (230), *Smilax australis* (228), *Terminalia ferdinandiana* (198), *Acacia auriculiformis* (193), *Cycas armstrongii* (191), *Thaumastochloa major* (189), *Pachynema complanatum* (180), *Flemingia parviflora* (178), *Ampelocissus acetosa* (173), *Acacia difficilis* (171), *Lophostemon lactifluus* (162) and *Eriachne burkittii* (157). This listing is partly related to the abundance and extensive distribution of these species, but also reflects some sampling bias to woody species (in some data sets) and to eucalypt forests.

Two data sets are based on sampling full floristics within only single major habitats: rainforests (Russell-Smith 1991 and Fensham and Woinarski 1992), and eucalypt forests (Fensham 1990a). The rainforest inventory included 320 plant species from 120 rainforest patches. Of these species, 33 were recorded in one patch only. The most frequently recorded species were *Flagellaria indica* (99 patches), *Smilax australis* (98), *Acacia auriculiformis* (85), *Opilia amentacea* (79), *Myristica insipida* (77) and *Carallia brachiata* (72). The eucalypt forest data set included 274 plant species within 193 sites. 52 species were recorded from only one of the sites. The most frequently recorded species were *Planchonia careya* (126 sites), *Hibbertia cistifolia* (124), *Acacia lamprocarpa* (118), *Eriachne trisetata* (113), *Flemingia parviflora* (103), *Pseudopogonatherum contortum* (102), *Buchanania obovata* (98), *Persoonia falcata* (95), *Livistona humilis* (95), *Eriachne avenacea* (95), *Eucalyptus miniata* (91), *Desmodium pycnotrichum* (81), *Corymbia nesophila* (78), *Eucalyptus tetradonta* (75), *Thaumastochloa major* (74), *Chrysopogon fallax* (72), *Terminalia ferdinandiana* (70), *Alloteropsis semialata* (70), *Alphitonia excelsa* (69) and *Erythrophleum chlorostachys* (69).

The high rate of “singleton” species implies that there is much spatial variability even within ostensibly homogeneous habitats and/or that some species are rare or very patchily distributed.

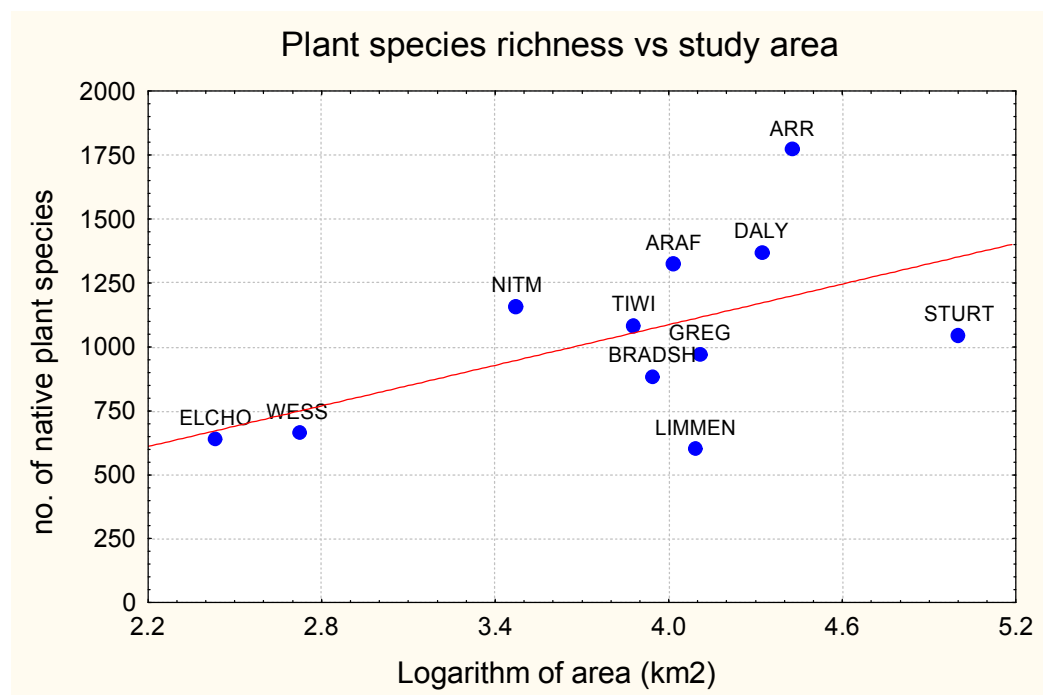
Species-rich groups on the Tiwi Islands include the families Poaceae (grasses: 141 species), Cyperaceae (sedges: 104 spp.), Fabaceae (peas: 86 spp.), Myrtaceae (50 species, including 20 eucalypts (*Corymbia* and *Eucalyptus* spp.)), Euphorbiaceae (49 spp.), Rubiaceae (42 spp.), Mimosaceae (28 spp., including 17 native *Acacia* spp.), Convolvulaceae (27 spp.), Asteraceae (daisies: 23 spp.), Scrophulaceae (23 spp.), and Verbenaceae (21 spp.). There are also 19 orchid species (Orchidaceae), 14 lily species (Liliaceae), 8 palm species (Arecaceae), and 7 *Grevillea* species (within 13 species in the family Proteaceae).

Within the known Tiwi flora, there are at least 25 distinctive but undescribed species, a high proportion which partly reflects the considerable recent survey work.

The Tiwi flora is rich relative to many other sampled areas in the Northern Territory (Table 3.2; Fig. 3.4), however such comparisons of relative species richness are much affected by



variation in sampling effort. Note that in this comparison, inland lower rainfall areas (such as Limmen Gate, Gregory and Sturt Plateau) typically have fewer plant species than similarly-sized higher-rainfall coastal regions, and that floristic richness is especially pronounced in topographically complex, stony areas (such as the Alligator Rivers Region and Nitmiluk).



**Figure 3.4.** The number of native plant species recorded on the Tiwi Islands compared with other sampled areas in the Top End of the Northern Territory, expressed in relation to study area.

The proportion of exotic species (10.6%) is high compared with that reported for some other NT island groups (e.g. 2.8% for the Wessel and English Company Islands: Woinarski *et al.* 2000*b*). But this proportion is somewhat misleading, as most of the exotic species are restricted to settlements, plantations and highly disturbed areas. Fensham and Cowie (1998) considered that “the vast majority of the native vegetation on the Tiwi Islands is free of exotic plants”, and that only 10 exotic plant species were naturalised (that is, with persistent populations in “natural” areas, away from disturbance): *Alysicarpus vaginalis*, *Cyperus rotundus*, *Dactyloctenium aegyptium*, *Echinochloa colona*, *Hyptis suaveolens*, *Lantana camara*, *Malachra fasciata*, *Passiflora foetida*, *Stylosanthes humilis* and *Triumfetta rhomboidea*. Restricted to these species, the proportion of naturalised species in the flora of undisturbed areas falls to 0.9%, substantially less than the equivalent figure for naturalised exotics in undisturbed areas of Kakadu National Park (5.3%), in the total NT flora (5.3%) and the 15% reported for Australia as a whole (Cowie and Werner 1987; Bowman *et al.* 1988; State of the Environment Advisory Council 1996).

**Table 3.2 Comparison of known tallies for native plant species (and exotic plant species) on the Tiwi Islands and some other sampled areas in the Top End of the Northern Territory.**

| Location                               | Area (km <sup>2</sup> ) | no. native plant species | no. naturalised exotic plant species | source                                   |
|--|-------------------------|--------------------------|--------------------------------------|--|
| Tiwi Islands                           | 7,481                   | 1086                     | 10                                   | this study                               |
| Alligator Rivers Region                | 26,500                  | 1773                     | 99                                   | Brennan (1996)                           |
| Wessel and English Company Islands     | 525                     | 665                      | 19                                   | Woinarski <i>et al.</i> (2000 <i>b</i> ) |
| Elcho Island                           | 270                     | 640                      | 27                                   | Dunlop <i>et al.</i> (1975)              |
| Arafura catchment, central Arnhem Land | 10,365                  | 1325                     |                                      | DIPE <i>unpublished data base</i>        |
| Gregory National Park                  | 12,727                  | 971                      |                                      | DIPE <i>unpublished data base</i>        |
| Bradshaw (Juliki)                      | 8,710                   | 886                      |                                      | DIPE <i>unpublished data base</i>        |
| Sturt Plateau bioregion                | 98,954                  | 1050                     |                                      | DIPE <i>unpublished data base</i>        |
| Nitmiluk National Park                 | 2,947                   | 1160                     |                                      | DIPE <i>unpublished data base</i>        |
| Daly Basin bioregion                   | 20,800                  | 1373                     |                                      | DIPE <i>unpublished data base</i>        |
| Limmen Gate National Park              | 12,337                  | 602                      |                                      | DIPE <i>unpublished data base</i>        |

### 3.5. *Listed threatened plants*

There have been many reviews of the conservation status of Australian plants. Such categorisation provides a measure of priorities for management and for the assessment of impacts of proposed land uses. Where these lists are annexed to legislation (such as in the federal *Environment Protection and Biodiversity Conservation Act 1999* and the *Territory Parks and Wildlife Conservation Act 2000*), they provide an explicit linkage for triggering particular actions or assessment. Lists are updated regularly to reflect increased knowledge, changes in conservation security, and trends in abundance. Here we collate current listings for Tiwi plant species. The lists we use are (i) regulations associated with the *Environment Protection and Biodiversity Conservation Act 1999*; and (ii) the proposed list of conservation status of Northern Territory wildlife, appended to the *Territory Parks and Wildlife Conservation Amendment Act 2000* (Anon 2002). Both lists use the most recent IUCN criteria (Version 3.1) for assessing conservation status (IUCN 2000). A detailed review of all NT plant species was undertaken by staff of the Parks and Wildlife Commission of the Northern Territory in 2002, and formed the basis of the conservation status given here. Given that the same set of criteria is used in both federal and NT listing, it is likely that the status most recently assigned to endemic NT species will be taken up at the national level. Table 3.3 summarises Tiwi plants in these lists.

**Table 3.3. Threatened plants recorded from the Tiwi Islands**, based on regulations of the *Environment Protection and Biodiversity Conservation Act 1999* (“National status”) and those of the *Territory Parks and Wildlife Conservation Act 2000* (“NT status”). For status, capital letters denote species that are endemic to the Northern Territory. Status codes: CR=critically endangered; EN=endangered; V=vulnerable; DD=data deficient.

| scientific name                         | FAMILY           | NT status | National status | habitat              |
|---|------------------|-----------|-----------------|----------------------|
| <i>Elaeocarpus miegei</i>               | ELAEOCARPACEAE   | CR        |                 | rainforest           |
| <i>Burmannia</i> D61177 Bathurst Island | BURMANNIACEAE    | EN        | EN              | rainforest           |
| <i>Cephalomanes obscurum</i>            | HYMENOPHYLLACEAE | en        |                 | rainforest           |
| <i>Garcinia warrenii</i>                | CLUSIACEAE       | en        |                 | rainforest           |
| <i>Tarennoidea wallichii</i>            | RUBIACEAE        | EN        |                 | rainforest           |
| <i>Typhonium jonesii</i>                | ARACEAE          | EN        |                 | eucalypt open forest |
| <i>Typhonium mirabile</i>               | ARACEAE          | EN        |                 | eucalypt open forest |
| <i>Utricularia subulata</i>             | LENTIBULARIACEAE | en        |                 | Melaleuca woodland   |
| <i>Xylopia</i> D30127 Melville Island   | ANNONACEAE       | EN        |                 | rainforest           |
| <i>Calochilus caeruleus</i>             | ORCHIDACEAE      | v         |                 | paperbark swamp      |
| <i>Cycas armstrongii</i>                | CYCADACEAE       | V         |                 | eucalypt open forest |
| <i>Dendromyza reinwardtiana</i>         | SANTALACEAE      | v         |                 | rainforest           |
| <i>Endiandra limnophila</i>             | LAURACEAE        | v         |                 | rainforest           |
| <i>Freycinetia excelsa</i>              | PANDANACEAE      | v         |                 | rainforest           |
| <i>Freycinetia percostata</i>           | PANDANACEAE      | v         |                 | rainforest           |
| <i>Hoya australis oramicola</i>         | ASCLEPIADACEAE   | V         |                 | rainforest           |
| <i>Luisia teretifolia</i>               | ORCHIDACEAE      | v         |                 | rainforest           |
| <i>Mapania macrocephala</i>             | CYPERACEAE       | v         |                 | rainforest           |
| <i>Mitrella</i> D24710 Melville Is.     | ANNONACEAE       | V         |                 | rainforest           |
| <i>Thrixspermum congestum</i>           | ORCHIDACEAE      | v         |                 | rainforest           |
| <i>Actinostachys wagneri</i>            | SCHIZAEACEAE     | dd        |                 | rainforest           |
| <i>Adiantum aethiopicum</i>             | ADIANTACEAE      | dd        |                 | rainforest           |
| <i>Baumea rubiginosa</i>                | CYPERACEAE       | dd        |                 | swamp, sedgeland     |
| <i>Calochilus boltzei</i>               | ORCHIDACEAE      | dd        |                 | eucalypt open forest |
| <i>Chloris pumilio</i>                  | POACEAE          | dd        |                 | disturbed areas      |
| <i>Crinum venosum</i>                   | LILIACEAE        | dd        |                 | Melaleuca woodland   |
| <i>Crotalaria sessiliflora</i>          | FABACEAE         | dd        |                 | eucalypt woodland    |
| <i>Cyperus compactus</i>                | CYPERACEAE       | dd        |                 | Melaleuca woodland   |

| scientific name                  | FAMILY           | NT status | National status | habitat                                 |
|----------------------------------|------------------|-----------|-----------------|---|
| <i>Dendrobium trilamellatum</i>  | ORCHIDACEAE      | dd        |                 | Melaleuca woodland                      |
| <i>Didymoplexis pallens</i>      | ORCHIDACEAE      | dd        |                 | rainforest; sedgeland                   |
| <i>Eleocharis nuda</i>           | CYPERACEAE       | dd        |                 | Melaleuca woodland; swamps              |
| <i>Eragrostis concinna</i>       | POACEAE          | dd        |                 | Melaleuca woodland                      |
| <i>Fimbristylis bisumbellata</i> | CYPERACEAE       | dd        |                 | Melaleuca woodland; swamps              |
| <i>Fimbristylis subaristata</i>  | CYPERACEAE       | dd        |                 | coastal sedgelands                      |
| <i>Habenaria ferdinandi</i>      | ORCHIDACEAE      | dd        |                 | Melaleuca woodland                      |
| <i>Habenaria hymenophylla</i>    | ORCHIDACEAE      | dd        |                 | rainforest                              |
| <i>Habenaria triplonema</i>      | ORCHIDACEAE      | dd        |                 | eucalypt open forest                    |
| <i>Hedyotis auricularia</i>      | RUBIACEAE        | dd        |                 | riparian                                |
| <i>Hypserpa polyandra</i>        | MENISPERMACEAE   | dd        |                 | rainforest                              |
| <i>Lindernia comrei</i>          | SCROPHULARIACEAE | DD        |                 | floodplain wetlands                     |
| <i>Liparis habenarina</i>        | ORCHIDACEAE      | dd        |                 | Melaleuca woodland; eucalypt woodland   |
| <i>Malaxis acuminata</i>         | ORCHIDACEAE      | DD        |                 | rainforest; Melaleuca woodland          |
| <i>Mitrasacme inornata</i>       | LOGANIACEAE      | dd        |                 | eucalypt woodland                       |
| <i>Mitrasacme stellata</i>       | LOGANIACEAE      | dd        |                 | Melaleuca woodland                      |
| <i>Najas brownniana</i>          | NAJADACEAE       | dd        |                 | aquatic                                 |
| <i>Nervilia peltata</i>          | ORCHIDACEAE      | dd        |                 | eucalypt open forest                    |
| <i>Pavetta tenella</i>           | RUBIACEAE        | DD        |                 | rainforest margins                      |
| <i>Rhynchospora gracillima</i>   | CYPERACEAE       | dd        |                 | sedgelands; swamps                      |
| <i>Scleria biflora</i>           | CYPERACEAE       | DD        |                 | Melaleuca woodland                      |
| <i>Scleria carpbiformis</i>      | CYPERACEAE       | dd        |                 | sedgelands; swamps                      |
| <i>Spermacoce omissa</i>         | RUBIACEAE        | DD        |                 | coastal dunes                           |
| <i>Stylidium capillare</i>       | STYLIDIACEAE     | dd        |                 | sedgelands; eucalypt woodland (wet)     |
| <i>Stylidium cordifolium</i>     | STYLIDIACEAE     | dd        |                 | sedgelands; eucalypt woodland (wet)     |
| <i>Stylidium fissilobum</i>      | STYLIDIACEAE     | dd        |                 | sedgelands; eucalypt woodland (wet)     |
| <i>Stylidium nominatum</i>       | STYLIDIACEAE     | DD        |                 | Melaleuca woodland                      |
| <i>Stylidium tenerimum</i>       | STYLIDIACEAE     | DD        |                 | sedgeland; treeless plain               |
| <i>Thaumastochloa pubescens</i>  | POACEAE          | dd        |                 | eucalypt woodland                       |
| <i>Triumfetta aquila</i>         | TILIACEAE        | dd        |                 | coastal dunes                           |
| <i>Triumfetta repens</i>         | TILIACEAE        | dd        |                 | coastal dunes                           |
| <i>Tropidia curculigoides</i>    | ORCHIDACEAE      | DD        |                 | rainforest                              |
| <i>Typhonium russell-smithii</i> | ARACEAE          | DD        |                 | eucalypt woodland; eucalypt open forest |

| <b>scientific name</b>        | <b>FAMILY</b> | <b>NT status</b> | <b>National status</b> | <b>habitat</b>     |
|-------------------------------|---------------|------------------|------------------------|--------------------|
| <i>Vernonia patula</i>        | ASTERACEAE    | dd               |                        | rainforest         |
| <i>Websteria confervoides</i> | CYPERACEAE    | DD               |                        | aquatic            |
| <i>Xyris pusilla</i>          | XYRIDACEAE    | dd               |                        | Melaleuca woodland |

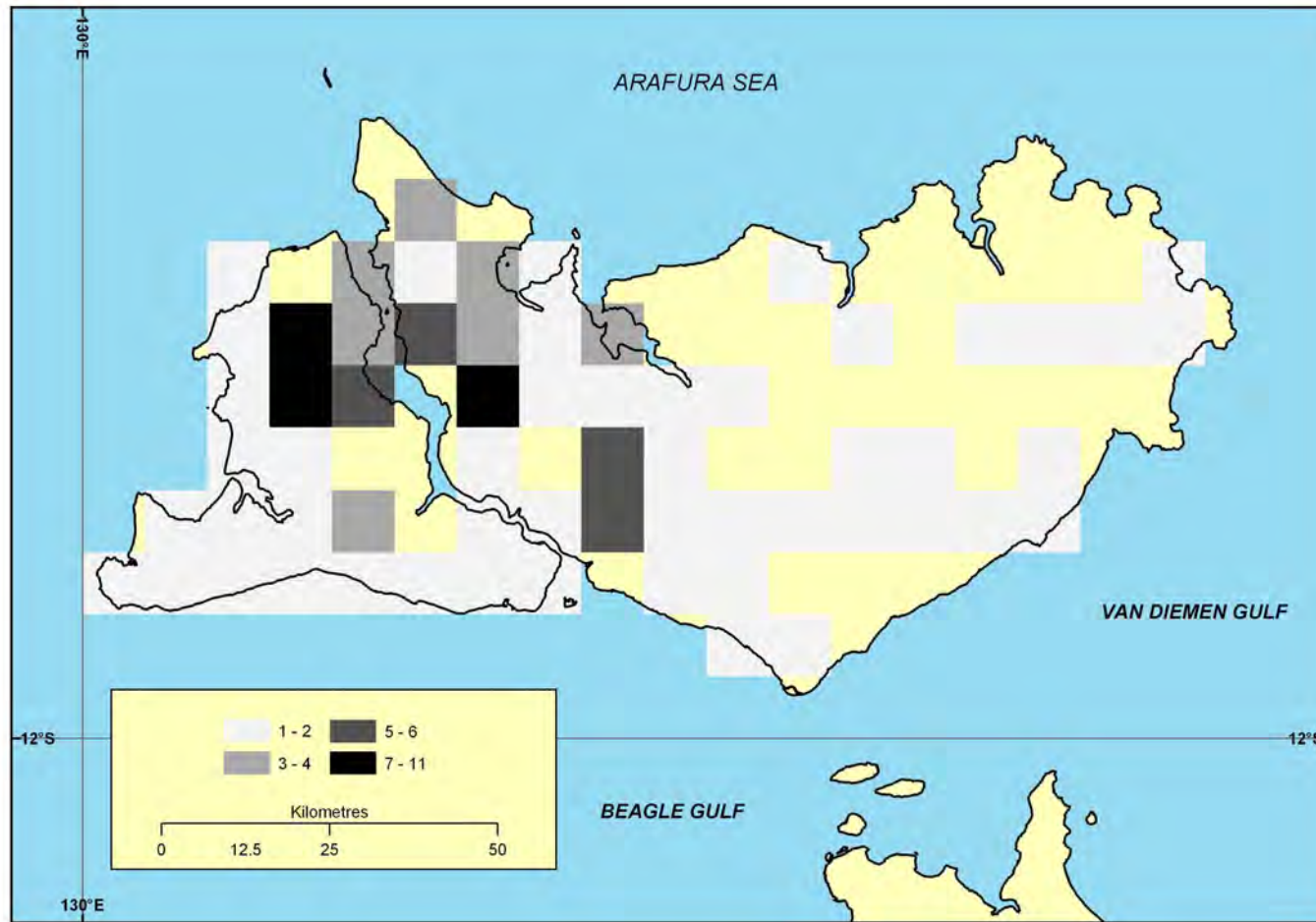


Figure 3.5. The number of listed threatened plant species (critically endangered, endangered or vulnerable) known from grid cells of 5' x 5' on the Tiwi Islands.

Twenty species (including nine NT endemic species) are listed as threatened on the NT list (one as critically endangered, eight as endangered, and 11 as vulnerable), but only one is currently listed as threatened on the national list. Additional information for every threatened plant species (other than the “data deficient” category) is given in Appendix B.

Of these 20 listed threatened plant species, 17 are not known from any conservation reserve in the Northern Territory, two are known from only one reserve (*Luisia teretifolia* from Black Jungle Conservation Reserve and *Frycinettia excelsa* from Kakadu National Park), and one (*Cycas armstrongii*) is known from 10 conservation reserves. *Cycas armstrongii* is an unusual case, in that it is currently at least locally common, however it qualifies as threatened based on recent detailed research and modeling that demonstrates very poor recruitment in the face of prevailing fire regimes and the increasing extent of exotic pasture grasses, and consequently extensive projected decline in abundance.

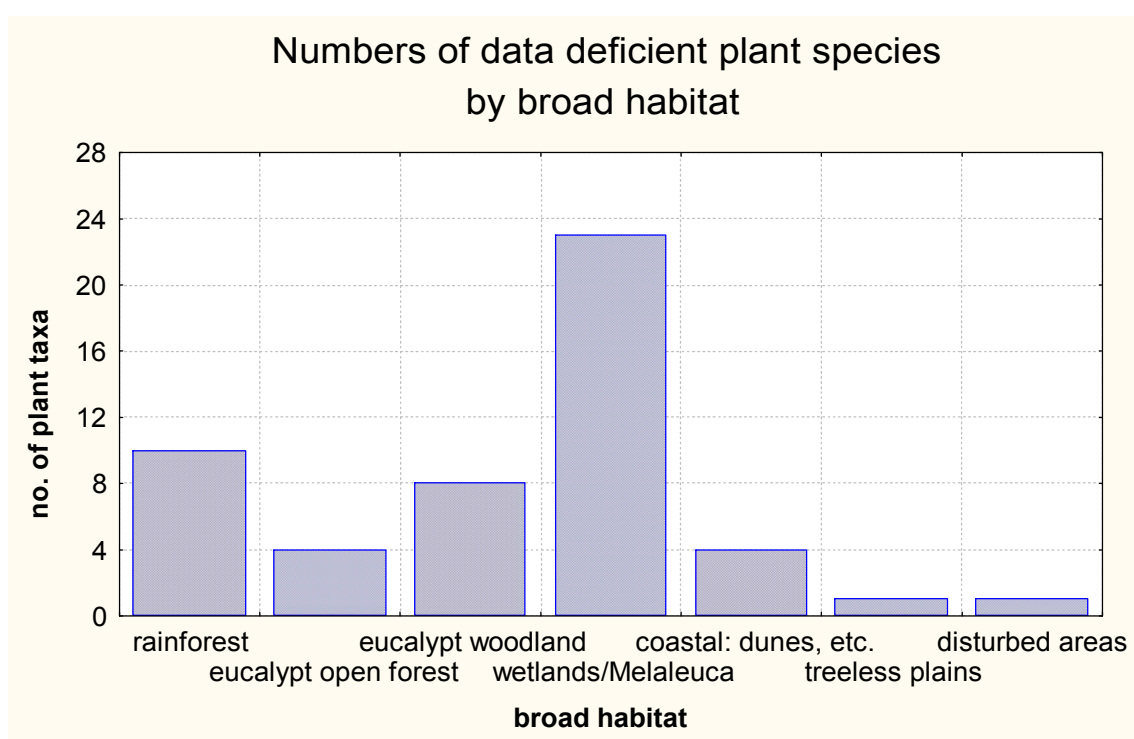
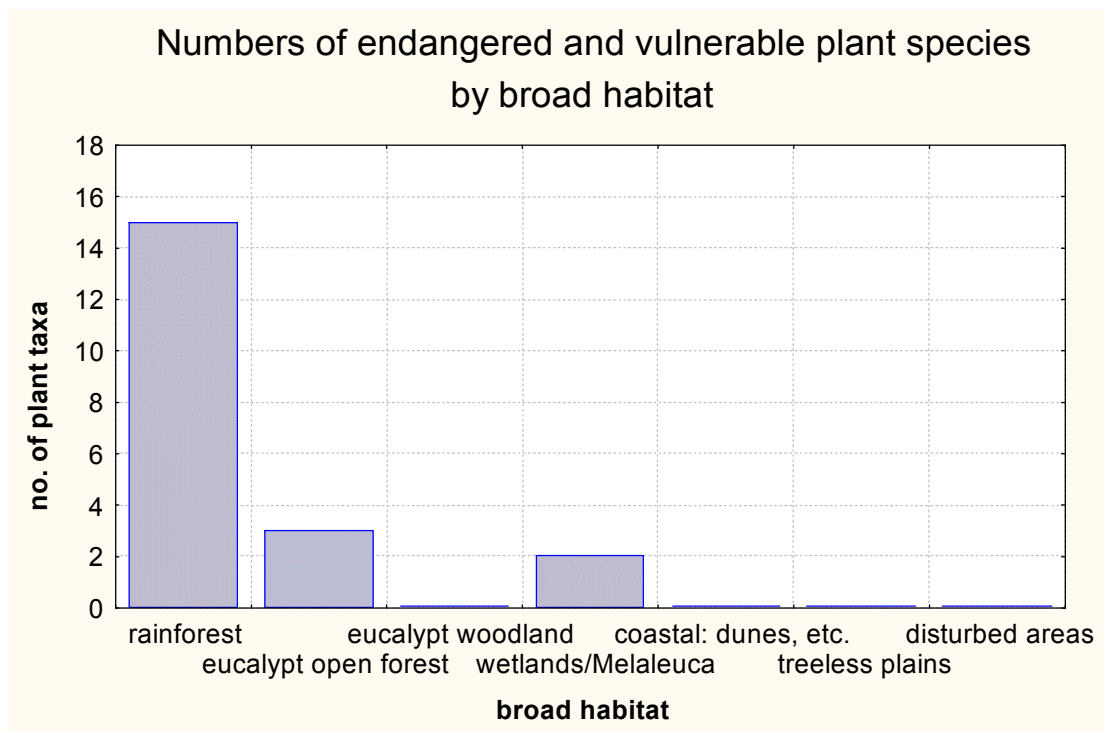
The disparity in numbers of species categorised as threatened at NT and national level is likely to be substantially reduced in the near future, as the recent comprehensive documentation of status of species in the NT (Anon 2002) can be expected to determine categorisations at national level: especially so for the seven threatened Tiwi plant species that occur only in the Northern Territory.

In addition to the 20 endangered and vulnerable Tiwi plant species, a further 44 species are listed as “data deficient”. For these Tiwi plant species there is very little information available from which to assess status. With more knowledge, some of these species may be shown to be widespread and common. Alternatively, some species now known from a few locations may actually be restricted to only those locations, and an upgrading of their conservation status may be warranted. In many cases, the conservation status of Tiwi plant species may have been assumed to be secure, largely on the basis of lack of apparent threats. For species occurring in habitats or areas proposed for conversion to *Acacia mangium* plantations, this security may no longer be presumed.

The threatened plant species are concentrated particularly in the northwest of Melville Island and north of Bathurst Island (Fig. 3.5). In part this may reflect the uneven sampling (Fig. 3.2), but there is also likely to be some underlying reality to this pattern, because of the geographic patterning of rainfall and, hence, rainforests and taller eucalypt open forests.

Most of the Tiwi *endangered and vulnerable* plant species occur primarily in rainforests (Fig. 3.6a), with a smaller proportion in eucalypt open forests and wetland areas (including *Melaleuca* forests and woodlands). None occur in mangroves, coastal dunes, eucalypt woodlands or treeless plains. In part, the preponderance of rainforest species among the threatened plants is because many rainforest plants occur in only a few rainforest patches, because rainforests may be particularly susceptible to a range of threatening processes, and because rainforests in the Northern Territory have been relatively well surveyed, and hence threatened species will be more likely to be given a code other than “Data Deficient”.

In contrast, most of the Tiwi *data deficient* plant species occur in wetlands (including *Melaleuca* forests and woodlands), with a more equitable spread over other environments (Fig. 3.6b). In part, this reflects the relatively meagre systematic collection in wetland environments, particularly on the Tiwi Islands.



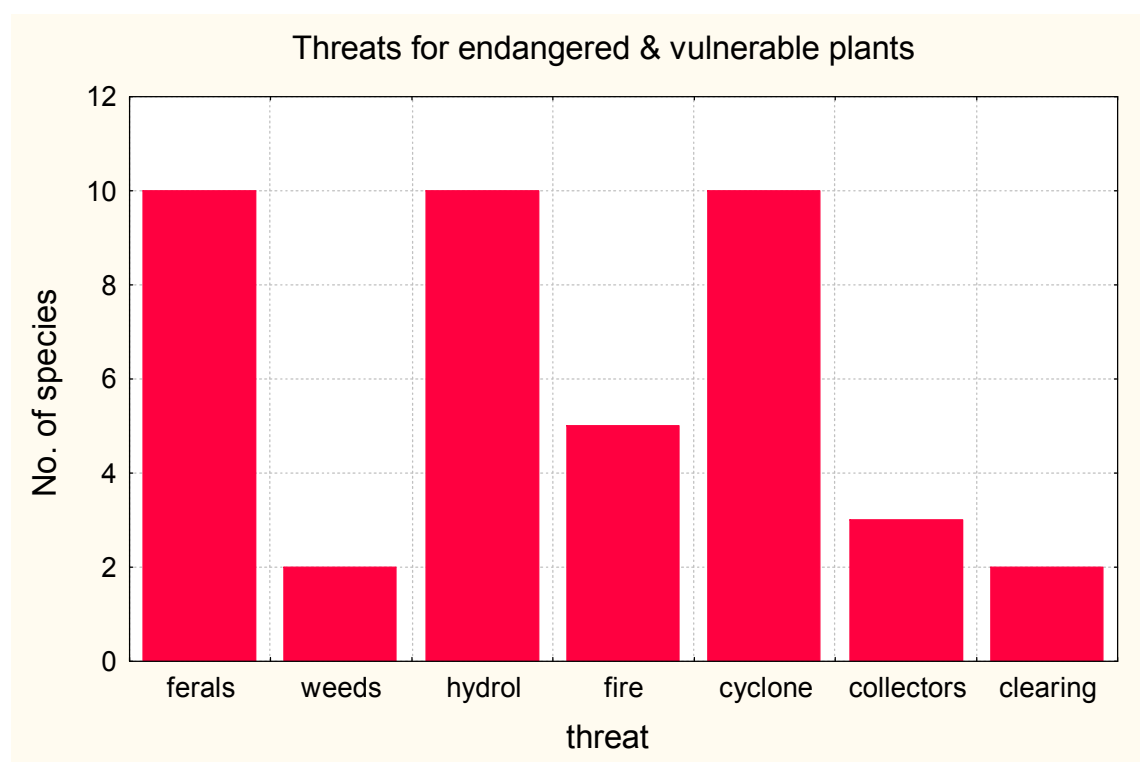
**Figure 3.6.** The broad habitat distribution of Tiwi Island threatened plant species. (a) endangered and vulnerable taxa; (b) data deficient taxa.



Appendix B lists the main threatening processes considered to be affecting (or likely to affect) each of the threatened plants. The threats affecting the most species are:

- changes in hydrology (largely because of the high number of threatened plants occurring in wet rainforest patches);
- feral animals (particularly pigs); and
- stochastic (chance) disturbances particularly cyclones (largely because of the relatively high number of epiphytes and species known from very few locations).

Other main threats are changed fire regimes, weeds, collectors (for orchid species) and clearing (Fig. 3.7).



**Figure 3.7. Threatening processes listed for endangered and vulnerable plants of the Tiwi Islands.** Note that more than one threat may be listed for any single plant species. “hydrol” = altered hydrological regimes.

The number of threatened plant taxa occurring on the Tiwi Islands is notably higher than that reported for other NT regions recently studied (Table 3.4).

**Table 3.4: Comparison of the number of threatened plants on the Tiwi Islands compared with other NT regions recently assessed.** nb where taxa are listed at different categories on national and NT lists, the more threatened category only is listed in this Table.

| region                  | area<br>(km <sup>2</sup> ) | no. threatened plants                                      |                   |                           | source                         |
|-------------------------|----------------------------|--|-------------------|---------------------------|--------------------------------|
|                         |                            | <i>endangered<br/>and/or<br/>critically<br/>endangered</i> | <i>vulnerable</i> | <i>data<br/>deficient</i> |                                |
| Tiwi Islands            | 7,481                      | 9  | 11                | 44                        | this report                    |
| Coomalie Shire          | 1,507                      | 1  | 2                 | 8                         | Price and Baker (2003)         |
| Mary River catchment    | 8,602                      | 0  | 4                 | 2                         | Armstrong <i>et al.</i> (2002) |
| Arafura Swamp catchment | 10,365                     | 0  | 3                 | 41                        | Brennan <i>et al.</i> (2003)   |
| Daly Basin bioregion    | 20,800                     | 0  | 2                 | 4                         | Price <i>et al.</i> (2000)     |

In some cases, the conservation status codes given here differ from those first assigned in 2000 for the initial regulations of the *Territory Parks and Wildlife Conservation Act 2000*. Under those schedules, there were two Tiwi species listed as endangered and 12 listed as vulnerable (Woinarski *et al.* 2000a). These changes reflect the more substantial information base available for the 2002 assessment. Species changing from the initial assessment to the current NT listing are: *Elaeocarpus miegei* (from endangered to critically endangered); *Cerbera manghas* (from vulnerable to near threatened); *Cycas maconochiei* (from vulnerable to least concern); *Dendrobium tritamellatum*, *Hedyotis auricularia* and *Tropidia curculigoides* (all from vulnerable to data deficient); *Cephalomanes obscurum*, *Garcinia warrenii*, *Tarennoidea wallichii*, *Typhonium jonesii*, *Typhonium mirabile*, *Utricularia subulata* and *Xylopia D30127 Melville Island* (all from unlisted to endangered); and *Dendromyza reinwardtiana*, *Endiandra limnophila*, *Freycinetia excelsa* and *Mitrella D24710 Melville Is.* (all from unlisted to vulnerable).

### 3.6. *Tiwi-endemic plants*

Eleven plant taxa have been recorded nowhere else in the world other than on the Tiwi Islands (Table 3.5). A further 19 are known in the Northern Territory only from the Tiwi Islands but also occur beyond the Northern Territory, mostly in northern Queensland, New Guinea and/or Malesia.

Most of the endemic plant taxa are associated with rainforests, but there are also several endemic taxa that occur mainly in eucalypt open forests and wetland areas (Fig. 3.8). The endemic plant taxa include representatives of most life forms, including large trees (e.g. *Elaeocarpus miegei*), sub-shrubs (*Desmodium tiwiense*), small herbs (*Burmannia* D61177 Bathurst Island), sedges (*Hypolytrum nemorum*) and epiphytes (*Dendrobium trilamellatum*, *Thrixspermum congestum*, but no grasses or palms.

Of the plant species that are restricted in the NT to the Tiwi Islands but also occur beyond the NT, most are present in northern Queensland, New Guinea and/or Malesia. Such distributions link areas of relatively high rainfall. These species also include some whose distribution is now largely relictual from a presumed more extensive range during climatically more favourable periods in the past.

Note that for many other plant species, the Tiwi Islands are of major significance in that, although not endemic, a very high proportion (>50%) of their total population or known sites of occurrence occur there. Such plants include the rainforest species: *Lindsaea walkerae* (known only from six records in perennially wet, rainforest habitats on Melville and Bathurst Islands, and one record from eastern Arnhem Land); *Nervilia peltata* (known from only four locations in the Northern Territory, of which two are on the Tiwi Islands); *Freycinetia percostata* (known in the NT from only three sites on Bathurst Island and two from the Arafura Swamp in central Arnhem Land); *Cephalomanes obscurum*; *Vittaria ensiformis*; *Melodinus australis*; *Mapania macrocephala* (known in the NT from only one site on Bathurst Island, one site on Melville Island and one site in NE Arnhem Land); *Elaeocarpus culminicola*; *Endospermum medullosum*; *Dysoxylum latifolium*; *Endiandra limnophila* (known in the NT from many sites on the Tiwi Islands, but otherwise only from Channel Point, near Darwin); *Acmena hemilampra* (known in the NT from about 30 sites on the Tiwi Islands, but otherwise from only two specimens on Croker Island); *Syzygium fibrosum*; *Luisia teretifolia* (known in the NT from only 12 sites on Melville Island and three locations in the Darwin-Litchfield area); and *Psychotria coelosperma*. In some of these cases, the relatively high incidence of records on the Tiwi Islands may represent a collection bias, as sampling effort on the Tiwi islands is now relatively higher than many other areas on the Northern Territory mainland.

A smaller number of open forest species also have most but not all of their NT distributions on the Tiwi Islands. These include the dominant tree *Corymbia nesophila* and the herb *Zornia disticha*. Except for where any of these species are also classified as threatened, we do not deal specifically with these species here, although we recognise that the conservation management of the Tiwi Islands is highly influential in their fate.

**Table 3.5 . List of plant species endemic to the Tiwi Islands (a), or whose NT distribution is limited to the Tiwi Islands (b). For distributional notes, B=Bathurst Island, M=Melville Island.**

| <b>FAMILY</b>  | <b>scientific name</b>                  | <b>no. Herb. records</b> | <b>no. plots</b> | <b>habitat</b>       | <b>distributional notes</b>                   |
|--|---|--------------------------|------------------|----------------------|---|
| <b>(a) Recorded nowhere but on the Tiwi Islands</b>  |   |                          |                  |                      |   |
| BURMANNIACEAE  | <i>Burmannia D61177 Bathurst Island</i> | 2                        | 0                | rainforest           | B   |
| FABACEAE   | <i>Desmodium tiwiense</i>               | 7                        | 6                | eucalypt open forest | BM  |
| GOODENIACEAE   | <i>Goodenia D1547 Melville Island</i>   | 12                       | 3                | eucalypt woodland    | BM  |
| ASCLEPIADACEAE   | <i>Hoya australis oramicola</i>         | 4                        | 0                | rainforest           | BM:   |
| SCROPHULARIACEAE   | <i>Lindernia cowiei</i>                 | 1                        | 0                | wetlands             | M   |
| ANNONACEAE   | <i>Mitrella D24710 Melville Is.</i>     | 9                        | 3                | rainforest           | BM  |
| APOCYNACEAE  | <i>Parsonsia D30178 Melville Island</i> | 3                        | 31               | rainforest           | BM  |
| RUBIACEAE  | <i>Spermacoce D43976 retitesta</i>      | 17                       | 15               | eucalypt open forest | BM  |
| ARACEAE  | <i>Typhonium jonesii</i>                | 4                        | 0                | eucalypt open forest | BM  |
| ARACEAE  | <i>Typhonium mirabile</i>               | 5                        | 3                | eucalypt open forest | M   |
| ANNONACEAE   | <i>Xylopia D30127 Melville Island</i>   | 1                        | 5                | rainforest           | BM  |
| <b>(b) NT distribution restricted to the Tiwi Islands, but also recorded beyond the NT</b> |   |                          |                  |                      |   |
| MYRTACEAE  | <i>Acmenosperma claviflorum</i>         | 14                       | 69               | rainforest           | BM: Also recorded in northern Qld and Malesia |
| SCHIZAEACEAE   | <i>Actinostachys wagneri</i>            | 1                        | 0                | rainforest           | M: Also occurs in northern Qld and Malesia    |
| ORCHIDACEAE  | <i>Calochilus caeruleus</i>             | 2                        | 0                | paperbark swamps     | M: Also recorded in WA, Qld and New Guinea    |

| <b>FAMILY</b>  | <b>scientific name</b>                              | <b>no. Herb. records</b> | <b>no. plots</b> | <b>habitat</b>  | <b>distributional notes</b>  |
|----------------|---|--------------------------|------------------|---|--|
| VERBENACEAE    | <i>Clerodendrum longiflorum</i> var. <i>glabrum</i> | 4                        | 6                | rainforest margins  | BM: This subspecies occurs also in north Qld and PNG                       |
| LILIACEAE      | <i>Crinum venosum</i>                               | 1                        | 0                | paperbark swamps  | M: Also recorded from Qld  |
| ORCHIDACEAE    | <i>Dendrobium trilamellatum</i>                     | 2                        | 0                | paperbark swamps  | M: Also NE Qld, New Guinea   |
| SANTALACEAE    | <i>Dendromyza reinwardtiana</i>                     | 7                        | 2                | rainforest  | BM: Also recorded from north Qld, new Guinea, Philippines and Sumatra      |
| ELAEOCARPACEAE | <i>Elaeocarpus miegei</i>                           | 1                        | 6                | rainforest  | BM: Also recorded in New Guinea and Malesia                                |
| CLUSIACEAE     | <i>Garcinia warrenii</i>                            | 2                        | 0                | rainforest  | M: Also recorded in north Qld  |
| RUBIACEAE      | <i>Hedyotis auricularia</i> var. <i>melanesica</i>  | 1                        | 2                | rainforest  | BM: Also recorded in north Qld   |
| CYPERACEAE     | <i>Hypolytrum nemorum</i>                           | 17                       | 18               | rainforest  | BM: Also NE Qld, Polynesia, to India and Taiwan                            |
| MENISPERMACEAE | <i>Hypserpa decumbens</i>                           | 4                        | 2                | rainforest  | BM: Also recorded from N&E Qld and NE NSW                                  |
| MENISPERMACEAE | <i>Hypserpa polyandra</i>                           | 1                        | 1                | rainforest  | BM: Also recorded from NE Cape York Peninsula, SE Indonesia and New Guinea |
| LAURACEAE      | <i>Litsea breviumbellata</i>                        | 21                       | 66               | rainforest  | BM: Also recorded in north Qld   |
| CYPERACEAE     | <i>Scleria carphiformis</i>                         | 3                        | 3                | treeless plains (sedgeland, <i>Melaleuca</i> woodland, swamp) | BM: Also recorded from north Qld   |
| LOGANIACEAE    | <i>Strychnos minor</i>                              | 14                       | 50               | rainforest  | BM: Also recorded from north Qld to Malesia                                |
| RUBIACEAE      | <i>Tarennoidea wallibii</i>                         | 7                        | 1                | rainforest  | M: Also recorded from Malesia, as far north as India                       |

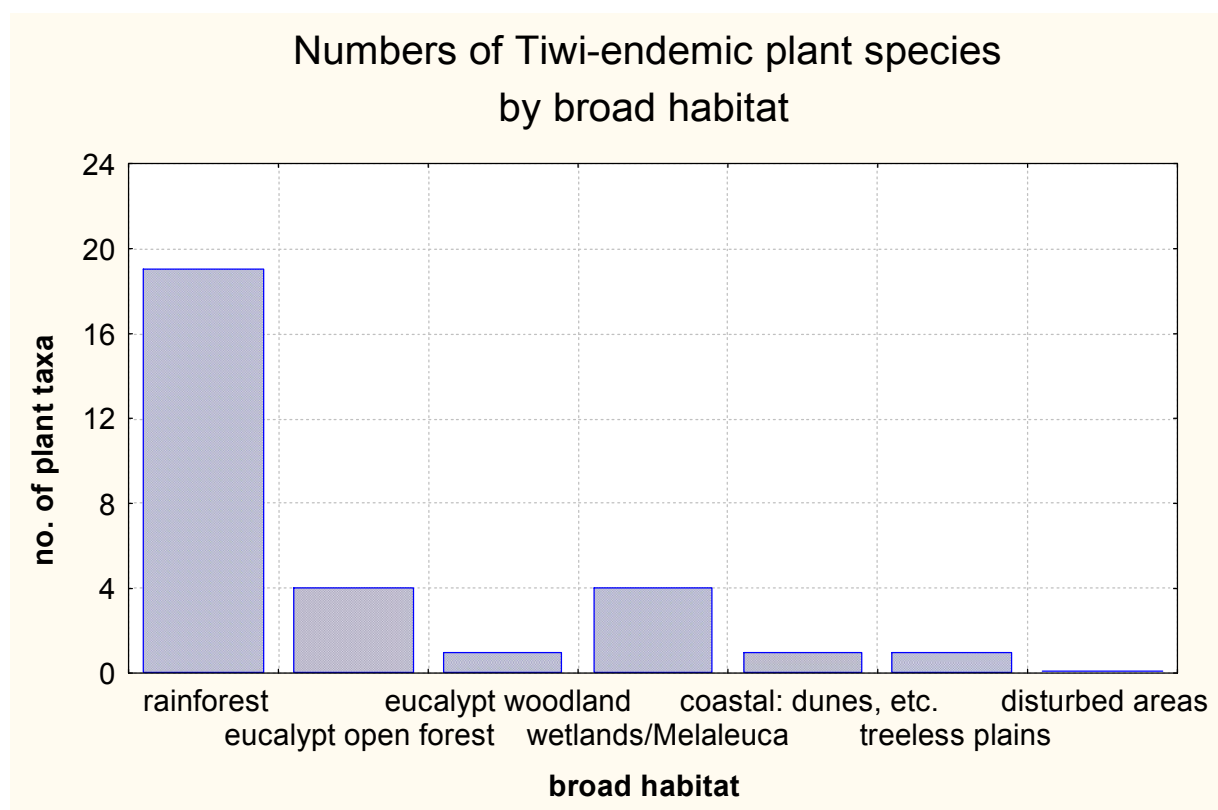
| <b>FAMILY</b> | <b>scientific name</b>        | <b>no. Herb. records</b> | <b>no. plots</b> | <b>habitat</b> | <b>distributional notes</b>                     |
|---------------|-------------------------------|--------------------------|------------------|----------------|---|
| ORCHIDACEAE   | <i>Thrixspermum congestum</i> | 3                        | 8                | rainforest     | BM: Also recorded in northern Qld and Malesia   |
| TILIACEAE     | <i>Triumfetta repens</i>      | 3                        | 1                | coastal dunes  | B: Also recorded from Qld, and beyond Australia |

With the exception of the Alligator Rivers Region, the Tiwi tally of endemic species is far higher than that of other NT regions that have recently been evaluated (Table 3.6).

**Table 3.6. Comparison of extent of plant endemism on the Tiwi Islands compared with other sampled regions in the Top End of the Northern Territory.**

| region                  | area (km <sup>2</sup> ) | no. endemic taxa           |   | source                         |
|-------------------------|-------------------------|----------------------------|---|--------------------------------|
|                         |                         | <i>entirely restricted</i> | <i>restricted in the NT, but also known beyond the NT</i> |                                |
| Tiwi Islands            | 7,481                   | 10                         | 20  | this report                    |
| Coomalie Shire          | 1,507                   | 0                          | 0   | Price and Baker (2003)         |
| Mary River catchment    | 8,602                   | 0                          | 0   | Armstrong <i>et al.</i> (2002) |
| Arafura Swamp catchment | 10,365                  | 1                          | 1   | Brennan <i>et al.</i> (2003)   |
| Daly Basin bioregion    | 20,800                  | 0                          | 1   | Price <i>et al.</i> (2000)     |
| Alligator Rivers Region | 30,000                  | >40                        | ?   | Ingwersen (1995)               |

As with Tiwi endangered and vulnerable plants, most of the Tiwi endemic plants occur primarily in rainforest (Fig. 3.8), but four Tiwi-endemic species occur in each of eucalypt open forests and wetland environments.



**Figure 3.8. Occurrence of Tiwi endemic plant species in broad habitat types (note that this listing includes those species that occur in the NT nowhere else than on the Tiwi Islands, but also occur beyond the NT).**

### 3.7. Floristics of individual islands

There is much similarity in the plant species composition of the two islands (Appendix xx). Of the tally of 1195 plant taxa known from the Tiwi Islands, 665 taxa have been recorded on both islands, 109 have been recorded from Bathurst Island but not Melville Island, and 421 have been recorded from Melville Island but not Bathurst Island. These tallies somewhat mask the similarity between the two islands in their flora: for many of the taxa recorded from only one of the two islands, this restriction may be simply because of sampling inadequacy. For example of the 109 species recorded from Bathurst but not Melville, 65 species are in our data bases from only one record on the Tiwi Islands, and a further 39 species have only two to five records from the Tiwi Islands; of the 421 species recorded from Melville but not Bathurst Island, 140 are in our data bases from only one record on the Tiwi Islands, and a further 128 species have between two and five records only.

A better picture of the similarity in flora between the two islands is painted by the occurrence of species better represented in our data bases. Of the 52 species recorded from at least 100 sites in our data base, all are known from both islands. Of the 123 species reported from between 50 and 99 sites, all but one two species (*Sauropus ditassoides*, which has been reported from Melville, but not Bathurst) are known from both islands. Of the 137 species reported from between 20 and 49 sites, only three species are known from only one of the two islands (*Yakirra nulla* and *Diospyros cordifolia* from Melville and *Spermacoce D129311 variabilis* from Bathurst).

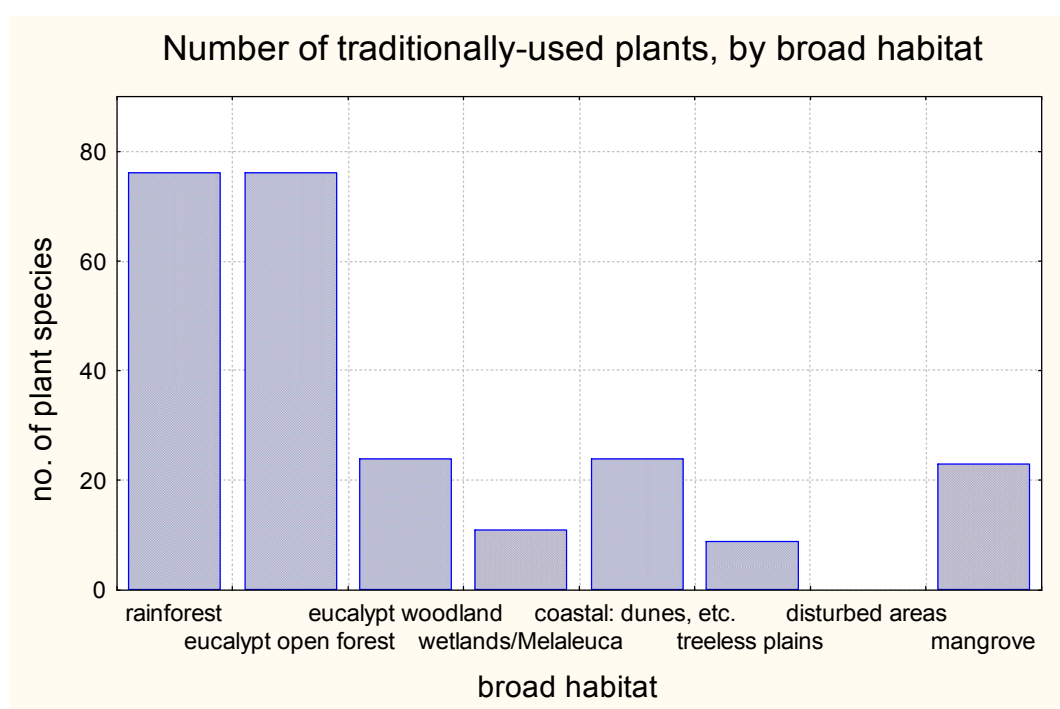
**Table 3.7. Comparison between Bathurst and Melville Islands in the number of threatened, endemic and all plant species recorded.**

| island                 | no. of threatened species          |            |                | no. endemic species |                   | total no. species |
|------------------------|------------------------------------|------------|----------------|---------------------|-------------------|-------------------|
|                        | endangered & critically endangered | vulnerable | data deficient | entirely endemic    | endemic in the NT |                   |
| <b><i>Bathurst</i></b> | 5                                  | 9          | 29             | 8                   | 14                | 774               |
| <b><i>Melville</i></b> | 7                                  | 9          | 39             | 9                   | 19                | 1086              |



### 3.8. Use of plants

Many plants occurring on the Tiwi Islands have great significance for the life and culture of Tiwi people. Puruntatameri *et al.* (2001) list uses for 216 plant species. These uses include foods (principally fruits and yams) and the provision of materials for cultural objects (such as ironwood *Erythrophleum chlorostachys* for pukumani poles), art (such as pandanus for weaving of mats, and ironwood for carvings), and for hunting, fishing, camping and cooking equipment. Other plants have significance as markers of seasons, or as part of the connection of people to history and place. Plants also provide the shelter and environments needed for the principal animal foods on the islands, such as hollow logs for pythons and bandicoots. All environments contain plants that have traditional uses, but eucalypt open forest and rainforest hold the most species that are traditionally used (Fig. 3.9).



**Figure 3.9. Habitat distribution of plant species traditionally used by Tiwi people.** Note that some species have been allocated to more than one habitat, and that this tally crudely treats all species as equally important. Tallies are calculated from the listing of species in Puruntatameri *et al.* (2001).

Some Tiwi plant species are used commercially, and others have potential for economic use. Currently, the species of most economic significance are pandanus *Pandanus spiralis* and ironwood, which are both staples for the commercial art and craft market. There has also been some interest in the use of ironwood for high-quality timber production, and of northern cypress-pine *Callitris intratropica* for timber and oils. As for elsewhere in the Top End, there is also some economic potential for the commercial use of native fruits, principally billy goat plum (Pirlamunga) *Terminalia ferdinandiana*, but also including a range of other species such as green plum (Yankumwani) *Buchanania obovata*, *Syzygium* spp., and *Vitex* spp.

The quantity of these food resources is affected by land management. Different fire regimes have the potential to increase or decrease the amount and distribution of most of the open forest

and rainforest plants, and the amount and timing of fruit, seed and root production, with production typically favoured by relatively infrequent “cool” fires, and reduced by frequent relatively high intensity fires (Williams 1997; Woinarski *et al.* 2003). Feral pigs diminish the available fruit and yam resources in the short-term, and may also reduce the longer-term availability of these through lowering the reproductive success of some plant species. Buffalo, cattle and horses may also affect plant resource availability through trampling and degrading some environments.

## 4. SYNTHESIS OF VALUES

The Tiwi Islands is like nowhere else in the Northern Territory. It has the highest rainfall, and is at the northern extreme, closest to Asia. These characteristics, and its isolation, ensure that the Tiwi Islands support a distinctive set of environments. Compared with any similar-sized area of the Northern Territory mainland, rainforest patches are more numerous (a total of 1261 rainforest patches occur on the Tiwi Islands) and occupy a larger total area, and they are distinctly different in plant species composition to any others. The distinctive “treeless plain” vegetation is present nowhere else than on the Tiwi Islands (at least in terms of vegetation discernible at 1:1,000,000 scale). The Tiwi Islands support extensive areas of some of the best developed eucalypt forests in northern Australia. There are also substantial areas of mangroves; eucalypt woodlands; coastal beach, dune and sedgeland communities; and wetlands. While the Garig Gunak Barlu National Park on the nearby Cobourg Peninsula represents some of these environments, there is no reserved area of treeless plain, and Garig Gunak Barlu provides no, or meagre, representation of rainforests, eucalypt woodlands and *Melaleuca* open forests.

Notwithstanding historic and recent clearing for timber plantations, the Tiwi Islands retain vast areas of intact vegetation: built-up areas, plantations and other disturbed areas currently constitute only about 2% of the Islands area.

The Tiwi Islands has a rich flora, comprising at least 1068 native plant species. This includes an exceptionally high number of recognised threatened species. Twenty plant taxa are listed as Endangered or Vulnerable at the Northern Territory level, with a further 44 species listed as Data Deficient. Only three of the 20 endangered or vulnerable plant taxa are known from any conservation reserves in the Northern Territory. Many of the listed threatened plants are known from extremely few locations. Most of the threatened plants are associated with rainforests, but all main habitats hold some threatened plants. These species are threatened by a broad range of factors, particularly including feral animals (especially pigs), changes in hydrology, and stochastic (chance) factors. Weeds, changed fire regimes, collectors and clearing also threaten some species.

The Tiwi Islands flora includes an unusually high number of endemic species. Eleven plant taxa are known only from the Tiwi Islands. A further 19 taxa occur in the Northern Territory only on the Tiwi Islands, but also occur beyond the Northern Territory, typically in rainforest patches of north-east Queensland, New Guinea and/or Malesia.

Many plants on the Tiwi Islands have traditional uses, for food, manufacture of implements and craft, or for other cultural reasons.

Although more than 100 exotic plant species have been recorded from the Tiwi Islands, most landscapes remain remarkably natural and free from weeds. Nonetheless, there are some significant weed species that have been recorded on the Tiwi Islands over the last 10-20 years, and these species have the potential to expand into, and transform, extensive areas of natural vegetation.

Taken together, the vegetation and plant composition of the Tiwi Islands is clearly of outstanding significance, at both a Northern Territory and national level. Options for the management and protection of those values are considered in Part 3 of this report.

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## Appendix A. List of vascular plant species recorded from the Tiwi Islands.

Tiwi name follows Puruntatameri *et al.* (2001).

\* = non-native species; # = record requires further confirmation.; ## record not accepted here; + = record from Fensham and Cowie (1998).

Sources for other records: Pur.=Puruntatameri *et al.* (2001); HR=number of specimen records in the NT Herbarium.

*Plot-based data bases:* BW=the number of sites (mostly eucalypt open forests and treeless plains) from which recorded in data bases associated with Wilson (1991); HP=the number of Herbarium plots from which recorded; RF=the number of rainforest patches from which recorded (Russell-Smith 1991); NTVM=the number of quadrats from which recorded from sampling for the Northern Territory 1: 1,000,000 vegetation map (Wilson *et al.* 1990); RFe=the number of sites (mostly eucalypt forest) from which recorded in data bases associated with Fensham (1990a); RFe2=the number of sites from which recorded in data bases associated with Fensham and Cowie (1998); NHT= the number of sites from which recorded in data bases associated with this report and Woinarski *et al.* (2000a); total quads=the sum of number of sites from which recorded in the 7 previous site-based columns.

Bath=recorded from Bathurst Island; Melv.=recorded from Melville Island.

| FAMILY     | scientific name              | Tiwi name                 | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i> |
|------------|------------------------------|---------------------------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| MALVACEAE  | <i>Abelmoschus manihot</i>   |                           |      | 2  |    |    | 1  |          |     |          |     | 1              | 1     | 1     |   |
| MALVACEAE  | <i>Abelmoschus moschatus</i> | Rani, Yirani              | 1    | 8  |    | 4  |    |          | 1   | 1        |     | 6              | 1     | 1     | <i>tuberosus</i>                        |
| FABACEAE   | <i>Abrus precatorius</i>     | Tapirtapunga,<br>Kulamuni | 1    | 6  |    | 32 | 49 |          |     | 1        |     | 82             | 1     | 1     | <i>precatorius</i>                      |
| MALVACEAE  | <i>Abutilon fraseri</i> ##   |                           |      |    |    |    | 1  |          |     |          |     | 1              |       | 1     |   |
| MALVACEAE  | <i>Abutilon indicum</i>      |                           |      | 2  |    |    | 2  |          |     |          |     | 2              |       | 1     |   |
| MIMOSACEAE | <i>Acacia alleniana</i>      |                           |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| MIMOSACEAE | <i>Acacia auriculiformis</i> | Jarrikarli                | 1    | 12 |    | 61 | 85 | 6        |     | 18       | 23  | 193            | 1     | 1     |   |
| MIMOSACEAE | <i>Acacia cataractae</i>     |                           |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| MIMOSACEAE | <i>Acacia crassicarpa</i> *  |                           |      | 2  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| MIMOSACEAE | <i>Acacia difficilis</i>     | Jarrikarli                | 1    | 9  | 65 | 51 |    | 28       | 13  |          | 14  | 171            | 1     | 1     |   |
| MIMOSACEAE | <i>Acacia dimidiata</i>      |                           |      | 6  | 6  | 13 |    | 6        | 5   |          |     | 30             | 1     | 1     |   |
| MIMOSACEAE | <i>Acacia gonocarpa</i>      |                           |      | 7  | 42 | 8  |    |          | 9   |          |     | 59             | 1     | 1     |   |
| MIMOSACEAE | <i>Acacia holosericea</i>    | Jarrikarli                | 1    | 3  |    | 9  |    |          |     | 3        |     | 12             | 1     | 1     |   |
| MIMOSACEAE | <i>Acacia humifusa</i>       |                           |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| MIMOSACEAE | <i>Acacia lamprocarpa</i>    | Jarrikarli                | 1    | 10 | 8  | 61 | 6  | 3        | 118 |          | 34  | 230            | 1     | 1     |   |
| MIMOSACEAE | <i>Acacia latescens</i>      | Jarrikarli                | 1    | 9  | 45 | 41 |    | 1        | 32  |          | 12  | 131            | 1     | 1     |   |

| FAMILY         | scientific name                  | Tiwi name  | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i>             |
|----------------|----------------------------------|------------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| MIMOSACEAE     | <i>Acacia leptocarpa</i>         | Jarrikarli | 1    | 13 |    | 75 |    | 9        | 33  | 8        | 15  | 140            | 1     | 1     |   |
| MIMOSACEAE     | <i>Acacia leptophleba</i> ##     |            |      |    |    |    |    | 1        |     |          |     | 1              |       | 1     |   |
| MIMOSACEAE     | <i>Acacia mangium</i> *          |            |      | 1  |    | 1  |    |          |     |          | 4   | 5              |       | 1     |   |
| MIMOSACEAE     | <i>Acacia mimula</i>             |            |      |    |    | 3  |    | 7        | 1   |          | 1   | 12             | 1     | 1     |   |
| MIMOSACEAE     | <i>Acacia multisiliqua</i>       |            |      | 3  |    | 1  |    |          | 1   |          |     | 2              |       | 1     |   |
| MIMOSACEAE     | <i>Acacia nuperrima</i>          |            |      | 3  |    | 1  |    |          |     |          |     | 1              | 1     |       |   |
| MIMOSACEAE     | <i>Acacia oncinocarpa</i>        | Murinyini  | 1    | 9  | 59 | 35 |    | 23       | 14  |          | 4   | 135            | 1     | 1     |   |
| MIMOSACEAE     | <i>Acacia platycarpa</i>         |            |      |    |    | 2  |    |          |     |          |     | 2              |       | 1     |   |
| MIMOSACEAE     | <i>Acacia praelongata</i>        |            |      | 6  |    | 4  |    | 2        |     |          | 2   | 8              | 1     | 1     |   |
| MIMOSACEAE     | <i>Acacia simsii</i> (*)         |            |      | 2  |    |    |    |          |     |          |     | 0              |       | 1     | native NT species,<br>but exotic on Tiwi<br>Islands |
| MIMOSACEAE     | <i>Acacia torulosa</i> #         |            |      |    |    |    |    | 1        |     |          |     | 1              | 1     |       |   |
| ASTERACEAE     | <i>Acanthospermum hispidum</i> * |            |      |    |    |    | 1  |          |     |          |     | 1              |       | 1     |   |
| ACANTHACEAE    | <i>Acanthus ilicifolius</i>      |            |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| AMARANTHACEAE  | <i>Achyranthes aspera</i>        |            |      | 3  |    | 11 | 9  |          |     |          |     | 20             | 1     | 1     |   |
| MYRTACEAE      | <i>Acmena hemilampra</i>         |            |      | 25 |    | 7  | 28 |          |     |          | 2   | 37             | 1     | 1     | <i>hemilampra</i>                                   |
| MYRTACEAE      | <i>Acmenosperma claviflorum</i>  |            | 1    | 14 |    | 9  | 58 |          |     |          | 2   | 69             | 1     | 1     |   |
| PTERIDACEAE    | <i>Acrostichum speciosum</i>     |            | 1    | 4  |    | 5  | 5  |          |     |          |     | 10             | 1     | 1     |   |
| SCHIZAEACEAE   | <i>Actinostachys digitata</i>    |            |      | 15 |    |    | 27 |          |     |          |     | 27             | 1     | 1     |   |
| SCHIZAEACEAE   | <i>Actinostachys wagneri</i>     |            |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| MIMOSACEAE     | <i>Adenantha pavonina</i>        |            |      |    |    |    | 12 |          |     |          |     | 12             | 1     | 1     |   |
| PASSIFLORACEAE | <i>Adenia heterophylla</i>       |            |      | 11 |    | 29 | 31 |          |     | 6        |     | 66             | 1     | 1     | <i>australis</i>                                    |
| ADIANTACEAE    | <i>Adiantum aethiopicum</i>      |            |      |    |    |    | 1  |          |     |          |     | 1              |       | 1     |   |
| ADIANTACEAE    | <i>Adiantum philippense</i>      |            |      | 2  |    | 1  | 3  |          |     |          |     | 4              |       | 1     |   |
| PLUMBAGINACEAE | <i>Aegialitis annulata</i>       |            | 1    | 13 |    | 6  |    |          |     |          |     | 6              | 1     | 1     |   |
| MYRSINACEAE    | <i>Aegiceras corniculatum</i>    | Mijinga    | 1    | 7  |    |    |    |          |     |          | 1   | 1              | 1     | 1     |   |
| FABACEAE       | <i>Aeschynomene americana</i> *  |            |      | 4  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| ASTERACEAE     | <i>Ageratum conyzoides</i> *     |            |      | 7  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| MELIACEAE      | <i>Aglaia brownii</i>            |            |      | 6  |    |    | 13 |          |     |          |     | 13             |       | 1     |   |
| MELIACEAE      | <i>Aglaia sapindina</i>          |            |      | 15 |    | 15 | 54 |          |     |          | 4   | 73             | 1     | 1     |   |
| RUBIACEAE      | <i>Aidia racemosa</i>            |            |      | 6  |    | 1  | 37 |          |     |          |     | 38             | 1     | 1     |   |
| MIMOSACEAE     | <i>Albizia canescens</i>         |            |      | 3  |    | 2  |    |          |     |          |     | 2              |       | 1     |   |
| MIMOSACEAE     | <i>Albizia lebbeck</i>           |            |      |    |    |    | 6  |          |     |          | 1   | 7              | 1     | 1     |   |
| MIMOSACEAE     | <i>Albizia procera</i>           |            |      |    |    |    | 3  |          |     |          |     | 3              | 1     | 1     |   |
| DROSERACEAE    | <i>Aldrovanda vesiculosa</i>     |            |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| SAPINDACEAE    | <i>Allophylus cobbe</i>          |            |      | 6  |    | 29 | 39 |          |     | 9        |     | 77             | 1     | 1     |   |
| POACEAE        | <i>Alloteropsis semialata</i>    |            |      | 1  | 35 | 28 |    | 2        | 70  | 3        |     | 138            | 1     | 1     |   |

| FAMILY           | scientific name                     | Tiwi name                     | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i> |
|------------------|-------------------------------------|-------------------------------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| RHAMNACEAE       | <i>Alphitonia excelsa</i>           | Jikiringini                   | 1    | 10 | 34 | 85 | 54 | 21       | 69  | 1        | 22  | 286            | 1     | 1     |   |
| RHAMNACEAE       | <i>Alphitonia incana</i>            |                               |      | 4  |    | 9  |    |          |     |          |     | 9              | 1     | 1     |   |
| APOCYNACEAE      | <i>Alstonia actinophylla</i>        | Palampalinga,<br>Murrulurluka | 1    |    |    | 7  | 20 |          | 1   |          | 3   | 31             | 1     | 1     |   |
| AMARANTHACEAE    | <i>Alternanthera dentata</i> *      |                               |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| FABACEAE         | <i>Alysicarpus muelleri</i>         |                               |      |    |    |    |    | 1        | 1   |          |     | 2              |       | 1     |   |
| FABACEAE         | <i>Alysicarpus ovalifolius</i> *    |                               |      | 8  |    |    |    |          |     | 13       |     | 13             |       | 1     |   |
| FABACEAE         | <i>Alysicarpus schomburgkii</i>     |                               |      | 4  |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| APOCYNACEAE      | <i>Alyxia spicata</i>               | Murinyini                     | 1    | 13 |    | 24 | 39 | 1        | 1   |          |     | 65             | 1     | 1     |   |
| APOCYNACEAE      | <i>Alyxia tropica</i>               |                               |      |    |    | 1  | 1  |          |     |          |     | 2              | 1     |       |   |
| AMARANTHACEAE    | <i>Amaranthus leptostachyus</i>     |                               |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| AMARANTHACEAE    | <i>Amaranthus viridis</i> *         |                               |      | 3  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| LYTHRACEAE       | <i>Ammannia baccifera</i>           |                               |      |    |    | 1  |    |          |     |          |     | 1              | 1     |       |   |
| ARACEAE          | <i>Amorphophallus galbra</i>        | Tiyoni                        | 1    | 9  |    | 4  | 33 |          |     | 3        |     | 40             | 1     | 1     |   |
| ARACEAE          | <i>Amorphophallus paeoniifolius</i> | Wupwama                       | 1    | 6  |    | 3  | 6  |          |     |          |     | 9              | 1     | 1     |   |
| VITACEAE         | <i>Ampelocissus acetosa</i>         | Turukwanga                    | 1    | 4  | 2  | 58 | 43 |          | 50  | 20       |     | 173            | 1     | 1     |   |
| VITACEAE         | <i>Ampelocissus frutescens</i>      |                               |      | 2  |    |    |    |          |     | 3        |     | 3              |       | 1     |   |
| THELYPTERIDACEAE | <i>Ampelopteris prolifera</i>       |                               |      |    |    |    | 4  |          |     |          |     | 4              | 1     | 1     |   |
| LORANTHACEAE     | <i>Amyema benthamii</i>             |                               |      | 1  |    |    | 2  |          |     | 1        |     | 2              |       | 1     |   |
| LORANTHACEAE     | <i>Amyema haematodes</i>            |                               |      | 5  |    |    | 2  |          |     |          |     | 2              | 1     | 1     |   |
| LORANTHACEAE     | <i>Amyema mackayensis</i>           |                               |      | 2  |    |    |    |          |     |          |     | 0              |       | 1     | <i>cycnei-sinus</i>                     |
| LORANTHACEAE     | <i>Amyema villiflora</i>            |                               |      | 4  |    | 2  |    |          |     |          |     | 2              | 1     | 1     | <i>villiflora</i>                       |
| ANACARDIACEAE    | <i>Anacardium occidentale</i> *     | Kuruti                        | 1    | 2  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| ACANTHACEAE      | <i>Andrographis paniculata</i> *    |                               |      | 2  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| POACEAE          | <i>Andropogon gayanus</i> *         |                               |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| CONVOLVULACEAE   | <i>Aniseia martinicensis</i>        |                               |      | 3  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| LAMIACEAE        | <i>Anisomeles malabarica</i>        |                               |      | 4  |    |    |    | 1        |     |          |     | 1              | 1     | 1     |   |
| MORACEAE         | <i>Antiaris toxicaria</i>           |                               |      | 3  |    | 2  | 11 |          |     |          |     | 13             | 1     | 1     | <i>macrophylla</i>                      |
| EUPHORBIACEAE    | <i>Antidesma ghesaembilla</i>       | Alimpunga                     | 1    | 9  |    | 11 | 21 | 2        | 4   | 16       |     | 54             | 1     | 1     |   |
| FABACEAE         | <i>Aphyllodium schindleri</i>       |                               |      | 4  |    | 1  |    |          |     |          |     | 1              | 1     | 1     |   |
| POACEAE          | <i>Aristida holathera</i>           |                               |      | 5  | 36 | 23 |    | 2        | 10  | 1        |     | 72             | 1     | 1     | <i>holathera, latifolia</i>             |
| POACEAE          | <i>Aristida macroclada</i>          |                               |      | 9  |    | 10 |    |          | 6   | 2        |     | 18             | 1     | 1     | <i>macroclada</i>                       |
| POACEAE          | <i>Aristida schultzii</i> ##        |                               |      |    |    |    |    | 1        |     |          |     | 1              |       | 1     |   |
| POACEAE          | <i>Aristida superpendens</i>        |                               |      | 1  |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| CYPERACEAE       | <i>Arthrostylis aphylla</i>         |                               |      |    |    |    |    | 1        |     | 1        |     | 2              |       | 1     |   |
| MORACEAE         | <i>Artocarpus glaucus</i>           |                               |      | 3  |    | 2  | 23 |          |     |          |     | 25             | 1     | 1     |   |
| ACANTHACEAE      | <i>Asystasia gangetica</i> *        |                               |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     | cultivated                              |
| PITTOSPORACEAE   | <i>Auranticarpa melanosperma</i>    |                               |      |    |    | 1  |    |          |     |          |     | 1              |       | 1     |   |

| FAMILY           | scientific name                  | Tiwi name                     | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i> |
|------------------|----------------------------------|-------------------------------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| FABACEAE         | <i>Austrodolichos errabundus</i> |                               |      | 1  |    | 5  |    |          |     |          |     | 5              | 1     |       |   |
| OXALIDACEAE      | <i>Averrhoa carambola</i> *      |                               |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     | cultivated                              |
| VERBENACEAE      | <i>Avicennia marina</i>          | Artama                        | 1    | 8  |    | 14 |    |          |     |          | 3   | 17             | 1     | 1     | <i>eucalyptifolia</i>                   |
| POACEAE          | <i>Axonopus compressus</i> *     |                               |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| POACEAE          | <i>Bambusa arnhemica</i>         | Kayartirri                    | 1    | 1  |    |    | 5  |          |     | 3        |     | 8              |       | 1     |   |
| PROTEACEAE       | <i>Banksia dentata</i>           | Mayili, Mayilinga             | 1    | 5  | 22 | 45 |    | 6        | 3   |          | 21  | 97             | 1     | 1     |   |
| LECYTHIDACEAE    | <i>Barringtonia acutangula</i>   |                               |      |    |    |    | 2  |          |     |          |     | 2              |       | 1     | <i>acutangulata</i>                     |
| LECYTHIDACEAE    | <i>Barringtonia asiatica</i>     |                               |      | 5  |    | 2  |    |          |     |          |     | 2              | 1     | 1     |   |
| BATAACEAE        | <i>Batis argillicola</i>         | Purrawurrika                  | 1    | 6  |    | 1  |    |          |     |          |     | 1              | 1     | 1     |   |
| CAESALPINIACEAE  | <i>Bauhinia acuminata</i> *      |                               |      | 3  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| CAESALPINIACEAE  | <i>Bauhinia binata</i>           |                               |      | 3  |    | 1  | 1  |          |     |          |     | 2              |       | 1     |   |
| CYPERACEAE       | <i>Baumea rubiginosa</i>         |                               |      | 4  |    | 3  |    |          |     |          |     | 3              | 1     |       |   |
| TILIACEAE        | <i>Berrya javanica</i>           |                               |      | 2  |    | 1  | 5  |          |     |          |     | 6              | 1     | 1     |   |
| ASTERACEAE       | <i>Bidens bipinnata</i> *        |                               |      | 5  |    | 4  |    |          |     | 4        |     | 8              | 1     | 1     |   |
| ASTERACEAE       | <i>Bidens pilosa</i> *           |                               |      | 5  |    | 2  |    |          |     |          |     | 2              | 1     | 1     |   |
| BLECHNACEAE      | <i>Blechnum indicum</i>          |                               |      | 7  |    | 2  | 24 |          |     |          |     | 26             | 1     | 1     |   |
| BLECHNACEAE      | <i>Blechnum orientale</i>        | Mirrijikurlini                | 1    | 8  |    | 18 | 39 |          |     |          |     | 57             | 1     | 1     |   |
| ASTERACEAE       | <i>Blumea diffusa</i>            |                               |      |    |    |    |    |          | 1   |          |     | 1              |       | 1     |   |
| ASTERACEAE       | <i>Blumea saxatilis</i>          |                               |      | 5  |    | 6  |    |          |     | 1        |     | 7              | 1     | 1     |   |
| HYDROCHARITACEAE | <i>Blyxa aubertii</i>            |                               |      | 2  |    |    |    |          |     |          |     | 0              | 1     | 1     | <i>echinosperma</i>                     |
| NYCTAGINACEAE    | <i>Boerhavia burbidgeana</i>     |                               |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| NYCTAGINACEAE    | <i>Boerhavia coccinea</i>        |                               |      | 1  |    |    |    |          |     | 2        |     | 2              |       | 1     |   |
| NYCTAGINACEAE    | <i>Boerhavia dominii</i>         |                               |      | 2  |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| NYCTAGINACEAE    | <i>Boerhavia gardneri</i>        |                               |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| NYCTAGINACEAE    | <i>Boerhavia schomburgkiana</i>  |                               |      | 2  |    |    |    |          |     | 1        |     | 1              | 1     | 1     |   |
| BOMBACACEAE      | <i>Bombax ceiba</i>              | Tunkuwaya,<br>Wurringa, Reili | 1    | 3  |    | 8  | 37 |          |     |          | 1   | 46             | 1     | 1     |   |
| CONVOLVULACEAE   | <i>Bonamia brevifolia</i>        |                               |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| CONVOLVULACEAE   | <i>Bonamia media</i>             |                               |      |    |    |    |    |          | 1   |          |     | 1              |       | 1     | <i>media</i>                            |
| CONVOLVULACEAE   | <i>Bonamia pannosa</i>           |                               |      |    |    | 1  |    |          |     |          |     | 1              | 1     | 1     |   |
| RUTACEAE         | <i>Boronia lanceolata</i>        |                               |      | 9  |    | 2  |    |          | 5   |          |     | 7              | 1     | 1     |   |
| POACEAE          | <i>Bothriochloa bladonii</i>     |                               |      | 7  |    | 5  |    |          |     | 2        |     | 7              | 1     | 1     | <i>bladonii</i>                         |
| POACEAE          | <i>Bothriochloa pertusa</i> *    |                               |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| POACEAE          | <i>Brachyachne ambigua</i>       |                               |      | 1  |    | 1  |    |          |     | 4        |     | 5              | 1     | 1     |   |
| POACEAE          | <i>Brachyachne convergens</i>    |                               |      | 4  |    |    |    |          |     | 7        |     | 7              | 1     | 1     |   |
| POACEAE          | <i>Brachyachne tenella</i>       |                               |      |    |    | 1  |    |          | 1   |          |     | 2              | 1     |       |   |

| FAMILY           | scientific name                         | Tiwi name              | Pur. | HR | BW | HP  | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i>          |
|------------------|---|------------------------|------|----|----|-----|----|----------|-----|----------|-----|----------------|-------|-------|--|
| STERCULIACEAE    | <i>Brachychiton diversifolius</i>       | Marlikirringa          | 1    | 6  |    | 32  |    |          | 5   | 3        | 11  | 51             | 1     | 1     | <i>diversifolius</i>                             |
| STERCULIACEAE    | <i>Brachychiton megaphyllus</i>         | Ngirniyani             | 1    | 5  |    | 27  |    | 7        | 27  | 2        | 1   | 64             | 1     | 1     | includes previous records of <i>B. paradoxus</i> |
| ASCLEPIADACEAE   | <i>Brachystelma glabriflorum</i>        | Jaliwaki, Jaliwak      | 1    | 3  |    |     |    |          |     |          |     | 0              |       | 1     |  |
| EUPHORBIACEAE    | <i>Breynia cernua</i>                   |                        |      | 11 |    | 54  | 52 |          | 25  | 1        |     | 132            | 1     | 1     |  |
| EUPHORBIACEAE    | <i>Bridelia tomentosa</i>               |                        |      | 5  |    | 35  | 48 | 1        | 9   | 15       | 1   | 109            | 1     | 1     |  |
| SIMAROUBACEAE    | <i>Brucea javanica</i>                  |                        |      | 1  |    |     | 2  |          |     |          |     | 2              |       | 1     |  |
| RHIZOPHORACEAE   | <i>Bruguiera exaristata</i>             | Nurninga               | 1    | 11 |    | 6   |    |          |     |          | 2   | 8              | 1     | 1     |  |
| RHIZOPHORACEAE   | <i>Bruguiera gymnorrhiza</i>            | Timinipulika, Murrunga | 1    | 9  |    | 3   |    |          |     |          | 3   | 6              | 1     | 1     |  |
| RHIZOPHORACEAE   | <i>Bruguiera parviflora</i>             | Nurninga               | 1    | 6  |    | 5   |    |          |     |          |     | 5              | 1     | 1     |  |
| ACANTHACEAE      | <i>Brunoniella acaulis</i>              |                        |      | 4  |    |     |    |          |     |          |     | 0              | 1     | 1     | <i>acaulis</i>                                   |
| ACANTHACEAE      | <i>Brunoniella australis</i>            |                        |      | 1  |    |     | 4  |          |     | 1        |     | 5              | 1     | 1     |  |
| ACANTHACEAE      | <i>Brunoniella linearifolia</i>         |                        |      | 2  |    | 13  |    |          |     |          |     | 13             | 1     | 1     |  |
| ANACARDIACEAE    | <i>Buchanania arborescens</i>           |                        | 1    | 4  |    | 12  | 48 | 1        |     |          | 2   | 63             | 1     | 1     |  |
| ANACARDIACEAE    | <i>Buchanania obovata</i>               | Yankumwani             | 1    | 6  | 44 | 119 |    | 27       | 98  | 1        | 6   | 295            | 1     | 1     |  |
| SCROPHULARIACEAE | <i>Buchnera asperata</i>                |                        |      | 1  |    | 3   |    |          |     |          |     | 3              | 1     | 1     |  |
| SCROPHULARIACEAE | <i>Buchnera ciliata</i>                 |                        |      | 1  |    |     |    |          |     |          |     | 0              | 1     |       |  |
| SCROPHULARIACEAE | <i>Buchnera gracilis</i>                |                        |      | 3  |    | 19  |    |          | 20  |          |     | 39             | 1     | 1     |  |
| SCROPHULARIACEAE | <i>Buchnera linearis</i>                |                        |      | 7  | 21 | 9   |    | 5        | 29  |          |     | 64             | 1     | 1     |  |
| SCROPHULARIACEAE | <i>Buchnera tetragona</i>               |                        |      | 1  |    | 1   |    |          |     |          |     | 1              |       | 1     |  |
| SCROPHULARIACEAE | <i>Buchnera urticifolia</i>             |                        |      | 2  |    |     |    |          |     |          |     | 0              |       | 1     |  |
| CYPERACEAE       | <i>Bulbostylis barbata</i>              |                        |      | 4  |    | 21  |    |          |     | 1        |     | 22             | 1     | 1     |  |
| BURMANNIACEAE    | <i>Burmannia coelestis</i>              |                        |      | 2  |    |     |    |          |     |          |     | 0              | 1     |       |  |
| BURMANNIACEAE    | <i>Burmannia D61177 Bathurst Island</i> |                        |      | 2  |    |     |    |          |     |          |     | 0              | 1     |       |  |
| BURMANNIACEAE    | <i>Burmannia juncea</i>                 |                        |      | 7  | 1  | 3   |    |          | 6   |          |     | 10             | 1     | 1     |  |
| BYBLIDACEAE      | <i>Byblis aquatica</i>                  |                        |      |    |    | 3   |    |          |     |          |     | 3              | 1     |       |  |
| BYBLIDACEAE      | <i>Byblis liniflora</i>                 |                        |      | 2  |    | 2   |    |          |     |          |     | 2              | 1     | 1     |  |
| CAESALPINIACEAE  | <i>Caesalpinia bonduc</i>               |                        |      | 3  |    | 2   | 5  |          |     | 1        |     | 8              |       | 1     |  |
| FABACEAE         | <i>Cajanus scarabaeoides</i>            |                        |      | 2  |    | 3   |    |          |     |          |     | 3              | 1     | 1     |  |
| PORTULACACEAE    | <i>Calandrinia gracilis</i>             |                        |      | 2  |    |     |    |          |     |          |     | 0              |       | 1     |  |
| PORTULACACEAE    | <i>Calandrinia pumila</i>               |                        |      | 2  |    | 1   |    |          |     |          |     | 1              | 1     |       |  |
| VERBENACEAE      | <i>Callicarpa candicans</i>             |                        |      | 2  |    |     | 5  |          |     |          |     | 5              | 1     | 1     |  |
| CUPRESSACEAE     | <i>Callitris intratropica</i>           | Karntirrkani           | 1    | 2  |    | 9   | 3  | 2        | 6   |          | 5   | 25             | 1     | 1     |  |

| FAMILY         | scientific name                  | Tiwi name                             | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i> |
|----------------|----------------------------------|---------------------------------------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| ORCHIDACEAE    | <i>Calochilus caeruleus</i>      |                                       |      | 2  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| ORCHIDACEAE    | <i>Calochilus holtzei</i>        |                                       |      | 6  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| CLUSIACEAE     | <i>Calophyllum inophyllum</i>    | Taruwuka                              | 1    | 6  |    | 5  | 6  |          |     |          |     | 11             | 1     | 1     |   |
| CLUSIACEAE     | <i>Calophyllum sil</i>           |                                       |      |    |    | 1  | 1  |          |     |          |     | 2              |       | 1     |   |
| CLUSIACEAE     | <i>Calophyllum soulattri</i>     | Pampiyaka                             | 1    | 24 |    | 21 | 67 |          |     |          | 7   | 95             | 1     | 1     |   |
| FABACEAE       | <i>Calopogonium mucunoides</i> * |                                       |      | 7  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| ASCLEPIADACEAE | <i>Calotropis gigantea</i> *     |                                       |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| MYRTACEAE      | <i>Calytrix achaeta</i>          | Murinyini                             | 1    | 3  |    | 3  |    |          | 3   |          |     | 6              | 1     | 1     |   |
| MYRTACEAE      | <i>Calytrix arborescens</i>      |                                       |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| MYRTACEAE      | <i>Calytrix brownii</i>          |                                       |      |    |    | 2  |    |          |     |          |     | 2              |       | 1     |   |
| MYRTACEAE      | <i>Calytrix exstipulata</i>      | Murinyini                             | 1    | 7  | 29 | 17 |    | 3        | 10  |          | 5   | 64             | 1     | 1     |   |
| BOMBACACEAE    | <i>Campostemon schultzei</i>     | Jinjinga,<br>Patialinga,<br>Tungkwuka | 1    | 4  |    | 1  |    |          |     |          | 1   | 2              | 1     | 1     |   |
| BURSERACEAE    | <i>Canarium australianum</i>     | Wilika                                | 1    | 2  |    | 40 | 60 | 1        | 5   | 4        | 14  | 124            | 1     | 1     |   |
| FABACEAE       | <i>Canavalia cathartica</i>      |                                       |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| FABACEAE       | <i>Canavalia papuana</i>         |                                       |      | 3  |    | 1  | 5  |          |     | 2        |     | 8              |       | 1     |   |
| FABACEAE       | <i>Canavalia rosea</i>           | Tingatiyanganila                      | 1    | 9  |    | 9  |    |          |     |          |     | 9              | 1     | 1     |   |
| OPIACEAE       | <i>Cansjera leptostachya</i>     |                                       |      | 1  |    | 1  | 8  |          |     |          |     | 9              |       | 1     |   |
| CAPPARACEAE    | <i>Capparis jacobsii</i>         |                                       |      |    |    | 3  | 1  |          |     |          |     | 4              |       | 1     |   |
| CAPPARACEAE    | <i>Capparis sepiaria</i>         |                                       | 1    | 5  |    | 20 | 30 |          |     | 6        |     | 56             | 1     | 1     |   |
| CAPPARACEAE    | <i>Capparis umbonata</i>         |                                       |      | 6  |    | 2  |    |          |     |          |     | 2              | 1     | 1     |   |
| RHIZOPHORACEAE | <i>Carallia brachiata</i>        | Taruwuka                              | 1    | 13 |    | 17 | 72 | 1        |     |          | 4   | 94             | 1     | 1     |   |
| APOCYNACEAE    | <i>Carissa lanceolata</i>        |                                       |      |    |    |    | 1  |          |     |          |     | 1              |       | 1     |   |
| ARECACEAE      | <i>Carpentaria acuminata</i>     | Jora, Yijora                          | 1    |    |    | 7  | 43 |          |     |          | 2   | 52             | 1     | 1     |   |
| COMMELINACEAE  | <i>Cartonema parviflorum</i>     |                                       |      | 1  | 4  | 4  |    |          | 10  |          |     | 18             | 1     | 1     |   |
| COMMELINACEAE  | <i>Cartonema spicatum</i>        |                                       |      | 2  | 4  | 12 |    | 2        | 16  |          |     | 34             | 1     | 1     |   |
| COMMELINACEAE  | <i>Cartonema trigonospermum</i>  |                                       |      |    |    | 1  |    |          |     |          |     | 1              | 1     |       |   |
| LAURACEAE      | <i>Cassytha capillaris</i>       |                                       |      | 2  |    | 14 |    |          |     |          |     | 14             | 1     | 1     |   |
| LAURACEAE      | <i>Cassytha filiformis</i>       | Ariwurrini                            | 1    | 6  | 10 | 19 | 11 | 9        | 4   | 1        |     | 54             | 1     | 1     |   |
| CASUARINACEAE  | <i>Casuarina equisetifolia</i>   | Munkarajinga,<br>Munkuraji            | 1    | 3  |    | 14 |    |          |     |          | 4   | 18             | 1     | 1     |   |
| APOCYNACEAE    | <i>Catharanthus roseus</i> *     |                                       |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| MIMOSACEAE     | <i>Cathormion umbellatum</i>     |                                       | 1    | 2  |    | 2  | 3  |          |     |          |     | 5              | 1     | 1     | <i>moniliforme</i>                      |
| VITACEAE       | <i>Cayratia maritima</i>         |                                       |      | 1  |    | 18 | 5  |          |     |          |     | 23             | 1     | 1     |   |
| VITACEAE       | <i>Cayratia trifolia</i>         |                                       |      | 5  |    | 6  | 2  |          | 9   | 10       |     | 27             | 1     | 1     |   |

| FAMILY           | scientific name                     | Tiwi name                  | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i> |
|------------------|-------------------------------------|----------------------------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| ULMACEAE         | <i>Celtis philippensis</i>          |                            |      | 3  |    | 20 | 27 |          |     |          |     | 47             | 1     | 1     |   |
| POACEAE          | <i>Cenchrus brownii</i> *           |                            |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| POACEAE          | <i>Cenchrus echinatus</i> *         |                            |      | 6  |    |    |    |          |     | 1        |     | 1              | 1     | 1     |   |
| POACEAE          | <i>Cenchrus elymoides</i>           |                            |      | 3  |    | 6  |    | 1        | 4   |          |     | 11             | 1     | 1     | <i>brevisetosus</i>                     |
| SCROPHULARIACEAE | <i>Centranthera cochinchinensis</i> |                            |      | 2  |    | 8  |    |          |     |          |     | 8              | 1     | 1     |   |
| CENTROLEPIDACEAE | <i>Centrolepis exserta</i>          |                            |      | 1  |    | 2  |    |          |     |          |     | 2              | 1     | 1     |   |
| FABACEAE         | <i>Centrosema molle</i> *           |                            |      | 3  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| HYMENOPHYLLACEAE | <i>Cephalomanes obscurum</i>        |                            |      | 7  |    |    | 2  |          |     |          |     | 2              |       | 1     |   |
| PARKERIACEAE     | <i>Ceratopteris thalictroides</i>   |                            |      | 3  |    | 1  |    |          |     |          |     | 1              | 1     | 1     |   |
| APOCYNACEAE      | <i>Cerbera manghas</i>              |                            |      |    |    | 1  |    |          |     |          |     | 1              | 1     |       |   |
| APOCYNACEAE      | <i>Cerbera odollam</i> *            |                            |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     | cultivated                              |
| RHIZOPHORACEAE   | <i>Cerriops australis</i>           |                            |      | 7  |    | 6  |    |          |     |          |     | 6              |       | 1     |   |
| RHIZOPHORACEAE   | <i>Cerriops decandra</i>            |                            |      | 7  |    | 3  |    |          |     |          |     | 3              | 1     | 1     |   |
| RHIZOPHORACEAE   | <i>Cerriops tagal</i>               | Marrakali,<br>Tumulupuluka | 1    | 6  |    | 4  |    |          |     |          | 1   | 5              | 1     | 1     |   |
| CAESALPINIACEAE  | <i>Chamaecrista absus</i>           |                            |      |    |    | 2  |    |          |     |          |     | 2              | 1     | 1     | <i>absus</i>                            |
| CAESALPINIACEAE  | <i>Chamaecrista mimosoides</i>      |                            |      | 2  | 5  | 3  |    | 1        | 29  |          |     | 38             | 1     | 1     |   |
| CAESALPINIACEAE  | <i>Chamaecrista nigricans</i>       |                            |      |    |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| CAESALPINIACEAE  | <i>Chamaecrista nomame</i>          |                            |      | 2  |    | 13 |    |          |     |          |     | 13             | 1     | 1     |   |
| CAESALPINIACEAE  | <i>Chamaecrista rotundifolia</i> *  |                            |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| ADIANTACEAE      | <i>Cheilanthes caudata</i>          |                            |      |    |    | 1  |    |          | 1   |          |     | 2              | 1     | 1     |   |
| ADIANTACEAE      | <i>Cheilanthes contigua</i>         |                            |      | 5  |    | 20 |    |          |     |          |     | 20             | 1     | 1     |   |
| ADIANTACEAE      | <i>Cheilanthes fragillima</i>       |                            |      | 3  |    | 4  |    |          |     |          |     | 4              | 1     | 1     |   |
| ADIANTACEAE      | <i>Cheilanthes nitida</i>           |                            |      | 1  |    | 1  |    |          |     |          |     | 1              | 1     | 1     |   |
| ADIANTACEAE      | <i>Cheilanthes pumilio</i>          |                            |      | 3  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| ADIANTACEAE      | <i>Cheilanthes tenuifolia</i>       |                            |      | 5  | 2  | 2  |    | 12       | 49  |          |     | 65             | 1     | 1     |   |
| POACEAE          | <i>Chloris inflata</i> *            |                            |      | 7  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| POACEAE          | <i>Chloris lobata</i>               |                            |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| POACEAE          | <i>Chloris pilosa</i> *             |                            |      | 3  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| POACEAE          | <i>Chloris pumilio</i> ##           |                            |      |    |    | 1  |    |          |     |          |     | 1              |       | 1     | probably <i>C. lobata</i>               |
| LILIACEAE        | <i>Chlorophytum laxum</i>           |                            |      | 1  |    | 8  |    |          |     |          |     | 8              | 1     | 1     |   |
| EUPHORBIACEAE    | <i>Choriceras tricornis</i>         | Tinginga                   | 1    | 16 |    | 25 | 6  | 6        | 15  |          |     | 52             | 1     | 1     |   |
| POACEAE          | <i>Chrysopogon elongatus</i>        |                            |      |    |    | 2  |    |          |     |          |     | 2              |       | 1     |   |
| POACEAE          | <i>Chrysopogon fallax</i>           | Pitarika                   | 1    | 4  | 5  | 29 |    | 27       | 72  | 6        |     | 139            | 1     | 1     |   |
| POACEAE          | <i>Chrysopogon filipes</i>          |                            |      | 6  |    | 2  |    |          |     |          |     | 2              | 1     | 1     |   |
| POACEAE          | <i>Chrysopogon latifolius</i>       |                            |      | 1  |    | 18 |    | 1        |     |          |     | 19             | 1     | 1     |   |
| POACEAE          | <i>Chrysopogon oliganthus</i>       |                            |      | 3  |    | 8  |    |          |     |          |     | 8              | 1     | 1     |   |
| POACEAE          | <i>Chrysopogon pallidus</i>         |                            |      |    |    | 1  |    |          |     |          |     | 1              |       | 1     |   |



| FAMILY        | scientific name                 | Tiwi name                            | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i>                              |
|---------------|---------------------------------|--------------------------------------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|--|
| VITACEAE      | <i>Cissus adnata</i>            |                                      |      | 1  |    | 8  | 23 |          |     | 1        |     | 32             | 1     | 1     |  |
| VITACEAE      | <i>Cissus reniformis</i>        |                                      |      | 3  |    | 17 | 22 |          |     |          |     | 39             | 1     | 1     |  |
| EUPHORBIACEAE | <i>Claoxylon tenerifolium</i>   |                                      |      | 4  |    | 4  | 9  |          |     |          |     | 13             | 1     | 1     |  |
| RANUNCULACEAE | <i>Clematis pickeringii</i>     |                                      |      | 2  |    | 3  | 15 |          |     |          |     | 18             | 1     | 1     |  |
| CAPPARACEAE   | <i>Cleome viscosa</i>           |                                      |      | 2  |    |    |    |          |     | 3        |     | 3              |       | 1     |  |
| VERBENACEAE   | <i>Clerodendrum costatum</i>    |                                      | 1    | 7  |    | 21 | 48 |          |     | 9        |     | 78             | 1     | 1     |  |
| VERBENACEAE   | <i>Clerodendrum floribundum</i> |                                      | 1    | 8  |    | 14 |    | 7        | 5   |          |     | 26             | 1     | 1     |  |
| VERBENACEAE   | <i>Clerodendrum inerme</i>      |                                      |      | 1  |    | 1  | 1  |          |     |          |     | 2              |       | 1     |  |
| VERBENACEAE   | <i>Clerodendrum longiflorum</i> |                                      |      | 4  |    | 5  |    |          |     |          | 1   | 6              | 1     | 1     | <i>glabrum</i>   |
| FABACEAE      | <i>Clitoria australis</i>       |                                      |      | 11 |    | 5  |    |          | 13  |          |     | 18             | 1     | 1     |  |
| FABACEAE      | <i>Clitoria ternatea</i> *      |                                      |      | 4  |    |    |    |          |     |          |     | 0              | 1     | 1     |  |
| CUCURBITACEAE | <i>Coccinia grandis</i>         |                                      |      |    |    |    | 4  |          |     |          |     | 4              | 1     | 1     |  |
| BIXACEAE      | <i>Cochlospermum fraseri</i>    | Pijuruwupirninga<br>, Malupunyini    | 1    | 3  |    | 11 |    |          | 6   |          | 3   | 20             | 1     | 1     | <i>fraseri</i>   |
| BIXACEAE      | <i>Cochlospermum gillivraei</i> | Pijuruwupirninga<br>, Malupunyini    | 1    | 3  |    |    |    |          |     |          |     | 0              |       | 1     |  |
| ARECACEAE     | <i>Cocos nucifera</i> *         | Purumatingurru<br>puwa, Alupwa       | 1    |    |    | 1  |    |          |     |          |     | 1              |       | 1     |  |
| BORAGINACEAE  | <i>Coldenia procumbens</i>      |                                      |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |  |
| RHAMNACEAE    | <i>Colubrina asiatica</i>       |                                      |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |  |
| COMMELINACEAE | <i>Commelina agrostophylla</i>  |                                      |      |    |    | 1  |    |          |     | 4        |     | 5              |       | 1     |  |
| COMMELINACEAE | <i>Commelina ensifolia</i>      |                                      |      | 7  |    | 15 |    |          | 5   |          |     | 20             | 1     | 1     |  |
| TILIACEAE     | <i>Corchorus aestuans</i>       |                                      |      | 5  |    | 3  |    |          |     | 3        |     | 6              |       | 1     |  |
| BORAGINACEAE  | <i>Cordia dichotoma</i>         | Patinga                              | 1    | 2  |    | 1  | 5  |          |     | 2        |     | 8              | 1     | 1     |  |
| BORAGINACEAE  | <i>Cordia subcordata</i>        |                                      |      | 7  |    | 4  | 4  |          |     |          |     | 8              | 1     | 11    |  |
| MYRTACEAE     | <i>Corymbia bella</i>           | Wuranungaping<br>ala,<br>Pintampunga | 1    |    |    | 8  |    |          | 5   |          | 6   | 19             | 1     | 1     | includes former<br>records of<br><i>Eucalyptus<br/>papuana</i>       |
| MYRTACEAE     | <i>Corymbia bleeseri</i>        | Tuwaninga                            | 1    | 5  |    | 24 |    | 9        | 24  |          | 33  | 90             | 1     | 1     |  |
| MYRTACEAE     | <i>Corymbia dichromophloia</i>  |                                      |      |    |    |    |    |          |     |          | 1   | 1              |       | 1     |  |
| MYRTACEAE     | <i>Corymbia disjuncta</i>       | Wurritjinga                          | 1    | 3  | 8  | 10 |    | 2        | 27  |          | 17  | 64             | 1     | 1     | includes former<br>records of<br><i>Eucalyptus<br/>confertiflora</i> |
| MYRTACEAE     | <i>Corymbia foelscheana</i>     | Pintampunga                          | 1    | 3  |    | 3  |    |          |     |          | 11  | 14             | 1     | 1     |  |
| MYRTACEAE     | <i>Corymbia grandifolia</i>     | Pintampunga                          | 1    | 5  | 4  |    |    |          | 10  |          | 2   | 16             | 1     | 1     | <i>grandifolia, longa</i>  |

| FAMILY         | scientific name                            | Tiwi name              | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i>                          |
|----------------|--|------------------------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|--|
| MYRTACEAE      | <i>Corymbia latifolia</i>                  | Mintalima,<br>Kiripayi | 1    | 12 | 1  | 8  |    | 1        | 18  | 2        | 16  | 46             | 1     | 1     |  |
| MYRTACEAE      | <i>Corymbia nesophila</i>                  | Wurringilaka           | 1    | 22 | 41 | 76 |    | 36       | 78  |          | 181 | 412            | 1     | 1     |  |
| MYRTACEAE      | <i>Corymbia papillosa</i>                  |                        |      | 2  |    | 6  |    |          |     |          | 2   | 8              | 1     |       | <i>papillosa</i>   |
| MYRTACEAE      | <i>Corymbia polycarpa</i>                  | Wurringilaka           | 1    | 5  | 4  | 27 |    | 7        | 3   | 4        | 18  | 63             | 1     | 1     |  |
| MYRTACEAE      | <i>Corymbia polysciada</i>                 |                        |      | 12 |    | 25 |    | 2        | 1   | 3        | 21  | 52             | 1     | 1     | includes former<br>records of<br><i>Eucalyptus<br/>clavigera</i> |
| MYRTACEAE      | <i>Corymbia porrecta</i>                   |                        |      | 6  | 7  | 1  |    |          | 4   |          | 6   | 18             | 1     | 1     |  |
| MYRTACEAE      | <i>Corymbia ptychocarpa</i>                | Pawlika                | 1    | 9  | 15 | 25 |    | 6        | 4   |          | 9   | 59             | 1     | 1     |  |
| LILIACEAE      | <i>Corynotheca lateriflora</i>             |                        |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |  |
| LILIACEAE      | <i>Crinum angustifolium</i>                | Aligirryaka            | 1    | 4  |    | 5  |    |          |     | 2        |     | 7              | 1     | 1     |  |
| LILIACEAE      | <i>Crinum uniflorum</i>                    |                        |      | 2  |    |    |    |          |     |          |     | 0              |       | 1     |  |
| LILIACEAE      | <i>Crinum venosum</i>                      |                        |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |  |
| CYPERACEAE     | <i>Crosslandia setifolia</i>               |                        |      | 2  |    | 3  |    |          |     |          |     | 3              | 1     | 1     |  |
| FABACEAE       | <i>Crotalaria brevis</i>                   |                        |      | 2  |    | 4  |    |          |     |          |     | 4              | 1     | 1     |  |
| FABACEAE       | <i>Crotalaria calycina</i>                 |                        |      |    |    | 1  |    |          |     |          |     | 1              | 1     |       |  |
| FABACEAE       | <i>Crotalaria goreensis</i> *              |                        |      | 8  |    |    |    |          |     |          |     | 0              | 1     | 1     |  |
| FABACEAE       | <i>Crotalaria medicaginea</i>              |                        |      | 5  |    | 8  |    | 1        | 27  | 1        |     | 37             | 1     | 1     |  |
| FABACEAE       | <i>Crotalaria montana</i>                  |                        |      | 2  |    | 16 |    |          |     | 1        |     | 17             | 1     | 1     |  |
| FABACEAE       | <i>Crotalaria pallida</i> *                |                        |      | 3  |    |    |    |          |     |          |     | 0              |       | 1     | <i>obovata</i>   |
| FABACEAE       | <i>Crotalaria sessiliflora</i>             |                        |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       | <i>anthylloides</i>  |
| EUPHORBIACEAE  | <i>Croton argyratus</i>                    |                        |      | 1  |    | 1  | 8  |          |     |          |     | 9              |       | 1     |  |
| EUPHORBIACEAE  | <i>Croton arnhemicus</i>                   |                        |      | 2  |    | 2  | 18 |          |     |          |     | 20             | 1     | 1     |  |
| EUPHORBIACEAE  | <i>Croton byrnesii</i>                     |                        |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |  |
| EUPHORBIACEAE  | <i>Croton habrophyllus</i>                 |                        |      | 6  |    | 23 | 37 |          |     |          | 1   | 61             | 1     | 1     |  |
| LAURACEAE      | <i>Cryptocarya cunninghamii</i>            |                        |      | 4  |    | 10 | 49 |          |     |          | 2   | 61             | 1     | 1     |  |
| ASCLEPIADACEAE | <i>Cryptostegia<br/>madagascariensis</i> * |                        |      | 3  |    |    |    |          |     |          |     | 0              |       | 1     | <i>glaberrima,<br/>madagascariensis</i>                          |
| CUCURBITACEAE  | <i>Cucumis melo</i>                        |                        |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |  |
| SAPINDACEAE    | <i>Cupaniopsis anacardioides</i>           |                        |      | 4  |    | 20 | 45 |          |     |          |     | 65             | 1     | 1     |  |
| LILIACEAE      | <i>Curculigo ensifolia</i>                 |                        |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |  |
| ZINGIBERACEAE  | <i>Curcuma australasica</i>                |                        |      | 7  |    | 12 | 29 |          | 8   |          |     | 49             | 1     | 1     |  |
| ASTERACEAE     | <i>Cyanthillium cinereum</i>               |                        |      | 7  |    | 7  | 4  | 1        | 4   |          |     | 16             | 1     | 1     |  |
| ANNONACEAE     | <i>Cyathostemma glabrum</i>                |                        |      | 1  |    | 1  | 4  |          |     |          |     | 5              | 1     | 1     |  |
| CYCADACEAE     | <i>Cycas armstrongii</i>                   | Minta, Kwaka           | 1    | 5  | 2  | 53 |    | 16       | 61  | 2        | 57  | 191            | 1     | 1     |  |
| CYCADACEAE     | <i>Cycas maconochiei</i>                   |                        |      | 2  |    | 4  |    |          |     |          | 17  | 21             | 1     | 1     | <i>maconochiei</i>   |

| FAMILY           | scientific name                   | Tiwi name                    | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i> |
|------------------|-----------------------------------|------------------------------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| FABACEAE         | <i>Cyclocarpa stellaris</i>       |                              |      | 3  |    | 6  |    |          | 1   |          |     | 7              | 1     | 1     |   |
| RUBIACEAE        | <i>Cyclophyllum schultzei</i>     |                              |      | 11 |    | 5  | 18 |          |     |          |     | 23             | 1     | 1     | <i>angustifolium</i>                    |
| THELYPTERIDACEAE | <i>Cyclosorus interruptus</i>     |                              |      | 1  |    | 1  | 2  |          |     |          |     | 3              | 1     | 1     |   |
| ORCHIDACEAE      | <i>Cymbidium canaliculatum</i>    | Japartinga,<br>Parlampalinga | 1    | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| POACEAE          | <i>Cymbopogon bombycinus</i>      |                              |      |    |    | 5  |    |          |     |          |     | 5              |       | 1     |   |
| POACEAE          | <i>Cymbopogon procerus</i>        | Wupwunga                     | 1    | 3  |    | 6  |    |          | 6   |          |     | 12             | 1     | 1     |   |
| POACEAE          | <i>Cymbopogon refractus</i>       |                              |      | 2  |    | 8  |    |          |     |          |     | 8              |       | 1     |   |
| ASCLEPIADACEAE   | <i>Cynanchum camosum</i>          |                              |      | 6  |    | 14 | 8  |          |     | 1        |     | 23             | 1     | 1     |   |
| POACEAE          | <i>Cynodon dactylon</i> *         |                              |      | 3  |    | 6  |    | 1        |     |          |     | 7              | 1     | 1     |   |
| POACEAE          | <i>Cynodon radiatus</i> *         |                              |      | 10 |    | 1  |    |          |     | 4        |     | 5              | 1     | 1     |   |
| CYPERACEAE       | <i>Cyperus angustatus</i>         |                              |      | 1  |    | 1  |    |          |     |          |     | 1              | 1     | 1     |   |
| CYPERACEAE       | <i>Cyperus aquatilis</i>          |                              |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| CYPERACEAE       | <i>Cyperus brevifolius</i> *      |                              |      | 2  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| CYPERACEAE       | <i>Cyperus compactus</i> ##       |                              |      |    |    |    |    |          | 1   |          |     | 1              |       | 1     |   |
| CYPERACEAE       | <i>Cyperus compressus</i> *       |                              |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| CYPERACEAE       | <i>Cyperus concinnus</i>          |                              |      |    |    | 1  |    |          |     | 2        |     | 3              | 1     | 1     |   |
| CYPERACEAE       | <i>Cyperus conicus</i>            |                              |      | 6  |    | 3  |    |          |     |          |     | 3              | 1     | 1     |   |
| CYPERACEAE       | <i>Cyperus cristulatus</i>        |                              |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| CYPERACEAE       | <i>Cyperus cuspidatus</i>         |                              |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| CYPERACEAE       | <i>Cyperus haspan</i>             |                              |      | 3  |    | 8  |    |          |     | 1        |     | 9              | 1     | 1     | <i>juncooides</i>                       |
| CYPERACEAE       | <i>Cyperus iria</i>               |                              |      | 2  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| CYPERACEAE       | <i>Cyperus javanicus</i>          |                              |      | 4  |    | 10 | 3  |          | 1   |          |     | 14             | 1     | 1     | <i>armstrongii</i>                      |
| CYPERACEAE       | <i>Cyperus nervulosus</i>         |                              |      |    |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| CYPERACEAE       | <i>Cyperus orgadophilus</i>       |                              |      | 1  |    | 4  |    |          |     |          |     | 4              | 1     |       |   |
| CYPERACEAE       | <i>Cyperus paniceus</i>           |                              |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| CYPERACEAE       | <i>Cyperus pedunculatus</i>       |                              |      | 7  |    | 3  |    |          |     |          |     | 3              | 1     | 1     |   |
| CYPERACEAE       | <i>Cyperus polystachyos</i>       |                              |      | 3  |    | 2  |    |          |     |          |     | 2              | 1     | 1     |   |
| CYPERACEAE       | <i>Cyperus pulchellus</i>         |                              |      | 3  |    | 11 |    | 3        | 2   |          |     | 16             | 1     | 1     |   |
| CYPERACEAE       | <i>Cyperus pumilus</i>            |                              |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| CYPERACEAE       | <i>Cyperus rotundus</i> *         |                              |      | 3  |    |    |    |          |     | 2        |     | 2              | 1     | 1     |   |
| CYPERACEAE       | <i>Cyperus scariosus</i>          |                              |      | 1  |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| CYPERACEAE       | <i>Cyperus sesquiflorus</i> *     |                              |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| CYPERACEAE       | <i>Cyperus sphacelatus</i> *      |                              |      | 8  |    | 1  |    |          |     |          |     | 1              | 1     | 1     |   |
| CYPERACEAE       | <i>Cyperus sporobolus</i>         |                              |      | 2  |    | 2  |    |          |     |          |     | 2              | 1     | 1     |   |
| CYPERACEAE       | <i>Cyperus zollingeri</i>         |                              |      | 2  |    | 3  |    |          |     |          |     | 3              | 1     | 1     |   |
| POACEAE          | <i>Dactyloctenium aegyptium</i> * |                              |      | 11 |    |    |    |          |     | 3        |     | 3              | 1     | 1     |   |
| POACEAE          | <i>Dactyloctenium radulans</i>    |                              |      | 1  |    | 1  |    |          |     |          |     | 1              |       | 1     |   |

| FAMILY         | scientific name                 | Tiwi name       | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i> |
|----------------|---------------------------------|-----------------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| FABACEAE       | <i>Dalbergia candenatensis</i>  |                 |      | 8  |    |    | 3  |          |     |          |     | 3              | 1     | 1     |   |
| FABACEAE       | <i>Dalbergia sissou *</i>       |                 |      | 2  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| RESTIONACEAE   | <i>Dapsilanthus elatior</i>     |                 |      | 7  |    | 3  |    |          |     |          |     | 3              | 1     | 1     |   |
| RESTIONACEAE   | <i>Dapsilanthus ramosus</i>     |                 | 1    | 3  |    | 3  |    |          |     |          |     | 3              | 1     | 1     |   |
| RESTIONACEAE   | <i>Dapsilanthus spathaceus</i>  |                 | 1    | 4  | 13 | 19 |    | 4        |     |          |     | 36             | 1     | 1     |   |
| LORANTHACEAE   | <i>Decaisnina petiolata</i>     |                 |      | 11 |    | 7  | 11 |          |     |          |     | 18             | 1     | 1     | <i>petiolata</i>                        |
| LORANTHACEAE   | <i>Decaisnina signata</i>       |                 |      |    |    | 1  |    |          |     |          |     | 1              | 1     | 1     |   |
| ORCHIDACEAE    | <i>Dendrobium affine</i>        |                 |      | 4  |    | 4  | 23 |          |     |          |     | 27             | 1     | 1     |   |
| ORCHIDACEAE    | <i>Dendrobium canaliculatum</i> |                 |      | 3  |    | 1  |    |          |     |          |     | 1              | 1     | 1     |   |
| ORCHIDACEAE    | <i>Dendrobium trilamellatum</i> |                 |      | 2  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| SANTALACEAE    | <i>Dendromyza reinwardtiana</i> |                 |      | 7  |    | 2  |    |          |     |          |     | 2              | 1     | 1     |   |
| LORANTHACEAE   | <i>Dendrophthoe glabrescens</i> |                 |      | 1  |    | 2  |    |          |     |          |     | 2              | 1     | 1     |   |
| LORANTHACEAE   | <i>Dendrophthoe odontocalyx</i> |                 |      | 6  |    | 2  |    |          |     |          |     | 2              | 1     | 1     |   |
| CELASTRACEAE   | <i>Denhamia obscura</i>         | Yirimunukaminni | 1    | 7  |    | 32 | 48 | 1        | 2   | 1        | 3   | 87             | 1     | 1     |   |
| RUBIACEAE      | <i>Dentella dioeca</i>          |                 |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| RUBIACEAE      | <i>Dentella repens</i>          |                 |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| FABACEAE       | <i>Derris trifoliata</i>        |                 |      | 4  |    | 3  | 1  |          |     |          |     | 4              | 1     | 1     |   |
| MIMOSACEAE     | <i>Desmanthus virgatus*</i>     |                 |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| FABACEAE       | <i>Desmodium brownii</i>        |                 |      | 3  | 5  | 5  |    |          | 7   | 6        |     | 23             | 1     | 1     |   |
| FABACEAE       | <i>Desmodium glareosum</i>      |                 |      |    |    | 6  |    |          |     |          |     | 6              | 1     |       |   |
| FABACEAE       | <i>Desmodium heterocarpon</i>   |                 |      | 3  |    | 2  |    |          |     |          |     | 2              |       | 1     | <i>strigosum</i>                        |
| FABACEAE       | <i>Desmodium pullenii</i>       |                 |      | 5  |    | 15 |    |          |     |          |     | 15             | 1     | 1     |   |
| FABACEAE       | <i>Desmodium pycnotrichum</i>   |                 |      | 3  | 11 | 20 |    |          | 81  | 6        |     | 118            | 1     | 1     |   |
| FABACEAE       | <i>Desmodium scorpiurus*+</i>   |                 |      |    |    |    |    |          |     |          |     | 0              |       | 1     |   |
| FABACEAE       | <i>Desmodium tiwiense</i>       |                 |      | 7  |    | 6  |    |          |     |          |     | 6              | 1     | 1     |   |
| FABACEAE       | <i>Desmodium tortuosum*</i>     |                 |      | 5  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| FABACEAE       | <i>Desmodium trichostachyum</i> |                 |      | 3  |    | 10 |    |          | 3   | 7        |     | 20             | 1     | 1     |   |
| FABACEAE       | <i>Desmodium triflorum*</i>     |                 |      | 5  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| ANNONACEAE     | <i>Desmos wardianus</i>         |                 |      |    |    |    | 20 |          |     |          |     | 20             | 1     | 1     |   |
| LILIACEAE      | <i>Dianella longifolia</i>      |                 |      | 1  |    | 2  |    |          |     |          |     | 2              | 1     | 1     | <i>longifolia</i>                       |
| LILIACEAE      | <i>Dianella odorata</i>         |                 |      | 7  |    | 24 | 12 |          | 5   |          |     | 41             | 1     | 1     |   |
| MIMOSACEAE     | <i>Dichrostachys spicata ##</i> |                 |      |    |    |    | 1  |          |     |          |     | 1              |       | 1     |   |
| GLEICHENIACEAE | <i>Dicranopteris linearis</i>   |                 |      | 14 |    | 22 | 53 |          |     |          |     | 75             | 1     | 1     | <i>linearis</i>                         |
| ORCHIDACEAE    | <i>Didymoplexis pallens</i>     |                 |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| POACEAE        | <i>Digitaria bicornis *</i>     |                 |      | 2  |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| POACEAE        | <i>Digitaria brownii</i>        |                 |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| POACEAE        | <i>Digitaria ciliaris *</i>     |                 |      | 3  | 4  | 1  |    |          |     |          |     | 5              | 1     | 1     |   |
| POACEAE        | <i>Digitaria ctenantha</i>      |                 |      | 3  |    | 2  |    |          |     |          |     | 2              |       | 1     |   |

| FAMILY        | scientific name                    | Tiwi name                 | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i> |
|---------------|------------------------------------|---------------------------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| POACEAE       | <i>Digitaria gibbosa</i>           |                           |      | 2  |    | 14 |    |          | 6   |          |     | 20             | 1     | 1     |   |
| POACEAE       | <i>Digitaria longiflora</i>        |                           |      | 1  |    | 1  |    |          |     |          |     | 1              | 1     | 1     |   |
| POACEAE       | <i>Dimeria acinaciformis</i>       |                           |      | 1  |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| POACEAE       | <i>Dimeria chloridiformis</i>      |                           |      | 3  |    | 3  |    |          |     |          |     | 3              | 1     | 1     |   |
| POACEAE       | <i>Dimeria ornithopoda</i>         |                           |      | 1  |    | 2  |    |          |     |          |     | 2              | 1     | 1     |   |
| DIOSCOREACEAE | <i>Dioscorea alata</i> *           | Muranga                   | 1    | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| DIOSCOREACEAE | <i>Dioscorea bulbifera</i>         | Kurlama                   | 1    | 4  |    | 21 | 16 |          | 4   | 2        |     | 43             | 1     | 1     |   |
| DIOSCOREACEAE | <i>Dioscorea transversa</i>        | Muranga,<br>Murani        | 1    | 9  |    | 32 | 50 | 1        | 7   | 9        |     | 99             | 1     | 1     |   |
| EBENACEAE     | <i>Diospyros calycantha</i>        |                           |      | 9  |    | 8  | 50 |          |     |          |     | 58             | 1     | 1     |   |
| EBENACEAE     | <i>Diospyros compacta</i>          |                           |      | 7  |    | 13 | 43 |          |     |          |     | 56             | 1     | 1     |   |
| EBENACEAE     | <i>Diospyros cordifolia</i>        |                           |      | 6  |    | 11 | 9  |          |     |          |     | 20             |       | 1     |   |
| EBENACEAE     | <i>Diospyros humilis</i>           |                           |      |    |    |    | 2  |          |     |          |     | 2              |       | 1     |   |
| EBENACEAE     | <i>Diospyros littorea</i>          |                           | 1    | 10 |    | 3  | 7  |          |     |          | 2   | 12             | 1     | 1     |   |
| EBENACEAE     | <i>Diospyros maritima</i>          |                           |      | 8  |    | 22 | 34 |          |     |          |     | 56             | 1     | 1     |   |
| LORANTHACEAE  | <i>Diplatia furcata</i>            |                           |      | 1  |    | 1  |    |          |     |          |     | 1              | 1     |       |   |
| CUCURBITACEAE | <i>Diplocyclos palmatus</i>        |                           |      |    |    |    | 1  |          |     |          |     | 1              | 1     |       |   |
| ORCHIDACEAE   | <i>Dipodium stenocheilum</i>       |                           |      | 10 |    |    | 2  |          |     |          |     | 2              | 1     | 1     |   |
| SAPINDACEAE   | <i>Distichostemon arnhemicus</i>   |                           |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| SAPINDACEAE   | <i>Distichostemon hispidulus</i>   |                           |      | 4  | 69 | 24 | 1  | 6        | 15  |          |     | 115            | 1     | 1     |   |
| SAPINDACEAE   | <i>Dodonaea lanceolata</i>         | Mirinyini                 | 1    | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| SAPINDACEAE   | <i>Dodonaea platyptera</i>         |                           |      |    |    | 1  | 4  |          |     |          |     | 5              |       | 1     |   |
| BIGNONIACEAE  | <i>Dolichandrone filiformis</i>    |                           |      | 1  |    | 6  |    | 1        |     |          |     | 7              | 1     | 1     |   |
| DROSERACEAE   | <i>Drosera brevicornis</i>         |                           |      |    |    | 1  |    |          |     |          |     | 1              | 1     |       |   |
| DROSERACEAE   | <i>Drosera burmanni</i>            |                           |      | 2  |    | 6  |    |          |     |          |     | 6              | 1     | 1     |   |
| DROSERACEAE   | <i>Drosera darwinensis</i>         |                           |      |    |    | 6  |    |          |     |          |     | 6              | 1     | 1     |   |
| DROSERACEAE   | <i>Drosera dilatato-petiolaris</i> |                           |      | 2  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| DROSERACEAE   | <i>Drosera falconeri</i>           |                           |      | 3  |    | 2  |    |          |     |          |     | 2              | 1     | 1     |   |
| DROSERACEAE   | <i>Drosera fulva</i>               |                           |      |    |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| DROSERACEAE   | <i>Drosera indica</i>              |                           |      | 2  |    | 1  |    |          | 3   |          |     | 4              | 1     | 1     |   |
| DROSERACEAE   | <i>Drosera petiolaris</i>          |                           |      | 13 | 65 | 4  |    |          | 39  |          |     | 108            | 1     | 1     |   |
| POLYPODIACEAE | <i>Drynaria quercifolia</i>        | Jurntuma,<br>Waluminikima | 1    | 4  |    | 12 | 45 |          |     |          |     | 57             | 1     | 1     |   |
| EUPHORBIACEAE | <i>Drypetes deplanchei</i>         | Karpilitu                 | 1    | 7  |    | 52 | 53 |          | 1   | 2        | 6   | 114            | 1     | 1     |   |
| FABACEAE      | <i>Dunbaria rotundifolia</i>       |                           |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| FABACEAE      | <i>Dunbaria singuliflora</i>       |                           |      | 3  |    | 1  |    |          | 1   |          |     | 2              | 1     | 1     |   |
| MELIACEAE     | <i>Dysoxylum acutangulum</i>       | Tuwuluwunga               | 1    | 5  |    | 12 | 43 |          |     |          | 2   | 57             | 1     | 1     | <i>foveolatum</i>                       |
| MELIACEAE     | <i>Dysoxylum latifolium</i>        |                           |      | 5  |    | 5  | 39 |          |     |          | 1   | 45             | 1     | 1     |   |

| FAMILY           | scientific name                  | Tiwi name | Pur. | HR | BW  | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i> |
|------------------|----------------------------------|-----------|------|----|-----|----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| POACEAE          | <i>Echinochloa colona</i> *      |           |      | 1  |     |    |    |          |     | 14       |     | 14             |       | 1     |   |
| POACEAE          | <i>Echinochloa polystachya</i> * |           |      | 1  |     |    |    |          |     |          |     | 0              |       | 1     |   |
| POACEAE          | <i>Ectrosia agrostoides</i>      |           |      | 4  |     |    |    |          | 4   |          |     | 4              |       | 1     |   |
| POACEAE          | <i>Ectrosia leporina</i>         |           |      | 2  |     | 5  |    |          |     |          |     | 5              | 1     | 1     |   |
| POACEAE          | <i>Ectrosia schultzii</i>        |           |      | 1  | 1   |    |    |          |     |          |     | 1              |       | 1     |   |
| ELAEOCARPACEAE   | <i>Elaeocarpus angustifolius</i> |           |      | 2  |     |    | 31 |          |     |          |     | 31             | 1     | 1     |   |
| ELAEOCARPACEAE   | <i>Elaeocarpus arnhemicus</i>    |           |      | 8  |     | 9  | 39 |          | 1   |          |     | 49             | 1     | 1     |   |
| ELAEOCARPACEAE   | <i>Elaeocarpus culminicola</i>   |           |      | 9  |     | 11 | 46 |          |     |          | 2   | 59             | 1     | 1     |   |
| ELAEOCARPACEAE   | <i>Elaeocarpus miegei</i>        |           |      | 1  |     |    | 6  |          |     |          |     | 6              | 1     | 1     |   |
| CYPERACEAE       | <i>Eleocharis dulcis</i>         |           | 1    | 1  |     |    |    |          |     |          |     | 0              |       | 1     |   |
| CYPERACEAE       | <i>Eleocharis geniculata</i>     |           |      | 3  |     | 1  |    |          |     |          |     | 1              | 1     | 1     |   |
| CYPERACEAE       | <i>Eleocharis nuda</i>           |           |      | 1  |     |    |    |          | 1   |          |     | 1              |       | 1     |   |
| CYPERACEAE       | <i>Eleocharis ochrostachys</i>   |           |      | 5  |     | 1  |    |          |     |          |     | 1              | 1     | 1     |   |
| CYPERACEAE       | <i>Eleocharis setifolia</i>      |           |      | 1  |     | 1  |    |          |     |          |     | 1              | 1     |       |   |
| CYPERACEAE       | <i>Eleocharis sphacelata</i>     |           |      |    |     | 3  |    |          |     |          |     | 3              |       | 1     |   |
| CYPERACEAE       | <i>Eleocharis spiralis</i>       |           |      | 2  |     | 2  |    |          |     |          |     | 2              | 1     | 1     |   |
| CYPERACEAE       | <i>Eleocharis sundaica</i>       |           |      | 1  |     |    |    |          |     |          |     | 0              | 1     |       |   |
| ASTERACEAE       | <i>Elephantopus scaber</i>       |           |      | 4  |     | 11 | 7  |          | 2   |          |     | 20             | 1     | 1     |   |
| POACEAE          | <i>Eleusine indica</i> *         |           |      | 9  |     |    |    |          |     |          |     | 0              | 1     | 1     |   |
| MYRSINACEAE      | <i>Embelia curvinervia</i>       |           |      |    |     |    | 13 |          |     |          |     | 13             | 1     | 1     |   |
| ASTERACEAE       | <i>Emilia sonchifolia</i> *      |           |      | 6  |     | 2  | 1  |          |     |          |     | 3              | 1     | 1     |   |
| LAURACEAE        | <i>Endiandra limnophila</i>      |           |      | 5  |     | 5  | 19 |          |     |          |     | 24             | 1     | 1     |   |
| EUPHORBIACEAE    | <i>Endospermum medullosum</i>    |           |      | 3  |     | 1  | 27 |          |     |          |     | 28             | 1     | 1     |   |
| HYDROCHARITACEAE | <i>Enhalus acoroides</i>         |           |      | 2  |     |    |    |          |     |          |     | 0              |       | 1     |   |
| MIMOSACEAE       | <i>Entada rheedii</i>            |           |      | 2  |     |    | 1  |          |     |          |     | 1              |       | 1     |   |
| ARACEAE          | <i>Epipremnum amplissimum</i>    |           |      | 6  |     | 4  | 21 |          |     |          |     | 25             | 1     | 1     |   |
| POACEAE          | <i>Eragrostis amabilis</i> *     |           |      | 2  |     |    |    |          |     |          |     | 0              | 1     | 1     |   |
| POACEAE          | <i>Eragrostis concinna</i>       |           |      | 1  |     |    |    |          |     |          |     | 0              |       | 1     |   |
| POACEAE          | <i>Eragrostis cumingii</i>       |           |      | 3  | 45  | 22 |    |          | 32  | 4        |     | 103            | 1     | 1     |   |
| POACEAE          | <i>Eragrostis pilosa</i> *       |           |      | 1  |     |    |    |          |     |          |     | 0              |       | 1     |   |
| POACEAE          | <i>Eragrostis pubescens</i>      |           |      | 5  |     | 8  |    | 3        |     |          |     | 11             | 1     | 1     |   |
| POACEAE          | <i>Eragrostis schultzii</i>      |           |      | 3  |     | 2  |    |          | 9   |          |     | 11             | 1     | 1     |   |
| POACEAE          | <i>Eriachne agrostidea</i>       |           |      | 3  | 1   | 2  |    |          |     |          |     | 3              | 1     | 1     |   |
| POACEAE          | <i>Eriachne armittii</i> ##      |           |      |    | 2   |    |    | 1        | 9   |          |     | 12             | 1     | 1     |   |
| POACEAE          | <i>Eriachne avenacea</i>         |           |      | 12 | 102 | 64 |    | 24       | 95  |          |     | 285            | 1     | 1     |   |
| POACEAE          | <i>Eriachne bleeseri</i>         |           |      | 1  |     |    |    |          |     |          |     | 0              |       | 1     |   |
| POACEAE          | <i>Eriachne burkittii</i>        |           |      | 10 | 54  | 40 |    | 13       | 47  | 3        |     | 157            | 1     | 1     |   |
| POACEAE          | <i>Eriachne capillaris</i>       |           |      | 1  |     | 1  |    |          |     |          |     | 1              | 1     |       |   |

| FAMILY          | scientific name                    | Tiwi name                              | Pur. | HR | BW | HP  | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i>  |
|-----------------|------------------------------------|--|------|----|----|-----|----|----------|-----|----------|-----|----------------|-------|-------|--|
| POACEAE         | <i>Eriachne ciliata</i>            |  |      | 4  | 24 | 5   |    | 2        |     |          |     | 31             | 1     | 1     |  |
| POACEAE         | <i>Eriachne filiformis</i>         |  |      | 1  |    |     |    |          |     |          |     | 0              | 1     |       |  |
| POACEAE         | <i>Eriachne minuta</i>             |  |      | 1  |    |     |    |          |     |          |     | 0              |       | 1     |  |
| POACEAE         | <i>Eriachne obtusa</i>             |  |      | 1  | 57 | 4   |    |          | 20  |          |     | 81             | 1     | 1     |  |
| POACEAE         | <i>Eriachne pallescens</i>         |  |      | 8  |    | 15  |    | 1        |     |          |     | 16             | 1     | 1     | <i>pallescens</i>  |
| POACEAE         | <i>Eriachne pulchella</i> ##       |  |      |    |    |     |    | 1        |     |          |     | 1              |       | 1     |  |
| POACEAE         | <i>Eriachne schultziiana</i>       |  |      | 1  |    | 7   |    |          |     |          |     | 7              | 1     | 1     |  |
| POACEAE         | <i>Eriachne semiciliata</i>        |  |      | 1  |    | 2   |    |          |     |          |     | 2              | 1     | 1     |  |
| POACEAE         | <i>Eriachne squarrosa</i> ##       |  |      |    | 41 |     |    |          | 36  |          |     | 77             |       | 1     | records probably<br>referrable to either<br><i>E. stipacea</i> or <i>E.</i><br><i>schultziiana</i> |
| POACEAE         | <i>Eriachne stipacea</i>           |  |      | 4  |    | 17  |    |          |     |          |     | 17             | 1     | 1     |  |
| POACEAE         | <i>Eriachne sulcata</i>            |  |      | 1  |    |     |    |          |     |          |     | 0              |       | 1     |  |
| POACEAE         | <i>Eriachne trisetata</i>          |  |      | 7  | 53 | 120 |    | 24       | 113 | 17       |     | 327            | 1     | 1     |  |
| ERIOCAULACEAE   | <i>Eriocaulon australe</i>         |  |      | 7  |    |     |    |          |     |          |     | 0              | 1     | 1     |  |
| ERIOCAULACEAE   | <i>Eriocaulon cinereum</i>         |  |      | 1  |    |     |    |          |     |          |     | 0              | 1     |       |  |
| ERIOCAULACEAE   | <i>Eriocaulon fistulosum</i>       |  |      | 6  |    | 5   |    |          |     |          |     | 5              | 1     | 1     |  |
| ERIOCAULACEAE   | <i>Eriocaulon pusillum</i>         |  |      | 2  |    | 1   |    |          |     |          |     | 1              | 1     | 1     |  |
| ERIOCAULACEAE   | <i>Eriocaulon schultzii</i>        |  |      | 1  |    |     |    |          |     |          |     | 0              |       | 1     |  |
| ERIOCAULACEAE   | <i>Eriocaulon setaceum</i>         |  |      | 2  |    | 4   |    |          |     |          |     | 4              | 1     | 1     |  |
| ERIOCAULACEAE   | <i>Eriocaulon spectabile</i>       |  |      | 1  |    |     |    |          |     |          |     | 0              | 1     |       |  |
| ERIOCAULACEAE   | <i>Eriocaulon tortuosum</i>        |  |      | 1  |    |     |    |          |     |          |     | 0              | 1     |       |  |
| ERIOCAULACEAE   | <i>Eriocaulon willdenovianum</i>   |  |      | 19 |    | 17  |    |          |     |          |     | 17             | 1     | 1     |  |
| POACEAE         | <i>Eriochloa decumbens</i>         |  |      | 1  |    |     |    |          |     |          |     | 0              |       | 1     |  |
| POACEAE         | <i>Eriochloa procera</i>           |  |      | 2  |    |     |    |          |     | 1        |     | 1              | 1     | 1     |  |
| FABACEAE        | <i>Eriosema chinense</i>           | Wakajini,<br>Pirlumataka,<br>Munkwanti | 1    | 10 | 16 | 19  |    |          | 30  |          |     | 65             | 1     | 1     |  |
| CONVOLVULACEAE  | <i>Erycibe coccinea</i>            |  |      | 1  |    | 7   | 57 |          |     |          |     | 64             | 1     | 1     |  |
| FABACEAE        | <i>Erythrina vespertilio</i>       | Yirrikarlwuni                          | 1    |    |    | 4   | 3  |          | 1   |          |     | 8              | 1     | 1     |  |
| CAESALPINIACEAE | <i>Erythrophleum chlorostachys</i> | Kartukuni,<br>Pijitinga,<br>Tumpurama  | 1    | 2  | 5  | 85  |    | 17       | 69  | 3        | 108 | 287            | 1     | 1     |  |
| MYRTACEAE       | <i>Eucalyptus alba</i>             | Pintampung                             | 1    | 3  |    | 6   |    |          |     |          | 7   | 13             | 1     | 1     | <i>australasica</i>  |
| MYRTACEAE       | <i>Eucalyptus bigalerita</i>       | Tuwaninga                              | 1    | 7  |    | 3   |    | 1        |     |          | 3   | 7              | 1     | 1     |  |

| FAMILY         | scientific name                   | Tiwi name                                       | Pur. | HR | BW | HP  | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i> |
|----------------|-----------------------------------|---|------|----|----|-----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| MYRTACEAE      | <i>Eucalyptus miniata</i>         | Timirraringa,<br>Mantingirraga,<br>Mantiyurlaka | 1    | 5  | 11 | 97  |    | 35       | 91  |          | 175 | 409            | 1     | 1     |   |
| MYRTACEAE      | <i>Eucalyptus oligantha</i>       | Mantipungala                                    | 1    | 10 |    | 13  |    | 4        | 9   | 5        | 12  | 43             | 1     | 1     | <i>oligantha</i>                        |
| MYRTACEAE      | <i>Eucalyptus tectifica</i>       |   |      |    |    |     |    |          |     |          | 1   | 1              | 1     |       |   |
| MYRTACEAE      | <i>Eucalyptus tetradonta</i>      | Jukwartirringa,<br>Jukwaliti                    | 1    | 4  | 33 | 106 |    | 35       | 75  |          | 182 | 431            | 1     | 1     |   |
| MYRTACEAE      | <i>Eucalyptus tintinnans</i>      | Tuwaninga                                       | 1    |    |    |     |    | 1        | 1   | 2        |     | 4              |       | 1     |   |
| POACEAE        | <i>Eulalia annua</i>              |   |      | 1  |    |     |    |          |     |          |     | 0              |       | 1     |   |
| POACEAE        | <i>Eulalia mackinlayi</i>         |   |      | 5  | 45 | 39  |    | 1        | 60  |          |     | 145            | 1     | 1     |   |
| EUPHORBIACEAE  | <i>Euphorbia atoto</i>            |   |      | 8  |    |     |    |          |     |          |     | 0              | 1     | 1     |   |
| EUPHORBIACEAE  | <i>Euphorbia heterophylla</i> *   |   |      | 8  |    |     |    |          |     |          |     | 0              | 1     | 1     |   |
| EUPHORBIACEAE  | <i>Euphorbia hirta</i> *          |   |      | 11 |    | 1   |    |          |     |          |     | 1              | 1     | 1     |   |
| EUPHORBIACEAE  | <i>Euphorbia mitchelliana</i>     |   |      |    |    | 3   |    |          |     |          |     | 3              |       | 1     |   |
| EUPHORBIACEAE  | <i>Euphorbia schizolepis</i>      |   |      |    |    | 1   |    |          |     |          |     | 1              | 1     |       |   |
| EUPHORBIACEAE  | <i>Euphorbia schultzii</i>        |   |      | 2  |    | 8   |    |          | 4   | 3        |     | 15             | 1     | 1     |   |
| EUPHORBIACEAE  | <i>Euphorbia vachellii</i>        |   |      | 10 | 3  | 17  |    | 1        | 21  | 10       |     | 52             | 1     | 1     |   |
| CONVOLVULACEAE | <i>Evolvulus alsinoides</i>       |   |      | 2  |    | 6   |    |          | 2   | 1        |     | 9              | 1     | 1     |   |
| CONVOLVULACEAE | <i>Evolvulus nummularis</i> *     |   |      | 6  |    |     |    |          |     |          |     | 0              | 1     | 1     |   |
| EUPHORBIACEAE  | <i>Excoecaria agallocha</i>       |   |      | 2  |    |     |    |          |     |          |     | 0              | 1     | 1     |   |
| EUPHORBIACEAE  | <i>Excoecaria ovalis</i>          | Artama  | 1    | 5  |    | 2   |    |          |     |          |     | 2              |       | 1     |   |
| SANTALACEAE    | <i>Exocarpos latifolius</i>       | Murinyini                                       | 1    | 8  |    | 67  | 62 | 5        | 5   | 6        | 2   | 147            | 1     | 1     |   |
| LOGANIACEAE    | <i>Fagraea racemosa</i>           | Turukwanga                                      | 1    | 15 |    | 18  | 62 |          |     |          | 3   | 83             | 1     | 1     |   |
| MORACEAE       | <i>Ficus benjamina</i>            | Jawarri   | 1    | 6  |    | 1   | 7  |          |     |          |     | 8              | 1     | 1     | <i>benjamina</i>                        |
| MORACEAE       | <i>Ficus hispida</i>              |   |      | 3  |    | 1   | 17 |          |     |          |     | 18             | 1     | 1     | <i>hispida</i>                          |
| MORACEAE       | <i>Ficus opposita</i>             |   | 1    | 2  |    | 20  | 3  | 1        | 7   | 1        | 2   | 34             | 1     | 1     | <i>indecora</i>                         |
| MORACEAE       | <i>Ficus platypoda</i>            |   |      |    |    |     | 2  |          |     |          |     | 2              |       | 1     |   |
| MORACEAE       | <i>Ficus racemosa</i>             |   |      |    |    |     | 1  | 1        |     |          |     | 2              |       | 1     | <i>racemosa</i>                         |
| MORACEAE       | <i>Ficus scobina</i>              |   | 1    | 4  |    | 2   | 25 |          |     |          | 1   | 28             | 1     | 1     |   |
| MORACEAE       | <i>Ficus virens</i>               | Jawarri   | 1    | 2  |    | 10  | 42 |          |     |          | 1   | 53             | 1     | 1     |   |
| CYPERACEAE     | <i>Fimbristylis A23005 Darwin</i> |   |      | 2  |    | 4   |    |          |     |          |     | 4              | 1     | 1     |   |
| CYPERACEAE     | <i>Fimbristylis acicularis</i>    |   |      | 3  |    | 4   |    |          | 2   | 3        |     | 9              | 1     | 1     |   |
| CYPERACEAE     | <i>Fimbristylis acuminata</i>     |   |      | 1  |    | 2   |    |          | 8   |          |     | 10             | 1     | 1     |   |
| CYPERACEAE     | <i>Fimbristylis bisumbellata</i>  |   |      | 1  |    | 1   |    |          |     |          |     | 1              | 1     |       |   |
| CYPERACEAE     | <i>Fimbristylis cymosa</i>        |   |      | 4  |    | 7   |    |          |     |          |     | 7              | 1     | 1     |   |
| CYPERACEAE     | <i>Fimbristylis densa</i>         |   |      |    |    | 2   |    |          | 9   |          |     | 11             | 1     | 1     |   |
| CYPERACEAE     | <i>Fimbristylis depauperata</i>   |   |      |    |    | 1   |    |          |     |          |     | 1              | 1     |       |   |
| CYPERACEAE     | <i>Fimbristylis dichotoma</i>     |   |      | 1  |    | 2   |    |          |     |          |     | 2              |       | 1     |   |



| FAMILY          | scientific name                    | Tiwi name                  | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i> |
|-----------------|------------------------------------|----------------------------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| CYPERACEAE      | <i>Fimbristylis dictyocolea</i>    |                            |      | 1  |    | 2  |    |          |     |          |     | 2              | 1     |       |   |
| CYPERACEAE      | <i>Fimbristylis ferruginea</i>     |                            |      | 2  |    | 7  |    |          |     |          |     | 7              | 1     | 1     |   |
| CYPERACEAE      | <i>Fimbristylis furva</i>          |                            |      | 1  |    | 5  |    |          | 3   |          |     | 8              | 1     | 1     |   |
| CYPERACEAE      | <i>Fimbristylis lanceolata</i>     |                            |      | 5  |    | 4  |    |          |     |          |     | 4              | 1     | 1     |   |
| CYPERACEAE      | <i>Fimbristylis littoralis</i>     |                            |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       | <i>littoralis</i>                       |
| CYPERACEAE      | <i>Fimbristylis macassarensis</i>  |                            |      | 3  |    | 2  |    |          |     |          |     | 2              | 1     | 1     |   |
| CYPERACEAE      | <i>Fimbristylis macrantha</i>      |                            |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| CYPERACEAE      | <i>Fimbristylis microcarya</i>     |                            |      |    |    | 1  |    |          |     |          |     | 1              | 1     |       |   |
| CYPERACEAE      | <i>Fimbristylis nutans</i>         |                            |      | 6  |    | 11 |    |          |     |          |     | 11             | 1     | 1     |   |
| CYPERACEAE      | <i>Fimbristylis ovata</i>          |                            |      |    |    | 1  |    |          |     |          |     | 1              | 1     |       |   |
| CYPERACEAE      | <i>Fimbristylis pachyptera</i>     |                            |      | 1  |    | 1  |    |          |     |          |     | 1              | 1     |       |   |
| CYPERACEAE      | <i>Fimbristylis pallida</i>        |                            |      | 1  |    | 3  |    |          | 6   |          |     | 9              |       | 1     |   |
| CYPERACEAE      | <i>Fimbristylis pauciflora</i>     |                            |      | 4  |    | 29 | 1  |          |     |          |     | 30             | 1     | 1     |   |
| CYPERACEAE      | <i>Fimbristylis pillifera</i>      |                            |      | 2  |    | 6  |    |          | 2   |          |     | 8              | 1     | 1     |   |
| CYPERACEAE      | <i>Fimbristylis polytrichoides</i> |                            |      | 2  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| CYPERACEAE      | <i>Fimbristylis pterygosperma</i>  |                            |      | 6  |    | 11 |    |          | 1   |          |     | 12             | 1     | 1     |   |
| CYPERACEAE      | <i>Fimbristylis pubisquama</i>     |                            |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| CYPERACEAE      | <i>Fimbristylis rara</i>           |                            |      | 2  |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| CYPERACEAE      | <i>Fimbristylis recta</i>          |                            |      | 5  |    | 7  |    |          | 2   |          |     | 9              | 1     | 1     |   |
| CYPERACEAE      | <i>Fimbristylis schoenoides</i>    |                            |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| CYPERACEAE      | <i>Fimbristylis schultzii</i>      |                            |      |    |    |    |    |          | 3   |          |     | 3              |       | 1     |   |
| CYPERACEAE      | <i>Fimbristylis sericea</i>        |                            |      | 4  |    | 2  |    |          |     |          |     | 2              | 1     | 1     |   |
| CYPERACEAE      | <i>Fimbristylis simplex</i>        |                            |      | 4  |    | 5  |    |          | 14  |          |     | 19             | 1     | 1     |   |
| CYPERACEAE      | <i>Fimbristylis squarulosa</i>     |                            |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| CYPERACEAE      | <i>Fimbristylis subaristata</i>    |                            |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| CYPERACEAE      | <i>Fimbristylis trachycarya</i>    |                            |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| CYPERACEAE      | <i>Fimbristylis xyridis</i>        |                            |      |    |    | 2  |    |          |     |          |     | 2              |       | 1     |   |
| FLACOURTIACEAE  | <i>Flacourtia territorialis</i>    |                            |      |    |    | 3  | 5  |          |     |          |     | 8              | 1     | 1     |   |
| FLAGELLARIACEAE | <i>Flagellaria indica</i>          | Mawunkati,<br>Mawunkatinga | 1    | 8  |    | 50 | 99 |          |     |          |     | 149            | 1     | 1     |   |
| FABACEAE        | <i>Flemingia D39269 sericea</i>    |                            |      | 10 |    | 11 |    |          |     |          |     | 11             | 1     | 1     |   |
| FABACEAE        | <i>Flemingia involucrata</i>       |                            |      | 1  |    | 1  |    |          | 2   |          |     | 3              | 1     | 1     |   |
| FABACEAE        | <i>Flemingia lineata</i>           |                            |      | 6  |    | 1  |    |          | 1   |          |     | 2              | 1     | 1     |   |
| FABACEAE        | <i>Flemingia parviflora</i>        |                            |      | 9  | 13 | 61 |    |          | 103 | 1        |     | 178            | 1     | 1     |   |
| FABACEAE        | <i>Flemingia pauciflora</i>        |                            |      |    |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| EUPHORBIACEAE   | <i>Flueggea virosa</i>             | Parntirringa               | 1    | 9  |    | 43 | 35 | 3        |     | 14       |     | 95             | 1     | 1     | <i>melanthesoides</i>                   |
| PANDANACEAE     | <i>Freycinetia excelsa</i>         |                            |      | 3  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| PANDANACEAE     | <i>Freycinetia percostata</i>      |                            |      | 1  |    |    | 2  |          |     |          |     | 2              | 1     |       |   |

| FAMILY        | scientific name                       | Tiwi name  | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i>           |
|---------------|---------------------------------------|------------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| CYPERACEAE    | <i>Fuirena ciliaris</i>               |            |      | 2  |    | 4  |    |          |     |          |     | 4              | 1     | 1     |   |
| CYPERACEAE    | <i>Fuirena umbellata</i>              |            |      |    |    | 2  |    |          |     |          |     | 2              |       | 1     |   |
| FABACEAE      | <i>Galactia megalophylla</i>          |            |      |    |    | 3  |    |          |     |          |     | 3              | 1     | 1     |   |
| FABACEAE      | <i>Galactia tenuiflora</i>            |            |      | 5  | 5  | 28 |    |          | 40  |          |     | 73             | 1     | 1     |   |
| SAPINDACEAE   | <i>Ganophyllum falcatum</i>           |            |      |    |    | 3  | 23 |          |     |          |     | 26             | 1     | 1     |   |
| CLUSIACEAE    | <i>Garcinia warrenii</i>              |            |      | 2  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| RUBIACEAE     | <i>Gardenia megasperma</i>            | Yimunga    | 1    | 5  | 11 | 16 |    | 6        | 23  | 2        | 2   | 60             | 1     | 1     |   |
| RUBIACEAE     | <i>Gardenia schwarzii</i>             |            |      | 6  |    | 12 |    |          |     |          | 7   | 19             | 1     | 1     |   |
| ORCHIDACEAE   | <i>Geodorum neocaledonicum</i>        |            |      | 8  |    | 3  | 11 |          | 1   |          |     | 15             | 1     | 1     |   |
| POACEAE       | <i>Germainia grandiflora</i>          |            |      | 6  | 8  | 30 |    | 2        | 2   |          |     | 42             | 1     | 1     |   |
| POACEAE       | <i>Germainia truncatiglumis</i>       |            |      | 2  |    | 10 |    |          |     |          |     | 10             | 1     | 1     |   |
| MOLLUGINACEAE | <i>Glinus oppositifolius</i>          |            |      | 2  |    | 1  |    |          |     |          |     | 1              | 1     | 1     |   |
| EUPHORBIACEAE | <i>Glochidion apodogynum</i>          |            |      |    |    |    | 4  |          | 4   |          |     | 8              |       | 1     |   |
| EUPHORBIACEAE | <i>Glochidion xerocarpum</i>          |            |      | 9  |    | 29 | 41 |          |     | 17       |     | 87             | 1     | 1     |   |
| FABACEAE      | <i>Glycine hirticaulis</i>            |            |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| RUTACEAE      | <i>Glycosmis trifoliata</i>           |            |      | 12 |    | 16 | 53 |          |     |          |     | 69             | 1     | 1     |   |
| VERBENACEAE   | <i>Gmelina arborea</i> *              |            |      | 2  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| VERBENACEAE   | <i>Gmelina schlechteri</i>            | Arluntunga | 1    | 4  |    | 22 | 63 |          |     |          | 4   | 89             | 1     | 1     |   |
| AMARANTHACEAE | <i>Gomphrena celosioides</i> *        | Puluma     | 1    | 5  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| AMARANTHACEAE | <i>Gomphrena flaccida</i>             |            |      | 2  |    | 1  |    | 1        |     |          |     | 2              |       | 1     |   |
| HALORAGACEAE  | <i>Gonocarpus chinensis</i>           |            |      |    |    | 1  |    |          |     |          |     | 1              |       | 1     | <i>chinensis</i>                                  |
| HALORAGACEAE  | <i>Gonocarpus leptothecus</i>         |            |      | 4  |    | 5  |    | 1        |     |          |     | 6              | 1     | 1     |   |
| GOODENIACEAE  | <i>Goodenia coronopifolia</i>         |            |      | 1  |    | 1  |    |          |     |          |     | 1              | 1     |       |   |
| GOODENIACEAE  | <i>Goodenia D1547 Melville Island</i> |            |      | 12 |    | 3  |    |          |     |          |     | 3              | 1     | 1     |   |
| GOODENIACEAE  | <i>Goodenia D58281</i>                |            |      |    | 4  |    |    |          |     |          |     | 4              |       | 1     | ID uncertain; may refer to another listed species |
| GOODENIACEAE  | <i>Goodenia hispida</i> #             |            |      |    |    |    |    | 1        |     |          |     | 1              |       | 1     |   |
| GOODENIACEAE  | <i>Goodenia holtzeana</i>             |            |      | 8  | 10 | 10 |    |          | 18  | 2        |     | 40             | 1     | 1     |   |
| GOODENIACEAE  | <i>Goodenia leiosperma</i>            |            |      | 1  | 9  | 8  |    |          | 30  |          |     | 47             | 1     | 1     |   |
| GOODENIACEAE  | <i>Goodenia pilosa</i>                |            |      | 2  |    | 2  |    |          |     |          |     | 2              | 1     | 1     |   |
| GOODENIACEAE  | <i>Goodenia porphyrea</i>             |            |      | 2  |    | 3  |    |          |     | 2        |     | 5              | 1     | 1     |   |
| GOODENIACEAE  | <i>Goodenia pumilio</i>               |            |      | 3  |    |    |    |          | 4   |          |     | 4              | 1     | 1     |   |
| GOODENIACEAE  | <i>Goodenia purpurascens</i>          |            |      | 4  |    |    |    |          |     | 2        |     | 2              |       | 1     |   |
| GOODENIACEAE  | <i>Goodenia symonii</i>               |            |      | 1  |    | 2  |    |          |     |          |     | 2              |       | 1     |   |
| MALVACEAE     | <i>Gossypium hirsutum</i> *           | Alabanjar  | 1    | 2  |    |    |    |          |     | 1        |     | 1              |       | 1     |   |
| PROTEACEAE    | <i>Grevillea angulata</i> #           |            |      |    |    |    |    | 1        |     |          |     | 1              | 1     |       |   |

| FAMILY         | scientific name                       | Tiwi name    | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i>        |
|----------------|---------------------------------------|--------------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|--|
| PROTEACEAE     | <i>Grevillea decurrens</i>            |              |      | 8  |    | 45 |    | 1        | 45  |          | 18  | 109            | 1     | 1     |  |
| PROTEACEAE     | <i>Grevillea dimidiata</i>            |              |      |    |    |    |    | 27       |     |          |     | 27             | 1     | 1     |  |
| PROTEACEAE     | <i>Grevillea dryandri</i>             |              |      | 2  |    | 5  |    | 4        | 8   |          |     | 17             | 1     | 1     | <i>dryandri</i>                                |
| PROTEACEAE     | <i>Grevillea heliosperma</i>          |              |      | 3  | 23 | 6  |    | 20       | 1   |          | 9   | 59             | 1     | 1     |  |
| PROTEACEAE     | <i>Grevillea parallela</i>            |              |      | 4  |    |    |    |          | 1   |          |     | 1              |       | 1     |  |
| PROTEACEAE     | <i>Grevillea pleuricaulis</i>         |              |      | 10 | 7  | 38 |    | 3        | 7   |          | 2   | 57             | 1     | 1     | some former records listed as <i>G. goodii</i> |
| PROTEACEAE     | <i>Grevillea pteridifolia</i>         | Yununga      | 1    | 8  | 83 | 86 |    | 12       | 38  |          | 35  | 254            | 1     | 1     |  |
| TILIACEAE      | <i>Grewia asiatica</i> #              |              | 1    |    |    |    |    |          |     |          |     | 0              | 1     | 1     |  |
| TILIACEAE      | <i>Grewia breviflora</i>              |              |      |    |    | 3  | 6  |          |     |          |     | 9              | 1     | 1     |  |
| TILIACEAE      | <i>Grewia D7426 Cobourg Peninsula</i> |              |      | 12 |    | 20 | 5  | 1        | 13  | 2        |     | 41             | 1     | 1     |  |
| TILIACEAE      | <i>Grewia oxyphylla</i>               |              |      | 4  |    | 9  | 14 |          |     |          |     | 23             | 1     | 1     |  |
| TILIACEAE      | <i>Grewia retusifolia</i>             |              | 1    | 3  |    | 1  |    | 6        |     | 3        |     | 10             | 1     | 1     |  |
| ARECACEAE      | <i>Gronophyllum ramsayi</i>           | Paliwuni     | 1    |    |    | 2  | 3  |          | 3   |          | 7   | 15             | 1     | 1     |  |
| RUBIACEAE      | <i>Guettarda speciosa</i>             | Tarukwa      | 1    | 10 |    | 5  | 8  |          |     |          |     | 13             | 1     | 1     |  |
| ASCLEPIADACEAE | <i>Gymnanthera oblonga</i>            |              |      | 4  |    | 26 | 19 | 2        |     | 8        |     | 55             | 1     | 1     |  |
| HERNANDIACEAE  | <i>Gyrocarpus americanus</i>          | Malikiwuni   | 1    | 1  |    | 8  | 7  |          |     |          |     | 15             |       | 1     |  |
| ORCHIDACEAE    | <i>Habenaria ferdinandi</i>           |              |      | 5  |    | 2  |    |          |     |          |     | 2              | 1     | 1     |  |
| ORCHIDACEAE    | <i>Habenaria hymenophylla</i>         |              |      | 2  |    | 1  | 2  |          |     |          |     | 3              |       | 1     |  |
| ORCHIDACEAE    | <i>Habenaria ochroleuca</i>           |              |      | 6  | 1  | 2  |    |          |     |          |     | 3              | 1     | 1     |  |
| ORCHIDACEAE    | <i>Habenaria triplonema</i>           |              |      |    |    | 1  |    |          |     |          |     | 1              |       | 1     |  |
| HAEMODORACEAE  | <i>Haemodorum A14021 red flowers</i>  |              |      | 2  |    |    |    |          |     |          |     | 0              | 1     | 1     |  |
| HAEMODORACEAE  | <i>Haemodorum brevicaule</i>          | Yaringa      | 1    | 1  | 4  | 11 |    |          | 2   |          |     | 17             | 1     | 1     |  |
| HAEMODORACEAE  | <i>Haemodorum coccineum</i>           | Yaringa      | 1    | 1  |    |    |    |          |     |          |     | 0              |       | 1     |  |
| PROTEACEAE     | <i>Hakea arborescens</i>              |              |      | 5  |    | 6  |    |          | 5   | 1        |     | 12             | 1     | 1     |  |
| CHENOPODIACEAE | <i>Halosarcia halocnemoides</i>       | Purrawurrika | 1    | 3  |    | 1  |    |          |     |          |     | 1              | 1     | 1     | <i>longispicata</i>                            |
| CHENOPODIACEAE | <i>Halosarcia indica</i>              |              |      | 2  |    |    |    |          |     |          |     | 0              | 1     | 1     | <i>julacea</i>                                 |
| HANGUANACEAE   | <i>Hanguana malayana</i>              |              |      | 7  |    | 4  | 9  |          |     |          |     | 13             | 1     | 1     |  |
| RUBIACEAE      | <i>Hedyotis auricularia</i>           |              |      | 1  |    |    | 2  |          |     |          |     | 2              | 1     | 1     | <i>melanesica</i>                              |
| PROTEACEAE     | <i>Helicia australasica</i>           |              |      | 8  |    | 18 | 60 |          |     |          | 2   | 80             | 1     | 1     |  |
| STERCULIACEAE  | <i>Helicteres A63558 Kakadu ##</i>    |              |      |    |    |    | 1  |          |     |          |     | 1              |       | 1     |  |
| STERCULIACEAE  | <i>Helicteres A78389 Darwinensis</i>  |              |      | 4  |    | 1  |    |          |     |          |     | 1              |       | 1     |  |
| STERCULIACEAE  | <i>Helicteres cana</i>                |              |      |    |    | 1  |    |          |     |          |     | 1              |       | 1     |  |
| STERCULIACEAE  | <i>Helicteres dentata</i>             |              |      | 14 |    | 5  |    |          | 1   |          |     | 6              | 1     | 1     | <i>dentata</i>                                 |

| FAMILY          | scientific name                      | Tiwi name          | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i> |
|-----------------|--------------------------------------|--------------------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| BORAGINACEAE    | <i>Heliotropium indicum</i> *        |                    |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| BORAGINACEAE    | <i>Heliotropium ovalifolium</i>      |                    |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| BORAGINACEAE    | <i>Heliotropium tenuifolium</i>      |                    |      | 1  |    |    |    |          |     | 1        |     | 1              |       | 1     |   |
| BORAGINACEAE    | <i>Heliotropium ventricosum</i>      |                    |      | 6  |    | 10 |    |          | 12  | 12       |     | 34             | 1     | 1     |   |
| OPHIOGLOSSACEAE | <i>Helminthostachys zeylanica</i>    |                    |      | 1  |    |    | 1  |          |     |          |     | 1              |       | 1     |   |
| POACEAE         | <i>Heteropogon contortus</i>         |                    |      | 3  |    | 1  |    | 1        | 7   | 3        |     | 12             |       | 1     |   |
| POACEAE         | <i>Heteropogon triticeus</i>         | Pitarika           | 1    | 1  |    | 10 |    | 7        | 8   |          |     | 25             | 1     | 1     |   |
| DILLENIACEAE    | <i>Hibbertia cistifolia</i>          |                    |      | 8  | 82 | 29 |    |          | 124 |          |     | 235            | 1     | 1     |   |
| DILLENIACEAE    | <i>Hibbertia D34798 Mt Finniss</i>   |                    |      |    |    | 2  |    |          |     |          |     | 2              |       | 1     |   |
| DILLENIACEAE    | <i>Hibbertia D6730 Finniss River</i> |                    |      | 10 |    | 72 |    |          |     |          |     | 72             | 1     | 1     |   |
| DILLENIACEAE    | <i>Hibbertia dealbata</i> #          |                    |      |    |    |    |    | 1        |     |          |     | 1              |       | 1     |   |
| DILLENIACEAE    | <i>Hibbertia tasmanica</i>           |                    |      | 5  |    |    |    |          | 9   |          |     | 9              |       | 1     |   |
| MALVACEAE       | <i>Hibiscus meraukensis</i>          |                    |      | 3  |    | 10 | 5  |          | 10  | 1        |     | 26             | 1     | 1     |   |
| MALVACEAE       | <i>Hibiscus sabdariffa</i> *         |                    |      | 2  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| MALVACEAE       | <i>Hibiscus tiliaceus</i>            | Alabanjar          | 1    | 4  |    | 20 | 16 |          |     |          |     | 36             | 1     | 1     |   |
| MYRISTICACEAE   | <i>Horsfieldia australiana</i>       | Tukutturukuni      | 1    | 1  |    | 15 | 55 |          |     |          |     | 70             | 1     | 1     |   |
| ASCLEPIADACEAE  | <i>Hoya australis</i>                | Kulipiyawuni       | 1    | 4  |    |    |    |          |     |          |     | 0              | 1     | 1     | <i>oramicola,<br/>rupicola</i>          |
| VERBENACEAE     | <i>Huxleya linifolia</i>             |                    |      | 3  |    | 2  |    |          | 1   | 1        |     | 4              | 1     | 1     |   |
| VIOLACEAE       | <i>Hybanthus enneaspermus</i>        |                    |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| ARECACEAE       | <i>Hydriastele wendlandiana</i>      | Paliwuni           | 1    | 8  |    | 15 | 61 |          |     |          | 2   | 78             | 1     | 1     |   |
| ACANTHACEAE     | <i>Hygrophila angustifolia</i>       |                    |      |    |    |    |    |          | 1   |          |     | 1              |       | 1     |   |
| POACEAE         | <i>Hymenachne acutigluma</i>         |                    |      |    |    | 2  |    |          |     |          |     | 2              |       | 1     |   |
| ACANTHACEAE     | <i>Hypoestes floribunda</i>          |                    | 1    | 14 |    | 17 | 26 |          |     | 1        |     | 44             | 1     | 1     |   |
| CYPERACEAE      | <i>Hypolytrum nemorum</i>            |                    |      | 17 |    | 2  | 16 |          |     |          |     | 18             | 1     | 1     |   |
| LILIACEAE       | <i>Hypoxis nervosa</i>               |                    |      | 4  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| MENISPERMACEAE  | <i>Hypserpa decumbens</i>            |                    |      | 4  |    | 2  |    |          |     |          |     | 2              | 1     | 1     |   |
| MENISPERMACEAE  | <i>Hypserpa polyandra</i>            |                    |      | 1  |    | 1  |    |          |     |          |     | 1              | 1     | 1     |   |
| LAMIACEAE       | <i>Hyptis suaveolens</i> *           |                    |      | 9  |    | 8  |    | 1        | 1   | 33       |     | 43             | 1     | 1     |   |
| APOCYNACEAE     | <i>Ichnocarpus frutescens</i>        |                    |      | 2  |    | 7  | 46 |          |     | 3        |     | 56             | 1     | 1     |   |
| AQUIFOLIACEAE   | <i>Ilex arnhemensis</i>              |                    | 1    | 9  |    | 14 | 43 |          |     |          | 3   | 60             | 1     | 1     | <i>arnhemensis</i>                      |
| POACEAE         | <i>Imperata cylindrica</i>           | Pitarika, Pitarini | 1    | 5  |    | 17 |    |          | 1   |          |     | 18             | 1     | 1     |   |
| FABACEAE        | <i>Indigofera colutea</i>            |                    |      |    |    |    |    |          |     | 1        |     | 1              |       | 1     |   |
| FABACEAE        | <i>Indigofera hirsuta</i>            |                    |      | 6  |    | 4  |    |          |     | 7        |     | 11             | 1     | 1     |   |
| FABACEAE        | <i>Indigofera linifolia</i>          |                    |      | 4  |    | 2  |    |          | 39  |          |     | 41             | 1     | 1     |   |
| FABACEAE        | <i>Indigofera saxicola</i>           |                    |      | 8  | 1  | 10 |    | 7        | 21  |          |     | 39             | 1     | 1     |   |
| FABACEAE        | <i>Indigofera tinctoria</i> *        |                    |      | 3  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| LILIACEAE       | <i>Iphigenia indica</i>              |                    |      | 4  |    | 8  |    |          |     |          |     | 8              | 1     | 1     |   |

| FAMILY         | scientific name                 | Tiwi name             | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i> |
|----------------|---------------------------------|-----------------------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| CONVOLVULACEAE | <i>Ipomoea abrupta</i>          | Rokuni, Roka          | 1    | 6  |    | 17 | 19 | 1        | 3   |          |     | 40             | 1     | 1     |   |
| CONVOLVULACEAE | <i>Ipomoea coptica</i>          |                       |      | 1  |    |    |    |          |     | 6        |     | 6              |       | 1     |   |
| CONVOLVULACEAE | <i>Ipomoea eriocarpa</i>        |                       |      | 3  |    | 2  |    |          | 2   |          |     | 4              | 1     | 1     |   |
| CONVOLVULACEAE | <i>Ipomoea gracilis</i>         | Rokuni, Roka          | 1    | 7  | 1  | 5  |    |          | 14  | 8        |     | 28             | 1     | 1     |   |
| CONVOLVULACEAE | <i>Ipomoea graminea</i>         | Portari,<br>Munkwanti | 1    | 4  | 4  | 19 |    | 2        | 31  |          |     | 56             | 1     | 1     |   |
| CONVOLVULACEAE | <i>Ipomoea macrantha</i>        |                       |      | 2  |    | 3  | 3  |          |     |          |     | 6              | 1     | 1     |   |
| CONVOLVULACEAE | <i>Ipomoea pes-caprae</i>       | Wurakinni,<br>Rokuni  | 1    | 9  |    | 19 |    |          |     |          |     | 19             | 1     | 1     | <i>brasiliensis</i>                     |
| CONVOLVULACEAE | <i>Ipomoea pes-tigridis</i> *   |                       |      | 3  |    | 2  |    |          |     |          |     | 2              | 1     | 1     |   |
| CONVOLVULACEAE | <i>Ipomoea polymorpha</i>       |                       |      | 7  |    | 1  |    |          |     | 1        |     | 2              | 1     | 1     |   |
| CONVOLVULACEAE | <i>Ipomoea quamoclit</i> *      |                       |      | 5  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| CONVOLVULACEAE | <i>Ipomoea triloba</i> *        |                       |      | 9  |    | 2  |    |          | 3   | 1        |     | 6              | 1     | 1     |   |
| CONVOLVULACEAE | <i>Ipomoea velutina</i>         |                       |      | 2  |    | 2  | 2  |          |     |          |     | 4              | 1     | 1     |   |
| POACEAE        | <i>Isachne confusa</i>          |                       |      | 8  |    | 13 |    |          |     |          |     | 13             | 1     | 1     |   |
| POACEAE        | <i>Ischaemum australe</i>       |                       |      | 2  |    | 7  |    |          |     |          |     | 7              | 1     | 1     | <i>arundinaceum,<br/>australe</i>       |
| POACEAE        | <i>Ischaemum barbatum</i>       |                       |      | 3  |    | 4  |    |          |     |          |     | 4              | 1     | 1     |   |
| POACEAE        | <i>Ischaemum decumbens</i>      |                       |      | 4  |    | 3  |    | 2        | 13  |          |     | 18             | 1     | 1     |   |
| POACEAE        | <i>Ischaemum fragile</i>        |                       |      |    |    | 3  |    |          |     |          |     | 3              | 1     |       |   |
| POACEAE        | <i>Ischaemum rugosum</i>        |                       |      | 3  |    | 3  |    |          |     |          |     | 3              | 1     | 1     | <i>rugosum, segetum</i>                 |
| ISOETACEAE     | <i>Isoetes coromandelina</i>    |                       |      | 2  |    | 2  |    |          |     |          |     | 2              | 1     | 1     | <i>macrotuberculata</i>                 |
| RUBIACEAE      | <i>Ixora timorensis</i>         |                       |      | 15 |    | 27 | 58 |          |     |          | 1   | 86             | 1     | 1     |   |
| FABACEAE       | <i>Jacksonia dilatata</i>       |                       |      | 8  | 12 | 9  |    | 2        | 2   |          | 3   | 28             | 1     | 1     |   |
| CONVOLVULACEAE | <i>Jacquemontia paniculata</i>  |                       |      | 1  |    |    | 7  |          |     |          |     | 7              |       | 1     |   |
| OLEACEAE       | <i>Jasminum aemulum</i>         |                       |      | 1  |    | 7  | 40 | 1        |     | 3        |     | 51             | 1     | 1     |   |
| OLEACEAE       | <i>Jasminum didymum</i>         |                       |      | 14 |    | 31 | 41 | 1        | 2   | 8        |     | 84             | 1     | 1     | <i>didymum</i>                          |
| OLEACEAE       | <i>Jasminum molle</i>           |                       |      | 1  |    | 4  | 3  | 2        | 1   |          |     | 10             | 1     | 1     |   |
| RUBIACEAE      | <i>Kailarsenia suffruticosa</i> |                       |      | 3  | 21 | 44 |    | 19       | 53  | 4        |     | 141            | 1     | 1     |   |
| MELIACEAE      | <i>Khaya senegalensis</i> *     |                       |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| RUBIACEAE      | <i>Knoxia stricta</i>           |                       |      | 5  |    | 6  |    |          | 11  |          |     | 17             | 1     | 1     |   |
| VERBENACEAE    | <i>Lantana camara</i> *         |                       |      | 1  |    |    |    |          |     | 1        |     | 1              |       | 1     |   |
| LEEACEAE       | <i>Leea indica</i>              |                       |      | 3  |    | 3  |    |          |     |          |     | 3              | 1     | 1     |   |
| LEEACEAE       | <i>Leea rubra</i>               |                       |      | 4  |    |    | 24 |          | 2   | 1        |     | 27             | 1     | 1     |   |
| POACEAE        | <i>Leersia hexandra</i>         |                       |      |    |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| CYPERACEAE     | <i>Lepironia articulata</i>     |                       |      | 7  |    | 8  |    |          |     |          |     | 8              | 1     | 1     |   |
| POACEAE        | <i>Leptochloa fusca</i>         |                       |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     | <i>fusca</i>                            |
| FABACEAE       | <i>Leptosema uniflorum</i>      |                       |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |

| FAMILY           | scientific name                         | Tiwi name                          | Pur. | HR | BW | HP  | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i> |
|------------------|---|------------------------------------|------|----|----|-----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| MYRTACEAE        | <i>Leptospermum madidum</i>             |                                    |      |    |    | 1   |    | 2        |     |          |     | 3              | 1     | 1     | <i>sativum</i>                          |
| MIMOSACEAE       | <i>Leucaena leucocephala</i> *+         |                                    |      |    |    |     |    |          |     |          |     | 0              | 1     |       |   |
| EPACRIDACEAE     | <i>Leucopogon acuminatus</i>            |                                    |      | 14 |    | 4   |    | 1        | 5   |          |     | 10             | 1     | 1     |   |
| SCROPHULARIACEAE | <i>Limnophila chinensis</i>             |                                    |      | 1  |    | 2   |    |          |     |          |     | 2              |       | 1     |   |
| SCROPHULARIACEAE | <i>Limnophila fragrans</i>              |                                    |      | 2  |    | 2   |    |          | 1   |          |     | 3              | 1     | 1     |   |
| SCROPHULARIACEAE | <i>Lindernia clausa</i>                 |                                    |      |    |    | 1   |    |          |     |          |     | 1              |       | 1     |   |
| SCROPHULARIACEAE | <i>Lindernia cowiei</i>                 |                                    |      | 1  |    |     |    |          |     |          |     | 0              |       | 1     |   |
| SCROPHULARIACEAE | <i>Lindernia crustacea</i> *            |                                    |      | 5  |    |     |    |          |     |          |     | 0              | 1     | 1     |   |
| SCROPHULARIACEAE | <i>Lindernia D28769 Melville Island</i> |                                    |      | 14 |    | 3   |    |          |     |          |     | 3              | 1     | 1     |   |
| SCROPHULARIACEAE | <i>Lindernia D47857 Recurved hood</i>   |                                    |      |    |    |     | 3  |          |     |          |     | 3              |       | 1     |   |
| SCROPHULARIACEAE | <i>Lindernia lobelioides</i>            |                                    |      | 1  |    |     |    |          |     |          |     | 0              |       | 1     |   |
| SCROPHULARIACEAE | <i>Lindernia pubescens</i>              |                                    |      | 1  |    |     |    |          |     |          |     | 0              |       | 1     |   |
| SCROPHULARIACEAE | <i>Lindernia scapigera</i>              |                                    |      | 1  | 1  | 2   |    |          | 13  |          |     | 16             | 1     | 1     |   |
| SCROPHULARIACEAE | <i>Lindernia tenuifolia</i>             |                                    |      | 6  |    | 2   |    |          |     |          |     | 2              | 1     | 1     |   |
| LINDSAEACEAE     | <i>Lindsaea ensifolia</i>               |                                    |      | 12 |    | 22  | 33 | 1        |     |          |     | 56             | 1     | 1     | <i>agatii, ensifolia</i>                |
| LINDSAEACEAE     | <i>Lindsaea walkerae</i>                |                                    |      | 6  |    |     |    |          |     |          |     | 0              | 1     | 1     |   |
| ORCHIDACEAE      | <i>Liparis habenarina</i>               |                                    |      | 6  |    |     |    |          |     |          |     | 0              | 1     | 1     |   |
| CYPERACEAE       | <i>Lipocarpha microcephala</i>          |                                    |      | 2  |    | 4   |    |          |     |          |     | 4              | 1     | 1     |   |
| MYRTACEAE        | <i>Lithomyrtus retusa</i>               |                                    |      | 16 |    | 10  |    |          |     |          |     | 10             | 1     | 1     |   |
| LAURACEAE        | <i>Litsea breviumbellata</i>            |                                    |      | 21 |    | 12  | 54 |          |     |          |     | 66             | 1     | 1     |   |
| LAURACEAE        | <i>Litsea glutinosa</i>                 |                                    |      | 7  |    | 18  | 64 |          | 1   | 1        | 1   | 85             | 1     | 1     |   |
| ARECACEAE        | <i>Livistona benthamii</i>              |                                    |      |    |    |     | 2  |          |     |          |     | 2              | 1     | 1     |   |
| ARECACEAE        | <i>Livistona humilis</i>                | Miparri,<br>Miparriyi,<br>Pakijipi | 1    | 5  | 64 | 125 |    | 23       | 95  |          | 141 | 448            | 1     | 1     |   |
| ARECACEAE        | <i>Livistona inermis</i>                |                                    |      |    |    | 1   |    |          |     |          |     | 1              | 1     |       |   |
| CAMPANULACEAE    | <i>Lobelia stenophylla</i>              |                                    |      | 2  |    | 1   |    |          |     |          |     | 1              | 1     | 1     |   |
| XANTHORRHOEACEAE | <i>Lomandra tropica</i>                 |                                    |      | 3  | 12 | 43  |    | 7        | 27  |          |     | 89             | 1     | 1     |   |
| MYRTACEAE        | <i>Lophostemon lactifluus</i>           | Pulumutuma                         | 1    | 7  | 25 | 72  |    | 6        | 16  |          | 43  | 162            | 1     | 1     |   |
| ONAGRACEAE       | <i>Ludwigia hyssopifolia</i>            |                                    |      | 2  |    |     |    |          |     |          |     | 0              | 1     | 1     |   |
| ONAGRACEAE       | <i>Ludwigia octovalvis</i>              |                                    |      | 2  |    |     |    |          |     |          |     | 0              |       | 1     |   |
| ONAGRACEAE       | <i>Ludwigia perennis</i>                |                                    |      | 1  |    | 1   |    | 1        |     |          |     | 2              |       | 1     |   |
| CUCURBITACEAE    | <i>Luffa cylindrica</i>                 |                                    |      | 3  |    | 2   | 5  |          |     | 2        |     | 9              | 1     | 1     |   |
| ORCHIDACEAE      | <i>Luisia teretifolia</i>               |                                    |      | 6  |    |     | 12 |          |     |          |     | 12             | 1     | 1     |   |
| COMBRETACEAE     | <i>Lumnitzera littorea</i>              | Mijinga                            | 1    | 9  |    | 2   |    |          |     |          | 3   | 5              | 1     | 1     |   |
| COMBRETACEAE     | <i>Lumnitzera racemosa</i>              | Mijinga                            | 1    | 8  |    | 15  |    |          |     | 1        | 1   | 17             | 1     | 1     |   |

| FAMILY           | scientific name                     | Tiwi name    | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i> |
|------------------|-------------------------------------|--------------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| RUTACEAE         | <i>Luvunga monophylla</i>           |              |      | 1  |    |    | 1  |          |     |          |     | 1              |       | 1     |   |
| LYCOPODIACEAE    | <i>Lycopodiella cernua</i>          |              | 1    | 9  |    | 16 | 24 |          |     |          |     | 40             | 1     | 1     |   |
| LYGODIACEAE      | <i>Lygodium flexuosum</i>           |              |      | 3  |    |    | 8  |          |     |          |     | 8              | 1     | 1     |   |
| LYGODIACEAE      | <i>Lygodium microphyllum</i>        |              |      | 12 |    | 4  | 16 |          |     |          |     | 20             | 1     | 1     |   |
| EUPHORBIACEAE    | <i>Macaranga involucrata</i>        | Yangutangini | 1    | 6  |    | 13 | 58 |          |     |          |     | 71             | 1     | 1     | <i>mallotoides</i>                      |
| EUPHORBIACEAE    | <i>Macaranga tanarius</i>           |              |      | 4  |    | 6  | 15 |          |     |          | 1   | 22             | 1     | 1     |   |
| FABACEAE         | <i>Macroptilium atropurpureum</i> * |              |      | 5  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| FABACEAE         | <i>Macroptilium lathyroides</i> *   |              |      | 2  |    |    |    |          |     |          |     | 0              | 1     | 1     | <i>semierectum</i>                      |
| MALVACEAE        | <i>Malachra fasciata</i> *          |              |      | 3  |    |    |    |          |     | 14       |     | 14             |       | 1     | <i>lineariloba</i>                      |
| ORCHIDACEAE      | <i>Malaxis acuminata</i>            |              |      |    |    |    | 1  |          |     |          |     | 1              | 1     |       |   |
| EUPHORBIACEAE    | <i>Mallotus nesophilus</i>          |              |      | 12 |    | 20 | 22 |          |     | 2        | 1   | 45             | 1     | 1     |   |
| EUPHORBIACEAE    | <i>Mallotus philippensis</i>        |              |      |    |    | 7  | 35 |          |     | 1        |     | 43             | 1     | 1     |   |
| MALVACEAE        | <i>Malvastrum coromandelianum</i> * |              |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| ANACARDIACEAE    | <i>Mangifera indica</i> *           | Mankuwu      | 1    | 1  |    | 1  |    |          |     |          |     | 1              | 1     | 1     |   |
| CYPERACEAE       | <i>Mapania macrocephala</i>         |              |      | 4  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| CHRYSOBALANACEAE | <i>Maranthes corymbosa</i>          |              |      | 7  |    | 4  | 38 |          |     |          | 1   | 43             | 1     | 1     |   |
| EUPHORBIACEAE    | <i>Margaritaria dubium-traceyi</i>  |              |      | 6  |    | 1  | 8  |          |     | 2        |     | 11             |       | 1     |   |
| ASCLEPIADACEAE   | <i>Marsdenia connivens</i>          |              |      | 3  |    | 5  |    |          |     |          |     | 5              | 1     | 1     |   |
| ASCLEPIADACEAE   | <i>Marsdenia geminata</i>           |              |      | 1  |    | 3  | 8  |          |     |          |     | 11             | 1     | 1     |   |
| ASCLEPIADACEAE   | <i>Marsdenia glandulifera</i>       |              |      | 2  |    | 1  | 29 |          |     |          |     | 30             | 1     | 1     |   |
| ASCLEPIADACEAE   | <i>Marsdenia trinervis</i>          |              |      | 2  |    | 3  |    |          |     |          |     | 3              | 1     | 1     |   |
| ASCLEPIADACEAE   | <i>Marsdenia velutina</i>           |              |      | 5  |    | 3  | 17 |          |     | 1        |     | 21             | 1     | 1     |   |
| ASCLEPIADACEAE   | <i>Marsdenia viridiflora</i>        |              |      | 3  |    | 5  |    |          |     | 1        |     | 6              | 1     | 1     | <i>tropica</i>                          |
| MARSILEACEAE     | <i>Marsilea hirsuta</i>             |              |      |    |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| MYRTACEAE        | <i>Melaleuca argentea</i>           |              |      |    |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| MYRTACEAE        | <i>Melaleuca cajuputi</i>           |              |      | 1  |    |    | 4  |          |     |          |     | 4              |       | 1     |   |
| MYRTACEAE        | <i>Melaleuca D120590 Red Bark</i>   | Punkaringa   | 1    | 1  |    | 2  |    |          |     |          |     | 2              |       | 1     |   |
| MYRTACEAE        | <i>Melaleuca dealbata</i>           |              |      | 1  |    |    |    |          |     | 1        |     | 1              |       | 1     |   |
| MYRTACEAE        | <i>Melaleuca leucadendra</i>        | Punkaringa   | 1    | 6  |    | 26 | 30 |          |     |          | 13  | 69             | 1     | 1     |   |
| MYRTACEAE        | <i>Melaleuca nervosa</i>            |              |      | 3  | 12 | 14 |    |          |     |          | 6   | 32             | 1     | 1     |   |
| MYRTACEAE        | <i>Melaleuca viridiflora</i>        | Punkaringa   | 1    | 9  | 2  | 71 |    | 8        | 25  | 2        | 32  | 140            | 1     | 1     |   |
| ASTERACEAE       | <i>Melanthera biflora</i>           |              |      | 3  |    | 3  |    |          |     |          |     | 3              |       | 1     |   |
| MELASTOMATACEAE  | <i>Melastoma malabathricum</i>      |              | 1    | 11 |    | 31 | 59 |          |     |          | 1   | 91             | 1     | 1     | <i>malabathricum</i>                    |
| RUTACEAE         | <i>Melicope elleryana</i>           |              |      | 3  |    | 18 | 60 |          |     |          | 3   | 81             | 1     | 1     |   |
| POACEAE          | <i>Melinis repens</i> *             |              |      | 4  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| STERCULIACEAE    | <i>Melochia corchorifolia</i>       |              |      | 1  |    |    |    |          |     | 11       |     | 11             |       | 1     |   |
| APOCYNACEAE      | <i>Melodinus australis</i>          |              |      | 5  |    | 1  | 12 |          |     |          |     | 13             | 1     | 1     |   |

| FAMILY           | scientific name                     | Tiwi name  | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i> |
|------------------|-------------------------------------|------------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| MELASTOMATACEAE  | <i>Memecylon pauciflorum</i>        |            |      | 9  |    | 13 | 44 |          |     |          | 1   | 58             | 1     | 1     |   |
| CONVOLVULACEAE   | <i>Merremia aegyptia</i> *          |            |      | 2  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| CONVOLVULACEAE   | <i>Merremia dissecta</i> **         |            |      |    |    |    |    |          |     |          |     | 0              | 1     |       |   |
| CONVOLVULACEAE   | <i>Merremia gemella</i>             |            |      |    |    | 1  |    |          |     |          |     | 1              |       | 1     | <i>splendens</i>                        |
| RUTACEAE         | <i>Micromelum minutum</i>           |            |      | 6  |    | 28 | 56 |          |     | 2        |     | 86             | 1     | 1     |   |
| ANNONACEAE       | <i>Milusa brahei</i>                |            |      | 1  |    | 1  | 17 |          |     |          |     | 18             | 1     | 1     |   |
| ANNONACEAE       | <i>Milusa traceyi</i>               |            |      | 2  |    | 2  | 2  |          |     |          |     | 4              | 1     | 1     |   |
| MIMOSACEAE       | <i>Mimosa pigra</i> *               |            |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| SCROPHULARIACEAE | <i>Mimulus uvedaliae</i>            |            |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| SAPOTACEAE       | <i>Mimusops elengi</i>              |            | 1    | 8  |    | 15 | 25 |          |     |          | 1   | 41             | 1     | 1     |   |
| ASTERACEAE       | <i>Minuria macrorhiza</i>           |            |      | 4  | 16 | 3  |    |          | 2   |          |     | 21             | 1     | 1     |   |
| RUBIACEAE        | <i>Mitracarpus hirtus</i> *         |            |      | 10 |    |    |    |          |     |          |     | 0              |       | 1     |   |
| LOGANIACEAE      | <i>Mitrasacme aggregata</i>         |            |      | 12 |    | 9  |    |          |     |          |     | 9              | 1     | 1     |   |
| LOGANIACEAE      | <i>Mitrasacme connata</i>           |            |      | 18 | 35 | 30 |    |          | 5   |          |     | 70             | 1     | 1     |   |
| LOGANIACEAE      | <i>Mitrasacme elata</i>             |            |      | 8  | 18 | 4  |    |          | 40  |          |     | 62             | 1     | 1     |   |
| LOGANIACEAE      | <i>Mitrasacme exserta</i>           |            |      |    | 55 | 3  |    |          |     |          |     | 58             | 1     | 1     |   |
| LOGANIACEAE      | <i>Mitrasacme inornata</i>          |            |      | 2  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| LOGANIACEAE      | <i>Mitrasacme laevis</i>            |            |      | 13 |    | 15 |    |          |     |          |     | 15             | 1     | 1     |   |
| LOGANIACEAE      | <i>Mitrasacme multicaulis</i>       |            |      | 3  |    |    |    |          | 4   |          |     | 4              | 1     | 1     |   |
| LOGANIACEAE      | <i>Mitrasacme nudicaulis</i>        |            |      |    |    | 11 |    |          |     |          |     | 11             | 1     | 1     |   |
| LOGANIACEAE      | <i>Mitrasacme nummularia</i>        |            |      | 15 | 19 | 21 |    |          | 32  |          |     | 72             | 1     | 1     |   |
| LOGANIACEAE      | <i>Mitrasacme retroloba</i>         |            |      | 5  |    | 9  |    |          |     |          |     | 9              | 1     | 1     |   |
| LOGANIACEAE      | <i>Mitrasacme stellata</i>          |            |      |    | 19 | 1  |    |          |     |          |     | 20             | 1     | 1     |   |
| LOGANIACEAE      | <i>Mitrasacme subvolubilis</i>      |            |      | 4  |    | 2  |    |          | 2   |          |     | 4              | 1     | 1     |   |
| ANNONACEAE       | <i>Mitrella D24710 Melville Is.</i> |            |      | 9  |    | 3  |    |          |     |          |     | 3              | 1     | 1     |   |
| LOGANIACEAE      | <i>Mitreola petiolata</i>           |            |      |    |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| POACEAE          | <i>Mnesithea formosa</i>            |            |      | 4  | 3  | 17 |    | 2        | 32  | 1        |     | 55             | 1     | 1     |   |
| POACEAE          | <i>Mnesithea rottboellioides</i>    | Pitarika   | 1    | 4  | 1  | 30 |    | 7        | 20  | 1        |     | 59             | 1     | 1     |   |
| MOLLUGINACEAE    | <i>Mollugo pentaphylla</i>          |            |      | 4  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| PONTERIACEAE     | <i>Monochoria vaginalis</i>         |            |      | 2  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| RUBIACEAE        | <i>Morinda citrifolia</i>           | Wuliwulama | 1    | 4  |    | 1  | 7  |          |     |          |     | 8              | 1     | 1     |   |
| RUBIACEAE        | <i>Morinda D29011 black</i>         |            |      | 10 |    | 6  | 30 |          |     |          |     | 36             | 1     | 1     |   |
| RUBIACEAE        | <i>Morinda jasminoides</i>          |            |      | 5  |    | 1  | 29 |          |     |          |     | 30             | 1     | 1     |   |
| FABACEAE         | <i>Mucuna gigantea</i>              |            |      |    |    |    | 5  |          |     |          |     | 5              | 1     | 1     | <i>gigantea</i>                         |
| POLYGONACEAE     | <i>Muehlenbeckia rhyticarya</i>     |            |      | 1  |    |    | 1  |          |     |          |     | 1              |       | 1     |   |
| CUCURBITACEAE    | <i>Mukia D51174</i>                 |            |      |    |    |    | 1  |          |     |          |     | 1              | 1     |       |   |
| CUCURBITACEAE    | <i>Mukia maderaspatana</i>          |            |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| COMMELINACEAE    | <i>Murdannia A7726 Top End</i>      |            |      |    |    | 12 |    |          |     |          |     | 12             | 1     |       |   |



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|-----------------|-----------------------------------|----------------------------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| COMMELINACEAE   | <i>Murdannia cleistantha</i>      |                            |      | 2  |    | 3  |    |          |     |          |     | 3              | 1     |       |   |
| COMMELINACEAE   | <i>Murdannia gigantea</i>         |                            |      | 5  |    | 11 |    |          | 56  |          |     | 67             | 1     | 1     |   |
| COMMELINACEAE   | <i>Murdannia graminea</i>         |                            |      | 10 | 2  | 20 |    | 2        | 3   |          |     | 27             | 1     | 1     |   |
| COMMELINACEAE   | <i>Murdannia nudiflora</i> *      |                            |      | 3  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| COMMELINACEAE   | <i>Murdannia vaginata</i>         |                            |      | 1  |    | 4  |    |          |     |          |     | 4              | 1     | 1     |   |
| RUTACEAE        | <i>Murraya paniculata</i>         |                            |      | 4  |    | 2  | 18 |          |     |          |     | 20             | 1     | 1     | <i>ovatifoliolata</i>                   |
| HALORAGACEAE    | <i>Myriophyllum filiforme</i>     |                            |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| HALORAGACEAE    | <i>Myriophyllum trachycarpum</i>  |                            |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| MYRISTICACEAE   | <i>Myristica insipida</i>         |                            | 1    | 4  |    | 1  | 77 |          |     |          | 5   | 83             | 1     | 1     |   |
| MYRISTICACEAE   | <i>Myristica lancifolia</i>       |                            |      | 7  |    | 5  |    |          |     |          |     | 5              | 1     | 1     | <i>australiana</i>                      |
| NAJADACEAE      | <i>Najas browniana</i>            |                            |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| NAJADACEAE      | <i>Najas graminea</i>             |                            |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| RUBIACEAE       | <i>Nauclea orientalis</i>         |                            |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| LAURACEAE       | <i>Neolitsea brassii</i>          |                            |      | 8  |    | 3  | 33 |          |     |          | 1   | 37             | 1     | 1     |   |
| DAVALLIACEAE    | <i>Nephrolepis biserrata</i>      |                            |      | 5  |    | 13 | 52 |          |     |          |     | 65             | 1     | 1     |   |
| MIMOSACEAE      | <i>Neptunia gracilis</i>          |                            |      | 6  |    | 3  |    |          | 8   | 1        |     | 12             | 1     | 1     | <i>gracilis</i>                         |
| ORCHIDACEAE     | <i>Nervilia peltata</i>           |                            |      | 2  |    | 1  | 1  |          |     |          |     | 2              | 1     | 1     |   |
| OLEACEAE        | <i>Notelaea microcarpa</i>        |                            |      | 4  |    | 1  | 12 |          |     |          |     | 13             | 1     | 1     |   |
| NYMPHAEACEAE    | <i>Nymphaea nouchali</i>          |                            |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| NYMPHAEACEAE    | <i>Nymphaea violacea</i>          | Purnarrika,<br>Malaritinga | 1    | 2  |    | 5  |    |          |     |          |     | 5              | 1     | 1     |   |
| MENYANTHACEAE   | <i>Nymphoides indica</i>          |                            |      |    |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| ARECACEAE       | <i>Nypa fruticans</i>             | Rola                       | 1    | 6  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| OLACACEAE       | <i>Olax imbricata</i>             |                            |      | 5  |    |    | 14 |          |     |          |     | 14             | 1     | 1     |   |
| RUBIACEAE       | <i>Oldenlandia corymbosa</i> *    |                            |      | 3  |    |    |    |          |     |          |     | 0              | 1     | 1     | <i>corymbosa</i>                        |
| RUBIACEAE       | <i>Oldenlandia galioides</i>      |                            |      |    |    | 2  |    |          |     |          |     | 2              | 1     | 1     |   |
| RUBIACEAE       | <i>Oldenlandia mitrasacmoides</i> |                            |      |    |    | 1  |    |          | 1   |          |     | 2              |       | 1     |   |
| EUPHORBIACEAE   | <i>Omalanthus novo-guineensis</i> |                            |      | 1  |    | 2  | 14 |          |     |          |     | 16             | 1     | 1     |   |
| CONVOLVULACEAE  | <i>Operculina brownii</i>         |                            |      | 3  |    |    | 5  |          |     |          |     | 5              |       | 1     |   |
| OPHIOGLOSSACEAE | <i>Ophioglossum intermedium</i>   |                            |      | 10 |    |    | 11 |          |     |          |     | 11             | 1     | 1     |   |
| OPHIOGLOSSACEAE | <i>Ophioglossum reticulatum</i>   |                            |      | 3  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| OPILIAEAE       | <i>Opilia amentacea</i>           | Murinyini                  | 1    | 14 |    | 44 | 79 | 1        |     | 4        |     | 128            | 1     | 1     |   |
| POACEAE         | <i>Opismenus burmanni</i>         |                            |      | 1  |    | 1  |    |          |     |          |     | 1              | 1     |       |   |
| POACEAE         | <i>Opismenus compositus</i>       |                            |      |    |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| MELASTOMATAEAE  | <i>Osbeckia australiana</i>       |                            |      | 4  | 4  | 12 |    |          |     |          |     | 16             | 1     | 1     |   |
| MYRTACEAE       | <i>Osbornia octodonta</i>         | Mijinga                    | 1    | 5  |    | 3  |    |          |     |          |     | 3              | 1     | 1     |   |
| MELIACEAE       | <i>Owenia reticulata</i>          |                            |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |

| FAMILY           | scientific name                         | Tiwi name | Pur. | HR | BW | HP  | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i> |
|------------------|---|-----------|------|----|----|-----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| MELIACEAE        | <i>Owenia vernicosa</i>                 |           |      |    |    |     |    |          |     |          | 1   | 1              |       | 1     |   |
| MENISPERMACEAE   | <i>Pachygone ovata</i>                  |           |      | 1  |    | 3   | 59 |          |     |          | 1   | 63             | 1     | 1     |   |
| DILLENACEAE      | <i>Pachynema complanatum</i>            |           |      | 14 | 72 | 33  |    | 9        | 66  |          |     | 180            | 1     | 1     |   |
| DILLENACEAE      | <i>Pachynema dilatatum</i>              |           |      |    |    | 4   |    |          |     |          |     | 4              | 1     | 1     |   |
| DILLENACEAE      | <i>Pachynema junceum</i>                |           |      | 2  |    | 24  |    | 1        | 17  |          |     | 42             | 1     | 1     |   |
| DILLENACEAE      | <i>Pachynema sphenandrum</i>            |           |      | 6  |    | 12  |    |          |     |          |     | 12             | 1     | 1     |   |
| PANDANACEAE      | <i>Pandanus spiralis</i>                | Miyaringa | 1    | 3  | 11 | 126 |    | 16       | 40  | 1        | 68  | 262            | 1     | 1     |   |
| POACEAE          | <i>Panicum decompositum</i> #           |           |      |    |    |     |    | 1        |     |          |     | 1              |       | 1     |   |
| POACEAE          | <i>Panicum mindanaense</i>              |           |      | 4  | 10 | 13  |    |          | 10  | 6        |     | 39             | 1     | 1     |   |
| POACEAE          | <i>Panicum trichoides</i>               |           |      | 1  |    | 8   | 3  |          |     | 3        |     | 14             | 1     | 1     |   |
| CHRYSOBALANACEAE | <i>Parinari nonda</i>                   |           |      |    |    | 1   |    |          |     |          |     | 1              | 1     |       |   |
| APOCYNACEAE      | <i>Parsonsia D30178 Melville Island</i> |           |      | 3  |    | 1   | 30 |          |     |          |     | 31             | 1     | 1     |   |
| APOCYNACEAE      | <i>Parsonsia velutina</i>               |           |      | 10 |    | 13  | 48 |          |     |          |     | 61             | 1     | 1     |   |
| POACEAE          | <i>Paspalidium rarum</i>                |           |      | 1  |    |     |    |          |     |          |     | 0              |       | 1     |   |
| POACEAE          | <i>Paspalum scrobiculatum</i>           |           |      | 6  |    | 4   |    |          | 6   | 2        |     | 12             | 1     | 1     |   |
| PASSIFLORACEAE   | <i>Passiflora foetida</i> *             |           | 1    | 11 |    | 13  |    |          | 1   | 18       |     | 32             | 1     | 1     |   |
| IRIDACEAE        | <i>Patersonia macrantha</i>             |           |      | 3  | 1  | 6   |    | 2        |     |          |     | 9              | 1     | 1     |   |
| RUBIACEAE        | <i>Pavetta brownii</i>                  |           |      | 3  |    | 1   |    |          |     |          | 3   | 4              | 1     | 1     | <i>brownii</i>                          |
| RUBIACEAE        | <i>Pavetta tenella</i>                  |           |      | 12 |    | 3   |    |          |     |          |     | 3              | 1     | 1     |   |
| CAESALPINIACEAE  | <i>Peltophorum pterocarpum</i>          |           |      | 2  |    | 1   | 6  |          |     |          |     | 7              | 1     | 1     |   |
| LYTHRACEAE       | <i>Pemphis acidula</i>                  | Mijinga   | 1    | 3  |    | 3   |    |          |     |          |     | 3              |       | 1     |   |
| POACEAE          | <i>Pennisetum pedicellatum</i> *        |           |      | 11 |    |     |    |          |     |          |     | 0              | 1     | 1     | <i>pedicellatum</i>                     |
| POACEAE          | <i>Pennisetum polystachion</i> *        |           |      | 1  |    |     |    |          |     |          |     | 0              |       | 1     | <i>polystachion</i>                     |
| SCROPHULARIACEAE | <i>Peplidium maritimum</i>              |           |      | 1  |    |     |    |          |     |          |     | 0              |       | 1     |   |
| POACEAE          | <i>Perotis rara</i>                     |           |      | 4  |    | 4   |    |          |     |          |     | 4              | 1     | 1     |   |
| PROTEACEAE       | <i>Persoonia falcata</i>                |           |      | 13 | 96 | 112 |    | 3        | 95  |          | 16  | 322            | 1     | 1     |   |
| EUPHORBIACEAE    | <i>Petalostigma banksii</i>             |           |      |    |    | 6   |    |          |     |          |     | 6              | 1     |       |   |
| EUPHORBIACEAE    | <i>Petalostigma pubescens</i>           |           | 1    | 3  | 1  | 25  |    | 13       | 39  | 2        | 27  | 107            | 1     | 1     |   |
| EUPHORBIACEAE    | <i>Petalostigma quadriloculare</i>      |           |      | 5  | 26 | 32  |    | 8        | 13  |          |     | 79             | 1     | 1     |   |
| THYMELAEACEAE    | <i>Phaleria octandra</i>                |           |      | 16 |    | 1   | 27 |          |     |          |     | 28             | 1     | 1     |   |
| POACEAE          | <i>Pheidochloa gracilis</i>             |           |      | 2  |    |     |    |          |     |          |     | 0              | 1     |       |   |
| PHILYDRACEAE     | <i>Philydrum lanuginosum</i>            |           |      | 2  |    | 2   |    |          |     |          |     | 2              | 1     | 1     |   |
| VERBENACEAE      | <i>Phyla nodiflora</i>                  |           |      | 1  |    |     |    | 1        |     |          |     | 1              |       | 1     | <i>nodiflora</i>                        |
| EUPHORBIACEAE    | <i>Phyllanthus amarus</i> *             |           |      | 10 |    | 1   |    |          |     |          |     | 1              | 1     | 1     |   |
| EUPHORBIACEAE    | <i>Phyllanthus carpentariae</i>         |           |      | 2  |    |     |    |          |     |          |     | 0              |       | 1     |   |
| EUPHORBIACEAE    | <i>Phyllanthus ciccoides</i>            |           |      | 4  |    |     | 6  |          |     | 3        |     | 9              | 1     | 1     | <i>ciccoides</i>                        |
| EUPHORBIACEAE    | <i>Phyllanthus exilis</i>               |           |      | 7  |    |     |    |          |     |          |     | 0              |       | 1     |   |

| FAMILY          | scientific name                     | Tiwi name   | Pur. | HR | BW | HP  | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i> |
|-----------------|-------------------------------------|-------------|------|----|----|-----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| EUPHORBIACEAE   | <i>Phyllanthus flagellaris</i>      |             |      | 9  |    | 20  |    | 1        |     |          |     | 21             | 1     | 1     |   |
| EUPHORBIACEAE   | <i>Phyllanthus minutiflorus</i>     |             |      | 1  |    |     |    |          | 2   | 2        |     | 4              | 1     | 1     |   |
| EUPHORBIACEAE   | <i>Phyllanthus reticulatus</i>      |             |      | 1  |    | 1   |    |          |     |          |     | 1              |       | 1     |   |
| EUPHORBIACEAE   | <i>Phyllanthus sulcatus</i>         |             |      | 1  |    |     |    |          |     |          |     | 0              |       | 1     |   |
| EUPHORBIACEAE   | <i>Phyllanthus urinaria</i>         |             |      | 2  |    | 1   |    |          | 2   | 4        |     | 7              | 1     | 1     |   |
| EUPHORBIACEAE   | <i>Phyllanthus virgatus</i>         |             |      | 5  | 3  | 22  |    | 1        | 43  | 2        |     | 71             | 1     | 1     |   |
| FABACEAE        | <i>Phyllodium pulchellum</i>        |             |      | 6  |    | 3   |    |          | 1   |          |     | 4              | 1     | 1     | <i>glabrus,<br/>pulchellum</i>          |
| SOLANACEAE      | <i>Physalis minima</i> *            |             |      | 7  |    | 1   |    |          |     | 1        |     | 2              | 1     | 1     |   |
| PINACEAE        | <i>Pinus caribaea</i> *             |             |      |    |    |     |    |          |     |          | 2   | 2              |       | 1     |   |
| PIPERACEAE      | <i>Piper macropiper</i>             |             |      | 6  |    | 9   | 47 |          |     |          |     | 56             | 1     | 1     |   |
| NYCTAGINACEAE   | <i>Pisonia aculeata</i>             |             |      | 1  |    |     | 6  |          |     |          |     | 6              | 1     | 1     |   |
| PITTOSPORACEAE  | <i>Pittosporum ferrugineum</i>      |             |      | 1  |    |     | 1  |          |     |          |     | 1              | 1     | 1     | <i>ferrugineum</i>                      |
| PITTOSPORACEAE  | <i>Pittosporum moluccanum</i>       |             |      | 4  |    | 1   | 3  |          |     |          |     | 4              |       | 1     |   |
| LECYTHIDACEAE   | <i>Planchonia careya</i>            | Kanuli      | 1    | 5  | 38 | 147 |    | 32       | 126 | 5        | 46  | 394            | 1     | 1     |   |
| LAMIACEAE       | <i>Plectranthus scutellarioides</i> |             |      | 5  |    | 3   | 7  |          | 3   |          |     | 13             | 1     | 1     |   |
| AGAVACEAE       | <i>Pleomele angustifolia</i>        | Mirima      | 1    | 16 |    | 15  | 68 |          |     |          | 1   | 84             | 1     | 1     |   |
| ASTERACEAE      | <i>Pleurocarpaea denticulata</i>    |             |      |    |    | 1   |    |          | 1   |          |     | 2              |       | 1     |   |
| ASTERACEAE      | <i>Pluchea indica</i>               |             |      | 1  |    |     | 1  |          |     |          |     | 1              | 1     | 1     |   |
| ASTERACEAE      | <i>Pluchea rubelliflora</i>         |             |      | 4  |    | 1   |    |          |     |          |     | 1              | 1     | 1     |   |
| PLUMBAGINACEAE  | <i>Plumbago zeylanica</i>           |             |      |    |    | 1   |    |          |     |          |     | 1              |       | 1     |   |
| RUBIACEAE       | <i>Pogonolobus reticulatus</i>      | Arrukununga | 1    | 4  | 1  | 21  |    | 12       | 15  |          |     | 49             | 1     | 1     |   |
| LAMIACEAE       | <i>Pogostemon stellatus</i>         |             |      |    |    |     |    |          | 1   |          |     | 1              |       | 1     |   |
| ANNONACEAE      | <i>Polyalthia australis</i>         |             |      | 2  |    | 10  | 45 |          |     |          |     | 55             | 1     | 1     |   |
| ANNONACEAE      | <i>Polyalthia nitidissima</i>       |             |      | 8  |    | 5   | 43 |          |     |          |     | 48             | 1     | 1     |   |
| CARYOPHYLLACEAE | <i>Polycarpaea breviflora</i>       |             |      |    |    | 1   |    |          |     |          |     | 1              |       | 1     |   |
| CARYOPHYLLACEAE | <i>Polycarpaea corymbosa</i>        |             |      |    |    | 1   |    |          |     |          |     | 1              |       | 1     |   |
| CARYOPHYLLACEAE | <i>Polycarpaea violacea</i>         |             |      | 2  |    | 2   |    |          |     |          |     | 2              | 1     | 1     |   |
| POLYGALACEAE    | <i>Polygala eriocephala</i>         |             |      | 3  | 37 | 1   |    | 1        | 30  |          |     | 69             | 1     | 1     |   |
| POLYGALACEAE    | <i>Polygala exsuarrosa</i>          |             |      | 5  |    |     |    |          |     |          |     | 0              | 1     | 1     |   |
| POLYGALACEAE    | <i>Polygala glaucoides</i>          |             |      | 2  |    |     |    |          |     |          |     | 0              | 1     | 1     |   |
| POLYGALACEAE    | <i>Polygala longifolia</i>          |             |      | 1  | 3  |     |    |          |     |          |     | 3              |       | 1     |   |
| POLYGALACEAE    | <i>Polygala orbicularis</i>         |             |      | 13 | 32 | 52  |    |          | 54  | 3        |     | 141            | 1     | 1     | <i>orbicularis</i>                      |
| POLYGALACEAE    | <i>Polygala pycnophylla</i>         |             |      | 1  |    | 1   |    |          |     |          |     | 1              |       | 1     |   |
| POLYGALACEAE    | <i>Polygala rhinanthoides</i>       |             |      | 1  |    | 1   |    |          | 1   |          |     | 2              | 1     | 1     | <i>minor</i>                            |
| POLYGALACEAE    | <i>Polygala stenoclada</i>          |             |      | 2  |    | 2   |    |          |     |          |     | 2              | 1     | 1     | <i>stenosepala</i>                      |
| POLYGALACEAE    | <i>Polygala triflora</i>            |             |      | 1  |    | 28  |    |          |     |          |     | 28             | 1     | 1     |   |
| CONVOLVULACEAE  | <i>Polymeria ambigua</i>            |             |      | 3  |    | 6   |    |          | 1   | 2        |     | 9              | 1     | 1     |   |

| FAMILY           | scientific name                     | Tiwi name                 | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i> |
|------------------|-------------------------------------|---------------------------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| ARALIACEAE       | <i>Polyscias australiana</i>        |                           |      | 9  |    | 6  | 38 | 1        |     |          |     | 45             | 1     | 1     |   |
| FABACEAE         | <i>Pongamia pinnata</i>             |                           |      | 2  |    | 6  | 4  |          |     |          | 1   | 11             | 1     | 1     |   |
| EUPHORBIACEAE    | <i>Poranthera microphylla</i>       |                           |      | 3  | 1  | 6  |    |          | 5   |          |     | 12             | 1     | 1     |   |
| PORTULACACEAE    | <i>Portulaca bicolor</i>            |                           |      | 4  |    | 2  |    |          |     | 2        |     | 4              | 1     | 1     | <i>rosea</i>                            |
| PORTULACACEAE    | <i>Portulaca oleracea</i>           |                           |      | 2  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| PORTULACACEAE    | <i>Portulaca pilosa</i> *           |                           |      | 2  |    |    |    |          |     | 4        |     | 4              |       | 1     |   |
| SAPOTACEAE       | <i>Pouteria arnhemica</i>           |                           | 1    | 9  | 6  | 19 |    | 4        | 31  | 1        | 11  | 72             | 1     | 1     |   |
| SAPOTACEAE       | <i>Pouteria richardii</i>           |                           |      |    |    | 8  | 63 |          |     |          | 5   | 76             | 1     | 1     |   |
| SAPOTACEAE       | <i>Pouteria sericea</i>             | Murinyi                   | 1    | 8  |    | 31 | 49 | 1        |     |          | 2   | 83             | 1     | 1     |   |
| VERBENACEAE      | <i>Premna acuminata</i>             |                           |      |    |    | 3  | 7  | 1        | 1   | 1        |     | 13             | 1     | 1     |   |
| VERBENACEAE      | <i>Premna herbacea</i>              |                           |      | 3  |    | 2  |    |          |     |          |     | 2              | 1     | 1     |   |
| VERBENACEAE      | <i>Premna odorata</i>               |                           |      | 3  |    | 8  |    |          |     |          | 1   | 9              |       | 1     |   |
| VERBENACEAE      | <i>Premna serratifolia</i>          |                           | 1    | 6  |    | 1  | 9  |          |     |          |     | 10             | 1     | 1     |   |
| LILIACEAE        | <i>Protasparagus racemosus</i>      | Aruwuinni                 | 1    | 4  |    | 19 | 24 | 1        | 1   |          |     | 45             | 1     | 1     |   |
| POACEAE          | <i>Pseudopogonatherum contortum</i> | Wupunga                   | 1    | 1  | 19 | 6  |    |          | 102 | 1        |     | 128            | 1     | 1     |   |
| POACEAE          | <i>Pseudopogonatherum irritans</i>  |                           |      | 7  |    | 24 |    | 19       |     |          |     | 43             | 1     | 1     |   |
| POACEAE          | <i>Pseudoraphis spinescens</i>      |                           |      |    |    |    |    |          |     | 1        |     | 1              |       | 1     |   |
| RUBIACEAE        | <i>Psychotria coelosperma</i>       |                           |      | 8  |    | 2  | 18 |          |     |          |     | 20             | 1     | 1     |   |
| RUBIACEAE        | <i>Psychotria daphnoides</i>        |                           |      | 1  |    |    | 2  |          |     |          |     | 2              |       | 1     |   |
| RUBIACEAE        | <i>Psychotria nesophila</i>         |                           |      | 6  |    | 8  | 39 |          |     |          | 1   | 48             | 1     | 1     |   |
| RUBIACEAE        | <i>Psydrax odorata</i>              |                           |      | 3  |    | 9  | 24 |          |     |          |     | 33             | 1     | 1     | <i>arnhemica</i>                        |
| DENNSTAEDTIACEAE | <i>Pteridium revolutum</i>          |                           |      | 5  |    | 1  | 6  |          |     |          |     | 7              | 1     | 1     |   |
| ASTERACEAE       | <i>Pterocaulon serrulatum</i>       |                           |      | 1  |    | 1  |    |          |     | 1        |     | 2              |       | 1     | <i>serrulatum</i>                       |
| ASTERACEAE       | <i>Pterocaulon sphacelatum</i>      |                           |      |    |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| AMARANTHACEAE    | <i>Ptilotus distans</i>             |                           |      | 3  | 3  | 4  |    |          |     |          |     | 7              |       | 1     |   |
| FABACEAE         | <i>Pycnospora lutescens</i>         |                           |      | 4  |    | 13 |    |          | 8   |          |     | 21             | 1     | 1     |   |
| COMBRETACEAE     | <i>Quisqualis indica</i> *          |                           |      | 2  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| MYRSINACEAE      | <i>Rapanea benthamiana</i>          |                           |      |    |    | 5  |    |          |     |          | 2   | 7              | 1     | 1     |   |
| MYRSINACEAE      | <i>Rapanea pedicellata</i>          |                           |      | 12 |    | 9  | 53 |          |     |          |     | 62             | 1     | 1     |   |
| RHIZOPHORACEAE   | <i>Rhizophora apiculata</i>         | Pukulijupa,<br>Purirringa | 1    | 9  |    | 2  |    |          |     |          | 4   | 6              | 1     | 1     |   |
| RHIZOPHORACEAE   | <i>Rhizophora lamarckii</i>         |                           |      | 7  |    | 1  |    |          |     |          | 2   | 3              | 1     | 1     |   |
| RHIZOPHORACEAE   | <i>Rhizophora stylosa</i>           | Pukulijupa,<br>Purirringa | 1    | 6  |    | 16 |    |          |     |          | 1   | 17             | 1     | 1     |   |
| MYRTACEAE        | <i>Rhodamnia australis</i>          |                           |      | 1  |    | 1  | 9  |          |     |          |     | 10             | 1     | 1     |   |
| FABACEAE         | <i>Rhynchosia australis</i>         |                           |      | 2  |    | 2  | 3  |          |     |          |     | 5              | 1     | 1     |   |
| FABACEAE         | <i>Rhynchosia minima</i>            |                           |      |    |    | 7  |    |          | 10  |          |     | 17             | 1     | 1     |   |

| FAMILY         | scientific name                          | Tiwi name   | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i>                                 |
|----------------|--|-------------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| CYPERACEAE     | <i>Rhynchospora brownii</i>              |             |      | 12 |    | 3  |    |          |     |          |     | 3              | 1     | 1     |   |
| CYPERACEAE     | <i>Rhynchospora gracillima</i>           |             |      |    |    | 1  |    |          |     |          |     | 1              | 1     |       |   |
| CYPERACEAE     | <i>Rhynchospora heterochaeta</i>         |             |      | 7  | 39 | 6  |    |          | 25  | 6        |     | 76             | 1     | 1     |   |
| CYPERACEAE     | <i>Rhynchospora longisetis</i>           |             |      | 1  |    | 1  |    |          |     |          |     | 1              | 1     |       |   |
| CYPERACEAE     | <i>Rhynchospora rubra</i>                |             |      | 5  |    | 12 |    |          |     |          |     | 12             | 1     | 1     |   |
| RUBIACEAE      | <i>Richardia scabra</i> *                |             |      | 3  |    |    |    |          |     |          |     | 0              |       | 1     | includes some<br>former records of<br><i>Richardia<br/>brasiliensis</i> |
| ACANTHACEAE    | <i>Rostellularia adscendens</i>          |             |      |    |    |    |    |          | 14  | 1        |     | 15             | 1     | 1     |   |
| LYTHRACEAE     | <i>Rotala mexicana</i>                   |             |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| POACEAE        | <i>Rottboellia cochinchinensis</i>       |             |      | 3  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| ACANTHACEAE    | <i>Ruellia tuberosa</i> *                |             |      | 3  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| POACEAE        | <i>Sacciolepis indica</i>                |             |      | 3  | 1  | 9  |    |          | 9   |          |     | 19             | 1     | 1     |   |
| POACEAE        | <i>Sacciolepis myosuroides</i>           |             |      | 1  |    | 1  |    |          |     |          |     | 1              | 1     |       |   |
| POLYGALACEAE   | <i>Salomonina ciliata</i>                |             |      | 7  |    | 4  |    |          |     |          |     | 4              | 1     | 1     |   |
| CHENOPODIACEAE | <i>Salsola tragus</i> *                  |             |      | 1  |    | 2  |    |          |     |          |     | 2              | 1     | 1     |   |
| SANTALACEAE    | <i>Santalum album</i>                    |             |      | 8  |    | 5  | 14 |          |     |          | 1   | 20             | 1     | 1     |   |
| SANTALACEAE    | <i>Santalum lanceolatum</i>              |             |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| ASCLEPIADACEAE | <i>Sarcolobus hullsii</i>                |             |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| ASCLEPIADACEAE | <i>Sarcostemma viminale</i>              |             |      | 3  |    | 1  | 8  |          |     |          |     | 9              |       | 1     | <i>brunonianum</i> ,  |
| EUPHORBIACEAE  | <i>Sauropus brunonis</i>                 |             |      | 3  | 11 | 2  |    |          | 46  |          |     | 59             | 1     | 1     |   |
| EUPHORBIACEAE  | <i>Sauropus ditassoides</i>              |             | 1    | 5  |    | 15 |    | 2        | 43  |          |     | 60             |       | 1     |   |
| EUPHORBIACEAE  | <i>Sauropus glaucus</i>                  |             |      | 4  | 40 | 47 |    |          | 52  |          |     | 139            | 1     | 1     |   |
| EUPHORBIACEAE  | <i>Sauropus ochrophyllus</i>             |             |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| EUPHORBIACEAE  | <i>Sauropus paucifolius</i>              |             |      | 3  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| GOODENIACEAE   | <i>Scaevola angulata</i>                 |             |      | 3  |    | 3  |    | 1        |     |          |     | 4              |       | 1     |   |
| GOODENIACEAE   | <i>Scaevola taccada</i>                  | Wuraka      | 1    | 9  |    | 7  |    |          |     |          |     | 7              | 1     | 1     |   |
| ARALIACEAE     | <i>Schefflera actinophylla</i>           |             |      |    |    |    | 1  |          |     |          |     | 1              | 1     |       |   |
| POACEAE        | <i>Schizachyrium D21454<br/>wingless</i> |             |      | 1  |    | 4  |    |          |     |          |     | 4              | 1     | 1     |   |
| POACEAE        | <i>Schizachyrium fragile</i>             |             |      | 1  | 8  | 6  |    | 7        | 47  |          |     | 68             | 1     | 1     |   |
| POACEAE        | <i>Schizachyrium pachyarthron</i>        |             |      | 1  |    | 4  |    |          |     |          |     | 4              | 1     | 1     |   |
| POACEAE        | <i>Schizachyrium pseudeulalia</i>        |             |      | 2  | 1  | 2  |    |          | 1   |          |     | 4              | 1     | 1     |   |
| SCHIZAEACEAE   | <i>Schizaea dichotoma</i>                | Yawurlawuni | 1    | 20 |    | 2  | 30 |          |     |          |     | 32             | 1     | 1     |   |
| CYPERACEAE     | <i>Schoenoplectus litoralis</i>          |             |      | 3  |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| CYPERACEAE     | <i>Schoenus calostachyus</i>             |             |      | 9  |    | 8  |    |          |     |          |     | 8              | 1     | 1     |   |
| CYPERACEAE     | <i>Schoenus falcatus</i>                 |             |      |    |    | 2  |    |          |     |          |     | 2              | 1     |       |   |

| FAMILY           | scientific name                  | Tiwi name  | Pur. | HR | BW | HP  | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i> |
|------------------|----------------------------------|------------|------|----|----|-----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| CYPERACEAE       | <i>Schoenus punctatus</i>        |            |      | 2  |    | 7   |    |          |     |          |     | 7              | 1     | 1     |   |
| CYPERACEAE       | <i>Schoenus sparteus</i>         |            |      | 3  | 1  | 7   |    |          | 2   |          |     | 10             | 1     | 1     |   |
| CYPERACEAE       | <i>Scleria A35618 Oenpelli</i>   |            |      |    |    | 1   |    |          |     |          |     | 1              | 1     |       |   |
| CYPERACEAE       | <i>Scleria biflora</i>           |            |      | 1  |    | 2   |    |          |     |          |     | 2              | 1     | 1     | <i>biflora</i>                          |
| CYPERACEAE       | <i>Scleria brownii</i>           |            |      | 2  | 6  | 12  |    |          | 26  | 4        |     | 48             | 1     | 1     |   |
| CYPERACEAE       | <i>Scleria caricina</i>          |            |      | 1  |    |     |    |          |     |          |     | 0              | 1     |       |   |
| CYPERACEAE       | <i>Scleria carphiformis</i>      |            |      | 3  |    | 3   |    |          |     |          |     | 3              | 1     | 1     |   |
| CYPERACEAE       | <i>Scleria ciliaris</i>          | Tornty     | 1    | 14 |    | 7   | 50 |          |     |          |     | 57             | 1     | 1     |   |
| CYPERACEAE       | <i>Scleria laxa</i>              |            |      | 5  |    | 10  |    |          |     |          |     | 10             | 1     | 1     |   |
| CYPERACEAE       | <i>Scleria levis</i>             |            |      | 1  |    | 2   |    |          |     |          |     | 2              | 1     |       |   |
| CYPERACEAE       | <i>Scleria lingulata</i>         |            |      | 4  |    | 6   | 7  |          |     |          |     | 13             | 1     | 1     |   |
| CYPERACEAE       | <i>Scleria lithosperma</i>       |            |      | 8  |    | 2   | 15 |          |     |          |     | 17             | 1     | 1     | <i>lithosperma</i>                      |
| CYPERACEAE       | <i>Scleria novae-hollandiae</i>  |            |      | 1  |    | 15  |    |          |     |          |     | 15             | 1     | 1     |   |
| CYPERACEAE       | <i>Scleria polycarpa</i>         |            |      | 6  |    | 2   | 10 |          |     | 2        |     | 14             | 1     | 1     |   |
| CYPERACEAE       | <i>Scleria pygmaea</i>           |            |      | 2  |    | 12  |    |          | 6   |          |     | 18             | 1     | 1     |   |
| CYPERACEAE       | <i>Scleria rugosa</i>            |            |      | 5  |    | 7   | 6  | 1        |     |          |     | 14             | 1     | 1     |   |
| CYPERACEAE       | <i>Scleria sphacelata</i>        |            |      | 5  | 1  | 2   | 1  |          | 9   |          |     | 13             |       | 1     |   |
| SCROPHULARIACEAE | <i>Scoparia dulcis</i> *         |            |      | 7  |    |     |    |          |     |          |     | 0              | 1     | 1     |   |
| RUBIACEAE        | <i>Scyphiphora hydrophylacea</i> | Murruka    | 1    | 10 |    | 4   |    |          |     |          |     | 4              | 1     | 1     |   |
| EUPHORBIACEAE    | <i>Sebastiania chamaelea</i>     |            |      | 3  |    | 12  |    |          |     |          |     | 12             | 1     | 1     |   |
| ASCLEPIADACEAE   | <i>Secamone elliptica</i>        |            |      | 7  |    | 19  | 28 |          |     | 6        |     | 53             | 1     | 1     |   |
| POACEAE          | <i>Sehima nervosum</i>           |            |      |    |    | 3   |    | 3        |     |          |     | 6              | 1     | 1     |   |
| SELAGINELLACEAE  | <i>Selaginella ciliaris</i>      |            |      | 1  |    |     |    |          |     |          |     | 0              |       | 1     |   |
| SELAGINELLACEAE  | <i>Selaginella pygmaea</i>       |            |      | 2  |    | 3   |    |          |     |          |     | 3              | 1     | 1     |   |
| SELAGINELLACEAE  | <i>Selaginella uliginosa</i>     |            |      | 4  |    | 5   |    |          |     |          |     | 5              | 1     | 1     |   |
| ANACARDIACEAE    | <i>Semecarpus australiensis</i>  | Kajuwiyi   | 1    |    |    |     |    |          |     |          |     | 0              |       | 1     |   |
| CAESALPINIACEAE  | <i>Senna obtusifolia</i> *       |            |      | 2  |    |     |    |          |     |          |     | 0              |       | 1     |   |
| CAESALPINIACEAE  | <i>Senna occidentalis</i> *      |            |      | 7  |    |     |    |          |     |          |     | 0              | 1     | 1     |   |
| CAESALPINIACEAE  | <i>Senna surattensis</i>         |            |      | 1  |    | 1   | 1  |          |     |          |     | 2              |       | 1     |   |
| CAESALPINIACEAE  | <i>Senna timorensis</i>          |            |      |    |    |     | 1  |          |     |          |     | 1              | 1     |       |   |
| FABACEAE         | <i>Sesbania cannabina</i>        |            |      |    |    |     |    |          |     | 6        |     | 6              |       | 1     |   |
| AIZOACEAE        | <i>Sesuvium portulacastrum</i>   |            |      | 5  |    | 5   |    |          |     |          |     | 5              | 1     | 1     |   |
| POACEAE          | <i>Setaria apiculata</i>         |            |      | 4  | 28 | 12  |    | 6        | 28  | 1        |     | 75             | 1     | 1     |   |
| MALVACEAE        | <i>Sida acuta</i> *              |            |      | 12 |    | 2   | 8  |          |     |          |     | 10             | 1     | 1     |   |
| MALVACEAE        | <i>Sida cordifolia</i> *         |            |      | 6  |    |     |    |          |     |          |     | 0              | 1     | 1     |   |
| MALVACEAE        | <i>Sida pusilla</i>              |            |      | 2  |    |     |    |          |     |          |     | 0              |       | 1     |   |
| MALVACEAE        | <i>Sida rhombifolia</i> *        |            |      | 5  |    |     |    |          |     |          |     | 0              |       | 1     |   |
| SMILACACEAE      | <i>Smilax australis</i>          | Turukwanga | 1    | 8  |    | 104 | 98 | 8        | 16  | 2        |     | 228            | 1     | 1     |   |

| FAMILY           | scientific name                           | Tiwi name  | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i> |
|------------------|---|------------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| SOLANACEAE       | <i>Solanum americanum</i> *               |            |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| SOLANACEAE       | <i>Solanum tetrandrum</i>                 |            | 1    | 11 |    | 4  | 3  |          |     |          |     | 7              | 1     | 1     |   |
| SONNERATIACEAE   | <i>Sonneratia alba</i>                    | Maripwanga | 1    | 5  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| SONNERATIACEAE   | <i>Sonneratia lanceolata</i>              |            |      | 2  |    | 2  |    |          |     |          |     | 2              |       | 1     |   |
| FABACEAE         | <i>Sophora longipes</i>                   |            |      |    |    |    | 11 |          |     |          |     | 11             | 1     | 1     |   |
| POACEAE          | <i>Sorghum bicolor</i> *                  |            |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| POACEAE          | <i>Sorghum exstans</i>                    |            |      | 5  |    | 6  |    |          |     |          |     | 6              |       | 1     |   |
| POACEAE          | <i>Sorghum interjectum</i>                |            |      |    |    | 17 |    |          |     |          |     | 17             | 1     | 1     |   |
| POACEAE          | <i>Sorghum intrans</i>                    | Marakati   | 1    | 1  | 41 |    |    | 3        | 17  | 1        |     | 62             | 1     | 1     |   |
| POACEAE          | <i>Sorghum laxiflorum</i>                 |            |      | 2  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| POACEAE          | <i>Sorghum plumosum</i>                   | Marakati   | 1    | 5  | 66 | 18 |    | 4        | 37  | 1        |     | 126            | 1     | 1     | <i>plumosum</i>                         |
| LILIACEAE        | <i>Sowerbaea alliacea</i>                 |            |      | 1  |    | 3  |    |          |     |          |     | 3              |       | 1     |   |
| BIGNONIACEAE     | <i>Spathodea campanulata</i> *            |            |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| RUBIACEAE        | <i>Spermacoce articularis</i> *           |            |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| RUBIACEAE        | <i>Spermacoce D129311<br/>variabilis</i>  |            |      | 5  |    | 26 |    |          |     |          |     | 26             | 1     |       |   |
| RUBIACEAE        | <i>Spermacoce D138967<br/>pectinifera</i> |            |      | 33 |    | 35 |    |          |     |          |     | 35             | 1     | 1     |   |
| RUBIACEAE        | <i>Spermacoce D23270<br/>occultiseta</i>  |            |      | 9  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| RUBIACEAE        | <i>Spermacoce D43976<br/>retitesta</i>    |            |      | 17 |    | 15 |    |          |     |          |     | 15             | 1     | 1     |   |
| RUBIACEAE        | <i>Spermacoce leptoloba</i>               |            |      | 6  |    | 58 |    |          |     |          |     | 58             | 1     | 1     |   |
| RUBIACEAE        | <i>Spermacoce omissa</i>                  |            |      | 3  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| RUBIACEAE        | <i>Spermacoce stenophylla</i>             |            |      | 3  |    | 3  |    |          |     |          |     | 3              | 1     | 1     |   |
| RUBIACEAE        | <i>Spermacoce verticillata</i> *          |            |      | 2  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| ASTERACEAE       | <i>Sphaeranthus africanus</i>             |            |      | 1  |    | 2  |    |          |     |          |     | 2              |       | 1     |   |
| ASTERACEAE       | <i>Sphaeromorphaea australis</i>          |            |      | 2  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| SPHENOCLEACEAE   | <i>Sphenoclea zeylanica</i>               |            |      | 1  |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| POACEAE          | <i>Spinifex longifolius</i>               | Pitarika   | 1    | 9  |    | 12 |    |          |     |          |     | 12             | 1     | 1     |   |
| POACEAE          | <i>Sporobolus jacquemontii</i> *          |            |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| POACEAE          | <i>Sporobolus pyramidalis</i> *           |            |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| POACEAE          | <i>Sporobolus virginicus</i>              |            |      | 2  |    | 2  |    |          |     | 2        |     | 4              | 1     | 1     |   |
| VERBENACEAE      | <i>Stachytarpheta cayennensis</i> *       |            |      | 3  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| VERBENACEAE      | <i>Stachytarpheta jamaicensis</i> *       |            |      | 2  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| VERBENACEAE      | <i>Stachytarpheta mutabilis</i> *         |            |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| STACKHOUSIACEAE  | <i>Stackhousia intermedia</i>             |            |      | 5  | 12 | 18 |    |          | 11  |          |     | 41             | 1     | 1     |   |
| ACANTHACEAE      | <i>Staurogyne leptocaulis</i>             |            |      | 2  |    |    |    |          |     | 1        |     | 1              |       | 11    | <i>decumbens</i>                        |
| SCROPHULARIACEAE | <i>Stemodia lythrifolia</i>               |            |      |    |    |    |    |          |     | 1        |     | 1              |       |       |   |

| FAMILY           | scientific name                  | Tiwi name            | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i>                |
|------------------|----------------------------------|----------------------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|--|
| PROTEACEAE       | <i>Stenocarpus acacioides</i>    |                      |      | 4  |    | 16 |    | 6        | 7   |          | 3   | 32             | 1     | 1     | includes some former records of <i>S. cunninghamii</i> |
| PROTEACEAE       | <i>Stenocarpus verticis</i>      |                      | 1    | 4  |    | 3  | 19 |          |     |          |     | 22             | 1     | 1     |  |
| BLECHNACEAE      | <i>Stenochlaena palustris</i>    |                      |      | 3  |    | 25 | 62 |          |     |          |     | 87             | 1     | 1     |  |
| MENISPERMACEAE   | <i>Stephania japonica</i>        |                      |      | 3  |    | 4  | 19 | 1        | 3   | 4        |     | 26             | 1     | 1     | <i>japonica, timoriensis</i>                           |
| STERCULIACEAE    | <i>Sterculia holtzei</i>         |                      |      | 1  |    | 2  | 9  |          |     |          |     | 11             | 1     | 1     |  |
| STERCULIACEAE    | <i>Sterculia quadrifida</i>      | Wurranyini, Malikini | 1    | 7  |    | 34 | 57 |          | 5   | 2        | 3   | 101            | 1     | 1     |  |
| CONVOLVULACEAE   | <i>Stictocardia tiliifolia</i>   |                      |      | 1  |    |    | 3  |          |     |          |     | 3              | 1     | 1     |  |
| SCROPHULARIACEAE | <i>Striga curviflora</i>         |                      |      | 2  | 1  | 1  |    |          | 6   |          |     | 8              | 1     | 1     |  |
| LOGANIACEAE      | <i>Strychnos lucida</i>          |                      | 1    | 2  |    | 28 | 41 |          | 1   | 7        | 1   | 78             | 1     | 1     |  |
| LOGANIACEAE      | <i>Strychnos minor</i>           |                      |      | 14 |    | 7  | 43 |          |     |          |     | 50             | 1     | 1     |  |
| STYLIDIACEAE     | <i>Stylidium candelabrum</i>     |                      |      | 3  |    |    |    |          |     |          |     | 0              | 1     | 1     |  |
| STYLIDIACEAE     | <i>Stylidium capillare</i>       |                      |      |    |    | 1  |    |          |     |          |     | 1              | 1     |       |  |
| STYLIDIACEAE     | <i>Stylidium ceratophorum</i>    |                      |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |  |
| STYLIDIACEAE     | <i>Stylidium cordifolium</i>     |                      |      |    |    | 1  |    | 1        |     |          |     | 2              | 1     | 1     |  |
| STYLIDIACEAE     | <i>Stylidium dunlopianum</i>     |                      |      | 1  |    | 1  |    |          |     |          |     | 1              |       | 1     |  |
| STYLIDIACEAE     | <i>Stylidium fissilobum</i>      |                      |      | 1  |    | 1  |    |          |     |          |     | 1              |       | 1     |  |
| STYLIDIACEAE     | <i>Stylidium leptorrhizum</i>    |                      |      |    | 12 | 4  |    | 1        | 21  |          |     | 38             | 1     | 1     |  |
| STYLIDIACEAE     | <i>Stylidium multiscapum</i>     |                      |      | 1  |    | 1  |    |          |     |          |     | 1              |       | 1     |  |
| STYLIDIACEAE     | <i>Stylidium nominatum</i>       |                      |      | 3  |    |    |    |          |     |          |     | 0              | 1     | 1     |  |
| STYLIDIACEAE     | <i>Stylidium pachyrhizum</i>     |                      |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |  |
| STYLIDIACEAE     | <i>Stylidium pedunculatum</i>    |                      |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |  |
| STYLIDIACEAE     | <i>Stylidium rotundifolium</i>   |                      |      | 3  |    |    |    |          |     |          |     | 0              | 1     | 1     |  |
| STYLIDIACEAE     | <i>Stylidium schizanthum</i>     |                      |      | 4  |    | 6  |    |          |     |          |     | 6              | 1     | 1     |  |
| STYLIDIACEAE     | <i>Stylidium semipartitum</i>    |                      |      | 7  |    | 2  |    |          |     |          |     | 2              | 1     | 1     |  |
| STYLIDIACEAE     | <i>Stylidium tenerrimum</i>      |                      |      | 1  |    | 2  |    |          |     |          |     | 2              |       | 1     |  |
| FABACEAE         | <i>Stylosanthes guianensis</i> * |                      |      | 2  |    |    |    |          |     |          |     | 0              |       | 1     |  |
| FABACEAE         | <i>Stylosanthes hamata</i> *     |                      |      | 2  |    |    |    |          |     |          |     | 0              |       | 1     |  |
| FABACEAE         | <i>Stylosanthes humilis</i> *    |                      |      | 6  |    |    |    |          |     | 3        |     | 3              |       | 1     |  |
| FABACEAE         | <i>Stylosanthes viscosa</i> *    |                      |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |  |
| CHENOPODIACEAE   | <i>Suaeda arbusculoides</i>      | Purrawurrika         | 1    | 4  |    |    |    |          |     |          |     | 0              | 1     |       |  |
| ASTERACEAE       | <i>Synedrella nodiflora</i> *    |                      |      | 12 |    |    |    |          |     |          |     | 0              | 1     | 1     |  |
| MYRTACEAE        | <i>Syzygium angophoroides</i>    | Pintawunga           | 1    | 3  |    | 5  | 30 |          |     |          | 1   | 36             | 1     | 1     |  |
| MYRTACEAE        | <i>Syzygium armstrongii</i>      | Parntirringa         | 1    | 8  |    | 1  | 4  |          |     |          | 1   | 6              |       | 1     |  |



| FAMILY          | scientific name                   | Tiwi name   | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i> |
|-----------------|-----------------------------------|---|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| MYRTACEAE       | <i>Syzygium eucalyptoides</i>     | Tumurangkini,<br>Tumaranka                              | 1    | 3  | 37 | 25 |    | 6        | 9   |          | 6   | 83             | 1     | 1     | <i>bleseri</i>                          |
| MYRTACEAE       | <i>Syzygium fibrosum</i>          | Tiwulama  | 1    | 22 |    | 9  | 45 |          |     |          |     | 54             | 1     | 1     |   |
| MYRTACEAE       | <i>Syzygium forte</i>             | Pintawuni   | 1    | 11 |    | 2  | 46 |          |     |          | 2   | 50             | 1     | 1     | <i>forte,<br/>potamophilum</i>          |
| MYRTACEAE       | <i>Syzygium minutiflorum</i>      |   | 1    | 4  |    |    | 57 |          |     |          | 1   | 58             | 1     | 1     |   |
| MYRTACEAE       | <i>Syzygium nervosum</i>          |   |      |    |    | 6  | 1  |          |     |          |     | 7              | 1     | 1     |   |
| MYRTACEAE       | <i>Syzygium suborbiculare</i>     | Pinyawini,<br>Wurringawuni,<br>Purringawuni,<br>Pinyama | 1    | 15 | 4  | 39 |    | 4        | 7   |          | 14  | 68             | 1     | 1     | <i>coastal</i>                          |
| APOCYNACEAE     | <i>Tabernaemontana orientalis</i> |   |      | 12 |    | 4  | 43 |          |     |          |     | 47             | 1     | 1     |   |
| TACCACEAE       | <i>Tacca leontopetaloides</i>     | Aligirryaka,<br>Alarriga                                | 1    | 7  |    | 34 | 8  | 1        | 16  | 5        |     | 64             | 1     | 1     |   |
| ADIANTACEAE     | <i>Taenitis blechnoides</i>       |   |      | 18 |    | 1  | 30 |          |     |          |     | 31             | 1     | 1     |   |
| CAESALPINIACEAE | <i>Tamarindus indica</i> *        |   | 1    | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| RUBIACEAE       | <i>Tarenna australis</i>          |   |      | 1  |    |    | 12 |          |     |          |     | 12             | 1     | 1     |   |
| RUBIACEAE       | <i>Tarenna dallachiana</i>        |   |      | 12 |    | 28 | 43 |          | 1   | 1        | 1   | 74             | 1     | 1     | <i>expandens</i>                        |
| RUBIACEAE       | <i>Tarenna pentamera</i>          |   |      | 10 | 1  | 10 | 24 |          | 1   |          | 1   | 37             | 1     | 1     |   |
| RUBIACEAE       | <i>Tarennoidea wallichii</i>      |   |      | 7  |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| CHENOPODIACEAE  | <i>Tecticornia australasica</i>   | Purrawurrika  | 1    | 4  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| FABACEAE        | <i>Tephrosia A7640 bifacialis</i> |   |      | 3  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| FABACEAE        | <i>Tephrosia elliptica</i> *#     |   |      |    |    |    |    |          | 4   |          |     | 4              |       | 1     |   |
| FABACEAE        | <i>Tephrosia juncea</i>           |   |      | 2  |    | 2  |    | 1        |     |          |     | 3              | 1     | 1     |   |
| FABACEAE        | <i>Tephrosia lamproloboides</i>   |   |      | 4  |    | 2  |    |          |     |          |     | 2              | 1     |       |   |
| FABACEAE        | <i>Tephrosia leptoclada</i>       |   |      | 4  |    | 4  |    |          | 2   |          |     | 6              | 1     | 1     |   |
| FABACEAE        | <i>Tephrosia oblongata</i>        | Yirrimunukamini   | 1    | 4  |    | 3  |    |          |     |          |     | 3              | 1     | 1     |   |
| FABACEAE        | <i>Tephrosia porrecta</i>         |   |      | 4  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| FABACEAE        | <i>Tephrosia remotiflora</i>      | Majatama  | 1    | 15 |    | 14 |    |          |     |          |     | 14             | 1     | 1     |   |
| FABACEAE        | <i>Tephrosia simplicifolia</i>    |   |      | 2  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| FABACEAE        | <i>Tephrosia vestita</i> *#       |   |      |    |    |    |    |          | 2   |          |     | 2              |       | 1     |   |
| FABACEAE        | <i>Tephrosia villosa</i> *#       |   |      |    |    |    |    |          | 10  |          |     | 10             |       | 1     |   |
| COMBRETACEAE    | <i>Terminalia D20544 Black Pt</i> |   |      |    |    |    | 30 |          |     |          |     | 30             | 1     | 1     |   |
| COMBRETACEAE    | <i>Terminalia ferdinandiana</i>   | Pirlamunga  | 1    | 7  | 29 | 66 |    | 6        | 70  | 2        | 25  | 198            | 1     | 1     |   |
| COMBRETACEAE    | <i>Terminalia fitzgeraldii</i>    |   |      | 1  |    |    |    |          |     | 2        |     | 2              |       | 1     |   |
| COMBRETACEAE    | <i>Terminalia grandiflora</i>     | Tuluwunga   | 1    | 1  |    | 4  |    | 2        | 3   |          | 4   | 13             | 1     | 1     |   |
| COMBRETACEAE    | <i>Terminalia latipes</i>         |   |      |    |    |    |    |          |     |          | 6   | 6              | 1     |       | <i>latipes</i>                          |

| FAMILY         | scientific name                    | Tiwi name | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i> |
|----------------|------------------------------------|-----------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| COMBRETACEAE   | <i>Terminalia microcarpa</i>       | Tinginga  | 1    | 7  |    | 15 | 50 | 1        |     | 7        | 2   | 75             | 1     | 1     |   |
| COMBRETACEAE   | <i>Terminalia pterocarya</i>       |           |      | 3  |    | 3  |    |          | 2   | 1        | 1   | 7              | 1     | 1     |   |
| POACEAE        | <i>Thaumastochloa major</i>        |           |      | 5  | 64 | 45 |    | 6        | 74  |          |     | 189            | 1     | 1     |   |
| POACEAE        | <i>Thaumastochloa pubescens</i>    |           |      | 2  |    | 1  |    |          |     |          |     | 1              | 1     | 1     |   |
| POACEAE        | <i>Thaumastochloa rubra</i>        |           |      |    |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| THYMELAEACEAE  | <i>Thecanthes punicea</i>          |           |      | 2  |    | 2  |    | 1        | 3   |          |     | 6              | 1     | 1     |   |
| POACEAE        | <i>Themeda arguens</i>             |           |      | 6  |    | 10 |    |          | 15  |          |     | 25             | 1     | 1     |   |
| POACEAE        | <i>Themeda quadrivalvis</i>        |           |      |    |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| POACEAE        | <i>Themeda triandra</i>            |           |      | 1  |    | 9  |    | 4        |     |          |     | 13             | 1     | 1     |   |
| MALVACEAE      | <i>Thespesia populneoides</i>      | Alabanjar | 1    | 2  |    | 7  | 4  |          |     | 1        | 1   | 13             | 1     | 1     |   |
| MALVACEAE      | <i>Thespesia thespesioides</i>     |           |      | 3  |    | 4  |    |          |     | 1        |     | 5              |       | 1     |   |
| ORCHIDACEAE    | <i>Thrixspermum congestum</i>      |           |      | 3  |    | 1  | 7  |          |     |          |     | 8              | 1     | 1     |   |
| ACANTHACEAE    | <i>Thunbergia arnhemica</i>        |           |      | 1  |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| LILIACEAE      | <i>Thysanotus banksii</i>          |           |      | 1  |    | 4  |    |          |     |          |     | 4              | 1     | 1     |   |
| LILIACEAE      | <i>Thysanotus chinensis</i>        |           |      | 5  |    | 2  |    |          | 5   |          |     | 7              | 1     | 1     |   |
| RUBIACEAE      | <i>Timonius timon</i>              |           |      | 4  |    | 19 | 28 |          |     |          | 3   | 50             | 1     | 1     |   |
| MENISPERMACEAE | <i>Tinospora smilacina</i>         | Rokuni    | 1    | 5  |    | 35 | 25 |          | 3   | 2        |     | 65             | 1     | 1     |   |
| APIACEAE       | <i>Trachymene didisoides</i>       |           |      | 7  | 18 |    |    | 2        | 2   |          |     | 22             | 1     | 1     |   |
| APIACEAE       | <i>Trachymene lacerata</i>         |           |      | 3  |    | 1  |    |          |     |          |     | 1              | 1     | 1     |   |
| APIACEAE       | <i>Trachymene microcephala</i>     |           |      | 2  |    | 1  |    |          |     |          |     | 1              | 1     |       |   |
| APIACEAE       | <i>Trachymene rotundifolia</i>     |           |      | 2  |    | 1  |    |          |     |          |     | 1              | 1     |       |   |
| ULMACEAE       | <i>Trema tomentosa</i>             |           |      | 6  |    | 5  | 15 |          |     | 2        |     | 22             | 1     | 1     | <i>viridis</i>                          |
| AIZOACEAE      | <i>Trianthema portulacastrum</i> * |           |      | 2  |    |    |    |          |     | 1        |     | 1              | 1     | 1     |   |
| ZYGOPHYLLACEAE | <i>Tribulus cistoides</i> *        |           |      | 6  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| ZYGOPHYLLACEAE | <i>Tribulus terrestris</i> *       |           |      |    |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| CUCURBITACEAE  | <i>Trichosanthes holtzei</i>       |           |      |    |    | 4  | 2  |          |     |          |     | 6              |       | 1     |   |
| CYPERACEAE     | <i>Tricostularia undulata</i>      |           |      | 8  |    | 21 |    |          |     |          |     | 21             | 1     | 1     |   |
| ASTERACEAE     | <i>Tridax procumbens</i> *         |           |      | 5  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| RUBIACEAE      | <i>Triflorensia australis</i>      |           |      | 4  |    | 5  |    |          |     |          |     | 5              | 1     | 1     |   |
| POACEAE        | <i>Triodia microstachya</i>        | Mulani    | 1    | 3  |    | 1  |    | 1        |     |          |     | 2              | 1     |       |   |
| TILIACEAE      | <i>Triumfetta albida</i>           |           |      | 2  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| TILIACEAE      | <i>Triumfetta aquila</i>           |           |      | 3  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| TILIACEAE      | <i>Triumfetta pentandra</i> *      |           |      | 12 |    | 3  |    |          |     |          |     | 3              | 1     | 1     |   |
| TILIACEAE      | <i>Triumfetta repens</i>           |           |      | 3  |    | 1  |    |          |     |          |     | 1              | 1     |       |   |
| TILIACEAE      | <i>Triumfetta rhomboidea</i>       |           |      | 8  |    | 6  |    |          |     | 10       |     | 16             | 1     | 1     |   |
| MORACEAE       | <i>Trophis scandens</i>            |           |      | 2  |    | 6  | 25 |          |     |          |     | 31             | 1     | 1     | <i>scandens</i>                         |
| ORCHIDACEAE    | <i>Tropidia curculigoides</i>      |           |      |    |    |    | 1  |          |     |          |     | 1              |       | 1     |   |
| MELIACEAE      | <i>Turraea pubescens</i>           |           |      |    |    |    | 6  |          |     |          |     | 6              |       | 1     |   |

| FAMILY           | scientific name                     | Tiwi name  | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i> |
|------------------|-------------------------------------|------------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| ASCLEPIADACEAE   | <i>Tylophora cinerascens</i>        |            |      | 5  |    | 3  |    |          |     |          |     | 3              | 1     | 1     |   |
| ASCLEPIADACEAE   | <i>Tylophora erecta</i>             |            |      | 5  |    | 1  |    |          | 1   |          |     | 2              |       | 1     |   |
| ASCLEPIADACEAE   | <i>Tylophora flexuosa</i>           |            |      | 6  |    | 19 | 36 |          |     | 7        |     | 62             | 1     | 1     |   |
| TYPHACEAE        | <i>Typha domingensis</i>            |            |      |    |    |    |    |          |     |          |     | 0              |       | 1     | reported only by<br>Holtze (1892)       |
| ARACEAE          | <i>Typhonium cochleare</i>          |            |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| ARACEAE          | <i>Typhonium flagelliforme</i>      |            |      | 5  |    | 3  | 9  |          | 4   |          |     | 16             | 1     | 1     |   |
| ARACEAE          | <i>Typhonium jonesii</i>            | Jilarringa | 1    | 4  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| ARACEAE          | <i>Typhonium mirabile</i>           |            |      | 5  |    | 3  |    |          |     |          |     | 3              |       | 1     |   |
| ARACEAE          | <i>Typhonium russell-smithii</i>    |            |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| FABACEAE         | <i>Urania lagopodioides</i>         |            |      | 2  | 3  | 13 |    |          | 24  | 1        |     | 41             | 1     | 1     |   |
| MALVACEAE        | <i>Urena lobata</i>                 |            |      | 3  |    | 1  | 2  |          |     |          |     | 3              |       | 1     |   |
| POACEAE          | <i>Urochloa distachya</i>           |            |      | 2  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| POACEAE          | <i>Urochloa holosericea</i>         |            |      | 3  |    | 11 |    |          | 1   | 3        |     | 15             | 1     | 1     | <i>holosericea</i>                      |
| POACEAE          | <i>Urochloa maxima</i> *+           |            |      | 4  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| POACEAE          | <i>Urochloa mosambicensis</i> *     |            |      | 8  |    |    |    |          |     |          |     | 0              | 1     | 1     |   |
| POACEAE          | <i>Urochloa mutica</i> *+           |            |      |    |    |    |    |          |     |          |     | 0              | 1     |       |   |
| POACEAE          | <i>Urochloa piligera</i>            |            |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| POACEAE          | <i>Urochloa polyphylla</i>          |            |      |    |    | 1  |    |          |     |          |     | 1              | 1     |       |   |
| POACEAE          | <i>Urochloa pubigera</i>            |            |      | 2  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| POACEAE          | <i>Urochloa subquadripara</i>       |            |      | 1  | 18 | 1  |    |          | 23  | 1        |     | 43             | 1     | 1     |   |
| LENTIBULARIACEAE | <i>Utricularia aurea</i>            |            |      |    |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| LENTIBULARIACEAE | <i>Utricularia caerulea</i>         |            |      | 4  |    | 8  |    |          |     |          |     | 8              | 1     | 1     |   |
| LENTIBULARIACEAE | <i>Utricularia capilliflora</i>     |            |      | 2  |    | 3  |    |          |     |          |     | 3              | 1     |       |   |
| LENTIBULARIACEAE | <i>Utricularia chrysantha</i>       |            |      | 5  |    | 8  |    | 2        |     |          |     | 10             | 1     | 1     |   |
| LENTIBULARIACEAE | <i>Utricularia D17394 parvialba</i> |            |      | 2  |    | 8  |    |          |     |          |     | 8              | 1     |       |   |
| LENTIBULARIACEAE | <i>Utricularia gibba</i>            |            |      | 1  |    | 1  |    |          |     |          |     | 1              | 1     |       |   |
| LENTIBULARIACEAE | <i>Utricularia involvens</i>        |            |      | 1  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| LENTIBULARIACEAE | <i>Utricularia kimberleyensis</i>   |            |      | 3  |    | 6  |    |          |     |          |     | 6              | 1     | 1     |   |
| LENTIBULARIACEAE | <i>Utricularia lasiocaulis</i>      |            |      | 1  |    | 1  |    |          |     |          |     | 1              | 1     |       |   |
| LENTIBULARIACEAE | <i>Utricularia leptoplectra</i>     |            |      | 7  |    | 13 |    |          |     |          |     | 13             | 1     | 1     |   |
| LENTIBULARIACEAE | <i>Utricularia leptorhyncha</i>     |            |      | 1  |    | 1  |    |          |     |          |     | 1              | 1     |       |   |
| LENTIBULARIACEAE | <i>Utricularia limosa</i>           |            |      |    |    | 1  |    |          |     |          |     | 1              | 1     |       |   |
| LENTIBULARIACEAE | <i>Utricularia minutissima</i>      |            |      | 5  |    | 2  |    |          |     |          |     | 2              | 1     | 1     |   |
| LENTIBULARIACEAE | <i>Utricularia quinquedentata</i>   |            |      |    |    | 2  |    |          |     |          |     | 2              |       | 1     |   |
| LENTIBULARIACEAE | <i>Utricularia subulata</i>         |            |      |    |    | 1  |    |          |     |          |     | 1              | 1     |       |   |
| LENTIBULARIACEAE | <i>Utricularia uliginosa</i>        |            |      | 6  |    | 7  |    |          |     |          |     | 7              | 1     | 1     |   |
| ANNONACEAE       | <i>Uvaria holtzei</i>               |            |      | 11 |    | 10 | 46 |          |     |          |     | 56             | 1     | 1     |   |

| FAMILY         | scientific name                            | Tiwi name      | Pur. | HR | BW | HP | RF | NTV<br>M | RFe | RFe<br>2 | NHT | total<br>quads | Bath. | Melv. | Notes;<br><i>subspecies<br/>present</i> |
|----------------|--|----------------|------|----|----|----|----|----------|-----|----------|-----|----------------|-------|-------|---|
| MELIACEAE      | <i>Vavaea amicornum</i>                    |                |      |    |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| MELIACEAE      | <i>Vavaea australiana</i>                  |                |      | 3  |    | 3  | 21 |          |     |          |     | 24             | 1     | 1     |   |
| ASTERACEAE     | <i>Vernonia patula</i>                     |                |      | 3  |    |    | 3  |          |     |          |     | 3              |       | 1     |   |
| MYRTACEAE      | <i>Verticordia cunninghamii</i>            |                |      |    | 8  | 7  |    | 1        |     |          |     | 16             | 1     | 1     |   |
| MYRTACEAE      | <i>Verticordia verticillata</i>            |                |      | 3  |    | 2  |    | 1        |     |          |     | 3              | 1     | 1     |   |
| FABACEAE       | <i>Vigna lanceolata</i>                    |                |      | 4  |    | 31 |    | 10       | 46  |          |     | 87             | 1     | 1     | <i>filiformis</i>                       |
| FABACEAE       | <i>Vigna radiata</i>                       |                |      | 1  |    | 2  |    |          | 2   | 1        |     | 5              |       | 1     | <i>sublobata</i>                        |
| FABACEAE       | <i>Vigna vexillata</i>                     | Wuliwirranga   | 1    | 9  | 4  | 10 |    | 1        | 18  |          |     | 33             | 1     | 1     | <i>angustifolia,<br/>vexillata</i>      |
| VISCACEAE      | <i>Viscum articulatum</i>                  |                |      | 12 |    | 1  | 2  |          | 1   |          |     | 4              | 1     | 1     |   |
| VERBENACEAE    | <i>Vitex acuminata</i>                     | Wurnika        | 1    | 5  |    | 5  | 19 |          |     | 2        | 1   | 27             | 1     | 1     |   |
| VERBENACEAE    | <i>Vitex glabrata</i>                      | Wurnika        | 1    | 6  |    | 8  | 27 |          | 5   | 4        | 1   | 45             | 1     | 1     |   |
| VERBENACEAE    | <i>Vitex rotundifolia</i>                  |                |      | 3  |    | 5  |    |          |     |          |     | 5              | 1     | 1     |   |
| VITTARIACEAE   | <i>Vittaria ensiformis</i>                 |                |      | 9  |    | 4  | 23 |          |     |          |     | 27             | 1     | 1     |   |
| STERCULIACEAE  | <i>Waltheria indica</i>                    |                |      |    |    | 1  |    |          | 1   |          |     | 2              |       | 1     |   |
| CYPERACEAE     | <i>Websteria confervoides</i>              |                |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| ASTERACEAE     | <i>Wedelia urticifolia</i>                 |                |      | 5  |    | 16 |    |          | 14  | 1        |     | 31             | 1     | 1     |   |
| POACEAE        | <i>Whiteochloa airoides</i>                |                |      |    |    |    |    |          | 1   |          |     | 1              |       | 1     |   |
| POACEAE        | <i>Whiteochloa capillipes</i>              |                |      | 2  |    | 15 |    |          | 18  | 1        |     | 34             | 1     | 1     |   |
| APOCYNACEAE    | <i>Wrightia pubescens</i>                  |                |      | 6  |    | 4  | 32 |          |     |          |     | 36             | 1     | 1     |   |
| APOCYNACEAE    | <i>Wrightia saligna</i>                    |                |      | 4  | 33 | 13 |    | 3        | 20  |          |     | 69             | 1     | 1     |   |
| MYRTACEAE      | <i>Xanthostemon paradoxus</i>              |                |      |    |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| MYRTACEAE      | <i>Xanthostemon psidioides</i>             | Tinginga       | 1    | 4  |    | 12 | 13 |          |     |          | 3   | 28             | 1     | 1     |   |
| CONVOLVULACEAE | <i>Xenostegia tridentata</i>               |                |      | 3  |    | 4  |    |          | 2   |          |     | 6              | 1     | 1     |   |
| POACEAE        | <i>Xerochloa imberbis</i>                  |                |      | 3  |    | 2  |    |          |     |          |     | 2              | 1     | 1     |   |
| MELIACEAE      | <i>Xylocarpus granatum</i>                 |                |      | 8  |    | 3  |    |          |     |          | 2   | 5              | 1     | 1     |   |
| MELIACEAE      | <i>Xylocarpus moluccensis</i>              | Pupwurrupwani  | 1    | 8  |    | 12 |    |          |     |          |     | 12             | 1     | 1     |   |
| ANNONACEAE     | <i>Xylophia D30127 Melville<br/>Island</i> |                |      | 1  |    |    | 5  |          |     |          |     | 5              | 1     | 1     |   |
| XYRIDACEAE     | <i>Xyris cheumatophila</i>                 |                |      | 3  |    | 11 |    |          |     |          |     | 11             | 1     | 1     |   |
| XYRIDACEAE     | <i>Xyris complanata</i>                    |                |      | 7  | 3  | 46 |    | 4        | 8   |          |     | 61             | 1     | 1     |   |
| XYRIDACEAE     | <i>Xyris indica</i>                        |                |      | 2  |    |    |    |          |     |          |     | 0              |       | 1     |   |
| XYRIDACEAE     | <i>Xyris oligantha</i>                     |                |      | 1  |    |    |    |          |     |          |     | 0              | 1     |       |   |
| XYRIDACEAE     | <i>Xyris pusilla</i>                       |                |      |    |    | 1  |    |          |     |          |     | 1              |       | 1     |   |
| POACEAE        | <i>Yakirra nulla</i>                       |                |      | 2  | 18 |    |    |          | 8   |          |     | 26             |       | 1     |   |
| RUTACEAE       | <i>Zanthoxylum parviflorum</i>             | Yarlakarliwuni | 1    | 5  |    | 15 | 40 |          |     |          |     | 55             | 1     | 1     |   |
| RHAMNACEAE     | <i>Ziziphus oenopolia</i>                  |                |      | 2  |    | 1  | 10 |          |     | 2        |     | 13             | 1     | 1     |   |
| RHAMNACEAE     | <i>Ziziphus quadrilocularis</i>            |                |      |    |    |    | 18 |          |     |          |     | 18             | 1     | 1     |   |

| <b>FAMILY</b> | <b>scientific name</b>  | <b>Tiwi name</b> | <b>Pur.</b> | <b>HR</b> | <b>BW</b> | <b>HP</b> | <b>RF</b> | <b>NTV<br/>M</b> | <b>RFe</b> | <b>RFe<br/>2</b> | <b>NHT</b> | <b>total<br/>quads</b> | <b>Bath.</b> | <b>Melv.</b> | <b>Notes;<br/><i>subspecies<br/>present</i></b> |
|---------------|-------------------------|------------------|-------------|-----------|-----------|-----------|-----------|------------------|------------|------------------|------------|------------------------|--------------|--------------|---|
| FABACEAE      | <i>Zornia disticha</i>  |                  |             | 4         |           |           |           |                  |            |                  |            | 0                      | 1            | 1            |   |
| FABACEAE      | <i>Zornia prostrata</i> |                  |             | 7         |           | 3         |           |                  |            |                  |            | 3                      | 1            | 1            |   |

## **Appendix B.**

### **Dossiers on threatened plant taxa recorded from the Tiwi Islands.**

These accounts are derived from Anon (2002) *Threatened species of the Northern Territory. Information package*. NT Department of Infrastructure Planning and Environment, Darwin.; but updated where more recent information is available.

Note that distribution maps show NT distributions only: for a few of these species, distributions extend beyond the NT.

## ***Burmannia* D61177 Bathurst Island**

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### **Conservation status**

Australia (*Environment Protection and Biodiversity Conservation Act 1999*):

Endangered.

Northern Territory (*Territory Parks and Wildlife Conservation Act 2000*): Endangered.

### **Description**

A herbaceous leafless saprophyte to 12 cm tall, with a small tuber. All parts translucent white, including stem. An undescribed species closely related to the Asian species *B. bifaria* JJS (Jonker, 1954).

Flowering: June, Nov. Fruiting: June.



*Burmannia* D61177 Bathurst Island.  
(Photo K. Brennan)

### **Ecology**

Very little is known of the ecology of this plant. It is recorded from wet spring-fed jungles growing out of damp peat in raised areas.

Uncommon on deep, undisturbed peat, *Burmannia* seems to have a disturbance requirement and the species may be able to colonise areas lightly disturbed by pigs. However, plants recorded in areas of pig rooting were only found where they were afforded protection within a network of sizeable roots. The saprophytic habit requires soil organic material and the establishment of this species may not occur on mineral soil (Fensham 1993).

### **Conservation assessment**

Recorded from two subpopulations in 1991 with a total population estimated between 500-2000 individuals in a 40 ha area. None were detected in the area in 1998-2000. Only one population of six individuals was recorded in 2001. This taxon qualifies as Endangered (under criteria B1ab(iii)+2ab(iii); C2b) based on:

- an extent of occurrence estimated to be <5000 km<sup>2</sup>

- an area of occupancy estimated to be <math><500\text{ km}^2</math>
- extreme fluctuations in number of locations and subpopulations and
- an inferred continuing decline due to extensive and frequent pig disturbance.

### Threatening processes

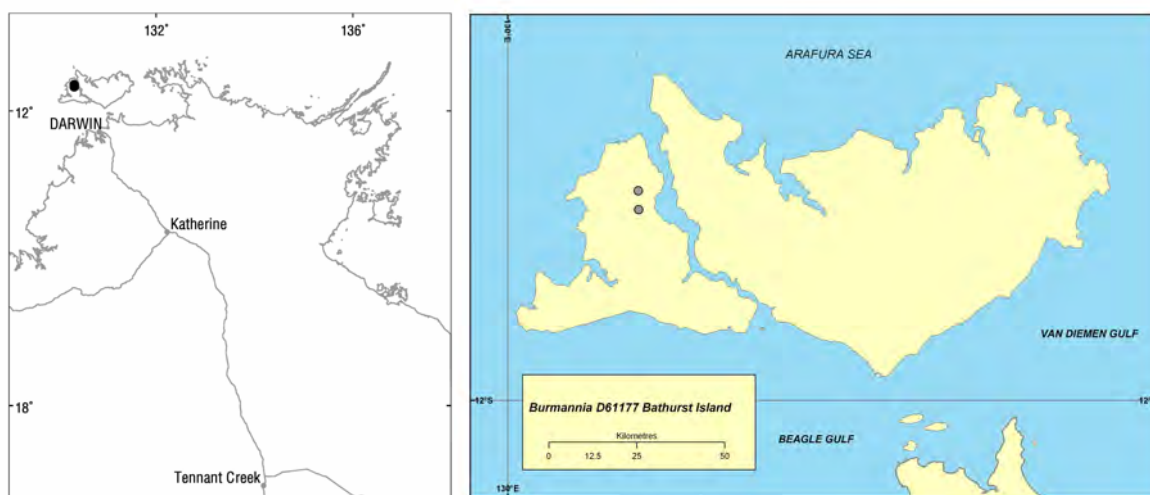
There is evidence to suggest that feral pigs are responsible for excavating *Burmannia* in their search for food.

### Distribution

The entire known distribution is two locations on Bathurst Island.

*Conservation reserves where reported:*

None.



Known locations of *Burmannia* D61177 Bathurst Island.

### Conservation objectives and management

Further research on the impact of pig disturbance, the environmental requirements of the species and the dynamics of the population are urgently required. Fencing of some areas of habitat is required to afford protection from pigs.

### Compiled by

Raelee Kerrigan , Ian Cowie, Bryan Baker  
[January 2002]

### References

- Fensham, R.J. 1993 The impact of pig rooting on populations of *Burmannia* sp., a rare rainforest herb on Bathurst Island. *Proc. R. Soc. Qd* 103:5-12.  
Jonker, F.P. (1954). Burmanniaceae. *Flora Malesiana* 4:13-26.



## ***Calochilus caeruleus*** L.O.Williams

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### **Conservation status**

Australia (*Environment Protection and Biodiversity Conservation Act 1999*): Not listed.  
Northern Territory (*Territory Parks and Wildlife Conservation Act 2000*): Vulnerable.

### **Description**

Erect terrestrial orchid, dying back to an underground tuber each dry season. Leaf to 40 cm x 8 mm, shallowly three-cornered in cross section and fleshy. Flower stem to 80 cm tall, slender, wiry and bearing four to eight flowers. Flowers greenish with red-brown markings and red labellum hairs.

Flowering: Dec-Jan. Fruiting: Jan.



*Calochilus caeruleus*

### **Ecology**

The species grows in swamps and seasonally inundated flats in open forest, wet heathland and *Melaleuca* woodland. The flower stem emerges before the leaves and these are not fully developed until after the seeds are shed. Each flower lasts about one day and usually only one or two open on an inflorescence at once.

### **Conservation assessment**

This species is classified as **Vulnerable** (under criteria D1+2) based on:

- a population size estimated to be <1000 and
- a restricted distribution estimated to be <20 km<sup>2</sup>.

Current data supports a category of Endangered. However, it has been downgraded due to the probable negative collection bias associated with this species. The flowering period is short and occurs during the early wet season when preferred habitat is difficult to access.

The classification of data deficient is unwarranted because of the considerable survey effort on Melville and Bathurst Island during the wet season in 2000-01.

### Threatening processes

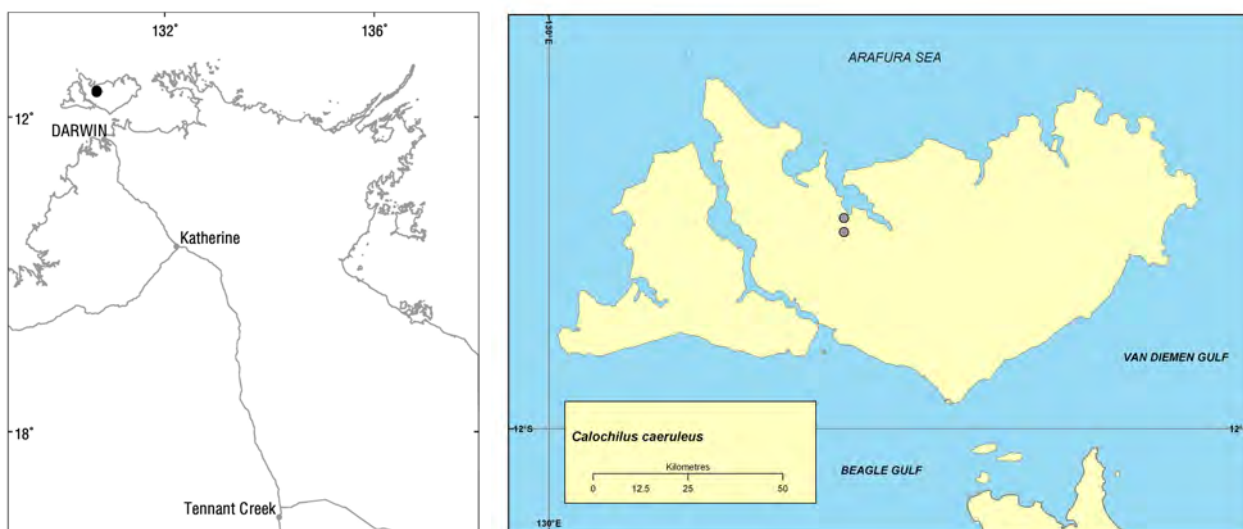
With a very restricted distribution and small population this species is susceptible to stochastic events. As a terrestrial orchid threatening processes would include weed infestation, changes in hydrology and impact of fire. The presence and impact of these processes are as yet unknown.

### Distribution

Tropical Qld, NT, WA and New Guinea. In the NT, it is only known from two collections (in 1975 and 1992) on Melville Island. These are likely to be from the same population.

*Conservation reserves where reported:*

None.



Known locations of *Calochilus caeruleus*.

### Conservation objectives and management

Further taxon specific surveys are required to determine the status and management requirements of the population.

### Compiled by

Raelee Kerrigan, Ian Cowie, Bryan Baker  
[February 2002]

### References

- Jones, D. L. (1988) *Native Orchids of Australia*. Reed, Australia.  
Woinarski, J., Brennan, K., Hempel, C., Firth, R. and Watt, F. (2000) *Biodiversity Conservation on the Tiwi Islands: Plants, vegetation types and terrestrial vertebrates on Melville Island*. Unpublished report. Parks and Wildlife Commission of NT, Palmerston.

## ***Cephalomanes obscurum* (Blume) K.Iwats.**

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### **Conservation status**

Australia (*Environment Protection and Biodiversity Conservation Act 1999*): Not listed.  
Northern Territory (*Territory Parks and Wildlife Conservation Act 2000*): Endangered.

### **Description**

Terrestrial fern, erect to 20 cm tall. Leaf blade 3-pinnate to 3-pinnate-pinnatifid, 5-15 cm long, 2-9 cm wide. Clusters of spores (sori) erect, borne on short lobes in the axils of tertiary segments.



*Cephalomanes obscurum*.

(Photo J. Risler)

### **Ecology**

Recorded as growing in damp gullies along creek banks or under rock ledges, in tropical and subtropical rain forest.

Recorded as a common coloniser, growing in dense patches, with young plants (sporelings) appearing in disturbed sites.

### **Conservation assessment**

This taxon qualifies for **Endangered** (under criteria D) based on the number of mature individuals in the total population estimated to be <250.

The Magela Creek population, collected in 1984, consisted of four individuals. The Tarracumbie population first collected in 1975 and last collected in 2000 consists of approximately 100 individuals. Additional populations have not been collected nor has the second population on Melville Island been recollected since 1994. This is despite substantial survey effort on the Tiwi Islands in the last 3-4 years.

It is possible that more populations exist. However, using the precautionary principle, the status of Endangered is given based on estimates of population size.

### Threatening processes

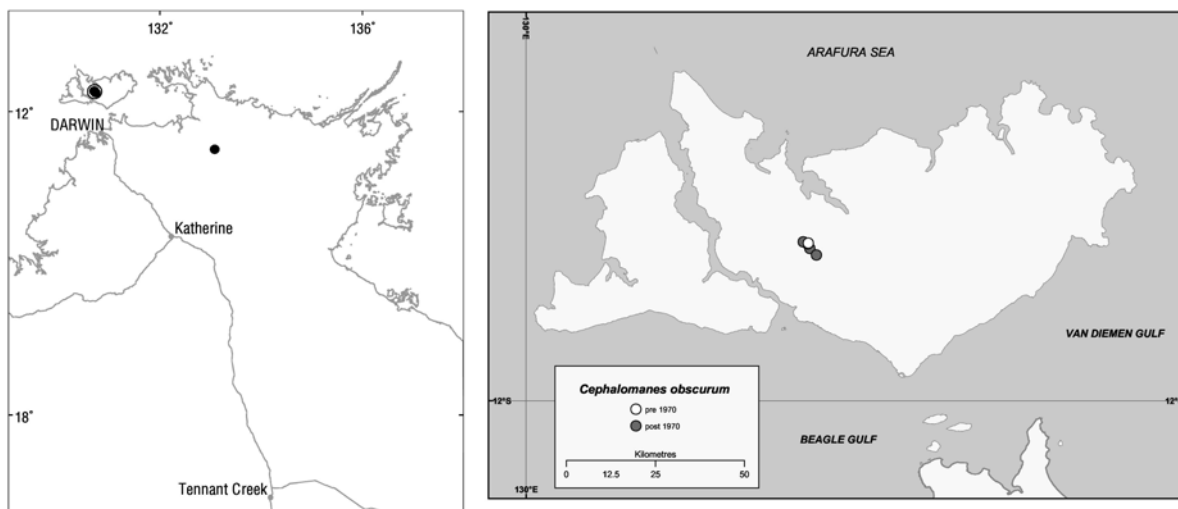
With a small population size this species is susceptible to stochastic events. Changes to hydrology and infestation from exotic weeds have the potential to threaten known populations but at present they are not imminent threats.

### Distribution

Occurs from north-eastern Qld to north-eastern NSW; also in Sri Lanka, southern India to Taiwan, Malesia, Solomon Island and possibly Vanuatu. In the NT, collected from three localities: Tarracumbie Falls and a nearby location on Melville Island, and Magela Creek in Arnhem Land.

*Conservation reserves where reported:*

None.



Known locations of *Cephalomanes obscurum*. (o = pre 1970; • = post 1970)

### Conservation objectives and management

Further survey is required to monitor the known populations and to search for others.

### Compiled by

Raelee Kerrigan, Ian Cowie, Bryan Baker  
[February 2001]

### References

- Bostock, P.D. and Spokes, M.Tracey. (1998). Hymenophyllaceae. *Flora of Australia* 48. ABRIS, Canberra.
- Liddle, D.T., Russell-Smith, J., Brock, J., Leach, G.J. and Connors, G.T. (1994) *Atlas of the vascular rainforest plants of the Northern Territory*. Flora of Australia Supplementary Series No. 3, ABRIS, Canberra.

## *Cycas armstrongii* Miq

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### Conservation status

Australia (*Environment Protection and Biodiversity Conservation Act 1999*): Not listed.  
Northern Territory (*Territory Parks and Wildlife Conservation Act 2000*): Vulnerable.

### Description

Medium cycad up to 6 m tall with a slender trunk 6-12 cm in diameter. Branching occurs along with occasional offsets and basal suckers. Leaves form an obliquely erect to spreading crown. Each has 160-300 leaflets attached to the rachis at about 70° with a prominent midrib above.



*Cycas armstrongii*  
(Photo D. Liddle)

### Ecology

Mainly in open grassy woodland on yellow and red earths, limited in the area by drainage.

### Conservation assessment

This species is locally abundant with less than 1% of the population included in conservation reserves. Applying the precautionary principle within the range, this species qualifies as **Vulnerable** (under criteria A4ce) based on a predicted >30% reduction in population size over a 100 year period commencing a decade ago.

Available habitat proximal to Darwin and the Litchfield Shire has been reduced due to land clearing for urban, rural residential and horticultural purposes. Such land clearing is expected to continue as Darwin expands. In particular prime cycad habitat with deep loamy soil has been identified as land suitable for horticulture. It is anticipated that substantial areas of prime habitat on the Tiwi Islands will be cleared for forestry. In

areas not subject to clearing there is a major threat from the combined impact of introduced grasses and fire whereby increased fuel loads lead to increased mortality of adult stems.

### Threatening processes

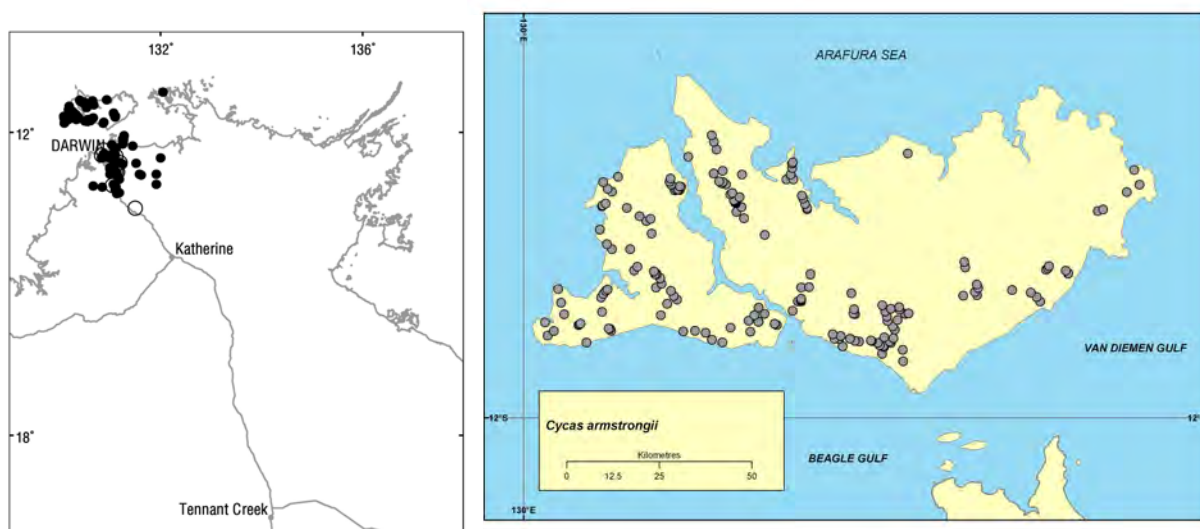
Land clearing due to the expansion of Darwin, rural residential living, horticulture, agriculture and forestry are the major threats to the species. Prime habitat for *C. armstrongii* includes deep loamy soils suitable for horticulture, agriculture and forestry. Mortality in excess of 20% of adult stems per fire event has been recorded when subject to fuel loads of 20 tonnes per hectare (D. Liddle, unpublished data). The exotic pasture species, Gamba Grass *Andropogon gayanus*, supports fuel loads up to 20 tonnes per hectare (Barrow 1995) and the exotic Perennial Mission Grass *Pennisetum polystachyon*, supports fuel loads up to 27 tonnes per hectare (Panton 1993). Both of these exotic species are spreading rapidly and have the potential to extend over the full range of *C. armstrongii*. Fire also reduces seed viability in *C. armstrongii* (D. Liddle, unpublished data).

### Distribution

Endemic to the NT. Known from Gunn Point to Hayes Creek, west to within 50 km of the coast and east to the Mary River Catchment. Also on the Tiwi Islands and Cobourg Peninsula.

#### *Conservation reserves where reported:*

Berry Springs Nature Park, Blackmore River Conservation Reserve, Casuarina Coastal Reserve, Djukbinj National Park, Garig Gunak Barlu National Park, Holmes Jungle Nature Park, Howard Springs Nature Park, Howard Springs Hunting Reserve, Litchfield National Park and Manton Dam Recreation Area.



Known locations of *Cycas armstrongii* (o = pre 1970; ● = post 1970).

**Conservation objectives and management**

Reservation of high quality habitat, control of exotic grasses and fire management are priority management requirements. Promotion of the value of cycad habitat through the economic returns gained by the sustainable use of this species may assist conservation of the species.

**Compiled by**

David Liddle, Raelee Kerrigan, Ian Cowie, Bryan Baker  
[May 2002]

**References**

- Anon. (1997) *A Management Program for Cycads in the Northern Territory of Australia*. Parks and Wildlife Commission of NT.
- Barrow, P. (1995) *The Ecology and Management of Gamba Grass (Andropogon gayanus Kunth.)* Final Report to the Australian Nature Conservation Agency. Northern Territory Department of Primary Industry and Fisheries.
- Panton, W.J. (1993) Changes in Post World War II Distribution and Status of Monsoon Rainforests in the Darwin Area. *Australian Geographer* **24**, 50-59.

## ***Dendromyza reinwardtiana*** (Blume ex Kunth) Danser

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### **Conservation status**

Australia (*Environment Protection and Biodiversity Conservation Act 1999*): Not listed.  
Northern Territory (*Territory Parks and Wildlife Conservation Act 2000*): Vulnerable.

### **Description**

Parasitic vine or scrambling shrub. Leaves alternate, elliptic to obovate, 20-100 mm long, with 3-9 longitudinal primary veins. Separate male and female flowers. Fruit pink, ovoid 6-8 mm long.

Fruiting: Jan, Sep, Nov.



*Dendromyza reinwardtiana*.

### **Ecology**

Found in perennial wet vine forest, where it is usually hosted by *Calophyllum soulattri* and *Syzygium eucalyptoides* subsp. *bleeseri*.

### **Conservation assessment**

This species is classified as **Vulnerable** (under criteria D1+2) based on:

- a population size estimated at <1000 individuals, with <20 individuals noted from one site (pers obs. R. Kerrigan); and
- a restricted area of occupancy (estimated to be <20 km<sup>2</sup>).

### **Threatening processes**

With a small population size and restricted distribution this species is susceptible to stochastic events. As an epiphyte, loss of habitat via cyclonic events is a potential threat. Changes to hydrology are also a possible threat, although not imminent. Wet riparian vine forests are more susceptible to fire following a reduction in water availability.



### Conservation objectives and management

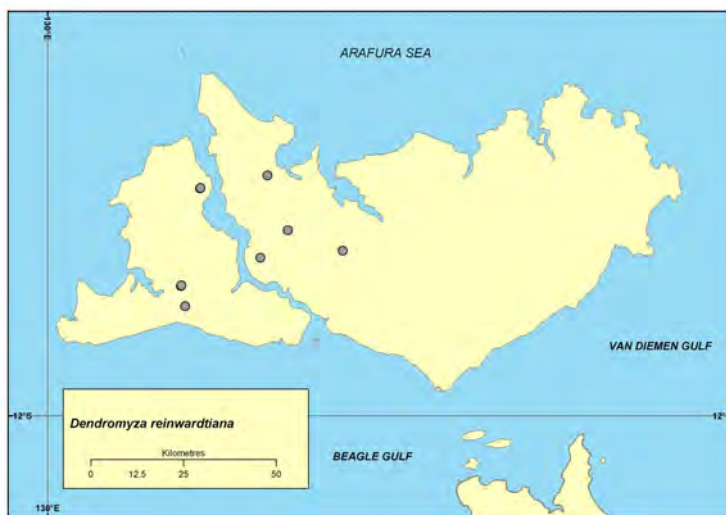
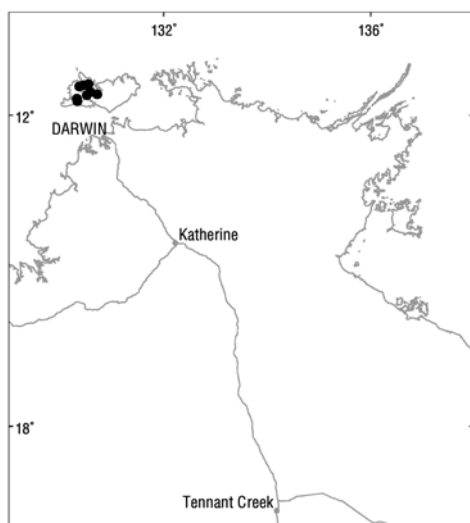
Research is required to establish the status of this population and the extent of its distribution. It is difficult to prescribe recovery actions without knowledge on the dynamics of the population or the associated threats. Management of fire in surrounding savanna is required to ensure that fires do not burn into the vine forests. Collection of propagation material and translocation to a botanic gardens may be required.

### Distribution

From Sumatra, Luzon to Papua New Guinea. In Australia, known from Cape York and NT. In the Northern Territory the species is only found on Bathurst and Melville Island. It is known from seven sites, three from Bathurst and four from Melville Island.

*Conservation reserves where reported:*

None.



Known locations of *Dendromyza reinwardtiana*.

### Compiled by

Raelee Kerrigan, Ian Cowie, Bryan Baker  
[February 2002]

### References

- Dunlop, C.R., Leach, G.J. and Cowie, I.D. (1995). *Flora of the Darwin Region Vol 2*. Conservation Commission of the Northern Territory, Government Printer of the Northern Territory, Darwin.
- Woinarski, J., Brennan, K., Hempel, C., Firth, R. and Watt, F. (2000). *Biodiversity Conservation on the Tiwi Islands: Plants, vegetation types and terrestrial vertebrates on Melville Island*. Unpublished report. Parks and Wildlife Commission of NT, Palmerston.

## *Elaeocarpus miegei* Weibe

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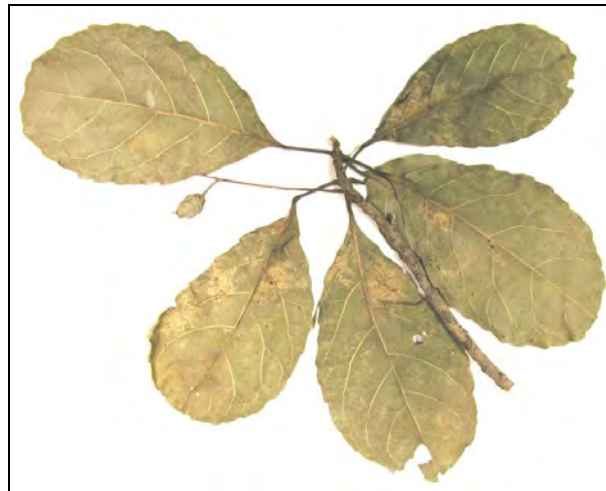
### Conservation status

Australia (*Environment Protection and Biodiversity Conservation Act 1999*): Not listed.  
Northern Territory (*Territory Parks and Wildlife Conservation Act 2000*): Critically Endangered.

### Description

Tree to 35 m tall. Occasionally reported to have buttresses. Recorded in Flora of PNG (Coode 1981) to be a variable species. Distinguished from *Elaeocarpus amhemicus* by longer petals (3 – 3.5 mm in *E. amhemicus* and 5 mm long in *E. miegei*), and leaf shape (elliptic acute and usually acuminate in *E. amhemicus*, obovate and obtuse in *E. miegei*).

Fruiting: Nov.



*Elaeocarpus miegei*

### Ecology

This species grows in permanently moist soils in wet rainforest patches.

### Conservation assessment

No records of this taxon have been made since 1989, despite concerted search efforts on the Tiwi Islands in 1998-2001. Without any data or detailed knowledge of abundance it is very difficult to assign a category. Given the survey effort applied to this taxon, its habitat on the Tiwi Islands, the non-cryptic nature of the species, and use of the precautionary principle, a status of **Critically Endangered** (under criteria D) is warranted based on a projected number of mature individuals of <50. It is possible that this taxon is not reproducing in the area and has been brought in by frugivorous birds. As such it may qualify as a vagrant or visitor. However, the sole collection in the NT Herbarium, Darwin does record fruit.

### Threatening processes

Potential threats include cyclonic events, feral animal activity (which may impact on recruitment), changes to hydrology and the subsequent threat from fire.

### Conservation objectives and management

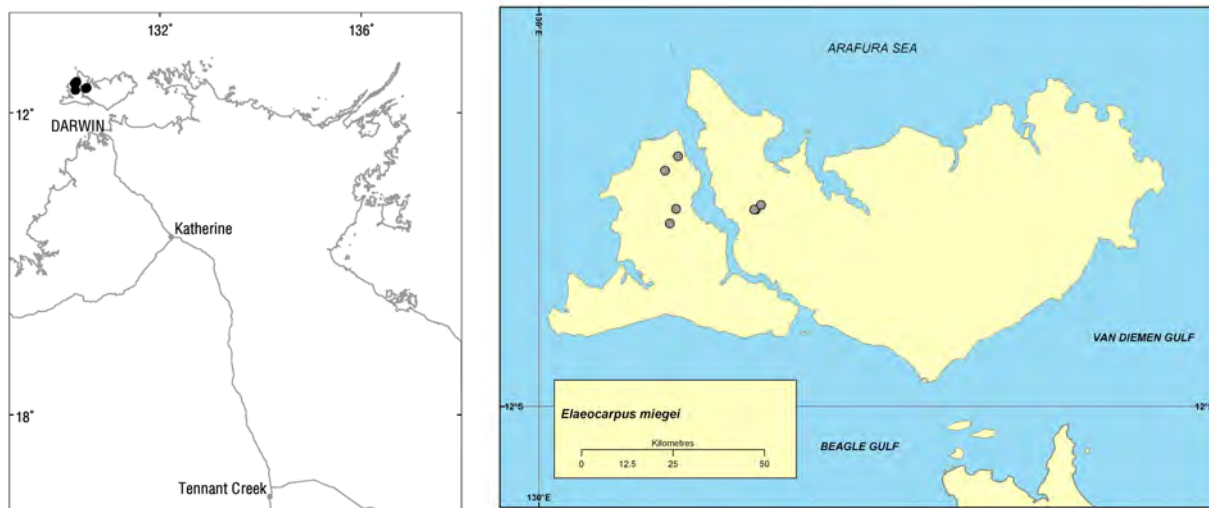
Further research into the status and extent of the population is required.

### Distribution

The only Australian occurrences of this tall rainforest tree are on the Tiwi Islands. Beyond Australia, it is also known from New Guinea, Malesia and the Solomon Islands. On the Tiwi Islands, it has been recorded from six wet rainforest patches. Only one specimen is lodged at the NT Herbarium in Darwin. Only one tree was recorded for this locality.

*Conservation reserves where reported:*

None.



Known locations of *Elaeocarpus miegei*.

### Compiled by

Raelee Kerrigan, Ian Cowie, Bryan Baker  
[January 2002]

### References

- Coode, M.J.E. (1981) Elaeocarpaceae. In "Handbooks of the Flora of Papua New Guinea: Volume II" ed. E.E. Henty. Melbourne University Press, Melbourne.
- Woinarski, J., Brennan, K., Hempel, C., Firth, R. and Watt, F. (2000). *Biodiversity Conservation on the Tiwi Islands: Plants, vegetation types and terrestrial vertebrates on Melville Island*. Unpublished report. Parks and Wildlife Commission of NT, Palmerston.

## ***Endiandra limnophila*** B.Hyland.

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### **Conservation status**

Australia (*Environment Protection and Biodiversity Conservation Act 1999*): Not listed.  
Northern Territory (*Territory Parks and Wildlife Conservation Act 2000*): Vulnerable.

### **Description**

Tree to 20 m tall and 30 cm diameter at breast height but usually smaller. Leaves somewhat bluish (glaucous) below, domatia present. Flowers pale green to cream, turning brown with age, perfumed or odourless. Fruits black and glaucous, 28-38 x 14-15 mm.

Flowering: Dec.



*Endiandra limnophila*.

### **Ecology**

Grows in well-developed rain forest. Normally found on swampy or wet situations along creek margins.

### **Conservation assessment**

Although recorded from a relatively large number of sites, there have usually been no more than 5 or 6 individuals observed at any one locality.

Extensive survey of the Tiwi Islands in 2000-02 have yielded no further populations of this species. The assumption has been made that the abundance of individuals is consistent for all localities. This species is classified as **Vulnerable** (under criteria D1+2) based on:

- an area of occupancy, although difficult to determine, estimated to be <20 km<sup>2</sup> and
- a population size estimated at <1000 individuals.

### Threatening processes

A small population and restricted distribution makes this species susceptible to stochastic events. Known localities on Bathurst Island have high pig populations that may impact on recruitment. Only being known from very wet, peat-like jungles, this species would easily be affected by changes in hydrology. However, such changes are not anticipated.

### Conservation objectives and management

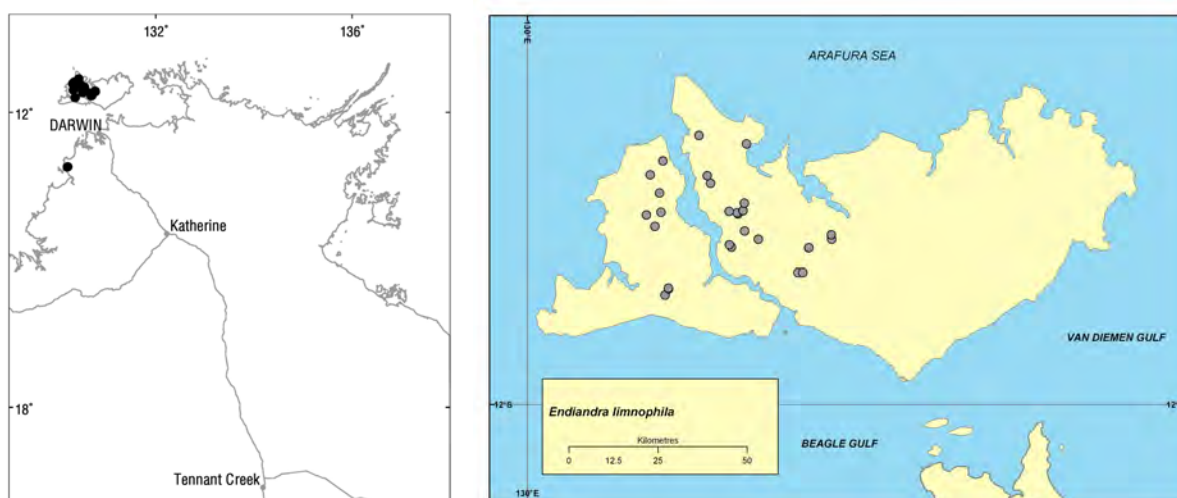
Research is required to establish the status of this population, the extent of its distribution and the impact of feral animals. Fencing is not practical for these areas.

### Distribution

An Australian endemic, known from the far north of Cape York Peninsula in QLD and the NT. In the NT, it is known from the Tiwi Islands and Channel Point. Recorded in the Rainforest Atlas at approximately 22 localities.

*Conservation reserves where reported:*

None.



Known locations of *Endiandra limnophila*

### Compiled by

Raelee Kerrigan, Ian Cowie, Bryan Baker  
[February 2002]

### References

- Hyland, B.P.M and Whiffin, T. (1993). *Australian Tropical Rain Forest Trees*. An interactive system Volume 2. CSIRO Publications, Melbourne.
- Liddle, D.T., Russell-Smith, J., Brock, J., Leach, G.J. and Connors, G.T. (1994) *Atlas of the vascular rainforest plants of the Northern Territory*. Flora of Australia Supplementary Series No. 3, Panther Publishing, Canberra.

## ***Freycinetia excelsa*** F. Muell.

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### **Conservation status**

Australia (*Environment Protection and Biodiversity Conservation Act 1999*): Not listed.  
Northern Territory (*Territory Parks and Wildlife Conservation Act 2000*): Vulnerable.

### **Description**

Small woody climber with stems to 7-8 mm in diameter. Leaf auricles each with a rounded apex and no distinct lobe. Bracts orange to red. Male spikes yellow to cream-brown. Fruit strawberry-red.

Fruiting: Feb.



*Freycinetia excelsa*  
(Photo K. Brennan)

### **Ecology**

Occurs in wet lowland rainforest and spring-fed jungles in sandstone gullies.

### **Conservation assessment**

This species is only known from five localities across the Top End where it is a climber in wet jungles of restricted size. The species qualifies as Vulnerable (under criteria D1+2) based on:

- the total number of individuals is estimated to be <1000 and

- a restricted area of occupancy estimated to be <math><20 \text{ km}^2</math>.

### Threatening processes

The impact of feral animals on this species is unknown but pigs in large numbers are likely to affect recruitment either through disturbance or grazing. Populations on Tiwi Islands would be susceptible to severe cyclonic events. This species has not been collected while reproductive despite re-survey throughout the year (K. Brennan, pers. comm.). Changes to hydrology, although none are foreseen, are likely to affect this taxon.

### Conservation objectives and management

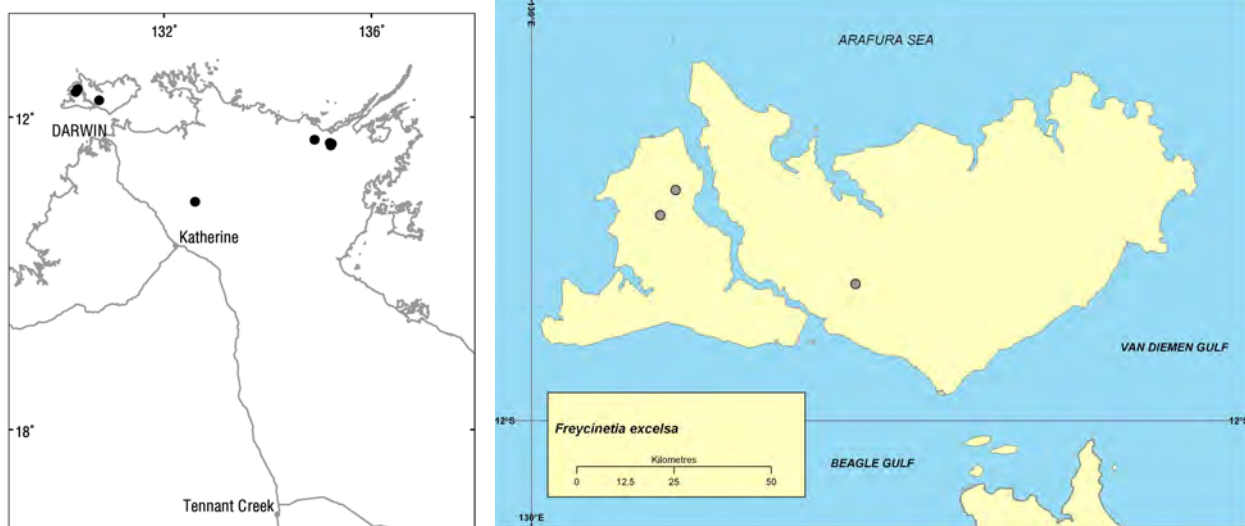
Research and further surveys are required to establish the status of these populations, the distribution of the species and the impact of feral animals. Fencing to keep out feral animals would not be practical.

### Distribution

Known from Australia and New Guinea. In the Northern Territory it has been recorded from five localities from Bathurst Island to the Arafura Swamp.

*Conservation reserves where reported:*

Kakadu National Park.



Known locations of *Freycinetia excelsa*.

### Compiled by

Raelee Kerrigan, Ian Cowie, Bryan Baker  
[February 2002]

### References

- Stone, B.C. (1982) The Australian Species of *Freycinetia* (Pandanaceae). *Brunonia* **5**: 79-94.  
Woinarski, J., Brennan, K., Hempel, C., Firth, R. and Watt, F. (2000). *Biodiversity Conservation on the Tiwi Islands: Plants, vegetation types and terrestrial vertebrates on Melville Island*. Unpublished report. Parks and Wildlife Commission of NT, Palmerston.

## ***Freycinetia percostata*** Merr. & L.M. Perry.

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### **Conservation status**

Australia (*Environment Protection and Biodiversity Conservation Act 1999*): Not listed.

Northern Territory (*Territory Parks and Wildlife Conservation Act 2000*): Vulnerable.

### **Description**

Moderately large woody climber, stems to 2 cm diameter. Leaf auricles each with a distinct apical deltoid lobe, margins distinctly ciliate-spinulose. Spathe yellow-orange to salmon pink. Male spikes pale to orange-brown. Broken fruit crimson.

Fruiting: Nov.



*Freycinetia percostata*

### **Ecology**

Occurs in wet lowland rainforest and spring-fed jungles in sandstone gullies.

### **Conservation assessment**

A climber only known from two wet jungles of restricted area across the Top End. The species is considered Vulnerable (under criteria D1+2) based on:

- the total number of individuals estimated to be <1000 and
- a restricted area of occupancy estimated to be < 20 km<sup>2</sup>.

### **Threatening processes**

The impact of feral animals on this species is unknown but pigs in large numbers are likely to affect recruitment either through disturbance or grazing. Populations on the Tiwi Islands, although inland, would be susceptible to severe cyclonic events. Changes to hydrology, although none are imminent, are likely to affect this taxon.



### Conservation objectives and management

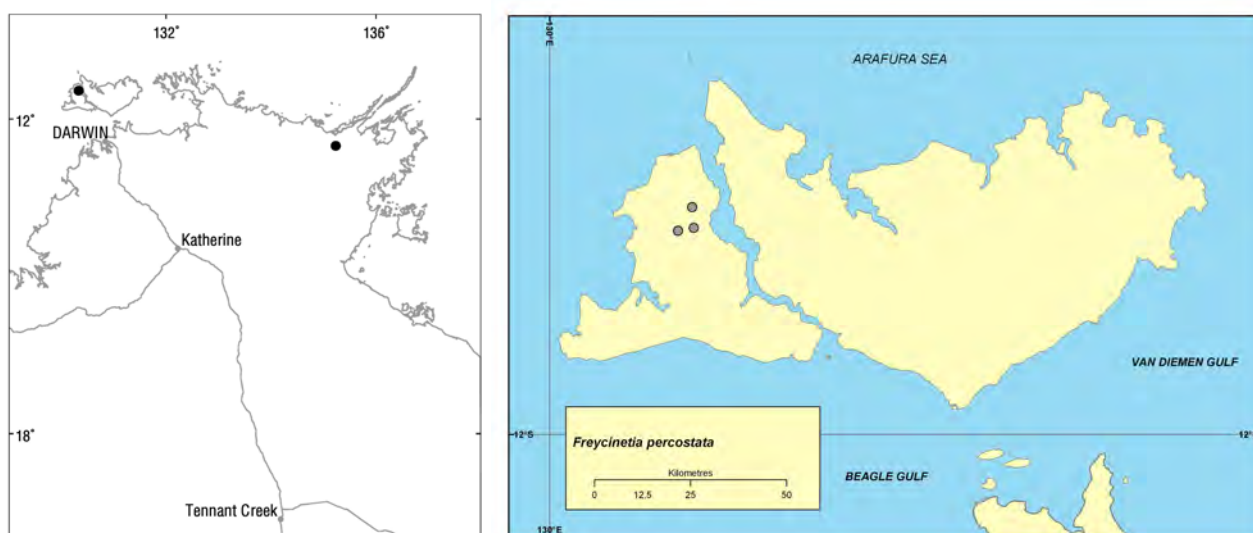
Research and further surveys are required to establish the status of these populations, the distribution of the species and the impact of feral animals. Fencing to keep out feral animals would not be practical.

### Distribution

Known from Australia, New Guinea and Solomon Islands. In the Northern Territory it has been recorded a number of times from localities on Bathurst Island and the Arafura Swamp.

*Conservation reserves where reported:*

None.



Known locations of *Freycinetia percostata*

### Compiled by

Raelee Kerrigan, Ian Cowie, Bryan Baker  
[February 2002]

### References

- Stone, B.C. (1982) The Australian Species of *Freycinetia* (Pandanaceae). *Brunonia* **5**:79-94.  
Woinarski, J., Brennan, K., Hempel, C., Firth, R. and Watt, F. (2000). *Biodiversity Conservation on the Tiwi Islands: Plants, vegetation types and terrestrial vertebrates on Melville Island*. Unpublished report. Parks and Wildlife Commission of NT, Palmerston.

## ***Garcinia warrenii*** F.Muell.

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### **Conservation status**

Australia (*Environment Protection and Biodiversity Conservation Act 1999*): Not listed.

Northern Territory (*Territory Parks and Wildlife Conservation Act 2000*): Endangered.

### **Description**

Tree to 8 m. Leaves simple and opposite. Foot of petiole with extensions or gland-like stipules that run along stem axis. Leaf venation distinctly parallel. Broken petioles and twigs produce a yellow exudate.

Flowering: Aug.



*Garcinia warrenii*

### **Ecology**

Little is known about the ecology of this species in the NT. In Queensland, it is usually found in well-developed rainforest but also along watercourses in the open.

### **Conservation assessment**

The species has been classified as **Endangered** (under criteria D) based on:

- a small population (<250 individuals) and
- a very restricted distribution.

This population occurs in a remote estuary on Melville Island and appears healthy with a number of saplings present.

### **Threatening processes**

A cyclonic event is the only imaginable threat as the community is surrounded by an extensive mangrove system and is unlikely to be impacted by weeds, feral animals, clearing or development.

### Conservation objectives and management

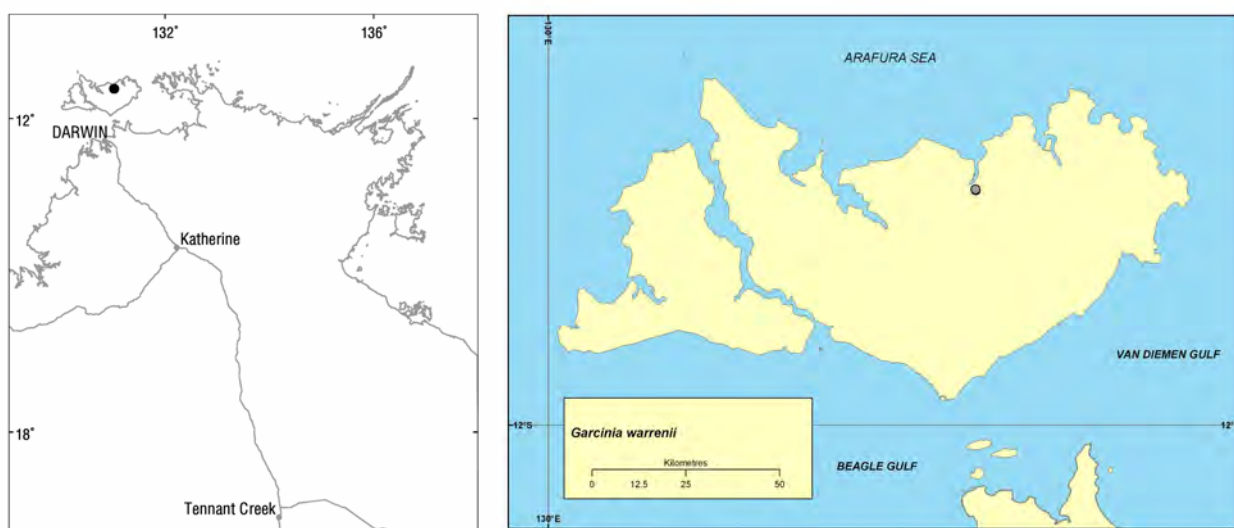
Collection of propagation material and translocation to a botanic gardens would seem the only action available to protect the species from a cyclonic event. Although similar habitats in the area were well surveyed, further survey may yield more populations.

### Distribution

In the NT, it is only known from a small hill surrounded by mangroves in the Jessie River on Melville Island. It is also found on Cape York Peninsula in Qld and in Papua New Guinea.

*Conservation reserves where reported:*

None.



Known locations of *Garcinia warrenii*

### Compiled by

Raelee Kerrigan, Ian Cowie, Bryan Baker  
[February 2002]

### References

- Hyland, B.P.M and Whiffin, T. (1993). *Australian Tropical Rain Forest Trees. An interactive system Volume 2*. CSIRO Publications, Melbourne.
- Woinarski, J., Brennan, K., Hempel, C., Firth, R. and Watt, F. (2000) *Biodiversity Conservation on the Tiwi Islands: Plants, vegetation types and terrestrial vertebrates on Melville Island*. Unpublished report. Parks and Wildlife Commission of NT, Palmerston.

## ***Hoya australis* var. *oramicola*** (R.Br. ex J. Traill) P.I.Forst. & Liddle

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### **Conservation status**

Australia (*Environment Protection and Biodiversity Conservation Act 1999*): Not listed.  
Northern Territory (*Territory Parks and Wildlife Conservation Act 2000*): Vulnerable.

### **Description**

Vine. Leaves with sparse to dense covering of hairs, leaf blade succulent, >10 cm long, leaf margin strongly recurved. Glands (colleters) absent. Latex present. Flowers cream and fleshy.

Flowering: Mar, Jul.

Fruiting: 3 – 4 months after flowering.



*Hoya australis* var. *oramicola*.

### **Ecology**

Grows in monsoon vine thicket on red laterite.

### **Conservation assessment**

This subspecies has been classified as **Vulnerable** (under criteria D1+2) based on:

- an estimated population size of less <1000 individuals (recorded as uncommon where found) and
- a restricted area of occupancy estimated to be <20 km<sup>2</sup>.

### **Threatening processes**

With a small population size this species is vulnerable to stochastic events such as cyclones. No other immediate threats have been identified.

### **Conservation objectives and management**

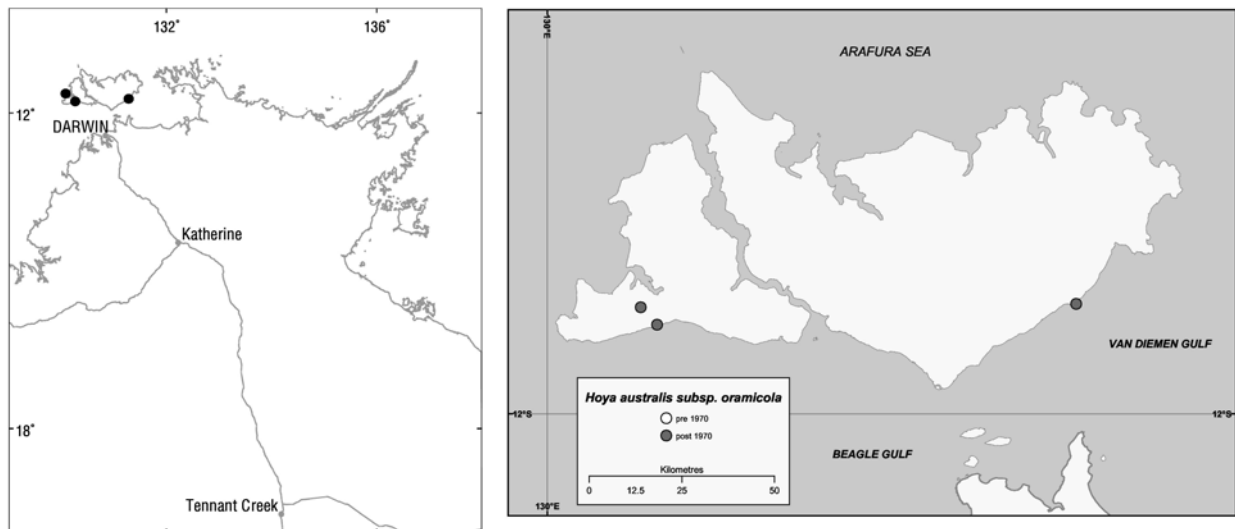
Research into the status of the population and further survey of the extent of the population are required.

### Distribution

Endemic to the NT. Found only on Bathurst and Melville Islands where it is known from just three localities. Recorded in the Rainforest Atlas from 11 collections.

*Conservation reserves where reported:*

None.



Known locations of *Hoya australis* var. *oramicola*.

### Compiled by

Raelee Kerrigan, Ian Cowie, Bryan Baker  
[February 2002]

### References

- Forster, P.I. and Liddle, D.J. (1996) *Hoya*. *Flora of Australia* **28**: 231-237.
- Liddle, D.T., Russell-Smith, J., Brock, J., Leach, G.J. and Connors, G.T. (1994) *Atlas of the vascular rainforest plants of the Northern Territory*. Flora of Australia Supplementary Series No. 3, ABRS, Canberra.
- Woinarski, J., Brennan, K., Hempel, C., Firth, R. and Watt, F. (2000) *Biodiversity Conservation on the Tiwi Islands: Plants, vegetation types and terrestrial vertebrates on Melville Island*. Unpublished report Parks and Wildlife Commission of NT, Palmerston.

## ***Luisia teretifolia*** Gaudich.

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### **Conservation status**

Australia (*Environment Protection and Biodiversity Conservation Act 1999*): Not listed.  
Northern Territory (*Territory Parks and Wildlife Conservation Act 2000*): Vulnerable.

### **Description**

Epiphytic orchid forming straggly clumps of slender, wiry, erect or semi-pendulous stems to 30 cm long. Leaves two to ten per stem, 15 cm x 5 mm, cylindrical in cross section. Flowers about 10 mm across, green with a dark burgundy labellum or lip. Flowering: Feb, Nov – Dec.  
Fruiting: Nov.



*Luisia teretifolia*

### **Ecology**

This species grows on mangroves and in humid coastal scrubs and rainforests, often on trees that have scaly bark. It usually occurs in situations of bright light.

### **Conservation assessment**

There is very little abundance data available for this species. As an epiphyte with terete leaves, it is recorded as growing in tangled clumps and numbers of individuals are difficult to assess.

There are approximately 10 populations of this species recorded. It is classified as **Vulnerable** (under criteria D1+2) based on:

- a population size estimated to be <1000 mature individuals and
- a restricted area of occupancy estimated to be <20 km<sup>2</sup>

### Threatening processes

Stochastic events such as cyclones and collecting pressure from horticulturists are the most likely threats to this taxon.

### Conservation objectives and management

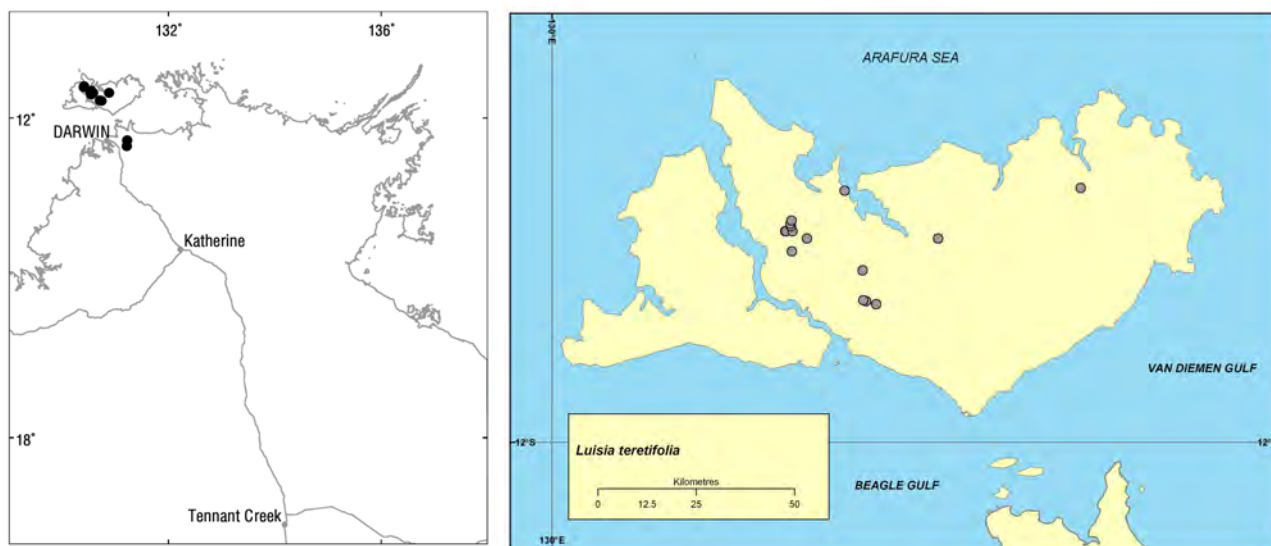
Live material has been given to Darwin Botanic Gardens. Research into the status of the population and further survey are required. Commercial availability of species may relieve any harvesting pressure on wild populations.

### Distribution

Occurs in North East Queensland, NT, New Guinea, Indonesia and Malaysia. In the Northern Territory it is known from approximately 11 localities, nine from Melville Island and two on the mainland (Bankers Jungle and Crocodile Creek in Black Jungle Conservation Reserve).

*Conservation reserves where reported:*

Black Jungle Conservation Reserve.



Known locations of *Luisia teretifolia*

### Compiled by

Raelee Kerrigan, Ian Cowie, Bryan Baker  
[February 2002]

### References

- Jones, D. L. (1988) *Native Orchids of Australia*. Reed, Australia.
- Woinarski, J., Brennan, K., Hempel, C., Firth, R. and Watt, F. (2000) *Biodiversity Conservation on the Tiwi Islands: Plants, vegetation types and terrestrial vertebrates on Melville Island*. Unpublished report. Parks and Wildlife Commission of NT, Palmerston.

## ***Mapania macrocephala*** (Gaudich) K.Schum. in Warb.

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### **Conservation status**

Australia (*Environment Protection and Biodiversity Conservation Act 1999*): Not listed.  
Northern Territory (*Territory Parks and Wildlife Conservation Act 2000*): Vulnerable.

### **Description**

Robust sedge to 2 m tall. Culms 3-angled. Leaves up to 4 m long, blade 3-nerved with distinct secondary nerves, margin spinose. Inflorescence terminal and globose 4-7.5 cm wide.

Distinguishable from young *Pandanus* by m-shaped cross-section of leaf.

Fruiting: Feb, Jun, Nov.



*Mapania macrocephala*

### **Ecology**

Known from wet, spring fed rainforests.

### **Conservation assessment**

Known from four populations on the Tiwi Islands and in Arnhem Land with a total number of individuals estimated to be <250. Area of occupancy estimated to be <20 km<sup>2</sup>.

There is some negative collection bias associated with this taxon because of its similarity to *Pandanus* and the remote areas in which it occurs. More populations may exist but recent and extensive survey efforts in both the Tiwi Islands and Arafura Swamp area have yielded only one additional population.



The negative collection bias associated with this taxon has led us to downgrade its status from Endangered to **Vulnerable** (under criteria D1+2).

### Threatening processes

There is a potential threat from pig and buffalo activity through either grazing on juveniles or disturbance. As a species occurring in spring jungles, changes to hydrology could threaten populations. However such changes are not anticipated.

### Conservation objectives and management

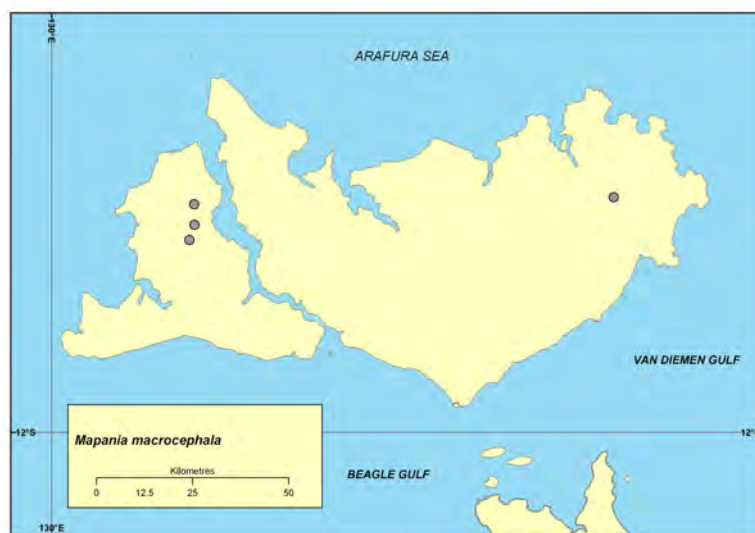
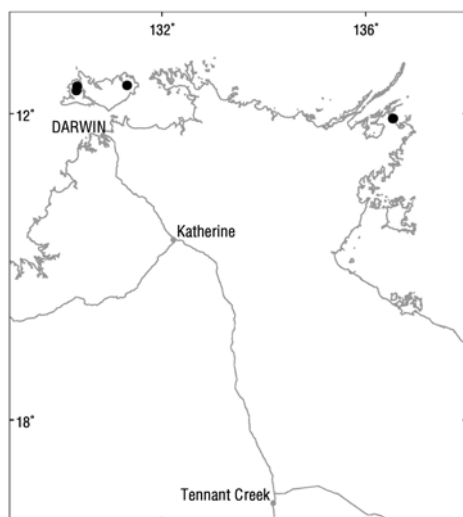
Research into the status of the population and further surveys are required

### Distribution

Sulawesi, Maluku, Nusa Tenggara, Philippines, New Guinea, North Australia (Qld and NT). In the NT this species is known from four localities: two from Bathurst Island, one from Melville Island and one from northeast Arnhem Land.

*Conservation reserves where reported:*

None.



Known locations of *Mapania macrocephala*

### Compiled by

Raelee Kerrigan, Ian Cowie, Bryan Baker  
[February 2002]

### References

- Liddle, D.T., Russell-Smith, J., Brock, J., Leach, G.J. and Connors, G.T. (1994) *Atlas of the vascular rainforest plants of the Northern Territory*. Flora of Australia Supplementary Series No. 3, ABRIS, Canberra.
- Simpson, D.A. (1992) *A revision of the genus Mapania*. Royal Botanic Gardens, Kew.
- Woinarski, J., Brennan, K., Hempel, C., Firth, R. and Watt, F. (2000) *Biodiversity Conservation on the Tiwi Islands: Plants, vegetation types and terrestrial vertebrates on Melville Island*. Unpublished report. Parks and Wildlife Commission of NT, Palmerston.

## ***Mitrella* D24710 Melville Island**

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### **Conservation status**

Australia (*Environment Protection and Biodiversity Conservation Act 1999*): Not listed.  
Northern Territory (*Territory Parks and Wildlife Conservation Act 2000*): Vulnerable.

### **Description**

A vine to 10 m, forming a semi-weeping shrub when young. Leaves shiny, dark-green above, bluish (glaucous) beneath. Branchlets distinctly zig-zagged. Flowers pinkish-orange, faintly scented. Fruit a multi-seeded berry, pale pink/green. Fruiting: Jun, Sep, Dec.



*Mitrella* D24710 Melville Island.

(Photo K. Brennan)

### **Ecology**

Recorded as growing in monsoon forest in deep shade associated with perennial springs, in moist leaf litter and stagnant mulch.

### **Conservation assessment**

This species was very difficult to code as very little data on abundance is available. In some cases it is recorded as common. In one location only 3-4 individuals have been observed (R. Kerrigan pers. obs.). However vines can be difficult to trace and therefore it is difficult to gain an accurate impression of abundance. Extensive survey has not yielded any additional populations of this taxon particularly in the east of the Island.

Based on present knowledge and using the precautionary principle this species is classified as **Vulnerable** (under criteria D1+2) based on:

- a restricted area of occupancy estimated to be <math><20\text{km}^2</math> and
- a small population size estimated to be <math><1000</math> individuals.

### Threatening processes

Susceptible to stochastic events such as cyclones. As a wet jungle species changes to hydrology could impact on the population but none are imminent. The impact of feral animals on recruitment is unknown.

### Conservation objectives and management

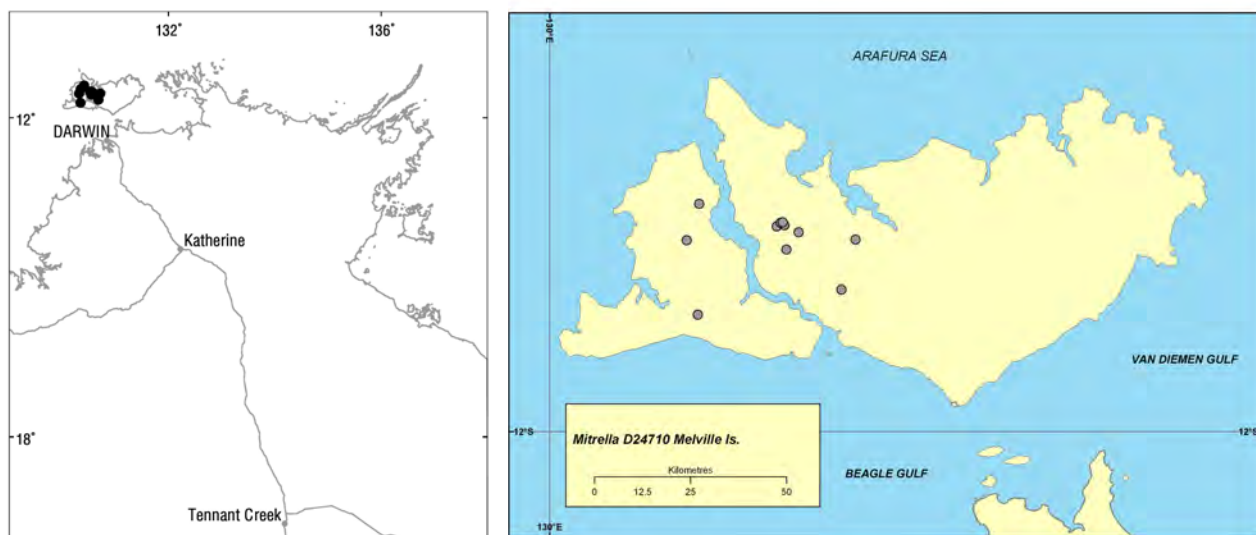
Research into the status and extent of the population are required.

### Distribution

Recorded as *Desmos* D24710 in the Rainforest Atlas, this undescribed taxon is only known from the Tiwi Islands. In the Rainforest Atlas it is recorded 22 times with approximately six localities recorded in the NT Herbarium database.

*Conservation reserves where reported:*

None.



Known locations of *Mitrella* D24710 Melville Island.

### Compiled by

Raelee Kerrigan, Ian Cowie, Bryan Baker  
[February 2002]

### References

- Liddle, D.T., Russell-Smith, J., Brock, J., Leach, G.J. and Connors, G.T. (1994) *Atlas of the vascular rainforest plants of the Northern Territory*. Flora of Australia Supplementary Series No. 3, ABRS, Canberra.
- Woinarski, J., Brennan, K., Hempel, C., Firth, R. and Watt, F. (2000). *Biodiversity Conservation on the Tiwi Islands: Plants, vegetation types and terrestrial vertebrates on Melville Island*. Unpublished report. Parks and Wildlife Commission of NT, Palmerston.

## ***Tarennoidea wallichii*** (Hook.f.) Tirveng. & Sastre

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### **Conservation status**

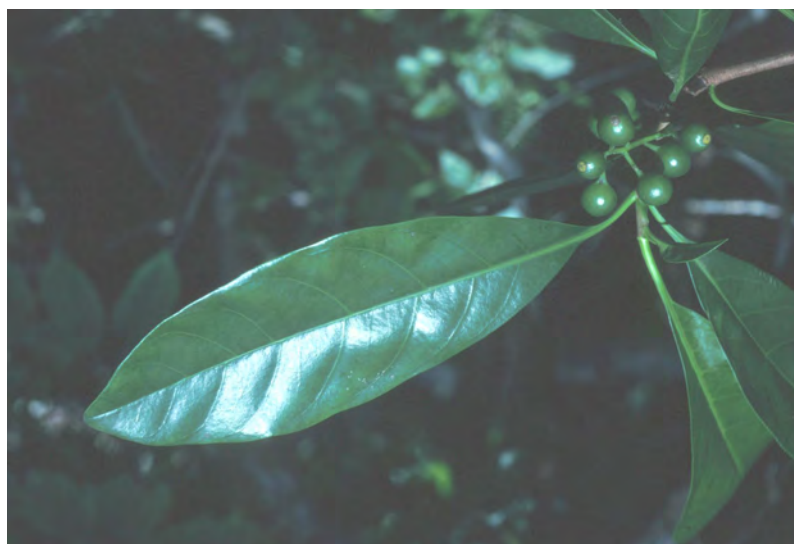
Australia (*Environment Protection and Biodiversity Conservation Act 1999*): Not listed.  
Northern Territory (*Territory Parks and Wildlife Conservation Act 2000*): Endangered.

### **Description**

Small tree to 5m. Bark grey, smooth throughout. Leaves opposite with interpetiolar stipules, dark green, glossy. Domatia with fringing hairs. Flowers white.

Flowering: Oct.

Fruiting: Jul, Oct.



*Tarennoidea wallichii*.  
(Photo K. Brennan)

### **Ecology**

It occurs in drier parts of complex evergreen monsoon rainforests.

### **Conservation assessment**

Collections of this species have been made from three separate localities on Melville Island. Eleven sites were recorded by Fensham and Woinarski in 1992. Extensive survey for this taxon on the Tiwi Islands during 1999-2001 have yielded no additional populations. Using the precautionary principle this species qualifies as **Endangered** (under criteria D) based on a population size estimated to be <250 individuals.

### **Threatening processes**

The small population size makes this species susceptible to stochastic events such as cyclones and fire. The maintenance of this species depends upon the retention of the Tiwi rainforest network and control of the impact of feral animals in this environment.

### Conservation objectives and management

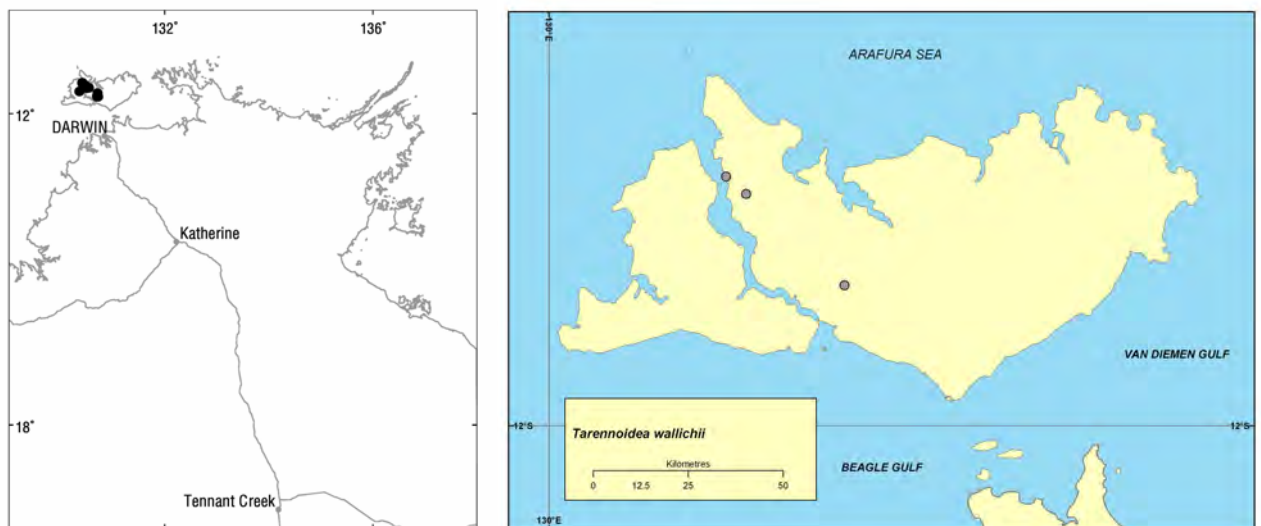
Research into the status of the population is required. Collection of propagation material and translocation to botanic gardens would assist in protecting this species from cyclonic events.

### Distribution

Widespread in Malasia, extending at least as far as India. In the Northern Territory it is only known from three localities on Melville Island.

*Conservation reserves where reported:*

None.



Known locations of *Tarennoidea wallichii*

### Compiled by

Raelee Kerrigan, Ian Cowie, Bryan Baker  
[February 2002]

### References

- Fensham, R.J. and Woinarski, J.C.Z. (1992). Yawulama: the ecology and conservation of monsoon forest on the Tiwi Islands, Northern Territory. Technical Report Conservation Commission of the Northern Territory, Palmerston.
- Woinarski, J., Brennan, K., Hempel, C., Firth, R. and Watt, F. (2000). *Biodiversity Conservation on the Tiwi Islands: Plants, vegetation types and terrestrial vertebrates on Melville Island*. Unpublished report. Parks and Wildlife Commission of NT, Palmerston.

## ***Thrixspermum congestum*** (Baill.) Dockrill

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### **Conservation status**

Australia (*Environment Protection and Biodiversity Conservation Act 1999*): Not listed.  
Northern Territory (*Territory Parks and Wildlife Conservation Act 2000*): Vulnerable.

### **Description**

Epiphyte orchid forming small clumps. Stems sparsely branched, flattened to 15 cm long. Leaves 6 to 15, leathery, often yellowish green. Inflorescence to 10 cm long, erect, wiry. Flowers opening all at once, about 15 mm across, cream or white, fragrant. The short-lived flowers last about one day and are produced in sporadic groups. Flowering: Feb.



*Thrixspermum congestum*

### **Ecology**

This species grows in lowland rainforests and also on mangroves. It is usually found in humid, airy situations, often in exposed positions on small branches.

### **Conservation assessment**

There is very little abundance data for this species. No further populations were uncovered during extensive surveys on the Tiwi Island between 1998-2001. There is an element of data deficiency with this species as flowers are recorded as lasting approximately 10 hours.

This species qualifies as **Vulnerable** (under criteria D1+2) based on:

- an estimated population size of <1000 individuals and
- an area of occupancy estimated to be <20 km<sup>2</sup>.

### Threatening processes

This species is an epiphyte and is susceptible to cyclonic events. As a wet jungle taxon, impacts on habitat by feral animal activity or changes in hydrology will affect population numbers although these threats are not considered imminent. As an orchid, pressure from horticultural collectors may be a threat.

### Conservation objectives and management

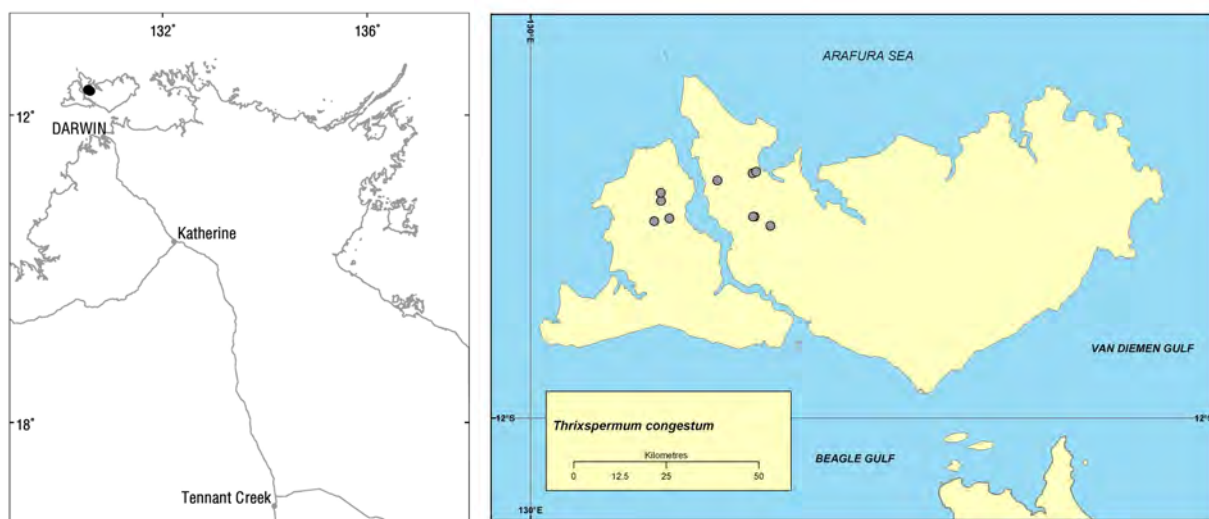
Research into the status and extent of the population are required. Living material has been collected for the Darwin Botanic Gardens. Availability of stock commercially may protect species from horticultural harvesting and stochastic events.

### Distribution

Qld, NT and New Guinea. In the Northern Territory it has been recorded from two localities on Melville Island in the NT Herbarium's database, and six records from the Rainforest Survey (four from Bathurst Is and two from Melville Is). The grid references of the Bathurst Is sites are unknown.

*Conservation reserves where reported:*

None.



Known locations of *Thrixspermum congestum*

### Compiled by

Raelee Kerrigan, Ian Cowie, Bryan Baker  
[February 2002]

### References

Jones, D. L. (1988) *Native Orchids of Australia*. Reed, Sydney.

## *Typhonium jonesii* A.Hay

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### Conservation status

Australia (*Environment Protection and Biodiversity Conservation Act 1999*): Not listed.  
Northern Territory (*Territory Parks and Wildlife Conservation Act 2000*): Endangered.

### Description

Cormous perennial herb with annual aerial parts. Leaf blade deeply trilobed, hastate or auriculate at base, segments linear. Spathe or bract of flower pale mauve-cream. Flowering: Dec.



*Typhonium jonesii*

### Ecology

Little is known of the ecology of this species. All three collections were located on rocky or lateritic hills, two from Eucalypt woodlands and one from a wet rainforest margin.

### Conservation assessment

This species is only known from three localities on the Tiwi Islands despite specific surveys for this taxon during the wet seasons of 2000 and 2001. This species qualifies as **Endangered** (under criteria B1ab(iii)+2ab(iii); D) based on:

- a small number of locations (<5)
- small number of mature individuals (<250)
- an extent of occurrence <5000 km<sup>2</sup>
- an area of occupancy <500 km<sup>2</sup> and
- a projected decline due the proposed clearing for plantation forestry in the area.



### Threatening processes

Clearing of habitat for plantation forestry development is a potential threat.

### Conservation objectives and management

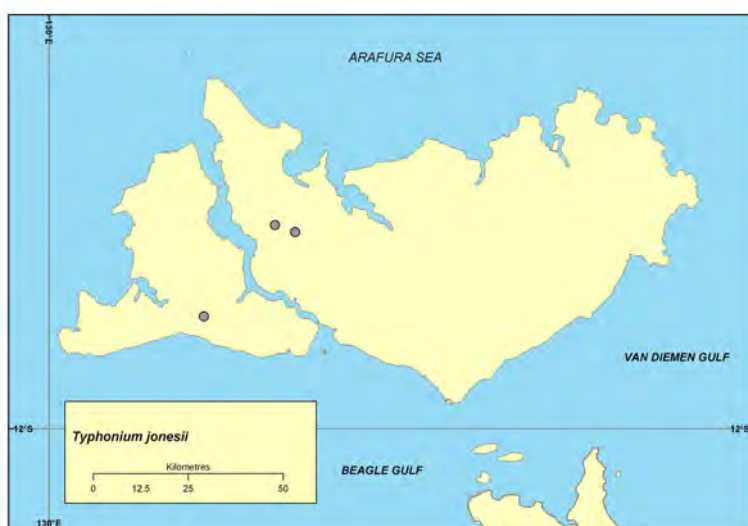
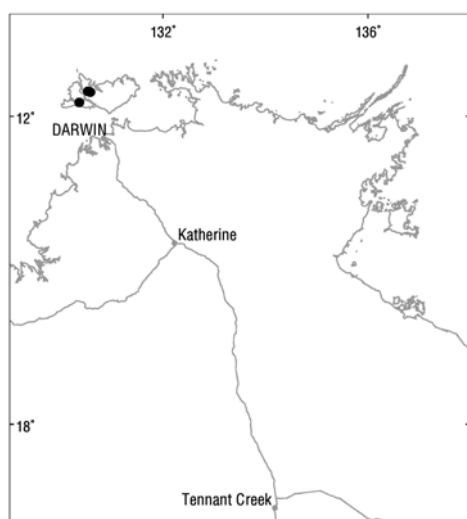
Habitat protection at the known localities is required to maintain the status of the species. Further survey may yield additional populations.

### Distribution

Endemic to the NT. It is only known from the Tiwi Islands: one locality on Bathurst Is and two on Melville Is.

*Conservation reserves where reported:*

None.



Known locations of *Typhonium jonesii*.

### Compiled by

Raelee Kerrigan, Ian Cowie, Bryan Baker  
[February 2002]

### References

- Hay, A. (1993) The genus *Typhonium* (Araceae-Araeae) in Australasia. *Blumea* **37**: 345-376.
- Woinarski, J., Brennan, K., Hempel, C., Firth, R. and Watt, F. (2000). *Biodiversity Conservation on the Tiwi Islands: Plants, vegetation types and terrestrial vertebrates on Melville Island*. unpublished report. Parks and Wildlife Commission of NT, Palmerston.

## ***Typhonium mirabile*** (A.Hay) A.Hay

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### **Conservation status**

Australia (*Environment Protection and Biodiversity Conservation Act 1999*): Not listed.  
Northern Territory (*Territory Parks and Wildlife Conservation Act 2000*): Endangered.

### **Description**

Small tuberous herb with annual aerial parts. Leaves blue-green, cordate held on or just above the soil surface. Spathe or bract of flower partly buried in soil; part below white cream with grey mottling; aerial part mottled grey-green; spadix limb smoky grey; greenish towards the base. Leaves are produced about 1-2 weeks before flowering.

Flowering: Oct.

Fruiting: Dec.



*Typhonium mirabile*.  
 (Photo K. Brennan)

### **Ecology**

Very little is known of the ecology of this species. It occurs very sporadically in groups in eucalypt woodland on lateritic and sandy soils, and in patches where the leaf litter is sparse or absent, mainly near the bases of young *Cycas* plants or in shade. Recorded from hillslopes and ridges.

### **Conservation assessment**

Only known from five locations on Melville Island. The largest population contains around 60 individuals suggesting the total number of mature individuals would be <250. Specific surveys for this taxon on the Tiwi Islands in the wet seasons of 2000 and 2001 yielded only one additional population. Hay (1996) notes that search efforts on Bathurst Island failed to uncover additional populations.

This species qualifies as **Endangered** (under criteria B1ab(iii)+2ab(iii); D) based on:

- an extent of occurrence <math><5000\text{ km}^2</math>
- an area of occupancy <math><500\text{ km}^2</math>
- a small population size (<math><250</math> mature individuals) and
- a projected decline in quality of habitat of this species in the near future as a result of clearing for expansion of plantation forestry.

### Threatening processes

This species is vulnerable to clearing for expansion of plantation forestry.

### Conservation objectives and management

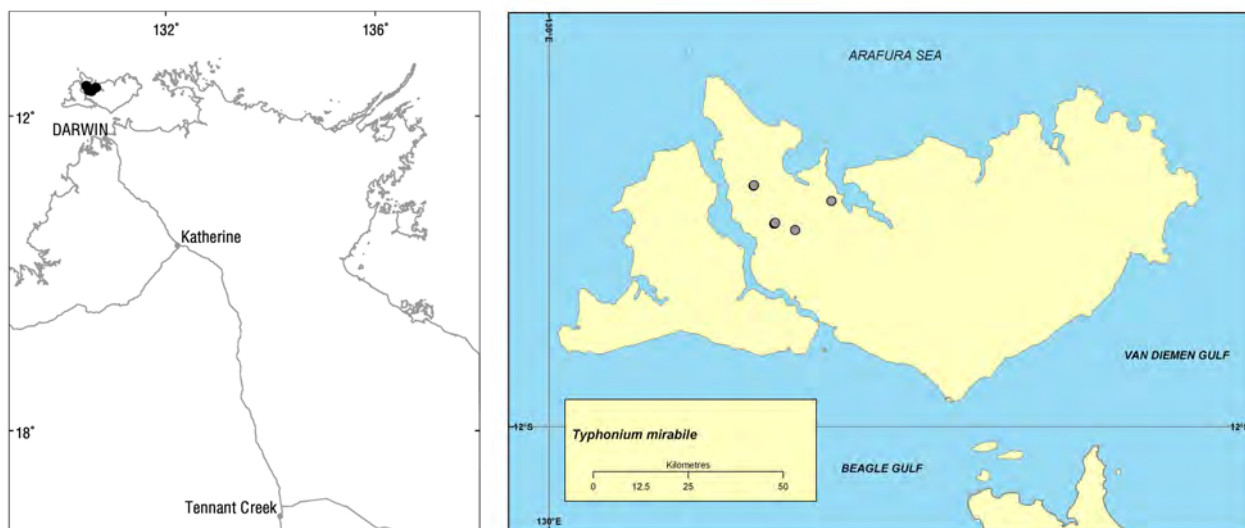
Protection of habitat at known localities is required to maintain the status of the species. Further survey may yield additional localities.

### Distribution

Endemic to the NT. This species' entire known range is restricted to five locations in the western half of Melville Island.

*Conservation reserves where reported:*

None.



Known locations of *Typhonium mirabile*.

### Compiled by

Raelee Kerrigan, Ian Cowie, Bryan Baker  
[February 2002]

### References

- Hay, A. (1992) A new Australian genus of Araceae, with notes on generic limits and biogeography of the Areae. *Botanical Journal of the Linnean Society* **109**: 427-434.
- Hay, A. (1993) The genus *Typhonium* (Araceae-Areae) in Australasia. *Blumea* **37**: 345-376.
- Woinarski, J., Brennan, K., Hempel, C., Firth, R. and Watt, F. (2000) *Biodiversity Conservation on the Tiwi Islands: Plants, vegetation types and terrestrial vertebrates on Melville Island*. unpublished report. Parks and Wildlife Commission of NT, Palmerston.

## *Utricularia subulata* L.

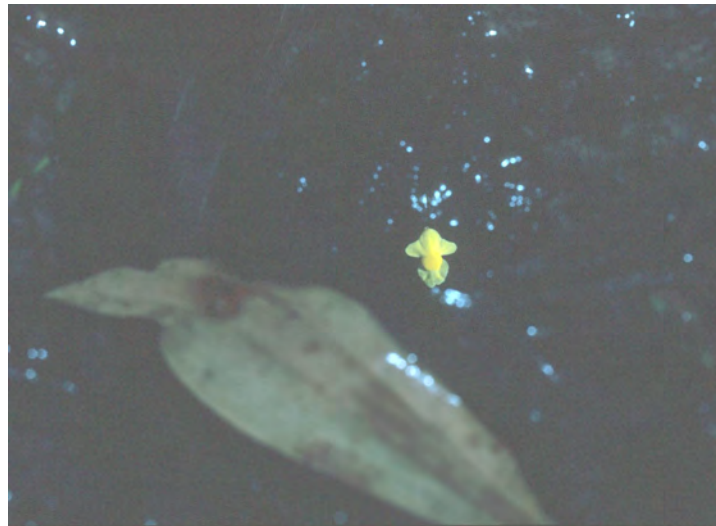
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### Conservation status

Australia (*Environment Protection and Biodiversity Conservation Act 1999*): Not listed.  
Northern Territory (*Territory Parks and Wildlife Conservation Act 2000*): Endangered.

### Description

Small to very small annual, terrestrial bladderwort. Inflorescence erect, solitary, simple or sometimes branched. Flower cleistogamous or chasmogamous 0.5-1cm long, yellow or white or reddish. Upper lip broadly ovate, lower lip deeply 3-lobed. Flowering: Mar, May.



*Utricularia subulata*.  
 (Photo K. Brennan)

### Ecology

The species occurs in wet open grassland on the margins of drainage depressions.

### Conservation assessment

This species is known from three localities and additional populations were not located in a recent *Utricularia* survey in the Darwin rural area. The McMinns Lagoon population may no longer be extant due to substantial changes in land use in the area.

Using a precautionary approach this species qualifies for **Endangered** (under criteria B1ab(iii)+2ab(iii)) based on:

- an extent of occurrence <5000 km<sup>2</sup>
- an area of occupancy <500 km<sup>2</sup> and
- a projected decline as a result of sandmining and subdivision activity in the Howard Springs area.

### Threatening processes

Sandmining, changes to hydrology and subdivision activity in the Howard Springs area.

### Conservation objectives and management

Protection of habitat at known localities is required to maintain the status of the species. Further survey may yield additional localities.

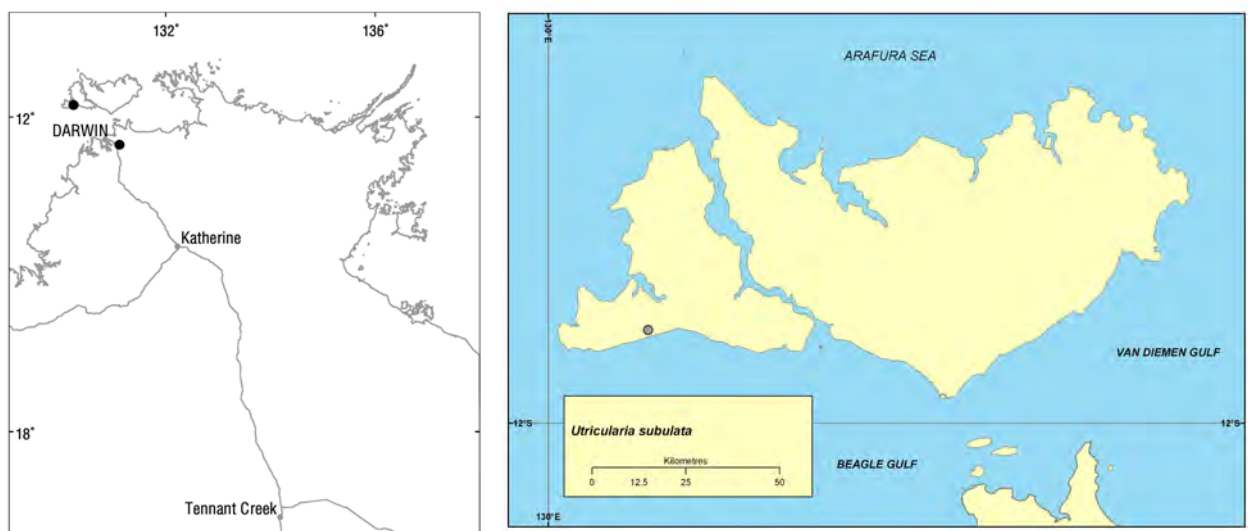
### Distribution

Pan-tropical. This is the most widespread of all *Utricularia* species.

In the NT it is known from two localities, one on Bathurst Island and the other at McMinns Lagoon. The latter population was not relocated during a survey in 2001.

*Conservation reserves where reported:*

None.



Known locations of *Utricularia subulata*.

### Compiled by

Raelee Kerrigan and Ian Cowie  
[February 2002]

### References

- Cowie, I. (2002) *Preliminary report on a survey of Utricularia (Lentibulariaceae) in the Howard River-Shoal Bay area*. Unpublished report. Parks and Wildlife Commission of NT, Palmerston.
- Taylor, P. (1989) *The Genus Utricularia: a taxonomic monograph*. Kew Bulletin Series XIV, HMSO, London.

## ***Xylopia* D30127 Melville Island**

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### **Conservation status**

Australia (*Environment Protection and Biodiversity Conservation Act 1999*): Not listed.  
Northern Territory (*Territory Parks and Wildlife Conservation Act 2000*): Endangered.

### **Description**

Very little is known of this undescribed taxon. It is now tentatively placed in the genus *Xylopia*, although formerly identified as *Miliusa*. Having only been collected as young, sterile material the taxonomy is still unresolved.

An open shrub or erect sapling to 3 m, with lateral branches perpendicular to stem. Leaves orientated in one plane (distichous) and occasionally wavy on margins.



*Xylopia* D30127 Melville Island.

### **Ecology**

Grows in wet vine forests occurring at springs.

### **Conservation assessment**

Although very little is known of the taxonomy of this species, as an entity it has been known for approximately 10 years. Despite extensive surveys on the Tiwi Islands no additional populations have been found and only one population has recently been recollected. Where collected, only one or two individuals have been recorded despite efforts to search for adults.

Using the precautionary principle this species is classified as **Endangered** (under criteria D) based on the small estimated population size (<250 mature individuals).

### Threatening processes

With a small population size and restricted distribution this species is vulnerable to stochastic events such as cyclones. As a wet jungle species, changes to hydrology could impact on the population although such changes are not considered imminent. The impact of feral animals on recruitment is unknown.

### Conservation objectives and management

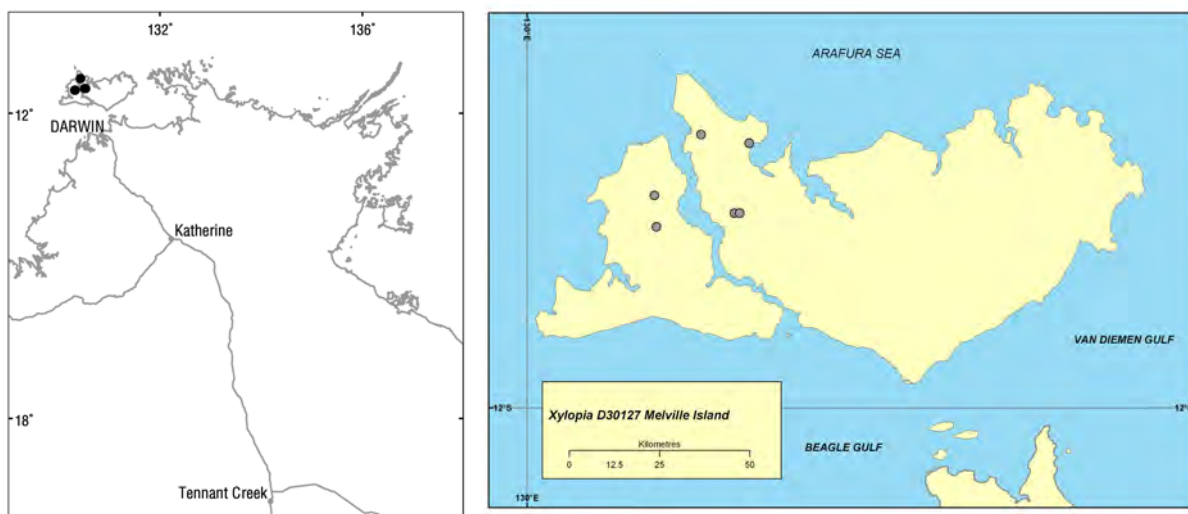
Research into the status of the population and further survey are required

### Distribution

The distribution of this taxon outside of the NT is unknown and it is possibly an endemic. In the NT, it is only known from five localities on the Tiwi Islands, two on Bathurst and three on Melville Island.

*Conservation reserves where reported:*

None.



Known locations of *Xylopia* D30127 Melville Island

### Compiled by

Raelee Kerrigan, Ian Cowie, Bryan Baker  
[February 2002]

### References

Liddle, D.T., Russell-Smith, J., Brock, J., Leach, G.J. and Connors, G.T. (1994) *Atlas of the vascular rainforest plants of the Northern Territory*. Flora of Australia Supplementary Series No. 3, ABRIS, Canberra.