

# **The State of the Shire- Year 2000 Benchmark**

## **Chapter 2 - Biodiversity - Flora and Fauna Technical Paper**

**April 2001**

## **Chapter 2 Biodiversity – Flora and Fauna**

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**CHAPTER 2 – BIODIVERSITY – FLORA AND FAUNA**

**2.1. Introduction**

This paper aims to examine the flora and fauna present in the Shire, highlight the threats to biodiversity maintenance, detail biodiversity maintenance initiatives presently being undertaken, and include proposals to ensure biodiversity survives into the future.

The Johnstone Shire is located within the Wet Tropics bioregion of Queensland, and forms part of the Innisfail Province within this region, containing 39 regional ecosystems. Many of these ecosystems are endangered or of concern, as are many of the species contained within them. The Johnstone Shire is also home to an array of fauna, which includes mammals, birds, reptiles, frogs, insects and fish, with some of these species under threat also.

The main threats to the maintenance of biodiversity have been identified as land clearing and fragmentation of habitat, alteration to drainage systems and watertables, inappropriate fire regimes, exotic species invasion, and agricultural and industrial runoff. In an attempt to mitigate these threats, a network of protected areas is being established to maintain biodiversity.

**2.2. Native Vegetation**

**2.2.1. Representation and Conservation Status of Regional Ecosystems**

The Wet Tropics bioregion is situated along the tropical East Coast of Northern Queensland (see figure 2.1). With an area of 1,849,725 ha (of which 310,400 ha are protected), the Wet Tropics covers about 1% of Queensland.

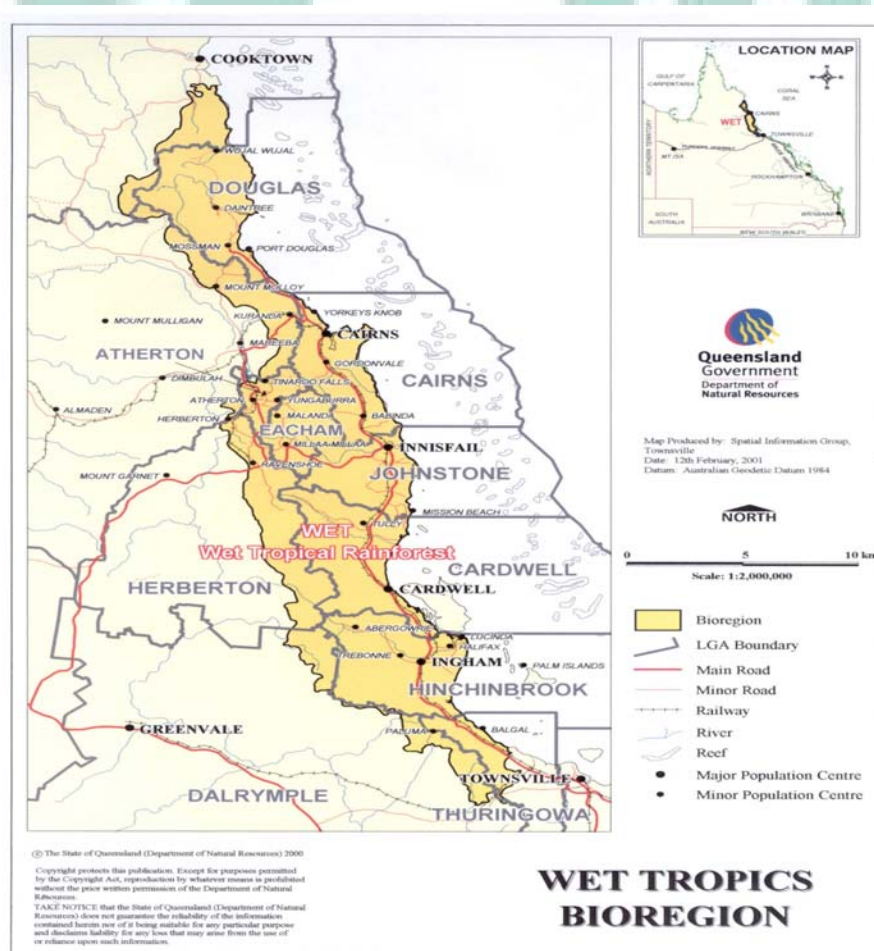


Figure 2.1 Wet Tropics Bioregion of Queensland

The bioregion is dominated by rugged, rainforested mountains and is predominantly leasehold land, State forest or National Park. Most of the remaining rainforest in these areas is contained within the Wet Tropics of Queensland World Heritage Area (WTQWHA). The plateau and coastal lowlands have been largely cleared for the purpose of primary production.

The bioregion contains 105 regional ecosystems, 39 of which are threatened (24 endangered, 17 of concern and the remainder not of concern). Regional ecosystems are classified by a three-part identification system. Firstly, by the bioregion, secondly by the land zone (geomorphic situation of land zone in which the vegetation community occurs), and thirdly by the ecosystem (ie. the vegetation communities).

The Johnstone Shire is primarily located within the Innisfail province of the Wet Tropics bioregion, however, the Bellenden Ker-Lamb and Atherton provinces are also represented to a much lesser extent. The Innisfail province is summarised below:

- Geology – quaternary alluvium
- Landform – low beach ridges and swales, alluvial plains, channels, levees, lagoons, and low hills
- Soils – alluvia, gleyed podzolics, humic gleys, red earths, red podzolics, and yellow earths
- Vegetation – mesophyll rainforest ± *Acacia* spp., *Eucalyptus* spp., estuarine mangroves; coastal dune vegetation; paperbark *Melaleuca quinquenervia* forest; fan palm *Licuala ramsayi* and feather palm *Archontophoenix alexandrae* swamp, woodlands dominated by paperbark *Melaleuca viridiflora*, forest red gum *E. tereticornis*, carbeen *E. tessellaris*, pink bloodwood *Corymbia intermedia*.

The following Regional Ecosystems can be found in the Johnstone Shire.

Regional Ecosystem	Description	Status
7.1.1	Mangrove forests on coastal lowland saline alluvial soils	No concern at present
7.1.3	Bulkuru swamp on poorly drained acid peats	Of concern
7.2.1	Mesophyll rainforest of very wet coastal lowlands on beach sands	Endangered
7.2.3	Dune ridge and swale vegetation mosaic of coastal lowlands	No concern at present
7.2.4	Open forest/woodland vegetation mosaic of wet lowlands on old stranded dune ridges on sand.	Of concern
7.3.1	Sedgeland and grassland freshwater swamp of seasonally inundated coastal lowlands	Endangered
7.3.3	Alexandra palm swamp rainforest on very wet poorly drained fertile lowlands	Endangered
7.3.4	Fan palm swamp rainforest on very wet poorly drained seasonally inundated lowlands	Endangered
7.3.5	Swamp paperbark open forest on very wet and wet poorly drained lowlands	Of concern
7.3.6	Swamp paperbark open forest/rainforest complex on a variety of very wet poorly drained lowlands	Endangered
7.3.7	Coastal floodplain forest red gum/melaleuca open forest complex on moist to very wet poorly drained lowlands	Endangered
7.3.8	Broad-leaf tea tree woodland swamp complex on dry to very wet poorly drained lowlands and tablelands	No concern at present
7.3.10	Complex mesophyll rainforest on very wet well drained fertile lowland alluvial soils	Endangered
7.3.11	Mesophyll rainforest with red stringybark emergents on very wet to wet well drained lowland alluvial soils	No concern at present
7.3.12	Forest red gum woodland on very wet to wet well drained lowland alluvial soils	Endangered
7.3.17	Complex mesophyll rainforest on very wet well drained lowland and foothill piedmont fans	No concern at present

7.3.18	Mesophyll rainforest with pink bloodwood emergents on wet to very wet well drained piedmont fans	No concern at present
7.3.20	Pink bloodwood, turpentine, red stringybark open forest on moist well drained piedmont fans	No concern at present
7.3.27	Carbeen, forest red gum, swamp mahogany, red tea-tree riparian open forest on levees	Of concern
7.3.28	Riparian herbfield/shrubland on river and stream bed alluvia	Endangered
7.8.1	Complex mesophyll rainforest on very wet well drained basalt lowlands	Of concern
7.8.6	Semi-deciduous mesophyll rainforest on moist basalt foothills	Endangered
7.11.1	Mesophyll rainforest on very wet to wet metamorphic lowlands and foothills	No concern at present
7.11.4	Mesophyll rainforest dominated by sally wattle on very wet to wet metamorphic lowlands and foothills	No concern at present
7.11.5	Simple mesophyll rainforest with red stringybark emergents on very wet to wet metamorphic lowlands and foothills	No concern at present
7.11.6	Simple mesophyll rainforest with turpentine emergents on very wet to wet metamorphic lowlands and foothills	No concern at present
7.11.7	Complex notophyll rainforest with kauri pine emergents on moist metamorphic foothills and uplands	No concern at present
7.11.8	Notophyll rainforest with acacia emergents on moist metamorphic lowlands and foothills	Endangered
7.11.17	Red stringybark woodland of the wet to moist metamorphic lowlands and foothills	No concern at present
7.12.1	Mesophyll rainforest on very wet to wet granite lowlands and foothills	No concern at present
7.12.2	Fan palm dominated mesophyll rainforest on very wet poorly drained granite foothills	Of concern
7.12.5	Simple mesophyll rainforest with red stringybark emergents on very wet to wet granite lowlands and foothills	No concern at present
7.12.6	Semi-deciduous mesophyll rainforest on moist granite lowlands and foothills	No concern at present
7.12.24	White mahogany woodland on wet to moist granite foothills	Of concern
7.12.31	White mahogany ± poplar gum on dry granite foothill slopes	No concern at present

Table 2.1 Representation of Regional Ecosystems in the Innisfail Province (Sattler & Williams: 1999)

2.2.2. Occurrence of Rare/Threatened Flora

The Johnstone Shire is home to a variety of rare or threatened flora. One of the most recognisable species is the Native Sugar Palm (*Arenga australasica*) from the family Areaceae. This is a tall, clumping, feather-leaved palm of the coastal rainforests of north-eastern Australia and the adjacent islands. This species usually has 1-3 dominant stems and numerous suckers around the base. The fronds are widely spaced along the trunk, which lacks a crownshaft.

The plant inhabits stony creek beds on sandy or red basalt soils in near-coastal and littoral rainforests, usually in partial shade. The fresh seed germinates erratically, taking 2-12 months or more.

The species is distributed on the coastal districts of north-eastern QLD from Cooktown to Tully, and some offshore islands adjacent to northern QLD and the NT, where they are more common.

Full lists of rare and threatened flora are included in Appendix A of the technical paper.



## 2.3. Fauna

Information on the occurrence of fauna specifically in the Johnstone Shire is not available, though some data is available for the wet tropics region and this gives some indication of what may be in the Shire. At least 610 terrestrial vertebrate species occur in the Wet Tropics, defined by Williams, Pearson and Walsh (1996) as lying between Mount Elliot, to just north of Cooktown, and from the coast to the western edge of the wetter sclerophyll forests where the forests give way to more open, drier woodlands. Excluding introduced species (15) and edge species (29), 566 species make up the terrestrial vertebrate fauna of the Wet Tropics Biogeographic region. This represents 28% of the entire Australian terrestrial vertebrate fauna and includes 95 mammals, 311 birds, 111 reptiles and 49 frogs. There is a substantial degree of regional endemism (12%), although this is highly variable between taxonomic groups (4%-39%).

“23% of all species within the region (143 species) should be regarded as very important species in a conservation sense: that is, they have a rare and threatened ranking and/or are endemic to the Wet Tropics biogeographic region”.

Studies have shown that although the dry sclerophyll forests contain the highest overall diversity there is a low degree of endemism (4%). In contrast, the rainforest fauna includes 66 species, which are found only in the Wet Tropics biogeographic region. This means that 25% of the rainforest species are endemic to the region.

### 2.3.1. Mammals

Mammal diversity is generally higher in the upland zones, with a mean species richness of 30.9 compared to a mean of 26.9 in the lowland zones, although this is not at a statistically significant level. This upland/lowland pattern based on altitudinal preference is stronger in the diversity of rainforest mammals. Diversity is highest in the central uplands, centred on the Atherton Tablelands, which has 48 species. Mammal diversity tends to decrease to the north and south, and with decreasing altitude. There are eight species exclusively recorded from lowland zones and 12 species, which are found exclusively in the uplands in the Wet Tropics region.

### 2.3.2. Birds

In general the diversity of terrestrial birds is higher in the lowlands than in the upland zones, but this difference is not statistically significant. The Atherton Uplands have the highest diversity (228 species), however, this includes many species which are primarily lowland species. This high total probably reflects the large amount of sampling effort on the Atherton Tablelands leading to the inclusion of rare visitors to the upland area. Removing the Atherton Uplands from the comparison leaves a significant difference between the diversity of upland and lowland zones. The diversity of rainforest birds in lowland and upland zones is very similar with mean species richness of 81.8 and 85.9 species respectively.

### 2.3.3. Reptiles

Records of reptiles are patchy and patterns are difficult to interpret. Accurate distribution records and knowledge of the habitats used by each species are also poor, making it difficult to decide whether or not to include unusual records or records of species which are considered to be primarily western species of drier habitats (edge species). Identification is often difficult leading to erroneous distribution data. The Atherton Uplands has the most diverse reptile assemblage, the Cooktown Lowlands have the second highest species richness of reptiles and the Cairns-Cardwell Lowlands (of which the Johnstone Shire is a part) have the second most diverse rainforest assemblage. The total reptile species richness of lowland zones is generally greater than in upland zones with mean species richness of 56.9 and 40.2 species respectively, although this difference is not quite statistically significant. Higher lowland diversity is mostly the result of high diversity in a heterogeneous mixture of sclerophyll habitats. The diversity of rainforest reptiles in upland and lowland zones is not significantly different with mean species richness of 27.3 and 29.3 species respectively.

2.3.4. Frogs

The primary gradients affecting frog assemblages in the Wet Tropics seem to be a latitudinal change in composition coupled with distinct differences between wetter and drier habitats. Diversity is highest in the Cairns-Cardwell lowlands (38) and Atherton Uplands (37) with a general trend of decreasing diversity to the north and to the south. The diversity of rainforest frog assemblages is highest in the Atherton Uplands (23 species), Cairns-Cardwell Lowlands (22 species) and the Carbine Uplands (21 species). There is no significant difference in the mean species richness of frogs (total or rainforest frogs) between upland and lowland zones.

2.3.5. Fish

The 1993 study of ‘Stream Habitat and Fisheries Resources in the Johnstone River Catchment’ identified over 120 fish species. Table 2.2 shows the number of fish species found in each catchment zone.

<b>Zone</b>	<b>Number of Sites</b>	<b>Species Number</b>
Estuary	19	88
Coastal Lowlands	9	29
Coastal Uplands	39	38
Range	10	11

Table 2.2 Fish species in each catchment zone.

Waterfalls and other natural obstacles to upstream fish movement on the coastal range act to limit the distribution of many species found in the coastal freshwaters (eg. barramundi (*Lates calcarifer*), mangrove jack (*Lutjanus argentimaculus*), jungle perch (*Kulia rupestris*), tarpon (*Megalops cyprinoides*), milkfish (*Chanos chanos*), sea mullet (*Mugil cephalus*), etc) but which are saltwater dependent during phases of their lifecycle. These barriers generally allow upstream movement of eels (*Anguilla reinhardtii*) which migrate to saltwater to spawn and move up rivers as juveniles.

The more widely distributed species and the percentage of sites in the catchment where they were found are as follows: rainbow fish (71%), eels (60%), freshwater catfish (33%), empire gudgeons (33%), and sooty grunter (30%).

This survey also extended the known Queensland southern limit of distribution of a number of species including the flag-tailed false percolate (*Ambassis miops*), the brown gudgeon (*Eleotris fusca*), the ebony gudgeon (*E. melanism*), and the green-backed guavina (*Oxyeleotris gyrinoides*).

Similarly, a study of the ‘Stream Habitat and Fish Resources in the Moresby Catchment’ was conducted in 1996. During the period of the study by Russell, Hales and Helmke (1996), 83 species of fish were recorded at 18 sites throughout the catchment. This is in comparison to the 120 species in the adjacent Johnstone River catchment.

Some 76 species were found in tidal waters and 22 species in non-tidal or freshwater sites. Fifteen species were found in both tidal and non-tidal waters. 28 estuarine species were also identified. The main Moresby River is classified as a fifth order stream. There is a general trend of increased species richness with increased stream order in the tidal zone. In the non-tidal zone, the number of species in the catchment appeared low but relatively stable with respect to stream order.

2.3.6. Rare/Threatened Fauna

Full lists of rare and threatened flora are included in Appendix A of the technical paper.

The Johnstone Shire is home to many rare and threatened fauna species of varied status. These animals need to be properly managed to ensure their existence in the future, with responsibility for their management residing with one or more local, state or federal government bodies, in consultation with relevant conservation organisations. Two of the most

recognised species in the Johnstone Shire include the **Southern Cassowary** (*Casuarius casuarius johnsonii*) and the **Estuarine Crocodile** (*Crocodylus porosus*)

#### *Cassowaries*

A Cassowary Management Project for the Wet Tropics has been prepared to identify cassowary population densities, population distributions, population movements, feeding habitats, key food sites, keystone food species, areas of habitat reduction and threats to habitat, areas of traffic hazard, land tenure types and land use opportunities, etc. Identified as part of this project was the Innisfail Management Area.

‘The Innisfail Cassowary Management Area comprises that section of the Moresby Range extending from Coquette Point in the North to Mourilyan Harbour Road to the south, and west to incorporate the inland swamps of East Innisfail and Rifle Range Road’. The Innisfail Management Plan identified twelve cassowaries within the area (eight adults and four sub-adults), as well as an additional five cassowaries (four adults and one sub-adult) which were located in the area at the time of surveying in May 1996.

The major threats to the Innisfail cassowaries have been identified as (not in priority order):

- The restricted and disturbed linear habitat of Moresby Range
- Swamp habitat drainage and clearing
- Connectivity and subsequent population fragmentation
- Habitat clearing
- Hand-feeding of birds
- Dogs
- Road crossings

A significant threat, that of past and on-going habitat fragmentation and subsequent population fragmentation, was identified for the Innisfail area. This threatening process has two clearly identifiable components: habitat clearing and barriers to population connectivity.

Over three-quarters of the adult cassowary population is at extreme or high risk of mortality due to threatening processes. Specifically:

- 83.4% of the adult cassowary population (10 birds) have been categorised as at Extreme or High Risk. These categories of risk are defined as subject to more than one significant threatening process on a daily basis and subject to one or more threatening processes on a regular basis respectively. The birds in these risk categories require the immediate implementation of risk reduction strategies to ensure their continued survival in the Management Area.
- 8.3% of the adult cassowary population (1 bird) is considered to be at Moderate risk. Moderate risk is defined as subject to human-generated risk on a regular basis (eg hand feeding, road crossings, and dog attacks). These birds require individual risk reduction strategies to be implemented to ensure their continued survival in the Management Area. As more data are gained on this bird it is likely that its risk category will be upgraded to High Risk.
- 8.3% of the adult cassowary population (1 bird) is considered to be at little or No Risk. These risk categories are defined as being rarely subjected to risk. It is uncertain whether this bird visits the residential areas surrounding Mourilyan Harbour. If this is confirmed, the risk category of this category of this cassowary will be significantly upgraded.

The seriousness of the threatening processes facing the Innisfail cassowaries is such that any delay in implementing appropriate management options will increase the likelihood of local extinctions along the Moresby Range.

Preliminary information from a report compiled by Les Moore on the Mission Beach Cassowary Survey indicates that there are now less than 50 adult birds within the 90km<sup>2</sup> of Mission Beach survey area. Two thirds of the adult males located during the survey period



were identified as breeding, with the majority of new chicks appearing in September. Family parties generally contained 1-4 chicks, with three young being the most common set of offspring.

During the survey it was observed that adult birds cover an area of 3 – 4 km<sup>2</sup> and it is thought this may be in response to low fruiting levels during the survey. Moore found that cassowaries visiting Garners Beach and Bingil Bay have the majority of their home range further west eg. The main adult female using Cedar Creek and Garners Beach national park regularly moves between the national park and the north end of Lacey’s Creek catchment.

Moore found that due to the relatively small area of forest involved and its almost total enclosure by farms and urban development, most Mission Beach cassowaries can be considered ‘humanised’ ie they have some form of regular contact with humans

There are a number of short-term management strategies that should contribute to slowing down the decline in viability of the local cassowary populations. These include:

- No further upgrading of the Etty Bay Road where it crosses the Moresby Range
- Traffic management at all known Cassowary crossing points
- Assessment of the scale and necessity of hand-feeding cassowaries at Coquette point, Etty Beach, and Mourilyan Harbour.
- Separate cassowary road management plans for the areas of Etty Bay and Mourilyan Harbour Roads (to include Queensland Ports Corporation land at Mourilyan Harbour)
- An assessment of CMA/buy-back options for habitat retention/enhancement of areas identified in the IRMS
- Implementation of a rehabilitation program for those areas adjoining the west side of Ninds Creek
- An active dog control program in recreational areas such as Mission Beach, Ninds Creek bridge, Coquette Point, Etty Bay and Mourilyan Harbour’.

### *Crocodiles*

A Memorandum of Understanding is also in existence for crocodiles in the Shire. In 1997, the Mayor of the Johnstone Shire Council and the Regional Director, Far Northern Region of the Department of Environment and Heritage (now the Environmental Protection Agency EPA) agreed to work together to produce a management strategy for Estuarine Crocodiles in the Johnstone Shire. A working group comprising of representatives from Johnstone Shire Council, EPA and community groups was established as part of this strategy, and meets regularly to discuss sightings and listen to public concern. Together, these representatives will develop policy for promoting public safety and conserving the protected Estuarine Crocodile in the Johnstone Shire.

Estuarine crocodiles are defined and managed by multiple pieces of legislation. Under the understanding, problem crocodiles are targeted for removal and are defined as any crocodile which:

- Is resident or regularly sighted within 200m of a public facility, or
- Is resident or regularly sighted within 1 km of a freshwater swimming area, or
- Is resident or regularly sighted within 1 km of a public swimming enclosure, or
- Displays bold or aggressive behaviour toward humans, stock or dogs, or
- Is interpreted as a threat by the assessment team, or
- Is within recognised water ski area of the Johnstone River.

As part of the understanding, all efforts are made to maintain the animal in the wild, however, public safety is the highest priority. No attempts are to be made to make areas completely ‘crocodile free’ as this is nearly an impossible task.

The memorandum of understanding also has provisions covering:

- The assessment of problem crocodiles
- Crocodile monitoring
- Crocodile warning signs

- Dealings with a swimming beach
- Crocodile issues and media contact
- Education, and
- Funding

During 2000 there were 3 crocodiles identified as problem crocodiles, captured and relocated to reduce the risk to public safety.

**2.4. Threats to Biodiversity Maintenance**

The main threats to ecosystems and species in the Wet Tropics bioregion are posed by continued land clearing, alterations to drainage systems and watertables, inappropriate fire regimes and feral animal and exotic plant invasion. Permanent alteration to the watertable and natural drainage systems, resulting from irrigation and land clearing, is threatening remaining habitats of the poorly drained coastal plain, particularly ecosystems dominated by sclerophyll species. Land clearing is occurring across all habitat types on land of gentler topography. Exact figures on vegetation clearing for the Johnstone Shire are not available. This information is important and should be sought to effectively manage existing habitat.

Large-scale changes of sclerophyll ecosystems to rainforest ecosystems are occurring throughout the bioregion as a direct result of altered fire regimes. Many of these changes have occurred in the last 30 years and are often irreversible. To a lesser extent fire has been responsible for loss of rainforest, particularly on steep hill slopes adjoining cultivated or urban areas.

Land clearing and fragmentation, wetland drainage and disturbance of riparian systems, agricultural runoff and industrial and urban runoff have also been recognised as threats. These issues are dealt with in other chapters of the report with the exception of industrial and urban runoff for which no information was available. However, a Stormwater Management Plan is to be prepared by Council by 2002.

2.4.1. Agricultural Runoff

The study conducted on ‘Stream Habitat and Fisheries Resources of the Johnstone River Catchment’ in 1993 identified agricultural chemicals as non-point source pollutants. Agricultural chemicals can have detrimental effects not only on the aquatic environment but also on the species of that environment, possibly resulting in behavioural abnormalities or reduced reproductive success.

A detailed study of agricultural runoff, or more specifically, nutrient balances and transport from agriculture and rainforest lands’ was completed by Prove, Moody & Reghenza (1997). This study estimated runoff from these lands to be as follows:

	<b>Rainfall</b>	<b>Irrigation</b>	<b>Runoff</b>	<b>Measured Drainage</b>	<b>Evapo-transpiration</b>	<b>Calculated Drainage</b>
Cane	3194.0	n/a	421	2192.7	1112.7	1660.3
Conventional Cane	3194.0	n/a	503	1879	1112.7	1578.3
Best Bet Banana	2750.9	109	201	1517	1114.5	1544.4
Overhead Banana	2750.9	155	216	1186.2	1114.5	1574.4
Undertree Pasture	2406.1	n/a	1	1550	632.0	1773.1
High Input Pasture	2406.1	n/a	5	1394.7	632.0	1769.1
Low Input Rainforest(*)	2750.9	n/a	139	1121	1238.3	1373.6

Table 2.3 Agricultural Runoff in the Johnstone River Catchment (units in mm)

The hydrological data indicate that drainage through the root zone and evapotranspiration are the major pathways of water movement. Runoff represented less than 18% of total annual rainfall on all sites with the greatest runoff being on the sugarcane site. This site generally received the highest annual rainfall and rainfall intensities, hence greater runoff was expected at this site. The report concludes that the concentrations of nutrients and sediment in runoff water were low.

**2.4.2. Exotic Species Invasions**

The Johnstone Shire Council Integrated Pest Management (IPM) Plan and the National Weeds Strategy have identified a range of declared and environmental weeds, with the IPM plan also identifying declared animals in the Johnstone Shire.

The National Weeds Strategy notes that weeds are an important factor in land and water degradation in both developed and natural ecosystems. The success of primary industries in the past has inadvertently assisted the invasion of natural ecosystems by alien plants. Weeds are among the most serious threats to Australia’s primary production and natural environment, having the ability to displace native species. Weeds can also pose a potential fire hazard, shelter vermin, and act as hosts for pests and plant diseases. They have the potential to impact the urban environment, amenity and health values, tourism and the conservation of biodiversity and natural ecosystems in general

**2.5. Complaints Received**

In the year 2000, Council also received a number of complaints regarding the exotic species in the Shire. These complaints are summarised in the table below.

Nature of Complaint	Number of Complaints
Noxious Weeds	35
Pests	2

Table 2.4 Complaints Received by Council

**2.6. Protected Area Management<sup>1</sup>**

Name	Area	District	Management Issues	Gazettal Date	Conservation significance
Wooroonooran National Park	79,500ha	Cairns/ Innisfail	Fire management in E.Grandis stands and pyramid section Tourism. Feral pigs. Weeds - Harungana, Sanchezie, Lantana, Guinea Grass. Rainforest encroach. into eucalypt stands	24/09/21	Only area of 1c (Tracey, 1987) type rainforest south of Cooktown. Remnant of the Mulgrave River flood plain system, under threat from exotic weed invasion (Thunbergia grandiflora). Tropical rainforest on granite and basalt soils, relict Eucalyptus grandis. Highest mountain in Queensland and landscape features include waterfalls and granite tors.
Carello Swamp Conservation	8.863ha	Innisfail	Weeds - Pond Apple. Crocodiles.		Wetland swamp with large palm stands.

<sup>1</sup> Wilson, pers. comm, 2001.

Park					
Clump Point National Park	282ha	Innisfail	Tourism - development on adjoining land. Ferals - pigs, dogs. Weeds - Bamboo	30/01/63	Lowland tropical rainforest on basalt soils. Cassowary habitat.
Ella Bay National Park	3,710ha	Innisfail	Fire Cassowaries. Ferals - Pigs, crocodiles.	19/05/52	Undisturbed coastal swamp Lowland tropical rainforest.
Etty Bay Road Conservation Park	125ha	Innisfail	Drainage. Fire. Crocodiles. Cassowaries.		Last remaining wetland swamp in Johnstone River catchment.
Eubenangee Swamp National Park	1,720ha	Innisfail	Fire. Weeds - Pond Apple, Hymenachne (ponded pasture grass), Bracharia. Tourism. Crocodiles. Drainage.	23/11/68	Large wetland bird and estuarine crocodile habitat. Most significant wetland on tropical coast.
Japoon National Park	44.819ha	Innisfail	Feral pigs.	21/11/68	Tropical rainforest on basalt.
Kurrimine Beach Conservation Park	5.7ha	Innisfail	Weeds - Lantana, Guinea grass, exotic garden species. Urban development adjoining park.		Scenic amenity. Lowland rainforest on sand. Arenga palms.
Kurrimine Beach National Park	910ha	Innisfail	Fire. Drainage.		Coastal wetland on sand swale and dune system.
Maria Creek National Park	749ha	Innisfail	Fire. Crocodiles. Drainage. Saltwater incursion into freshwater wetland system.	03/06/72	Coastal wetland. Large expanse of mangroves.
Moresby Range National Park	268ha	Innisfail	Feral pigs. Cassowaries. Tourism. Development adjoining NP.	20/05/72	Spectacular scenic amenity. Coastal range lowland rainforest. Cassowary habitat.
Palmerston Rocks National Park	9.521ha	Innisfail	Feral pigs. Weeds - Lantana, Guinea grass.	02/12/67	Scenic features large basalt rocks.
Warrina Conservation Park	15.484ha	Innisfail	Weeds - Pond Apple. Urban development adjoining park.		Scenic amenity in centre of Innisfail. Lowland rainforest swamp.
Warrubullen	79ha	Innisfail			



Conservation Park					
Moresby Range Resources Reserve	5 ha	Innisfail			
Brooks Beach Nature Refuge	17ha	Innisfail			

Table 2.5 Protected Areas in the Innisfail District

**2.7. Related Interest/Community Groups**

There are various conservation groups operating in the Shire with the purpose of conserving and enhancing the natural environment.

*Community Revegetation Unit Volunteers<sup>2</sup>*

The Community Revegetation Unit volunteer group was established in 1999. Volunteers meet at the Community Revegetation nursery every Thursday Morning 8am-12noon.

In 2000, volunteers were involved in:

- Collecting and preparing seeds for planting,
- Repotting seedlings,
- Weeding,
- Washing pots,
- Assisting at community plantings,
- In conjunction with Mamu, the establishment of a Bushfood Garden,
- Attending related community meetings (eg Landcare),
- Participation in World Environment Day displays,
- Hymenachne workshops
- The successful propagation of 80,000 - 90,000 trees in the nursery

Future plans include:

- Information sessions for volunteers (eg Bushfoods)
- Research on growth rates in diverse eco-zones
- Biomass of plantings
- Increased assistance to participating landholders,
- Prepare information/photos of trees suitable for diverse growing situations
- Completion of the Bushfood garden

**2.8. Deficiencies in Data**

Data on biodiversity (eg flora and fauna) is available on a bioregion basis only. Whilst this information will provide a good indication of what is present in the Shire, it is not Shire specific. Data to be collected on a Shire basis should include:

- Land clearing.
- Fauna and flora species lists.
- Insects (information similar to that on mammals, birds, reptiles, etc, presented in this report).

<sup>2</sup> Lipscombe, pers. comm, 2001.

## 2.9. Recommendations – Natural Environment Chapter

### *Cassowaries*

- That traffic is appropriately managed at known Cassowary Crossing Points. Specifically that Road Management Plans be generated and implemented for Coquette Point, Etty Bay, Mourilyan Harbour, and Mission Beach and Bingil Bay Roads
- That educational material on how to live with cassowaries be distributed to residences in Cassowary Habitat
- That funding be sought for voluntary acquisition of critical cassowary habitat in specific high risk areas
- That a rehabilitation program be established for the area to the west side of Ninds Creek
- That efforts continue for responsible dog ownership at Mission Beach, Coquette Point, Etty Bay and Mourilyan Harbour
- That a program of responsible rural dog ownership and management commence.

### *Crocodiles*

- That the public awareness campaign for the management of crocodiles in the Johnstone Shire be increased.

### *Biodiversity Maintenance*

- That statistics on vegetation clearing be collated to enable more effective management of existing habitat
- That on-ground management of pest plants and animals increase on state land.

## 2.10. Bibliography and Further Reading

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Appendix A – Rare and Threatened Flora and Fauna Species Lists for the Johnstone Shire

Queensland Biodiversity Network as cited in Bell R., 1996, ‘*Johnstone River Catchment Revegetation Strategy Appendix 2*’, Johnstone River Catchment Management Association Inc.

**Flora**

Family	Scientific Name	Common Name	Status (QLD Legislation)	Status (Federal Legislation)
Mimosaceae	<i>Acacia albizioides</i>		Rare	Not Classified
Mimosaceae	<i>Acacia guymeri</i>		Vulnerable	Vulnerable
Mimosaceae	<i>Acacia hylonoma</i>		Rare	Not Classified
Mimosaceae	<i>Acacia longipedunculata</i>		Rare	Not Classified
Mimosaceae	<i>Acacia purpureipetala</i>		Vulnerable	Vulnerable
Elaeocarpaceae	<i>Aceratium doggrellii</i>		Rare	Not Classified
Elaeocarpaceae	<i>Aceratium sericoleopsis</i>		Rare	Not Classified
Orchidaceae	<i>Acianthus sublestus</i>		Rare	Not Classified
Myrtaceae	<i>Acmena divaricata</i>		Rare	Not Classified
Orchidaceae	<i>Acriopsis javanica</i>		Vulnerable	Not Classified
Rutaceae	<i>Acronychia aberrans</i>		Rare	Not Classified
Rutaceae	<i>Acronychia choorechillum</i>		Rare	Not Classified
Rutaceae	<i>Acronychia crassipetala</i>		Rare	Vulnerable
Epacridaceae	<i>Acrotiche baileyana</i>		Rare	Not Classified
Euphorbiaceae	<i>Actehila foetida</i>		Vulnerable	Not Classified
Ericaceae	<i>Agapetes meiniana</i>	Agapetes	Rare	Not Classified
Araucariaceae	<i>Agathis atropurpurea</i>		Rare	Not Classified
Araucariaceae	<i>Agathis microstachya</i>		Rare	Not Classified
Sapindaceae	<i>Alectryon semicinereus</i>		Rare	Not Classified
Proteaceae	<i>Alloxylon flammeum</i>		Vulnerable	Vulnerable
Zingiberaceae	<i>Alpinia hylandii</i>		Rare	Not Classified
Apocynaceae	<i>Alyxia orophila</i>		Rare	Not Classified
Zingiberaceae	<i>Amomum dallachyi</i>		Rare	Not Classified
Annonaceae	<i>Ancana hirsuta</i> <i>Meiogyne</i> sp.		Rare	Not Classified
Vittariaceae	<i>Antrophyum plantagineum</i>		Rare	Not Classified
Vittariaceae	<i>Antrophyum subfalcatum</i>		Rare	Not Classified
Aponogetonaceae	<i>Aponogeton bullosus</i>		Endangered	Not Classified
Aponogetonaceae	<i>Aponogeton elongatus</i>		Rare	Not Classified
Aponogetonaceae	<i>Aponogeton</i> sp. ( <i>Innisfail-live bearing</i> )		Endangered	Not Classified
Orchidaceae	<i>Appendicula austaliensis</i>		Rare	Not Classified
Araliaceae	<i>Aralia macdowallii</i>		Rare	Not Classified
Mimosaceae	<i>Archidendron lucyi</i>		Rare	Not Classified
Mimosaceae	<i>Archidendron whitei</i>		Rare	Not Classified
Myrsinaceae	<i>Ardisia bifaria</i>		Rare	Not Classified
Areaceae	<i>Arenga australasica</i>		Vulnerable	Not Classified
Grossulariaceae	<i>Argophyllum cryptophlebu,</i>		Rare	Not Classified
Convolvulaceae	<i>Argyreia southeri</i>		Presumed Extinct	Not Classified
Sterculiaceae	<i>Argyrodendron</i> sp.		Rare	Not Classified
Aspleniaceae	<i>Asplenium atheronense</i>		Rare	Not Classified
Aspleniaceae	<i>Asplenium australasicum</i>	Crows Nest or Birds Nest Fern	Common	Not Classified
Aspleniaceae	<i>Asplenium excisum</i>		Rare	Not Classified
Aspleniaceae	<i>Asplenium normale</i>		Rare	Not Classified
Aspleniaceae	<i>Asplenium pellucidum</i>		Vulnerable	Vulnerable



Aspleniaceae	<i>Asplenium unilaterale</i>		Rare	Not Classified
Euphoribaceae	<i>Austrobuxus nitidus</i>		Rare	Not Classified
Proteaceae	<i>Austromuelleria trinervia</i>		Rare	Not Classified
Myrtaceae	<i>Austromyrtus lasioclada</i>		Rare	Not Classified
Myrtaceae	<i>Backhousia bancroftii</i>		Rare	Not Classified
Flacourtiaceae	<i>Baileyoxyton lanceolatum</i>		Rare	Not Classified
Myrtaceae	<i>Barongia lophandra</i>		Rare	Not Classified
Lauraceae	<i>Beilschmiedia oligandra</i>		Rare	Not Classified
Lauraceae	<i>Beilschmiedia volckii</i>		Rare	Not Classified
Euphoribaceae	<i>Bertya polystigma</i>		Rare	Not Classified
Rubiaceae	<i>Bobea myrtoides</i>		Rare	Not Classified
Zamiaceae	<i>Bowenia serrulata</i>	Byfield Fern	Common	Not Classified
Zamiaceae	<i>Bowenia apecabilis</i>	Zamia Fern	Common	Not Classified
Sterculiaceae	<i>Brachychiton vitifolius</i>		Rare	Vulnerable
Cabombaceae	<i>Brasenia schreberi</i>		Rare	Not Classified
Winteraceae	<i>Bubbis queenslandiana</i>		Rare	Not Classified
Orchidaceae	<i>Bulbophyllum boonjee</i>		Not Classified	Vulnerable
Cesalpiniaceae	<i>Caesalpinia robusta</i>		Rare	Not Classified
Fabaceae	<i>Cajanus mareebensis</i>		Endangered	Endangered
Orchidaceae	<i>Calanthe triplicata</i>	Christmas Orchid	Common	Not Classified
Cupressaceae	<i>Callitris columellaris</i>	Bribie Island Cyprus	Common	Not Classified
Burseraceae	<i>Canarium acutifolium</i> var. <i>acutifolium</i>		Vulnerable	Vulnerable
Cyperaceae	<i>Carex breviscapa</i>		Rare	Not Classified
Cyperaceae	<i>Carex rafflesiana</i> <i>Carex cruciata</i> var. <i>rafflesiana</i>		Rare	Not Classified
Menispermaceae	<i>Carronia pedicellata</i>		Endangered	Vulnerable
Commelinaceae	<i>Cartonema brachyantherum</i>		Rare	Not Classified
Flacourtiaceae	<i>Casearia grayi</i>		Rare	Not Classified
Cunoniaceae	<i>Eratopetalum virchowii</i>		Rare	Not Classified
Apocynaceae	<i>Cerbera inflata</i>		Rare	Not Classified
Orchidaceae	<i>Chiloglottis longiclavata</i>		Rare	Not Classified
Thelypteridaceae	<i>Chingia australis</i>		Endangered	Not Classified
Sapotaceae	<i>Chrysophyllum spl</i>		Rare	Not Classified
Lauraceae	<i>Cinnamomum propinquum</i>		Rare	Not Classified
Euphoribaceae	<i>Cleistanthus discolor</i>		Rare	Not Classified
Orchidaceae	<i>Corybas abellianus</i>	Nodding Helmet Orchid	Rare	Not Classified
Hymenophyllaceae	<i>Crepidomanes majoriae</i>		Rare	Not Classified
Alseuosmiaceae	<i>Crispiloba disperma</i>		Rare	Not Classified
Euphoribaceae	<i>Croton densivestitus</i>		Rare	Not Classified
Lauraceae	<i>Cryptocarya bellendenkerana</i>		Rare	Not Classified
Lauraceae	<i>Cryptocarya pleurosperma</i>		Rare	Not Classified
Asclepiadaceae	<i>Cryptolepis grayi</i>		Rare	Not Classified
Grammitidaceae	<i>Ctenopteris walleri</i>		Vulnerable	Vulnerable
Cyatheaceae	<i>Cyathea baileyana</i>		Rare	Not Classified
Cyatheaceae	<i>Cyathea celebica</i>		Rare	Not Classified
Cycadaceae	<i>Cycas media</i>	Zamia Nut, Nut Plam	Common	Not Classified
Combretaceae	<i>Dansiea slliptica</i>		Rare	Not Classified
Proteaceae	<i>Darlingia ferruginea</i>		Rare	Not Classified
Orchidaceae	<i>Dendrobium callitrophilum</i>		Vulnerable	Vulnerable
Orchidaceae	<i>Dendrobium mirbelianum</i>	Mangrove	Endangered	Endangered

		Orchid		
Orchidaceae	<i>Dendrobium nindii</i>	Blue Orchid	Endangered	Endangered
Orchidaceae	<i>Dendrobium toressae</i>		Rare	Not Classified
Celastraceae	<i>Denhamia viridissima</i>		Rare	Not Classified
Gesneriaceae	<i>Didymocarpus kinnearii</i>		Rare	Not Classified
Gesneriaceae	<i>Boea kinnearii</i>			
Hymenophyllaceae	<i>Didymoglossum exiguum</i>		Presumed Extinct	Not Classified
Sapindaceae	<i>Dimocarpus liechhardtii</i>		Presumed Extinct	Not Classified
Fabaceae	<i>Dioclea reflexa</i>		Vulnerable	Vulnerable
	<i>Dioclea hexandra</i>			
Ebenaceae	<i>Diospyros sp.</i>		Rare	Not Classified
Athyriaceae	<i>Diplazium cordifolium</i>		Vulnerable	Vulnerable
Athyriaceae	<i>Diplazium pallidum</i>		Endangered	Not Classified
Sapindaceae	<i>Diploglottis bracteata</i>		Rare	Not Classified
Sapindaceae	<i>Diploglottis harpullioides</i>		Rare	Not Classified
Sapindaceae	<i>Diploglottis pedleyi</i>		Rare	Not Classified
Gleicheniaceae	<i>Diplopterygium longissimum</i>		Rare	Not Classified
Orchidaceae	<i>Dipodium ensifolium</i>	Leafy Hyacinth Orchid	Rare	Not Classified
Dipteridaceae	<i>Dipteris conjugaa</i>		Rare	Not Classified
Orchidaceae	<i>Diurus oporina</i>		Rare	Not Classified
Epacridaceae	<i>Dracophyllum sayeri</i>		Rare	Not Classified
Droseraceae	<i>Drpsera adela</i>	Lance-leaved Sundew	Rare	Not Classified
Droseraceae	<i>Drosera achizandra</i>		Vulnerable	Vulnerable
Meliaceae	<i>Dysoxylum setosum</i>		Rare	Not Classified
Elaeocarpaceae	<i>Elaeocarpus carolinae</i>		Rare	Not Classified
Elaeocarpaceae	<i>Elaeocarpus coorangooloo</i>		Rare	Not Classified
Elaeocarpaceae	<i>Elaeocarpus grahamii</i>		Rare	Not Classified
Elaeocarpaceae	<i>Elaeocarpus hohnsonii</i>		Rare	Not Classified
Elaeocarpaceae	<i>Elaeocarpus linsmithii</i>		Rare	Not Classified
Elaeocarpaceae	<i>Elaeocarpus stellaris</i>		Rare	Not Classified
Lomariopsidaceae	<i>Elaphoglossum callifolium</i>		Rare	Not Classified
Cyperaceae	<i>Eleocharis retroflexa</i>		Vulnerable	Not Classified
Myrsinaceae	<i>Embelia grayi</i>		Rare	Not Classified
Lauraceae	<i>Endiandra anthropophagorum</i>		Rare	Not Classified
Lauraceae	<i>Endiandra bellendenkerana</i>		Rare	Not Classified
Lauraceae	<i>Endiandra dichrophylla</i>		Rare	Not Classified
Lauraceae	<i>Endiandra globosa</i>		Rare	Not Classified
Lauraceae	<i>Endiandra sideroxylon</i>		Rare	Not Classified
Lauraceae	<i>Endiandra xanthocarpa</i>		Rare	Not Classified
Orchidaceae	<i>Eria dischorensis</i>		Rare	Not Classified
Orchidaceae	<i>Eria irukandjiana</i>		Rare	Not Classified
Erythroxylaceae	<i>Erythroxylum ecarinatum</i>		Rare	Not Classified
Myrtaceae	<i>Eucalyptus lockyeri</i>		Rare	Not Classified
Myrtaceae	<i>Eucalyptus pachycalyx</i>		Rare	Not Classified
Myrtaceae	<i>Eucalyptus rhodops</i>		Vulnerable	Vulnerable
Eucryphiaceae	<i>Eucryphia sp.</i>		Vulnerable	Vulnerable
Euphorbiaceae	<i>Euphorbia carissoides</i>		Vulnerable	Presumed Extinct
Cyperaceae	<i>Fimbristylis adjuncta</i>		Endangered	Endangered
Sterculiaceae	<i>Firmiana papuana</i>		Rare	Not Classified
Rutaceae	<i>Flindersia oppositifolia</i>	Mountain	Rare	Not Classified

		Silkwood		
Euphoribaceae	<i>Fontainea picrosperma</i>		Rare	Not Classified
Pandanaceae	<i>Freycinetia marginata</i>		Rare	Not Classified
Cyperaceae	<i>Gahnia sieberiana</i>	Sword Grass, Razor Grass	Common	Not Classified
Clusiaceae	<i>Garcinia gibbsiae</i>		Rare	Not Classified
Clusiaceae	<i>Garcinia mestonii</i>		Rare	Not Classified
Orchidaceae	<i>Gastrodia queenslandica</i>		Rare	Not Classified
Myrtaceae	<i>Gen.No.</i>		Vulnerable	Not Classified
Orchidaceae	<i>Genoplesium alticola</i>		Rare	Not Classified
Euphoribaceae	<i>Glochidion pruinatum</i>		Rare	Not Classified
Orchidaceae	<i>Goodyera grandis</i>		Rare	Not Classified
Orchidaceae	<i>Goodyera viridiflora</i>		Rare	Not Classified
Rhamnaceae	<i>Gouania australiana</i>		Rare	Not Classified
Grammitidaceae	<i>Grammitis albosetosa</i>		Rare	Not Classified
Proteaceae	<i>Grevillea glossadenia</i>		Vulnerable	Vulnerable
Orchidaceae	<i>Habenaria divaricata</i>		Endangered	Not Classified
Anonaceae	<i>Haplostichanthus johnsonii</i>		Rare	Not Classified
Annonaceae	<i>Haplostichanthus sp.</i>		Rare	Not Classified
	<i>Haplostichanthus sp.</i>			
	<i>Haplostichanthus sp.</i>		Rare	Not Classified
	<i>Haplostichanthus sp.</i>		Rare	Not Classified
Proteaceae	<i>Helicia blakei</i>		Rare	Not Classified
Proteaceae	<i>Helicia lamingtoniana</i>		Rare	Not Classified
Lamiaceae	<i>Hemigenia clotteniana</i>		Presumed Extinct	Not Classified
Hernandiaceae	<i>Hernandia albiflora</i>		Rare	Not Classified
Celastraceae	<i>Hexaspora pubescens</i>		Vulnerable	Vulnerable
Rubiaceae	<i>Hodgkinsonia frutescens</i>		Vulnerable	Vulnerable
Proteaceae	<i>Hollandaea sayeriana</i>		Rare	Not Classified
Myrtaceae	<i>Homoranthus porteri</i>		Vulnerable	Vulnerable
Lycopodiaceae	<i>Huperzia dalhousieana</i>		Endangered	Endangered
Lycopodiaceae	<i>Huperzia lockyeri</i>		Vulnerable	Vulnerable
Lycopodiaceae	<i>Huperzia marsupiiiformis</i>		Vulnerable	Vulnerable
Lycopodiaceae	<i>Huperzia phlegmaria</i>	Common Tassell Fern	Rare	Not Classified
Lycopodiaceae	<i>Huperzia phlegmarioides</i>		Vulnerable	Vulnerable
Lycopodiaceae	<i>Huperzia prolifera</i>	Square Tassell Fern	Vulnerable	Vulnerable
Lycopodiaceae	<i>Huperzia serrata</i>		Presumed Extinct	Not Classified
Lycopodiaceae	<i>Huperzia squarrosa</i>		Endangered	Endangered
Rubiaceae	<i>Hydnophytum papuanum</i>	Ant Plant	Common	Not Classified
	<i>Hydnophytum moseleyanum</i> var. <i>moseleyanum</i>			
Hymenophyllaceae	<i>Hymenophyllum gracilescens</i>		Rare	Not Classified
Hymenophyllaceae	<i>Hymenophyllum kerianum</i>		Rare	Not Classified
Hymenophyllaceae	<i>Hymenophyllum lobbii</i>		Presumed Extinct	Not Classified
Menispermaceae	<i>Hypserpa smilacifolia</i>		Rare	Not Classified
Celastraceae	<i>Hypsophila halleyana</i>		Rare	Not Classified
Idiospermaceae	<i>Idiospermum australiense</i>	Idiot Fruit	Rare	Vulnerable
Aquifoliaceae	<i>Ilex sp.</i>		Rare	Not Classified
Rubiaceae	<i>Ixora baileyana</i>		Rare	Not Classified
Sapindaceae	<i>Jagera javanica subsp.</i>		Vulnerable	Vulnerable

	<i>australiana</i>			
Liliaceae	<i>Kuntheria pedunculata</i>		Rare	Not Classified
Dryopteridaceae	<i>Lastreopsis grayi</i>		Rare	Not Classified
Dryopteridaceae	<i>Lastreopsis tinarooensis</i>		Rare	Not Classified
Dryopteridaceae	<i>Lastreopsis walleri</i>		Vulnerable	Vulnerable
Polypodiaceae	<i>Lemmaphyllum accedens</i>		Presumed Extinct	Not Classified
Gesneriaceae	<i>Lenbrassia australiana</i>		Rare	Not Classified
Sapindaceae	<i>Lepiderma largiflorens</i>		Rare	Not Classified
Zamiaceae	<i>Lepidozamia hopei</i>		Common	Not Classified
Myrtaceae	<i>Leptospermum wooroonooran</i>		Rare	Not Classified
Epacridaceae	<i>Leucopogon malayanus subsp. novoguineensis</i>		Rare	Not Classified
Epacridaceae	<i>Leucopogon spathaceus</i>		Rare	Not Classified
Lindsaeaceae	<i>Lindsea repens</i> var. <i>lingulate lindsea repens</i>		Presumed Extinct	Not Classified
Lindsaeaceae	<i>Lindsea repens</i> var. <i>marquesensis lindsea repens</i>		Rare	Not Classified
Arecaceae	<i>Linospadix microcarya</i>		Rare	Not Classified
Arecaceae	<i>Lindospadix palmeriana</i>		Rare	Not Classified
Lauraceae	<i>Litsea bennettii</i>		Rare	Not Classified
Arecaceae	<i>Livistona drudei</i>		Vulnerable	Vulnerable
Lycopodiaceae	<i>Lycopodium volubile</i>		Presumed Extinct	Not Classified
Loranthaceae	<i>Lysiana filifolia</i>		Rare	Not Classified
Proteaceae	<i>Macadamia grandis</i>		Endangered	Not Classified
Proteaceae	<i>Macadamia heyana</i>		Rare	Not Classified
	<i>Catalepidia heyana</i>			
Combretaceae	<i>Macropteranthes montana</i>		Vulnerable	Vulnerable
Orchidaceae	<i>Malaxis xanthochila</i>		Rare	Not Classified
Clusiaceae	<i>Mammea touriga</i>		Rare	Not Classified
Melastomataceae	<i>Medinilla ballsheadleyi</i>		Rare	Not Classified
Apocynaceae	<i>Melodinus baccellianus</i>		Rare	Not Classified
Clusiaceae	<i>Mesua sp.</i>		Vulnerable	Vulnerable
Rutaceae	<i>Microcitrus indora</i>		Rare	Not Classified
Hymenophyllaceae	<i>Microgonium mindorense</i>		Rare	Not Classified
Polypodiaceae	<i>Microsorium membranifolium</i>		Rare	Not Classified
Hymenophyllaceae	<i>Microtrichomanes digitatum</i>		Rare	Not Classified
Fabaceae	<i>Milletia pilipes</i>		Rare	Not Classified
Vittariaceae	<i>Monogramma dareicarpa</i>	Grass Fern	Presumed Extinct	Not Classified
Musaceae	<i>Musa jackeyi</i>		Rare	Not Classified
Rubiaceae	<i>Myrmecodia beccarii</i>	Ant Plant, Ant house Plant	Vulnerable	Not Classified
Hamemilidaceae	<i>Neostrearia fleckeri</i>		Rare	Not Classified
Apiaceae	<i>Oenanthe javanica</i>		Rare	Not Classified
Rubiaceae	<i>Oldenlandia polyclada</i>		Rare	Not Classified
Euphoribaceae	<i>Omphalea queenslandiae</i>		Rare	Not Classified
Proteaceae	<i>Orites sp. Orites Magacarpa</i>		Rare	Not Classified
Proteaceae	<i>Orites sp. megahertsia amplexicaulis</i>		Rare	Not Classified
Hamamelidaceae	<i>Ostrearia australiana</i>		Rare	Not Classified
Monimiaceae	<i>Palmeria hypotephra</i>		Rare	Not Classified



Panandaceae	<i>Pandanus gemmifer</i>		Rare	Not Classified
Piperaceae	<i>Peperomia bellendenkerensis</i>		Endangered	Not Classified
Elaeocarpaceae	<i>Peripentadenia mearsii</i>		Rare	Not Classified
Orchidaceae	<i>Peristylus banfieldii</i>		Rare	Not Classified
Orchidaceae	<i>Phaius pictus</i>		Vulnerable	Not Classified
Orchidaceae	<i>Phaius tancarvilleae</i>	Swamp Orchid, Swamp Lily	Endangered	Vulnerable
Euphorbiaceae	<i>Phyllanthus hyposporidius</i>		Rare	Not Classified
Piperaceae	<i>Piper mestonii</i>		Rare	Not Classified
Sapotaceae	<i>Planchonella macrocarpa</i>		Rare	Not Classified
Sapotaceae	<i>Planchonella singuliflora</i>		Rare	Not Classified
Lamiaceae	<i>Plectranthus gratus</i>		Vulnerable	Vulnerable
Hymenophyllaceae	<i>Pleuromanthes pallidum</i>		Rare	Not Classified
Thelypteridaceae	<i>Pneumatopteris costata</i>		Rare	Not Classified
Podocarpaceae	<i>Podocarpus dispermus</i>		Rare	Not Classified
Annonaceae	<i>Polyalthia michaelii</i>		Rare	Not Classified
Annonaceae	<i>Polylathia sp.</i>		Rare	Not Classified
Grossulariaceae	<i>Polyosma rigidiuscula</i>		Rare	Not Classified
Araliaceae	<i>Polyscias bellendenkerensis</i>		Vulnerable	Vulnerable
Araliaceae	<i>Polyscias willmottii</i>		Rare	Not Classified
Orchidaceae	<i>Pomatocalpa macphersonii</i>		Common	Not Classified
Araceae	<i>Pothos brassii</i>		Rare	Not Classified
Araceae	<i>Pothos brownii</i>		Rare	Not Classified
Lamiaceae	<i>Prostanthera atrovioleae</i>		Rare	Not Classified
Annonaceae	<i>Pseuduvaria hylandii</i>		Rare	Not Classified
Annonaceae	<i>Pseuduvaria mulgraveana</i>		Rare	Not Classified
Annonaceae	<i>Pseuduvaria villosa</i>		Rare	Not Classified
Rubiaceae	<i>Psychotria coelospermum</i>		Rare	Not Classified
Rubiaceae	<i>Psychotria submontana</i>		Rare	Not Classified
Simaroubaceae	<i>Quassia baileyana</i>		Rare	Not Classified
Grossulariaceae	<i>Quintinia quatrefagesii</i>		Rare	Not Classified
Hymenophyllaceae	<i>Reediella endlicheriana</i>		Rare	Not Classified
Araceae	<i>Remusatia vivipara</i>		Rare	Not Classified
Restionaceae	<i>Restio tetraphyllus</i>	Foxtails	Common	Not Classified
Araceae	<i>Rhaphidophora pachyphylla</i>		Rare	Not Classified
Ericaceae	<i>Rhododendron lochiai</i>	Native Rhododendron	Rare	Not Classified
Myrtaceae	<i>Ristantia gouldii</i>		Vulnerable	Vulnerable
Myrtaceae	<i>Ristantia pachysperma</i>		Rare	Not Classified
Euphorbiaceae	<i>Rockinghamia brevipes</i>		Rare	Not Classified
Connoraceae	<i>Rourea brachyandra</i>		Rare	Not Classified
Orchidaceae	<i>Sarcochilus serrulatus</i>		Rare	Not Classified
Sapindaceae	<i>Sarcopteryx acuminata</i>		Rare	Not Classified
Sapindaceae	<i>Sarcotoechia serrata</i>	Fern-leaved Tamarind	Rare	Not Classified
Euphorbiaceae	<i>Sauropus macranthus</i>		Vulnerable	Vulnerable
Cunoniaceae	<i>Schizomeria whitei</i>		Rare	Not Classified
Solanaceae	<i>Solanum dimorphispinum</i>		Rare	Not Classified
Solanaceae	<i>Solanum hamulosum</i>		Rare	Not Classified
Myrtaceae	<i>Sphaerantia discolor</i>		Rare	Not Classified
Monimiaceae	<i>Stegantnera australiana</i>		Rare	Not Classified
Proteaceae	<i>Stenocarpus cryptocarpus</i>		Rare	Not Classified
Cesalpiniaceae	<i>Storckiella australiensis</i>		Rare	Not Classified

Fabaceae	<i>Strongylodon lucidus</i>		Rare	Not Classified
Symplocaceae	<i>Symplocos hayesii</i>		Rare	Not Classified
Symplocaceae	<i>Symplocos hylandii</i>		Rare	Not Classified
Symplocaceae	<i>Symplocos sp.</i>		Rare	Not Classified
Symplocaceae	<i>Symplocos stawellii</i> var. <i>montana</i>		Rare	Not Classified
Myrtaceae	<i>Syzygium alatoramulum</i>		Rare	Not Classified
Myrtaceae	<i>Syzygium alliligneum</i>		Rare	Not Classified
Myrtaceae	<i>Syzygium boonjee</i>		Rare	Not Classified
Myrtaceae	<i>Syzygium sharoniae</i>		Rare	Not Classified
Myrtaceae	<i>Syzygium xerampelinum</i>		Rare	Not Classified
Fabaceae	<i>Tephrosia savannicola</i>		Rare	Not Classified
Myrtaceae	<i>Thaleropia queenslandica</i>		Rare	Not Classified
Tmesipteridaceae	<i>Tmesipteris lanceolata</i>		Presumed Extinct	Not Classified
Sapindaceae	<i>Toechima monticola</i>		Rare	Not Classified
Orchidaceae	<i>Trachoma papuanum</i>		Rare	Not Classified
Proteaceae	<i>Triunia montana</i>		Rare	Not Classified
Epacridaceae	<i>Trochocarpa bellendenkerensis</i>		Rare	Not Classified
Asclepiadaceae	<i>Tylophora rupicola</i>		Endangered	Endangered
Asclepiadaceae	<i>Tylophora williamsii</i>		Vulnerable	Vulnerable
Rubiaceae	<i>Uncaria cordata</i> var. <i>cordata</i>		Rare	Not Classified
Myrtaceae	<i>Uromyrtus metrosideros</i>		Rare	Not Classified
Hydrocharitaceae	<i>Vallisneria gracilis</i>		Rare	Not Classified
Asteraceae	<i>Vittadinia scabra</i>		Rare	Not Classified
	<i>Peripleura scabra</i>			
Asteraceae	<i>Vittadinia sericea</i>		Rare	Not Classified
	<i>Peripleura sericea</i>			
Myrtaceae	<i>Waterhousea hedraiophylla</i>		Rare	Not Classified
Myrtaceae	<i>Waterhousea mulgraveana</i>		Rare	Not Classified
Rubiaceae	<i>Wendlandia basistaminea</i>		Rare	Not Classified
Euphorbiaceae	<i>Whyanbeelia terraereginae</i>		Rare	Not Classified
	<i>Whyanbeelia terrae- reginae</i>			
Monimiaceae	<i>Wilkiea wardellii</i>		Rare	Not Classified
Xanthophyllaceae	<i>Xanthophyllum fragrans</i>	Fragrant Boxwood	Rare	Not Classified
Myrtaceae	<i>Xanthostemon whitei</i>		Rare	Not Classified
Orchidaceae	<i>Zeuxine polygonoides</i>		Vulnerable	Vulnerable
Rutaceae	<i>Zieria aspalathoides</i> var. <i>obovata</i>		Vulnerable	Not Classified

**Fauna**

<b>Class</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>Status (QLD Legislation)</b>	<b>Status (Federal Legislation)</b>
Bird	<i>Accipiter novaehollandiae</i>	Grey goshawk	Rare	Not Classified
Bird	<i>Aerodramus spodiopygia</i>	White-rumped swiftlet	Rare	Not Classified
Mammal	<i>Antechinus godmani</i>	Atherton antechinus	Rare	Not Classified
Reptile	<i>Bartleia jigurru</i>		Rare	Not Classified
Mammal	<i>Bettongia tropica</i>	Northern bettong	Endangered	Endangered
Bird	<i>Casuarius casuarius</i>	Southern cassowary	Endangered	Endangered
Reptile	<i>Coeranoscincus frontalis</i>		Rare	Not Classified
Amphibian	<i>Cophixalus infacetus</i>		Rare	Not Classified
Amphibian	<i>Cophixalus neglectus</i>		Rare	Not Classified
Reptile	<i>Crocodylus porosus</i>	Saltwater crocodile	Vulnerable	Not Classified
Reptile	<i>Ctenotus hypatia</i>		Rare	Not Classified
Bird	<i>Cyclopsitta diophthalma macleayana</i>	Double-eyed fig parrot (Macleay's)	Vulnerable	Not Classified
Mammal	<i>Dasyurus maculatus gracilis</i>	Spotted-tailed quoll	Rare	Not Classified
Reptile	<i>Delma mitella</i>		Rare	Not Classified
Mammal	<i>Dendrolagus lumholtzi</i>	Lumholtz's tree-kangaroo	Rare	Not Classified
Bird	<i>Erythrotriorchis radiatus</i>	Red goshawk	Endangered	Vulnerable
Bird	<i>Erythrura trichroa</i>	Blue-faced finch	Rare	Not Classified
Reptile	<i>Eulamprus tigrinus</i>		Rare	Not Classified
Mammal	<i>Hemibelideus lemuroides</i>	Lemuroid ringtail possum	Rare	Not Classified
Mammal	<i>Hipposideros cervinus</i>	Fawn horseshoe-bat	Vulnerable	Not Classified
Mammal	<i>Hipposideros diadema</i>	Diadem horseshoe-bat	Rare	Not Classified
Butterfly	<i>Hypochrysops apollo apollo</i>	Apollo jewel butterfly	Endangered	Not Classified
Reptile	<i>Lampropholis robertsi</i>		Rare	Not Classified
Amphibian	<i>Litoria genimaculata</i>		Rare	Not Classified
Amphibian	<i>Litorianannotis</i>	Torrent tree frog	Endangered	Not Classified
Amphibian	<i>Litoria nyakalensis</i>		Endangered	Not Classified
Amphibian	<i>Litoria revelata</i>	Whirring tree frog	Rare	Not Classified
Amphibian	<i>Litoria rhecola</i>		Endangered	Not Classified
Mammal	<i>Murina florum</i>	Tube-nosed insectivorous bat	Vulnerable	Not Classified
Reptile	<i>Natator depressus</i>	Flatback turtle	Vulnerable	Not Classified
Bird	<i>Ninox rufa queenslandica</i>	Rufous owl (eastern subspecies)	Vulnerable	Not Classified
Amphibian	<i>Nyctimystes dayi</i>		Endangered	Not Classified
Mammal	<i>Ornithorhynchus</i>	Platypus	Common	Not Classified
Mammal	<i>Petaurus australis reginae</i>	Yellow-bellied glider	Vulnerable	Not Classified
Mammal	<i>Petrogale mareeba</i>	Mareeba rock-wallaby	Rare	Not Classified
Mammal	<i>Pseudocheirus archeri</i>	Green ringtail possum	Rare	Not Classified
Mammal	<i>Pseudocheirus herbertensis</i>	Herbert River ringtail possum	Rare	Not Classified
Reptile	<i>Ramphotyphlops broomi</i>		Rare	Not Classified
Reptile	<i>Simoslaps warro</i>	Burrowing snake	Rare	Not Classified
Mammal	<i>Sminthopsis leucopus</i>	White-footed dunnart	Rare	Not Classified

Amphibian	<i>Sphenophryne fryi</i>		Rare	Not Classified
Amphibian	<i>Sphenophryne robusta</i>		Rare	Not Classified
Mammal	<i>Tachyglossus aculeatus</i>	Echidna (short-beaked)	Common	Not Classified
Amphibian	<i>Taudactylus acutirostris</i>	Sharp-snouted torrent frog or tinker frog	Endangered	Endangered
Bird	<i>Turnix olivei</i>	Buff-breasted button-quail	Vulnerable	Not Classified
Mammal	<i>Uromys hadrourus</i>	Thornton Peak melomys	Rare	Not Classified
Reptile	<i>Varanus semiremex</i>	Rusty monitor	Rare	Not Classified