

BIODIVERSITY

Introduction

Johnstone Shire includes outstanding and significant areas of Biodiversity. The World Heritage Area comprises 47% of the land in the Shire, but it does not contain all of the biodiversity of significance. Efforts by the Council, State and Federal organisations, and community groups continue to make positive contributions towards the preservation and restoration of fauna and flora.

News

Policy and Legislation

Strategy for the Conservation of Biodiversity in the Johnstone Shire

Johnstone Shire Council completed the Strategy for the Conservation of Biodiversity in the Johnstone Shire. It was approved by Council in December.

The strategy will focus work by:

- Identifying priority areas for conservation of biodiversity in the Johnstone Shire; &
- Providing a prioritised list that will be recognised by funding bodies as a strategic approach towards conservation of biodiversity in the Johnstone Shire.

The result of this prioritisation has seen the biodiversity strategy focus future conservation effort into four primary areas -

- 1) **Granadilla/Mission Beach.** There is a significant amount of remnant vegetation in this zone with strong linkages between remnant areas.
- 2) **Basilisk Range/Cowley Defence Reserve,** which encompasses area between the Liverpool Creek north to the mouth of the Moresby River at Mourilyan Harbour and west to the Basilisk range, which forms the headwaters of the Moresby River.
- 3) **Ninds Creek Catchment.** This zone encompasses the Ninds creek catchment along the coastal range from Mourilyan harbour to Coquette point and includes the wetland system associated with Ninds creek.
- 4) **Nerada/East Palmerston.** The zone encompasses the area of several tributaries of

Pressure

- The Council's biodiversity strategy has identified major pressures on flora and fauna in the Shire. These include the following:

- Continued land clearing
- Alterations to drainage systems and water tables
- Inappropriate fire regimes; &
- Feral animal and exotic plant invasion.

These factors threaten the integrity and ecological function of our natural ecosystems and the long-term survival of many of our native plant and animal species.

the North Johnstone River. The catchments of Rankin, Wadda, Berner and Fishers Creeks are contained within this zone.

Application of the Strategy will provide Council and the Johnstone Shire Community with:

- A strategic approach to conservation of biodiversity for implementation by government agencies and the community;
- A link into the regional natural resource management process in regards to conservation of biodiversity;
- Conservation of biodiversity within protected land, reserves and on freehold land; &
- Strategic rehabilitation of degraded areas.

Draft Wet Tropics Conservation Strategy

The Wet Tropics Management Authority released the draft Wet Tropics Conservation Strategy in October. The strategy has been developed to promote cooperative management to ensure the future ecological health of the Wet Tropics WHA. The strategy identifies the need to address the many direct and underlying pressures that threaten the Area's integrity. It emphasises the need for cooperative, coordinated management between all stakeholders in order to:

- Identify, conserve and rehabilitate all natural World Heritage values and associated cultural values within the Wet Tropics World Heritage Area,
- Identify, conserve and rehabilitate areas of high biodiversity outside the WHA which contribute to the values and integrity of the Area, &
- Mitigate processes that threaten the integrity and values of the WHA and surrounds.



Wet Tropical Coast Regional Coastal Management Plan

The EPA released the Wet Tropical Coast Regional Coastal Management Plan in December. Local Government must have regard to the plan for developments assessable under the Integrated Planning Act (IPA) or the current Shire planning scheme. The aim of the plan is to ensure that decision makers appropriately consider coastal resources and values in planning, development assessment, and coastal management.

The plan identifies five key coastal areas in the Shire – Ella Bay, Innisfail, Moresby, Kurrimine, and Mission Beach. These areas are further subdivided into 14 localities. There are varying pressures on each of these different areas and localities; the Plan describes desired outcomes in response to these pressures.

Flora

The Johnstone Shire is home to a variety of rare or threatened flora. Approximately 23% of plant species in the wet tropics are either endemic or listed as rare or threatened. One of the most recognisable species is the Native Sugar Palm (*Arenga australasica*).

The most threatened areas in the Shire are the basalt rainforest remnants, which contain a very high level of diversity. Before clearing occurred the basalt rainforest was the most complex development of rainforest in Australia.

The Wet Tropics NR&M board are presently conducting a catchment basis assessment of endangered plants.

A new issue of concern is Rainforest Dieback, attributable to a root fungus *Phytophthora*

Implications

- Humans are a part of the natural environment, in form, and because it provides everything that is essential to our continued survival.

Rainforests are the earth's lungs, providing oxygen and absorbing greenhouse gases. The fauna are part of a web of interrelationships that keeps the forests alive. To survive, and for our future generations to survive, we must nurture the natural environment.

The natural environment offers more than these basics. Part of the quality of life in Johnstone Shire is encountering some of the unique fauna such as cassowaries. The rainforests and waterways offer us recreation and respite from the urban landscape.

This has economic implications—our pristine natural areas are our major drawcard for tourism. As an example, cassowaries can be seen as a resource from this point of view. Care must therefore be taken to preserve the habitat that sustains the cassowary, and development must be restrained to protect the resource. Community cooperation is required to ensure that individual attitudes support this greater goal. Only cooperatively can these types of benefits be reaped.

As a part of the greater web of life we must adopt in our personal lives a morality of respect for the natural environment that supports us all. It deserves to exist as intrinsically as any of us, and without it, none of us exist at all.

cinnamomi. Numerous patches of dieback were identified in regions of the WHA. Studies have been conducted into the dieback phenomenon. Although the cause is still unclear, distribution of the fungus was found to be significantly correlated with human roads and tracks.

It is hoped that the spread of the fungus can be minimised by improving drainage and restricting access along roads and tracks where there is potential for infected soils to be picked up.

Remnant vegetation may be under pressure from the development of a proposed power line. The route avoids the WHA, but tracks through coastal lowland habitat containing significant rare plants. The Ecological Impact Assessment prepared is currently under a review process.

Broad Forest Types in the Wet Tropics Region	Regional Extent ('000 ha)	WHA Extent ('000 ha)
Rainforests		
- Complex mesophyll	36	16
- Mesophyll	348	283
- Complex notophyll	71	52
- Notophyll	203	193
- Microphyll	20	17
- Semi-deciduous	5	1
- Deciduous microphyll	8	0.5
- With sclerophyll emergents	144	106
Sclerophyll Forests and Woodlands		
- Tall open forest	54	37
- Medium and low open forest and woodland	852	135
Vegetation Complexes		
- Shrublands	19	7
- Swamp communities and coastal complexes	113	22
- Mangroves	43	14

From WTMA: State of the Wet Tropics Report 2002-03; Based on work by Tracey and Webb in 1975, and by Olsen in 1993.

Habitat Representation

Regional Ecosystems

The classification status of the Shire's regional ecosystems was changed greatly in 2003. The Vegetation Management Act classifies ecosystems according to location, soil type and species composition. They are then rated according to how much of the ecosystem remains in Queensland. Endangered (<10% remains), Of Concern (10-30% remains) and Not of Concern (>30% remains).

In the Shire, one 'Endangered' ecosystem was reclassified to a level of 'Of Concern'. Five 'Not of Concern' ecosystems changed to a level of 'Of Concern'. This is due to the representation of these systems outside of the Shire, as well as within the Shire. It means that the Shire's remnant ecosystems are of even greater importance for conservation than previously.

The Shire also contains variations of the standard regional ecosystems which are being proposed as subsets. These are found in Eubenangee Swamp and Ella Bay National Park. All are wetland

Pressure

- Vegetation in the Shire is well protected in the uplands of the WHA. However, the coastal plains contain a diversity of ecosystems that have been reduced and isolated by human settlement and agriculture.

These remnants are vulnerable to invasion by weed plants, as they often have large exposed edges and little core area to maintain their integrity. The isolation of these small communities can also mean that important ecological functions from fauna are not occurring, or that there are no sources for replacement when a species is lost.

Clearing, altered drainage in wetlands, inappropriate fire regimes, and pest species are continuing pressures on the Shire's vegetation systems.

ecosystems and are considered to contain many rare and endangered species.

Updated regional ecosystems mapping showed the following status of vegetation in the Shire:

No concern at present	Of concern	Endangered
15	18	15

Adapted from: Environmental Protection Agency (2003). Regional Ecosystem Description Database (REDD). Version 4.0. Updated Sept 2003.

Areas of remaining vegetation in the Shire

Vegetation Mgt Act Status	Total Johnstone Shire	Area outside WHA and Protected Area Estate
Endangered	5866 Ha	2130 Ha
Of Concern	22463 Ha	6942 Ha
Not of Concern	70737 Ha	11669 Ha
Total	99066 Ha	20741 Ha

Compared to other regions in Queensland, the Wet Tropics Region has a very high number of endangered ecosystems. This is due to the fragmentation of ecosystems on the lowlands.

Conservation on private land

The Council encourages conservation on private land through the covenant program.

Voluntary Conservation Covenants are an agreement between an organisation such as Council (or QPWS or WTMA) and a landholder

to preserve and maintain habitat on the landholder's property. Different rewards exist, with either a reduction in the rates, bonus development rights, or taxation reimbursements.

In 2003, 5 new rate deferral and 6 bonus development right covenants were established with Council, for an area of 116.42 ha. This brings the total properties with covenant to 63, with an area of 1520.36 ha.

Two covenants at Bingil Bay exist with the WTMA. The area of these is approximately 30 ha. The WTMA is presently encouraging landowners to utilise Council for covenants.

Land for Wildlife agreements are another incentive to promote the conservation of vegetation on private land.

1 additional Land for Wildlife property of 76 ha was added in 2003. This brings the total of properties to 8—an area altogether of 218.93 ha. Another 1 property was still 'working towards registration' at the end of the year.

Council reviewed and updated its habitat mapping. Regional ecosystem maps were combined with the cassowary habitat mapping. This now allows Council to provide covenants for threatened and vulnerable regional ecosystems on private land. Endangered regional ecosystems are already protected, as they cannot be cleared under the Vegetation Management Act.

Revegetation

Council

Council's revegetation unit conduct planting and weed control projects around the Shire. They also maintain the revegetation nursery. In 2003 the nursery supplied 38,000 trees for environmental projects. Council's staff are supported by a dedicated team of volunteers. In 2003, the number of volunteers increased to 85.

Their work included:

- Coventry Creek Vegetation Linkage – 2 ha
- Moresby River Riparian Rehab – 2.5 ha
- Community Vegetation Initiative – 4 ha

Internal Council Projects included:

- Spannagle Road litter screen
- Dunne Road



Landcare volunteers

- Bingil Bay Road
- Greens Gravel pit
- Stoters Hill Green waste batter

Contract works included:

- Stoters Hill Sub-Station Landscaping
- Mourilyan Mill toe stabilisation
- Sugdens Creek Revegetation

Weed control included *Hymenachne* control on public land, centred on major River and Creek systems. Pond apple control work was carried out in the North Maria Creek catchment.

Innisfail TAFE

The Innisfail TAFE continued enrichment planting along the Johnstone River adjacent to the TAFE. Part of this has been demonstration planting to promote bushtucker trees and farm forestry. It is hoped that landholders will diversify into these industries and be encouraged to replant riparian areas.

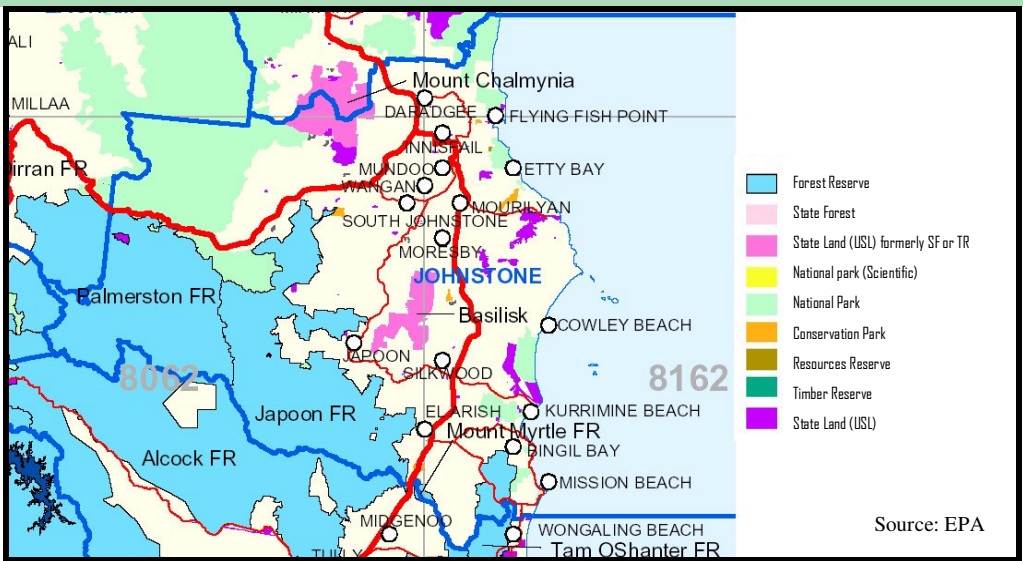
Training courses are also being held and have received a good response from farmers. This has also promoted cultural exchange with the indigenous students.

The TAFE also cooperated with the Council to remove sisal hemp and replant an old Coastcare site at North Mission beach.

JRCMA

The JRCMA facilitated the following revegetation projects:

- Liverpool Creek (~2 ha). This was conducted in conjunction with the Cairns Community Development and Employment Program.
- A property near the southern end of the Shire (~3 ha). This project reconverted grazing land to rainforest.



Source: EPA

- Riverine restoration along the North Johnstone River on private land (~0.75 ha).
- Lockyer Creek (~2 ha stretching along the river). Conducted with Fitzgerald Rotary.

Centre for Tropical Restoration

- The Centre for Tropical Restoration (CTR) continued work on a five year project sponsored by Powerlink. planted ~2 ha were in the El Arish region. Landholders have been involved through promotion of this vegetation as a part of Integrated Pest Management (IPM) to control cane rats. The trees provide habitat for birds of prey. The project has the goal of establishing linkages for fauna movement between the coastal lowlands and the WHA uplands. Cassowaries are a key target species.
- A 200 ha property was purchased adjacent to Eubenangee Swamp. This important wetland area will benefit greatly from the restoration to be carried out on the property.
- 2000 trees (~1 ha) were planted at the Wadda banana plantation. The plantation's owners have demonstrated excellent proactive environmental support.
- Assistance with the development of the Misty Mountain walking trails in the Palmerston region. 6-700 trees were planted.

Wet Tropics Forest Transfer Program

A number of State Forests have been handed over to the QPWS for management. Most of these areas are in the WHA. They represent the finalisation of the process of commitment to the conservation of the WHA. This process is still ongoing, as the forest areas are being classified according to conservation values. In the Shire they will become national parkland, but some small areas for mining extraction (quarries) may still exist.

The transfer of Unallocated State Land is the other part of this process. Two large areas in the Shire that will undergo assessment are the Basilisk range, and the area south of Mount Chalmynia.

Fire

QPWS conduct prescribed burns in areas where the vegetation is dependent on fire. In 2003 there was public concern that prescribed burning was occurring at the wrong time of the year, particularly in one instance where burning occurred during the nesting period of a flock of migratory birds.

QPWS plan to promote education throughout 2004 on fire regimes and the necessity of fire for sustaining particular ecosystem types.

Fauna

More detailed information remains to be gathered on the fauna in the Shire.

The EPA threatened species unit conducted work on two types of fauna in the Shire besides cassowaries. These included Spectacled Flying Foxes and Endangered Stream Frogs.

- Stream frogs were studied at Mission Beach, Lacey Creek and in Wooroonooran WHA. The ongoing investigation looked at frog numbers, and the effects of the chytrid fungus. The fungus is partly responsible for a national decline in frog numbers.

- The Spectacled Flying Fox *Pteropus conspicillatus* is classified as *vulnerable* under Federal legislation. Colonies are regularly sighted in the Shire, but populations of this flying fox have been declining over a number of years. The EPA conducts annual surveys. The last three years have seen a reduced but apparently stable population. Protection of the animal in 2002 may have halted culling by farmers as a fruit crop pest, though there are still reports of tree clearing where the animals set up a roosting colony. This is also illegal under the EPBC Act.

The 'State of Australia's Birds 2003' by Birds Australia was published in December. This work compares changes over the last 20 years. The Johnstone Shire area is one of high species richness and has not demonstrated any change over the time frame. Bird species richness fell mainly in areas of Australia where clearing was significant. The bulk of clearing in Johnstone Shire occurred more than twenty years ago.

Council prepared interpretive material—Living with Wildlife. This was for release with the 2004 rates notices.

Pressure

- Clearing of habitat is the main threat to the survival of fauna species. The clearing of even small areas can be a problem, when these areas link other patches of vegetation—thus forming a corridor for fauna to move between areas. This can be important for animals to forage or to breed. The size of a habitat area is also important—if it is large it will support a greater diversity with food plants, and room for faunal territories.

Fauna in smaller habitat areas are also vulnerable to domestic animals—dogs and cats allowed by careless owners to roam uncontrolled. Similarly, feral animals are a pressure, often targeting young animals or eggs. Roads dividing habitat areas can form a deadly barrier to fauna movement.

Appropriate fire regimes are important in some habitat types, as some animals will depend on the bounty of regrowth after a fire.

There is also some effect from diseases on wildlife such as frogs. Research is continuing into the causes.



Red legged Pademelons at Wildcare

Mission Beach Wildcare

Mission Beach Wildcare was established in 2002 to tend and foster injured native animals for release back into the wild. They presently have 25 members involved.

WILDNET – Fauna recorded so far, as part of the Wildnet Program

(At least these numbers of species exist within our Shire—there are definitely more)

Fauna in the Shire	Qld NCA Class	Amphibians	Reptiles	Birds	Mammals
Significant Species—due to either State, National or International Conventions	Endangered	5		4	
	Vulnerable		2	7	
	Rare	3	3	11	1
	Common			48	
	Introduced	1	1	8	5
Total No. of Species Registered to Date in the Shire (minimum possibly present)		25	30	339	34

Source: Environmental Protection Agency (2003) Wildnet. (Database) - EPA, Brisbane. 11/2/04.

In 2003 Wildcare took 166 animals into care. 77 of these animals survived their injuries, 6 were still in care at the end of 2003. 82 of the animals succumbed to injury or stress.

The major cause of injuries to mammals was from vehicle strikes, often orphaning infants in the pouch. Dogs were the other major cause, also separating infants from their parent. Stress from the dog attack killed some of the animals brought in.

Birds brought in were most often chicks fallen from the nest, especially during rough weather. Cats, cars, and flying into windows also contributed.

Wildcare advises people to check the pouch if a marsupial is injured or killed. It is a good idea to drive carefully on moonlit nights, as nocturnal animals will be more active. Dogs should be restrained in areas with wildlife, and fenced in to prevent wandering.

Wildcare raise funds with the ‘Sponsor a Wallaby Program’. The program involves people with progress reports and pictures of the animal that they are sponsoring. The funds raised are used to buy food in bulk to assist the carers with their animals.

Dogs and Wildlife

Loose dogs are a significant pressure on wildlife. The number of roaming dogs forms an indicator

Dog complaints involving Native Fauna in 2003 (Based on Council data)	
Cassowaries	0
Other wildlife	5
Town break up of dog complaints—All types —Roaming dogs are the most common complaint.	
Innisfail	380
Flying Fish Point	25
Moresby	5
Mourilyan	28
Kurrimine	26
Bingil Bay	15
Mission Beach	19
Silkwood	13
South Johnstone	18
Mundoo	2
Wangan	20
Garradunga	5
El Arish	12
Cowley	3
Boogan	1
Coquette Point	1
Rural (outside residential areas)	32

of this pressure. Complaints against dogs are made regularly to Council; these include reports of roaming dogs.

Dogs taken into parks or nature reserves for the purpose of pig hunting are also a problem, as they can indiscriminately harm native animals.

Cassowaries

The 2002 Update featured a photo of Lucky – one of two cassowary chicks that were fostered at the QPWS Cassowary Rehabilitation and Relocation Program. Both chicks were reared successfully and released near Ella Bay in September and November last year.

The latest addition to the care program is Stretch, who was brought in and who will be in care for a further 9 months.

The Cassowary Rehabilitation and Relocation Program has attracted attention from some major media producers. One of chick releases was filmed by Aussie Animal Rescue and will be screened in 2004. Australian Geographic filmed at the Rehabilitation site and will be running a feature article on cassowaries also. Late in 2002 the David Attenborough film crew also spent time filming at the Rehabilitation site.

Media attention of this kind is very beneficial to educating people about the pressures on cassowaries, and for increasing community concern.

The Community for Coastal and Cassowary Conservation maintain records of the number of cassowaries reported sighted by tourists and locals in the Mission Beach region.

Although there is a decrease in total sightings since 2002, this would appear to be mainly due to



Stretch

a great reduction in the number of chicks sighted. Despite the high number of chicks reported in 2002, there has been no increase in the number of sub adults sighted in 2003.

Reported Cassowary Sightings—Mission Beach	2001	2002	2003
Adult Males (positively identified)	<i>n.a.</i>	193	118
Adults (unidentified sex)	246	188	214
Sub adults	112	137	124
Chicks	97	264	89
Total	455	782	545

(Source: C4). Note that *Sightings* will depend on the response from tourists and locals and will vary according to visitor numbers or community interest.

C4 also record cassowary deaths in the Mission Beach area. Of the known deaths the following causes were attributable.

5 chicks were recorded – 1 killed by a dog attack, 3 of natural causes, and 1 unknown causes.

2 subadults – Both killed in vehicle strikes.

1 adult female – Unknown causes.

Cassowary conservation was promoted by educating people not to feed cassowaries. Feeding has been determined as a cause of aggressive and demanding behaviour from cassowaries – so called ‘problem’ birds, which have to be relocated. Worse still is that feeding attracts cassowaries to roadside areas where they are very likely to be run over – the major cause of unnatural fatality for cassowaries. QPWS involved a range of local businesses to display warning signs about feeding cassowaries. Fines of up to \$3000 now apply for this bad practice, and will be enforced.

8 problem cassowaries had to be relocated in 2003. Hopefully education about feeding will reduce this number in the future.

Pressure

– Human cohabitation with cassowaries has brought a lot of pressures on these large flightless birds. Cassowaries are periodically killed by people speeding in vehicles, are also vulnerable to attacks by dogs. Habitat clearing has reduced populations of the birds, as cassowaries occupy territories. This makes it impossible for the cassowary population to expand greatly, even when there are some good years and a number of chicks survive. Further reductions in habitat are a significant hazard to the viability of the cassowary population.

QPWS visited schools and tourist groups to further promote living together with cassowaries. Schools regularly visit the ranger base in Bingil Bay, and take part in activities such as putting together a cassowary information kit, or revegetation plant outs.

Schools were increasingly involved in 2003. Goondi, South Johnstone and Woree state schools respectively sold books, calendars, and raised money - to contribute to the C4 gift fund, which is in place for the purchase and preservation of critical cassowary habitat.

What is believed to be the first ever free-range rehabilitation took place with three chicks at Mourilyan. These ten-week old chicks lost their father, but were supplied appropriate food by a QPWS volunteer for a number of months. They were then weaned until they became successfully able to forage for themselves.

QPWS created a cassowary response trailer. This contains all the equipment necessary to deal with injured or problem birds.

The upgrade of Mission Beach road included a cassowary management plan. A number of



Cassowary preening

methods to calm traffic have been introduced. Culverts under roads were being investigated. It remains to be demonstrated whether cassowaries will use such tunnels, but they will be of great benefit to other wildlife – particularly nocturnal marsupials.

A program to monitor the Cassowary population by sampling DNA from droppings was under development by QPWS. Some problems have so far been encountered - a number of rainforest fruits contain chemicals that degrade the DNA. Further work is progressing to overcome this setback and the method may be trialed in 2004.

Crocodiles

CrocWise education by QPWS to encourage safe and responsible behaviour around crocodile areas was ongoing. Human attitudes have changed positively, particularly in response to being able to report crocodile concerns to QPWS or Council.

Generally, crocodiles along the inhabited east coast are remaining at low-level but stable populations. The population is restricted by two factors -

- The availability of nesting habitat
- Crocodile management tends to target the large animals, which are the breeders.

Despite this, the population is breeding and there has been some small expansion of crocodiles into areas in which they have not been seen for a long time. Although the species is listed as vulnerable, there is no significant likelihood of extinction.

The results of recent research conducted by the QPWS indicates that crocodiles have extensive ranges along a river, and along the coast; including excursions to other river systems. This dispels the myth that crocodiles are limited to defined territories—as the crocodiles studied moved through one another's foraging ranges daily.

It is therefore not possible to keep an area of river clear of crocodiles. Fortunately, management of crocodiles in the Shire's public river areas is not based on this idea. Crocodiles are removed only when they adopt behaviours such as frequenting boat ramps or jetties. There is no reason for a crocodile to adopt such



Crocodile trapped for removal

behaviour unless people are irresponsible and feed crocodiles, swim, or leave bait or fish scraps at such locations.

The research also indicated that crocodiles could return home despite significant translocation distances. Translocation is no longer an option for crocodile management.

No. of Crocodiles removed, within the Shire 2003

17/7	Upper Johnstone River	Male	2.72 m
23/9	Johnstone River	Male	3.73 m
12/10	Moresby River	Male	3.56 m
23/10	Johnstone River	Male	3.16 m

Pest Species

Feral pigs are a significant pressure on wildlife and the ecosystems they inhabit.

The NR&M Wet Tropics Feral Pig Trapping Program ceased after nine years of operation. Council is now responsible for ensuring that landholders control feral pigs on their land. This can be enforced under the Lands Protection Act. QPWS control pigs in the national parks, but presently only on an opportunistic basis.

Another threat is the presence of wild deer in the Palmerston, Mena Creek and Bingal Bay areas of the Shire. They have the potential to cause significant damage in open woodland areas. Control is presently limited to shooting which is proving successful.

Conclusion

2003 saw the finalisation of a number of strategic plans towards the continued protection and restoration of natural values in our area, and over the Wet Tropics region.

The condition of the environment remained relatively stable through the year. No significant changes to the status of any flora or fauna were reported. Some conservation statuses have been redefined, but this is due either to re-evaluation or because of changes outside the Shire.

Better information on the status of vegetation has become available. More information on fauna in the Shire is required.

Future Direction

The new strategic plans will shape and integrate work towards conservation in future years.

The plans will restrain the direction of development in the future, so there may yet be a period of adjustment before a synthesis is fully achieved and respected.

It remains to be seen how successfully the strategies that have been formulated are put into practice.

Report Card for Biodiversity**OVERALL GRADE****B+**

Criteria	Grade	Recommendation Group	Explanation
Action on recommendations 15 of 19 recommendations actioned to date	B	Biodiversity Strategy Interpretation ranger for the Shire Cassowaries and crocodiles	Completed. Position not created by the EPA but mitigated by regional work conducted. Many plans and approaches are underway.
Filling deficiencies in data	B	Regional mapping of conservation values Fauna monitoring Vegetation monitoring	Council improved conservation mapping, EPA released regional ecosystem mapping, Stanton mapping underway. No detailed information on species. No detailed information on private clearing or on endangered species.
State of the Shire	C+	Fauna Flora Pests	No major changes reported. A decline in frog species may still be occurring. No major changes reported. Rainforest dieback may be a new threat. Covenant program continues successfully. Remain at stable, problematic levels.
Goal Achievement	A+	All	Progress by organisations through planning. Continued dedication from small groups in the community.
Community Awareness	B+	Public education Events	Cassowaries and crocodiles have been promoted, including additional public signage Council developed interpretive material – Living with Wildlife Council developed brochures—Conservation Incentives. Few community events.