



"Pitt" Rescued from a barbed wire fence in May 2009 - ready for release in October 2009 - photo D Dickson

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Call for Assistance

Cyclone Yasi - mahogany glider recovery, survey and impact evaluation

As you no doubt may be aware, Cyclone Yasi left a devastating trail of damage not only to North Queensland communities, but also to the habitat of our endangered species.

My role is as the principal researcher associated to monitoring mahogany glider distribution within its limited range from Hull River S to Ollera Creek, with a particular emphasis towards recovery actions necessary to maintain and improve habitat integrity of this species on protected area estate. My other interest is supporting the valuable efforts of those also striving to conserve, protect and broaden community awareness about the plight of *Petaurus gracilis*, our slender rope dancer.

Mark Parsons
Senior Conservation Officer, QPWS Wet Tropics

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Call for assistance *continued...*

Efforts to rescue the mahogany glider are in hand, with a program initiated by the Wildlife Preservation Society of Queensland (Tully Branch) and supported by donations organised through the RSPCA to look at property based supplementary feed station kits for freehold semi rural properties across the Meunga Creek, Lily Creek, Bilyana and Kennedy areas, sites of concern where traditionally the majority of our injured glider encounters occur. A second wave of effort will involve the supply and installation of den boxes in sites most evident of impact and hollow loss. QPWS is an active supporter of these efforts, with the key concern to address welfare issues of disorientated or debilitated gliders and with a particular goal to ensure prompt veterinary assessment if required, release back into the wild as soon as possible, but ultimately and primarily to harness the community to attempt to support the glider to advert this action of coming into care in the first instance where possible.

The impact of Yasi is still being considered with preliminary observations that most elements of habitat persist, particularly hollow bearing live trees as a core feature of need. In many cases the impact could be considered similar to a very late season extensive wildfire, albeit with little to no untouched refugial areas. There is concern however that fragile, narrow and linear habitat represented W of the Bruce Highway on the Murray floodplain has borne the brunt of damage. Girramay (Edmund



Image: Yoshi, a mahogany glider detected on 14 February 2011. Courtesy Mark Parsons

Kennedy) National Park also has raised concerns about the severity of impact but much of the park is inaccessible due to cyclone debris and flooding.

This is a call for assistance, as a unique opportunity for independent research into the impact of Yasi exists. Unlike the cassowary, there has been no prior study on the impacts of catastrophic events on the mahogany glider, only rediscovered in the 1990's. QPWS is naturally keen, I am keen, to support such research to form this valuable evaluation on how well the glider may fare, or more crucially what intervention or assistance could be brought to bear not only within this event but for future events as well. Baseline data exists for pre and post Yasi comparison, including Steve Jackson's PhD study site at Mullers Creek, and Scott Burnett's study of glider density in a narrow, linear fragment at Corduroy Creek. The role of supplementary feed stations and den boxes also presents an avenue of research.

If you have experience with surveying for glider species (supervision of work through an animal ethics process) involving a variety of methodologies including trapping, spotlighting and remote camera stations, please contact me. Surveys typically run for four nights, with a desirable need to repeat at stages throughout this year at key sites. You will need to be self sufficient in terms of accommodation, food, vehicle, however QPWS can supply survey equipment, methodology and will be in a position to provide local support (be aware that Cardwell is rebuilding) which can be negotiated. QPWS is pursuing funding for research both internally and externally, however again independent research has a vital role in informing the recovery efforts and knowledge behind this species. Volunteer effort to assist with installing feed stations and den boxes is also appreciated.

Mark Parsons
Senior Conservation Officer,
QPWS Wet Tropics
Mark.Parsons@derm.qld.gov.au

Not a coward just yellow-bellied

The yellow-bellied glider (*Petaurus australis*) is a small, possum-like mammal with an average body length of 28cm and tail extending a further 42cm. Unlike the larger greater glider (*Petauroides volans*), whose gliding membrane extends from elbow to ankle¹, the yellow-bellied glider's membrane extends from wrist to ankle. The yellow-bellied glider is found along much of the eastern mainland, preferring tall open eucalypt forests.

In 1982, Smith and Russell described the yellow-bellied glider as "one of the most unusual and yet poorly studied of the Australian marsupial gliders."² In recent years, extensive research and reporting has focussed on the loss of habitat for many wildlife species, along with several notable reports into the use of population viability assessment (PVA³) modelling (notably H. P. Possingham and D.B Lindenmayer).

However, to this date, the yellow-bellied glider remains just as elusive due to the increased rate of urbanisation, and the gliders' preference of undeveloped areas. In Northern Queensland, rainforest encroachment is estimated to have captured 70% of all open forest dominated by rose gum and 50% dominated by mixed species of eucalypts over a period of 50 years. This habitat, regularly used by the yellow-bellied glider, is slowly being overtaken by rainforest species, and it is believed that it will be used by these gliders until there are a minimal number of habitat trees in the area.

It is for this reason that populations of the yellow-bellied glider occurring in the Wet Tropics have been listed as Vulnerable under the Environment Protection and Biodiversity Conservation Act 1999 (Federal Legislation), and the Nature Conservation Act 1992 (Queensland State Legislation). In the Wet Tropics area, it is estimated the yellow-bellied glider population is confined to a narrow, 300km band of vegetation, ranging from one to five kilometres in width.

The situation is currently different for populations found in south east Queensland, though potential remains for the same path to be followed. Currently listed as being of Least Concern under the Nature Conservation Act 1992, these populations tend to prefer dry sclerophyll open forests, with an average rainfall of between 650-1200mm a year.

How can we identify a yellow-bellied glider? Apart from the physical description listed above, it is important to observe the trunks of potential feed trees in the target area. When attempting to access the sap of given food trees, the yellow-bellied glider is known to leave a small, V-shaped or triangular incision on the trunk. In addition, listening for the loud call can be an indication that you are within a potential 500m radius of its location.

The yellow-bellied glider has been found to give birth to a single young all year round, with most births occurring in the winter months. Young are known to live in the pouch for the first 100 days, before remaining in the den for around 50 days before beginning independent foraging.

While these facts are well known, it is clear that we still have a lot more to learn about these gliders. As more information about this species is uncovered, we will be better able to respond in order to conserve the yellow-bellied glider in both south east Queensland, and more urgently in the Wet Tropics.

This information and more is available on the website.

Article written by Matthew McInerney, QGN member (see p7)

References

- ¹ Queensland Museum. Wildlife of Greater Brisbane pg. 372. ©Queensland Museum 2007. Cited: Friday, February 04, 2011.
- ² Smith, A.P and Russell, R., 1982, Diet of the Yellow-bellied Glider *Petaurus australis* (Marsupialia Petauridae) in North Queensland. Cited: Wednesday, February 02, 2011.
- ³ PVA is a computer-based modelling approach for simulating the processes that influence the behaviour of populations and predicting the viability of a population (Burgman et al., 1988; Possingham, 1991; Akçakaya, 1992; Boyce, 1992).



Image: Yellow-bellied glider was rescued from barbed wire in December 2010 and released after successful rehabilitation. Courtesy Natasja De Gouveia Brazao

Updates

on Yasi and the floods

Tropical Cyclone Yasi

At time of publication, the full effects of Tropical Cyclone Yasi are still unknown. As Mark Parson's article outlines, there is cause for concern particularly for the mahogany glider, as the last remaining habitat was impacted by in excess of Category 5 winds.

A report into the effects on wildlife following Cyclone Winifred found stunningly large differences in wildlife numbers following the passing of the storm. For example, "On North Brooke Island, 21 800 pigeons were counted on January 7, 1986; while on March 18, 1986, only 36 pigeons were present (A. and M. Thorsborne; pers. comm.)" (Blackman et al 1986).

Considering that mahogany gliders are only found between Tully and Ingham, keeping in mind Tully was the crossing point for TC Yasi, with winds sustaining speeds over 200km/h for at least four hours (max 300km/h), it is a nervous wait as the full impact is slowly uncovered.

For updates as information is gathered please visit our news page on the event.

Article written by Matthew McInerney, QGN member (see p7)

References

¹ Blackman, J.G., Winter, J.W., King, B.R. 1986. Effects of Cyclone Winifred on Coastal and Island Fauna. Cited: Tuesday, February 08, 2011.



Image: Cyclone Yasi Mark Parson with landholder Paula Ingerson mahogany glider feed station

Queensland Floods

The first round of results from water quality testing in the south of Moreton Bay shows some positive outcomes for the health of the Bay. The Department of Environment and Resource Management (DERM) has found that the flood plume which loomed over much of Moreton Bay has not affected salinity and turbidity levels - key ecosystem health parameters for the southern sections of the Bay.

For further information and updates on the effects of the Queensland floods please visit our news page on this event.

Spotlight

on gliders

The Queensland Glider Network is organising another 2 glider spotlighting events in April and QGN members are invited to attend.

The first is 2 April 2011 at White Rock - Spring Mountain Conservation Estate, Ipswich, from 6:00-7:30pm and the second is 9 April 2011 at

The Knoll, Mt Tamborine, running from 5:30-7:00pm.

All you will need is closed in shoes, a small personal torch and a water bottle.

RSVP is essential as numbers are limited to 12 people for each trip - please email glider@wildlife.org.au as soon as possible to register.

Further information and a meeting point will be sent upon registration.

Caring for gliders

While wildlife rehabilitation is sometimes perceived as a controversial or unnecessary method of conservation and many questions have been raised to the success of the process¹ – a staggering 25.5 per cent of animals hit by cars can be saved through rehabilitation, whereas without rehabilitation only 1.16 per cent would survive².

Australia is home to many species of endemic wildlife that have helped to characterise our country and have become important icons in our society. Of the wildlife found in Australia, 89% of marsupials, 73% of mammals, 70% of birds, 88% of reptiles and 94% of frogs are found exclusively in Australia. Furthermore, all the known species of monotremes, the legless lizard family, as well as our gliders are confined to Australia and New Guinea³. These unique wildlife species play vital roles in our environment by dispersing seeds, recycling nutrients, regulating pests, and maintaining natural ecosystems. Our native wildlife is also important to society as icons of our country. Our coat of arms contains native wildlife, national sports teams are named after Australian animals and many of these species are internationally recognised as symbols of Australia. These internationally recognised wildlife species also have an economic advantage to the country. They play a major role in Australian tourism and a vital role in influencing tourists to visit Australia. Many tourists say our unique wildlife is a major influencing factor in their decision to visit Australia and would change their mind to visit if it were not for these species. Koalas alone bring \$1.1 billion into the economy and create 9,000 jobs for local communities⁴. It is undeniable

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that our unique wildlife is valuable in many ways to our community and worthy of protecting, yet there are many threats facing them.

Wildlife extinctions are happening faster than ever before. This is attributed in part to the fact that today's society has become reliant on man-made technology and wildlife is being forced to overcome many artificial obstacles. It is these human influences, such as roads, powerlines, deforestation, and hunting that increase wildlife endangerments. For example the Tasmanian tiger became extinct as a result of hunting; the lesser bilby is presumed extinct and the greater bilby is critically endangered due to the destruction of habitat and the effects of introduced species⁵. Along with these, the mahogany glider is listed as endangered due to habitat fragmentation and the introduction of artificial barriers such as roads and barbed wire fencing. Australia has a frighteningly high rate of extinction - one of the highest in the world. Over the past 200 years almost 50% of

global mammal extinctions have occurred in Australia. Under national legislation approximately 1667 Australian species are listed as threatened and a further 103 are listed as extinct⁶. Extinctions in the wild are a natural process but with the introduction of cars, roads, housing and other artificial structures we are significantly increasing the process. With the increase in human population there is also an increase in the rate of species extinction⁷.

Statistics obtained from the Australia Zoo Wildlife Hospital show the extent of human impact on wildlife, with over 39% of the wildlife coming into care at the hospital in 2009 brought in for reasons directly caused by human influence. These included over 100 from barbed wire and fence entanglements, over 600 from domestic animal attacks, over 1400 due to vehicle collisions, and even 30 due to intentional malicious activities by humans⁸.

It is our responsibility as a country to be protecting these endemic animals - as once they are gone from here, they are gone forever.

In my opinion wildlife rehabilitation has become one of the most important aspects of conservation today. With the populations of several species experiencing severe declines, the services of local care groups are becoming more vital. The number of injured animals being brought into these groups has even led to the establishment of specialised hospitals to cater for the care of our native wildlife⁹. Wildlife care has come a long way over the years and is slowly becoming more accepted with the introduction of laws and guidelines to protect the interests of the animal and the environment. Wildlife carers must be under a license and conform to rules and restrictions on the care of their specialised animal¹⁰. This allows the rehabilitation process to be a more monitored and effective way of protecting species.

Arguments have been raised on the aspects of wildlife rehabilitation. As the process involves taking animals from the wild and bringing them into captivity, possibly affecting the natural balance, it can be seen as an inappropriate method of conservation¹¹. Wildlife rehabilitation is defined as caring for injured, sick, or orphaned

native animals and providing access to veterinary assessment and treatment where required, then nursing care and support, with the goal of restoring them to their natural condition and habitat¹². Caring for wildlife is not an excuse to have wild animals as pets – conversely it ensures that wildlife is not tamed when in care there is strict legislation that needs to be followed. This legislation ensures the animal is rehabilitated to a point where it can successfully be reintroduced to the wild environment.

The Wildlife Information Rescue and Education Service (WIRES) estimate that 3400 native animals are killed on Australian roads every day. A study on wildlife incidents on NSW roads in 1993-4 by WIRES shows just how important the rehabilitation process is in compensating for the impact of these tragedies. Within the study period, 3086 animals were reported by the public as being hit by cars. Of those that survived only 36 animals did not need any treatment. The remaining 787 animals were taken into care, treated, and rehabilitated successfully to release. Without rehabilitation, only 1.16% of wildlife involved in vehicular collisions survived, but with the help of wildlife carers, a further 25.5% of wildlife were saved and reintroduced to the wild¹³.

Wildlife is important within our environment and needs to be protected to allow ecosystems to function correctly with adequate biodiversity; and wildlife care is a vital part of this conservation. We care for wildlife because in today's society we are having too much of a negative effect on wildlife populations. The role of a wildlife carer is an important one and is becoming a more accepted and effective way of conserving wildlife. Wildlife care groups are providing education for carers by running workshops to allow carers to have the best and most current knowledge so they can provide the greatest care for native wildlife. We rely on wildlife to continue providing vital services to ecosystems. Without them we could not survive.

So while incorrect care can often be detrimental to our wildlife, in the hands of registered, experienced carers following legislated guidelines, wildlife rehabilitation could be the answer to the sustainable future of our iconic endemic species.

Article written by Shari English
QGN member and wildlife carer
(see p7)

¹ <http://www.news.com.au/opinion/wildlife-rehab-may-do-long-term-harm/story-e6frfs99-1111115824947#ixzz1DHDTY047>

² <http://www.abs.gov.au/ausstats/abs@.nsf/Previousproducts/1301.0Feature%20Article312003?opendocument&tabname=Summary&prodno=1301.0&issue=2003&num=&view=>

³ <http://www.abs.gov.au/Ausstats/abs@.nsf/0/525e198ee27f1682ca2569de00267e45?OpenDocument>

⁴ Koalas and Tourism, Australian Koala Foundation© 2010, Queensland, 6/5/10, <https://www.savethekoala.com/>

⁵ <http://www.kidcyber.com.au/topics/austendangered.htm>

⁶ http://www.boobook.org.au/questions_and_answers.htm

⁷ http://salsa.democracyinaction.org/o/2167/t/0/blastContent.jsp?email_blast_KEY=1150373

⁸ Australia Zoo Wildlife Hospital 2009

⁹ http://www.wildlifewarriors.org.au/wildlife_hospital/

¹⁰ <http://www.derm.qld.gov.au/register/p00066aa.pdf>

¹¹ <http://www.news.com.au/opinion/wildlife-rehab-may-do-long-term-harm/story-e6frfs99-1111115824947#ixzz1DHDTY047>

¹² <http://www.land.vic.gov.au/dpi/nreninf.nsf/LinkView/B60B567FD0CF8A42CA256C19000EFC3E7F8E4DBA5A6FDD04A256DEA0027A820>

¹³ <http://www.abs.gov.au/ausstats/abs@.nsf/Previousproducts/1301.0Feature%20Article312003?opendocument&tabname=Summary&prodno=1301.0&issue=2003&num=&view=>

The Wildlife Preservation Society of Queensland (*Wildlife Queensland* or WPSQ) has many programs and projects—the Queensland Glider Network (QGN) is one of them.

We are a community conservation organisation with a diverse membership drawn together by a common interest in wildlife.

Wildlife Queensland has been working to protect Australia's precious and vanishing natural environment since 1962.

If you would like to become a wildlife protector, a subscriber or a volunteer, please contact us:

95 William St Brisbane
Qld 4000 Australia

wpsq@wildlife.org.au
ph 07 3221 0194

www.wildlife.org.au



Whether you are a conservationist, researcher, carer, or simply interested in gliders, you will find QGN has something to offer you, and in turn, you may have information to share with all of us.

Email us your glider news to glider@wildlife.org.au

To join QGN (it's free) - download the membership form from www.wildlife.org.au/qgn/join

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Do you have a story to share about spotting a glider?

Send it to *Glider Tales* along with a picture if you have one and we may publish it on our website. See

www.wildlife.org.au/projects/gliders/tales



www.wildlife-australia.org



About our contributors

Matthew McInerney moved to Queensland from New South Wales in 2009 to study Conservation and Land Management, completed his Diploma in 2010, and is now studying a Bachelor of Journalism/Bachelor of Science at the University of Queensland. During this time, he has developed a keen interest in the conservation of our environment, and has become passionate about the protection of our native wildlife.

Shari English has a certificate in horticulture, has completed study on Native Animal Rehabilitation at TAFE and is currently studying Applied Science at the University of Queensland. "After joining WPSQ, I was given the opportunity to volunteer with QGN which gives me the chance to work with like-minded people, network with people in the industry and learn new skills. I have learnt a lot more about gliders, and hope to be able to make a difference for these gorgeous creatures."

