

Central Queensland Koala Volunteers



SPRING EDITION 2013

St Bees Island July 2013 – counting koalas, goats and wallabies.



Mathilde, Julia and Mary (right) resting after a day hunting koalas across southern St Bees Island. July 2013

The research team comprised four researchers this year. Mary McCabe, Alistair and interns Mathilde Dionisi (from France) and Julia Kamp (from Germany) travelled to the island in mid July. The objectives were fourfold: repair the weather station that was recently shifted from St Bees to Keswick island; download data from the microweather stations in the grazing enclosures on St Bees island; undertake a census of koalas, goats and wallabies on St Bees; observe the behaviour of koalas during changes in weather during the day; and assess changes in the vegetation communities on St Bees. Usually a team from the Queensland National Parks and Wildlife Service joins us on the July trips. Unfortunately they were unable to attend. This meant that our work load was higher than usual.



Brett Curd (Keswick Island Manager) ferries a cold wet team home from St Bees Island. Alistair back left, Mary back right
We travelled to Mackay by road and then flew to Keswick Island by light plane. Weather was fine and clear with little wind and we were able to see a female humpback whale and calf on the flight over. However, after the first few days this situation changed and strong winds, rough seas, low temperatures and intermittent rain and sea fog characterized the remainder of the trip. Fine clear weather, low winds and calm seas returned the day we flew back to the mainland. We lost one half day when winds were too strong to enter the forest safely and another half day when sea fog and rain made the terrain unsafe. Despite that we were able to achieve all but the last objective. We did not have sufficient time to do the vegetation monitoring.

As the camp site on St Bees is not yet established we based ourselves in the builder's quarters on Keswick island. It costs us about \$60.00 per day including food,

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accommodation, hot showers and clean, comfortable beds. The island management team was most helpful and shuttled us back and forth between Keswick and St Bees islands. We are most grateful to Bret Curd (Islands Operations Officer, Keswick Developments) and his team for this assistance and their general hospitality.



Coral gardens, St Bees Island July 2013
Here Mary was stung by a stingray

There were some adventures. Mathilde and Julia were introduced to spiders, snakes, green ants and sting rays. The latter became quite significant during the trip. Because we were running between the islands by boat we were required to wade to get on and off the boat. The extent of wading depended on the state of the tides. The tidal range was extremely high during most of the trip. This meant that at high tide we could be dropped off at the beach. However at low tide we had to walk across tidal mud and sand flats and, on two occasions, pick our way through coral gardens. This was an adventure in its own right. A colourful and diverse array of soft and hard corals and algae were exposed. This included branching, brain and plate corals as well as red, brown and green algae. On the edge of the vertical drop to deep water, stranded pools of shallow water held a complex array of molluscs, sea-cucumbers, crabs, fish, rays and one stranded turtle. Although we wore “reef shoes” of various types, care was needed to avoid breaking coral while not being cut by coral or shellfish and making sure that we were not stung by the

panicking fish and rays.

Mary was the unlucky one. A small sting on the ankle above the reef shoe resulted in debilitating pain for several hours including a difficult night. However, by next morning Mary was back “on deck” despite some tenderness and able to continue the trip. The wound slowly healed without infection. So now we have to revise our recommendations for suitable footwear for wading across these flats. We did spend some time watching the much larger rays following the tide into sand channels in Homestead Bay. A sting from these big specimens would have been most challenging.

Footwear became an issue on the last day when a harried Alistair left his walking boots in the dingy and spent the day searching for koalas in a pair of sandals.

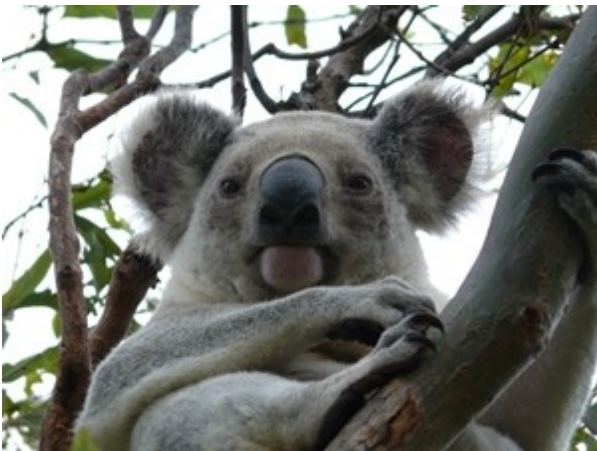
So what about the koalas?



Old Natasha curled on a cold, damp winter day. St Bees Island July 2013

We spent most days walking the western slopes of St Bees Island looking for koalas. This was part of a census of the island population and it also included wallabies and goats. In all, we walked about 17 km. We saw 43 koalas, 37 swamp wallabies and 22 goats. By knowing the distance we travelled and the distance between the researcher and each animal spotted we were able to calculate an estimate of the number of koalas on the island. For technical reasons we combined the data from the 2012 and 2013 census. We

estimated that there are about 270 koalas on St Bees in 2012/2013. This is less than the 364 estimate that we made in 2010 (Alistair with Mary and Gabriella). Also the estimate of goats and wallabies on the island has increased from 2010 (532) to 2012/13 (691) despite the ongoing cull of goats by QPWS. Does this mean that there are fewer koalas and more goats and wallabies? Not necessarily; this is only the second full census and the difference may reflect variability in the method. We probably need to repeat the census a further three times to understand how much the results vary from census to census and whether there is a consistent trend or not.



A rather superior young male koala raises his head to examine ret researchers below. St Bees Island July 2013

A major impediment to our search efficiency was the increased density of the shrubby midstorey. In particular, lantana has increased to such an extent as to make moving across the island a constant effort. This meant that a lot of attention and physical effort was directed to clearing a path. In many places the lantana brush influenced the direction of passage and, hence, biased the survey design. A machete (Bill) or secateurs (Alistair) are now essential field equipment.

We are also interested in understanding how the koalas manage under changing environments. One way is to adjust their stance with temperature. Under cold conditions they curl up into a ball minimizing

their surface area and maximizing the conservation of heat. Under warmer conditions they progressively expose more of their body to air increasing the amount of radiant heat they can lose. This is facilitated by differences in the density of the fur on their body. Fur on the back is denser and darker in colour than fur on their underside and on the inside of the limbs. So a curled animal minimizes heat loss from the thinner fur but also maximizes insulation by exposing the denser fur to the air. The way in which koalas increase or decrease the exposure of the under-fur indicates how they are regulating their body temperature. So we are looking at the patterns of body posture over a range of weather and seasonal conditions and contrasting latitudes to see how different koala populations use this behaviour. This trip Mathilde and Julia watched five koalas for six days and recorded their changes in posture from 9am to 4pm. In all they recorded 124 changes in posture. Every half hour they also recorded temperature, humidity and wind speed. The temperature ranged from 19 to 23 degrees with winds gusting up to 45 km/ hr and intermittent rain in the mornings. So, most of the time, the koalas were tightly curled. Occasionally there were short bouts of scratching, and some feeding in the late afternoon. Such exciting days! We'll repeat this work in spring/summer and then examine the data.

Alistair Melzer

Sniffing out koalas

The Journal of the NSW Rural Fire Brigade (Bush Fire Bulletin 32 (2) 2012) reports on **Oscar - a koala detection dog**. NSW Rural Fire Services and NSW Parks and Wildlife Services are using Oscar (a black Labrador) to sniff out koalas ahead of planned hazard reduction burns.

Koala Dog is used to systematically locate koalas in areas planned for burning. When a koala is located the burn is postponed until the koala has left the area.

It is great to see this approach. We talked about developing such a dog with Paul Lawless-Pyne at Springsure nearly 20 years ago when his dog would “tree” a koala ahead of us catching and collaring it. Again the subject arose at Stirling Downs when Jim and Jenny showed us their echidna dog in action. It is out in these more western sites where such a dog would be useful. The koala density is very low and we may walk several kms to find one koala.

Alistair Melzer

Mission

CQ Koala Volunteers seek the conservation of the koala and other tree living mammals in Central Queensland by

- *Supporting research into koalas, other arboreal mammals and their habitat through (a) providing volunteer support to research projects, and (b) assisting in the raising of funds for research and the volunteer teams;*
- *Developing public awareness of the needs of koalas, tree living mammals and their habitat requirements generally;*
- *Fostering community support for koalas and tree living mammals generally;*
- *Encouraging and assisting with the development of habitat rehabilitation projects where necessary through the region;*
- *Supporting the rehabilitation and release of sick, injured or displaced koalas and tree living mammals.*

The Central Queensland Koala Volunteers are not about stopping development. They seek to encourage planned development, which allows for the co-existence of koalas and other tree living mammals with human activity.

Funds are used to buy equipment for the researchers, to fund volunteer field teams and provide limited support for animal carers. Donations may also be made to the Koala Research Centre of Central Queensland and are tax deductible.

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OUR ‘ORPHANED’ KOALAS

Our fund raising has been boosted by a sell out of our ‘orphaned’ koalas at two events recently.

The ‘orphans’ are pre-loved toy koalas donated to the volunteers. I wash them, brush them and give each a name. Then I compose a short story to tell how they became orphaned. I pin a nappy on and they are ready to be adopted.

Our ‘orphans’ have been great fund raisers for some years now. Their stories are meant to convey to children some insights into the many problems baby koalas face in the wild.

The entire basket of small ‘orphans’ was sold at the Gladstone Eco-Fest in June and later at the Girl Guides another basket full was sold.

The money raised from these sales goes towards funding the research into understanding the requirements wild koalas need to survive in the wild.

Carmen Drake