

# Emu DNA collection report

## Inverell district – 28-29 December 2015

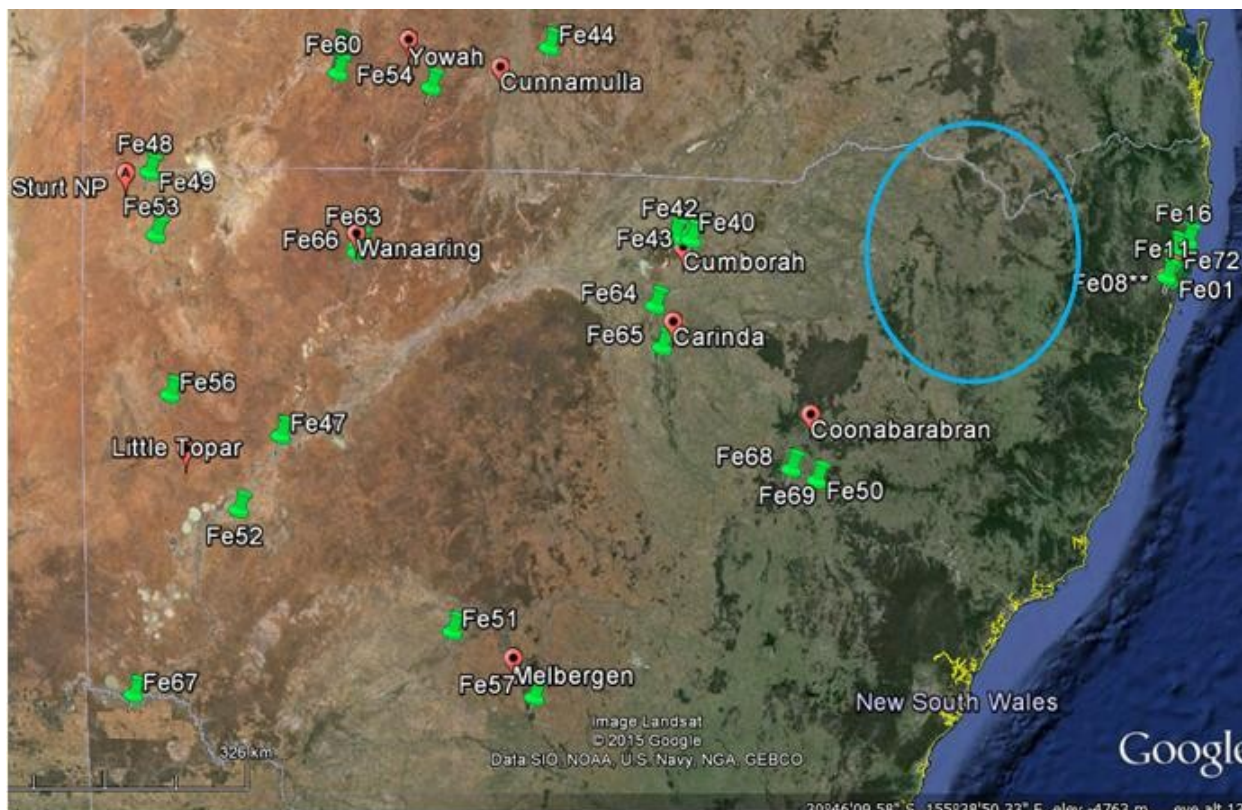
30<sup>th</sup> December 2015

### Introduction

There has long been speculation that the Coastal Emu (*Dromaius novaehollandiae*) could be a distinctly different species to its inland counterpart. To this end, DNA testing has been proposed and tissue samples, collected over a period of years, have been stored at the Hawkesbury Institute for the Environment in Western Sydney, pending funding to allow the work to proceed.

According to Dr Shannon Smith of the Institute, some 60-70 specimens have been collected, and a further 30 specimens from inland NSW would be ideal, particularly from an area circled on the following map, specifically the New England Tablelands region centred around Inverell - south of the Queensland border to about Uralla and west of the Great Dividing Range to Moree.

As a result of this appeal Pat and I decided to travel to the area to see what could be found, and undertook that trip on 28-29 December 2015.



*Proposed search area circled in blue. Green pins show existing sample collections.*

### Search conclusion

Having spent 2 full days travelling the search area, covering some 1,000km of the region's roads, and speaking with local landowners, information centre employees, service station attendants, tourists, shop-keepers and a local 'zoo' licensee, we have concluded that the Emu situation across the search area is very similar to that of our Coastal Emu population - precarious.

Across the region, people we interviewed all asserted that if we wanted to see Emus we would need to travel west of Moree. Our own observations backed up these assertions, finding that the highly developed agricultural activities that dominate the New England, specifically grazing (mostly sheep), and grain growing, has resulted in widespread land-clearing and the erection of sheep-proof fences right across the landscape, allowing little or no opportunity for movement of larger fauna.





***Fenced cropping land***



***Fenced grazing land***

Everywhere, crop lands and less productive grazing land are protected by tightly strung fences, using multiple strands of wire, or mesh, that are sheep proof, and therefore impassible to Emus and even smaller macropods and young Kangaroos.

Even large areas of the Copeton Dam State Recreation Area are shut off by Emu proof fencing, as are forested areas that appear to have no agricultural function whatsoever (see below).



***And even large fenced off portions of State Recreation Areas.***



***And bushland areas with no apparent need for fences***

Not only were the fences tightly strung, but most had posts at 3 to 4 metre intervals, or in some cases, such as that pictured left, only one metre apart.

In the entire 1,000km travelled, mostly in open country with panoramic views, only twice did we see Kangaroos, one group of 6, close to a large dead male that had been killed by a vehicle strike, and another solitary animal. We also saw a pair of Wallaroos in Kwiambal National Park. All up we recorded only six road kills, all macropods, mostly Eastern Grey Kangaroos, a Wallaby, and a Pademelon.



## Narrative - Searching the New England Tablelands

### Day 1

First stop was at Glen Innes, at the eastern edge of the proposed survey area, where we stopped in at the Tourist Information Centre. The attendant was really interested and knowledgeable about wildlife, and familiar with our coastal Emus. His first response to our “where can we find Emus” question was “*You'll have to go a lot further west, not Emu country around here*. However, he then said he'd seen a small group of Emus in the Furracabad Valley, about 15km south west of Glen Innes, and gave us the phone contact of Alan, the owner of a large sheep holding in the valley. So armed with a map we headed out to look for ourselves.

It is fair to say that the entire Furracabad Valley is given over to sheep and cattle grazing and apart from the upper slopes of surrounding hillsides is almost entirely cleared of trees, with ring-lock mesh or tightly strung 6-strand wire fences everywhere. Compared to areas further west the properties were small, ie relatively densely populated country, and the likelihood of there being Emus there seemed unlikely. We did search some fence lines and road verges for feathers, foot prints and scats in likely spots near where the man claimed to have seen the birds, but found nothing. When telephoned, the contact grazier expressed major doubt about the claim of an Emu sighting in the valley stating “you might see an Emu here once in a blue moon; you'll need to go west of Warialda to find any Emus.”

From there we took the advice and headed west to Inverell where we booked into a motel and made enquiries about emu whereabouts of the motel manager. He was new to the area, but advised that some visitors had recently left a bunch of Emu feathers in one of the rooms, and we should speak to the cleaners the next day for further details. He did say that in the brief few years he had lived at Inverell, he had never seen an Emu.

Having seen the intense agricultural nature of the countryside, and total lack of suitable habitat for terrestrial fauna larger than a rabbit, this did not surprise us. It appeared clear that our best chance of finding an emu was to visit some of the small national parks and reserves that dot the area, so we headed north-west to Ashford and the Kwiambal National Park.

At Ashford we made the standard Emu enquiry of a local shop-owner, who said the only place she had seen Emus was on the way to the Park, so with renewed hope we continued on.

A few kilometres up the road, and a road sign warning of a need to watch out for Emus and Kangaroos for the next 22km replenished our enthusiasm even further. So we were not surprised to spot 2 adult Emus just outside the Park near a small farm dam where they had just been drinking.



*The road sign suggesting Emus are present north of Ashford on the way to Kwiambal National Park*

The pair displayed considerable inquisitiveness and gradually moved closer, allowing us to photograph them, before another car approached from the other direction and spooked them back into the bush. While we had been watching them one bird shook its feathers vigorously and preened itself, but no feathers seemed to be dislodged. Nevertheless, once they had gone, we scoured the area, including the dam surrounds hoping to find feathers on the ground or floating on the water, but alas, nothing. Clearly it was not the moulting season. That was the first and last sighting we made of wild Emus for the entire trip.





*Two adult Emus near Kwiambal National Park. The only wild Emus sighted during the trip*



We made a brief detour to the spectacular McIntyre Falls, where we questioned other visitors, but nobody had seen Emus. So it seems we were lucky. We continued our search back to Ashford using a different route.

Along the way we again stopped at likely-looking sites, like creek crossings, to check for signs of the elusive birds, scats on the roads, feathers caught up in roadside grass verges or on barbed wire fences, or footprints in soft silt deposits along the roadside or table drains. All to no avail.

## **Day 2**

An early breakfast and an early start. The Motel owner let us know that the now “Ostrich” feathers had been tossed out, a remark that lowered our expectations in regard to the usefulness of that lead. So we were not overly disappointed when the cleaners told us the feathers were neither Emu or Ostrich, but from a Peacock!



*The spectacular McIntyre Falls*



However, the ladies were locals of long standing and a useful source of information, mostly negative, saying that Emu sightings in the Inverell area are rare.

A discussion with staff at the impressive Inverell Information Centre backed up what everyone else was saying - Emus can be seen further west, but not “here”. However, the staff did tell us there were Emus at the Green Valley Farm amusement park, museum and zoo, a family-operated enterprise some 20km south of the historic tin mining town of Tingha.

The staff there assured us that their emus were from the local region, and the family matriarch and founder of the park was happy for us to collect feathers from their pet birds. A granddaughter was called on to escort us to the animal pens, where we managed to collect a few old feathers from around a rough resting site in the paddock, and Pat successfully managed to remove a handful of fresh feathers from the back of one surprised young bird.

A conversation with the Park's owner, Pat Jones(?) uncovered the fact that all three of the Park's Emus had come from a relative's farm near North Star, a wheat growing centre north of Moree close to the Queensland border. As a 3<sup>rd</sup> or 4<sup>th</sup> generation sheep farmer in the area, he again confirmed that we were unlikely to find wild Emus anywhere close to Inverell, and seemed mildly surprised that we had actually seen some at Kwiambal.

We had heard that Emus had also been seen around the Copeton State Conservation Area, near the camping ground on the shores of the Copeton Dam, so we made that our next call. However on arrival we found the place overrun with Christmas holiday-makers, which we felt would have sent any Emu's scurrying for cover. There were of course, the usual array of impenetrable fences, even in areas which we perceived to support suitable habitat, and totally unsuitable for sheep farming.



Cursory searches in likely looking areas around the camping area failed to find any evidence of Emus, other than a single possible scat; so we moved on, happy to accept that there could be some Emus in that area.



*Typical agricultural landscape on the New England Tablelands*

Following the advice from almost everyone we had spoken to, we headed west, between kilometres of well-maintained sheep fences, through Warialda and finally pulling up at a Moree service station. The station owner was new to the area and of no help, but I struck up a conversation with an Aboriginal lady who was filling up her new 4 wheel drive Toyota.

When I asked the Emu question I was told - “Haven't seen Emus in ages, you'll need to go further west to Collarenabri, or maybe up around Goondawindi” - both areas outside Dr Smith's nominated search area.

To get a second opinion we drove to the Information Centre, where a young lady was called up “because she lives on a farm out in the country”, to advise us. It turned out she lived on the family farm some 60km north on the Newall Highway, and commuted daily for work in Moree. However she too said she had not seen Emus for years. Nevertheless, as North Star, the area where the Green Valley Emus had come from, was north-east of the Newall, we drove there to check it out.

If possible we found North Star to be even more intensely farmed than most other parts of the region, with a flat, treeless landscape mostly given over to irrigation cropping. Any native vegetation was mostly confined to the occasional waterway or drainage line, and the broader roadsides, which doubled as travelling stock routes. And everywhere, the sheep-proof fencing



*The flat treeless landscape that greeted us north of Moree*



*The village of North Star, dominated by its massive grain storage facility*

The village of North Star is dominated by a massive grain storage facility, surrounded by flat crop-lands and seemingly an unlikely place to find Emus. We had to suspect that if the 3 young birds at the Green Valley Farm had in fact originated from there, they were quite likely the last ones known in that area.

We moved on to the Bruxner Highway, to Yetman, through some of the only truly forested country we had seen on the New England. However, we were running out of time and as we had not heard of Emus being seen in that area we called it a day and headed for home. We were disappointed not to have found more Emus, but we had enjoyed our break and were satisfied that even if our feather collection proves worthless, obtaining DNA samples from that area is not crucial to the project.

**Compiled by John and Patricia Edwards for the Clarence Environment Centre**