



Toodyay Naturalists' Club Inc.

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PRESIDENT'S REPORT

by Desraé Clarke

ON a glorious autumn day in May Club members met at the John Masters Bird Hide overlooking the Red Bank Pool on the Avon River. The hide is situated on the Bilya Walk Track so is an ideal resting point for walkers. Birds sighted on the day were a pair of Shelduck with the handsome male showing his bronze chest, Coots, Australasian Grebes, Little Black Cormorants and a variety of duck species.

The Members proceeded on to James Drummond Memorial Lookout at the Pelham Reserve overlooking the town. Much Shire work, with ideas and supervision by Shire Reserves Management Officer and member, Greg Warburton, has been completed over recent months with the construction of several sets of picnic tables and seating, refurbished signage and upgraded roadway.

The program for the year has altered because the visit to the Gingin Observatory programmed for June was postponed. Following a chat with Professor Noel Nannup, who we had hoped would lead the excursion and give us the wonderful Noongar aspect of the night skies, he suggested March/April as the preferable months; those months would have minimal cloud cover. With that advice the visit has been postponed till 2020.

The club members were fortunate to have naturalist and birdo, Phil Lewis, fill the June vacancy to present a power point of his seven week excursion of wending his way from his wheatbelt home in Korrelocking across the continent to the Cape York Peninsular. Accompanying him was his wife, Sharon, and 'birdo' and Club member, John Masters.

The Annual General Meeting in July was planned to be held in the reserve along Forrest Road, an area that is hoped to be named the 'Ray Paynter Reserve' in recognition of one of the club's four founding members. However, the previously glorious weather had become rough and heavy rains fell overnight. The road, churned up by vehicles, was impassable so a change of plan was to meet at the entrance to Wongamine Reserve.

The AGM proceeded with all positions filled for the forthcoming twelve months together with sunny weather delighting all especially the birdos, photographers and walkers.

Honorary Life Member, Dr Neville Marchant OA, and his wife Denise visited the club for the August meeting with Neville giving a wonderful power point presentation on 'Poison Plants of Western Australia'. Emphasis was placed on the role of the early government botanist, James Drummond, and his discovery of the devastating impact of the plants on the pioneer's precious stock.



Left: View of Red Banks Pool from the John Masters Bird Hide

Photo: Wayne Clarke

Cover photo: Native Masked or Yellow-faced Bee (see page X)

Photo: Ardina Van de Ven

Reserves of Toodyay

by Greg Warburton

WHAT a privilege it has been for this Reserves Management Officer (RMO) and Toodyay Naturalists' Club members to be given the opportunity to make improvements at Pelham Reserve. As we know soon after the Club was founded the fledgling environmental group embarked upon an ambitious project to create a town lookout incorporating a memorial to James Drummond (1786-1863), Toodyay's own famous pioneer, explorer and botanist. It is a testament to the vision of the Club and the support of the then council as Pelham Lookout has served Toodyay well for nearly 50 years as a tourist attraction. Sadly, during that time neglect and vandalism reduced the site to a very poor condition.

However a successful budget request prepared by Museum Curator, Margie Eberle and myself has allowed for the completion of significant improvements and additions to Pelham recently. After consultation and on-site meetings with members of the TNC work commenced in April and was completed late July.

Three new picnic tables and a bench seat have been strategically positioned and mounted on concrete slabs. The Drummond Memorial itself has been refurbished and new, attractive interpretive signage has been added to tell the story of Drummond and his achievements. The placement of an entry statement to the reserve, road repairs and improved directional signage will help visitors find it now! Vegetation has been extensively pruned to enhance the view and down on Pelham Street the concrete spillway has been cleared to reveal a fascinating historical feature. A new 300 metre linking section of walk track has been created and all 5.5 kilometres of walk trails throughout the reserve have been colour coded marked and re-signposted.

Further improvements are planned but for now it is the perfect time to enjoy the new look picnic area, lookout and walk tracks at Pelham. There are great views from various locations around the reserve and spring will bring forth fields of Pink Everlastings. There is always a chance to glimpse the rich, red-coated Euro *Macropus robustus*. Birdlife abounds and a new sign featuring the artwork of our TNC President shows some of those species. Drop into the Visitors Centre, pick up an information brochure and partake of some Pelham pleasure.

Reserve Management has been undertaking work at Wallaby Reserve in Morangup for a few years now. Initially to address the fire risk by hazard reduction burning and now activities include rehabilitation and invasive weed removal. This reserve contains a Swamp Paperbark forest featuring some of the largest old growth *Melaleuca raphiophylla* you will see anywhere. It is very calming to spend time in this magical place as members of Conservation Volunteers Australia experienced on July the 5th. Although it was a rainy weather we had a productive day installing new signage, tree planting and removing dumped rubbish. The Reserve has old gravel pits that are gradually being revegetated. We also have plans to create a walk trail incorporating a board walk at the Paperbark forest. Many thanks to Conservation Volunteers Australia, Boral, Morangup Progress Association and the 'Mayor of Morangup', Kim Maddrell, who gave us a tour of the new Ambulance Station.

For the Pelham Reserve Management Project I would like to thank: Unisite Outdoor Furniture, Oasis Outdoor Structures, Wacwill Landscaping, Geja Valley Fencing, Abbott's Timber Signs, Allmark Signs, Dads Metal Art, Fibretech, A. Carr, Shire of Toodyay Parks & Gardens department and the Toodyay Naturalists' Club Inc.



Above: Pelham waterway before and after cleanup.



Photos: Greg Warburton

Reserves of Toodyay... cont.



Above: Seating in the reserve has interesting vistas

Photo: Greg Warburton

Below: New picnic settings in Pelham Reserve

Photo: Wayne Clarke



Reserves of Toodyay... cont.



The revitalisation of Toodyay Reserves is a credit to the Shire of Toodyay, and its Reserves Management Officer Greg Warburton. Some of the changes are featured here.

Left: Laser etched signs are secured in an imaginative framework, as seen at left.

Photo: Greg Warburton

Below: The Drummond Memorial Lookout has been refurbished with new railings and a more attractive safety wire. The outlook down Toodyay Valley shows the townsite and the distant hills of Coondle.

Photo: Wayne Clarke



Birding from Korrelocking, W.A. to Cape York, Queensland and return

by Beth Frayne

Phil and Sharon Lewis from Korrelocking gave a most interesting presentation at Nats' gathering on 15th June in the CWA Hall, Toodyay. Accompanied by Nats' members, John and Jeanette Masters, of Glenavon (Northam), they travelled over 15,500 km in 7 weeks, from 15 July to the end of August 2018, covering WA, NT, QLD and SA. The presenters gave an illustrated overview on the birds and animals encountered along the way.

We were given an insight into what 'birders' do on such a trip, supported with impressive statistics such as 337 bird species seen and listed. Of these, 44 were 'lifers' for Phil. A 'lifer' usually means a bird seen for the first time by the birder, but in Phil's case, it is the first time photographed.

Travelling north from Korrelocking, and only 10 km into the trip, a black kite was sighted, which was unusual in the Wheatbelt. The Lewises met up the John and Jeanette Masters at Mt. Magnet and continued north. Phil's first 'lifer' was a Horsfield's bush lark, somewhere between Pardoo Station (east of Port Hedland) and Derby in the Kimberley! Not only birds but fish and a freshwater crocodile were seen in the Fitzroy River in the West Kimberley. Bower birds were present at a roadside stop, and fish and a saltwater crocodile in the Parry Lagoons Nature Reserve, an important waterbird feeding and breeding area, south of Wyndham. At Wyndham, the sighting of a juvenile Gouldian finch was a highlight. On the shores of Lake Kununurra, some excitement was caused by a black kite flying in and stealing Jeanette's sandwich from her hand. Another 'lifer' seen around this time was the white-browed crane, adept at walking on water-lily leaves.



Birding from Korrelocking to Cape York (cont.)

Just over the NT border, near the Victoria River, another 'lifer' was spotted: a beautiful purple crowned fairy wren. Sharon often took shots of land-based animals, such as the agile wallaby at Butterfly Springs in the Limmen National Park, between Katherine and Borroloola. Near the Calvert River, just before the Queensland border, a noted event was the sighting of a sea eagle and a wedge-tailed eagle, when disturbed feeding on a 'roo, flying into the same tree; a good photo opportunity!

A friend's backyard in Malanda on the Atherton Tableland was a very comfortable and safe place to look for 'lifers'. Even a green-eyed tree frog just fell out a nearby tree. Tree-kangaroos, the colourful Wompoo fruit-dove and a golden-shouldered parrot (that nests in termite mounds) were sighted on the Cape York diversion. Greater frigatebirds were expected and seen at Weipa (on the north-west coast of the Cape), the only mainland roosting site of this species. The rain forest of the Kutini-Payamu (Iron Range) National Park on the east coast of the Cape is a 'birders' hot spot', offering the eclectus parrot (red and green) and the magnificent riflebird (black and blue) with a green tree python thrown in. Further north, a spangled drongo was seen near the Jardine River, the largest river in the Cape York region. (Wikipedia states: "The unsuccessful racehorse Drongo was named after the bird and led to the Australian slang insult "drongo" meaning "idiot".")

The return journey progressed through Mt. Isa and southwards through the centre to the south coast. Coming home through the southern desert area, Phil spotted another 'lifer': a gibberbird, a ground dwelling species of chat. The eastern bluebonnet was also sighted. After travelling through Norseman and the goldfields, the trip ended at the end of August. Many thanks to Phil and Sharon for sharing their adventures.



Above: At the top end! l to r: John & Jeanette, Sharon & Phil

Photo by magic



Above: Jeanette, John, Sharon & Phil at the presentation to the Toodyay Naturalists' Club.

Photo Beth Frayne

Poisonous plants of Western Australia

Presentation by Dr Neville Marchant

by Jacqueline Lucas

I looked forward to this presentation from Neville with great anticipation and was not disappointed. Neville drew upon the work of Rica Erickson “The Drummonds of Hawthornden” to determine the initial connection between government botanist James Drummond (1786-1863), and the poison plants of Western Australia.

James Drummond was a key player in the identification of poisonous plants in the colony. It was initially difficult to identify these plants as sheep, coming at that time from Europe and South Africa were very expensive, and a rare commodity.

In England, where botanists had access to records sent by Drummond and other collectors, and by 1811 had used the name *Gastrolobium*, but it wasn't used in the colony until May 1847. Neville described several historical botanical books, and outlined how expensive they were, let alone not yet available in the colony.

The focus of Neville's talk was on the work done by James Drummond on identifying the plants which were affecting the health of grazing sheep. We now know that the poison causing this problem is sodium fluoroacetate, or colloquially known as 1080.

Sodium fluoroacetate is found in the plant genus *Gastrolobium*, as well in a species of *Acacia* in the Northern Territory and Queensland. There are 109 species of *Gastrolobium*, with 44 storing 1080. Interestingly they are not poisonous all the time. They are toxic when sprouting, flowering, seed maturation, usually between September to November.

Western Australian native animals have evolved with 1080 and hence are immune, whilst introduced mammals, particularly carnivores, are highly susceptible to the tasteless, odourless poison, with no known antidote. The biochemistry of the 1080 disrupts the Krebs Cycle, a vital process in the mitochondria which keeps organisms alive.

Fascinatingly, it was not until 1962 that sodium fluoroacetate was found the toxic component of *Acacia*, and until 1964 identified in *Gastrolobium*, even though thanks to Drummond's work it was known to be toxic but not why it was toxic.

When James Drummond was appointed to the colony as the botanist, he was already considerably knowledgeable about the then known WA flora, and was well regarded by his fellow settlers. However, as time went by it became apparent he had poor recording skills and did not put enough details on his specimen labels.

In 1834 local newspapers began to print many letters about the problems settlers were having with dying sheep. At first it was thought to be from allowing sheep to graze in swamps where there was ‘bad air’ and the subsequent symptoms were described as “bloodstriking”. There was a lively debate carried on in the papers, discussing what could possibly be the problem. Other botanists and a lawyer who ran a newspaper, and actually had a duel in Fremantle, were very disparaging of James and his work on the poison.

Initially James Drummond thought it was from the plant we now know as Woodbridge Poison (*Isotoma hypercrateriformis*) but studies these days have shown this plant not to be actually toxic despite its common name. To prove which was the culprit food trials with sheep given Woodbridge Poison and York Road Poison were set up.

The trials were held in Belgarup and Williams and by 21st November 1840 York Road Poison, *Gastrolobium calycinum*, or as it was known then, Sage plant, was identified as the culprit with confirmation by the Agricultural Society in May 1841.

Nowadays many *Gastrolobiums* are very rare, due to land clearing and grubbing out to protect sheep and cattle from their toxic effects. Neville conducted an interesting search using NatureMap to trace the stock route along Old York Road, and found that in a 12km wide strip, for 68 km, there were 9 species of *Gastrolobium*. No wonder the settlers had so much difficulty in the early days when not knowing that these plants were toxic.

(images on the following page)

Poisonous plants of Western Australia

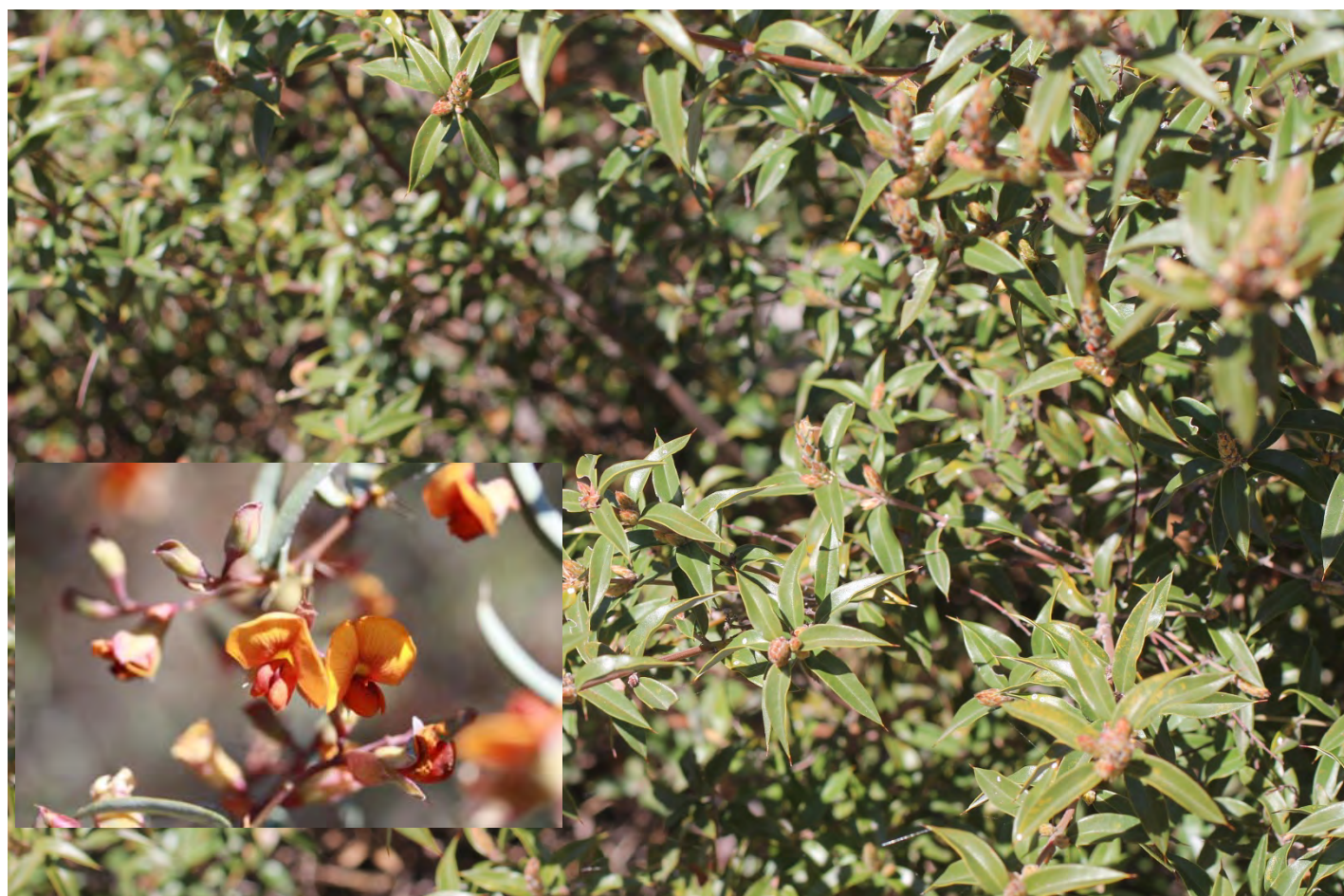
Top (r and l) Crinkle-leaf Poison (*Gastrolobium villosum*).

Bottom: York Road Poison (*Gastrolobium calycinum*).

Photos: Desraé Clarke

Bottom inset: York Road Poison flower

Photo: Jacqueline Lucas



Members photographs



Above: The White-browed Babbler with its distinctive 'white brow'

Photo: Lee Francis



Above: The Elegant Parrot conveniently nests in Majestic Heights for our photographer. Here the male's beautiful plumage is captured in the right light.

Photo: Sharon Richards

Members photographs



Above: A Western Grey kangaroo with joey in pouch. Obviously in someone's garden!

There are a lot of young kangaroos around at present, with even less road-sense than the more senior members of the family. A heightened wariness when driving through 'roo country is advised, particularly with young joeys finding their legs.

Photo: Charmian St John

DID YOU KNOW...

... that the cover photo is a native bee?

The following information is kindly supplied by taxonomist/curator Andras Szito from DPIRD

I believe this is a native Masked bee or Yellow faced bee, *Hylaeus* species (*Hymenoptera: Colletidae*) - though it is more of a guess work than a reliable identification. However even separating *Hylaeus* into genera one needs to examine the specimen under a high powered microscope. *Hylaeus* is a very large cosmopolitan genus encompassing well over 100 native Australian species. *Hylaeus* species carry pollen internally, unlike European bees. Nests are usually built in small natural cavities such as reeds, hollow twigs etc., and the cells lined with a membranous cellophane like substance, and supplied with liquid pollen/nectar.

ENVIRONMENT MATTERS



Above: Well-known Morangup resident Kim Maddrell admires the newly installed sign at Wallaby Reserve in Morangup, with volunteers from 'Conservation Volunteers Australia'.

Photo: Greg Warburton

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