



THE LAUNCESTON NATURALIST

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The aim of the Launceston Field Naturalists Club is to encourage the study of all aspects of natural history and to support the conservation of our natural heritage

Patron : Prof. Nigel Forteath

President : Mrs Prue Wright, 0438 410 192

Hon. Secretary : Mr Phillip Brumby, 0407 664 554

Hon. Treasurer : Mrs Karen Manning, 0363 442 277



Due to COVID19 restrictions, the Club's program has been suspended until further notice

When restrictions have been eased or lifted, members will be notified by email or post, and website <https://lfnc.org.au/meetings.htm> of future dates for Field Trips, Skemp Days and Club evenings.

Club Evenings held at Scotch-Oakburn College, Senior Campus, Penquite Rd Newstead.

Skemps Report:

It was just starting to look good for volunteering at Skemps with so many new people regularly going out, and bringing new skills, when the COVID-19 upset things. We did get a lot done though before the lockdown.

Thanks to Bernadette the grass is short and awaiting spring, many of the plant signs have been cleaned, the driveway drain cleared of leaves and sticks and behind the Centre is looking tidier. Matthew has all the tracks cleared for the moment and Rob used his chainsaw skills to remove a blockage at the far end of the forest track and his son's 4WD to move the resultant fire wood to the Centre. He also cleared along the Watergate trail as I used the spray pack.

I have used the spray pack from behind the fire shed to the bottom falls and along the Watergate trail and into the Federation Corridor and taken the slasher out a few times as well. The ride on mower dropped the drive belt from the pulleys and it was a challenge to get it untangled and an even bigger challenge to reattach it.

Claire, Karen and I have been out a few times of late to keep the place clean and tidy and check that all is working well ready for when we next see people hiring the place. I was reminded of the importance of cleaning fire place flues after the recent house fire at Myrtle Bank and Grant leant me his flue brush to clean the two at the Centre.

Noel Manning

World Wetlands Day – February Sunday 2 – Tamar Island Wetlands Centre

The Club's display at the Tamar Island Wetlands Centre which had on show, native flora found in the Tamar's saltmarsh wetland, images taken in the wetland areas and other information. Thanks to Prue and Roy for providing the plants, and to Helen, Bernadette, Karen and Kay for assisting on the day.



Meeting Tuesday 4 February – Who’s Sharing Your Patch?

Shane Westley from NRM North gave the first presentation with movies from his backyard in Youngtown showing cats wandering around as well as an eastern barred bandicoot (EBB). Over a period of about three hours he had a cat first then a bandicoot followed by another cat and a few months later the bandicoot was still using the yard. This suggested that the cats were not bothering the bandicoots or that the bandicoots were able to avoid the cats. A video of a mother with a baby bandicoot showed that there was a breeding population in the area.

Shane explained that Tasmanian Land Conservancy lent wild life cameras so that interested people could check for wild life on their land and he had done so on his rural block which is in the Deloraine area. As well as a feral deer he also took a picture of a devil, after which he set the camera on video mode and pointed it at a dead wallaby. He expected to get a minute or so of footage of the animal feeding, but instead the devil moved the estimated 10 kilogram wallaby away. He also had videos of quolls and the EBB on his block. He knew from the scats that the quolls were using fallen trees to move around the forest and set the cameras to capture them. From his study he knew that the quolls preferred to be about just after dusk while the devils chose 1 to 2 in the morning and then EBB preferred to be out late as well. The penultimate video showed a wombat with a young in the pouch and he finished his presentation with another devil.

To the amusement of those present Shane told us that he was the Regional Cat Management Coordinator at NRM North. After a member asked if Shane would consider a cat trap he told us that we were not allowed to catch cats under current legislation though it would change in March. From then it would be legal to trap cats though we had to then take them to a cat management facility.

In the middle of his presentation there was around five minutes of discussion and questions and answers about legislation, responsible cat ownership and cat management generally.

After welcoming life member Jeff Campbell back to the Club, Prue told us that she had permission to show pictures from Marion and John Simmons’ collection including those taken on their Legana and Binalong Bay properties. Among the images were an antechinus, bettong, southern brown bandicoot, long tailed mouse, a new Holland mouse, pigmy possum, ring tailed possum and a swamp rat. Prue had asked us to note the background of the pictures of the small animals and told us that she had confirmed with Marion that John would set up his shower bay with bark and leaves to photograph these small animals.

Roy’s short presentation included a large wattle moth and a Macleay’s swallowtail butterfly which he and Prue agreed were rare and each had seen very few. This was followed by Prue’s own presentation and she started by saying that summer had brought few insects to her place and then she had too many and these were attacking her plants. Her images included a metallic shield bug (aphid bug) a tree hopper (by two), leaf roller cricket and a cup moth. Her last image was of a copper head snake which had become caught in her garden netting and died.





Images taken from the wildlife camera deployed on the Skemps Property
Wombat, Echidna, Spotted Quoll and Eastern Barred Bandicoot

Noel finished the presentations with 'our backyard' the field naturalist's property, Skemps, and images from the wild life camera. These included feral cats, one with a native animal in its mouth, a rabbit, echidna, quolls, healthy wombats, possums, wallabies (one with a joey trying to reenter the pouch), a skink, furry faces investigating the camera, southern brown bandicoots and a variety of rodents and birds.

On the table was a container with insects collected by Karen at Skemps, including two broken mud wasp nests showing the paralyzed spiders left to feed the young when hatched. Noel Manning

Fundraiser – February Wednesday 19 – Sausage Sizzle at Bunnings

Although it was raining as we departed home this morning to collect the fresh sausages and bread for the BBQ, we did not realise what was to come. Setting up in the rain with help from Claire, Noel, Tom and Tina, and Tom T, the weather took a turn for the worse about 8.30am and the high winds made it too dangerous for us to continue setting up the shade cover. Following discussion with Bunnings' staff, it was decided that for safety reasons we would pack up and have our BBQ rescheduled to another day.

Cold, wet and disappointed, we headed home, but not before finding a freezer to temporarily store the food. Thank you to all involved and to those that have provided temporary freezer space. The BOM site advised that the wind speeds this morning were recorded at over 50 k/h, hence our difficulty in setting up.

Skemps Day - February Sunday 23 – Working Bee on Skemps Creek

Twelve members attended the Skemps working bee on an overcast morning with rain a possibility. By mid-morning the sun was shining as we collected and stored the tree guards, plastic surrounds and sticks removed from plants along the creek.

Bernadette and her friend Simon located a large amount of bundled fencing wire beside the creek in the long grass and moved this to a more accessible collection point. They then joined Claire, Karen, Noel and Tom in moving trailer loads of tree guards and sticks to the Barn area before we headed back for lunch, a chat and a well-deserved break.

While we were down at the creek, Tina was showing Caitlin over the Library as Caitlin would be taking on the role as Club Librarian.

After lunch we headed back to the creek and collected more of the items and filled a further two trailer loads, which were transferred, sorted and stored at the Barn. Damaged tree guards were flattened for disposal and plastic surrounds were checked for either disposal or reuse. Prue and Claire installed supports around shrubs weakened by the removal of guards.

A very productive day and a big thank you to everyone for their help. K & N Manning

Field Trip - February Saturday 29 - Bakers Point Saltmarsh Monitoring

Seven members met at the Narawntapu carpark this morning to record our observations in the saltmarsh areas at low tide. We were pleased to meet our newest member Ruth Hutchison who was attending her first club activity and had a keen interest in birds.

We carpooled to Bakers Point for the low tide which was expected around 10.45am and readied ourselves with binoculars and recording sheets. We firstly observed and recorded the birds and wildlife seen in the immediate area. There were approximately 180 birds counted for the 16 species seen. The wetland plants were recorded and our observations of rice grass in the area noted. It was good to see there was no evidence of human impact.

We returned to our vehicles and lunched in the picnic area and later set off and explored down all the roads on the Point to see where they led to, our last stop being the far end of Bakers Beach where we were looking across to Port Sorell and Hawley Beach. Returning to the Parks and Wildlife Rangers Station, we spoke to the Ranger about the rice grass and were told that the areas we observed had recently been treated by the Cradle Coast NRM team, which was good to hear.

Our second observation area was a short distance from the Rangers Station on a saltmarsh area high up in the North East Arm. Members who had visited this area during past monitoring felt it had changed since our last visit a couple of years ago. The grassed area approaching the saltmarsh seemed to have a denser coverage of the glasswort plant, *Sarcocornia* and some of the older and larger *Tecticornia arbuscular* shrubs on the mudflats were no longer there. Wombat holes remain unused.

There were only 8 species of bird observed in the area with numbers significantly lower than earlier in the day and there were over 50 giant Forester kangaroos on the surrounding grassland.

Another record for our growing collection of data for the local salt marsh wetlands monitoring.

Bakers Point

Flora - *Atriplex* sp., orache; *Austrostipa stipoides*, coast speargrass; *Carpobrotus rossii*, native pigface; *Disphyma crassifolium*, roundleaf pigface; *Distichlis distichophylla*, Australian saltgrass; *Euphorbia paralias*, sea spurge (i); *Hemichroa pentandra*, trailing saltstar; *Rhagodia candolleana*, coastal saltbush; *Sarcocornia blackiana*, thickhead glasswort; *Sarcocornia quinqueflora*, beaded glasswort; *Selliera radicans*, shiny swampmat; *Senecio* sp, groundsel; *Spartina anglica*, common cordgrass (rice grass) (i); *Suaeda australis*, austral seabite; *Tecticornia arbuscula*, shrubby glasswort; *Tetragonia implexicoma*, bower spinach

Birds - *Acanthiza* sp., thornbill; *Calidris ruficollis*, Red-necked stint; *Charadrius ruficapillus*, Red-capped plover; *Chroicocephalus novaehollandiae*, Silver gull; *Corvus tasmanicus*, Forest raven; *Cygnus atratus*, Black swan; *Egretta novaehollandiae*, White-faced heron; *Epthianura albifrons*, White-fronted chat; *Haematopus fuliginosus*, Sooty oystercatcher; *Haematopus longirostris*, Pied oystercatcher; *Hirundo neoxena*, Welcome swallow; *Larus pacificus*, Pacific gull; *Malurus cyaneus*,

Superb fairy-wren; *Microcarbo melanoleucos*, Little pied cormorant; *Pelecanus conspicillatus*, Australian pelicans; *Zosterops lateralis*, Silvereye

Miscellaneous - *Mictyris* spp., Soldier crabs on mudflats; Jelly sack of a sand snail

Rangers Station Narawntapu NP

Flora - *Austrostipa stipoides*, coast speargrass; *Disphyma crassifolium*, roundleaf pigface; *Distichlis distichophylla*, Australian saltgrass; *Sarcocornia blackiana*, thickhead glasswort; *Sarcocornia quinqueflora*, beaded glasswort; *Tecticornia arbuscula*, shrubby glasswort; *Tetragonia implexicoma*, bower spinach



Birds - *Anas castanea*, Chestnut teal; *Anthus novaeseelandiae*, Australian pipit; *Cygnus atratus*, Black swan; *Egretta novaehollandiae*, White-faced heron; *Haematopus fuliginosus*, Sooty oystercatcher; *Larus pacificus*, Pacific gull; Plover ? red-capped; *Vanellus* sp., Lapwing

Miscellaneous - *Macropus giganteus tasmaniensis*, Forester kangaroo; Crab holes in mud flats; Mud flats very dry

Tecticornia arbuscula shrubs (KM)



Cygnus atratus, black swan on the sandflats (KM)



Hemichroa pentandra, trailing saltstar (KM)



Sarcocornia blackiana, thickhead glasswort & *Sarcocornia quinqueflora*, beaded glasswort (KM)

Member Gathering March 3rd - Guest Speaker Ian Thomas **- *Pollen, History and the South-eastern Grasslands***

After announcements about future Club activities Prue introduced Dr Ian Thomas who started his talk with a more detailed history of his background and areas of study and interest. These interests include archeology, geology, aboriginal influence on the landscape and plants through their ecological history and how all this ties in with climate history.

He did his PhD in Hobart studying the paleontology and archeology of north eastern Tasmania looking at swamps and bogs from Waterhouse Point to the foot hills of Ben Lomond and Ben Nevis as well as Mathinna Plains and Saddleback. He reconstructed a vegetation history of the area going back 10,000 years, surveyed aboriginal sites and did some excavations.

He told us his study of pollen was similar to the more familiar studies in the macro world where plants and animals are divided up by taxonomic similarities and differences and so too is pollen identified by features. Although sometimes the identification is to the species level it is often only to the genus or family level with grasses, other than domesticated ones such as wheat and barley, all looking so similar it is nearly impossible to tell an individual species. We learnt this can vary as the pollen of the pineapple lily, *Astelia alpina*, is easy to identify.

Ian showed us four northern hemisphere pollens, including one from a conifer and another from a grass, and described their features, including the aperture allowing fertilization. We were shown a schematic of the factors affecting the pollen species found in a local community including evolutionary processes and physiological constraints such as a preference for hot or cold, wet or dry. Big historical events, including continental plates shifting, can also alter the conglomeration of pollen in a sample. The regional species pool is affected by habitat selection, dispersal & colonization and cooperation & competition and these factors need to be taken into account before drawing conclusions from a study.

Ian said pollen loves Tasmania as the wet conditions, the proliferation of acidic peats and the low oxygen in lake sediments favoured storing and preservation. We were shown a drawing of a simplified scenario where pollen is carried by the wind and if it landed on the ground it could produce a new plant or be consumed. If it ended up in the water and was covered by silt it could later be found and carbon dated providing a record of changes over time. In the example shown the lower parts of the bog were dominated by conifers while later times were dominated by grasses. There could be many other species also represented in a real sample and we were shown how such a study would be put into a graph.

Ian told us the percentage of different pollens found in four of the many habitat types of Tasmania allowing him to know what climate existed in an area at different times and we learnt pollens are tiny;

being from 5 to 40 microns in diameter with most between 10 and 20 microns and their study is called palynology.

A map of Tasmania showed the sites surveyed and Ian told us it indicated the areas with the most suitable places for preserving pollen, with the north east, east coast and midlands under represented. In these areas fires, sand drifts and drying events can obliterate the bogs though this did not make the east less interesting than the west. While the west is dominated by Gondwanan vegetation the plants of the east featured endemics and showed our connection to the rest of the world.

A graph showed the percentage of five types of vegetation from a study done by Professor Eric Colhoun at Lake Selina in Tasmania. The study used core samples to compare pollen quantities with climate during the quaternary, dating back over the last 50,000+ years. The five categories of plants were sedges, herbs & forbs, alpine & subalpine trees & shrubs, trees & shrubs and rainforest. The herbs & forbs and rainforest varied the most in this sample with herbs and forbs representing over 90% of the vegetation around 18,000 years ago during the last glacial maxima. Ian pointed out the alpine component was drastically curtailed 14 to 15 thousand years ago when deglaciation occurred over western and central Tasmania. He also told us if there had been a category for charcoal (from smoke) it would show the history of fire as well.

A world map showed the extent of savannah and temperate grasslands which included the North American prairie, the pampas, the African savannahs, the central European & Asian steppes and the semi-arid places, including central Australia. Ian had studied some of these first hand including Turkey, Georgia and Iran. Three pictures featured grasslands in Turkey and we learnt we would find butter cups, ranunculus, as well as common herbs such as oregano, fennel and the aromatics we use in our kitchens and a walk through these released familiar aromas.

He wondered whether these places were always treeless and his study suggested they were not. From up to five to seven thousand years ago there were trees in successions including birches, oaks and deciduous forest. These disappeared quite dramatically and it appears to be human activity. As Ian said if you burn every two or three years for thousands of years you get rid of the evidence and sheep, goats and cattle grazing on the grasslands for at least 10,000 years added to the impact as well.

Ian mentioned the changes caused by human activity on grasslands starting with the bison (buffalo) cull in the United States. The buffalo kept the prairie treeless until the railway barons arranged a cull and we saw how big this was with a pile of skulls being seven or more metres high. As the buffalo declined the trees moved into these former grasslands until removed for farmland resulting in the grasslands being replaced by wheat fields.

In Africa the *Themeda* grasslands supported the large grazing animals until around 1,000 years ago when the tribes moved into these areas and 400 or 500 years ago when white settlement further impacted. While small grazers remain the heavy grazers are restricted to game reserves and as a result the grasslands thickened up and the forest expanding out of the pockets. Ian told us there was a termite line in South Africa north of Kimberley or Johannesburg. Above this line the hot dry conditions allowed termites to flourish while south of this line it was wetter and cooler and there were none. Yet further south, when the landscape is seen from above, mounds of about 10 metres in diameter can be seen which he described as fossil termite mounds. By dating the seeds and grasses taken into the mounds by the termites you could see this line had been further south and maybe this area was 5 degrees warmer and had 100 mm less rain per annum in the past.

The talk moved on to the temperate lowland grasslands of south east Australia, including Tasmania, which Ian described as favouring areas of low rainfall, <700mm per annum, with relatively rich, fertile, often organic rich clay soils. Obviously there are few trees, probably the result of frequent burning, natural soil disturbance and competition for the low soil moisture.

These grassland communities have two main growth forms starting with the most common seen being the tussock species, with its own root, stem and leaves, mainly *Themeda*, with some *Austrodanthonia* and *Poa* while the other growth forms produce horizontal stems. The stoloniferous ones have stems on the soil surface and include *Microlaena* (Ian told us this made a good backyard lawn) while the rhizomatous have stems growing below the ground, with *Ehrharta* and some *Austrostipa* seen in south eastern Australia.

These two growth forms react differently to disturbance with the tussocks providing gaps. When the tussocks are disturbed by fire or grazing the gaps allow smaller plants to take hold and without this periodic disturbance the smaller plants are excluded. The rhizomatous and stoloniferous grasses stabilise the soil

and produce the familiar 'marsupial lawns' so favoured by our wombats and other small grazers. A picture showed what Ian described as rich and diverse grassland in southern Victoria with daisies, everlastings and monocots (grasses) and some bare ground providing opportunities for other plants to establish.

The talk moved on to the different pathways for photosynthesis in two classes of grass named C3 and C4 for the number of carbon atoms produced. C3 grasses are mostly introduced, agriculturally valuable, rich in nutrients and winter growing as well as being invasive and needing lots of water. The native C4 plants, though not as nutritious, are tougher and will last the summer and these include *Themeda triandra* which is the dominant species of many remnant grasslands.

In Australia there were also large grazers in the past, the megafauna, keeping the biomass low and when these disappeared their grazing was replaced by fire as the aboriginal peoples populated the continent. Fire was not used in Europe for keeping the grass low as it may have been too dangerous, instead they stuck to grazing though overgrazing can lead to erosion and weed problems. Ian suggested Australia has this issue and he would soon be in the Flinders Ranges which he said were a disgrace due to the weeds. Two reproductions of colonial art showed an aboriginal man with a fire stick and the other an aboriginal hunter with a spear and a grass fire in the background demonstrating the fire stick land management seen by the first European settlers. He showed us pictures of Paradise Plains a subalpine grassland with *Leptospermum* invasion while another showed an old log of celery top pine which he said had been carbon dated as being around 350 old. This was in a grassland and was an obvious aboriginal landscape and would have been forest up to 350-400 years ago and worthy of conservation.

Ian told us others often commented they were in an aboriginal landscape when this was clearly not so. Unless you are in very heavy Errinundra rainforest, the Otway rainforest or in patches of river red gum woodlands there are almost no aboriginal areas in Victoria, and the same applies to eastern New South Wales, with most trees seen being under 200 years old. He noted the Bunya Balds of Queensland and Pelion Plains of Tasmania were clearly aboriginal. The Pelion Plains has nearby access to grasslands, button grass plains, woodlands, rainforest and alpine areas providing multiple resources with some muted European influence from grazing, possum hunting and mining.

His talk moved onto Liawenee near Great Lake and how it was full of flammable shrubs and sheep farmers claimed the shrubs had become a problem since their burning practices stopped. Ian used core samples going back 7,000 years which showed the area being grassland up to 200 years ago and then becoming progressively shrubbier due to the heavy annual ultra-burning by sheep farmers. The core also showed the level of carbon particles present and these were off the scale in the last 200 years. The aboriginal burning was muted as subalpine grasslands did not need burning often as frosts assist with control. We saw a picture from the last bad fires in this area, a hot destructive fire, while the next showed the more traditional low intensity fires being trialed in the Midlands property Beaufront, a mosaic of partial burning, in different areas using a variety of intensities.

In the last part of the talk we learnt how little of the natural grasslands remain in Victoria with an estimate to the year 2000 of ~ 0.5% (3000ha) in even semi natural condition with Derrimut Grasslands Reserve (157ha) in Melbourne and Craigieburn (400ha) on the northern outskirts being among the biggest. Management is difficult as much of it is covered by different authorities with nearly ¾ of this being either private land or roadside reserves and the rest unreserved crown land, used and unused rail reserves, biological reserves and cemeteries.

Ian linked his talk to our next talk and field trip suggesting we ask our guest speaker how grasses affect the insects to be found before inviting questions. After twelve minutes of questions, answers and comments Roy gave the thanks and led the acclamation.

Noel Manning

Additional Information

Club Outings:

- All outings depart from Inveresk carpark (near Museum entrance) at 9 am unless otherwise specified. Internet site updated regularly to reflect short notice changes. Saturday all-day parking cost is \$4.00. Sunday parking free.
- Provide your own food and drinks for the outing and wear/take clothing/footwear suitable for all weather types.
- When travelling by car in convoy, each driver is responsible to ensure that the vehicle behind is in sight immediately after passing a cross road or fork in the road.
- When carpooling, petrol costs should be shared between all the passengers, including family of the driver, and based on other clubs the Committee suggested \$11 per 100 km. This is a guideline only.

Name Tags: Please wear your name tags to meetings and on outings.

Tea/Coffee: A levy of 50c is currently charged for supper provided at meetings.

Field Centre: All members have access to the John Skemp Field Centre, but should contact our booking manager, Phil Brumby on 0407 664 554 or bookings@lfnc.org.au regarding availability and keys.

Field Centre Phone Number: (03) 6399 3361

Postal Address: PO Box 1072 Launceston 7250

Internet site: <https://www.lfnc.org.au>

Facebook site: <https://www.facebook.com/groups/527797787360157/>

Emails: secretary@lfnc.org.au

newsletter@lfnc.org.au

program@lfnc.org.au

treasurer@lfnc.org.au

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