



THE LAUNCESTON NATURALIST

Volume LI No. 5 June/July 2018

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 Forteach
President : Mr Tom Treloggen, 0408 341 397
Hon. Secretary : Mr Phillip Brumby, 0407 664 554
Hon. Treasurer : Mrs Karen Manning, 0363 442 277

Meetings 1st Tuesday of month, Feb-Dec at Scotch-Oakburn College,
Penquite Rd Newstead

Program:

August - Tuesday 7
Social Evening at Golden Brumby

August - Saturday 11
Field Trip – Explore the roadside vegetation of the Lake Leake Highway on way to the Lost Falls

August - Saturday 18
Skemps Day – Continue with tree maintenance and social day

September - Tuesday 4
General Meeting – Speaker Phil Brumby – *First aid when out in the natural environment*

September - Sunday 16
Field Trip - Waterhouse Lagoon vegetation and Blizzards Landing for coastal vegetation

September - Saturday 22
Annual General Meeting at Skemps (further information page 2)

For further program details visit <http://www.lfnc.org.au/meetings.htm>

ANNUAL GENERAL MEETING

Join us at the 2018 Annual General Meeting of the Launceston Field Naturalists Club which will be held at the John Skemp Field Centre, Myrtle Bank, **Saturday 22nd September, commencing 11 am.**

Our Patron, Professor Nigel Forteath AM will give the Occasional Address about his exciting new book, *Birds of Cataract Gorge and Surrounds*.

Agenda

- Welcome from President, Tom Trelloggen
- Apologies
- Acceptance of minutes of previous AGM
- President's report
- Receive and accept the Financial Report from the Treasurer
- Set the amount of the subscription to be paid for 2018/2019 financial year
- Appoint an Auditor for the term until the conclusion of the AGM in 2019
- Professor Nigel Forteath's presentation
- Election of Office Bearers namely: President, Vice President, Secretary, Treasurer and 6 Committee members

Expressions of interest to other positions are also requested.

These include: Skemps Bookings Officer, Librarian, Newsletter Editor, Program Coordinator (arrange & advertise speakers etc.), Club Promoter, Social Organiser (arrange venues for social outings), Assets Manager (mainly looking after Skemps), Public Officer, and volunteers to write up field trips, talks by guest speakers and other events, and the *Year That Was* (powerpoint display).

Please consider one of the above roles. It would be wonderful to have some new blood on the Committee to help with the running of the Club bringing with them new ideas and perspectives.

Nominations for the positions should be submitted to the Secretary no later than 10 days prior to the AGM using forms accompanying this newsletter. Electronic newsletter recipients can download the nomination form from the [Additional Program Details](#) page.

It would be appreciated if members could bring along slices, sweets or cakes to share following lunch which will be provided by the present Committee members.

Please advise **Phil Brumby on 0403 845 000 or email him at secretary@lfnc.org.au** by Wednesday 19 September if you are attending or offering an apology.

Skemp Report, June/July 2018

Having been criticised for my lack of imagination with Skemps Reports, and using the idea that an image says more than a thousand words, I gave a visual presentation for my July report based around what our wildlife camera had recorded. I have a permanent mounting post not far into the entrance to the Bedfordia Track looking at the site of a wombat burrow.

This old burrow appears to have been extended by a wombat relocated to the property and the images from the camera show that the animal has chosen Skemps as its home.

As well as confirming that the wombat is still there, since around Easter when he moved in, the camera has recorded pademelons, wallabies, echidna, possums, spotted tail quoll, feral cats, rodents, a panther and ghosts. The panther was really a large black cat which moved like a panther

and animals at the fringe of the image showed up as white dots with only their eyes shining in the night light of the camera.

I hope to set up four or more permanent camera sites and change the location occasionally when we are there on a Tuesday or a Skemps Day. I drive a star picket into the ground and attach a piece of wood so that I can aim the camera at a particular spot and chain it down for security purposes.

I look forward to having more images to prove that Skemps is the haven for wildlife we had hoped it to be when the covenant was attached to the title.

Fire wood cutting, splitting, moving and stacking is still the biggest task at Skemps with small maintenance issues always cropping up. Grant, Rob or I use the chainsaw to cut up fallen spars, John and Rob do most of the splitting before Grant moves it to the main wood shed which is fast filling with Grants tidy stacking.

Noel Manning

Puggle

June ~ Ann presented a beach find from Lulworth – a Sea Pen. Members had not seen this before but David Maynard explained that it is fairly common in the Tamar Estuary – it stands upright in the sand and the appendages have polyps for feeding in the current.

July ~ Phil asked members to provide the collective nouns for the following: finches, parrots, eagles, fungi, kangaroos, crows, owls, boys, jellyfish, wombats, platypuses and echidnas.

The answers were: A **charm** of finches, a **company** of parrots, a **convocation** of eagles, a **flush** of fungi, a **mob** of kangaroos, a **murder** of crows, a **parliament** of owls, a **rascal** of boys, a **smack** of jellyfish, a **wisdom** of wombats, a **paddle** of platypuses and a **parade** of echidnas. Members who correctly answered were rewarded with a small chocolate.

Sightings

June

- Tina noted that in May there were no spoonbills at Queechy Lake and she believes they have moved to Tamar Wetlands. On 31/5 Tina saw a copperhead snake at the Tamar Wetlands.
- Karen noted she saw a Bassian Thrush at Skemps on 27/5.
- Also in May Prue noted a Kookaburra with a small snake on the road to Liffey, and that Sally had a snake in the nursery at Habitat Plants.

July

- Little wattle birds and eastern spinebills were seen by Tom in Mulgrave Street, South Launceston.
- Roy had seen 5 eastern spinebills in a grevillea at Binalong Bay at the end of June.
- Phil had seen a mange covered wombat at River Road Reedy Marsh.
- Prue had seen 20 – 30 wren at the last Skemps Day.

GENERAL MEETING ~ Tuesday 5 June – David Maynard - *Tasmania's Forgotten Emu Species*

Tom introduced David who was to talk on the emu subspecies of Tasmania and the Bass Strait islands. David started by acknowledging Tammy Gordon as the co-author of the work and reminded us that they had both worked on the book about the thylacine.

The second slide showed the contents of the talk starting with the Australian emu, followed by the Tasmanian then King Island emu, the role of isolation, Baudin's expedition followed by the fact that, as with the thylacine, precious little remains to be studied.

The mainland emu, *Dromaius novaehollandiae*, grows up to 1.9 metres tall and can weigh up to 45 kilograms. A map showed the extensive distribution over mainland Australia, excluding a lot of the eastern coastal fringe, the dryer parts of the centre and what may have been the wetter parts of the central north.

The next slide included a picture of the Tasmanian emu, *Dromaius novaehollandiae diemenensis*, attributed to John Gerrard Keulemans (1842-1912), and it has only been identified as a subspecies in the last month or so. This emu was smaller, maybe only 1.5 metres, and hunted by both the Tasmanian aborigines and the early Europeans (who arrived in Tasmania in 1803); by 1830 the local emu was listed as rare and was extinct by 1865 with the last one dying in captivity in 1873.

As with the Tasmanian tiger, which became extinct more than 60 years later, little physical evidence remains, including study skins, skeletal remains, egg shell and a foot. We know the foot came from a Tasmanian emu as it was the one raised from an egg by Ronald Campbell Gunn.

Another picture, also attributed to Keulemans and based on the Paris skin, showed the King Island emu, *Dromaius novaehollandiae minor*. It was smaller again, 1.4 metres and only 23 kilograms, hunted by the English sealers and the last recorded sighting was by the French explorer Baudin in 1802.

David noted that the King Island emu was effectively becoming a dwarf species and asked us to consider the size of an island on a species. He said that if you go to Chappell Island you will find that the snakes are gigantic to take advantage of the glut of mutton bird chicks. If they are not big they will not be able to eat a chick.

David stopped the slide show and put on a visualisation of the sea changes over the last 50,000 years. We saw the sea receding from the land and returning with the coming and going of the ice ages connecting mainland Australia with Tasmanian and New Guinea. He stopped it at 43,000 years as this was the first time there was a bridge since humans had entered Australia. David showed the extent of ice over Tasmania with it being 100 metres thick on the mountains and 300 metres in the valleys.

There was a lake in the deeper central parts of Bass Strait while grassy plains connected the west to Adelaide and the east to Melbourne. As the tide rose the western bridge disappeared first and by 40,000 years ago the eastern bridge was gone and Tasmania became isolated from the mainland. At this stage the Tasmanian devil and emu, the thylacine and other endemics became isolated along with the aboriginal inhabitants.

A graph showed the change in populations of Tasmanian Aborigines, thylacines, European settlers and sheep between 1803 and 1930. Thylacines were estimated to have a starting population of between 2,000 and 4,000 and there were about 7,000 aborigines. The aborigines were gone around 30 years later and the landscape was changing as their small fires were no longer being used to produce the open grasslands favoured by the herbivores.

The other major change was the number of humans and by 1835 the 7,000 aborigines were replaced with 50,000 Europeans and another herbivore was introduced, sheep. By 1835 some 700,000 sheep were compacting the soil and competing with the native herbivores for the grasses while the Europeans were hunting the native animals.

David then spoke of the exhibition, the Art of Science: BAUDIN'S VOYAGERS 1800 – 1804, about the French explorer Nicholas Baudin and his visit to Australia, including the Sydney area of NSW heading south, then around Australia and Tasmania and then east nearly reaching the Cape York Peninsular. He had two ships and two artists and he was mapping the coast as he went.

He collected emus and wombats from King Island as well as emu from Tasmania and Kangaroo Island and when these died they were taxidermed (sic). Some animals lived to occupy the garden of Lady Josephine before being move to the botanical gardens and some were reported to have lived up to 1822 and, as David said, the story does not end there.

Rolan Eberhard, of the Department of Primary Industries, who is in charge of natural heritage, is also a caver and he found emu bones in a cave. David showed us a movie of Rolan entering the small entrance to the cave which is assumed to have been much larger in the past and then blocked by a rock fall.

Research is ongoing with the limited material of the emu being examined, including using DNA analysis, to see if the Tasmanian and King Island animals are separate species and David summed up his talk with: "*The emus are Tasmania's forgotten extinctions and there are two distinct Tasmanian*

variations. The climate, arrival of Europeans and the change to the landscape by removing the aborigines contributed to the extinction. The French scientific exploration contributed to our knowledge of these animals. The museum collections are integral to ongoing research and let's stop human-induced extinctions."

After a lengthy questions and answers session, Judith thanked David and led the acclamation.

Noel Manning

FIELD TRIP ~ Sunday 16 June - Tamar Discovery at Seahorse World

12 members attended the Tamar Discovery open day at Seahorse World, Beauty Point, hosted by NRM North. The event featured static displays and four speakers gave impressive presentations. Participants were also offered discounted entry to tours of Seahorse World.

Cayne Layton started with a talk on the Great Southern Reef, a series of interconnected reefs on all Australian coast lines south of Geraldton in Western Australia around to the border area of NSW/Queensland on the east coast. This reef included the coast line of Tasmania and the Bass Strait islands.

Unlike the Great Barrier Reef, which is made up of living coral, this reef system is based on rock outcrops not far below the surface. The reef could be a shallow rocky outcrop close to or some distance from the shore or an underwater extension of a rocky headland.

He showed us the variety of life to be found on these reefs and explained that as the east coast warm current moved further south, due to quite small sea temperature rises, it had adversely affected the kelp forests of Tasmania.

Sheree Marris followed with a presentation on Melbourne Down Under, her efforts to let people know of the underwater wonders of Port Phillip Bay and hopefully to have them appreciate and protect this wonderful and diverse environment. We also learnt that she was working on a similar project here called Tasmania Down Under and we saw some of the images which would highlight our aquatic wonders, including the Tamar River estuary.

Toni Furlonge, who had hosted the talks and introduced the speakers, gave a presentation on water quality in the Tamar catchments based on 12 years of research with NRM North. This involved monthly checks of salinity, turbidity, temperature and chemical and bacteria content.

We learnt of the surprisingly extensive area of the South and North Esk catchments and her conclusion was that the quality was reducing, especially for waters entering the northern section of the Tamar.

To finish these interesting presentations Prof Gretta Pecl talked about the new species found in the Tamar Estuary and the coast of Tasmania. A series of satellite images showed the water temperature around the lower east coast of Australia and how over the years the warmer waters were moving further south and onto the east coast of Tasmania. We learnt that citizen science employed recreational fisherman, divers and beachcombers to report new species being found and images of these were being passed to experts to confirm an identification.

After a quick lunch, four of us did a conducted tour of Seahorse World which others had done earlier in the day. As well as the familiar seahorse and seadragon the tour featured other fascinating creatures of the mostly not so deep and new born seahorse were stars of the show. In the foyer a movie showed the seadragon in the wild.

After coffees we ventured into the cold for the trip home. Alas, we did not go to Holwell Gorge as Tom was speaking with a Beaconsfield local, who advised him that the road way into the gorge had been damaged recently with the heavy rains.

Noel Manning



SKEMPS DAY ~ Saturday 23 June – Fungi Hunt

Nine members and three visitors arrived at Skemps on a cold but sunny morning to look for fungi.

Earlier starters walked along the forest edge seeing many *Sclerodermas* which had already matured and released their spores. At the Federation corridor we walked to the Top Pond where there was a carnivore scat on the boardwalk, but no fungi along the pond wall. On the far side of the creek, we checked all the plants that still had guards around them, deciding that many guards should be removed during our National Tree Day event in late in July.

A fallen tree at the creek crossing had many *Panellus longinquus* growing on it and we later found many small cap fungi (not identified) on the lawn area below the Centre. With a few more members arriving, we then walked the Power Track where we saw the *Fistulina hepatica*, beefsteak fungus and more cap fungi, returning along the roadway for lunch. We did not see the *Cordyceps gunnii* that members reported seeing in large numbers last month. The *Scleroderma* seen on the driveway had not released their spores.

After lunch, with the weather still looking good, we went onto the Forest Track that had recently been cleared of ferns totally covered a section of the track. It was here we found the rosette shaped leathery fungi *Podoccypha petalodes* in the leaf litter, and growing on the roots of trees, having noted this fungi in previous years. Our walk toward the steeper end of the track was slowed due to the amount of leaves and sticks on the track following heavy winds. Taking a little more care

negotiating the track we noticed two lilac *Hygrocybe* under a *Dianella tasmanica*, a fungi I had not seen for some time.

Out of the forest and onto the grassland above the ponds, we returned to the Centre to catch up with other members for a coffee and chat, before we all went our separate ways. Karen manning

Bisporella citriodora, *Calocera guepinioides*, *Clavaria amoena*, *Fistulina hepatica*, *Geastrum triplex*, *Heterotextus peziziformis*, *Hygrocybe lewellinae*, *Hypholoma sublateritium*, *Leotia lubrica*, *Marasmius* sp., *Mycena interrupta*, *Oudemansiella gigaspora*, *Panellus longinquus*, *Podoscypha petalodes*, *Pseudohydnum gelatinosum*, *Ryvardenia campyla*, *Scleroderma cepa*, *Stereum illudens*



***Podoscypha petalodes* (KM)**



***Panellus longinquus* (KM)**

FIELD TRIP ~ SUNDAY 1 July – Blue Tier

Seven members met at the Blue Tier today for a walk in the Goblin Forest. As all members had done this walk before and the day was sunny and the sky cloud free, we decided to be more adventurous and do the Wellington Loop Walk.

The track for this walk was very boggy and in places we needed to go around particularly wet patches. With the usual search, look at and photographing of plants and fungi, combined with the slow going we were well behind schedule for the full walk.

At the far junction with the Australia Hill walking track we headed in that direction and a shorter loop walk back to the car park. This walk started through open country where we saw remains of abandoned machinery and structures from the mining era before crossing a small stream to enter a lovely rainforest.



There were many varieties of fungi present, and the ferns, mosses and lichens growing on the trees were a picture. It was just magic walking through the rainforest area, with celery top pine, assafras, myrtles and mountain peppers above us with engaeus mounds seen in many of the wet areas.

As we neared the top of Australia Hill the forest changed to shrubs, grasses and ferns. We lunched on large flat boulders on the hill top where we had views to St. Helens and the mountains Albert, Victoria, Barrow and Ben Nevis. Stylidium leaves were seen in the crevices on the boulders and Roy advised that it was a hot-spot for Stylidium plants which were very common in the area.

We had just commenced our walk back down the hill when Noel spotted a bright green tree which looked quite out of place up there, and with closer inspection we found it to be a solitary Radiata Pine! Roy said he would report the tree, so that it could be removed before setting seed. Further down there were more even bigger boulders and appeared to be stacked on top of each other.

Roy took us off the track to look at a “big hole in the ground” from a tin mine from the early twentieth century. It was quite deep and difficult to see the bottom due to the large trees and smaller shrubs growing there.

On the return walk we saw more fungi that we had not previously seen on this walk and there were also many piles of reasonably fresh wombat scats.

Back at the carpark, we said goodbye to Roy who was heading back to St Helens. The 6 remaining members headed back to Launceston. Four made a stop to look at the myrtle forest in the Rainforest Reserve Walk on the Weldborough Pass. It was delightful walking under the towering ancient myrtles, sassafras and tree ferns. There were also different fungi here to our previous location. While we were there we explored the forest on both sides of the road way finding many engaeus mounds on the lower side where there was a small creek.

During the day we collected five samples of forest litter to send to a PhD student at Melbourne University, who is hoping to identify novel species of fungi growing in decomposing leaf litter. Driving back to Launceston the sun was in our eyes so progress was slow and of course when the sun went down the animals came out along the roadway, so had to take even more care. The day was wonderful, the walk was flat or gently sloped, and for those who couldn't join us today you really missed out on a spectacular display of ferns, mosses and lichen, in the rainforest amongst the trees.

Karen Manning



Grasses - *Dianella tasmanica*, forest flaxlily; *Gahnia grandis*, cutting grass

Ferns - *Blechnum pennamarina* subsp *alpina*, alpine water fern; *Blechnum watsii*, hard water fern; *Dicksonia Antarctica*, soft tree fern; *Gleichenia dicarpa*, pouched coral fern; *Grammitis magellanica*, finger fern; *Hymenophyllum flabellatum*, shiny filmy fern; *Microsorium pustulatum*, kangaroo paw fern; *Polystichum proliferum*, mother shield fern; *Pteridium esculentum*, austral bracken

Mosses - *Lycopodium* sp., club moss; *Sphagnum* sp., moss

Lichens - *Cladia retipora*, coral lichen; *Cladina confusa*, reindeer lichen; *Cladonia pleurota* with red fruiting bodies; *Pseudocyphellaria billardiarei*, lichen; *Pseudocyphellaria multifidi*, lichen; *Sterocaulon ramulosum*, lichen; *Usnea* sp., old man's beard

Trees & Shrubs - *Atherosperma moschatum*, sassafras; *Epacris impressa*, common heath; *Gaultheria hispida*, copperleaf snowberry; *Nothofagus cunninghamii*, myrtle beech; *Persoonia gunnii*, mountain geebung; *Phyllocladus aspleniifolius*, celery top pine; *Pimelea pauciflora*, poison riceflower; *Pomaderris apetala*, common dogwood; *Richea gunnii*, bog candle heath; *Stylidium* sp., trigger plant; *Tasmannia lanceolata*, mountain pepper

Other - Engaeus mounds; Wombat scats; *Malurus cyaneus*, superb fairy-wren

GENERAL MEETING ~ Tuesday 3 July – Kathryn Pugh

- Human impacts on the kanamaluka/Tamar River estuary

Tom introduced Kathryn and she started by telling us that she would not be mentioning weeds and threatened species, instead her talk would cover how we treat the waterways in and around Launceston, the pressures on the estuary, the combined sewer and storm water system and the investment plans to try and fix the problems.

She described the Tamar as, at 70 kilometres, the second longest estuary in Australia after the Alligator in the Northern Territory, features Tasmania's longest river, the South Esk, and that the >10,000km² catchment involves nine municipalities and 5 major river systems, South and North Esk, Brumby's Lake, the Macquarie River and Meander River. Also, that such a large area has multiple land-uses including agriculture, forestry, urban settlements, parks and reserves.

While the rivers are normally calm Kathryn reminded us that if there is 400mm of rain at Gray on the east coast 2½ days later (an interjector had suggested 3 days) we get flooding in Launceston and we saw images of both Eskes in flood. Using a map Kathryn pointed out Invermay Island, a small area not below the high tide mark as is the situation with most of Invermay and suggested that we controlled the flooding in many ways. One way was to turn the North Esk into a ditch, tightly constraining the river with levee banks hard up against the edge, with roads hard up against the levee leaving no room for trees.

We saw a familiar image of the Tamar mud flats with boats sitting on silt near Sea Port and Kathryn described the silt as entirely natural, in her words 'meant to be there'. An image showed us the Inglis, Pipers and Blythe River estuaries which were at the mouth of these rivers while the Tamar, as a drowned river valley, is 70 kilometres inland and not where we expect it and that as an estuary the tidal differences are bigger at Launceston than at Low Head therefore exposing the mud.

A survey map from 1833 showed that the mudflats were not new with the difference being that we have reclaimed areas around Royal Park and Canal Street, Invermay was then shown as a swamp and the North Esk has a couple of rough edges and islands.

Kathryn talked about the often mentioned beach at Royal Park and showed an article from the Examiner 13 November 1923 as well as a picture. The sand had soon washed away and Kathryn pointed out that this beach was next to the sewerage outlet. A picture showed the Margaret Street outfall old enough to have nothing in the Trevallyn area.

Kathryn moved onto the Trevallyn Dam and explained that the impact on the Tamar was less than we might expect as 30% of the water in the dam is diverted from Poatina and that an article from the Examiner, four years before the dam was built, showed that silt and effluent was already a problem. She told us that the Hydro has voluntarily increased the flow through the gorge over the years and noted that the dam regulated the flow in the lower South Esk adding to the recreational value of the First Basin.

The next slide showed three images of issues in the waterways leading to the Tamar. The first was of a construction site near Bunnings, at Connector Park, with clay silt spreading into the waterway, then two waterways joining with one heavily silted and the last showed erosion on the banks of a stream. We learnt that sediment comes from the catchment and the urban storm water during rain events rather than the sewerage system and that a lack of riparian vegetation in agricultural areas contributes to the problem.

After some 10 minutes of discussion and questions Kathryn moved on to the possible solutions starting with sediment raking. She told us that there were costs associated with raking including the creation of shoals and the smothering of the underwater environment downstream.

Our urban waterways also carry high contaminant loads and a slide showed a 500 metre section of Newnham Creek which includes 12 discharge points. As well as heavy metals from industry there are hydrocarbons from the road and faeces not only from wildlife and dogs but also from incorrect plumbing in the suburbs.

A slide showed some issues with the storm water drainage including blue water where paint had been dumped and a recently widened drain with exposed soil which would easily wash away.

Kathryn moved onto Launceston's combined drainage system noting that with no rain or light rain it all goes to the sewerage treatment plant while during heavy rains it overflows and the diluted sewerage goes into the river. While this combined system is unusual for Tasmania it is not third world as there are 760 such systems in north America and London has such a system as well. The Launceston combined drainage was built in the 1860s and only covers the older parts of the city.

The talk then covered her research into pathogen loads in the Tamar using data going back to the 1970 and the graph showed no bad events since the mid-1990s when Killafaddy Sale Yards and Abattoirs were connected to the Hobblers Bridge Sewerage Treatment Plant. Most of the spikes in load correlated to sale days at Killafaddy.

We learnt that overflow events will occur if there is more than 2mm of rain in an hour or more than 4mm of rain in the previous 24 hours. Kathryn told us that there are more infill development with impervious surfaces, aging infrastructure and sediment in the pipes reducing the amount of water capable of being moved by pipes, as some reasons for the problem. One pipe is 80 years old and the flow is restricted, as boosting the pressure from the pump station could burst it.

Graphs showed the enterococci count at Royal Park and in the North Esk at St Leonards with spikes associated with increased water flows and Kathryn stated that it takes two days to return to normal. A third graph showed a timeline for the impact of a 10mm rain event at Inveresk, Seaport, Royal Park, St Leonards, Kings Bridge, Kings Wharf, Hunters Cut and Tamar Island. Royal Park and St Leonards were three to four times as bad as the others for their quality, while Tamar Island was the best and only just above the recommended levels.

Kathryn is on the Tamar Estuary Management Taskforce which is looking at improving recreational water quality in Launceston and they quickly dismissed the idea of consolidating the treatment plants and moving them down stream as it would need to go to Hillwood to be half way effective. The full separation of the sewerage and storm water was not feasible either starting with a \$435M estimate for public works. As well each household would incur a large cost to change their connections, it would be tremendously disruptive in the construction stage and there would be an increase in the pollutant load to the estuary from the storm water.

Kathryn noted that current legislation did not adequately cover our combined system and that the public needed to be better informed to fully understand the issues and that these were not nearly as bad as is normally perceived before she went into the five effective options that are less disruptive and less costly.

Option 1 – Divert sewerage from West Launceston and Trevallyn direct to Ti Tree Bend. This would reduce the wet weather sewerage component at Margaret Street by about a third of the equivalent tenements. For \$4.6M there would be a 19% reduction in sewerage overflow to the Tamar.

Option 2 – A new rising main pipe would double the flow from Margaret Street Sewerage Pump Station (SPS) and there would be further increased flows from St John and Forster Streets. As well there would be buffer storage at Ti Tree Bend and 10 hectare wetland. For \$26.8M there would be a 28% reduction in sewerage overflow to the Tamar. Kathryn described this option as her favourite as it would turn unused weed infested land into a nature reserve and recreational area that would also help remove metal pollutants from the water.

Option 3 – Construct a 4.2M litre offline storage adjacent to the Margaret Street SPS to decrease the frequency with which overflows occur and capture the more contaminated 'first flush' of the combined system. For \$10M there would be a 21% reduction in sewerage overflow to the Tamar.

Option 4 – Send sewerage from Kings Meadows and Newstead direct to Ti Tree Bend and add 3M litre storage at the Esplanade. For a cost of \$24.8M there would be a 22% reduction in sewerage overflow to the Tamar.

Option 5 – Construct 2.5M litre offline storage adjacent to Forster Street SPS. For a cost of \$8.4M there would be a 6% reduction in sewerage overflow to the Tamar.

For around \$74.6M there would be an overall reduction of 68% in sewerage overflow to the Tamar. The Catchment Action Working Group led by NRM North has found that the small areas devoted to dairy and grazing have a huge impact on the nutrient and enterococci count in the system, while the urban environment is overly represented in sediment and phosphorous. For farms trough watering and the reintroduction of riparian vegetation are the most cost effective options to improve water quality.

There were more questions and answer including the inevitable question about whether it would be appropriate to turn the upper Tamar into a lake. Kathryn said that this would be an absolute catastrophe. Assuming you could get through the legislation that allows a couple of thousand hectares of conservation area to be turned from an estuary into a fresh water system, everything there would die. All life forms there need the brackish water and algae blooms would be a problem and Kathryn noted that this had been tried with Orielton Lagoon near Pitt Water in the south and it did not work.

Phil thanked Kathryn on behalf of the members and led the acclamation. Noel Manning

SOCIAL OUTING ~ Sunday 8 July – Christmas in winter luncheon at Poatina

Seventeen members and one visitor met at the Chalet for warming drinks around a log fire on a cold mid-winter day with a blustery wind, snow on the tops of the surrounding mountains and a constant mist. The mist had the advantage of producing an impressive rainbow which was visible from our journey there, throughout the meal and it was still visible when the last person left.

A huntsman spider was rescued from the fire by Tom (T) and taken outside, with Claire stating that it should have been left there to cook.

Karen and I had arrived about 10:30 to do some of the walks in very poor conditions. Gusting wind, light rain and a low temperature made walking uncomfortable along the exposed Summit track. Once we entered the lower slopes, with the shelter of the trees, the wind was not so bad, although the descent to Woodside Rivulet was steep and slippery and most of the track was narrow with steep sections and spars to cross. The signs along the way did not seem to match the names on the map. The rivulet had a good flow from recent rains making the rapids a picturesque sight.



Back at the car the wind made it difficult to remove the many layers we had donned for the wet and cold we had expected on the walk and after a look at the Poatina Monument we headed to the Chalet for lunch and the warmth of the indoors. Our host Dave, told me that the monument was probably damaged during a bad storm with two of the obelisks being broken.

In the dining room we found our table set for our Christmas meal. Each person was given a card from a small set in a tin and we read out our card which gave two choices and we were invited to choose a preferred option. Someone with a silly imagination had put the options on the cards which were often a choice between really bad or worse. We did however have fun with most agreeing on the option.

The meal was impressive and each plate had a thick slice of pork, turkey and ham and there was cranberry or apple sauce available with a choice of two desserts to follow. Over hot drinks we chatted and watched the wild weather through the large windows of the Chalet. It must have been a solid building as it did not seem to shake as you would expect although we wondered during some especially strong gusts if we would lose the roof or a window.

We were curious as to why the birds would take to the wing in such windy conditions with Tom (T) suggesting that they had been blown off their perch and had no choice. A large dam, clearly visible in the middle distance, was being emptied by the wind as frequent gusts blew a thick spray over the dam wall.

We thanked our hosts for a wonderful meal and our family did a car tour of the village before heading for home after a great get together. Noel Manning

EXCURSION ~ Wednesday 18 July – Fern Foray @ Skemps with APST North members

Six members and three visitors attended Skemps today, on a beautiful sunny morning, to find ferns and bring samples back to the field centre for identification and to better understand the differences. Visitor Julian was also there to look at Skemps on behalf of the Friends of the QVMAG in preparation for a Bug Day Out in December.

I got the fire going and boiled the kettle for the usual pre work drinks and then showed Julian what the property had to offer, both for accommodation and outdoor activities, while others prepared for the fern foray.

The start of the foray was delayed by a few minutes as the first of the predicted rain came and went. I waited for stragglers and showed them where to start, prepared myself for the foray, before locking up and heading off.

Catching up with the others I found that they were less than a third of the way into this well organised field trip. Roy had carefully marked 15 ferns, of 13 different varieties on the tracks we



were to walk. These examples showed our intrepid explorers what each looked like in the bush and most of those chosen had some identifying features. We also looked at the common bracken, with Roy pointing out the distinguishing feature of each stem having a distinctive wing between each pinna. As we proceeded Margaret collected samples of each fern for us to examine more closely after lunch.

We reached the last of the marked ferns only to find a recent tree fall blocking the way. Visitor Peter found his way around and with some difficulty we all joined him having decided to return to the Centre via the bottom falls and to look for other ferns along the way. This soon came to a stop as the recent rains had caused a strong flow in this part of the creek, only passable if you did not mind getting your feet wet.

Back at the Centre we lunched before huddling around the four microscopes to look for the identifying features of our samples. The two USB MicroCapture Digital microscopes were attached to computers and after some fiddling about we had reasonable images and the ability to record pictures and movies.

Using heat from a lamp we tried to fool the plants into thinking the weather was warming so that the sporangium would open to release the spores and we did get movies of this. It must have been too warm for the insects as these could be clearly seen running about once the lamp was used.

The old fashioned microscopes gave a much clearer image and to our delight we saw the sporangium open on the kangaroo fern and the soft tree fern. A little extra heat from the lamp and four or five of us were able to see this display.

Tom went out and bought back a sample of the scrambling coral fern from the pond area and also of a rough tree fern from behind the Centre for us to look at.

After a final cuppa and a clean-up we said our farewells and headed home after a successful day thanks to the efforts of Roy. Noel Manning

Ferns seen today: *Asplenium appendiculatum*, narrow spleenwort; *Asplenium bulbiferum*, mother spleenwort; *Blechnum nudum*, fishbone waterfern with fertile fronds; *Blechnum watsii*, hard water fern; *Cyathea australis*, rough treefern; *Dicksonia antarctica*, soft tree fern with spores; *Gleichenia microphylla*, scrambling coral fern; *Grammitis billardieri*, common fingerfern; *Histiopteris incisa*, batwing fern; *Hymenophyllum australe*, southern filmyfern; *Hypolepis rugosula*, ruddy ground fern; *Microsorium pustulatum*, kangaroo fern; *Polyphlebium venosum*, veined bristle fern; *Polystichum proliferum*, mothershield fern; *Pteridium esculentum*, austral bracken; *Rumohra adiantiformis*, leathery shield fern



Skemps Day, National Tree Day, 29 July

Eight members and two visitors met on a cold and wet Sunday for our annual National Tree Day at Skemps. Arriving at the Centre we noticed that the winds had moved a sheet of iron on the trailer shed, damaging the ridge capping and exposing a large area to the weather. As well as keeping the old trailer out of the weather we store short stove wood in this shed.

Banking on a kinder weather prediction for the late morning and something even better for the afternoon we settled in for a drink and chat before a warming fire set by Claire. An update of the weather showed that our optimism was misplaced and that we could not expect any better as the day progressed.

I set about some small maintenance tasks, Karen cleaned up, Tina worked on library matters and we all waited in expectation of better weather which was obviously not going to happen. During the rare breaks in the weather we worked on the damaged roof and cleared the drain along the drive way. Afterwards we looked at the program for our Club's activities followed by more drinks and snacks, including Claire's excellent rum balls and Lois's scrumptious cream cake, before a final clean up and farewells.

I was thinking of that well known fishing/golf joke when we said our goodbyes and headed home early '*a bad day at Skemps is still better than the best day at work*'. Noel Manning

East Coast weekend with APS members - Sat 13th/Sun 14th October

Members are invited to attend this excursion with APS members, to properties owned by two of their members. The plan at time of writing is to probably go first to Helen Tait's (also LFNC member) property at Rocka Rivulet near Tooms Lake, stay overnight somewhere nearby (possibly Lisdillon) and then proceed to Judy Harris's property at Ponty Pool. Please contact Roy Skabo on 6334 6787 or email rlskabo@gmail.com (before the end of August if you would like to join this excursion). Roy will circulate a list of participants later, so that attendees can organise car-pooling and accommodation.

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 \$3.00. 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 0403 845 000 or bookings@lfnc.org.au regarding availability and keys.

Field Centre Phone Number: (03) 6399 3361

Postal Address: PO Box 1072 Launceston 7250

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