



THE LAUNCESTON NATURALIST

Volume LI No. 3 February / March 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 Forteath
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:

April - Tuesday 3rd
General Meeting ~ Members Night

April - Saturday 21st
Trip to Lake Mackenzie ~ Meet at 9.00am at Mole Creek near toilets.

April - Saturday 28th
Skemps Day ~ Macro-invertebrate monitoring

May - Tuesday 1st
General Meeting ~ John Skemp Memorial Lecture
Guest speaker ~ Clare Hawkins, *Towards Citizen Science*

May - Sunday 27th
Skemp Day ~ Fungi hunt

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

SKEMPS REPORT

February/March 2018

While weeding, small repairs, blockages on the nature trails and clearing them of bracken and ferns are still a good part of our Tuesday work our water supply has caused major problems of late.

A month or so ago I noticed that the three main interconnected tanks were all very low during the driest part of the year. As we were at Skemps soon after each rain, I was able to set the flow going and they went from about 125mm to about 250mm and then Rob noticed a leak under the number three tank. Each tank fills to a little over 1 metre so this means we had gone from the maximum capacity of 12,000 litres to around 1,500 litres and after considerable effort only increased the stored water to around 3,000 litres. As the tanks fill from the bottom, a leak in one tank drains the others connected to the system. The number two tank was isolated from the rest and remained full, as the 2,000 litres it carries is for the fire hose.

I disconnected the leaking tank from the water supply and a few weeks back finished draining it and John, Rob and I turned it on its side. It was immediately obvious where the leak was and on inspection this area was distorted, probably from the tank being on an uneven base. Recent rains have filled the two remaining tanks giving us around 7,000 litres (aside from the 2,000 isolated for the fire hose) and we have the winter to work on this issue.

As a new tank will cost \$1,350 we will try to repair the damaged one and I propose to arrange for the tanks to be filled from the top which will prevent all tanks from draining if one leaks as has happened three times so far.

Please report any issues in the building or the grounds, especially blockages on the nature trails, and remember to make suggestions for improving the facilities we offer. Any given suggestion may not be acted upon immediately as we need to prioritise tasks and to work within a budget.

Noel Manning

FUTURE & UP-COMING EVENTS

Australian Plant Society, Northern Group - Autumn Native Plants Sale

To be held on Saturday April 14th at Max Fry Hall, Trevallyn from 10.00 – 4.00 pm.

October Tuesday 2

Annual General Dinner Meeting

General Meeting February 2018 – Mike and Helen Statham, Svalbard Islands

Tom introduced Mick and Helen Statham who would talk on their trip the Svalbard islands of Norway.

Mick started the presentation and he had some interesting information on the islands including the location and the history, the towns and the people, and the ship and the trip. He started by telling us that they spent ten days travelling around the islands on a Russian expedition ship, in his words a slightly converted research boat, with only 55 passengers and a Russian crew. While describing the accommodation as basic, the beds were comfortable, the food good and the small number of passengers meant that they could be in Zodiacs in 30 minutes for a trip ashore if something interesting was seen and they were ashore at least twice a day except when in pack ice.

We saw satellite images of the Islands showing where they were in relation to Norway, Iceland, Greenland and the North Pole and Mick said that at under 1,000 kilometres it is a lot closer to the North Pole than our Casey Station is to the South Pole. The white on the maps showed that the islands are mostly covered with permanent snow while the western fringe is tundra, covered in snow

during winter which melts in summer. He described the thaw as being, luckily, only about a gumboot depth down to the permafrost and that the milder western side is brought about by the gulf stream from the south which also keeps the ocean ice free. The permafrost causes buried bodies to rise from the ground so all were removed and reburied with the coming of tourism, which took off in the 60s, and no bodies are buried there anymore. Another map showed the route taken by the ship with the places visited and notes on what was seen there.

Many attempts to reach the North Pole by balloon and plane started from Svalbard resulting in some deaths and disappearances. A few years ago, the governor, unimpressed with the bleak looking buildings of the town, asked an artist to design a colour scheme for the buildings and all residents must paint their home in the designated colours. There is an excellent museum and surprisingly a small university. The subjects taught are arctic related including meteorology, glaciology and tourism, with students first taught how to use a rifle to protect against the polar bears.

On arriving at the airport, they noticed the signs warning about polar bears and by law you must carry a rifle if you venture away from the towns. Just days before they arrived Longyearbyen, the largest town, was in lockdown due to a polar bear and as the bears are protected a couple were taken to court for shooting one. As they were in imminent danger they were acquitted. Armed guides were the first ashore, and on a particular trip when a bear was sighted around two kilometres away a guide stayed on a small rise all day. When ashore there were always armed guides keeping an eye out for bears positioned to be able to see in all directions away from where the tourists were.

There is a population of over 2,500 during summer, with only a few over wintering, and it is the northern most populated place on earth. There is a lot of meteorological work done, the coal mines are still active, tourism is a major industry and the Global Seed Bank is in a disused coal mine on Spitsbergen. The 80,000 tonnes of coal produced annually are only slightly more than what is used for their power needs. The islands were officially discovered by Willem Barentsz in 1596, as he looked for the north east passage, although Norse legends tell of an island which was three days sailing north east of Iceland.

Although Svalbard looks uninviting from the first it was home to many industries starting with whaling set up in the early 1600s which was so efficient it was finished in the late 1600s due to the declining whale population. The walrus, prized for tusks, blubber and the thick, tuff skin, which was used to make machinery belts, were hunted to near extinction and they are now returning. Seals, polar bears and foxes in their white winter coats were also hunted for fur.

There are very few roads on the islands with transport mainly by boat in summer and we saw pictures of the winter transport including motorised snow vehicles, numerous dog sleds and some of the 50 or so huskie dogs, which Mick described as very big.

As the ship breaks up the ice it attracts birds which feed on the small fish and crustaceans which feed on the algae on the underside of the ice.

It was Helen's turn to talk and she told us that the ship had a small library of reference books, kept on the bridge, which was also the passenger common room, and they spent a lot of time there looking out the windows for interesting things or trying to identify what they had photographed. She told us that due to the harsh environment there were only 170 species of plants on the islands, which mostly had a circumpolar distribution, including Russia and Alaska.

Helen described the two main plant habitats as the stony arctic desert and the tundra. In the desert the constant freeze and thaw opens cracks in the rocks allowing lichens and mosses to grow, eventually producing soil. Prompted by a picture of Mick on his knees with his camera Helen told us that there are only small plants. The summer is not long enough to support large plants and those that are there have adapted to the cold. Plants do better if sheltered from the wind, some are woolly on the stems and leaves to protect them from the cold and many flowers are parabolic and move around with the sun. Helen told us that they were lucky to see plants as the growing season is so short they may have missed them even the following week.

The impressive PowerPoint presentation, as well as featuring scenery, ice and snow, human impact on the environment, the town and buildings, the various water craft used and life aboard their ship also had excellent images of the following:

BIRDS: Black-legged Kittiwake (including large numbers wheeling in front of a glacial cave); Arctic Turn; Atlantic Puffin; Northern Fulmar; Brunnich's Guillemont (and a cliff covered in hundreds); Little Auk (including a flock in flight and a group on a rock leaping into the water);

PLANTS: lichen and mosses; *Eriophorum scheuchzeri ssp arcticum*, Arctic cottongrass (looking like thin cylindrical stems with cotton balls in it); *Carex ursina*, Polar Bear Sedge; *Saxifraga oppositifolia*, Purple Saxifrage; *Draba oxycarpa*, Pale Whitlow-grass; *Papaver dahlianum ssp. Polare*, Svalbard Poppy; *Saxifraga platysepala*, Polar Stoloniferous Saxifrage; *Dryas octopetala*, Mountain Avens; *Salix polaris*, Polar Willow; *Silene uralensis ssp. Arctica*, Polar Campion; *Ranunculus nivalis*, Snow Buttercup; *Ranunculus sulphureus*, Sulphur-coloured Buttercup; *Erigeran humilis*, Black Fleabane; *Saxifraga hirculus ssp compacta*, Yellow Marsh Saxifrage; *Saxifraga cespitosa*, Tufted Saxifrage; *Saxifraga cernum*, Drooping Saxifrage; *Chrysosplenium tetrandrum*, Dwarf Golden-saxifrage; *Silene acaulis*, Moss Campion; *Oxyria digyna*, Mountain Sorrel; *Taraxicum brachyceras*, Polar Dandelion; *Cerastium arcticum*, Arctic Mouse-ear;

ANIMALS: *Oderbenus rosmarus*, Walrus; *Pagophilus groenlandicus*, Harp Seal; *Vulpes lagopus*, Arctic Fox (with five white pelts hanging up, and another of a fox with a stolen egg); *Ursus maritimus*, Polar Bear (including a mother and two juveniles); Huskies; *Rangifer tarandus platyrhynchus*, Svalbard Reindeer; many *Homo sapiens ssp turista* (exhibiting typical behaviour including leaping into the cold, Arctic Ocean waters).

After Mike and Helen had answered member's questions, Peter Ralph gave the thanks and asked members to show their appreciation.

Noel Manning

The Big Blue Marine Community Expo - Albert Hall Launceston, Sunday 11 February

Ann, Karen, Margrit, Noel, Tina, Tom (M) and Tom (T) attended The Big Blue, a Marine Community Expo, at the Albert Hall Launceston on a pleasantly mild Sunday.

The first talk, really a discussion, was between David Maynard (QVMAG), Andrew Baldwin (NRM North) and Kathryn Pugh (LCC) on the state of the Tamar and inevitably the barrage was mentioned. It was not considered to be a solution to any problems of the Tamar and that making such a large fresh water lake would kill off a lot of the marine life and promote pest fish. We were told that other such barrages have been unsuccessful and most have been removed.

It was also noted that the Tamar, as an estuary, is naturally silted, although the silt is much further inland and nearer the city than is the case with other Tasmanian rivers. The silt was there before the Trevallyn Dam and raking has made silt bars further downstream and some returns with the incoming tides. Dredging is considered the best option for this ongoing, mostly aesthetic problem. Dredging is expensive and requires large areas to dump the silt.

For the 11 am session Kathryn returned to tell us about Launceston's contentious dual waste water system combining sewerage and storm water. Although it is the only one in Australia, it was appropriate for the time it was built and this system is still used widely in the USA and Europe. She told us that the prohibitive cost and lengthy disruption to life in Launceston make it impractical to replace. Also, that wide, well vegetated canals for waste water would help with the problem.

For our noon presentation Nicole Hennessey, a marine biologist, hosted a two way video link to the MV Investigator doing the oceanographic side of climate research around the Australian coast. Researchers on-board showed us around the vessel, explained their work and demonstrated the equipment used before answering questions. Then Alison Rockwell, from the Southern Ocean Clouds, Radiation, Aerosol Transport Experiment Study (SOCRATES), invited us to see her exhibit in the next room. When we later attended she explained that SOCRATES uses a Gulfstream V business

jet that has been highly modified for scientific research, to monitor the unpolluted atmosphere over the Southern Ocean, sometimes in conjunction with the MV Investigator.

From 1 pm Annalise Rees talked about her art of the ocean environment, some done as an official artist aboard the MV Investigator and others while cadging a lift on a fishing boat working the oceans around Tasmania. While she spoke a slide show gave us glimpses of her art as well as photographic images of the MV Investigator, the fishing boat, the crews and the places she visited.

We missed the presentation from 2 pm as we lunched in the Hall cafe and then looked at the excellent individual stalls which were manned by enthusiastic and helpful staff. Tom and Tina did attend this talk and told me that Dan spoke about his study of the giant cuttlefish which breed near Whyalla in the Spencer Gulf. Fished to near extinction for bait and pet food (between 1998 and 2013) these short lived (2 to 3 years) animals have been protected since 2013 while still under threat by marine activity near Whyalla including pollution from the steel works and acoustic trauma. The second part of his talk was mainly advice for underwater photography and for filming using consumer grade photographic equipment.



Plastics waste is causing worldwide concerns in our Oceans and Waterways (KM)

The Institute of Marine and Antarctic Studies, Seahorse World, the Seadragons Dive Group, NRM North and Fishcare had active displays including some of their equipment, movies of their work and there were fish tanks with live critters at some stalls.

David had some of his impressive images from the waters of the Tamar, microscopes introduced us to microbiology, marine themed arts and crafts were available to buy and a display about the problem of plastic and other rubbish in the oceans rounded out the impressive exhibits. There were other stalls that I did not visit and cannot comment on.

After this we returned to the Tamar room for another presentation by Nicole, this was on her study of plankton in the Southern Ocean and was accompanied by great pictures and information on this diverse group of marine life. Nicole then told us about her journey to the Antarctic and the islands along the way.

This impressive day was marred by the poor acoustics of the auditorium and a confusing, ever evolving, program which was different to the one on the Internet. Also, I would have preferred a designated lunch break, shorter presentations and better signage on the excellent stalls.

I was still happy to be at this well attended expo and learnt much, especially about the Tamar, and it would have been even better for anyone new to the subjects covered.

I congratulate the partners who gave us this wonderful expo and hope they come up with something for the future, perhaps a biennial or triennial with other themes. Noel Manning

Skemp Day – Saturday 24 February – Bug Hunt

We left Launceston this morning in drizzly rain heading for Skemps, and despite the overcast sky, it soon turned into a warm and sunny morning, perfect for looking for bugs. With so few in attendance we dealt with some maintenance jobs before Karen and Taylor started looking around the building, finding a few spiders, beetles and an earwig.

Noel worked on the plumbing as the tanks were near empty and there was no flow into them from a full settling tank. After removing the airlock in the line we left with a good flow into the main tank and the hope that it would continue to fill for a day or two.

After an early lunch we checked out the new plants below the Forico plantation and came across lots of grasshoppers and butterflies along the way. All the plants were looking good, with some welcome new growth on them. Walking back along the creek we released some older plants from their guards and cleaned up around them.

A large echidna was seen on the paddock behind the old barn and yellow tailed black cockatoos and kookaburras made their presence known with their squawking and laughing. Our day finished around 4pm following a final coffee, chat and tidy up before heading home.

Karen Manning

What we identified :-

Ancita crocogaster, longicorn beetle; *Austroicetes sp.*, grasshopper; *Bombus terrestris*, european bumble bee; *Calyptorhynchus funereus*, yellow tailed black cockatoo; *Dacelo novaeguineae*, laughing kookaburra; *Gastrimargus musicus*, yellow winged locust; *Geitoneura klugii*, Klug's Xenica; *Hednota relatalis*, grass moth; *Labidura riparia*, riparian earwig; *Myrmecia esuriens*, inchman; *Myrmecia pilosula*, jack jumper; *Omyta centrolineata*, gum tree shield bug; *Orthophagus sp.*, dung beetle; *Orthorhinus cylindrirostris*, elephant weevil; *Philaemon pungens*, leech; *Pieris rapae*, cabbage white; *Proteuxoa sanguinipuncta*, moth; ? *Russalpia albertisi*, grasshopper; *Tachyglossus aculeatus*, echidna; Theridiidae sp.; comb-footed spider (male); *Theridion gigantipes*, comb-footed spider; *Vespula germanica*, european wasp



Orthorhinus cylindrirostris (KM)



Proteuxoa sanguinipuncta (KM)

General Meeting March 2018 – Rees Campbell - Eat Wild, Grow at Home

Tom introduced Rees who was to talk on edible native Tasmanian plants, her native garden in Wynyard, native plant based product from the Feisty Tasmanian range and her book *Eat Wild Tasmania* while her husband Col kept the PowerPoint presentation on track.

Rees started the talk with the idea that a full, traditional meal could be put together with native ingredients. A picture showed a main dish of *Coturnix* quail with saltbush chips, a dessert of native raspberry and native pepper ice cream, all washed down with the *Sambucus* (native elderberry) champagne.

She then suggested that history precluded recording the use of native foods because during early settlement no one admitted to eating them, as to do so identified you as first Tasmanian or poor white. The garden showcasing over 100 edible native species, her book, *Eat Wild Tasmanian*, and her Feisty Tasmanian products are designed to promote Tasmanian plants as useful, functional and edible. In her words '*Not just as some gourmet garnish you might get in some expensive restaurant, but genuine food you can use*'. The foods are further promoted by hosting wild food dinners by arrangement and by having morning teas and tastings with garden walks.

Rees said that there were over 150 edible plants in Tasmania, although she only uses around 130 as the others are killed by harvesting, including tree ferns. Other plants such as the climbing clematis and native orchids are killed by harvesting as you eat the tuber. She then moved on to the poisonous items in the bush and told us not to eat fungi at all, as many are extremely poisonous, although to our amusement she said that you can eat any fungus once.

Rees told us that other than fungi, the Tasmanian bush has nothing that is drop dead poisonous though some need to be prepared before eating and the kangaroo apple is poisonous when unripe. The aboriginals would put the apple in wet sand to ripen so that it would not be eaten by birds. We learnt that many of our plants are from the Gondwana times when there was little sugar about making them quite astringent and people think these are poisonous. They are not poisonous and if mixed with other ingredients are in her words, '*absolutely fabulous*'.

A slide showed six bowls of edible berries which were mountain pepper (*Tasmannia lanceolata*), prickly currant bush (*Coprosma quadrifida*), blue berry lily (*Dianella revoluta*), snowberry (*Gaultheria hispida*) mountain pinkberry (*Leptecophylla juniperina*) and mountain currant (*Coprosma nitida*). We learnt that our six varieties of *Coprosma* are all edible, though they vary from bitter to sweet, that the more common *Dianella tasmanica* may irritate the throat and that the snowberry can only be used fresh. Rees told us of her failures when trying to freeze, preserve, dry and poach them and also that those growing in full sun were bitter.

Many coastal plants are halophyte, they absorb salt, and although the aboriginals knew they were edible and advised early settlers about them, they only ate them when necessary. They had no way to boil the salt out and these plants are too salty and not good for your kidneys. Rees told us that two *Tetragonia* species as well as salt bush and two types of sea parsley were all edible and we were told that the common sea parsley (or sea-celery, *Apium prostratum*) was easy to propagate from seed. Two slides showed foods prepared with these ingredients including wallaby on steamed samphire and a *Tetragonia* pesto.

She also reminded us that as these were Tasmanian natives she did not advocate raiding the bush for our supplies, instead we should be encouraged to grow them, as early settlers nearly wiped out the saltbush by over use for both food and fire. Continuing with the coastal theme, Rees claimed pigface as one of the best native plants to eat. The fruit is squeezed to get out the sweet, tasty pulp, while plant nurseries tend to sell the South American one which is bitter to the taste. We learnt that the bitter tasting seeds of *Rhagodia candolleana* (seaberry saltbush) make a great hot, bitter sauce and a slide showed dishes featuring the *Rhagodia* and pigface.

Staying on the coast, though moving into the water, Rees told us that all seaweeds are edible with some tasting better than others, bull kelp being one of the best and she uses it in a chutney.

Rees mentioned native violet, *Sassafras*, and the climbers and ramblers such as the *Billardiera* vine, *Muehlenbeckia* montane shrub and native raspberry as edible plants while telling us that no Tasmanian native has been properly developed as a food plant. After hundreds of years of development, the commercial raspberry is not much better than our native raspberry. Three small shrubs of the *Trochocarpa*, *Cyathodes* and *Leptecophylla* family were described as astringent foods on small prickly bushes which were nothing on their own, however these were great foods when mixed with other ingredients and also as garden plants. Her description of dodder, starting with a common name, snotty laurel, due to the ability to stretch out the fruit, suggested something undesirable. When cooked with a sugar syrup she could make use of this sticky substance in muesli bars or toffee apples.

We moved onto what Rees described as tough plants starting with *Lomandra*, a coarse, tussocky sedge, which she described as something considered a rubbish plant. The white pithy bit at the bottom of the stems can be eaten raw, is fabulous in stir fries or can be caramelised as a slow cooked vegetable. The flowers and seeds are also edible as are the seeds of the *Acacia*. A slide showed foods with slow cooked *Lomandra*, Kangaroo apple (with cumquat) marmalade and a crumble with *Acacia* and *Allocasuarina* seeds and we learnt that all (allo) casuarina and *Banksia* seeds are edible.

Other edible plants included native cherry (*Exocarpos cupressiformis*) which was described as a plant impossible to propagate yet it is in high demand as a native food. Another is currantbush (*Leptomeria drupacea*) which is covered in tiny berries, from 1mm to 6mm, which Rees said is a little acid (citrus flavoured) drop and that these are fabulous in any dessert and cakes. Water ribbon was described as the original baby food and aboriginals would dry roast the large bulb and mix it with water to make a paste for the baby. These can also be sliced up for a stir fry and the seeds are edible as well. Alpine heathmyrtle (*Baeckea gunniana*) Rees described as a great herb with a bush lemon seasoning suitable for many dishes from savoury through to sweet. With mountain pepper as well as the seeds the leaves, stems and male flowers are also edible.

We then came to what Rees described as the sad part of her talk, about plants driven to near extinction by European settlement and farming practice. The yam daisy (*Microseris lanceolata*) was farmed by aboriginal women for the carbohydrate by dividing the tubers and replanting one. Rabbits and compacted soil have put it on the endangered list and it is difficult to distinguish from introduced daisies. *Barbarea australis*, is a nationally listed endangered species endemic to Tasmania growing along the northern rivers. This brassica grows well in the garden and provides a rocket like peppery leaf for stir fries and has edible flowers as well. The cider gum (*Eucalyptus gunnii*) is rare in its natural habitat around Liawenee. The resin could be fermented into a cider and a slide showed a large tree with a one hundred year old scar in the bark where the resin was bled from.

Finishing the talk Rees told us that *Wahlenbergia*, *Melaleuca*, *Kennedia*, *Hakeas*, our *Grevillea* and *Banksia* flowers are edible or can be steeped in water to slightly sweeten it and the *Kennedia* makes a liquorice flavoured tea. As well as getting edible seeds from *Themeda*, *Gahnia*, *Banksia* and *Allocasuarina*, the *Banksia* flowers were used as a water strainer to remove grubs and sticks. *Ozothamnus*, *Olearia*, *Baeckea* and *Kunzea* can be used for herbs and seasonings, while *Prostanthera* and *Mentha australis* give us mints and *Arthropodium* lilies, *Phragmites* and *Cumbungi* have edible tubers. Throughout the presentation slides showed two dozen mouth-watering images of food and drink prepared by Rees with native ingredients.

Rees answered many questions from members, then invited us to sample her wares. Phil thanked Rees and asked members to show their appreciation.

Noel Manning

Field Trip – 17 & 18 March 2018, Murnong Wild Food Garden Wynyard and other places

With the internet indicating that the Burnie Regional Art Gallery would not be open till 1:30 pm, on Saturday and Sunday, we wondered how we would fit in a visit to see the National Geographic 50 Greatest Photographs exhibition. Thinking we would be unable to go there on Saturday due to the

restricted opening hours we made a leisurely trip to the north-west including a side trip to the Henry Somerset Nature Reserve. We found little of interest there other than many butterfly we had not encountered before, although they flitted about too quickly to photograph.

After lunch we found our way to our destination by 1:30 pm wondering if we had the time wrong as no one else appeared to be there at the designated start time. It transpired that Alkira, (junior member) Lee and Phil had already arrived and were chatting with our hosts while a familiar car was seen three times before Ann, Tina and Tom found their way to the garden and others trickled in after that, mostly late. To our annoyance we learnt that Tom and Robyn had been to the Burnie gallery in the morning and found it open, despite the listed opening times.

Eventually 12 members met at the home and garden of our March guest speaker Rees Campbell. Rees, her husband Col Meyer and dog Roxy all gave us a warm welcome and we were soon looking around. We were told that Roxy, a very small poodle cross, considered we were there to see her and she played up to us outrageously.



In Rees & Col's garden (KM)



Mountain pepper and Kangaroo apple (KM)

Surprisingly, Rees and Col have only owned this one acre, two block property for less than four years. The small house, parking area, sheds and outdoor entertaining area (with swimming pool) are surrounded by gardens, including a large area of raised garden beds covered with netting.

We were told that some of the original introduced plants were left while others were removed to be replaced with the edible natives. While some bamboo remained, the stumps of poisoned bamboo could be seen and I noted that the stems were retained as stakes and for other garden uses.

We were treated to an impressive walk and talk as we viewed the garden starting with a small alpine section in the shaded lee of the house. From here our walk covered the rest of the front yard, including a well-stocked lemon tree, before moving to the covered garden and then the impressive back yard. Here we were mainly restricted to boardwalks while Rees moved about the gardens and explained the plants, listing the scientific name, sometimes the common name, the gastronomic uses and preparation methods while samples of some were handed about for tasting to mixed reactions and comments. An aviary near the top of the garden held plump quail and we knew that these were not a decoration.

After around two hours we returned to an entertainment area between the house and shed where plain and savoury scones were available for a generous afternoon tea. Butter, cream with acacia seeds and an assortment of sweet and savoury spreads were there to accompany the small scones while we sat around and chatted with an opportunity to look at, and purchase their books.

Tom (T) thanked them for their hospitality before the seven who were staying the night headed off for a short down time, which for us included a beach walk and a look at the rock pools. It was

then on to the Toy Sun Chinese Restaurant for a banquet evening meal and an early night in preparation for the predicted wet and windy Sunday. The rain started in the late evening followed by a stormy night and the promise of uncomfortable conditions for Sunday excursions.

Saying goodbye to those who ventured out on the wet early Sunday morning we headed east with the hope of fine weather for a few side trips as we had all decided to do our own thing due to the poor weather. After an hour at the gallery, looking at National Geographic photos, we went to the Burnie Fern Glade for an interesting walk, although no platypus were seen. We did however meet Ann and told her that the gallery was indeed open. The weather held till we finished lunch and after a dash to the car we headed home considering the weekend at an end.

We took the delightful, though slower, coastal road home, both before and after Penguin, arriving in the late afternoon. Our last stop was at the Christmas Hills Raspberry Farm where we enjoyed sorbet before the final run home.

We heard that Ann, Tina and Tom looked around Fossil Bluff on Saturday morning with the trip cut short by an incoming tide. Judith and Mike were to catch up with family on Sunday and hoped to get to the Burnie Gallery as well while Tina and Tom were to stay an extra night planning a visit to the Flowerdale Lobster Farm.

Noel Manning

Skemp Day - Sunday 25 March

Eight members, including a junior, met at Skemps on a miserable Sunday to attempt tree decline monitoring, although the weather refused to clear long enough to look at the trees. It rained very heavily on and off over the day with the advantage that our three remaining water tanks, which were near empty a few weeks back, are now full. We recently discovered that the number three tank has a major leak, probably due to not being on an even base, and it had drained two others.

We were able to take a few walks and, during one, to the lower part of the creek, I saw a platypus in the middle pond, which must have seen me and did not make another appearance. After this four members walked the settling tank track and ended up with many tiny leaches, as little as 5mm long, saw large wallabies and Tina pointed out fresh wombat scats on the end of the first board walk.

Tina did library work and we had time for lunch time socialising and this was followed by a discussion on Skemps accommodation charges. The four committee members present, with Claire helping with the mathematics, spent the post lunch time discussing the charges and came up with a number of suggestions to present to the next committee meeting.

Phil rang not long after he left to say that he had seen a wedgie and a sea eagle on the Skemps' side of the bridge over the St Patrick's River. On our way home we saw the wedge-tailed eagle in a tree where Phil had said and while watching it noticed the sea eagle in another tree not too far away.

Even on such a lousy day we achieved much and had some impressive sightings.

Noel Manning

Field Trip - Date TBA

Saltmarsh Monitoring on the Tamar River

There is a degraded section of saltmarsh at the end of Bowen's Jetty Road near Beaconsfield that maybe a suitable site for monitoring, it is close to Launceston and accessible to all members, even those with mobility issues. The area was once a mooring site for barges and small shipping associated with the Beaconsfield Gold mine early last century.

Members should inform our Secretary Phil Brumby if they are interested in assisting with the monitoring, and should it go ahead, you will be kept informed of future dates.

MOLE CRICKETS

Gryllotalpa sp.

At this time of the year, especially at dusk after rain or watering the garden we can be almost deafened by the song of Mole Crickets. I decided to look into the lives of the little songsters and came up with the following facts, mostly from Wikipedia and other Internet resources.

Mole crickets vary in size and appearance, but most of them are of moderate size for an insect, typically between 3.2 and 3.5 cm long as adults. They are adapted for underground life and are cylindrical in shape and covered with fine, dense hairs. The head, forelimbs, and prothorax are heavily sclerotinised but the abdomen is rather soft. The head bears two threadlike antennae and a pair of beady eyes. The two pairs of wings are folded flat over the abdomen; in most species, the fore wings are short and rounded and the hind wings are membranous and reach or exceed the tip of the abdomen; however, in some species the hind wings are reduced in size and the insect is unable to fly. The fore legs are flattened for digging but the hind legs are shaped somewhat like the legs of a true cricket; however, these limbs are more adapted for pushing soil, rather than leaping, which they do rarely and poorly. The nymphs resemble the adults apart from the absence of wings and genitalia; the wingpads become larger after each successive moult.

Mole crickets undergo incomplete metamorphosis; when nymphs hatch from eggs, the nymphs increasingly resemble the adult form as they grow and pass through a series of up to ten moults. After mating, there may be a period of one or two weeks before the female starts laying eggs. She burrows into the soil to a depth of 30 cm to 72 cm.



Taken by Fir0002, flagstaffotos.com.au

Camera Details:
Camera: Canon 20D
Lens: Sigma 150mm f/2.8 Macro

Male mole crickets sing by stridulating, always underground. In *Gryllotalpa gryllotalpa* the song is based on an almost pure tone at 3.5 kilohertz, loud enough to make the ground vibrate 20 cm all round the burrow; in fact the song is unique in each species. Mole crickets stridulate like other crickets by scraping the rear edge of the left forewing, which forms a plectrum, against the lower surface of the right forewing, which has a ratchet-like series of asymmetric teeth: the more acute edges face backwards, as do those of the plectrum. The plectrum can move forwards with little resistance; but moving it backwards makes it catch each tooth, setting up a vibration in both wings. The sound-producing stroke is the raising (levation) of the wings. The resulting song resembles the result of modulating a pure tone with a 66 hertz wave to form regular chirps. In *G. vineae*, the wing levator muscle, which weighs 50 milligrams, can deliver 3.5 milliwatts of mechanical power; *G. gryllotalpa* can deliver about 1 milliwatt. *G. vineae* produces an exceptionally loud song from half an hour after sunset, continuing for an hour; it can be heard up to 600 metres away. At a distance of 1 metre from the burrow, the sound has a mean power over the stridulation cycle of up to 88 decibels;

the loudest recorded peak power was about 92 decibels; at the mouths of the burrow, the sound reaches around 115 decibels. *G. gryllotalpa* can deliver a peak sound pressure of 72 decibels and a mean of about 66 decibels. The throat of the horn appears to be tuned (offering low inductive reactance), making the burrow radiate sound efficiently; the efficiency increases when the burrow is wet and absorbs less sound. Mole crickets are the only insects that construct a sound-producing apparatus. Given the known sensitivity of a cricket's hearing (60 decibels), a night-flying *G. vineae* female should be able to detect the male's song at a range of 30 metres; this compares to about 5 metres for a typical *Gryllus* cricket that does not construct a burrow.

The loudness of the song is correlated with the size of the male and the quality of the habitat, both indicators of male attractiveness. The loudest males may attract 20 females in one evening, when a quieter male may attract none. This behaviour enables acoustic trapping: females can be trapped in large numbers by broadcasting a male's song very loudly and lays a clutch of 25 to 60 eggs.

In *Gryllotalpa* and *Neocurtilla* species, the female has been observed to remain in an adjoining chamber to tend the clutch. Further clutches may follow over several months, according to species. Eggs need to be laid in moist ground and many nymphs die because of insufficient moisture in the soil. The eggs hatch in a few weeks, and as they grow, the nymphs consume a great deal of plant material either underground or on the surface. The adults of some species of mole cricket may move as far as 8 kilometres during the breeding season. Mole crickets are active most of the year, but overwinter as nymphs or adults in cooler climates, resuming activity in the spring.

Peter Ralph

Additional Information

Club Outings:

1. 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.
2. Provide your own food and drinks for the outing and wear/take clothing/footwear suitable for all weather types.
3. 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.
4. 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

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