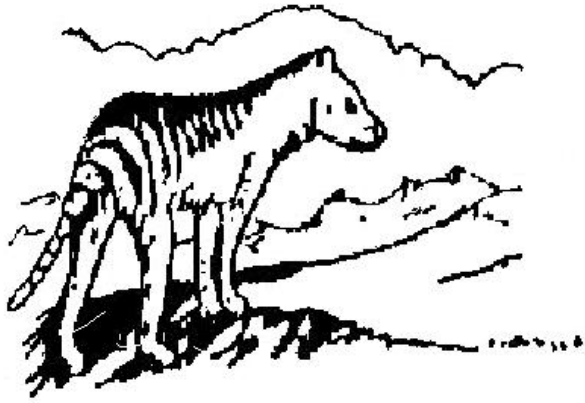
THE LAUNCESTON NATURALIST

Issued to members of the Launceston Field Naturalists Club as a contribution to club activities.



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

Volume XLIX No. 4 **April/May 2016**

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Committee	**:**	**Ms Campbell, Mr Geeves, Ms McGlynn, Mr Ralph, Ms Wright, Mr Warren**

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

PROGRAM

JUNE

Tuesday 7	**John Skemp Memorial Lecture ~ Guest Speaker Dr Jennifer Lavers ~ *Natural and unnatural history of remote Pacific Islands***
Sunday 19	**Field Trip and Social Lunch ~ Cluan Tier followed by lunch at Entally Lodge (more information this new-letter)**
Saturday 25	**Skemp Day ~ Fungi and track clearing**

JULY

Tuesday 5	**Speaker ~ Mark Wapstra ~ *Thismia***
Saturday 9	**Field Trip ~ Meander Falls carpark area ~ Fungi and ferns**
Sunday 24	**Skemp Day ~ Tree maintenance**

AUGUST

Tuesday 2	**Speaker ~ Kevin Bonham ~ *Land snails***
Sunday 14	**Field Trip ~ Location to be confirmed ~ on the trail of the snail**
Saturday 27	**Skemp Day ~ Searching for the Skemps Snail**

SEPTEMBER

Tuesday 6	**Speaker ~ Phil Collier ~ *Monitoring with a purpose: the crowded leek orchid at Surrey Hills, north-west Tasmania***
Saturday 10	**Field Trip ~ Location to be confirmed, native orchids**
Sunday 18	**Skemp Day**

To see the full January to December program visit

http://www.lfnc.org.au/meetings.htm

Skemp Report

Contractor Kevin spent Thursday afternoon, all Friday and Saturday morning deepening the drain at the side of Skemps Road with Kerry assisting with the pipes to the right of the road just before the creek. The new drain was given a good tryout by the heavy rains which quickly followed and is working well. John was unhappy with the work on the first part of the road and spent most of the Tuesday making the drain a little wider and deeper. A large amount of rubbish from behind the barn was removed by these contractors as well.

I spent Friday night at Skemps, dragged a dead wallaby to the bridge on the middle pond and set up a camera lent to us by Alison Hugo through NRM North. The camera recorded nothing overnight while two forest ravens were filmed many times during the Saturday morning. By Tuesday the carcass had been moved and Grant and John told me the damage around the stomach area suggested feral cats have been at work. Unfortunately we did not capture this as I was unwilling to leave the camera unattended for two more nights.

We have purchased enough wood for up to 37 steps needed on the steeper sections of the Tyre track and the Tamar Valley Masters Hash has installed 20 and suggested a zigzag to complete the descent below their work. They have done an excellent job with only four working on one day.

The recent high winds have brought down trees and Rob and Grant worked on one blocking Skemps Road above Bob's Bog and Rob made a start turning into firewood one which fell near the Wollemi Pine. John and I cleared a few spars along the Tyre Track, the Fern Gully, the climb up to the Forest Track and from there back to the Centre. Later that day Rob and I cleared along the Zigzag Track. We can only assume that there are more on other tracks since the high wind so please walk the tracks and report issues to your committee.

John is working on a cupboard in the right hand bunk room to give more space for our ever expanding library while another poor season saw little work for the ride on mower.

Noel Manning

Puggle

April ~ Lynne had a 'what am I?' and her clues were: I was first described by George Waterhouse in 1843 and then disappeared for 100 years. I was then rediscovered in the outskirts of Sydney in the 1960s. In Tasmania I am restricted to a few remaining patches of dry coastal heathland and open forest of the north east coast. I am omnivorous with a diet of seeds, mainly the pea species, also leaves, fungi and small invertebrates. I have grey brown fur with a dusky brown tail, the body length is 65—90 mm and the tail 80—105 mm. John correctly said that it was the New Holland mouse.

May ~ John showed members an image of a yellow wattle bird, a forest raven and native hen, and asked what two of them had in common. Prue correctly stated that the wattle bird and the native hen were endemic to Tasmania.

Sightings

April ~ Tina stated that the juvenile nankeen night heron is quite different to the adult, looking more like a bittern. Both heron chicks seen before at Queechy Lakes have gone and one couple has another chick. Prue found quoll scats near her home after a three year absence. Tom T saw an eastern rosella and a yellow wattle bird at his

home and visitor Jenni saw large water spiders at the Gorge. Tom T and Marion both heard, but did not see a musk lorikeet.

May ~ To the amusement of all present at the general meeting Prue stated that she saw the rain. Alison, who lives in the retirement units near Queechy High School, saw eastern spinebills and pademelons from her kitchen window and Tina gave an update on the ongoing saga of the royal spoonbills at Queechy Lakes. The two couples nesting there have both lost their chicks although one couple has another chick. Also, she has seen swamp harriers on the island and one sat on the side of a cormorant nest without taking the chicks in it. Noel gave a few individual, well spaced, chirps and then described how he heard these in his back yard and looked up to see what he thought was a robin. The wattle tree he saw it in has since fallen in the winds. Tom T saw *acacia* and *epacris* ? *gunnii* in flower at the Winifred Curtis Reserve and magpies which he considered to be not unusual except that they were about a bit early.

Library Report
Tina reported that newsletters had been received from the Tasmanian and Burnie Field Naturalists Clubs and the following books had been added to the Library collection: *FungiFlip*, *Sixteen Legs Kinky Love: A Study of the Tasmanian Cave Spider* and a copy of Tamar NRM's publication *Tamar Estuary and East River Catchments Water Quality Improvement Plant 2015.*

New Member ~ A warm welcome was given to new junior member, Sophia Evans, who attended the May meeting to collect her members kit. Sophia joined us recently for the fungi foray and we look forward to her joining us at meetings and field trip in the future.

Social Meal ~ Sunday 19 June, 1 pm at Entally Lodge (formerly Rutherglen)
This is a fixed price Sunday roast which comes highly recommended, either pork loin or beef sirloin for $22. You will need to RSVP with Judith on 6393 6603 before Wednesday 15 June if you would like to attend.

Field Trip ~ Sunday 19 June
Feeling energetic? Then join us before the social meal for a field trip to the Cluan Tiers and the Eden River. If you live in the city we will leave the Inveresk carpark at 9am sharp, regrouping at Andy's in Westbury, leaving for our final destination at 9.40am with Rob Mitchelson guiding us. This is not a particularly strenuous walk and there should be some fungi. We need to be back at our cars and on the way by 12.15pm to reach Entally Lodge for a 1pm meal as above. RSVP with Judith on 6393 6603 before Wednesday 15 June if attending the meal.

GUEST SPEAKER MAY ~ KATHRYN PUGH ~ *WATERMONITORING*

Tom introduced Kathryn Pugh who was to talk on her role as an ecologist at Tasmanian

Irrigation (TI) checking the environmental impact of proposed TI dams and checking the ongoing impact of dams once built.

Kathryn told us about some of her early work and showed images of these. She started with a marine pest survey in state ports. Next was an impact survey for the construction of the new Midway Point causeway, and Kathryn with the help of Green Army volunteers, moved many thousands of live-bearing sea star (*Parvulastra vivipara)* out of the impact zone. Then to the amusement of those present she told us that the new causeway was built and the animals were returned. Work was also conducted for fish farms and marina developments and Kathryn was involved with the impact survey of the reefs around Five Mile Bluff (Low Head) for the Gunn's Pulp Mill.

Kathryn showed a slide of a mangrove in the Pilbara region of WA, this was 10 years after a gas pipe was put in and the mangrove had still not re-established. We learnt that with the movement of the water changed by the pipe and three metre tides twice daily it was nearly impossible to restore the mangrove and the sediment fences shown in the slide were ineffective. Kathryn then spoke of her controversial bio-prospecting for sponges, ascidians (sea squirts) and algae for a University of Queensland partnership with a biopharmaceutical company. A job she liked as sponges are not well studied in Tasmania.

Moving on to her roll in Tasmanian Irrigation, Kathryn told us it was a state-owned company established in 2008 to develop, construct, operate and own irrigation schemes in a private-public partnership. She mentioned 11 schemes with a capacity of 115,000 mega litres of water and a hydro scheme using water from Arthurs Lake.

The schemes are market driven being economically viable, sustainable and supported by the community it will serve. Tasmania Irrigation has to apply for water licences the same as other users. Most schemes are in heavily modified environment and do not take away from the natural beauty of Tasmania. There are many operational schemes and others under development, and a slide showed the areas which is or will be served by the schemes.

Slides showed the various processes for developing a scheme with Kathryn concentrating on her environmental surveys before moving on to the permits needed for the scheme. These start with a water permit based on hydrological modelling from the worst years so that the scheme can supply all the water needed 95 years out of 100 while a threatened species permit and a forest practices plan are also needed.

Based on a member question Kathryn stated that a scheme from thought to completion could take around three years although the Scottsdale one is taking much longer as it has been difficult to find a suitable site. There appeared to be wonderful dam sites on the Flowerdale River but Kathryn said it could not be used due to the important crayfish habitats.

After a further question from the floor, Kathryn explained that while she did some parts of the environmental assessment, flora and fauna assessments were handed to independent consultants. At the construction stage the environmental guidelines are part of the contract and contractors are required to follow these guidelines.

Tasmanian Irrigation has had success with river bank erosion and sediment control and this knowledge has been passed on through seminars.

Another slide showed tape blocking access to a road with a sign with 'EAGLE ZONE NO ACCESS' written on it and Kathryn explained that this was a no go zone for six months while the eagles were nesting.

A further slide showed an excavation for a pipe in a paddock which had revealed a burrow. Kathryn told us that an infra-red camera was set up. When it was established that it was a wombat burrow, a dog door was put across the burrow and the wombat

could easily get out but not return. A number of slides showed the action at 19 devil and wombat burrows managed by TI at Ringarooma. Kathryn told us that three different devils visited a wombat burrow and the mother wombat won each encounter.

When a farmer applies for water there must be a Farm Water Access Plan limiting the use of water in environmentally sensitive areas. Compliance is monitored and externally audited, and water can be denied for noncompliance.

A slide showed a map of Tasmania with the 110 water monitoring sites in 16 irrigation districts with 12 dams and 66 waterways in 17 catchments. Those 110 sites are monitored monthly for water quality by Kathryn or by operations staff trained by her. The testing involves quite a lot of parameters including oxygen, temperature, conductivity, turbidity and nutrients and sometimes e-coli and blue/green algae. The team also looks out for chytrid fungus in frogs and a slide showed frogs and tadpoles in plastic containers.

The next slide showed a small concrete barrier across a stream which was to prevent pest fish from moving upstream and the next a taped off area around a tree showing where burrowing crayfish were being monitored. Kathryn told us that although cute the kittens in the next slide were not allowed to stay.

We were next introduced to acoustic monitoring sites and told that the monitors came on at dusk and recorded for four hours. Instead of spending hours in the cold listening at these sites software identifies the frogs present.

Another slide pictured Kathryn holding a giant freshwater crayfish (*Astacopsis gouldi*) and she said 'the critter I like to play with the most is this guy'. The habitat they liked is cool, fast flowing clear creeks with cobble bottoms and deep holes. She gave further information on the animal and where she found it and we learnt that there were more about than we would expect. Another slide featured the smaller *A. franklinii* which is found in the Tamar.

Kathryn talked about water monitoring with reference to macroinvertebrates noting that this will tell you the condition of the waterway three months or even years before the monitoring not just the present condition. The effect of a pesticide spill in the NE could still be noticed quite a few years after the spill.

A slide showed the bugs we would find in fast flowing water including juvenile *astacopsis*, riffle beetles, mayflies and dragon flies, while in the slow flowing water you will find damsel flies, cranefly, mud snails, water penny and freshwater sponge. The last slides showed a river in flood followed by the same river during a dry spell, and the Meander Dam in flood.

There was about 10 minutes of questions and comments with two items standing out. Kathryn explained that if you were farming on the north coast you would not be allowed to grow root crops as these require too much water and that there were areas where she had not detected the chytrid fungus in the frog population.

John thanked Kathryn for her interesting presentation and members showed their appreciation. Noel Manning

FIELD TRIP ~ EAST BEACH ROCKPOOLING AND BEACHCOMBING ~ Tuesday 12 April

Today we took advantage of a very low tide to explore the headland at East Beach. Walking to the headland we noted that there was a rocky area on the beach that we had not seen before, a result of a very low tide and shifting sands.

Sea grasses and seaweeds were abundant in the area, and hiding amongst them was a blue ringed octopus which was carefully removed from the area, due to the number of children that were participating today. Junior member Toby, was joined today by his mum Jen and two younger brothers and Prue had invited members of her girl guides group along who had arrived with parents, siblings and friends, so there was an additional 10 people along with nine attending members.

We found sea stars in many colours, sponges and soft corals, crabs and chitons, and there were squeals of delight as the children found new and interesting creatures, wanting to know what they were, which kept everyone on their toes. This lower area had been underwater during previous trips and we were now seeing a larger variety of seaweed and algae along with the sea creatures that live amongst them.

Moving further around the headland, again many interesting items, including flat worms, a small decorator crab, a new chiton and a sea squirt. With the tide turning we headed back to the beach locating a group of waratah anemones in a rock pool high on the rocky outcrop.

It was a very interesting morning, the variety and quantity of the items was larger than those from previous years, although we didn't spend as much time on the seashells.

We returned to the carpark and had lunch in the picnic area with some of the visitors joining us for lunch. Later Tom and Tina, Tom T, Noel and I walked along the beach to Cimitiere Creek lagoon to have a look at the saltmarsh plants. The lagoon was high and covered the track along the back of the sandhill, so we looked for petrified wood on the beach instead and enjoyed the sunshine.

We returned to the carpark to find everyone else had left, so decided to go to the Pilot Station at Low Head for afternoon tea before heading back to Launceston.

Karen Manning

Birds ~ *Egretta novaehollandiae*, white-faced heron; *Haematopus fuliginosus,* sooty oystercatcher; *Larus novaehollandiae*, silver gull; *L. pacificus*, pacific gull; ? *Phalacrocorax varius*, pied cormorant; *Vanellus miles*, masked lapwing
Anemones ~ *Actinia tenebrosa*, waratah anemone

Barnacles ~ *Austrominius modestus*, Darwin's barnacle; *Tetraclitella purpurascens*, purple barnacle

Crustaceans ~ *Mictyris longicarpus*, soldier crab; *Notomithrax ursus*, decorator crab ; *Petrolisthes elongates*, NZ half crab; *Strigopagarus strigimarus*, rasping hermit crab; Lobster

Lichen ~ *Lichena confinis*, black tufted lichen

Marine worms ~ *Galeolaria caespitosa*, calcareous tubes polychaete worms; *Noto-plana australis*, flat worm; unidentified sea slug and segmented worm of Phylum Annelida

Octopus and allies ~ *Hapalochlaena maculosa*, southern blue-ringed octopus; Sepia sp., cuttlefish cutlet

Sea snails and shells ~ *Astralium aureum*, golden star-shell; *Austrocochlea concamerata*, wavy top-shell; *A. constricta*, ribbed top-shell; *Austrolittorina unifasciata*, banded australwink; *Cellana solida*, orange lipped limpet; ? *Chlorodiloma adelaidae*, Adelaide top-shell; *Cryptoplax striata*, mottled worm chiton; *Haliotis* sp., abalone; *Holothurian* sp, sea cucumber; *Ischnochiton australis*, southern chiton; *I. elongatus,* elongate chiton; *Limnoperna pulex*, flea mussel; *Mitrella* sp., dove shell; *Nerite atramentosa*, western black nerite; *Patelloida alticostata*, tall-ribbed limpet; *Phasianella australis*, painted lady pheasant shell; *Pleurobranchaea maculate*, side-gilled slug; *Scutus antipodes*, elephant snail; *Siphonaria diemenensis*, common siphon shell; *Stomatella impertusa*, elongate false ear shell; *Sypharochiton pelliserpentis*, snakeskin chiton

Seastars and allies ~ *Coscinasterias muricata*, eleven armed seastar; Meridiastra calcar, eight armed seastar; *Ophionereis schayeri*, Schayer's brittle star; *Parvulastra exigua*, 5 armed cushion star; *Tosia australis*, southern sea biscuit

Sea Squirt ~ Solitary ascidian

Sea Urchins ~ *Heliocidaris erythrogramma*, sea urchin

Seaweeds and seagrasses ~ *Celleporaria cristata*, lace coral; *Codium fragile*, velvet codium; *Corallina officinalis*, tufted coralline; *Cystophora torulosa*, club-leafed cystophora; *Ecklonia radiata*, common kelp; *Hormosira banksii*, neptune's necklace; *Leathesia difformis*, leatherwood; *Rivularia australis*, blue-green seaweed; *Zostera nigricaulis*, sea grass

Sponges ~ *Aplysilla rosea*, rose rock sponge; *Tethya bergquistae*, golfball sponge; brown sponge not encrusting

FIELD TRIP ~ FUNGI FORAY AT SKEMPS ~ Saturday 23 April

Twelve members and two visitors arrived at Skemps this morning to participate in a fungi foray with our hosts Genevieve Gates and David Ratkowsky, and their visiting postgraduate student Deago, from Brazil.

It was a warm sunny morning and following a quick drink we set out to look at the variety of fungi on two old stumps near the old homestead site. On one of the stumps, Deago and Genevieve tied a plastic bag with a piece of foil in it under a bracket fungi hoping to obtain a spore print to help with the identification. Once this was in place, and photos of all the fungi had been taken, we headed to the Forest Track which would eventually take us down to the Ferngully. With the combination of a warm summer and very little rain, the Forest Track was very dry, and checking in places that were generally abundant with fungi, we were disappointed to find very few. At the Fern-gully turnoff David and Peter W took the Forest Track to the grassland and headed back to the Centre.

On the Ferngully track it was very different. On the steps down we found quite a few bracket and encrusting fungus. Deago was interested in these types of fungi and took samples where he could for further study. Keeping up with Genevieve was difficult as we stopped frequently taking photographs of nearly every fungi we saw. At one point we stopped in an area of old fallen trees covered with mosses and ferns waiting for Deago to catch up. Looking around the fallen trees we found a pair of *Pholiota aurivella,* a large cluster of *Mycena mulawaestris* and two coral fungus *Artomyces austropiperatus.*

Genevieve preparing to photograph a *Laetiporus portentosus*

We hadn't found any *Mycena interrupta* which was very unusual, but eventually found a small group on the back of a log not long before arriving at the Bottom Falls. From the falls we decided to return to the Centre via the quickest route for a very late lunch. Heading uphill via the Bottom Falls Track to the Forest Track, we noted some eucalypts with the ginger mould, a misnamed non-fungal disease, which will kill the affected tree eventually.

Later in the day, Genevieve made up some slides from small pieces of gill combined with a chemical solution so we could see the spores and other structures of the fungi under the microscope. Considering the weather had been very dry, we found a surprising amount of fungi today.

This was a successful day learning more about fungi, catching up with old friends and meeting a new one. Before we left the word got around that a platypus had been seen in the Top Pond. A few of us went over and the platypus put on a show, ducking and diving around the pond. We hope that Deago got to see it before he left, as he was interested in seeing more of our native wildlife. Noel and Karen

A big thank you to Genevieve who checked our recordings and added some additional species to this final list

Agarics ~ *Agaricus* sp, *Armillaria novae-zelandiae, Crepidotus nephrodes, Descolea recedens, Entoloma albidocoeruleum, E. aromaticum, E. brevispermum, Hypholoma fasciculare* var. *fasciculare, H. fasciculare* var. *armeniacum, Galerina* sp, *G. patagónica, Gymnopilus junonius, Gymnopus* aff. *dryophilus* (grounds of Skemps), *Lepiota fuliginosa, L. haemorrhagica, Leucoagaricus* aff. *rubrotinctus*, *Leucocoprinus* sp, *Lichenomphalia chromacea, Macrolepiota clelandii* (grounds of Skemps), *Marasmiellus affixus, M.* 'earth odour', *M. elegans, M.'horse hair', Mycena albidocapillaris, M. cystidiosa, M. epiptergia, M. kuurkacea, M. interrupta, M. marangania, M. mulawaestris, M. nargan, M. vinacea, Oudemansiella gigaspora, Pholiota aurivella, Pluteus atromarginatus, Psathyrella echinata, P. pennata, Psilocybe subaeruginosa, Russula* 'pallid pink', *R.*'red-yellow', *R. lenkunya*

Ascomycetes ~ *Hypocrea* aff. *megalosulphurea, Hypoxylon* aff. *placentiforme*

Boletes ~ *Pulverboletus ravenelii*

Corals ~ *Artomyces austropiperatus, Clavulinopsis sulcata*

Jellies ~ *Calocera guepinioides*

Leathers ~ *Podoscypha petalodes*

Polypores ~ *Amauroderma rude*, *Antrodiella zonata, Bjerkandera adusta, Fistulina hepática, Ganoderma australe, Laetiporus portentosus, Phellinus* 'resupinate', *Polyporus melanopus, Postia subcaesia, Trametes versicolor*

Puff balls ~ *Scleroderma cepa*

Resupinates ~ *Rhizochaete brunnea*

Slime moulds ~ *Fuligo septica*

SKEMPS DAY ~ MACROINVERTEBRATE MONITORING
~ Saturday 30 April

Arriving at the Centre this morning we were pleased to find that Peter W and Stephen had already opened up and had a warming fire going on this very overcast day with rain predicted. John and Noel set off to collect the water sample from the creek which was then put in sampling trays to settle ready for us to catch and identify the bugs.

We had drinks, biscuits and a chat while we waited and Kathryn Pugh, who had spoken to members recently about water-monitoring, arrived to help us and give her advice. Leaving the warmth of the Centre we braved the cooler temperatures outside to begin our work, finding that there didn't seem to be many bugs. This was put down to a very hot dry summer and possibly the platypus which were seen in the creek area and the heavy dumping of rain overnight may have contributed to the problem as well. We eventually found some of the usual critters, although not in great numbers. We found sideswimmers and a water penny that hadn't been collected for some time and Kathryn found some bivalves and a water flea which had not been noted before in the area.

Prue, John and Judith watch as Kathryn removes the bivalves from the water sample

Around 11.30 the rain started and as it was being blown in under the building's verandah we moved inside. John and Kathryn put names to the bugs caught, while Judith set up the microscope for us to have a look at some of the catch. The water penny, in particular, was very interesting to look at.

Before Kathryn left, Judith thanked her on behalf of those present for assisting us today and for some useful tips for future water monitoring days.

Lunch was a long and noisy affair with the rain still coming down quite heavy. There was no reason to head outside so John set up his laptop to record today's findings and work out the scores while Prue, Karen and Judith looked at images from the recent field trip to East Beach.

The rain stopped and the sun came out briefly so a few members packed up and left while those remaining went for walks, photographic sessions, had a chat or cleaned up in preparation for leaving. Noel and Karen

RESULTS OF MACROINVERTEBRATE MONITORING

The Signal 2 score is typical of this site. Most results from this site indicate either excellent water quality or good water quality. The number of taxa seen is the highest for this site. One taxa, mussels, have never been seen here before.

Sample date	Taxa	Signal 2	Interpretation	Water Quality
21/04/12	6	5.7	Questionable quality, possibly disturbance or poor sampling	Fair
28/10/12	8	5.1	Fair quality. Some degradation due to agriculture	Good
27/04/13	7	5.4	Fair quality. Some degradation due to agriculture	Good
27/10/13	7	5.4	Fair quality. Some degradation due to agriculture	Good
26/04/14	9	5.7	Good quality. Little or no environmental degradation	Excellent
20/09/14	8	6.3	Good quality. Little or no environmental degradation	Excellent
26/04/15	10	4.7	Fair quality. Some degradation due to agriculture	Good
24/10/15	8	5.8	Good quality. Little or no environmental degradation	Excellent
30/04/16	11	5.6	Good quality. Little or no environmental degradation	Excellent

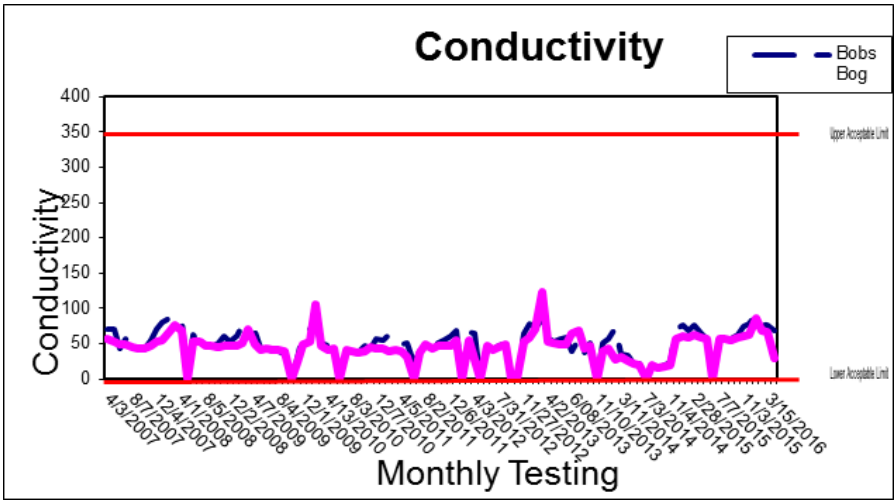
The following taxa were seen:

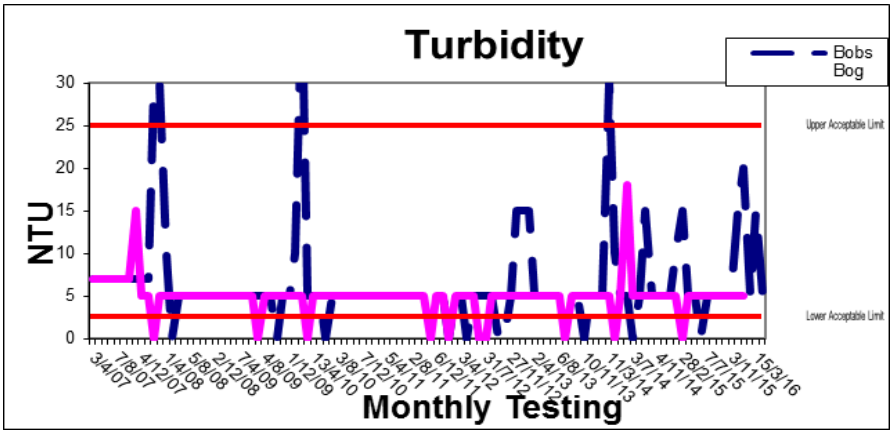
Acarina	Water mites
Amphipoda	Side swimmers (Crustaceans)
Bivalvia	Mussels
Coleoptera	Beetles
Diptera	True flies
Ephemeroptera	Mayflies
Hemiptera	True bugs

Mecoptera	Scorpionflies
Odonata	Dragonflies, Damselflies
Plecoptera	Stoneflies
Trichoptera	Caddis flies

CONDUCTIVITY AND TURBIDITY RESULTS

The graphs below show the conductivity ("salinity") results and turbidity results for both sites which have basically stayed within acceptable limits.





GUEST SPEAKER MAY ~ MEGAN DYKMAN
~ SOFT CORALS AND SEA FANS OF THE TAMAR ESTUARY

Tom introduced Megan who was to talk on her honours project diving in the lower Tamar studying the rocky reefs and the soft corals and sea fans communities.

Megan started by explaining that '*..I am here to talk about the Tamar tonight which you are probably all familiar with, but I am going to talk about a very different part of the Tamar. So this a part that most people would never get to see with their own eyes and a lot of people would struggle to believe even existed. But it something that I am very passionate about and I am excited to be sharing it with you tonight*'.

She went on to explain that she is the Tamar facilitator with NRM North and that at an early age she knew that she wanted to study the ocean and she did so at the Institute for Marine and Antarctic Studies. After a short gap she did her honours studies over a year looking at the soft corals and sea fans of the lower Tamar as suggested by David Maynard.

Although it was known that the corals were in the Tamar, very little was known about them and their study had been neglected. Megan said the corals were from the order *Alcyonacea* and that they are octocorals (every polyp has eight tentacles) related to jelly fish, hard corals and sea anemones.

Only one is known to be solitary (only one organism) the rest are colonial, that is they are made up of hundreds of individual polyps all living together and a slide showed the diversity of shape and size.

The corals live on the sea floor, do not move and filter feed although some have a symbiotic relationship with tiny algae known as *zooxanthellae*. Megan told us that while we associate corals with the large colourful ones from the tropics, octocorals as well as being in the tropics, can be found in deep water and cold water environments such as the Antarctic and of course the temperate waters of the Tamar.

While previous studies have concentrated on tropical or deep water corals Megan told us that the Tamar temperate, moderate depth corals fall somewhere in between and that many factors make them unique. They need a hard substrate, strong currents to transport food to them and clear waters, especially for those that have a symbiotic relationship with algae. These corals also provide habitat for many other organisms.

We learnt that octocorals are only known from a handful of locations in Tasmania including Bathurst Harbour in the south west, the D'Entrecasteaux Channel, the north west and in the Tamar. The Tamar also has a high diversity of fish and invertebrates.

Megan described the Tamar octocorals as unique and the environment they are in as special as the Tamar is the only drowned river valley in Tasmania. A drowned river valley has a narrow, deep channel which drops off quickly (60 metres for the Tamar) so that ocean species normally found miles off shore are only a few metres from the Tamar.

A slide showed a map of the Tamar with coloured sections indicating the type of community to be found or the surface material and the five rocky reefs (coloured red) of the lower estuary were studied by Megan. Another slide named these reefs as Shag Rock (W) to the north of Beauty Point, Garden Island South (W), The Monument (E) and Honduras Bank (W) all near George Town and Fish Beacon (E) to the north of Low Head. (W) indicates this place is on the western side of the Tamar and (E) for places on the eastern side.

Megan stated that the rocky reefs '*…are really complex habitats but they haven't been studied a lot in the past and shallower parts of the reef are dominated by sea-*

weed and you get great algae beds, but then below about 15 metres the light starts to run out and that's really where the action starts to happen. So that's where you get really colourful sponge gardens dominating instead and that's where the soft corals become the star of the show.'

While Megan told us it is great to have such an incredible community so close to Launceston there were issues as well such as the upper estuary being classified as polluted with sedimentation and turbidity being a problem. It is unknown what affect this has in the lower estuary or on the octocorals.

There was no base line for the study of octocorals in the Tamar with the only knowledge coming from a few specimens and a few underwater photographs. Some of these were linked to tropical species and the study data proved that these were not the same.

Megan showed a slide with six corals and suggested they could be six separate species or variations of the one due to environmental influences, they just had no idea, and as well different species can look the same making identification difficult.

According to Megan this is where sclerites come in, which are a fraction of a millimetre in size. The soft corals have a skeleton made up of these tiny structures called sclerites which are made of the same substance as stalactites. A slide showed images of the various types, which were described as spindles, rods, clubs, plates or capstans and are an important taxonomic feature in octocorals and their arrangement is another identification factor as well. DNA was also a factor in the identification.

Megan described the diving as difficult with a one hour window of opportunity for a slack tide dive and even then there were strong currents and visibility varied from 20 to as little as one metre. There were four divers on each dive with two photographing the rocky reef habitat while two photographed the specimens and then collected them and Megan told us that it was important to photograph the coral before collecting as they lost shape and colour when placed in the preserving ethanol.

The collection was taken back to the lab for a close examination and from the slide we could see that the preserved specimen was in Megan's words '*..so they're not over pretty anymore*' and we had to agree.

Megan first described removing and looking at the sclerites under a powerful microscope to check the species and then she gave a brief description of the DNA sequencing. First she took a tissue sample, amplified the DNA, purified it and then sequenced it and ended up with a long list of letters and we were shown a representation of the result. This was then compared to the sequences on GenBank, a huge data base of known DNA sequences and Megan gave a result summary from the 46 specimens collected.

What was previously thought to be *Capnella* species turned out to be *Drifa* species. *Drifa gaboensis* was identified in the Tamar for the first time as well as four different and unknown *Drifa* species. A sea fan, *Mopsella zimmeri*, was found as well as a bramble coral, *Acabaria* species as well as two new genera.

For the last 10 minutes of the talk Megan told us the details of the work which identified the specimens found or which told her that others were unknown and new. This was backed by pictures of the octocorals and the sclerites. A complicated family tree showed how she reached the conclusion that she had two new genera.

After around 13 minutes of questions and answers Judith thanked Megan for her interesting talk and asked members to show their appreciation. Noel Manning

SKEMPS DAY ~ FUNGI ~ Sunday 28 May

Driving to Skemps this morning it was 5°C with a frost on the ground, light fog and sunshine. On the wire fences and small trees along the highway we noticed lots of spider webs covered in frost, making them look delicate and quite pretty. Arriving at the property the boom gate was up which could only be Peter and yes he had lit the fire and the Centre was warm and inviting.

Over the next hour other members arrived and after a warming drink we put on our boots and armed with cameras, headed to the Zig-Zag track to look for fungi. We weren't disappointed, finding mostly capped fungi in the leaf litter of the dogwood forest and a large group of earthstars. Exiting the forest to the grassland, *Cordyceps gunnii* was seen growing in large numbers, in the same area as last year. Noel dug one up to show the parasitised insect on the other end that hosted the fruiting body. This was taken back to the Centre to show other members who had arrived and gone on other walks.

At lunch we compared notes with other walkers, Prue reported *Podoscypha petalodes* pretty much encircling the base of a tree on the Fern Gully Track, which would have been very interesting to see. John mentioned that if we went to the Loop Track we would see something special.

Paul Edwards joined us today for possibly the last time before selling up and returning to Canberra. He became a member six years ago and is returning to his mainland home and dropped in to say goodbye and for a "trip down memory lane". He told us that his grandparents had been neighbours of the Skemps in the late 1800's before moving to Lisle. Paul had bought along 3 bottles of wine to share with us from his vineyard which everyone enjoyed with lunch. Although the red was as Paul said 'a bit young and vigourous.'

Mycena vinacea

After saying farewell to Paul, Prue, Tina, Taylor and I headed to the Loop Track to look for the 'something special' as described by John. Starting on the top side of the loop, we found mainly *Mycena* species, removed a couple of foxgloves and noted that the holly tree along Old Scottsdale Road was dying. Continuing down the other side of the loop we found two small groups of *Hygrocybe graminicolor* and stopped to take photos. With a flat camera battery, Taylor scouted around and found a stunning maroon *M. vinacea* (ID confirmed by Genevieve) and a hairy grey fan-shaped fungi, *Schizophyllum commune* while waiting for us. Before exiting to the grassland, we found a large group of the *H. graminicolor* nestled in with the ferns off the side of the boardwalk, which we all felt was what John was referring to and as he had already departed for the day, we will have to ask next time we see him.

The sun was now low in the sky and it was quite cold, the warmth at the Centre was welcoming for a final drink and chat, before heading home. Karen Manning

Fungi seen:
Agaricus sp.*;, Antrodiella zonata; Armarilla novea-zelandiae; Bisporella citrina;, Calocera sp.,* branched jelly fungi*; Cordyceps gunnii; Cortinarius* 'blood red purple'*; Crepidotus* 'orange*'; Fistulina hepatica; Geostrum triplex,* earthstar*; Heterotextus miltinus,* golden jelly-bells*; Hymenoscyphus* 'white disc bruising orange*'; Hygrocybe graminicolor; Hypholoma sublateritium,* brick caps; *Hyprocrea sulphurea; Laccaria* sp*; Laetiporus portentosus; Lanzia lanaripes,* black tacks; *Lentinellus pulvinulus; Lycoperdon scabrum; Macrolepiota clelandii; Marasmiellus affixus; Marasmius* sp*; Mycena albidocapillaris,* tall white cluster; *M. cystidiosa; M. epipterygia; M. interrupta; M. subgalericulata; M. vinacea; Oudemansiella radicata var australis,* rooting shank; *Panellus longinquus; Podoscypha petalodes; Ramaria sp., white; Russula* sp; *Schizophyllum commune; Scleroderma cepa; Stereum* aff *rugosum; Trametes versicolor*

QVMAG EXHIBITIONS

Sixteen Legs: Enter the Cave - hidden beneath one of the world's last great wildernesses is a place of twisted beauty, haven to a variety of weird inhabitants but hostile to others. Australia's deepest caves hide animals surviving from the first age of the dinosaurs and the splitting of the continents. Enter a world full of weird animals and unusual rock formations, overseen by still-living, giant prehistoric spiders the size of dinner plates.

When: 2 April to 19 June
Where: Travelling Exhibition Gallery, Inveresk
Admission: Free
Museum open: 10 am to 4pm

Source: http://www.qvmag.tas.gov.au/qvmag/index.php?c=350

AUSTRALIAN PLANT SOCIETY MEETINGS

LFNC members are welcome to attend APS meetings held on a Tuesday at Max Fry Hall, Gorge Road Trevallyn at 7.30 pm. The next meetings will be on:

June 21 - Club night presentations, talks will be given by Helen and Mick Statham, and Julie Nermut
July 19 - APS member Rosemary Verbeeten will give a talk on *Gardening with natives*

NRM NORTH UPCOMING EVENTS

Tree Decline Monitoring Project ~ Have you noticed changes to vegetation on your property such as the sudden death of Eucalyptus species? NRM North is interested in hearing from community members that would like to be involved in a long term monitoring project to record these changes. For more information contact NRM North Regional Landcare Facilitator, Alison Hugo, 6333 7788 or ahugo@nrmnorth.org.au

LISTmap Workshops for Smallholders ~ would you like to harness the power of mapping to better understand and manage your property? You are invited to two sessions introducing the features and functions of LISTmap, a free and publicly available online map application (Flyer) Enquiries to Megan Dykman on 6333 7775 or mdykman@nrmnorth.org.au

LANDCARE EVENT

Landcare Tasmania will be holding a series of informal consultation workshops for members in northern Tasmania from June 17-20. The workshops are designed to help Landcare Tasmania better support members, to increase involvement and cooperation and to gather information on how the community Landcare network can work collectively to do things better. For more information phone 6234 7117 or contact executive.officer@landcaretas.org.au

TAMAR NRM EVENT

Tamar NRM staff are currently working with Biosecurity Tasmania to jointly facilitate a Besom Heath (*Erica scoparia*) Field Day and Workshop in the Bridgenorth area. The Besom Heath infestation is slowly but surely spreading into the West Tamar Council area. This emerging invasive woody weed threatens our agricultural lands and the native environment.

The Besom Heath workshop will be held on Friday 24th June between 11am and 2pm. Further details on their website: www.tamarnrm.com.au

MYRTLE RUST IN THE TAMAR VALLEY

Myrtle rust is continuing to be detected in home gardens and is now known to be in Launceston. Biosecurity Tasmania has a state wide emergency response program underway in an attempt to eradicate myrtle rust, before it becomes established and poses a serious risk to the health of Tasmania's native bushland.

Lophomyrtus plants are the key carriers of myrtle rust and Biosecurity Tasmania needs to inspect these plants in home gardens (with your permission) for signs of disease. This time of the year, the rust will have been washed off leaves and hard to detect, but recording the locations of these plants at any time of the year will assist.

You can help by simply letting DPIPWE know if you have *Lophomyrtus* plants on your property.

For more information visit the DPIPWE website at: www.dpipwe.tas.gov.au/myrtlerust or contact them on 6165 3785

From: Naturally Yours, Tamar NRM newletter, May 2016

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. You need to provide your own food and drinks for the outing unless otherwise specified. Morning tea is normally provided by the bus company on bus outings.
3. When travelling by car in convoy, each driver is responsible to ensure that the vehicle behind is in sight immediately after passing each cross road or fork in the road.
4. When car pooling, 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: Name tags are to be worn at 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, John Elliott on 6344 9303 or skempbookings@yahoo.com.au regarding availability and keys.

Field Centre Phone Number - 6399 3361

Postal Address: PO Box 1072 Launceston 7250

Internet site : http://www.lfnc.org.au

E.mail : secretary@lfnc.org.au