North-Eastern Tasmanian Field Naturalists Club Inc.

The North Eastern Naturalist

Newsletter of the NE Tasmanian Field Naturalists Club

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MISSION STATEMENT: It is the mission of this club to encourage the study, appreciation and preservation of our natural and cultural environment, the animals, plants, geology and landforms, including those of the coastal and marine areas in the North East region of Tasmania.

From the Editor: In addition to the usual reports on our recent activities, this issue contains two submitted articles based on specific activities. Lou Brooker has written an informative follow-up article based on our visit to Musselroe Bay in December, while Mike Douglas has contributed a description of the geological history of the Ralphs Falls area—the location of our January outing. Because of space limitations, the write-up of our visit to the Ben Lomond area in February will be included in the next issue of the newsletter.

My sincere thanks to Lou and Mike for contributing such interesting and relevant articles.

I would encourage others to follow in their footsteps—all similar contributions will be gratefully received. Please remember that if you do submit an article, it should be in the form of a Word document attached to an email message, with relevant photos (preferably 1 MB or greater) also sent as email attachments.

Photos of Northern Tasmanian wildlife

Epiphyte – Penny Reeves

Hygophorous lewellinae – Ross Coad

Crescent honeyeater on waratah – Susan McClenaghan

Program for March–June 2020

MARCH 14th MERTHYR PARK AND MOUNT DIRECTION – Leader Len Gillett

Our activity for March will consist of two walks—at Merthyr Park and Mt Direction, which are approximately 16 km apart. Walk one, or walk both, then head to the nearby Hillwood Berry Farm for a refreshing ice cream or coffee afterwards.

Len advises that the Merthyr Park walk is a 3-km circuit, while Mt Direction is 4 km return.

For the most part, both feature moderate grades, with a couple of short steepish bits, but both walks are on high-quality paths. The effort required in gaining some elevation is spectacularly rewarded with views over Second River at Merthyr Park, and over the Tamar Valley from Mt Direction, particularly when coming down.

There are some seats along the way, and a lunch break could be taken either at the picnic facilities at the start of the Mt Direction walk, or at the top, where there is a picnic table and some low stone walls to sit on. Meet at Merthyr Park at 10.00 am. To get there from Scottsdale, take B81 (Golconda Rd) towards Lilydale. Turn right along C811 (Second River Road) just before Lilydale. Merthyr Park is about 2 km west of the junction of C811 with Golconda Rd. Len's mobile number is 0439 065 535.

APRIL 18th SPRINGFIELD PARK - Leader Jay Wilson

Since Easter falls on our normal outing date, we have decided to have an informal get-together a week later at the Springfield Park opposite the Huon Fish Hatcheries. Jay has some curiosities to look for and we will have a walk and a barbeque. Details will be sent later by email.

MAY 9th PARADISE PLAINS, SOUTH OF RINGAROOMA – Leader Dr Perpetua Turner

This will involve an introduction to the world of bryophytes (mosses and liverworts) at Paradise Plains, with Dr Perpetua Turner from the School of Natural Sciences, University of Tasmania. Please bring a hand lens if you have one. We have invited members of the Launceston Field Nats on this outing. Details will be sent later by email.

Dr Turner has a blog and the following two posts may be useful. The first gives a basic introduction, with links and a figure that broadly explain the differences between mosses, liverworts and hornworts:
https://peptalkecology.wordpress.com/2015/08/01/bryology-are-you-interested-in-becoming-a-budding-protonema/
The second is more of a fun read: https://peptalkecology.wordpress.com/2016/05/25/moss-lady/

JUNE 13th SCAMANDER – Leaders Liese and Paul Fearman

We will make a comparison of two catchments on the east coast with different and contrasting geology. Details will be sent later by email.

Cancellation Process: ***If there is unpredictable and severe weather, or for any other reason, it may occasionally be necessary to cancel with short notice. Here is the process for cancellation: an outing will be cancelled if the leader considers that the conditions are not safe. If an activity is cancelled, a global email will be sent by 0700 (i.e. 7.00 am) on the day of the outing. If members are uncertain, it is their responsibility to contact Ann, Lou or the activity leader. Note that phone reception is not always available, so you may have to try alternative numbers.***

DECEMBER 2019: MUSSELROE BAY

Text by Chris Forbes-Ewan with Lou Brooker and Caroline Joyce

Photos by Chris Forbes-Ewan (CFE), Jay Wilson (JW) and Revel Monroe (RM)

Looking over Musselroe Bay towards South Mount Cameron – CFE

Our December activity took place in the Musselroe Bay area in far north-eastern Tasmania.

With Caroline Joyce as our guide, on a cool and windy day 21 members and guests were first taken on a tour along the spectacular coastline east of the small township of Musselroe Bay (aka Poole).

The walk along the beach took about 90 minutes, and included many stops to admire the stunning views, identify plants and gaze in wonder at the huge Aboriginal shell middens we passed.

These middens resulted from centuries (or even millennia) of gathering shellfish for food by the north-eastern Tasmanian Aborigines, who lived here in harmony with nature for approximately 40 000 years, until European occupation disrupted their way of life about 200 years ago.

One of several huge middens that were built up over many centuries – CFE

At one point during the walk we detoured to look at a small lagoon. There had been very little rain, so the lagoon was dry, but we did see a pair of hooded plovers.

Not to be confused with the common plover, or masked lapwing as it is now known, the hooded plover is a small, attractive and endangered shorebird that lives on the beach from the high-tide line to the water's edge. (*For more about the hooded plover, see the article by Pam Bretz in the December 2019 issue of the North Eastern Naturalist.*)

After lunch, Caroline led a brief tour of an abandoned mansion that was built in the 1980s, and more recently was to be the centrepiece of a new resort until legal issues forced cancellation of the development.

The mansion is massive, with dozens of rooms, including seven spacious bedrooms (most with ensuite bathrooms), and a large entertainment room measuring approximately 120 sq m in area, larger than many houses! The entertainment room has a large fireplace, a cathedral ceiling and massive exposed beams made of blackwood.

The mansion as it looked in 2007, before it was abandoned – RM

There are also outside tennis courts (no longer fit for playing tennis) and an attractive driveway lined with exotic eucalyptus trees, identified by club member Mike Douglas as spotted gums, which are native to NSW and Queensland. Previously classified as *Eucalyptus maculata*, but recently reclassified by some authorities as *Corymbia maculata*, they have a spotted trunk and contribute to a very pleasant entrance to the mansion.

Unfortunately, following its abandonment a decade or so ago, the mansion is in a state of advancing disrepair, and the floors are now covered with animal dung.

Abandoned about a decade ago, the once-magnificent mansion is now in a state of considerable disrepair – CFE

By mid-afternoon the sun had come out, and we enjoyed a visit to the attractive Musselroe River at a point about 500 m short of its mouth, i.e. where the river enters Musselroe Bay.

On the far side of the river we saw a solitary cygnet apparently feeding near the bank. No-one had previously seen a cygnet unaccompanied by its parents or siblings, and we wondered if it was ill, or had been abandoned by its family. However, despite looking a little lonely the cygnet appeared to be in good condition.

Through the day we also saw a wombat, several massive Forester kangaroos, at least one eagle, and a flock of inquisitive (or perhaps hungry) pelicans that took a keen interest in the members who started to have lunch following the beach walk.

Tea trees lining the bank of the placid waters of Musselroe River – CFE

Seeing double—two pelicans caught flying in formation; perhaps planning a dive-bombing attack on the diners below – JW

Among many other snippets of interesting information, Caroline told us that there is an ongoing program aimed at restoring Tasmanian devils in the area, following decimation of the devil population by the highly-contagious devil facial tumour disease. Devils are being relocated from an insurance population that was established some years ago on Maria Island, using devils that were free of the facial tumour. Regular trapping occurs to monitor the health of local devils and those reintroduced from Maria Island.

Although the weather turned cool and windy in the late afternoon, we completed a fascinating and informative day with an enjoyable barbeque in the spacious and attractive front yard of Caroline's home.

Several members then took advantage of the opportunity to stay on and camp for the night.

NE Field Nats is very grateful to Caroline Joyce for showing us around this beautiful part of Tasmania.

APPENDIX: An Investigation Triggered by a Visit to Musselroe Bay, by Lou Brooker; photos by Lou Brooker (LB) and Caroline Joyce (CJ)

In 2011 a Management Plan for Musselroe Bay was put together by Bushways Environmental Services in conjunction with NRM North. Jay Wilson was the Resource Management Officer for Dorset Council at the time and he had a hand in putting the plan together. I was lucky enough to read a copy of this very thorough document as I planned our excursion there.

Along with the notes about Aboriginal Heritage that Lloyd provided for our walk around the point, the plan contained a very thorough account of the vegetation types to be found there. These included one I hadn't heard of before: *lacustrine herbland*.

This is described as follows:

> Lacustrine herbland includes marsupial lawns and herbfields, which occur in areas that are subject to short periods of inundation. They consist of species less than 20 cm in height, and are commonly less than 5 cm in height. Some communities of herbfield marginal to wetlands can be very species-rich with upwards of 20 species in a square metre. As a general rule the species diversity decreases as salinity increases[1] .

The TASVEG mapping system classifies the non-forest vegetation communities into six categories. Each one has a three-letter code. They are Freshwater Aquatic Herbland (AHF), Lacustrine Herbland (AHL), Freshwater Aqautic Sedgeland and Rushland (ASF), Saline Aquatic Herbland (AHS), Succulent Saline Herbland (ASS) and Saline Sedgeland/Rushland (ARS).

A close look at an intertidal habitat in the form of a dry lagoon – CJ

Whereas almost all the other 150 vegetation communities in the TASVEG mapping system consist of vertical layers of species, it appears that the lacustrine herbland consists of almost as many species, but they are all in one horizontal layer. Not much taller than 5 cm, it is made up of herbs and orchids, tiny grasses, lilies and sedges, and some mosses and lichens. I counted forty species in the list which may be present in these herbfields, all of which are herbaceous, that is without a woody stem.

Unfortunately, I didn't see the dry lagoon on the way south from Musselroe Point that attracted so much close attention. This is how Jay described it: 'An unusual upper intertidal habitat in a flat area surrounded by big rocks, possibly with a mudsoil substrate. A carpet-like assemblage of plant species'. The plant of most interest there, and not noticed on any of our previous outings, was a *Lilaeopsis polyantha.* This plant was

Lilaeopsis polyantha (creeping cranzia) – LB

previously assigned to the genus *Cranzia*, thereby explaining its common name, creeping cranzia. The species name, *polyantha*, implies many flowers, but the specimens we saw didn't live up to its name here.

L. polyantha reproduces with a creeping rhizome and can form dense colonies in shallow water and wet mud close to the water. Its leaves are eaten by waterbirds.

Later in the day, and after our attention was drawn away from the lonely-looking cygnet on the opposite bank, I noticed we were standing in a small patch of the lacustrine herbland beside Musselroe River.

Lacustrine herbland is sometimes referred to as marsupial lawn; as its alternative name suggests, it is a popular grazing site for Forester kangaroos, Bennett's wallabies, pademelons and wombats. It may also be grazed by black swans and native hens.

This constant grazing may be what stops the invasion of woody species. It has been hypothesised that woody species might also be prevented from colonising a marsupial lawn by the occasional inundation by salt water[2]. All the other low-growing species present can tolerate some inundation by salt water.

You could say that all these plants are in the 'second line'—not actually plants of the saltmarsh, where they would be inundated by salt water twice a day, but plants that like a slightly less salty habitat.

Invertebrates such as crickets and grasshoppers are known to reduce the herbland biomass to a similar degree as vertebrate grazers. These would also include beetles, bugs, flies, micro-wasps and butterflies sucking the sap from the vegetation, and pollinating the flowers. The genus *Chloropidae* (grass flies) includes florivores—insects that eat flowers.

Also present in this patch was *Triglochin minutissima*, common name tiny arrowgrass, though it is not really a grass. It is so-named because the mature fruit has short spurs at the base. Mark Wapstra[3] explains the derivation of the name as follows: *tri* means three, while *glochis* indicates a projecting point, alluding to the segments of the fruits which have a protruding tip.

Triglochin procera, its larger cousin, has the common name water ribbons. Though it is found in other states, in Tasmania it has formally been recognised as 'rare' under the Tasmanian Threatened Species Protection Act 1995. Although officially rare, it is found in various parts of the north east of Tasmania. Its bulbs or rhyzomes are permanently under water. This plant can be exceedingly small, as was the case here.

Triglochin minutissima, tiny arrowgrass - LB

Leptinella longipes **(coast buttons) was also found on the river bank. (Some people still refer to this as *Cotula*, the name previously used for this genus.) It has prostrate rooting branches with fleshy leaves with noticeably indented leaf margins. Its flowerhead, less than a centimetre across, is button-shaped and has no petals. It is quite common in the less saline coastal environment.**

Selliera radicans **grows in a wet but slightly less saline habitat. We spotted it growing in tight mats in the 'lawn' behind the estuary where we camped the night. Its leaves are succulent and bulging towards the tip. It is sometimes confused with *Scaevola hookeri*, which has the same number of petals and all on one side of the flower as well. In addition to being called the shining swampmat, it is also known as bonking grass; I have no idea why!**

Leptinalla longipes **(coast buttons) - LB**

Selliera radicans **(shining swampmat or bonking grass) - LB**

References

[1] Kitchener A, Harris S. From Forest to Fjaeldmark: Descriptions of Tasmania's Vegetation (Edition 2). Department of Primary Industries, Parks, Water and Environment; URL: https://dpipwe.tas.gov.au/Documents/f2f_saltmarsh.pdf

[2] Marsupial Grazing Lawns in Tasmania: maintenance, biota and effects of climate change. Pub. Cynthia Merrion Roberts, Master of Applied Science [Hons] Lincoln University, New Zealand.

[3] Wapstra M, Wapstra A, and Wapstra H. Tasmanian Plant Names Unravelled. Pub. Fullers Bookshop Pty. Ltd. 2010.

Acknowledgements

1. For information about the plants described: Prahalad, Vishnu. A Guide to the Plants of Tasmanian Saltmarsh Wetlands. Pub. University of Tasmania and NRM North 2014.

2. Many thanks also to Alex Buchanan who, as always, willingly shared his vast knowledge.

JANUARY 2020: RALPHS FALLS

By Chris Forbes-Ewan with Mike Douglas; photos by Chris Forbes-Ewan (CFE) and Lou Brooker (LB)

As the January activity of the NE Field Naturalists Club, Parks Discovery Ranger Hannah Vasiliades led nine members and guests on a 4-km loop walk in the Mt Victoria Forest Reserve, including stops at Ralphs Falls and Cashs Gorge.

The well-maintained track starts at the Ralphs Falls car park, and involves initially walking through a callidendrous rainforest—that is, the tall trees form a closed canopy, so only diffuse light reaches the forest floor. This means that new plants generally get a foothold only where the canopy is broken by trees that have fallen, so there is little undergrowth.

Callidendrous (park-like) rainforest, showing hard water fern (*Blechum wattsii*) in the foreground – CFE

Although you 'probably couldn't ride horse through it' (as Mike Douglas—one of our most experienced members—pointed out), the park-like nature of callidendrous rainforest allows clear visibility for 30 metres or more, and is relatively easy to walk through. This forest is dominated by myrtles (*Nothofagus cunninghamii*), with some sassafras (*Atherosperma moschatum*) and celery top pine (*Phyllocladus aspleniifolia*) also present. The sparse undestorey has a few shrubs, including heart berry (*Aristotelia peduncularis*) and cherry riceflower (*Pimelia drupacea*), with ferns such as manfern (*Dicksonia antarctica*), hard water fern *Blechum wattsii*), leathery shield fern (*Rumohra adiantiformis*), and mother shield fern (*Polystichum proliferum*). Kangaroo fern (*Microsorum pustulatum*) and several species of filmy ferns (genus *Hymenophyllum*) were seen growing on trunks, particularly manfern trunks.

Here we also saw magnificent fungi, including the colourful myrtle orange (*Cyttaria gunnii*). This is found only on myrtle trees, where it resembles a bunch of orange-white grapes hanging from the tree. The *Cyttaria* mycelium forms woody galls on its host tree, from which the perennial crops of fruit are produced.

Although it is a parasite to the myrtle, it is edible for humans. It has been described as having a texture similar to jelly and an appealing taste. It was reportedly a source of food for local Aborigines.

Old man myrtle (Nothofagus cunninghamii) with kangaroo ferns growing from its trunk – CFE

Myrtle orange (*Cyttaria gunnii*); a parasitic fungus that was probably a source of food for the local Aboriginal population – LB

Approaching the Ralphs Falls lookout, we passed from rainforest to a damp shrubbery that included currantwood, also known as goldey wood (*Monotoca glauca*), stinkwood (*Zieria arborescens*), lemon bottlebrush (*Notelaea ligustrina*), and turquoise berry, also known as Solomon's seal (*Drymophila cyanocarpa*)

A detour of a few metres off the track took us to the viewing platform for Ralphs Falls. This very slim but attractive waterfall drops 90 metres over a sheer cliff face, and is Tasmania's highest single-drop fall.

We then resumed walking until we came to a large rocky outcrop overlooking the spectacular New River Valley, where we stopped for lunch. Here we saw many waratahs (*Telopea truncata*), dusty daisybush (*Olearia phlogopappa*) and pink mountain berry (*Leptecocophylla juniperina* subsp. *parvifolia*).

Lunch at Mannalargenna's Throne, overlooking New River Valley – CFE

This is believed to be the site of 'Mannalargenna's Throne'. About 200 years ago Mannalargenna, who was a highly-respected Aboriginal warrior and leader, would come to this place to consider important issues affecting his people, including how to deal with the occupation of their country by Europeans. Cultural exchanges happened here as well, for example, a glowing firestick might be exchanged for stone tools or other implements. (Fire was of great importance, so keeping a functional firestick was essential.)

The walk then continued through an attractive forest consisting mainly of tall woolly teatrees (*Leptospermum lanigerum*). Old myrtles were sparsely distributed through the forest, survivors of a fire that occurred here long ago.

This teatree forest is being invaded by regrowth of myrtle and celery top pine. If left undisturbed, an eventual return to myrtle-dominated forest is likely.

Interesting lycopods (ancient spore-bearing plants that preceded ferns) seen in this forest were long club moss, *Huperzia varia*) and mountain club moss (*Lycopodium fastigiatum*).

From there we continued on to Cashs Gorge, which is very impressive in its own right. From the viewing

platform overlooking the gorge we could see as far as Bass Strait. Here we also saw a fork fern (*Tmesipteris obliqua*), which is a 'fern ally'. (Fern allies are a diverse group of seedless vascular plants that are not true ferns. Like ferns, a fern ally disperses by shedding spores.)

Fork fern (Tmesipteris obliqua) – a fern ally (CFE)

(*Gymnoschoenus sphaerocephalus*), which grows in damp, nutrient-poor soil known as peat. Buttongrass is actually a sedge, not a grass, belonging to the family Cyperaceae.

Buttongrass moorlands are highly pyrogenic. The size of the buttongrass clumps, and the prevalence of paperbarks and teatrees invading the moorland indicate that this area has not been burnt for many years.

An attractive golden-flowered, tufted herb seen in this moorland was yelloweye (*Xyris operculata*). A reminder of the altitude here (about 800 m) was the presence of pineapple grass (*Astelia alpina* var. *Alpina*), which actually belongs to the lily family.

NE Field Nats is very grateful to Hannah Vasiliades for taking us through such an enchanting part of NE Tasmania, and for so enthusiastically sharing her knowledge with us.

From Cashs Gorge it was a relatively straightforward walk back to the car park, mostly on a narrow wooden walkway through marshland (although in summer there is little evidence of the water that would be ankle-deep in winter).

On the way, we passed fields of beautiful wildflowers—predominantly *Melaleuca squamea* and *Leptospermum lanigerum,* and buttongrass

Melaleuca squamea (pink flowers) and *Leptospermum lanigerum)* (white flowers) – CFE

Buttongrass (*Gymnoschoenus sphaerocephalus*) – CFE

APPENDIX: The Geology of Ralphs Falls Area, by Mike Douglas; photos by Chris Forbes-Ewan

Ralphs Falls plunge about 90 metres down a precipice on a fault-controlled tributary of the New River. The vertical strata comprising the cliff face are Mathinna Supergroup rocks. Originally, these were horizontal beds of sandstone and mudstone formed from sediment deposited on an ocean floor between about 440 and 390 million years ago (MYA). Deposition was terminated by an upheaval known to geologists as the Tabberabberan Orogeny, in which the rocks were folded and thrust up, followed by deep-seated intrusions of granitoid magma.

Ralphs Falls – with a vertical drop of 90 metres, this is the longest single-drop waterfall in Tasmania

The mountain ranges formed at that time have long since vanished, with the land eroded to a peneplain and later inundated by a shallow sea.

Permian-aged sediments were deposited in this sea, and these rocks—mainly sandstones—are now found on the slopes of Mt Victoria, not far above Ralphs Falls.

About 180 MYA, during the Jurassic period, a dark magma was intruded and spread out to form tubular sills of dolerite between the Permian strata.

Massive block faulting between 100 and 40 MYA, associated with the wrenching of Tasmania from Antarctica, produced the basic form of the present-day northeast highlands, with down-thrown blocks (grabens) forming the Midlands and Tamar Valley.

Fluvial erosion has stripped away the upper layers of Permian sandstone on peaks such as Mt Victoria, leaving hard caps of dolerite. These in turn are undergoing mass wastage due to shattering by frost action,

with downhill creep and topples. The Mathinna beds, as exposed at Ralphs Falls and Cashs Lookout, form the basement rocks of the mountain.

The small stream at the falls has selectively eaten away a relatively soft stratum with harder rocks on each side, giving the very narrow falls we see today.

Cashs Gorge, as seen from Cashs Lookout