North-Eastern Tasmanian Field Naturalists Club Inc.

The North Eastern Naturalist

Newsletter of the NE Tasmanian Field Naturalists Club

Number 203: December 2018

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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 Secretary: At the end of what has been another great year for our club, I'd like to thank all who made this year's outings memorable. It's a really good feeling for me when I am contacted by members offering to lead outings, or making suggestions for activities. So thank you everyone.

It's an appropriate time to remind people who haven't paid their $20 subs for the year 2018/19 that you can do this now quite easily on-line:

Name of Bank: Bendigo Bank

Name of Account: North East Tasmania Field Naturalist Club

BSB number 633000

Account number 128381860.

Don't forget to record your name in the transaction.

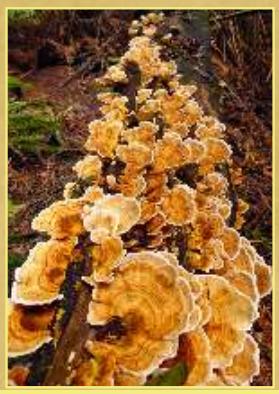
Our next activity will be on February 9th. On the draft calendar, but not in any particular order, are the following possibilities:

Five Mile Bluff; Cape Portland; Fungi and Orchids at North Scottsdale; and Mutual to Moorina along the Ringarooma River.

Wishing you all a safe and happy summer,

Louise Brooker.

Photos of Northern Tasmanian wildlife



Polypore fungi – Jay Wilson

Coral fungus – Chris Forbes-Ewan

Brown falcon – Lou Brooker

SEPTEMBER 2018: LITTLE CHOOK WALK

Article by Debbie Searle and Jay Wilson; photos by Jay Wilson (JW), Craig Searle (CS) and Roy Skabo (RS)

Some of the verdant bush beside the Little Chook mountain bike trail – JW

No, this article isn't about a variation of the once-popular Chicken Walk dance! Rather, our September activity was a walk around the Little Chook mountain bike trail, which is near Weldborough.

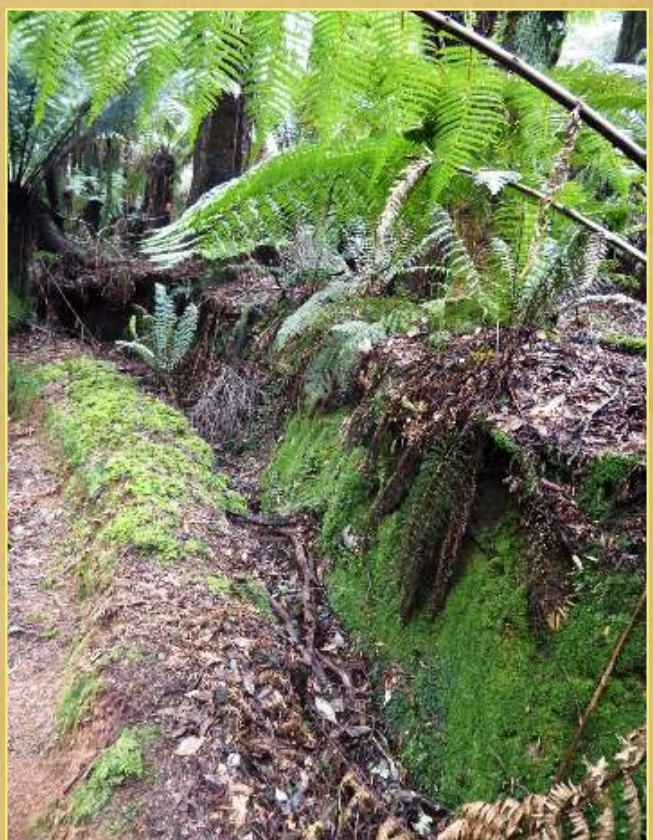
Led by Debbie Searle, 15 enthusiastic field naturalists spent two hours strolling through wet sclerophyll forest on this delightful, undulating trail of about five kilometres.

Many ferns and fungi were observed, as well as the appropriately named dog vomit slime mould.

The day was intermittently sunny and overcast, with dark clouds in the distance threatening to rain on our parade (but the rain held off, fortunately).

The bike trail was clearly designed to be very sympathetic to the environment, with a gentle grade and rock-paved stream crossings. The area shows the legacy of extensive tin mining in the late 1800s and early 1900s, mainly by Chinese miners.

Following the walk, most participants retired to the Weldborough Pub for a well-earned lunch with frothy coffee – very civilised!

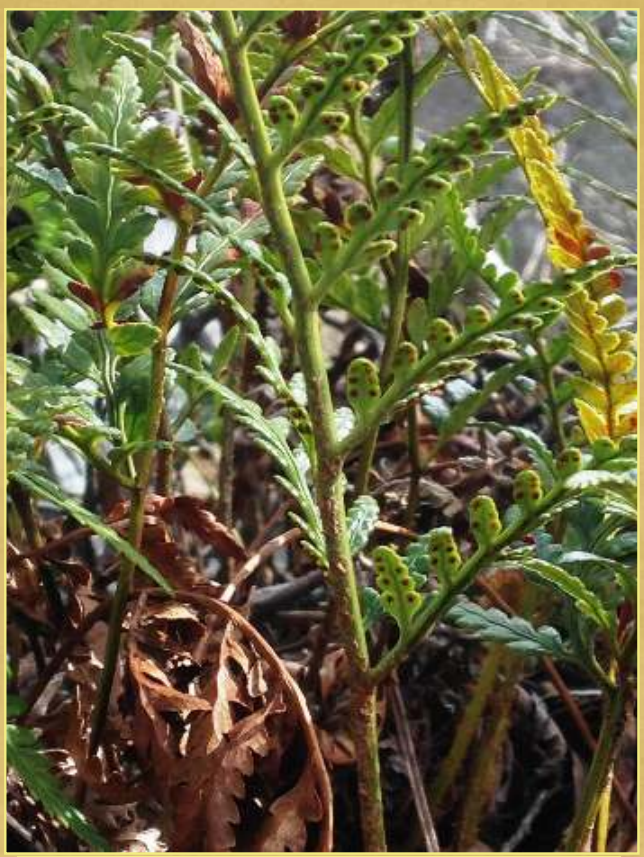


An old tin-mining water race adjacent to the trail – JW

NOTES BY DEBBIE SEARLE ON SOME OF THE MANY FERNS FOUND AT LITTLE CHOOK

Most ferns have fronds with a stalk (stipe) and leaflets (pinnae) which arise from a leaf stalk (rachis) and are divided into pinnules. Spores usually occur on the underside of the pinnules grouped together in sori. The sori may have protective covers (indusia). Ferns are anchored into the substrate by a rhizome.

Leathery shield fern (*Rumohra adiantiformis*) – grows from the ground or on manferns, tree trunks, logs or rocks. Triangular, leathery, glossy, dark green fronds (which look almost like plastic); stipe is long, deeply grooved on the upper surface and covered with papery, brown scales; rachis is grooved with a raised centre on the upper surface. Sori are round, and immature sori are covered by square, stalked indusia. When shed, the indusia leave dark, central spots in the middle of the sori.



Leathery shield fern (*Rumohra adiantiformis*) – CS

Bracken fern (*Pteridium esculentum*) – leathery fronds emerge singly from a spreading rhizome; stipe is green-brown to red-brown and mainly hairless; pinnules have sunken veins and conspicuous mid-veins. Sori are linear and almost continuous along the margins, protected by strongly reflexed leaf margins; narrow indusia. New emerging fronds (croziers) have a dense cover of brown hairs.

Bat's wing fern (*Histiopteris incisa*) – very soft, green fronds with opposite pinnae giving the resemblance to a bat's wings. Sori are sub-marginal, occurring as lines along the sides but not the tips of pinnules, protected by pale, membranous, reflexed margins. Often occurs with ruddy ground fern.

Bat's wing fern (*Histiopteris incisa*) – JW

Fishbone fern (*Blechnum nudum*) – vegetative fronds are soft and light-green, emerging as a clump; pinnae are broadly attached to leaflet stalk (rachis) and arranged like fishbones with the largest pinnae near the centre of the leaflet and diminishing towards both apex and base; fertile fronds are narrower, with sori forming continuous bands either side of the midveins of the pinnae. Sori are protected by membranous indusia. Can form a sturdy trunk up to one metre in diameter.

Man fern - *Dicksonia antarctica* - leathery fronds emerging from a tall trunk; pinnae are stalked; stipe and rachis have a narrow groove on the upper surface, rachis are hairy on both surfaces. Sori are small and round, covered by cup-shaped structures formed from curved-over leaf margins and fawn, membranous indusia.

Veined bristle fern (*Polyphlebium venosum*) – rhizome is densely covered with tiny, pale-brown hairs. Fronds distant, 5–15 cm long. Stipe is thread-like, not winged. Pinnae are sometimes very long and hanging almost parallel to the main rachis; lower pinnae are often small and widely spaced; ultimate segments are short and broad, 2–6 mm wide; margin is wavy or broadly crenate. Sori are borne singly on short lateral lobes at the base of pinnae, immersed in lamina; indusium is narrowly trumpet shaped, 2–4 mm long; receptacle is fine, projecting more than 10 mm out from the indusium at maturity.

Veined bristle fern - *Polyphlebium venosum* – RS

Mother spleenwort (*Asplenium bulbiferum subspecies gracillimum*) – grows on logs, manferns, tree trunks and among boulders; fronds are narrow, pale- to dark-green, thin textured; upper surface of rachis has raised central rib; may have buds on fronds which develop into new plants. Sori are oblong with firm indusia near the margins of the pinnules.

Ruddy ground fern (*Hypolepis rugosula*) – mid- to dark-green fronds emerge singly from a spreading rhizome; stipe is red-brown; rachises and fronds feel sticky due to fine hairs on both surfaces, rachises are red-brown with two prominent ridges on the undersurface. Sori are round and partially protected by a reflexed marginal flap. Often occurs with batwing fern.

OCTOBER: WALK UP MT WILLIAM

Text by Lou Brooker and Pam Bretz; photos by Lou Brooker

The rare entangled guinea flower (*Hiibbertia empetrifolia*) in Mt William National Park, one of the few places where it occurs naturally

Morning Walk (by Lou Brooker)

Ten members and guests took part in the walk up Mt William, the focal point of Mt William National Park in far north-eastern Tasmania.

Mt William rises above a plain which is near the coast and contains heathland vegetation, grass trees (*Xanthorrhoea*) and black peppermint (*Eucalyptus amygdalina*). Little is left of Tasmania's heathland now, so reserves like these are precious. Heath is found on poorer soils such as those here, which result from weathered granite and wind-blown sand.

This outing began with a gathering of information at the park entrance, where we found out that this national park was formerly a farm, purchased in the early 1970s specifically to form a sanctuary for the forester kangaroo (*Macropus giganteus tasmaniensis*). The forester is the Tasmanian sub-species of the eastern grey kangaroo (*Macropus giganteus*), one of three large species of kangaroo found on the mainland. (*For more about the forester kangaroo, see the Appendix to this article.*)

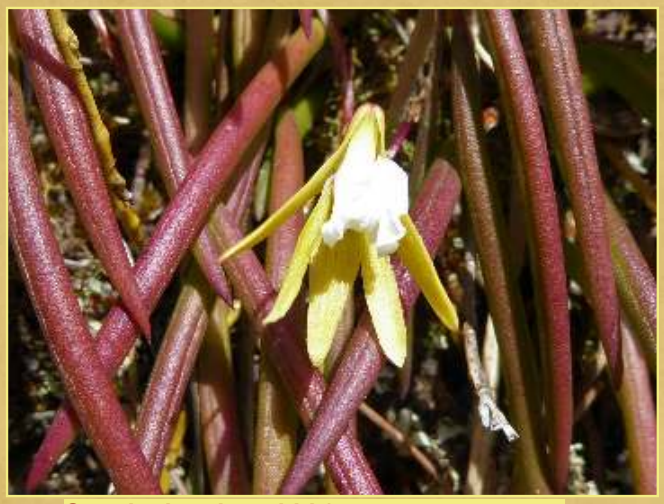
Mt William National Park has an amazing diversity of animals, including approximately one hundred species of birds inhabiting the coastal heathlands.

After driving through the grassland section of the park where, in the evening, forester kangaroos

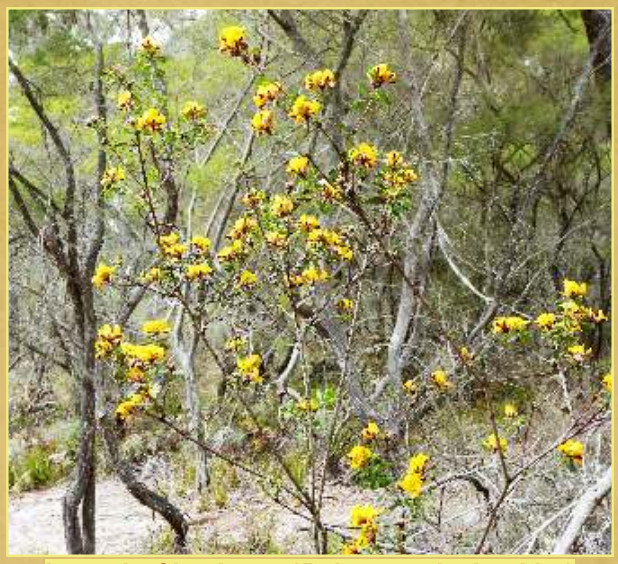
would be seen in profusion, the group set off on the assault of Mt William ... all 212 metres of it. It was purported to be a short walk—someone mentioned 20 minutes—but in usual Field Nats fashion, it took double the predicted time!

In addition to black peppermint, the dry sclerophyll forest includes common smaller trees such as banksias, she-oaks, bull-oaks and *Kunzea*. We also saw grass trees (*Xanthorrhoea australis*), golden tip or clover trees (*Goodia lotifolia*), ivy flat peas (*Platylobium triangulare*), smooth pomaderris (*Pomaderris elliptica*), and large-leaf bush peas (*Pultenaea daphnoides*).

Three plants of special interest to field naturalists were observed on this walk. *Dockrillia striolata* (streaked rock orchid) is a beautiful and unusual orchid unlike any other. It attaches itself to granite and its leaves can be seen hanging down in clumps all year round. The upside down yellow flower can be seen in October and November on granite boulders across north-east Tasmania.



Streaked rock orchid (*Dockrillia striolata*)



Large-leaf bush pea (*Pultenaea daphnoides*)

The second interesting plant is *Hibbertia aspera* (rough guinea flower). This has an attractive yellow flower; it brightens up the bush here as it trails through and amongst other plants.

The third plant of interest was *Pterostylis dubia* (blue tongued orchid). For most of the year this plant would not be noticed, but in spring a very fragile stem and flower appear. The blue tongued orchid is in the same family as the nodding greenhood orchid.

Some rare plants such as *Zieria veronicacea* (a small coastal shrub) and *Villarsia exaltata* (erect marsh flower) are also found in the national park. The group who camped were lucky enough to spot the *Zieria* on a walk the next morning.

Afternoon Walk (by Pam Bretz)

After lunch half of the group walked south along the beach towards Boulder Point. We spotted two black swans apparently enjoying themselves riding the swell behind the surf. Pied and sooty oystercatchers and hooded plovers were also observed. Tracks of a wombat were noticed. Native animals often come down to the tide line to obtain salt from kelp and seaweed at night.

We were pleased to find only one small plant of seaspurge, this being one of the areas that is monitored by volunteers in the annual PWS seaspurge and marine rubbish collection weekend each June.

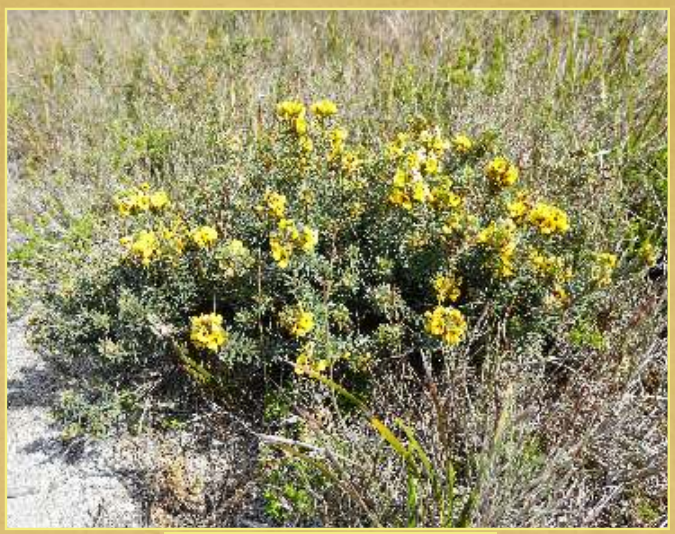
We came across large Aboriginal middens, and behind the vegetation-covered dunes were sand blows where the surface sand had been stripped back, revealing the grey and reddish layers beneath and creating a desert-like moonscape.

At Boulder Point Lagoon we cut inland along a vehicular track through flat and treeless heathland. This area is old sand dune country, with insufficient soil nutrients to support trees and large shrubs. The main plant in flower was *Aotus ericoides*, providing a carpet of yellow. There were many grass trees (*Xanthorrhoea australis*) and many were in bloom. Along the centre of the track grew *Caladenia* orchids, probably *C. mentiens*, being single flowered and tiny. Here the common heath (*Epacris impressa*) was mostly very small and almost exclusively white.

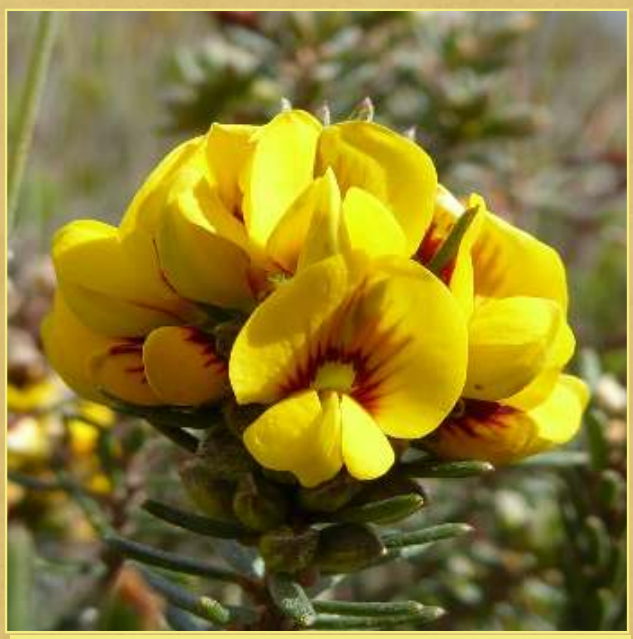
As we moved inland, vegetation became taller and eventually we were back into a more forested landscape of *Banksia*, *Casuarina* and eucalypts. In this more protected environment we saw many *Glossodia major* (waxlip) orchids. The heath was much taller and mostly red/pink.

The highlight of the walk for many was seeing a family of five or six fledgling dusky woodswallows (*Artamus cyanopterus*) huddled together on a branch and being visited by their very active parents, possibly with food.

Shoreline, old dune and coastal forest provided interesting changes of environment on this most enjoyable walk.



Golden pea (*Aotis ericoides*)



Close-up of flower of the golden pea (*Aotis ericoides*)

Postscript

The NE Field Nats activity for February 2011 was also a walk up Mt William. On that walk we saw helmet orchids (*Corybas sp.*), amongst fingers of yellow coral fungus, and mosquito orchids (*Acianthus sp.*)

Although it is said to be common on shaded hillsides throughout the state, none of us had seen many examples of *Goodia lotifolia* before. This is a small-to-medium-sized understorey shrub with distinctive trifoliate leaves and a yellow pea flower at the tips of the branches. That explains one of its common names, golden tip. The other common name, clover tree, is derived from its clover-like leaves. It was growing at an elevation of about 150 metres and upwards.

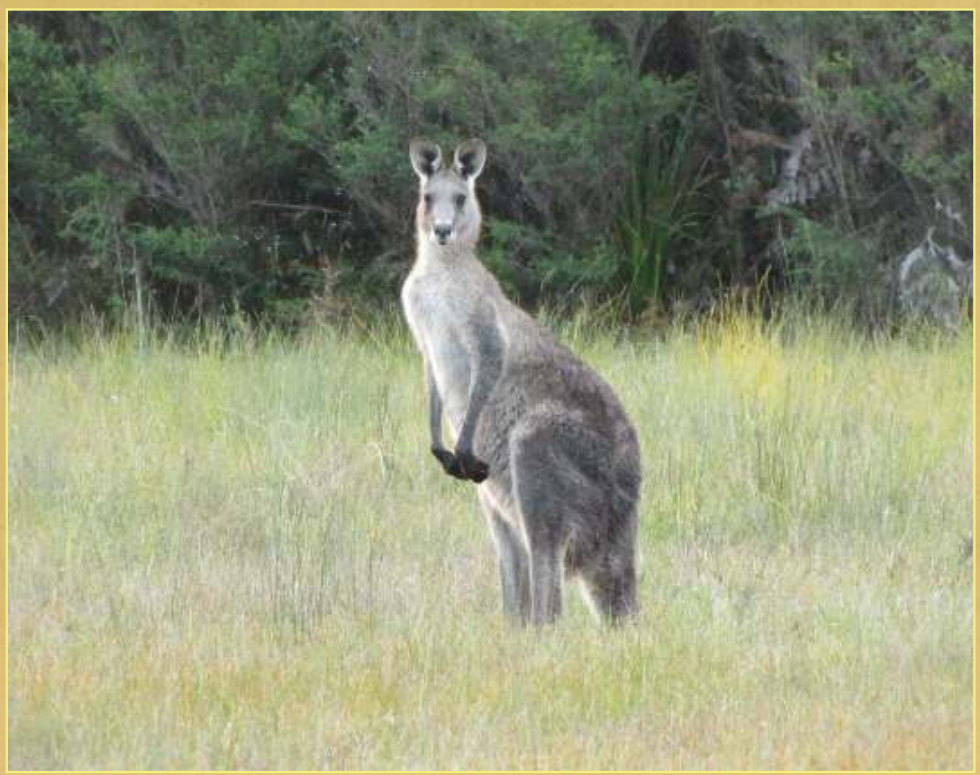
APPENDIX: THE CHEQUERED HISTORY OF THE FORESTER KANGAROO, by Lou Brooker

As noted at the beginning of this article, the forester kangaroo (*Macropus giganteus tasmaniensis*) is the Tasmanian sub-species of the eastern grey kangaroo (*Macropus giganteus*), one of three large species of kangaroo found on the mainland.

The subspecies status of the forester is based on differences in its skull and coat from the mainland population as a result of its isolation in Tasmania since the last ice age finished about 12 000 years ago.

Studies indicate that there is less than 1% difference in the mitochondrial DNA between the eastern grey and the forester.

The forester kangaroo is the largest of Tasmania's marsupials. Its coat colour varies from light brownish-grey to grey. A male forester can be more than two metres in height when fully upright, and can weigh over 60 kg.



The forester kangaroo *(Macropus giganteus tasmaniensis)* – Tasmania's largest marsupial

Foresters are social animals, often seen in family groups of three or more, and may occur in groups of more than ten.

They reach breeding age at approximately 2–3 years, and can live for over ten years.

They feed on grasses, herbs and forbs (defined as herbaceous flowering plants that are not grasses, sedges or rushes) mostly at dawn and late in the day. Their preferred habitat is dry sclerophyll forest with open grassland.

Prior to European settlement, fire had been an important factor in keeping up the numbers of forester kangaroos. Aborigines regularly fired the bush, thereby promoting lush vegetation growth at ground level to attract kangaroos so they could be hunted. In the park there are now vast areas of 'marsupial lawn' where the foresters can be seen, either resting or grazing.

As soon as European settlement of Tasmania began in 1803, so also began the demise of the foresters. They were hunted by packs of dogs, shot for sport, and killed to prevent competition for grazing of the grasslands by sheep. They also fell foul of poison baits laid for rabbits in the 1870s.

As a result of all these factors, and to a lesser extent land clearing, by the early 1900s the species was in serious decline. By 1950, forester kangaroos existed in only two areas—the Midlands and the North East. The forester's range had been reduced by about 95% in the ~150 years since European settlement.

During the 1970s, foresters were trapped and relocated to a number of other locations, including Maria Island, Three Hummock Island, Kempton, and Narawntapu National Park.

Surveys undertaken in 2002 estimated that there were approximately 1400 mature foresters in the national park and adjoining private land. Some experts consider numbers to be relatively stable in the national park, but there are concerns about a declining population on nearby privately-owned land. (It had been claimed that degradation of pasture in the Mt William National Park led to the forester kangaroos moving to adjoining private land, and this led to the subsequent culling of this kangaroo under permit on these lands.)

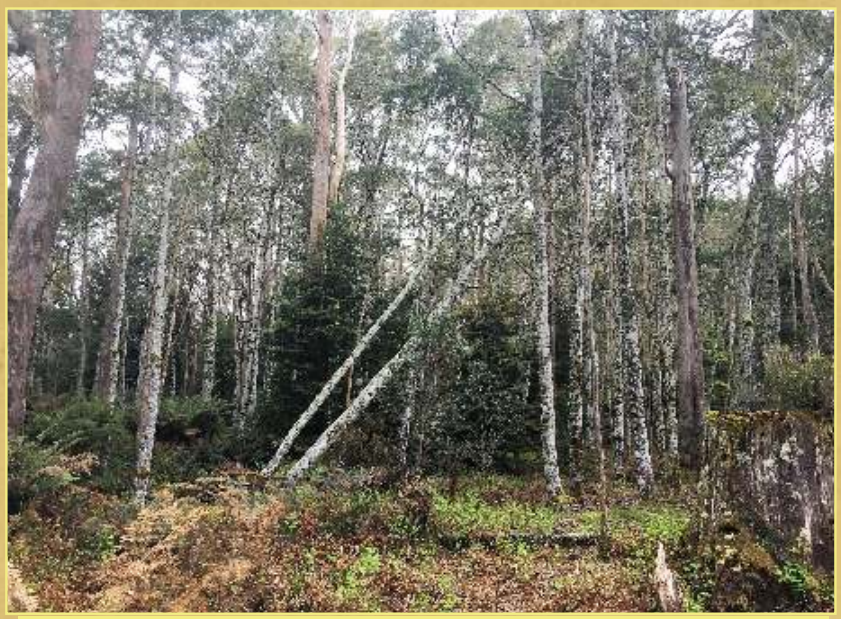
NOVEMBER 2018: WALK TO THE SUMMIT OF MOUNT MAURICE

Text by Chris Forbes-Ewan, with Alex Buchanan; photos by Chris Forbes-Ewan (CFE) and Lou Brooker (LB)

Led by Alex Buchanan, 18 members and guests took part in the walk up Mt Maurice.

In his pre-walk briefing, Alex told us that we would see three main types of forest—wet sclerophyll, mixed forest, and rainforest.

The wet sclerophyll forest consists largely of *Eucalyptus delegatensis,* known in Tasmania as white-top stringybark or gum-topped stingybark; the rainforest is mostly *Nothofagus cunninghamii* (known as myrtle in Tasmania); and the mixed forest consists of white-tops with a predominantly myrtle understorey.



Mixed forest, with silver wattle *(Acacia dealbata)* in the foreground and white-top stringybarks (*Eucalyptus delegatensis*) behind – CFE

Alex explained that the eucalypt-dominated forest 'came from the dry north' (i.e. is of mainland origin) while the rainforest is typically 'southern Gondwanan' in nature, dating back to the time of the great supercontinent Gondwana, which connected Tasmania to the other southern land masses until it started to break up about 180 million years ago.

Various factors influence the type of forest in this area, including soil fertility—wet, fertile soils promote rainforest, while dry, less-fertile soils promote sclerophyll forest.

However, of even greater importance is exposure to fire—without fire the eucalypts will not regenerate.

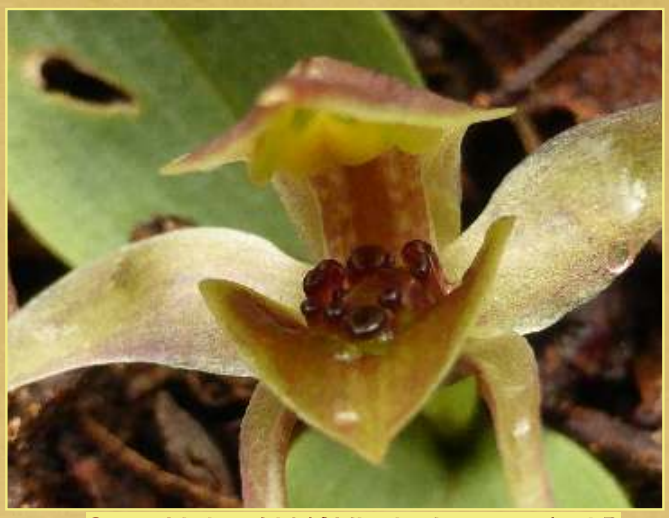
Following European settlement, the periodic firing of the forest by Aborigines to attract game for hunting ceased, so many eucalypt forests in wetter areas are no longer regenerating. Alex told us that white-top stringybarks have a lifespan of 300–400 years, so without man-made fires in the next century or two, much of the extant wet eucalypt forest will give way to the myrtle-dominated rainforest. This makes the rainforest the 'climax' stage (i.e. the ultimate stage) in the ecological succession taking place on and below the slopes of Mt Maurice.

Tramping past *Nothofagus* in the rainforest – LB

Similar ecological successions are occurring elsewhere in the north-east, including in the Paradise Plains area, as described in the North Eastern Naturalist of December 2015.

The attractive mixed forest contains not only eucalypts and myrtles, but many other species as well. Among others, we observed the typical Gondwanan plants celerytop pine (*Phyllocladus aspleniifolius*), sassafras (*Atherosperma moschatum*), Tasmanian pepperberry (*Tasmannia lanceolatus*), silver wattle (*Acacia dealbata*), waratah (*Telopea truncata*), cheesewood (*Pittosporum bicolor*), and various mosses and ferns.

We were also pleased to see some orchids in the wet sclerophyll forest, including the attractive green bird orchid *Chiloglottis cornuta*.



Green bird orchid (*Chiloglottis cornuta*) – LB

Richea scoparia (common name scoparia) – LB

We were lucky with the weather—although there were some dark clouds on the horizon, they kept their distance and we experienced only light winds and even brief intervals of sunshine. When the sun shone, the dappled light coming through the understorey made for a visual feast.

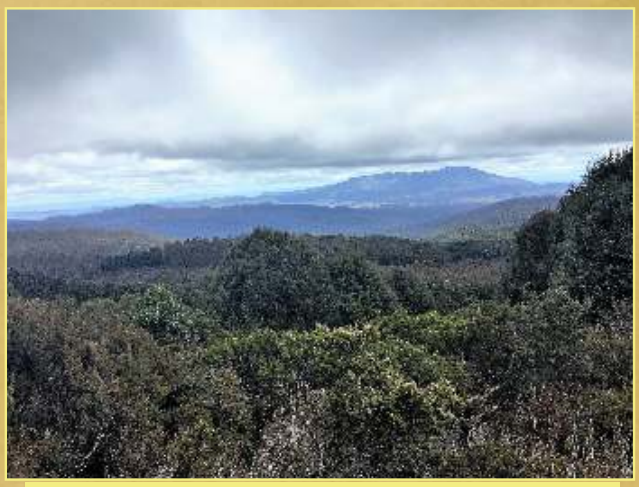
Mt Maurice has an altitude of about 1100 metres. Although not especially steep, the path to the top did present a challenge to some members—especially those with 'dodgy knees'. But to their credit, everyone rose to the challenge and completed the climb.

We stopped for lunch at the summit and admired the panoramic, 360-degree view and some more flora, including scoparia *(Richea scoparia),* a prickly plant that is endemic to (i.e. occurs naturally only in) Tasmania.

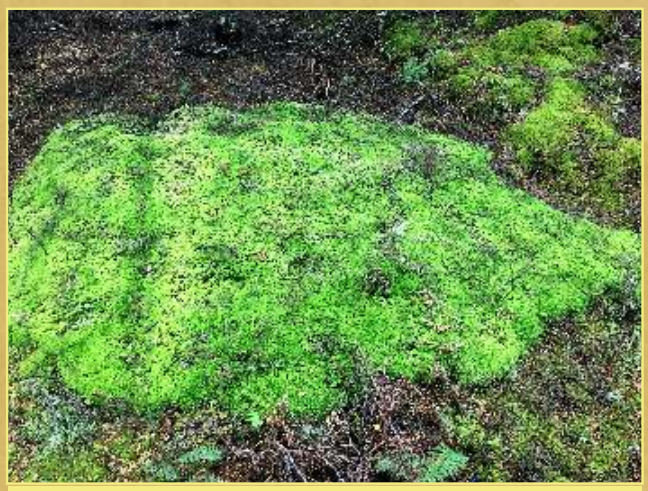
We were also surprised that the wind, which was coming from the north, was quite chilly.

As an aside, on the return journey several wombat droppings were noticed and the perennial question was asked—how do wombats make cube-shaped poo? A recent article in Live Science states that wombats are

One of several pools at the summit of Mt Maurice – LB



Part of the view from the top of Mt Maurice – CFE



Mound of sphagnum moss (species unknown) – CFE

the only animals able to do this, and describes how they manage to achieve the seemingly impossible. The article is available at: www.livescience.com/64119-wombat-butt-poop-cubes.html

After we had returned to the base of the mountain, Mike Douglas told us about the human history of the region following European settlement. An article about this will be in the Christmas supplement to this issue.

NE Field Nats Club is very grateful to Alex Buchanan for leading this walk, and for so generously sharing his knowledge of the natural history of the Mt Maurice region.

An ancient myrtle (*Nothofagus cunninghamii*) that spent most of its life in the open, hence the wide branching from the base – CFE