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: This issue contains articles describing two of our monthly activities, and an article about an ongoing conservation program that is taking place on the islands of Bass Strait.

Ian Cameron led the very enjoyable walk in Diddleum Plains last December, as described in the article starting on page 3. What isn't mentioned in the article is that Ian provided superb smoked trout to go with the Christmas BBQ that followed the walk.

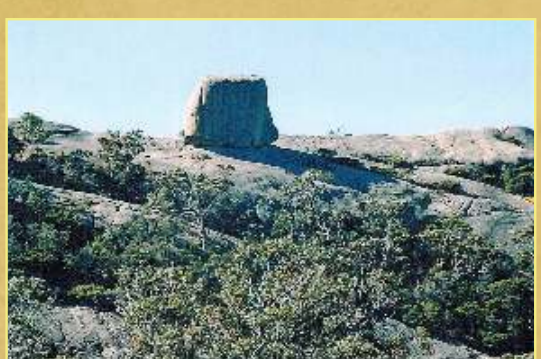
The article starting on page 5 describes the walk conducted in February to Five Mile Bluff. This was a repeat of a walk conducted eight years ago that was led by our current President, Ann Scott. Perhaps not entirely coincidentally, Ann wrote the article in the North Eastern Naturalist about the 2011 walk.

Finally, Karen Ziegler has written a fascinating article on the Herculean efforts being made to rid Bass Strait islands of African boxthorn. This plant was introduced during the early years of settlement to act as a wind-break and to provide feed for sheep.

NE Field Nats members Scott Bell and Revel Monro have contributed to these endeavours.

Photos of North-Eastern Tasmania

Hibbertia empetrifolia (tangled Guinea flower) – Lou Brooker



Cube Rock, Blue Tier – Mike Douglas

Sphagnum moss at Paradise Plains – Chris Forbes-Ewan

Program for March–May 2019

Please read the notice at the bottom of this program about the cancellation process

NOTE: The details of the activity for May are to be confirmed. An email message will be sent later about this activity.

MARCH 9th MUTUAL TO MOORINA

A gentle 5-km walk on a marked track along the banks of the beautiful Ringarooma River.
Meet at 10 am at the Mutual Bridge. Turn down Mutual Road 1 km north-east of Derby; drive about 2 km till you reach the bridge.
This is a one-way walk; a car shuttle will be arranged.
Contact: Lloyd Reeves 0477 695 048

APRIL 13th RIVER WALK – KIM AND PETER EASTMAN'S – NORTH SCOTTSDALE

Once again, this generous couple have agreed to host an outing of exploration at their place.
In April in the past we have found fungi galore here.
Meet at 10 am in Scottsdale at the corner of Tasman Highway and the North Scottsdale Road C832.
Bring your Fungi Flip or other references to share.
Contact: Jay Wilson 0408 561 512

MAY 11th FUNGI FORAY – SKEMPS [pending]

Skemps—located at Myrtle Bank, just south of the Sideling—is the Field Centre for the Launceston Field Naturalists Club.
Meet at 10 am at the junction of C828 and the Tasman Highway.
Once again, Fungi Flips and other references would be useful.
Contact Lou Brooker 0417 149 244

Cancellation of Field Nats Outings

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 Scott, Lou Brooker, or the activity leader. Note that phone reception is not always available, so you may have to try alternative numbers.

DECEMBER 2018: DIDDLEUM PLAINS

By Ian Cameron; photos by Susan McLenaghan

Editorial Note: This article was first published in the North-Eastern Advertiser of 23 Jan 19.

Our final activity for 2018 was an excursion from East Diddleum to the Huon Aquaculture Fish Farm at South Springfield. The walk commenced at the point where the soon-to-be-installed pipeline from the Camden Dam Project will cross East Diddleum Road.

Fourteen members, plus several invited locals, undertook the mostly downhill walk. The meandering route, which is approximately four kilometres as the crow flies, was actually closer to eight kilometres with all the bends in the road.

During the first 500 metres of the walk we passed through a five-year-old *Eucalyptus nitens* plantation, whose trees are already 15–20 metres tall, before crossing a tributary of the Upper Brid River.

The track follows the route which the Camden irrigation pipeline will take, and we were disappointed to realise that many beautiful manfern glades, myrtles and sassafras will have to be cleared to make way for the pipeline.

Headquarters Dam – visible between the trees

Despite the dry conditions, the keener fungi hunters managed to spot a number of cryptic species as well as the larger polypores.

Further down, the track meandered through mature native forest, with many large *Eucalyptus delegatensis*—local common name gum-top (or white-top) stringy bark—which are festooned with climbing clematis vines.

On one side the upper catchment of the Brid River can be seen, while a few hundred metres further down, the track overlooks the top end of the Great Forester Basin.

One interesting discovery was a large forest land snail, *Anoglypta launcestonensis*, a member of the Caryodidae family.

Coprinellus disseminatus – Fairy inkcap

Anoglypta launcestonensis – granulated Tasmanian Snail

We continued walking downhill until we could see the waters of the Headquarters Road Irrigation Dam directly below. When the Camden pipeline is complete, water from Camden rivulet will be discharged via a mini Hydro scheme, before being piped further towards the coast.

It was a shock to emerge from cool, shady manfern gullies into the radiata pine forest, which is currently being harvested from the slopes above the fish farm.

The walk concluded with a Christmas BBQ followed by a tour of the Springfield Hatchery and ponds.

Editorial Postscript: *Susan McLenaghan, who took the excellent photos shown in this article, informed me last month that the track and adjoining bush 'is now pretty much obliterated by the pipeline channel clearing.'*

Although I understand the need for progress, as a conservationist I find it disappointing that this often occurs at the expense of the natural environment.

Calocera guepinioides – Scotsman's beard

FEBRUARY 2019: FIVE MILE BLUFF

By Chris Forbes-Ewan and Ann Scott; photos by Penny Reeves (PR) and Chris Forbes-Ewan (CFE)

Our February activity involved a return visit to Five Mile Bluff, near Low Head, our previous visit there having been in February 2011.

The day was off to a shaky start because of severe wind and rain across northern Tasmania in the early morning. There was even talk of cancelling, or at least postponing the walk. However, 'creative procrastination' ensured that the deadline for cancellation passed before a decision could be made, so eight intrepid adventurers took part in this walk, which was led by Ann Scott.

Fortunately, the weather gods smiled on us, and the rain stopped just as we arrived at the meeting point in George Town.

The original intention had been to start at Bell Buoy Beach, the starting point for the 2011 walk. This would have meant an out-and-back walk of about eight kilometres. However, Ann managed to obtain permission to cross private property so we could start at about the halfway point.

With the weather fining up as we went, the walk along the beach was very enjoyable, although the beach was rather desolate and wind-swept. Looking to the west, we could see all the way to the Dial Range, near Penguin.

During the walk, the keen naturalists identified seven species of seaweed: *Phyllospora comosa* (common name crayweed); *Colpomenia sinuosa* (oyster thief or ballweed); *Scaberia agardhii* (warty twig seaweed); *Hormosira banksia* (Neptune's necklace); *Cystophora grevillei* (common name 'algae'); *Austronereia australis* (no common name identified); and *Macrocystis pyrifera* (giant kelp).

We also passed stones of a variety of colours that had been eroded by wave action over the millennia, so they were almost perfectly smooth.

Wind-swept beach on the way to Five Mile Bluff – PR

Wave-polished stones lining the shore – CFE

Hormosira banksia (Neptune's necklace) – PR

We also passed what appeared at first sight to be a fossilised dinosaur. On closer inspection, we decided it may actually have been a very clever sand sculpture!

Fossilised dinosaur or sand sculpture? You decide – PR

Lunch was eaten in near-perfect weather – PR

Looking west from the beach we could see Hebe Reef. As reported by Ann in 2011, this reef was named after the first ship to be wrecked there—while on its way from India in 1803, the Hebe foundered on the reef.

Ann also mentioned that the most recent ship to be wrecked on Hebe reef was the Iron Baron, which met its demise in 1995. At ~37 500 tonnes, this was the largest ship ever to be wrecked in Tasmanian waters. To make matters worse, the Iron Baron was carrying 350 tonnes of fuel oil, which spilled onto the reef, severely damaging the sub-tidal reef community over an area of about 3500 square metres. However, nature is resilient, and we saw no signs of continuing stress at or near the reef on this walk.

In 2011, and again on this walk, the two species of tree commonly called Boobyalla were observed. These are *Myoporum insulare* and *Acacia sophorae.*

Unfortunately, because we were concerned that the rapidly incoming tide might trap us, we didn't make it all the way to the headland that had the best examples of tessellated pavement and circular rock pools that were observed (and photographed) during the 2011 walk.

Brooding and atmospheric headland at Five Mile Bluff – PR

By the time we returned to the starting point, the clouds had disappeared and the wind had dropped, so we decided to have lunch on a sand dune, while basking in the sunlight.

Afternoon tea at the Pilot Station near Low Head was also a very welcome interlude before returning home.

This was an informative activity that was well-led, and greatly enjoyed by the eight members who attended.

RESTORATION OF SEABIRD HABITAT IN THE FURNEAUX GROUP BY REMOVAL OF AFRICAN BOXTHORN

by Karen Ziegler, President, Friends of Bass Strait Islands (FoBSI), Wildcare Inc.
Photos by John French (JF) and Karen Ziegler (KZ)

Roydon Island, in Bass Strait, is undergoing extensive restoration to remove African boxthorn – JF

Context

The Furneaux Islands in Bass Strait were occupied early during European settlement of Australia. Some sealers settled following the short-lived boom of the sealing industry. The islands were favoured because the water provided effective barriers to introduced stock, and they provided rich annual food stocks in the form of short-tailed shearwaters (aka mutton birds).

However, these natural resources were often exploited to the point of local extinction, or were intentionally removed because rookeries were seen as a hindrance to farming.

Many of these islands were naturally treeless, or the existing trees were used for firewood. This lack of trees led to the introduction of African boxthorn as a shrub that provided good shelter from the winds of the roaring forties, and allowed some green pick for sheep in drier conditions. The African boxthorn has proliferated on the islands, with seed being spread by both feral and native birds. Boxthorn is particularly common on islands that were heavily grazed by sheep and cattle, resulting in bare ground.

Work aimed at restoring the seabird habitat by removal of boxthorn was instigated by the Marine Community Network in the early 2000s. This network was hosted by the Tasmanian Conservation Trust and has evolved into a Wildcare 'friends of' group, with both local and agency support of the Tasmanian Parks and Wildlife Service. Volunteers donate time and effort to protect these little-known areas of Tasmania. Many bodies (both government and non-government) and individuals have funded this work, or have provided in-kind support.

2018 boxthorn removal program

In 2018 two fortnight-long trips were made to the Furneaux Islands by volunteers representing Wildlife Inc., one in autumn and the other in early winter. NE Field Nats members Scott Bell and Revel Munro participated in the 2018 program.

Both trips were partly funded by a grant from Birdlife Australia. Fortuitously, calm conditions at the beginning and end of each trip allowed passage to and from Roydon Island. However, strong winds during both working bees kept the two groups on Roydon Island, because sea conditions precluded boating to other islands. Follow-up treatment at Settlement Point—which hosts the only shearwater rookery on the main island, Flinders Island—occurred at the end of the second working bee.

The culprit – African boxthorn: JF

History of FoBSI boxthorn work and effects on seabird habitat restoration

Restoration work on the Furneaux Islands began in 2003, and this year marks the tenth year of work on Roydon Island to remove boxthorn.

The clearing has stimulated the re-establishment of native vegetation with surprising speed. The rapid recovery is attributed to soil-stored native seed being viable, and the disturbance created by clearing the boxthorn scrub being akin to the natural disturbance created by seabirds breeding on offshore islands.

The island's vegetation has evolved with seasonal disturbance. This annual disturbance has resulted in a resilient ecosystem. Ruderal species (plants that colonise disturbed ground) are common in seabird rookeries due to the high degree of seasonal disturbance. Examples are *Senecio lautus*, *S. capillifolius* and *Pelargonium australe.*

How the boxthorn eradication program design is referenced to seabird colonies and their breeding schedules

Primary treatment of boxthorn used throughout FoBSI's work in the Furneaux Group involves the 'cut and paint method', using secateurs and loppers for smaller plants, and handsaws and chainsaws for larger specimens. This is followed by the immediate application of glyphosate (e.g. Roundup®) herbicide, using a 500 ml/1.5 litre spray bottle with herbicide and water at a ratio of 1:1, with a small quantity of marker dye to keep track of

Lush *Pelargonium australe* (Austral stork's bill) growing in an area cleared of boxthorn the previous year – JF

which stems have been treated. Cut material is burnt when permitted by the land manager, Tasmanian Parks and Wildlife Service (TPWS).

Follow-up treatment within the first two years following primary treatment removes regrowth and seedlings. Further follow-up occurs every two years until boxthorn regeneration slows, and then can decrease to about every four years to ensure that any seed-introduced bird vectors are treated.

Cut boxthorn is burnt when permitted by TPWS – JF

Timing our work on the offshore islands depends on several factors. For those sites with shearwater rookeries, work occurs after seabird migrations, and prior to the breeding period for the little penguin.

We avoid summer, because our only summer trip to an area without shearwaters caused volunteers to experience many skin irritations and cases of Flinders Island Spotted Tick Fever. The period from the end of April to July provides suitable weather for burning cut boxthorn, is outside the breeding times of seabirds, and results in minimal exposure to Flinders Island Spotted Tick Fever.

Some people with urban or peri-urban experience of boxthorn providing a haven for little penguins have expressed concern that we are removing habitat and protection for seabirds, particularly for the little penguin.

However, fortunately there are no feral cats on the islands we have treated, and therefore a threat common in urban coastal areas is absent on the offshore islands. Also, because only limited areas can be treated at any one visit, or within the single season, only a small percentage of vegetation on each island is disturbed.

'Who are you looking at?' a slightly disgruntled-looking little penguin seems to be saying – JF

This work has been slow and laborious in relatively dense areas of boxthorn with approximately 25% cover, and a dozen people clear about one hectare of vegetation of boxthorn during each working bee.

Little penguin burrows and nests are common in the rehabilitated areas among succulent plants, including *Rhagodia candolleana, Tetragonia implexicoma*, *Carpobrotus rossii*, and both *Poa* and *Stipa sp.* tussock grasses, as well as under slabs of granite or limey sandstone.

The spread of boxthorn could have a significant effect on ground-nesting birds like the Pacific Gull. Nest site selection by the Pacific Gull involves the availability of a rock near the nest for the non-incubating bird to use as a lookout site.

Boxthorn bushes growing over and among rocky outcrops cover the rocks and exclude the gulls (B.I. Robertson *pers. comm*., 2006). Although this hasn't happened as yet, it would be very useful to have an ornithologist survey the Islands now treated, and compare the amount of boxthorn to data collated by Brothers *et al*. in the 1980s, when boxthorn was well established.

April 2017: High boxthorn cover before clearing – KZ

May 2017: Virtually no boxthorn after clearing – KZ

May 2018: One year on, almost continuous native ground cover has replaced the boxthorn – KZ

Repeated visits have allowed observations of bird activity on the islands, including that Cape Barren geese have increased in numbers where dense areas of boxthorn have been removed, as grazing habitat is enhanced by the clearing.

We have observed that the Cape Barren geese graze on seedling boxthorn plants while they are still just cotyledons, which can decrease the number of seedlings dramatically.

It has also been interesting to witness trends in little penguin comings and goings on islands over many visits. We now expect that in periods of good weather, especially after wild conditions, we barely see or hear penguins, as the majority are at sea. Conversely, when wild weather comes in, the birds come back to the island. This weather-related presence of the little penguin has made us realise how weather could influence census data for this species.

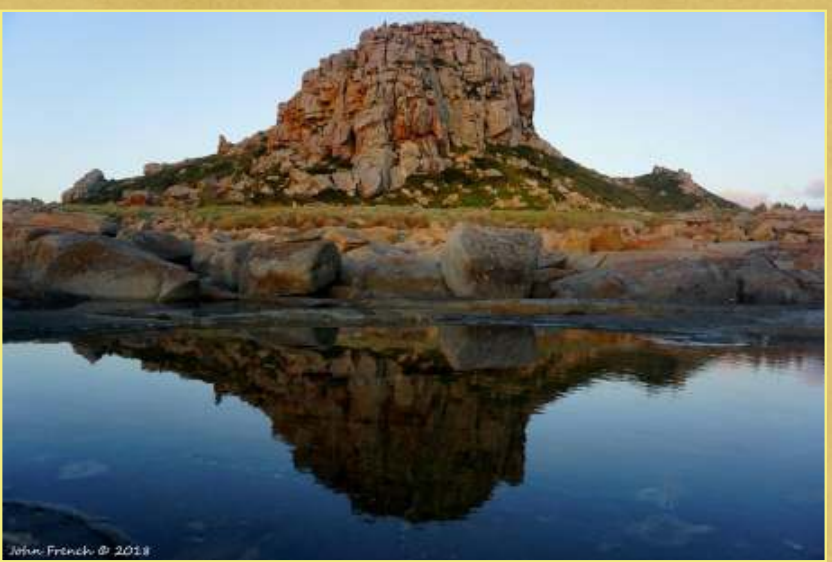
NE Field Nats member Revel Monro fires up the chainsaw in preparation for cutting boxthorn – JF

The importance of burning boxthorn was highlighted in the early years when we did not burn the cut plants, which were at times enormous. As they dried, these plants continued to provide feral birds—predominantly starlings and blackbirds—safe roosts. These feral birds are significant vectors for boxthorn seed. As a result, when seedling boxthorn grew up through these dead bushes it was a formidable task to get to the base of the plants to treat them with herbicide. It is now standard procedure to burn the plants.

On those islands that are predominantly tussock grasslands, the likelihood of re-infestation with boxthorn has decreased as the feral birds have minimal roosting opportunity. On one trip we observed a flock of starlings coming from Flinders Island as dusk descended, only to make numerous sweeps over the spot where their guano-laced roost had stood, and to eventually fly back toward Flinders Island.

Sadly, another woody weed has become more common over the years on the Furneaux Islands—mirror bush is being found occasionally on the islands to the west of Flinders Island.

However, in Franklin Sound, which is between Flinders Island and Cape Barren Island, some reefs are entirely covered with mirror bush. What is the impact likely to be for seabirds that use these areas to breed if this trend continues? This question is as yet unanswered—we have found that treating the mirror bush in the same way as boxthorn, i.e. with glyphosate, is not effective. Nearly all the plants re-shoot from the base.



Tranquil reflection of rock formation on Roydon Island – JF

The repeated visits have allowed estimation of the longevity of boxthorn seed in soil as greater than 10 years, although mass germination seems restricted to the first four years, but then only in some years.

In areas where there had been large infestations, occasional seedlings are still found up to a dozen years later. It is surmised that it is ground stored seed because outside those areas new plants are only very isolated.

The reasoning is that if the ecosystems are intact, and diverse and feral species are controlled, then all the native fauna (including birds) can thrive.

If you would like to track our work, please follow our Facebook page. And if you would like to be involved in a hands-on way you can *like* our Facebook page:

https://www.facebook.com/friendsofthebassstraitislands/

Alternatively, you can join Wildcare Inc. by going to https://wildcaretas.org.au/ and clicking on 'Join'. Then tick the Friends of Bass Strait Island group as an area of interest.


Unusual rock formation on Roydon Island – JF


Preparing to remove boxthorn – JF