The North-Eastern Naturalist

Issue 174 APRIL 2008.

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.

The Club conducts outings on the second Saturday of the month.

APRIL 12th

ST. PATRICK'S HEAD
Starting off a little easier ending in a fairly steep walk up to the 694m summit. We have all day to do it , and its advertised as only taking an hour each way. We'll go at field nats. pace, moderate fitness required. Rewarding 360º views at the top. I'll shout pancakes at the bottom.. Meet at 10am in St. Mary's somewhere near the Esk Main Road / Tasman Highway junction. Contact: Lou Brooker mob. 0417 149 244.

MAY 10th

MT. LITTLECHILD - BLUE TIER
In terms of mountain climbing, a fairly easy "peak" to conquer. 50% on tracks, 85% open, 15% rainforest without track, no steep clambers to Blue Tier's highest point. There and back about 5km.. Meet 10am at the 'timber lookout amidst the plantation' at the junction of the Tasman Highway and Lottah Road at Little Plain.
Contact: Revel Munro mob. 0448 542254

JUNE 14th

EXPLORING WATERHOUSE CONSERVATION AREA.
A fairly easy walk 6km across heath, woodland and rocky coast in the One Tree Hill area. Some cross country travel and clambering over coastal rocks. Meet at 10am at the junction of Waterhouse and Homestead Roads [signposted] Approximately 27kms from Bridport. Leader: Mike Douglas 63 561 234

JULY 12th

MEMBERS DAY - FILMS - VIDEOS - CLUB PHOTOGRAPH ARCHIVES..
Members are invited to bring films/ videos/ etc. and I'm hoping to have a Jeff Jennings contribution also. We have been promised some of Ern Armstrong's photos and can work on mounting and naming these, updating our collection and possibly scanning to keep in a digital library. Gather from 11am onwards at 482 East Minstone Road, Scottsdale. Bring something to share for lunch. Contact: Lou Brooker mob. 0417 149 244.

AUGUST 9th

ANNUAL GENERAL MEETING. [venue and speaker yet to be organised]

The Bornemissza Stag Beetle is currently being assessed by the Commonwealth Scientific Advisory Committee to determine how it should be classified under the Environment Protection and Biodiversity Act. It is thought this species might be listed as 'threatened'.

At the state level the beetle is listed as threatened under the Threatened Species Act 1995 but the recovery plan is still in draft form.

The problem in the North East is that Forestry has plans to log Coupe GC148A at Gould's Country, one of the few known habitats of the beetle. And logging without a final recovery plan is totally inappropriate.

The Forest Practices Authority has advised against logging this critical habitat but Forestry argued there was a commercial imperative to do so. The FPA has just buckled under Forestry's pressure.

Tim Morris asks "Does this make Forestry a "responsible land manager?"

Source: Media Release , Tim Morris MP, 6th February 2008.

Use of Tree Hollows by Birds.

In the latest Tasmanian Naturalist published at the end of 2007, the results of a survey which aimed to gather information on the use of tree hollows by birds in Tasmania was published.

The authors, aware that hollows are produced by slow processes involving fire, fungi and termites, were concerned that with so much land clearing, the depletion of tree hollows might cause concern for the conservation of hollow dependant fauna. There seemed to be a paucity of information available about Tasmanian bird species in particular, so the authors of the paper* distributed a survey to members of Birds Tasmania.

In terms of threatening processes the one process considered to be of major concern for most species was forestry activities. [its obvious isn't it?] Agriculture was also considered to be a major concern. There was also a threat perceived to be due to competition for nesting sites, especially for the orange bellied parrot. Other minor perceived threats received a mention, such as predation, hunting, windfarms and cars.

The responses to the survey showed that 29 bird species commonly found in Tasmania are likely to regularly use tree hollows for either nesting or roosting. However, only one species, the Australian owlet nightjar, is considered to be dependent on tree hollows for both nesting and roosting.
Nineteen species are considered to be dependent on tree hollows for nesting, while the remaining 10 species use tree hollows to varying degrees. Four hollow-using species are currently listed as threatened in Tasmania. They are the swift parrot, the orange bellied parrot, forty spotted pardalote and the masked owl. Respondents to the survey expressed further concern over the status of the yellow-tailed black cockatoos and musk lorikeets, their threat being the clearing of land .

* Amelia J. Koch & Eric Woehler.
Sorrce: The Tasmanian Naturalist. Number 129, 2007. published by Tasmanian Field Naturalist Club Inc.

Conservation Expo

A flyer received from the North-East Bioregional Network and NRM North gives information about a Conservation Expo Event to be held on the 26th April at the Portland Memorial Hall, St. Helens from 9am to 4pm.

"The aim of the Expo is to bring together organisations, groups or individuals that have a role in protecting, enhancing, restoring, improving or maintaining our natural environment…..it will provide a forum to share and showcase information to the public of N.E. Tasmania"

CSIRO publishing

'Water-wise House and Garden', 'Spirit of the Wedge Tailed Eagle', 'Science and Certainty', 'Shorebirds of Australia'. These are just a few of the titles from the CSIRO publishing list.
I have only just discovered this catalogue and bit the bullet and bought books from their secure on-line website for the first time at Christmas. The website contains many more titles than the hard copy catalogue displays, but at least the catalogue alerts the buyer to what is new.
Try browsing at www.publish.csiro.au

Book review : New Insect Book.

In his foreword to this new book, Peter McQuillan talks of how often he receives emails with pictures of insects accompanied by requests to identify them. Dr. Elizabeth Daley, author of *Wings* was amongst those who sent him photographs and he soon realised that her fascination for insects was more than casual.

The recently published book shows the great diversity of Tasmania's insects, some of which are survivors of environmental changes across millions of years. Tasmania has more threatened species of invertebrates than any other state in Australia; many were lost before they were even described.

In a pictorial presentation of very high quality, Daley has enables us to make the first stages of identification very easily, which can then be followed up using the w.w.web for access to the wider store of knowledge.

The over 600 photographs provided for 350 insects are accompanied by basic information on body length, distribution, habitat, food and flight period.
This book is a long awaited field guide, easy to read and easy to use. R.R.P. $49.95.

Eucaflip

We have purchased multiple copies of the Eucaflip [see last newsletter] and can sell them for $8.

Green Carbon

In a report on the role of ecosystems [i.e. natural forests] in carbon storage and the climate change problem, it has been reported that the default IPCC value for temperate forests has been grossly underestimated by TEN TIMES.
The researchers show that the average density of carbon for intact natural forests is about 670 metric tonnes of carbon per hectare not the 60 tonnes specified by the IPCC.

Source:Executiver Summary of paper by Professor Brendan Mackey, Dr. Heather Keith and Dr. Sandy Berry, A.N.U.

Federation Weekend - Liaweenee - March.

Most people know that Liaweenee often reports the lowest overnight temperatures and indeed, a minus 3 was reported only two days before the Federation Weekend and I noticed a second occasion with a minus factor the week after. But the weather for the get-together couldn't have been more pleasant.

The intension was to see and study a unique place rarely vis-

ited by field naturalists although popular enough with fisher-people. The weekend attracted forty field nats. from all over the state, many visiting the area for the first time. Four of our club members attended.

The Saturday outing began with a drive to Lake Ada where insects were the focus. We had with us Michael Driessen, World Heritage Area Zoologist, who has a special interest in the alpine grasshoppers.

Of the 62 species of grasshopper in Tasmania, 20 are endemic. This is thought to be a fairly high number, most having only been described in the last 50 years.

The Tasmanian velvet grasshopper, *Tasmanalpina clavata* was only described in 1992. It prefers these higher altitudes. We are 1150 m above sea level here.

The Southern Pyrgomorph, *Monistria concinna*, is a flightless grasshopper which occurs from sea level to higher altitudes. Although flightless, it has two sets of tiny wings, the underneath set being red. The rest of its body is delightfully patterned with black and green.

The air around us was filled with the singing of the Swamp Crickets, *Bobilla poene*. Although it seemed as though they were everywhere, it wasn't easy to see them. We were able to catch sight of the Tasmanian Hairy Cicada, *Tettigarcta tomentosa*.

Probably the most interesting was the Mountain katydid, *Acripeza reticulata*. The male and female are so different from each other, they look like two species. The female has the most striking blue and red stripes on her body seen only when she spreads her strange textured brown wings to fly.

The area around Lake Augusta is especially interesting. We had lunch here and spent a couple of hours exploring. On the lee side of the lake, there are lunettes. These are sand dunes formed from wind-blown glacial material such as dolerite fragments. This probably happened after the glaciers retreated 7000 years ago when the landscape was probably barren and the climate cooler. They are the only alpine lunettes in Australia and as such are extremely important geomorphological features.

Fen was found on the rocky parts of the lake shore. We were surprised to see some ancient pencil pines growing here, but by and large the vegetation consisted mostly of short herbs and cushion bushes. The graminoids here included Restio and Carex species. There were also Hypericum, Ranunculus, Danthonia and Drosera species.

The sand dunes were covered with shrubland communities, sparce in the fore-dunes with height and species richness increasing further into the dune zone. The most common shrub is *Orites revoluta* with much *Grevillea australis, Olearia algida* and the strong smelling *Ozothamnus hookeri* .

Over at the end of the beach we found alpine herbfield or marsupial lawn. Here, the tallest herb could be 5cm high, but most are below that height. They are intensively grazed when not inundated. There were Ranunculus, Hypericum and Isotoma species here.

Below are three different views from atop one of the fore-dunes with the water at varying levels. Photos were taken over three different visits.

Living with birds.

I had designed my native garden to try and attract as many different birds to it and attempted to have as many types of plants flowering throughout the year as possible. One of the most important features was the constant availability of water.

I feared when I left the garden for a couple of years that if no-one provided water daily, the birds might go elsewhere.

A few weeks ago I returned to the house to live. It didn't take long after I filled all the bathing stations for them to be discovered.

I guessed the cranky fans would be first to visit, and I was right. They love the water and will come and play if the sprinkler is on. They make a great fuss about their bath time.

The wrens seem to prefer to bathe in very shallow water. They don't really bathe, its more like paddling, standing in the water fluttering their wings.

The yellow throated honey eaters, on the other hand, seem to go for the full immersion. They get in and out of the bath a couple of times and then sit looking bedraggled on a branch afterwards.

The golden whistler seems to crouch in the water for ages. All you can see is head and shoulders. They take the type of bath I do….minus the book and the glass of wine of course.

The only time I seem to hear the grey shrike thrush is when he gives his one short staccato call either to announce his bathing session or to let other birds know to keep away. It makes me think of someone whistling when they're sitting on the long-drop at a camping site hoping they won't be surprised by another person.

During the first day of my return, a New Holland Honeyeater got stuck at the top window in the garage. His constant high pitched whistle of alarm concerned me but any attempts to help him find the door, only upset him more. He found his way out at dusk.

The next day I thought I could hear a cuckoo calling from inside the garage, but it was the call of a pardalote caught in the same place. His mournful little cry continued all day until he too found the door at dusk.

The swallows who had come back to their usual nest under the eaves at the back of the house, had managed to raise two families this summer. The second family looked close to fledging. There they sat, too big for their nest, their heads touching the eaves, their mouths opening in unison each time a parent swooped past.

As I lay in bed one morning, looking out the window I saw a yellow wattle bird sitting in a tree opposite the baby swallows. In a flash, he swooped at the nest. Then, as if from nowhere, there appeared five swallows who darted and squeaked at the wattle bird. He didn't reappear after that. But where had the other five swallows come from? I think it may have been the first family of the summer. They did an excellent job of guarding the babies and over the next three days, made constant attacks on me as I worked in the garden.

Another day, as I was gardening, my attention was caught by a squawking in the sky. A bigger bird, two in fact, performing an interesting sky dance. A couple of brown falcons were making this ruckus as they followed each other in circles above my head. They would occasionally come together in a very quick but quite beautiful coupling, all fluttering and falling about, then resume the pattern of circling again.

I've omitted to mention the yellow-cheeked black cockatoos. Thankfully, they only wreck one of my five banksias, and thankfully, they've only woken me once with their raucus screeching and chattering as they split seed cases for breakfast.

common. The moss is distinctive due to the spongy texture of the moss tendrils. The plant consists of a main stem that is sometimes quite hard, with short clusters of branches arranged along its length and forming a mop-like head. When these stems are growing densely together in a hummock, only the mop-tops are visible.

The growth rate of *Sphagnum cristatum* varies in Tasmania depending on altitude and shelter. At a site at Mt. Field [950m] the growth rate was measured at 0.4cm/year whereas at a sheltered site in Central Tasmania at alt. 530 metres, a rate of 4.2cm/year was measured.

Sphagnum has an extremely high water holding capacity – 15x its weight in water, making it a useful commodity in the nursery industry. It is favoured by orchid growers and is often used to wrap rose and fruit tree rootstock for transportation. Harvesting occurs on a very small scale and is closely monitored. Very little peat mining occurs in Tasmania.

We were shown two sites on this outing to Paradise Plains. The one described earlier is sheltered to the extreme, protected because of its uniqueness as a site of floral significance. The other, on the more open part of the plain, is exposed in the extreme, and still shows signs of damage from grazing in the 1980's. Here, the Sphagnum occurs alongside the watercourses and creeks - in particular, Newitt's Creek, a tributary of the South Esk River.

The site is interesting for an entirely different reason, though. These highland grasslands were man made - by aboriginals. Poa grasslands such as these are more common in the Northwest of the state. A lot of botanical "sleuthing" has been carried out on this site.* Observations have confirmed that in areas over 800m, rainforest, when burned is replaced by grassland. Archaeological studies have shown that such areas were used by Aborigines as summer hunting grounds. The firing was used to promote fresh growth, concentrating the game for ease of hunting. Although, as one can imagine, these fires were controlled so as not to destroy the environment the aboriginals depended on for survival, it is certain that extensive fires did occur by accident during hot, dry years. I saw a photograph of four overlapping fire scars on a eucalypt engulfed in a stand of myrtle 140 years of age, an indication of a dramatic decrease in fires since early last century. Fragments of charred wood found on this part of Paradise Plains showed that rainforest originally covered the area. The plains were a through-way for the north-eastern tribes as they went to meet the more easterly tribes to barter and exchange.

The conversation became quite passionate when talk turned to possible plans of continuing the burning here in the Paradise Plains Forest Reserve. But all around here the rainforest is beginning to recolonise and looks set to complete the process begun more than 5 000 years ago. It may be that in the light of current global warming concerns attempting to return this place to an early nineteenth century 'garden' is not an important enough reason to burn.

Thanks to Mike for identifying *Olearia algida*, the Kerosene Bush; *Trachymene humilis subsp. humilis*, the Alpine Wild Parsnip; *Planocarpus petiolaris*, the Eastern Whorled Cheeseberry; *Wahlenbergia saxicola,* the Alpine Bluebell and the *Persoonia meulleri*, found only in the Northeast.

Thanks to Sean for a most enjoyable and thoroughly unique experience.

Sources:
* Ellis, R.C. The Relationship between Highland Forest and Grassland in the Northeast.1985. *Biogeography of Northeast Tasmania.*
Forest Practices Board—Flora Technical Note Series No. 6. Draft version 2003.
www.dpiw.tas.gov.au—paper titled Sphagnum Moss—Sustainable Use and Management. J.Whinam [1997]

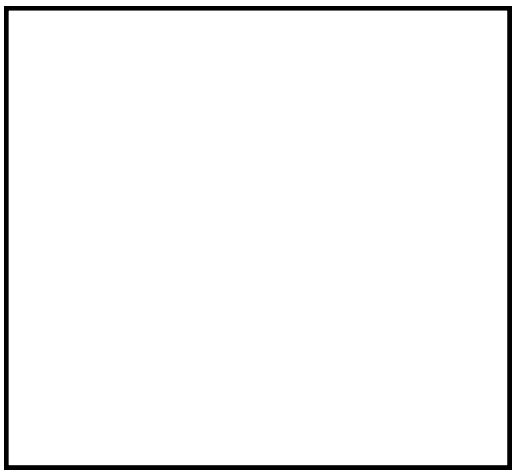
SPHAGNUM PEATLANDS—PARADISE PLAINS

We are standing in the middle of a most amazing piece of *Sphagnum* peatland. The ground is covered with rounded hummocks like a pale green and orange-green blanket. At the edges of the mounds and hollows, there are marked trails made by marsupials. We have tried to step only in these trails for fear of leaving our mark on this extremely fragile environment. This is a unique experience for every member of our group, for there is so little of this type of *Sphagnum* peatland remaining undisturbed in Tasmania.

What makes this site so precious is that over the top of these rolling beds of pure sphagnum moss is a forest of celery top pine, *Phyllocladus asplenifolius* of some 3-6 metres tall. The over-storey of 20 metre tall woolly tea tree, *Leptospermum lanigerum,* along with an occasional myrtle, *Nothofagus cunninghamii* provides the top canopy.

These bog mosses or mires or as they are alternatively named, make up such a small part of the landscape that they are ecologically unique. The total area in Tasmania is approximately 1300ha [or 0.0015%]. Most of the peatland community types are poorly reserved. In times past, sites were destroyed because of lack of knowledge, many by grazing, and still other areas were harvested for the horticultural industry. Typical clearing activities such as happened at one site in the north-east near the Ralph Falls car park, disturb and degrade these sensitive peatlands where even alterations to drainage and sediment flow can lead to destruction. Jennie Whinam, a specialist in *Sphagnum* ecology, has been instrumental in increasing the knowledge and improving the reservation status of peatlands in Tasmania since the late 1990's.

Thirteen different *Sphagnum* community types have been identified, most occurring at altitudes of between 600m and 1300m. Sphagnum community types range from heath and sedge peatlands to montane and snow-patch moss beds to habitats including blackwood, sassafras, melaleuca or celery top pine.



Sphagnum is strongly associated with waterlogged sites, high rainfall and low evaporation. And with peat formation. Peat comprises a layer of dead material from bog plants which is sometimes several metres deep. They contain important palaeoecological information such as vegetational sequences, climatic conditions and fire histories. The deepest peats in Tasmania, some in excess of 3m, indicate considerable antiquity. Radiocarbon dates from a mire at the Walls of Jerusalem indicate that peat accumulation began some 8,000 years ago.

Some *Sphagnum* mires have formed in places where drainage is slowed or blocked. The constant moisture, moderate aeration and minimal nutrient input seem necessary to their formation. Because of sphagnum's highly acidic chemistry and because the high water table promotes low oxygen levels, the fungi and bacteria which would otherwise decompose the dead plant material are not present, allowing the peat to build up. Coincidentally many of the sites where mires have formed in Tasmania were in formerly glaciated areas such as the Central Highlands. On the Blue Tier, there are excellent examples of tussock-sphagnum-mire communities which developed along the streams after the burning of the rainforest.

SPHAGNUM PEATLANDS—PARADISE PLAINS contd.

Peat forms at the rate of 2 centimetres every hundred years

Sphagnum peatlands contain one or more species of *Spagnum* moss. There are seven in Tasmania, *Sphagnum cristatum* being the most