

ARTICLES FROM THE LAUNCESTON NATURALIST

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April 1 - Helen Jones talks on her travels

Helen took us on a tour with her camera. Over the years she has visited many interesting places from Africa to see the gorillas and photograph them at close quarters to many parts of northern Australia in particular.

Her first Australian trip was with 'Go Bush' lead by John Sinclair and was to the well-known sand island, Fraser Island. We saw hanging lakes behind the dunes and whales in Harvey Bay.

A West Australian trip to the famed Monkey Mia to see and photograph the feeding of the local dolphins and of ancient living sub-tidal Stromatolites in Hamelin Pool, Shark Bay. The number of flowers and variety seen in Western Australia were spectacular as usual. As well as the flowers, we saw photographs of a wonderful grass tree in flower and another believed to be more than 1000 years old. This visit took in southern parts including Fitzgerald National Park with its amazing array of unique flora.

Another holiday was to mountainous Lord Howe Island with its extraordinary views. Helen commented that the smells of the island were wrong and it was soon learnt that it was because no eucalypts occur there.

A trip to China included visits to war cemeteries and museums and of course the Great Wall of China. Helen found South Korea a fascinating place as well.

Fungi in Australia was a favourite and here we saw blue, brown, yellow and pink specimens, some with gills others without, also stinkhorn and bird-nest fungi.

Several other trips were described and illustrated, visits to parts of Northern Australia, Cape York to Cairns and Cairns to Darwin, taking in some scenic wonders including incredible 'beehive' rock formations, the Normanton Purple Pub and oasis in the desert. Lorne Hill National Park. At Alice Springs Helen had photographed a bower bird nest at Olive Pink Reserve, the Katajuta Rocks and sunset at Uluru.

This was followed by photographs taken of some extremely old rocks of the Kimberley as well as some 'shots' of some of the gorges, the Mitchell Falls, Gibb River Road and the Ord River.

A visit was taken to see the huge flocks of birds at Fogg Dam on the way to Kakadu, as well as a visit to Lichfield National Park.

A very interesting and varied presentation that I am sure everyone enjoyed.

Marion Simmons

April 6 Field Trip - Mathinna Falls

After the usual Windmill Hill gathering we set off on our field trip to the Mathinna Falls taking the Midlands Highway to Conara Junction. 12 members and one guest met by the river near the Mathinna camping grounds for morning tea, a most beautiful spot. We then took a short drive over rough gravel roads to the Mathinna Falls car park. After the short

walk from there we came to the impressive Mathinna Falls with some members venturing to the top of this fall getting an even better view of surrounds. With the more experienced members not with us we struggled to identify plants and there was much discussion when 2 or 3 interesting plants were seen. As we were running a bit late we did not go to Evercreech instead returning on gravel roads through Blessington and White Hills.

Noel J Manning

April 19 - MACROINVERTEBRATE MONITORING AT SKEMPS

Order, Class or Phylum	Grade	Numbers: Creek below Bob's Bog 19/4/08	Grade x Weight : Creek below Bob's Bog
Acarina (Mites)	6	3	12
Coleoptera (Beetles)	5	4	10
Conchostraca (Seed Shrimps)	1	4	2
Cyclopoda (Copepods)	1	4	2
Diptera (True flies)	3	93	15
Ephemeroptera (Mayflies)	9	1	9
Plecoptera (Stoneflies)	10	8	30
Trichoptera (Caddis)	8	3	16
Signal 2 score			5.1
Number of orders			8

Comments

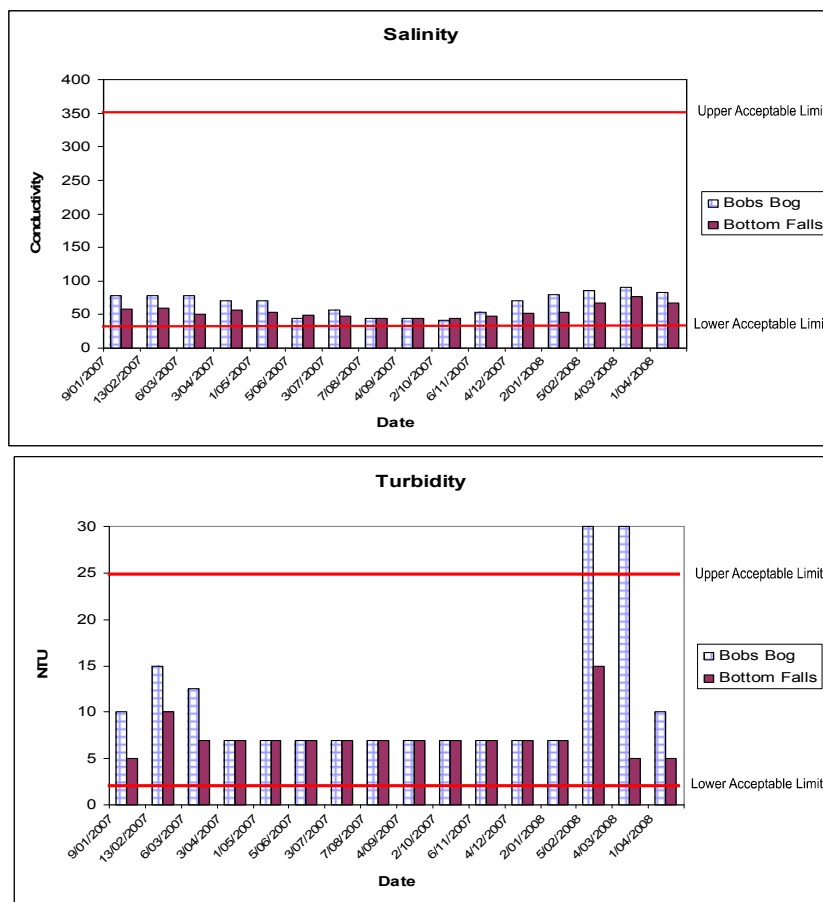
In October 2007, the Bottom Falls site was replaced by a site about half way between Bob's Bog and the Top Falls. The creek here is a riffle similar to that below Bottom Falls. The Signal 2 results from the new site are much the same as those from the Bottom Falls.

At Debbie Searle's suggestion, macroinvertebrate monitoring will be restricted to this site. The site is easier to access and sampling one site allows the sorting and identification of macroinvertebrates to be done more thoroughly.

Skemps Creek was not flowing in February and March and wasn't much more than a trickle when the macroinvertebrate sample was taken. This is probably why the Signal 2 score is a little lower than usual for this time of

year. The result is still satisfactory, however. A score in Quadrant 2 indicates a stream slightly degraded by an activity such as agriculture.

SALINITY AND TURBIDITY MONITORING



Comments

Probably because of the minimal flow, salinity levels were higher than in summer last year. Turbidity was high, particularly in Bob’s Bog. In March, the water level in Bob’s Bog was about a metre below the outlet. The high turbidity is more likely to be due to microscopic life than to suspended soil particles.

John Elliott

May 6 - John Skemp Memorial Lecture

In introducing the speaker, Gintaras Kantvilas, the Head of the Tasmanian Herbarium. John Simmons began with a short commentary on the origin and significance of the lecture to the Club, followed by an outline of the speaker’s qualifications and interests.

Gintaras gave us a fascinating glimpse into the world of lichens and some of the results of his 30 years’ work in the field. He began with a rhetorical question, one that I imagine most of our would have asked – ‘what is a lichen?’

In the plant world, together with mosses, liverworts, fungi and algae, lichens are classified as non-vascular or lower plants that lack a ‘plumbing system’, that is they absorb water and nutrients through their walls. They are involved in a unique association, the closest in the plant kingdom,

between two genera and are placed between algae and a fungus. They are not a liverwort, nor a moss, nor an alga nor a fungus.

Lichens are part of a unique and profitable association between a fungus and an alga. The association provides benefits for both as the fungus acquires food via the alga which makes sugars during photosynthesis and the alga benefits from the extra nutrients as well as providing a home for the lichen body. It seems that neither partner in this association occurs in a 'free-living state'.

Gintaras listed about six different types of lichens and their characteristics and differences. In the Tasmanian Lichen flora about 1000 species are named, a large number awaiting names and many yet to be discovered. This year 6 new species and 20 new records were recorded for the state.

Lichens occur pretty well everywhere in Tasmania, there are no exceptions. Think of the coastal rocks coated with orange lichen, tops of mountains are crammed with species and they occur below high water mark and in semi-permanent lakes and tarns. They will grow on any surface - to name a few - wood, bark, charcoal, living leaves (mainly in the tropics), ferns, trees and manmade substrates such as insulators, gravestones, garden concrete and roof tiles. To illustrate a point he told us he found 7 species, 5 of them new, in his own garden. The largest number of lichens are found in cool temperate rainforests. In wet eucalypt forest 50/60 species have been recorded from 500 sq. metre plots and the same in logging coupes 5/6 years after logging.

Gintaras showed us many beautiful pictures, taken by Jean Jarman, of the lichen species he referred to in his talk and there were many. As well as those species from Tasmania, they included others from different parts of the world, some reflecting connections with the ancient continent Gondwana, that is those that occur only in Tasmania or south-eastern Australia, New Zealand and South America; some with bi-polar distribution and others that occur in both the northern and southern temperate forests.

One of the major uses of lichens today is in environmental monitoring as they are extremely sensitive to even the smallest change in the environment. In the Northern Hemisphere particularly, their presence is used extensively to map pollution as the lichens disappear and die out in polluted areas.

Gintaras generously presented the Club with two volumes relating to Lichens, one is a quite technical volume and the other, more suited to amateur botanists and enthusiasts, is "Lichens of rainforest in Tasmania and south-eastern Australia" by G. Kantvilas and S.J. Jarman and illustrated with many photographs by the renowned photographer, B.A. Fuhrer. These books have been integrated into the Club library. Our president, Noel Manning, presented the John Skemp medallion, after Dr Al Pegler had thanked Gintaras for an inspirational talk. This was carried by acclamation.

Marion Simmons

May 10 - Field Trip to Hobart

Twenty LFNC members visited the Tasmanian Herbarium and the Royal Tasmanian Botanical Gardens in Hobart. During half of the bus journey

south fog and sunshine alternated. From our Oatlands tea stop onwards, sunshine prevailed.

The Herbarium is a part of the Tasmanian Museum but its location is on University of Tasmania land at Sandy Bay. Its specially designed building extends into a hillside. Staff rooms stand clear and in daylight, but the workroom and specimens store behind them are underground. This reduces temperature fluctuations for the latter.

Staff member Alex Buchanan gave a detailed account of the purpose and practical work of the Herbarium, well supported by the showing of relevant objects. In the general workroom he began with the pressing, drying, mounting and documentation of plant material. Essential field information includes date and location. Recent specimens have latitude/longitude and/or grid references added, while some now include GPS readings in their collecting data.

Paper sheets bearing processed specimens are lent for research studies. Many of these deal with plant classification, including publication in the *Flora of Australia* series. Among other uses are plant geography and changes of plant distribution in time.

Duplicate material is exchanged with other Herbaria. Non-local donations can be quarantined and fumigated, if necessary.

Herbarium staff members will identify native plants on request. A basic set of reference sheets can be used by visitors to check identities for themselves.

In the specimens store we changed from the Herbarium's "hands on" activities to its "knowledge bank". Here specimen sheets are arranged in order of classification and kept within files, on compactus shelving.

As with most official Natural History collections, the Tasmanian Herbarium safeguards **type specimens**. Ideally each plant species should have a Holotype, i.e. one specimen which is the undisputed standard example of its species. Several kinds of supporting **type specimens** exist also.

Other sheets of special interest bear historical material, including Australian plants collected during expeditions led by Captain Cook. Well-prepared plant specimens, if protected from damp and insects, should stay in good condition for a long time.

During the LFNC visit of about 1.5 hours, Alex Buchanan answered many questions. John Simmons gave a well deserved vote of thanks.

At about 1 pm the group was bussed to the Botanical Gardens for BYO lunch and free time until departure at 3 pm. Exploring the Gardens in warm sunshine was a pleasure. My own stroll included the Tasmanian native plants section, autumn colours and gorgeous chrysanthemums in the Conservatory. A smooth journey home completed a great day.

Alison Green