

Latrobe Valley Naturalist

WILDLIFE HEALTH UNDER THE MICROSCOPE

The guest speaker for our March meeting was Pam Whiteley from the University of Melbourne's Faculty of Veterinary Science. Pam is responsible for wildlife health surveillance in Victoria, investigating reports of sick and dead animals from free-ranging populations in order to understand what is normal and to detect changes. She explained the importance of identifying the cause of morbidity and mortality, including risk factors that may influence the transmission of disease, so that agencies can respond quickly to prevent its spread.



The mite that causes mange in wombats is thought to have been introduced on an infected Red Fox (Photo: rocklilywombats.com)

Wildlife health issues may pose a threat to human health, the health of domestic animals, and the health of our biodiversity and ecosystems. Some wildlife harbour diseases without showing symptoms, but when these diseases are transmitted to another species, they can be deadly. This often occurs when a virus and host move to a location where closely-related local species have not co-evolved with the virus. For example, the human herpes virus that causes cold sores is deadly to macaques, which are very closely related to us, and almost all macaques carry a similar herpes virus that can be fatal to humans. It is often difficult to detect diseases if the host is unaffected. Waterbirds such as herons and cormorants are known to carry Murray Valley Encephalitis, which is transmitted to humans via

mosquitoes. Both the birds and mosquitoes are unharmed by the virus, but they can both be tested to monitor its occurrence and distribution.

Our border controls are the first line of defence in preventing infectious diseases entering Australia, but many make it through. For example, a disease called Paramyxovirus affecting fancy breeds of pigeons imported from overseas has made its way into populations of feral pigeons in Melbourne and will likely affect native pigeon populations in the future. Pacheco's Disease occurs in parrots overseas but is threatening



Psittacine Circovirus Disease causes beak and feather deformities in parrots (source: www.birdclinic.net)

to invade through illegal trade in exotic birds. This disease causes damage to internal organs including the liver and kidneys, and birds often die within a few days. With Australia's high diversity of native parrots, one can only imagine how devastating this disease could be if it was introduced here. During March-June 2013, a bacteria called *Pasteurella multocida* was found to be killing large numbers of coots, teal and swans in Lismore, Victoria. This was the first time such an outbreak of this pathogen had ever been seen in Australia, though it is known to cause mass mortalities in waterbirds and domestic poultry in the United States. Once such diseases have entered the country, they can be difficult to control, but if an abnormality can be detected quickly, action can be taken to identify the cause and reduce the

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risk of spread. Sometimes sick individuals can be removed from a population, but where this is not possible, other methods may be employed. For example, if people avoid feeding birds, the risk of diseases such as Salmonella, Mycoplasma, Trichomonus, Chlamydia and Necrotic enteritis spreading through bird populations are greatly reduced. These diseases are transmitted when one bird inadvertently consumes the faeces of an infected individual while feeding. Psittacine Circovirus Disease, which causes deformities in the beaks and feathers of parrots, is spread in a similar manner, and is a particularly tough pathogen to kill, persisting for years in nest boxes.



The intestinal worm *Globocephaloides trifidospicularis* causes a swollen head and anaemia in sub-adult kangaroos, but only occurs when kangaroo densities are very high (source: hermonslade.org.au)

Diseases and parasites occur naturally in wildlife populations, many of them species-specific. They act as a natural source of mortality in regulating population size, especially when numbers become unsustainable due to a shortage of resources. But any observed illness or death of an individual may be worthy of note because much is still not understood about less common species. Even when the cause of death seems obvious, such as the animal being predated or hit by a car, there may be a reason why that animal was too slow or disorientated to escape death.

Pam's organisation relies heavily on information provided by the public. She encourages us all to closely observe the wildlife in our local area so that we may notice abnormalities in their appearance or behaviour. Signs of problems are often missed because an animal may deteriorate quickly, with its body subsequently rotting or being consumed by scavengers. Some illnesses, such as Botulism, are difficult to detect unless the behaviour of an animal was observed prior to its death. This disease usually affects waterbirds, resulting in a steady paralysis of the legs, then the wings, with it eventually being unable to hold its head up and subsequently drowning.

If unusual behaviour or deaths of mammals, birds, reptiles or frogs are observed by members of the public, they should contact Pam on 0400 119 301 or pamw@unimelb.edu.au. She will advise on whether the laboratory is interested in examining the animal to determine its cause of death. All dead individuals of less common species (eg. sugar gliders, antechinus, bandicoots) are of interest. The specimen should be picked up using a plastic bag (inverted to avoid touching the animal with bare hands), placed on ice or cold packs and placed inside two more layers of plastic bags (fresh specimens are better than frozen). Details including date, location, species, number affected, number at risk/healthy should be recorded on a piece of paper and placed in a plastic bag to be sent with the specimen. Traralgon and Bairnsdale DEPI, and some specialised wildlife veterinary practices, will accept dead specimens and package them appropriately for postage to Pam's toxicology laboratory at Werribee. Postage is paid for by the laboratory, and Pam will keep donators updated on the analysis of their specimen.

Tamara Leitch

MORWELL NP - MOTHING AND SPOTLIGHTING 26.4.2014

Marilyn and Dean Hewish from Bacchus Marsh, and Ken Harris, arrived at Morwell NP at 5.30pm and set up their respective mothing sheets and generators.

The BBQ was cleaned and ready to go as people arrived. The weather had cleared so we were able to move around and view the first insects and moths arrive as we enjoyed our BBQ meal.

David Stickney led a spotlighting walk where we saw 3 Koalas, 2 Ringtail Possums and a Greater Glider. Also heard were a Sugar Glider and an Owlet Nightjar.

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On returning to the picnic area a Brush-tailed Possum was spotted as it climbed down a large gum tree and posed for photos.

It proved to be a slow night for nothing but some interesting specimens were found, (particularly for Marilyn, coming from the western side of Melbourne), and the many photos taken revealed their intricate patterns and colourings.

It was a chilly but fine night under the stars and a wonderful opportunity for the 15 people who participated to appreciate some of the myriad night life of this wonderful forest.

The Club's thanks go to Ken Harris for hosting Marilyn and Dean for the weekend and taking them birding to Sale wetlands and Holey Plains on Saturday morning.

(Marilyn was our Friday night guest speaker).

Marilyn has only been interested in moths for the past 5 years but it has become a consuming affair. Marilyn has already become quite expert at identifying them and her first book is now at the printers. We wish her well for the next volume!

Meryl Cracknell

SEANA AUTUMN 2014 CAMP AT MARYSVILLE

The autumn SEANA camp was held over the extended weekend of 2-5 May 2014, based at Camp Marysville and ably hosted by the relatively small Upper Goulburn FNC. Camp Marysville was originally a cluster of cottages occupied by Marysville residents displaced by the disastrous 2009 fires. The addition of a spacious meeting/dining hall has made it a good venue for large group gatherings.

A major theme of the camp was the recovery of the natural environment from the fires. The Saturday night speaker, Stephen Smith from DEPI, gave an excellent overview of efforts to monitor the fire impacts and assist the recovery of the flora, fauna and regional infrastructure.

Personal circumstances meant that Gill and I were unable to participate in much of the program. However we did join an all-day Sunday excursion in the Cathedral Ranges State Park, led by Grant Stinear and John Dowling. A highlight was a close sighting of a female Lyrebird near the Farmyard, which apparently got its name from the variety of imitative calls heard from the valley below! We climbed both the North and South Jawbones Peaks, passing through several changes of plant communities and keeping moving in the decidedly bracing conditions. A bonus in the afternoon was the visit to the beautiful home and garden of a local apiarist who gave us a quick rundown on the production of their cold extracted Australian bush honey.

The SEANA AGM and subsequent meeting of the newly elected management committee saw the re-election of Russell Green (FNCV) as President, yours truly as Secretary and Denis Thurgood (FNC Ballarat) as Treasurer for twelve-month terms.

Philip Rayment

REPORT ON BUSINESS MEETING HELD 19.5.2014

General Meetings & Excursions

Friday 27 June: Whale Watching – Geoff Glare

Saturday 28 June: Uralla Reserve, Trafalgar. Meet there at 10am.

Friday 25 July: Winter Members' Night – various club members to speak.

Saturday 26 July: Traralgon Railway Reservoir Conservation Reserve. Meet 10am at Hickox St carpark.

Botany Group: Saturday 5 July: Fungi ID with specimens from 31 May Fungi Foray at the Tims' residence, Yarragon Sth Rd, Yarragon Sth, at 10am. Contact: Jackie Tims ☎ 5634 2628

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Bird Group: Moe WWTW and Edward Hunter HBR. Meet by 9.30am at WWTW. Please contact Alix in advance if planning to go. Contact: Alix Williams ☎ 5127 3393, alixw@spin.net.au.

Finance – Cash Mgt Trading A/c \$3597.91. Term Deposit \$14,148.46.

Business Arising, Correspondence & General Business

Botany microscope – discussed at botany meeting. Would like to investigate further as members need to know more about options, potential use and costs before making a decision.

Storage at Uniting Church – Marja is looking at suitable books to fit into space available.

LVFNC Website – John S has prepared a new membership form with direct debit details.

Sustainability Gippsland Website – John S will apply for our club to be included in their membership, and we can advertise our program and events on the site.

Naturalist production – surveys so far (34) indicate strong preference for bi-monthly edition, and 23 have opted for an email link. Comments and suggestions will be considered when making decisions. Some committee members have opted to download copies next month to solve shortfall in magazines due to extra members. Some recipients of free copies will no longer receive them, Surveys due by end of month (May).

Data projector problems – John P and John S have informed us that our data projector is good quality and does not need replacing, and it is not recommended we purchase a dedicated laptop as software would need to be updated regularly to support speakers' presentations. John P will run a workshop for interested committee members at 6.30 Friday, to explain how to set it up properly, and will provide some instructions and labels on ports.

DEPI Planned Burning Database – will respond that we still wish to be sent notifications.

Club mugs for speakers' gifts and for sale – we have 3 left, so should order more. Same type can still be purchased from C R Hose. Cost is \$6.85 each with minimum order of 72 mugs at \$493.20.

Eric Lubcke Reserve – Edith Ewen gave a talk to the Morwell Girl Guides last month about the reserve as they were doing a service picking up rubbish and seeing how the reserve grew again after the fire.

Lorna Long will be unavailable for a couple of months after a surgical procedure. Gill will collect the mail in June, and David S in July.

Reminder: June-August BM times 3pm.

Energy Australia Yallourn planting Morwell West Drain Diversion. World Environment Day 5 June. Community involvement welcome. Flyer tabled.

Registration form and details for Portland SEANA camp 26-29 September will soon be arriving. Marysville SEANA Camp attended by 5 members. SEANA office bearers remain unchanged, so Phil is still Secretary.

Lichens of Morwell NP brochure – total cost could be about \$2700 for 500 copies, \$2900 for 1000, \$3000 for 2000. Plan to put in \$1500 from Friends of Morwell NP, then try for grants or loans for the balance. LVFNC would consider grant of \$500, and SEANA also offer small grants.

Conservation Matters

EHHBR & Wagners Paddock proposed development – EHHBR have given a presentation at Council and are giving another. Sent email with their presentation which highlighted fire concerns and effect on dwarf galaxias. We were invited to present only hours before. David S attended meeting; mention was made of our continued objection.

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Strategic Bushfire Management Planning workshop, Neerim South meeting 7 May attended by Jackie. Planning appears to be more targeted to likely areas where fires may occur than the blanket approach in the past.

SPEAKERS FOR JULY will be various club members.

FOR THE DIARY

BOOK LAUNCH AND EXHIBITION

Jean Galbraith: Writer in a Valley by Meredith Fletcher and the exhibition 'Jean Galbraith and Friends: a Shared Passion for Nature', Sat 26 July at Latrobe Regional Gallery Morwell. See below for details.

SEANA SPRING CAMP PORTLAND

Friday 26 to Monday 29 September, hosted by Portland FNC. Information and registration forms should be arriving soon.

WELCOME TO NEW MEMBERS

Zac Billingham & Bree Cawsey, Malvern E

Bob Ellen, Erica

Lorraine Norden, Tarwin Lower

Cheryl and Fergus O'Gallagher, Upper Beaconsfield

Melanie Wiltshire, Boolarra

We wish all a long and happy association with the club. My apologies for my tardiness in some cases.

INVITATION TO BOOK LAUNCH

Meredith Fletcher's biography of Jean Galbraith is being launched at the Latrobe Regional Gallery in Morwell on Saturday 26 July at 1.30 for 2pm. There is also an exhibition of objects, manuscripts and photographs from the Jean Galbraith Papers in the State Library of Victoria, showing how she became a botanist and writer. In addition botanical artist Betty Conabere's wildflower paintings and Edna Walling's wildflower photographs will be displayed as part of the exhibition.

RSVPs are essential – please contact the Latrobe Regional Gallery: ☎ 5128 5700, or email: lrg@latrobe.vic.gov.au

This is the same day as the club's excursion to TRRCR, but being winter we will probably not want to linger too long there after lunch, so there should be ample time to get to the Gallery for the launch.

THOMSON RIVER FISHWAY AT HORSESHOE BEND

Martin Fuller, CEO West Gippsland Catchment Management Authority, gave a very interesting talk on the proposed Fishway to be constructed at Horseshoe Bend.

The Horseshoe Bend Tunnel is four kilometres from Walhalla on the Thomson River. It was built over 1911 and 1912 to drain the water from the river at Horseshoe Bend. This was to create essentially a dry riverbed to allow for alluvial mining. This tunnel gained heritage status in 2002.



Image courtesy of David Stickney LVFNC

Fish migration is extremely important in the lifecycle of many of our native fish, including the vulnerable Australian Grayling.



Australian Grayling courtesy WGCMA

The Fishway is designed to be a low flow fishway that will have minimal impact on the surrounding environment at Horseshoe Bend. It will provide fish passage for Australian Grayling so that the juveniles can migrate upstream in the Spring – Summer period and the adults can migrate downstream in April – May.

The four main features which will allow fish passage around Horseshoe Bend are:

1. Splitting the flows between the tunnel and around Horseshoe Bend. A 60% to 40% split is proposed minimising the turbulence in the water.
2. The design of a fishway entrance, at the tunnel outlet, to create the hydraulic conditions to attract fish past the outlet.
3. Passage over existing rock riffles with provision of resting pools for the fish.
4. A constructed fishway through the rock bar near the tunnel inlet.

The effect of the flows being split with strategic rock placement (in the second image) to reduce turbulence is shown below. This will encourage fish to come past the tunnel outfall and around Horseshoe Bend.

The constructed fishway through the rock bar will have a length of 210m, a top width average of 7.4m, a base width of 2.5m with eight resting pools.



Images courtesy of WGCMA

When completed this project will give access to over 85 km of habitat in the upper reaches of the Aberfeldy River and it will create habitat connectivity between the Gippsland lakes and the Alpine area. It will also optimise the benefit of the 18GL environmental water flow entitlement as well as protecting the Horseshoe Bend tunnel and its heritage values.

The following day 14 members and friends assembled at the Horseshoe Bend car park and walked to the river. Below are Wendy Savage's observations on the botany of the area.

Some of the group compiled a plant list on the excursion, which is available if anyone is interested. The overstorey of eucalypts were mainly Silvertop and Narrow-leaved Peppermint interspersed with a few gums (Mountain Grey and Manna Gum). Hop Goodenia and kunzea were very common, and there were also cassinias, an attractive fine-leaved version of *Acacia mucronata* and *Putenaea daphnoides*. There were three interesting little shrubs we saw on the way down the kilometre long zig-zag track to the river. One was the Small Crowea, *Crowea exaltata* with pretty pink flowers. Ken Harris spotted a single flower on a narrow leafed little shrub and identified it as Narrow-leaf Logania, *Logania albiflora*. He had only seen this species once, many years ago. We puzzled over what appeared to be a tetraetheca, although I had my doubts as the leaves did not seem to be in whorls. Later when I examined it with a hand lens, the stems and leaves were covered in gland-tipped hairs which made it Glandular Pink-bells, *Tetraetheca labillardierei*. Its description includes that it is not regularly whorled.

The bush on the walk down was virtually weed free, but along the river was evidence of the earlier gold mining settlement with weeds such as periwinkle, a mint which I thought was Apple Mint, gorse, broom and some cape ivy. The River Lomatia *Lomatia myricoides* grew here as well as the River Bottlebrush *Callistemon seiberi* and the Myrtle Teatree *Leptospermum grandifolium*.

Ken Savage (Plants by Wendy Savage)