



Understanding
Our Natural World
Est. 1880

Field Nats News No.266

Newsletter of the Field Naturalists Club of Victoria Inc.

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August 2016

From the President

There have been many FNCV activities over the last month. Unfortunately, due to circumstances beyond my control, I have not been able to participate in most of them. Happily I was able to attend the book launch for Dr Gary Presland's "Understanding our natural world" which was held in conjunction with a celebration of the Club's 20th anniversary of moving into the Blackburn premises. The Hall was packed and it was a most enjoyable occasion. Those who organised the event are to be congratulated on the effort that guaranteed its success. I purchased a copy of the book and can recommend it as an essential addition to the library for all naturalists. It is very difficult to put down once you start reading it because it is about all of us. It is clear that conservation and protection of the environment has always been important to the Club.

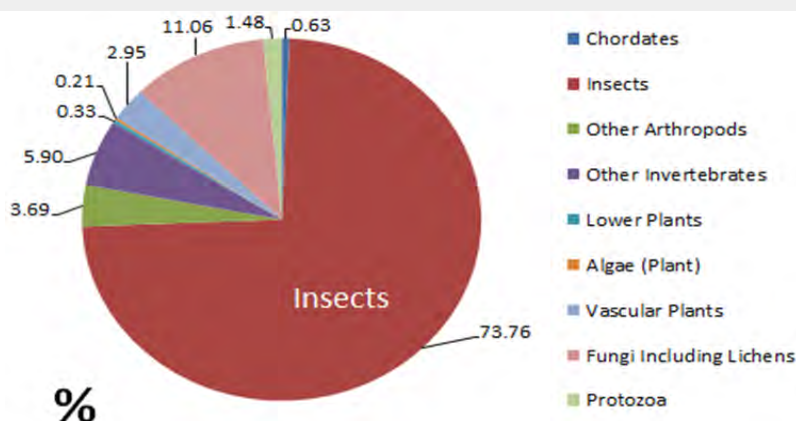
During my month of forced respite, I did however spend a great deal of time reading and in consequence found myself reflecting on the true nature of biodiversity and how it is perceived by most people. The following is a useful starting definition of biodiversity and embraces the ecological dynamic of life forms. "Biodiversity is the variety of all living things; the different plants, fungi, animals and micro organisms, the genetic information they contain, their inter-relationships and the ecosystems they form."

In his book, "Planet of the Bugs", Scott Richard Shaw discusses the implicit human (vertebrate) centrist bias and mythology that permeates ideas of biodiversity. It is seen in the naming of geological ages. The ages of fishes, amphibians, reptiles and mammals are well known. Admittedly the Cambrian is often termed the age of invertebrates; but only because there were no obvious ancestral vertebrates present. It might have been more appropriately called the age of arthropods or perhaps trilobites. The status of the tiny Burgess Shale fossil *Pikaia* as a potential, notochord bearing, vertebrate ancestor, might one day encourage the use of the "age of *Pikaia*" for the Cambrian. If we look at biodiversity today, ignoring bacteria, it is clear that we are living in the age of arthropods; notably insects. There are undoubtedly enormous numbers of arthropods and other invertebrates at risk of extinction from human activity and the changes we have made to the planet over the past 200,000 years. Most invertebrate species may not have even been identified let alone monitored and will seldom appear on a "save the" badge in the manner of pandas, koalas, whales and penguins. (Wetas, a stick insect and the occasional beetle or butterfly may be possible exceptions.)

The ecological importance of the smaller, cryptic plants and animals and fungi is enormous and they support the higher trophic levels of the Earth's ecosystems. They are often overlooked since, as humans, we have a preoccupation with vertebrates; particularly the cute furry and feathery kind. Bacteria are unlikely to have too many supporters, despite their important role. Admittedly many are small and "out of sight" is simply "out of mind".

Most, if not all organisms have complex, critical symbiotic relationships with other species. We humans share our bodies with thousands of other organisms which may

Ignoring bacteria the relative percentages of species today might look like this:



The deadline for FNN 267 will be **10 am on Tuesday 2nd of August 2016**. FNN will go to the printers on the 9th with collation on Tuesday 16th.

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CALENDAR OF EVENTS

All meetings are held at the FNCV Hall, 1 Gardenia St. Blackburn at 8 pm., unless otherwise indicated. On days of extreme weather conditions, excursions may be cancelled. Please check with leader.

AUGUST

Monday 1st – Fungi Group Meeting: *Workshop - How to carry out data-rich surveys for rare fungi like the Tea-tree Fingers. (Hypocreopsis amplexans).* Speaker: Sapphire McMullan-Fisher, Senior Mycologist at Royal Botanic Gardens and current Fungimap Coordinator. Contact: Virgil Hubregtse 9560 7775

Tuesday 2nd - Fauna Survey Group Meeting: *Behind the scenes of natural history exhibitions.* Speaker: Dean Smith, Taxidermist, Environmental Creations. Contact: Sally Bewsher 9752 1418

Sunday 7th – Fungi Group Foray: *Cathedral Range State Park.* Meet at 10.30 am at Ned's Gully car park (Mel Ed 37 Map X910 T9). Contact: Virgil Hubregtse 9560 7775

Monday 8th – Marine Research Group Meeting: Contact Leon Altoff for details: 9530 4180 AH; 0428 669 773

Saturday 13th - Fauna Survey Group Survey: *Nest-box checking at Long Forest.* Contact: John Harris 0409 090 955; wildlifeexperiences@gmail.com

Sunday 14th – Juniors' Group Excursion: *You Yangs trip.* Meet 10.30 am at Serendip Sanctuary. Contact: Claire Ferguson 8060 2474; toclairef@gmail.com

Tuesday 16th—Collate FNN 267. Starting about 10.00 am. Some folk come a little earlier. All welcome. Contact Joan Broadberry 9846 1218

Wednesday 17th - Microscopy Group Meeting. Contact Philippa Burgess for details: 0409 866 389

Thursday 18th – Botany Group Meeting: *Food plant mimicry in orchids.* Speaker: Andrea Fitzpatrick. Contact: Sue Bendel 0427 055 071

Monday 22nd - FNCV Council Meeting - 7.30 pm sharp. Agenda items and apologies to Wendy, 98779860 or admin@fncv.org.au

Tuesday 23rd – Day Group Meeting: *New Zealand South Island: Geology for the Tourist.* Speaker: Rob Hamson. Meet at 10.30 am for coffee and a chat. Speaker at 11 am. Contact: Joan Broadberry 98461218

Wednesday 24th – Geology Group Meeting: *Geology of Western Tasmania.* Speaker: Dr Peter Jackson, meteorologist, geologist, and educator (previously at La Trobe University and now at U3A Nunawading) with extensive experience in SW Australian mineral deposits. Contact: Ruth Hoskin 9878 5911

Friday 26th – Juniors' Group Meeting 7.30 pm. *Party Night (insect theme)* Bring a plate of party food and dress for the theme for a costume parade, games and prizes!. Contact: Claire Ferguson 8060 2474; toclairef@gmail.com



The policy of the FNCV is that non-members pay \$5 per excursion and \$3 per meeting, to contribute towards Club overheads. Junior non-member families, \$4 for excursions and \$2 per meeting.

Members' news, photos & observations

We always have space for member photos and natural history observations. Please share with us what you have noted in your daily life, travels or garden. Email: fnnews@fncv.org.au by the first Monday in the month.

Welcome
Welcome

Warmest greetings to these new members who were welcomed into our club at the last Council meeting:

Lily Tomlinson, Wesley Tomlinson, Jennifer Robertson, Lydia Fysh, Rachel Fysh, Stuart Fysh, Alison Fysh, Stephen Tate, Arjuna Kem, Josephine Tomolo, Joanna Fulton, Herbert Harris, Lyn Meredith and Lara Webb.

A Double Celebration

On Friday 8th of July, 2016 almost exactly 20 years after the official opening of the FNCV's premises in Blackburn, over 90 FNCV members and friends crowded into the hall for a double celebration. As well as marking the 20th anniversary of our Blackburn home, Dr. Gary Presland's book, *Understanding our natural world. The Field Naturalists Club of Victoria 1880-2015* was launched.

Our first speaker, Ed Grey who, as secretary to the FNCV (1991-1994), took part in the search for a permanent home for the Club, spoke of the era in which meetings were held in the Herbarium Hall and Club administration and production of *The Victorian Naturalist* took place in a room in the Astronomer's Residence of the Royal Botanic Gardens. The search for a suitable building took over two years, but eventually a former Scout Hall near Blackburn Station was found, inspected and purchased. Rob Wallis, FNCV president (1995-1997) during the period in which the hall was being renovated to fulfil the Club's requirements, spoke via a video recording. He reminded us that the Club's building fund had benefited from several generous bequests and went on to detail the process of designing and refitting the interior of the building. One of the biggest challenges was making sure the stumps were strong enough to take the weight of the library compactuses. Alan Reid, who formally opened the Club's new home on 7th of July 1996 and was also unable to attend, sent a written message. Alan recalled many places which hold a special meaning in his life, one of which is the FNCV's Blackburn home. His words were: "The last **special place** is where you're sitting now, the **memorable event** was the 7th July 1996 and the inspiring people are yourselves. Because a large part of my naturalist life has focused on Blackburn, I was thrilled when the FNCV invited me to open the new premises."



Gary Presland signing a copy for Linden Gillbank.

The celebration then turned to Gary Presland's much anticipated history of the FNCV. Gary's remarks included insights into how the book came to be written. The idea for a history of the Club was first suggested by Linden Gillbank during her presentation to the symposium held in 2005 to mark the FNCV's 125th anniversary. Sheila Houghton (1928-2014) nurtured this seed. Sheila has contributed an enormous amount to the FNCV, including 26 years as librarian and archivist and was a driving force in the refitting of the building. Sheila was made an honorary life member in 2006. Gary has dedicated his book to her memory: "Without her meticulous work in the FNCV archives over many years, this history could not have been written." Another important step was the scanning and digitising of back copies of *The Victorian Naturalist* which Gary arranged in 2008.

The history was officially launched by Associate Professor Don Garden, President of the Royal Historical Society of Victoria. We also welcomed Whitehorse councillors: Gary's wife, Helen Harris, Raylene Carr and the mayor of Whitehorse, Phillip Daw, who was presented with a complimentary copy.

Special thanks go to John Harris who chaired the celebration and to Su Dempsey and Barbara Burns for arranging a wonderful spread of refreshments.

JB



Fungi Group

FNCV FUNGI GROUP FORAY 15 May 2016

MORTIMER RESERVE, BUNYIP STATE PARK

Riparian Forest and Scrubby Foothill Forest.

The picnic area became the focus of activity for the group with a number of species being found. The reddish caps of *Laccaria* spp were common through the grass and in the moss were scattered orange caps of the Little Pin *Rickenella fibula*. Smooth, brown, ball-shaped fruit bodies of the puffball *Lycoperdon scabrum* were also scattered here and found elsewhere during the morning.

A large group of coral fungi growing in a circle in moss kept photographers busy. The fruit-bodies showed a range of development from small whitish young specimens, to the larger pale fawn and finally to the mature fawn-grey specimens (to 55 mm tall). All

were branched with most fruit-bodies showing the characteristic dark tips to the branches. It was identified as *Clavulina vinaceocervina* (photo above) and it was interesting to see that the younger fruit-bodies were pale in colour and that the colour then graded through pale fawn to the mature fawn grey *Russula iterika* (photo below) was spotted in the grass. This is one of the green-capped *Russulas*, the other is *R. viridis*. Both have similarly-coloured caps but the two species can be separated by the colour in the cap and the type of gills. The cap of *R. iterika* dries pale brownish-orange, *R. viridis* has white in the cap and does not change colour on drying, and the cream-coloured gills of *R. iterika* are bifurcate (have u-forked) gills near the stem (*Larger Fungi of South Australia* by CA Grgurinovic 1997, p 73-76). After a discussion, when we saw the bifurcate gills, we all agreed that it was *R. iterika*.



Clavulina vinaceocervina

Photo: Reiner Richter

Two of our iconic specimens were not found. One, the Artists Conk *Ganoderma australe* was no longer growing on the large fallen log at the beginning of the nature trail. It's huge size last year must have been the last gasp before the trunk rotted away. The second species was the Gold Tuft *Cryptotrama aspratrum* originally found off the track on a fallen log, where again the log had been 'eaten' away. We had seen them in the same place on every foray since 2004.

Small, fallen Eucalypt branches were a substrate for three interesting fungi, two in the genus *Hypocrea* and one *Bisporella*. The yellow cushions to 4 mm diameter with obvious dark ostioles showing at the surface were *Hypocrea victoriensis*. Our specimens were young and had not started to fuse into patches. An earlier name given to this species included *H. sulphurea* (see Fuhrer no 497), but this is now considered a European species and moreover grows on *Exidia* species (jelly fungus with ostioles). The name *H. victoriensis* is now accepted as the Australian name. It grows on wood or bark and is not associated with *Exidia* species. We also saw pale red-brown cushions dotted with dark ostioles and thought they might have been *H. rufa*. See Bruce Fuhrer, 2011, *A field guide to Australian fungi*, no. 496. However, the references (*Studies in mycology* 2006; 56: 135-177) state that the ostioles in *H. rufa* are yellowish to brown, almost invisible or as indistinct darker dots, but note that the colour of *Hypocrea victoriensis* (photo p6) ranges from yellow to pale red-brown so they were *H. victoriensis*. The widespread genus *Hypocrea* is estimated to contain 171 species that grow on rotten wood and are often associated with other fungi. Anamorphic genera associated with *Hypocrea* include *A. cremonium*, *Gliocladium*, *Trichoderma*, and *Verticillium*. *Hypocrea* was circumscribed by mycologist Elias Fries in 1825. Due to changes with in the code of nomenclature, the

Russula iterika Photo: Richard Hartland



genus *Trichoderma* has been proposed for conservation over its teleomorph *Hypocrea*. This means that all species with both a *Hypocrea* and *Trichoderma* name will be officially known by their *Trichoderma* name, and any species only described as *Hypocrea* will be transferred to *Trichoderma*.

The *Bisporella* species, found near the picnic ground, was discussed over lunch. On a small piece of wood there were numbers of tiny to very small (to 3 mm diameter) lemon-yellow discs of a *Bisporella* species. The question was whether these were *B. sulfurina* or *B. citrina*. However, the size (to 3 mm) of the larger discs confirmed that it was *B. citrina*, not *B. sulfurina* which is smaller, the discs only reaching 1 mm diameter being much rarer. *B. sulfurina* also fruits in close association with a pyrenomycete, which shows as a blackish layer of tissue found in close proximity to the brightly coloured discs. *Bisporella citrina* is a common, larger species, not associated with a pyrenomycete. It typically fruits gregariously in colonies on bark-free hardwoods. There is a third *Bisporella* sp., *B. pallescens*, which forms small, whitish cups on hardwoods, and like *B. sulfurina*, fruits on the surface of another fungus, a conidial forming taxa called *Bispora antennata* (California Fungi *Bisporella sulfurina* MycoWeb). However, according to the Atlas of Living Australlia *B. pallescens* has not been recorded in Australia.

Unusually, we saw a number of *Amanita* species today. *Amanita peltigera* in the picnic area was a sturdy species with a densely coloured grey-brown cap, a white margin and flat

(Continued on page 5)

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scales. It is distinctive in having a whitish stem with a loose sheathing volva at the swollen base and no ring on the stem. Towards the end of the nature trail we came to an open area (more deer damage) in which there was a cluster of *Amanita* species including the very distinctive pale apricot-coloured 'cottage loaf' shape of young *A. ochrophylla*. As this large species matures, the apricot cap with patches becomes flatter and the buff-apricot stem with its large double membranous ring high up and bulbous base is revealed. Nearby were *Amanita ananiceps*, the species that drops white scurfy material on the ground falling from the mealy ragged fragments around the cap. This species which has a grey coloured cap can be differentiated from the similar *A. farinacea* which has a white cap, and also drops a powdery meal. The group has not seen *A. ananiceps* since 2009 where it was also found here. Of course, there were several types of grey *Amanitas* for which we were unable to determine the species.

There were some species new to me. In the picnic area on the ground were some *Coprinus*-types. The caps were quite plicate and going grey, and the young were paler, more of an apricot colour. The mature specimens looked somewhat like *Parasola plicatilis* whose grey-brown cap is also heavily pleated with a smooth central disc, but it is more delicate and solitary, and *Coprinellus disseminatus*, which has a similar colouring, fruits in large numbers, usually near the base of trees. Virgil Hubregtse had a close look at the cap and noted that it was covered in fine brown scales. This suggested *Coprinus virgicolens* that was first described by Cleland 1934 (J.B. Cleland, *Toadstools and Mushrooms and other Larger Fungi of South Australia*. South Australian Government) who says "Characterised by a membranaceous plicate pileus with some scurfy granules and a slightly raised brown disc, purplish brown narrow gills, a white stem with a small bulb, spores which are dark fuscous brown and the attachment to rotting twigs" hence the name (*L. virgula* – little twig; *colens* – dwelling). (*Coprinus virgicolens* is the name accepted by ICAF, RBG rather than *Parasola virgicolens*). Torbjorn von Stokirch noted an *Inocybe fibrillosibrunnea*, which is very distinctive with a small shaggy reddish-brown cap to 15 mm, gills with a yellowish hue and a pale reddish-brown stem.

Clitocybula sp. 'streaky yellow' growing on roots at the base of a tree was recognised by Richard Hartland from the book by Gates & Ratkowsky (2014, Genevieve Gates and David Ratkowsky, *A Field Guide to Tasmanian Fungi*) who describe it thus: "The white-spored decomposer genus [*Clitocybula*] is reminiscent of the genus *Clitocybe*, the differences being microscopic rather than morphological." And they describe *C. sp.* 'streaky-yellow' as "A common species growing in clumps on wood, usually at the base of stumps. The greyish yellow depressed cap (ca 4 cm diam) has a dark brown centre and is made up of radiating brown fibrils and small scales. The sub-decurrent gills are creamy yellow to yellow and the stipe (ca 5 cm long, ca 5 mm wide) is brownish. The characteristics of these two new-to-me species are quite distinct and we should be able to recognise them again.

Paul George, Reiner Richter and Torbjorn von Stokirch saw the uncommon *Lactarius wirrabara*. "*Lactarius wirrabara* is another striking Australian mushroom in which the milk chocolate brown stem and cap contrast with strong yellow gills. The cap 44 can grow to 6 cm. It begins as unevenly convex and becomes undulate as it ages meaning that the margins or edges are wavy. The brown top is easily washed out and becomes blotchy. The stem is the same brown as the cap and is central, cylindrical and finely felty. The yellow, medium spaced gills are sometimes stained pink in older specimens by the weeping of drops of white latex caused by bruising and their intercalated structure becomes obvious. This means that the gills are attached to each other via wavy cross-connections at their base" (web site – FungiOz – Australian Fungi & more).

A single *Boletus barragensis* was also seen by some forayers along the nature trail. This is a red bolete – red cap, yellow tubes with red pore openings and a red stem, slightly reticulate and expanding towards the base. To date this year we have not seen many boletes.

Thanks to Richard Hartland, Virgil Hubregtse and Reiner Richter for contributing to identification in the field, which adds to our knowledge of the species. Thanks to the photographers Paul George, Pat Grey, Richard Hartland, Bill Leithhead, Reiner Richter and Torbjorn von Stokirch who supplied many photos to select for the report. Thanks also to Paul George, Richard Hartland, Torbjorn von Stokirch and Reiner Richter who sent some images of their sightings.

Pat Grey

ADDENDUM TO TOORONGO FALLS 1 May 2016

Paul George found a small (to 30 mm) Cordyceps, *Cordyceps militaris*. This species has an orange fertile head on which the perithecia appear as small orange pimples scattered over the surface and which merges smoothly into the stem. The fruit-body emerges below ground from an insect chrysalis or mummified caterpillar. Often more than one fruit-body will be present on large insect hosts (Tony Young, 1994. *Common Australian Fungi, a naturalist's guide*. Pub University of NSW Press). This is an uncommon find for Victoria and the first time it has been noted for our group. The small *Cordyceps meneristitis* is differentiated by an orange-tan to brick red cap, a distinct demarcation from the stem and the fact that it develops from a parasitised underground beetle larva, probably Darkling Beetles, possibly *Meneristes australis* and species of *Lepispilus*.



Hypocrea victoriensis

Photo: Torbjorn von Stokirch

Extracts from SIG reports given at the last FNCV Council Meeting

Fauna Survey Group: The meeting on 3rd May was attended by 29 members and visitors. The speaker for the night was Cara Sambell (nee Brammar). Cara spoke on her research into bird species and populations in the western part of the Strzelecki Ranges. This is a highly modified landscape overall and the differences between natural forest, farmland and towns was explained.



A survey was commenced by nine members in the Northern Grampians National Park around Dadswell's Bridge and Golton with the deployment of 18 remote wildlife cameras, which were retrieved in June. We also conducted bird surveys along 500m fixed transects in the mornings and spotlighting along the same transects each night. We recorded Sugar Gliders and Brushtail Possums by spotlight, and were disappointed that the Swift Parrot eluded us by day!

Juniors' Group: On Sunday 15th May we had a group of 31 attend our photographic practical workshop with Wendy Clark at Valley Reserve in Mount Waverley! We had a variety of camera types that we were working with and Wendy shared her knowledge with us on camera settings, focus, lighting and composition. We tried photographing nature close up and low to the ground, and we found many things to photograph including fungi, moss, trees, flowers, birds and of course each other! Thankfully we had a lovely morning with low wind and the children also enjoyed playing and picnicking in the fabulous new playground. A special thanks to Wendy for teaching us and everyone who attended.

Our May meeting was well attended with our guest speaker, Max Campbell, speaking on the topic "A bug's life." He showed us fascinating video footage of several bugs eating aphids under microscope. We also had a slide show of the best photos taken by the children at our May photography excursion with Wendy Clark.



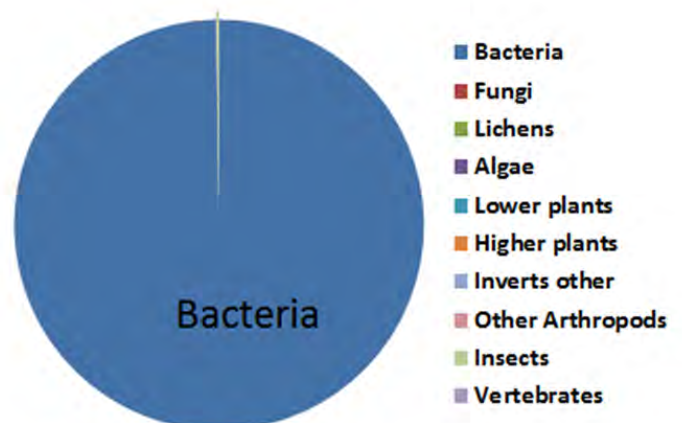
(Continued from page 1) From the President

represent as much as 10 to 80% of the cells in our bodies. Bacteria, protozoa, fungi and algae in particular have formed intricate and complex symbiotic relationships and dependencies with other organisms. Close examination reveals that there is nothing simple about biodiversity. Once ecosystems are destroyed they cannot be replaced; they are too complex for any human technology or current knowledge to recreate. If they go, we lose the ability to study them and it is impossible to restore or replace ecosystems when the species involved are unknown and the relationships not understood. With so much of the planet's forests, oceans and waterways already destroyed or seriously compromised the only sensible approach would be to preserve what little is left. A brief look at Google Earth very quickly confirms the level of environmental devastation that has already occurred. (It will of course be greater in reality because the maps are always slightly out of date.) It can be argued that other, different ecosystems may develop from the ruins, but they may take millennia to evolve and stabilise, if indeed there is recovery at all. Tree plantations are not forests and do not and never will support the enormously complex biodiversity of old-growth forests.

As naturalists it behoves us to ensure that we continue to investigate biodiversity and pass on our knowledge to the wider community; in particular the younger members who are going to inherit the consequences of today's mistakes. It is also important to engage actively in the processes of regulatory change relating to environmental protection and conservation of biodiversity. The FNCV is frequently invited to participate in stakeholder groups for public feedback/consultation on proposed changes to such legislation. It is important that we continue to do so as an organisation and as individuals. (Parks Victoria is currently seeking feedback on the Lake Boort Draft Management Plan)

In spite of all of the evidence that suggests that we are in the middle of a sixth extinction, greed, ignorance, self-interest and sheer population pressure are continuing to weaken legislation that should protect our environment. Our preoccupation with saving particular species, usually vertebrates, often on the basis of aesthetic appeal has seriously skewed the approach of conservation towards species that have an attractive, albeit superficial, appeal to humans. Any plans to re-introduce organisms to areas in which they were previously present need to include thorough assessments of the full biodiversity of the sites if success is to have a chance. Once a key species is lost from an area, the biodiversity will be changed and may not support its later reintroduction. If fungi require the presence of a specific mammal in order to reproduce they may also vanish with those mammals. Re-introducing the mammals might be pointless without the fungi they need to eat. Similarly plants need their mycorrhizal fungi to survive. Understanding the true nature of biodiversity is critical to protecting the planet's ecosystems.

...with bacteria included, it might look like this.



Max Campbell



Microscopical Group

Vanessa Craigie 15th June 2016
'Translocation of Spiny Rice-Flower
Pimelea spinescens

Vanessa has worked for DELWP for over 20 years, specialising in threatened species and communities, particularly native grassland species, with interests in marine and coastal sciences. Vanessa is currently working on the Victorian Biodiversity Plan.

Pimelea spinescens or SRF (photo right)

- small and very slow growing shrub 50 – 100cm
- small white/pale yellow flowers April to August
- subdioecious, although some evidence of hermaphroditism
- very long lived, lifespan estimates of 50 to 100 years
- mature plants support very large thick taproot greater than 50cm long
- endemic to Victoria, in lowland grassland, grassy woodland and open shrub lands from south west to north central Victoria.
- Plants from more northerly populations appear more robust than those from southern areas
- intolerant of soil disturbances such as ploughing or rock removal
- critically endangered under EPBC Act
- listed as threatened and vulnerable



We also discussed SRF relative the Wimmera rice-Flower WRF

- endemic to Victoria with similar habitat and life history as SRF
- WRF hadn't been collected since 1901 and was presumed extinct, until discovered in Natimuk in 2005, and then a second population in Minyip 30km away

'The Pimelea spinescens Recovery Team', with over a dozen team members, was established in 2000 as a result of a million dollar offset agreement between the Federal Department and Multiplex Development No.8 to allow development in Altona.

This agreement allowed for :

- Creation of Pimelea Nature Conservation Reserve in Altona along a 400m stretch containing approx 400 plants.
- Site fencing
- Translocating 25 SRF plants from Altona site to Altona Conservation Reserve and management plans for both sites. Parks Victoria manages these reserves.
- An interest bearing trust fund to fund activities and promote, protect and conserve Pimelea.

The results of genetic research indicates that SRF and WRF are distinct taxa. SRF has maintained an unexpected degree of genetic variation and plants up to 50 to 60km apart are likely to be more similar than would be expected by chance. Some Riverine plains populations were distinctly different from those to the south, so genetic material should be moved only within the Riverine plain area. For the remaining populations, genetic material from different populations can be combined, but preferably within 60km of the recipient site. They learnt that high genetic variation does not guarantee the persistence of SRF if further fragmentation occurs. Management is required to promote the mixing of genetic material to maintain diversity.

There are 11 translocation sites that are inspected where results are recorded and, though critical review of the translocation process, insight is gained into management works or other factors that may improve survivorship of future translocations. The method used in this process is by tree spade or either tractor or trailer mounted which cuts a deep plug of earth ensuring that the long tap root is kept intact. An identical hole is dug at recipient site and the plug inserted. This is heavy machinery and can do much damage to both sites, so the most suitable locations tend to be degraded areas on the margins of recipient sites to minimise damage to intact remnant grasslands. Reviews and monitoring gave a sad picture of an average survivorship across all sites of 33%. Factors contributing to this statistic include weed encroachment and high biomass of Kangaroo Grass; and drowning, through recipient holes not being of identical depth, more common with trailer mounted tree spades. Some poorly chosen recipient locations were also responsible.

Many new protocols are now being followed:

- The translocation of SRF must remain an option of last resort, with in-situ conservation being the highest priority.
- Regular monitoring needs to be increased with regard to clearing encroaching vegetation.
- Prior to relocation, a minimum of 2 years should be allowed to collect seed
- Gene mixing must be encouraged to increase genetic 'fitness' of populations to adapt to a changing climate & environment.

Through the continued work of the Recovery Team and the Pimelea Conservation Trust Committee, as well as increased monitoring and learning from past errors the team are now more confident of protecting and restoring populations of Spiny Rice-Flower and Wimmera Rice-Flower.

A very interesting question and discussion time followed this well presented and enlightening talk. Thank you Vanessa.

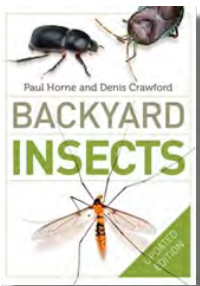
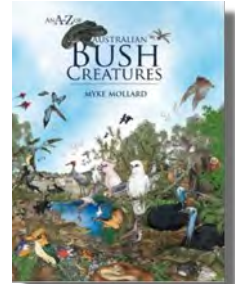
Philippa Burgess

NEWS FROM THE BOOKSHOP (August 2016)

New books, out of print books and updated books covering marine, reptile, insects, reptiles, plants and conservation topics are the selection for this month. Some of these titles are available on the shelves, some will need to be ordered in. A must have is Gary Presland's new book about the history of the FNCV that was launched on Friday 8th July. Copies are available for sale from the clubrooms or can be posted out on request. Don't forget to pop in and have a look at the bargain books in the "SALE" section of the display cases, before the limited number of copies get snapped up. To order or inquire about a book, please send me an email to, bookshop@fncv.org.au and I will reply as soon as I can. Happy reading and stay warm!

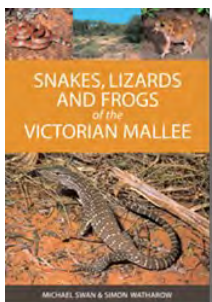
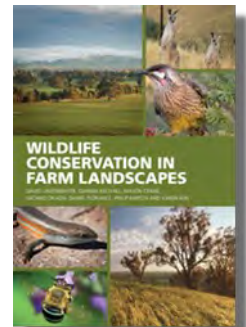
Kathy Himbeck

An A-Z of Australian Bush Creatures (M. Mollard) includes over 400 land, sea and air-born creatures, from Abalone to Zebra Finch, organised alphabetically using a mixture of common, scientific and aboriginal names. Each A-Z plate explores Australia's varied landscapes, both natural and introduced. Each page is a journey of discovery for the reader. This is a delightfully crafted book and beautifully presents Australia's amazing varied wildlife. It will be a treasured part of any child's library. (PB, 48 pp., 2014) **RRP \$19.95 Members \$16**



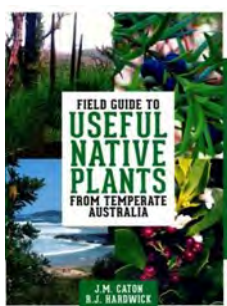
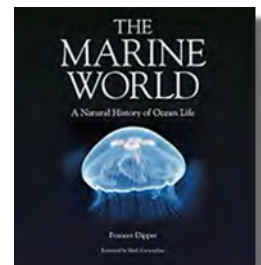
Backyard Insects (Horne & Crawford) explores the secrets and habits of more than one hundred little critters that are common to backyard Australia. From aphids to flies, ladybirds to wasps, insects of all shapes and sizes share our homes and gardens. Like the previous edition, there are large full colour photographs that help with identification. This updated edition, with the addition of 19 new species, makes this book an indispensable guide for nature lovers, gardeners and kids of all ages. (PB, 300 pp., January 2016) **RRP \$24.95 Members \$20.00**

Wildlife Conservation in Farm Landscapes (Lindenmayer, Michael, Crane, Okada, Florance, Barton & Ikin) communicates new scientific information about best practice ways to integrate conservation and agriculture in the temperate eucalypts woodland belt of eastern Australia. Richly illustrated, with chapters on birds, mammals, reptiles, invertebrates and plants, this book illustrates how management interventions can promote nature conservation and what practices have the greatest benefit for biodiversity. (PB, 232 pp., August 2016) **RRP \$49.95 Members \$41.00**



Snakes, Lizards & Frogs of the Victorian Mallee (Swan & Watharow) represents a comprehensive publication on the herpetofauna of the mallee region. It covers 56 species that inhabit the area as well as a further 24 species occurring in fringe riverine and woodland systems. This book is currently out of print with only floor stock still available. Those attending the FSG September camp will find this book an invaluable reference. (PB, 104 pp., 2005) **RRP \$19.95, Members \$16.50**

The Marine World: A natural history of ocean life (Dipper, F) is a book for everyone with an interest in the ocean. With colour illustrations, line drawings, more than 1500 colour photographs, and with clear accessible text, this book encompasses all those organisms that live in, on and around the ocean, bringing together in a single text everything from the minuscule to the immense. It incorporates information, distribution, structure, biology, ecology, classification and conservation of each group. (HB, 544 pp., August 2016) **RRP \$89.95 Members \$74.00**



Field Guide to Useful Native Plants from Temperate Australia (Caton & Hardwick) is a comprehensive outline of how temperate Australian native plants have been used for food, fibre, medicine and everyday convenience. This field guide includes illustrations and descriptions to help identify 150 useful native plants. The plants described in this field guide are found in the temperate eco-region, which stretches from south-eastern Queensland around the coastline to South Australia, and includes Tasmania. (PB, 412 pp., 2016) **RRP \$45.00, Members \$36.00**

From the office



A vote of thanks is due to our Local State MP Samantha Dunn, whose office has kindly printed for us 200 copies of our colour FNCV information flyer. Samantha likes to offer assistance to not-for-profit groups in her electorate, which is much appreciated.

As usual, we would be glad to receive donations of biscuits, tea-bags, kitchen roll, toilet paper and office paper for the Club. Recycled paper is naturally always preferred (except as Joan always reminds me – I shouldn't ask for recycled toilet paper as such!)

Thank you to those who transferred recently to the email list for receiving the Field Nats News. We really do appreciate it: our printing and postage costs are now holding steady instead of increasing.

Wendy Gare

Whitehorse Spring Festival Sunday 16th October Nunawading

We will again have an FNCV stall - it's always very popular, particularly with children, gives us good publicity and is well worth the effort. As usual we ask for volunteers to give an hour or two of their time to help.

If you are able to assist please email me ASAP at admin@fncv.org.au - it runs from 10 am to 4 pm.

Library News



Recently accessioned monographs

The following volumes have been added to the Library's holdings and are now available for borrowing:

Entwistle, T (2015) *Springer and sprummer: Australia's changing seasons*. (CSIRO: Collingwood, Victoria) [577.23 ENT]

Presland, G (2016) *Understanding our natural world: the Field Naturalists Club of Victoria 1880-2015*. (Blackburn: FNCV) [570.6 PRE]

Trnski, T and Schlumpf, HA (2015) *Kermadec biodiversity expedition 2011*. (Auckland: Auckland Museum) [508.93 KER]

Recent periodicals:

Wildlife Australia 53(1) covers many interesting topics including the amazing association between eucalypt galls, a tiny fly and nematode worms; Australia's stingless bees; sea cucumbers and Australian native organisms that threaten others.

Wildlife Research 42(7) reports on a study of the historical persistence of the smoky mouse in the Grampians and the effectiveness of its detection.

An item in *Australian Journal of Zoology* 63(6) looks at the reintroduction of the brush-tailed rock-wallaby in the Grampians.

Emu 116(2) is a special issue devoted to the East Asian-Australasian Flyway for shorebirds.

The latest periodicals are displayed in a rack in the library. You can borrow periodicals in the rack, as well as previous issues. Don't forget to fill in the borrowing book.

Library collections now on website

A reminder that you can now search the library's collections on the FNCV website. Click 'About us' – Library and you will be able to download searchable lists of books, periodicals, maps and photos.

Gary Presland, Honorary Librarian

Thanks to the editorial and layout team who put together FNN 266

Joan Broadberry
Wendy Gare
Sally Bewsher

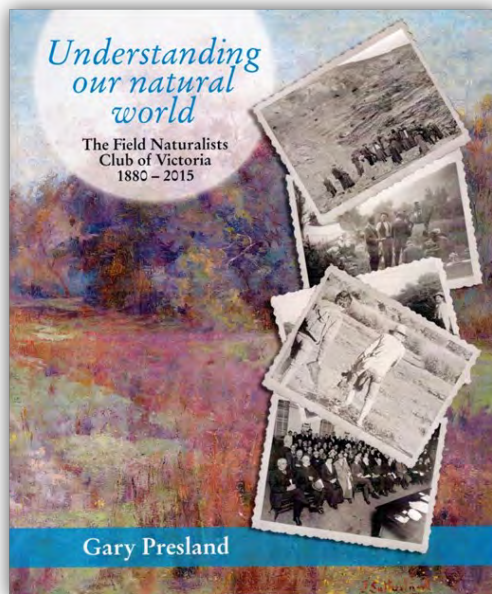
Thanks to Gary for brewed coffee.

Understanding our natural world The Field Naturalists Club of Victoria 1880-2015 by Gary Presland

The Field Naturalists Club of Victoria (FNCV) is the oldest organisation of its kind in Australia. From its beginnings in 1880, the club has been centrally involved in campaigns to conserve the natural flora and fauna of Victoria. In the 1890s FNCV was instrumental in having Wilsons Promontory declared as a National Park.

The story of the FNCV is about thousands of people working together to increase their own knowledge, as well as the awareness of a wider population, about the indigenous plants and animals of Victoria. In more than 135 years of fieldwork, in all parts of Victoria, the Club has made an enormous contribution to the scientific understanding of the state's natural environments and its flora and fauna.

This history of the FNCV explores the ways in which the Club has gone about achieving its aims, since its inception in 1880. Along the way the book charts the major shifts in the preservation and conservation of the natural environments of Victoria over the past 135 years.



RRP \$30, FNCV Members \$24

bookshop@fncv.org.au



Day Group

What's the buzz? A peek into the lives of our native bees: nesting, mating and roosting.

The June Day Group audience enjoyed a vivid account from naturalist Linda Rogan of her experiences in learning about native bees. Most of what Linda spoke about took place no further away than her back yard in Briar Hill and nearby bushland reserves.

Linda's interest in native bees started in 2008 when she noticed a small *Cassinia* bush that appeared to be blackened, growing by a creek in Browns Reserve. Closer observation and photographs showed this to be a cluster of small native bees. Individuals measure only 5-6 mm in size and were identified by Ken Walker of Museum Victoria as *Homalictus punctatus*, (photo right). The males come together to roost overnight, as do many other varieties. Since then, Linda has seen roosting clusters of this species on several other occasions. It took until 2014 to find a female, which was finally photographed on Spur Velleia, *Velleia paradoxa* in her own garden. Finding a pair of mating insects is very helpful for identifying and distinguishing males and females. In December 2015, Linda succeeded in photographing the brief encounter of a mating pair of *H. punctatus*.

Linda recounted many other exciting 'bee moments'. *Kunzea* sp. Have proven to be especially bee attracting shrubs and was it was on its twigs that Linda photographed the first two species of bees roosting in her own garden. One was *Euryglossa ephippiata*, the females having two colour forms, one with a red saddleback and another a black form. However, as sometimes happens, a much smaller bee was noticed in one of the photos. This proved to be a species of masked bee, *Hylaeus ofarrelli*. In late October this year a *Euryglossa ephippiata* mating frenzy occurred. On just one warm day many males were observed searching for females and Linda was able to photograph mating pairs, (photo below). Another find this year was of a single male of a different *Euryglossa* species amongst a congregation roosting on *Kunzea*. While most clusters are made up of a single species, it is not unusual for males of different species and genera to join in as well. Females normally spend the night in their nesting burrows which may be in the ground, in trees or even inside reeds.

In December 2015 Linda found a group of small to medium sized bees, again roosting in Browns Reserve. With the help of the website, Bowerbird, these were identified as *Lasioglossum bicingulatum*. Linda then realised she had had already photographed the very different looking female, feeding on *Kunzea* in her garden.

By far the most species and largest numbers of clusters of roosting male bees have been found locally while walking along Karingal Creek. First and most often seen have been Green and Gold Nomia Bees *Lipotriches australica*. The female of this species is also a frequent visitor to Dianella and other flowers in Linda's garden. *L. australica* is one of many native bees expert in buzz pollinating as required by tomatoes. One of the most exciting finds on her walks has been Linda's recent first local sighting of roosting Blue Banded Bees, *Amegilia cingulata*. Unusually the cluster included a female. Linda is yet to see a Victorian nesting site for this species, so if anyone sees or knows of one please contact her. A 2016 first sighting along the creek has been the beautiful Neon Cuckoo Bee, *Thyreus nitidulus* which lays eggs in the Blue Banded Bee's nest. To date Linda has identified 12 species of roosting native bees, four in her garden and eight in nearby reserves including Karingal Creek.

To assist her study of native bees, Linda has created a bee-friendly bush garden using plants that bloom over the summer months. These include *Kunzea* sp., *Dianella* sp. Flax Lillies, *Brononia australis* Blue Pincushion, *Arthropodium strictum* Chocolate Lillies, *Wahlenbergia* sp. Native Bluebells, *Crowea exaltata* Waxflower, *Lithrim salicaria* Purple Loosestrife and various pea flow-



Homalictus punctatus

Photo: Linda Rogan



Mating pair, *Euryglossa ephippiata*, black form.

The male has curved antennae

Photo: Linda Rogan

(Continued on page 12)



Marine Research Group

Queen's birthday honours for Marine Research Group members Robert Burn and Alan Monger.

It is, of course, very difficult to achieve royal recognition for services which benefit others, but in a rare double celebration for the MRG, our two senior statesmen Alan Monger (also the longest serving member of the MRG) and Robert Burn have each received the Medal of the Order of Australia (OAM) in the latest Queen's Birthday honours.

Robert's honour was for services to the sciences, especially in the field of malacology (the study of molluscs). In particular, his key contributions have been toward the description and study of the heterobranch molluscs formerly known as the Opisthobranchia.

Alan's honour was for services to the community of Benalla. Obviously, those who nominated Alan were unaware of his own outstanding contributions to the molluscan field, especially knowledge of the micromollusca and the compilation of broad identification guides to the south eastern Australian molluscan fauna.

We heartily congratulate Alan and Bob as two very worthy recipients of this honour, and look forward to continuing to enjoy the outcomes of their ongoing work. "Very well done", to you both!!

Research on the ascidian *Corella eumyota* presented by Carol Bathie during the MRG member's night Monday 9 May, 2016-

A more detailed account of this presentation is here presented. Carol discussed the process of identification of a local and not uncommonly seen solitary ascidian species on the under-surface of littoral rocks, in the process highlighting some of the key components of ascidian structure (see reference list for further reading). The species proved to be *Corella eumyota* (something the MRG has tended to misidentify as *Ciona intestinalis*).

The features of this species are:

a/. It lays flat, attached to the substrate by it's right side.

b/. It has a thin, gelatinous, translucent tunic that is usually clear, but may have adherents such as compound ascidians or algal growth.

c/. The siphons are usually orange but

not always.

d/. The branchial (in-current) siphon is at one end; the atrial (ex-current) siphon is a quarter to halfway down the body.

Sometimes the apertures have a warty appearance.

e/. The gut forms a curved loop in the posterior third of the body.



Corella eumyota — Above and below left: attached to rock. Below right—a detached specimen. Images: Carol Bathie



Corella eumyota — Above: view of right side demonstrating the intestinal loops. Below: atrial siphon, showing an orange colour tinge. Images: Carol Bathie.

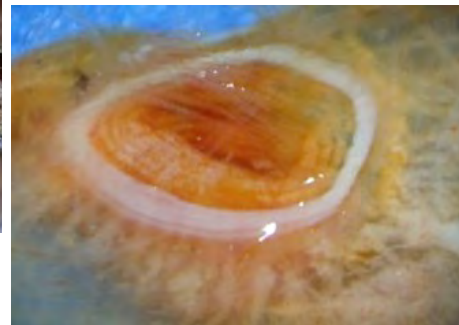


f/. The gonads are embedded in the body

wall between gut loops and are visible from the right side

g/. It has fifty to one hundred simple branchial tentacles (these are a ring of projections protecting the entrance to the pharynx).

h/. The branchial sac is flat, not folded; under magnification there are spiral stigmata between the longitudinal vessels (the stigmata are the perforations in the pharyngeal wall).



Corella eumyota - branchial tentacles. Image: Carol Bathie.

i/. The position of the heart is in the lower abdomen (ascidian hearts also have a remarkable ability to change the direction of blood flow).

The combination of the above features are consistent with *Corella eumyota*. In summary it has a clear gelatinous tunic; the branchial siphon is at the anterior end, the atrial siphon about halfway down; the curved gut loop is visible on the right side; the gonads are 'enclosed' by intestinal loops; there are fifty to one hundred branchial tentacles, and the branchial sac is flattened.

Corella eumyota is a temperate species found from Western Australia to central Victoria, and Tasmania; it also occurs in New Zealand, South Africa and off Macquarie Island (Kott, 1997).

We thank Carol for this work and presentation (which was also performed with the collaboration of Janet Pett).

Reference and further reading:

Kott P (1997). Chapter 23: Tunicates (sub-Phylum Tunicata), p. 1092-1255, in: *Marine Invertebrates of Southern Australia, Part III* (edited by Shepherd SA & Davies, M), South Australian Research and Development Institute, Flora & Fauna of South Australia Handbooks Committee, 1997.

Platon Vafiadis

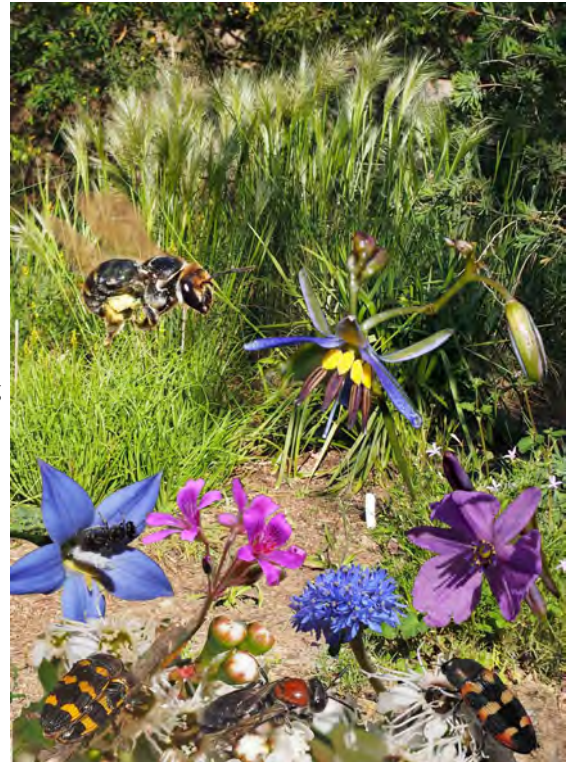
(Continued from page 10)

ers. Other important plants include *Eutaxia* sp. which attracted Linda's first spring bee *Trichocolletes*, perhaps *venustus* and an *Angophora* that bloomed for the first time this year and has attracted a reed bee, possibly even *Exoneura angophorae*.

Another feature of Linda's garden are her 'bee posts'. Her first attempt was just to drill holes in the red gum posts of an existing fence. In Autumn 2015 free standing posts with small, drilled holes were added. Both have been very successful, attracting at least four species of nesting resin bees of the *Megachile* genus and also as roosting spot for two species of masked bees belonging to the *Hylaeus* genus. Nesting females construct cells inside their burrows, stock them with food, lay eggs and seal the entrance. That masked bees males were roosting in holes close to the burrows of females was a behaviour not yet observed by bee specialists Ken Walker and Terry Houston (WA Museum). In total Linda has identified an astonishing 26 species of native bees in her Briar Hill garden.

Linda's images are beautifully clear even though native bees are often tiny and always fast moving. Her presentation was greatly appreciated by a large audience. It was a real eye-opener to learn what a dedicated observer can discover in their own neighbourhood. I would also like to thank Linda for lending me her notes for this brief summary of a few of the highlights of her wonderful bee journey and for generously allowing FNN to publish some of her photos.

Joan Broadberry



'Fantasy photo' of Linda's garden

Photo: Linda Rogan

FNCV Environment Fund Grant Report

Project Name: Bairnsdale & District Field Naturalist Club – Junior Field Naturalist Group. **Outcome:** We have purchased the 3 dissecting microscopes **Model:** Motic RED20-S and the children are thoroughly enjoying exploring this new microscopic world.

The Juniors used the microscope for the first time on 21st May during a field trip to Fairy Dell. An eight year old was heard to say, 'this is amazing' as she looked at a lichen encrusted piece of bark which also had small invertebrates living on it, not able to be seen with the naked eye. This trip had an attendance of 46, with some members completing their Scouts badges. The children were supported by parents, senior field naturalists and a botanist (parent).



Many thanks to those
who helped collate and
label FNN 265

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Edward Brentnall
Hazel Brentnall
Joan Broadberry
Barbara Burns

Field Nats News 266



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