



QNC NEWS

Newsletter of The
QUEENSLAND NATURALISTS' CLUB INC.

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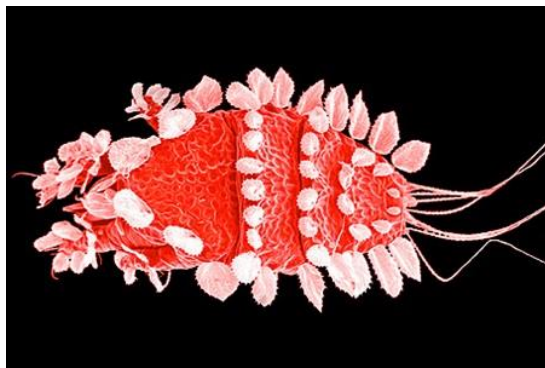
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July -August 2017

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INSIDE	Page
Programme	1
General Meetings	2
Meeting Reports	3
Excursions	7
Council News	9
Excursion Reports	10
Exhibits	12
Correspondence	13
Library/Facebook	14
What's On	15
Membership Renewal Form	16



PROGRAMME

General Meetings:

July 17	Dr Matt Phillips
August 21	Robert Whyte
Sept 18	Dr Melinda Laidlaw

Excursions:

July 9	Toohy Forest
July 23	Beerburum Mountain
August 13	Norman Creek, Coorparoo
August 16	Enoggera Reservoir
August 26-27	Chinchilla Wildflowers

MAILING ADDRESS: PO Box 5663, WEST END QLD 4101

President:	Mr Neil Fordyce	Ph: 0400299991	president@qnc.org.au
Secretary:	Ms Judy Haines	Ph: 0402 236 359	secretary@qnc.org.au
Treasurer:	Mr Mike Anderson	Ph: 07 3263 4502	treasurer@qnc.org.au
Excursion Secretary:	Mr Barney Hines	Ph: 07 3720 9414	excursion@qnc.org.au
QNC News Editor:	VACANT		news@qnc.org.au

Next Deadline – September-October 2017 QNC News – **15th August 2017.**

The Queensland Naturalist is published twice per year.

ARTICLES to the EDITOR, Dr. Peter Woodall at journal@qnc.org.au

GENERAL MEETINGS

General meetings are held on the third Monday of the month, between February and November, starting at 7.30 pm, in the Royal Geographical Society of Queensland building at 237 Milton Road, Milton. This is near the corner with Barooka Road and next to the Castlemaine Perkins (Fourex) Brewery and the Theological College entrance lane. Entrance in Milton Road, with side ramp. Parking available in adjacent streets. For those who park in the Theological College car park, please put a \$3 donation in the box at the meeting reception. Milton railway station is directly opposite the building and there is a pedestrian underpass from the station under Milton Road.

Please bring any pictures of exhibits that you want to project to the Lanternist by 7.15pm.

Daytime meetings will be held occasionally at the Queensland Museum from 12:30 to 1:30 pm.

General Meeting - 17th July Associate Professor Matthew Phillips

School of Earth, Environmental and Biological Sciences, QUT

The Evolution of Giant Flightless Birds

Ratites include flightless birds, such as emu, kiwi, rhea and ostrich, as well as the recently extinct moa and elephant birds. This group has long been thought of as remnants from the “age of dinosaurs” that originated in Gondwana and diversified as these southern land masses drifted apart. He will discuss how this story has been overturned by recent findings in molecular biology, particularly with the use of ancient DNA from extinct ratites. The first clues were some surprising relationships - kiwi and elephant birds are close relatives, while the closest relatives of moa are the flying tinamou of South America. It now turns out that the ancestors of ratites flew to each continent (and to New Zealand and Madagascar), and then independently evolved large size and flightlessness. These parallel evolutionary events took place during a brief window of opportunity that immediately followed the extinction of dinosaurs, but before the evolution of large mammals.

General Meeting 21st August, Robert Whyte

author of *A Field Guide to Spiders of Australia* (2017).

Ten Things You Didn't Know About Spiders

Robert Whyte is an Australian scientist, environmentalist, photographer, author, editor and journalist. As a scientist specialising in spiders and as a scientific photographer, he has participated in the Australian Government's new species exploration program Bush Blitz since the Fish River Bush Blitz in 2012. He attended his fifth Bush Blitz, in Quinkan Country inland from Cooktown in 2017 where he photographed and filmed live many of the more than 70 new species of spiders discovered on the trip. His recently published *A Field Guide to Spiders of Australia*, co-authored by himself and Greg Anderson, is considered the most comprehensive account yet of Australian spiders. It features over 1300 colour photographs and covers all the spider families known to occur in Australia.

Details in next News for

September 18th Dr Melinda Laidlaw – Quantifying the impact of land clearing on threatened species in Queensland.

October 16th – Members' Night (TBC)

November 20th – Report from the Long Excursion (TBC)

Roster for General Meetings

Please consider nominating for the General Meeting Roster. You can select a spot on the Roster Sheet which is available at each meeting OR if you are unsure about committing two or three months in advance, email your availability to news@qnc.org.au closer to the day. Thanks to the following people who have nominated already.

July 17:	Reception:	
	Supper:	
August 21:	Reception:	
	Supper:	
September 18:	Reception:	Yvonne & Keith Travers
	Supper:	Barbara Braddock

MEETING REPORTS

GENERAL MEETING 15TH MAY 2017 C. T. WHITE LECTURE DR JOHN HOOPER

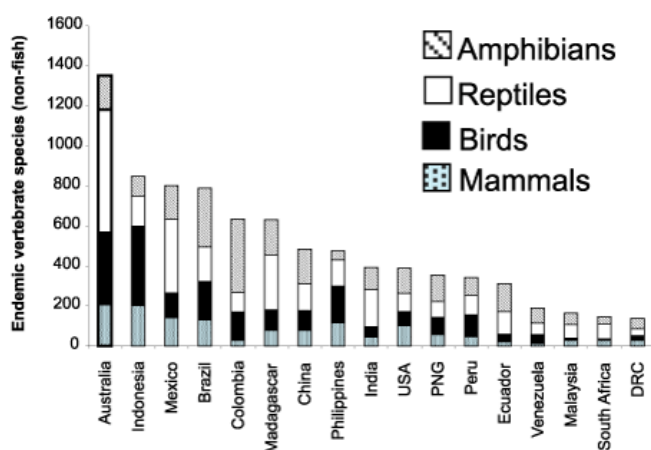
Head of the Biodiversity & Geosciences Program at the Queensland Museum,
Adjunct Professor at the Griffith Institute for Drug Discovery.

WHAT DO WE STILL NOT KNOW? THE 'MARINE UNKNOWNNS' AND WHY THEY MATTER.

Dr John Hooper is an international authority on sponges (Phylum Porifera), with specific research interests in their taxonomy, systematics, evolutionary biology, biogeography, biodiversity informatics and conservation biology, and in global biodiversity and marine conservation in general. He has collaborated extensively with various 'biodiscovery/ bioprospecting' agencies since 1987, searching for new therapeutic pharmaceutical compounds from marine invertebrates. Amongst the most prominent agencies were the United States National Cancer Institute, the Australian Institute of Marine Science, the Institut de Recherche pour le Développement New Caledonia & French Polynesia, the Cancer Research Institute at the University of Arizona, the Coral Reef Research Foundation in Palau, the University of Utah Medicinal Chemistry Group, the Institute of Marine Sciences at the University of Dar es Salaam, Zanzibar, and the Eskitis Institute for Drug Discovery at Griffith University.

The Club is most appreciative of his acceptance of our invitation to give the C. T. White Memorial Lecture for 2017. It covered, both broadly and with particular reference to sponges, the topics of megadiversity in our region and the current state of knowledge; the discovery of new species benefitting from the economic imperative to discover new pharmaceuticals; and lastly, in view of recent discoveries, he asked how much is still to be discovered.

Over the years, estimates of the number of species on earth have ranged from 3 million to 100 million, though current opinion is suggesting between 9 million and 12 million. While the number of species is less in oceanic environments than on land, there are more phyla in the marine environment and consequently, greater genetic and chemical diversity. This makes marine species a desirable target in the search for new chemical compounds.

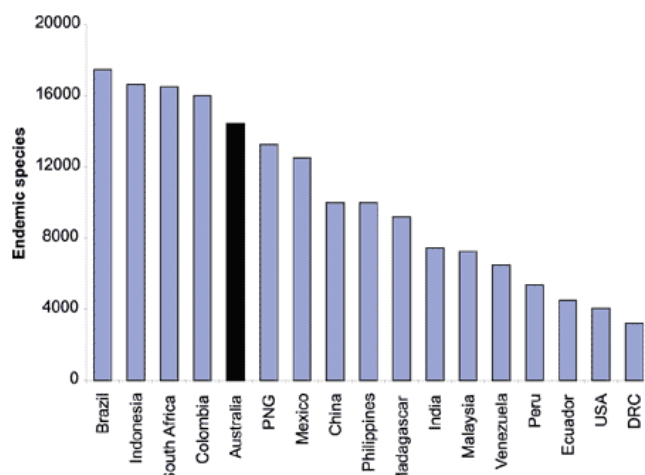


Australia is one of the 17 most megadiverse countries, and has the greatest number of endemic non-fish vertebrate species and the fifth highest number of vascular plant species. Of the 220,000 described marine species worldwide, 34,000 come from Australia and endemic to Australia are also 13 of the 31 marine phyla. However, many more species await describing: approximately one million species in the Queensland Museum's Collections have

been accessioned and databased leaving about 16 million non-accessioned. Among this number are about 53,000 sessile marine invertebrates which is about half of that particular collection.

The collection of new marine species has been aided by the economic imperative of new drug development and Dr Hooper's collaboration with the Griffith Institute for Drug Discovery is an example of this. Newly identified chemicals from natural sources such as plants and marine species are an important source of new pharmaceuticals. In the 30 years from 1981 to 2010, they contributed 34% of all new approved drugs and 49% of those specifically for cancer. New chemicals isolated from marine organisms between 1990 and 2009 totalled about 10,000 with the main pharmacological groups being cytotoxics, antimicrobials and analgesics. The Porifera were the source of 49% of these, followed by Cnidaria, Echinodermata, Chordata and Mollusca. An illustrated overview of these groups showed the great variety of their spectacular shapes and colours.

Dr Hooper described four Australian sponges and their bioactive chemicals which are thought to be the



product of microbial organisms living within the sponge.

Stylissa flabellate is found mainly in the Great Barrier Reef on the slopes and sides of coral reefs. It contains Stylissadines A and B which are specific antagonists for the pain receptor P2X7 and could lead to a new treatment for inflammatory diseases.

Aplysinella rhax lives among coral rubble, rock and shallows of the east coast of Australia and some Pacific islands. Psammaplin A and Bisaprasin 11'-sulfate have been isolated from it and their modulation of cAMP via adenylate

cyclase is effective for controlling blood flow, cardiovascular system and metabolism.

A new species of *Axinella sp.1333* is found only in the Sydney region where it is common on rocky substrates 8m to 35m in depth. It contains Axinellamines B, C and D which have bactericidal activity against *Helicobacter pylori* and so offer potential for the treatment and prevention of gastric and duodenal ulcers and gastric cancer.



Pipestela candelabra, the 'Bob Marley Sponge' (left), is a new genus and species from the Great Barrier Reef, PNG, Solomon Islands and Vanuatu. New tripeptides from it, hemiasterlins, have high cytotoxic activity and are now in preclinical trials as a possible cancer treatment.

The extent of what we do not know about sponges can, of course, only be guessed at but our knowledge in particular areas has been significantly extended in recent years.

Most of our knowledge of the organisms of the Great Barrier Reef is from the reef

areas: comparatively little is known about life in the adjacent seabeds. In the 5 year period from 2003, the Griffith University Great Barrier Reef Seabed Biodiversity Project sampled ~1,500 sites and collected ~14,000 benthic samples. Among the 341,000 specimens recorded, ~7,500 species or operational taxonomic units (OTUs) were recognized. The survey also found that more than 23% of all invertebrates processed were sponges (~1300 species or OTUs); that two of the five most abundant sponges were new to science; and that four of these five most abundant sponges were not found on the adjacent coral reefs.

The deep-sea benthic invertebrate communities have also not been studied to any great extent and the World Register of Deep-Sea Species consider that there are 26,000 species that range below 500 metres. In recent years, there has been a significant increase in the number of novel chemical compounds from sources below 1000 metres.

The NORFANZ Expedition in 2003 explored deep sea habitats in the Tasman Sea to provide baseline information about them. Sponges were collected from the Norfolk Ridge and Lord Howe Rise Seamounts up to depths of 2000 metres. It was found that taxonomic diversity at the family level decreased with depth until the 1000 metres level while taxonomic composition was observed to change with depth with a turnover at about 600 metres. For example, *Halichondrida* were found only down to 600 metres while *Hexactinosida* and *Amphidiscosida* appeared from 600 metres down.

The use of genetic analysis has revealed the existence of cryptic species which, while appearing identical or near identical morphologically, are genetically different and so sponge biodiversity is likely to be much higher than our present understanding. One example is a *Lamellodysidea* species which produces a variety of polybrominated diphenylethers (PBDEs) which have antiplasmodium activity. Different PBDE compound profiles are seen in different populations and these differences correlate with genetic differences and increase with geographic distance. This may indicate a likely co-evolution of bacteria and sponge hosts. Another example is the calcareous sponge *Leucetta chagosensis* which occurs widely from the Red Sea through SE Asia to the Pacific Ocean and possibly comprises 6 different species.

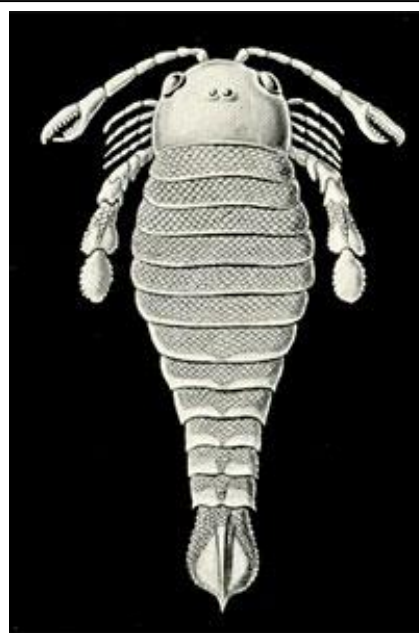
GENERAL MEETING 19TH JUNE DR OWEN SEEMAN,

Collection Manager for Arachnida at the Queensland Museum,
Subject Editor for the journals *Zootaxa* and *Systematic and Applied Acarology*.

MITES: MINIATURE BEASTS AND WHERE TO FIND THEM

Members and guests enjoyed Dr Seeman's comprehensive and splendidly illustrated talk on the mostly invisible world of mites.

In structure, they have two main body parts: the "front body" has four pairs of legs, a pair of palps, and a pair of chelicerae; this latter characteristic is reflected in their classification in the arthropod subphylum Chelicerata. The larvae are 6-legged but become 8-legged as nymphs. The base of their palps form a "gnathosoma" (mouth-body).



Eurypterida an extinct Paleozoic group of chelicerate arthropods

It is thought that early chelicerates were marine or amphibious but then adapted to living on land to become the arachnids. They are the tiniest arachnids but most can be seen using a low-power microscope. They are also the most diverse arachnid: 55,000 species have been described to date but many more are being progressively described. Locally, *Neonidulus tereotus* growing on the Weeping Lilly Pillies *Waterhousea floribunda* in Reddacliff Place in Queen Street, Brisbane was described in 2010. More recently, in 2016, *Steneotarsonemus hippodromus* was described from Royal Randwick Racecourse where it is a pest of kikuyu grass. Mites can be found almost everywhere from Antarctic mosses to hot, dry deserts though not in the pelagic zone or as parasites of entirely marine animals.

Mites are found on almost all vascular plants. Many are parasitic and cause problems for agriculture. Examples of these are the Eriophyoidea, very tiny, four-legged herbivorous mites which cause erineum (hyperplasia of leaf trichomes), russet and galls. Other groups are the Tetranychidae (spider mites), the Tuckerellidae (peacock mites) and the Tenuipalpidae (flat mites). The flat mite *Brevipalpus phoenicis*, which is a vector of citrus leprosis, occurs in

Australia but as yet the virus has not reached us. Plants host other mites such as predators, fungivores and detritivores in a mutualist relationship and these are not parasitic. The mites shelter in plant structures known as domatia, along with presumably some parasites too.

Mites are extraordinarily abundant in soils as predators, fungivores, detritivores and root-feeding mites. Surface-roaming mites tend to be larger than those in the soil. Deep soils, or those with small particle size, have extraordinary mites such as the “dragon mite” that looks somewhat like a nematode.

Mites have also colonised many aquatic environments: oceans, streams, hot springs, tree holes. The water mites, often attractive, are found in fresh and brackish waters around the world. These, along with scrub-itch mites (chiggers), belong to the hyporder Parasitengonina, which is characterized by having parasitic larvae and free-living nymphs and adults.

Mites are common on animals. Humans are usually aware of them only after being bitten by scrub-itch mites or the scabies mite. However, almost everyone has hair-follicle mites *Demodex follicularum* and many people have a second species *Demodex brevis*.



Water mite *Arrenurus sp* larvae on a dragonfly

Mites have their own ecological niche and some of them are quite bizarre. In bats, specific mites inhabit the gastric mucosa, eyeballs, ani, fur and wings. Birds have mites living in feathers, skin, inside quills, nostrils and the subcutaneous fat of pigeons. Feather mites are especially diverse on birds, with parrots having between 10 and 20 species, all specialising in different types of feathers and on different parts of the bird. The canary lung mite *Sternostoma tracheacolum* is a pathogen of the respiratory system of canaries and Gouldian finches and can cause significant morbidity and mortality. An early sign of infection is when the canary stops singing. Other mite – animal associations are *Chysomelobia lawsoni* which lives inside the tracheae of a eucalyptus leaf beetle and *Pneumonyssus capricorni* from the lungs of a brush-tailed possum. Some mites spend only part of their lives in the one place. For example, there are three species of *Macrocheles* which inhabit the anal region of sloths but hop off to the fresh dung when the sloth defecates, feed there on nematodes and maggots, then hitch a ride on corpophagous beetles back to the sloth.

Ticks are mites too. They can be classified into hard ticks and soft ticks. Hard ticks may be one-, two- or three-hosts ticks while soft ticks have only one host.

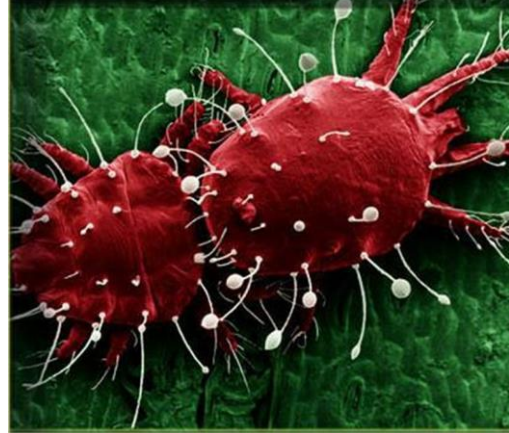
Thousands of mite species live with other invertebrates and, as with vertebrate hosts, many invertebrates have multiple mite species living with them. Their relationships are many and varied: they may feed from their host, be phoretic (using the invertebrate for transport), or even use the invertebrate as a place to find a mate. Mites are a major problem for honeybees. The Varroa mite *Varroa destructor* attacks bee larvae and is phoretic on the adult bee. Honeybee tracheal mites reduce the respiratory function of their host so that they can no longer forage. Both lead to collapse of the hive. Other examples are the slug mite which lives in the pulmonary chamber of slugs and mites that mimic the feet of army ants.

The insects that mites most often associate with are beetles, especially the Scarabaeidae and Passalidae and the most common relationship is phoresy. Phoretic mites usually have a migratory life stage as the deutonymph or adult and various morphological adaptations such as suckers, claws and adhesive structures. More than “pure phoresy” occurs when mites associate with insects over a long period. This can be seen when insects such as passalid beetles occupy long-lived resources such as rotting logs. Several families of mites can spend their adult life with passalid beetles. Feeding and mating occur in close association with the beetle but very few feed on the beetle. It has been found in Australia that passalid beetles have 2 to 5 times the number of mite species on them compared to other invertebrates in the same habitat. The record is *Pharochilus dilatatus* with 21 mite species from 11 families.

Some of these mites are not small: earlier this year, Dr Seeman described *Megisthanus leviathanicus* a common symbiont of the passalid beetle *Mastachilus australasicus* found in northern Queensland. The male is a huge 5mm and is the world’s biggest Mesostigmata – a discovery akin to finding the world’s biggest whale or turtle!



Adult female *Megisthanus sp* towering over a group of three fedrizziid mites. All are on a passalid beetle, where they spend their adult life. They don't feed on the beetle but are predators and scavengers, much like their young which live inside the log.
Photo: Anthony O'Toole and Owen Seeman.



Two red palm mites, *Raiiella indica*, about to mate. These mites have been introduced to several countries where they are a major pest of palms. Scanning electron micrograph by Gary Bauchan, Ron Ochoa & Jenny Beard.



The "pink peacock" mite on page 1 is a *Tuckerella sp.* from Australia. Peacock mites tend to live in crevices on wood stems where they feed on the cambium. Coloured scanning electron micrograph by Dave Walter and Caroline Meacham.

EXCURSIONS

Fees apply for weekend camps - \$2 per adult per night, plus other camping fees, if applicable.

Registration for all excursions is with the Leader or contact given.

Those participating in any Club activity do so as volunteers in all respects and as such accept responsibility for any injury to themselves, however incurred.

The Club or its officers cannot accept any liability or responsibility.

JULY 9TH TOOHEY FOREST, TARRAGINDI

Walking with Life: Exploring our Living Catchments series

Sunday 1.45 for 2pm - 4pm, Leader: Helen Schwencke phone 0423 127 492

Registration Options:

- Email excursion@qnc.org.au with the subject "WWL Toohey Forest 9/7/17"
- By phone (as above)
- At <http://www.meetup.com/Walking-with-Life-in-our-catchments-Nature-Excursions/> QNC's Meetup website (become a member first)

Meet at the parking area on Monash Rd, (Google Maps -27°32'09.3"S 153°03'17.8"E, UBD Map 180, K20), between the roundabout on Monash Rd and Isabella St. Parking is available along the roadside. The area of Toohey Forest we will be exploring is a watershed with gullies that flow into Norman Creek. As the gully and creek-line leaves the forest it disappears under some urban development. We will start with the Tallowood Track and explore various tracks in the forest as time permits. On past visits the Casuarina filled gullies in this part of the forest have been an overwintering site for many common crow butterflies, though this recent summer season didn't have large population build ups of this species. See the downloadable Toohey Forest Track Map link:

<https://www.brisbane.qld.gov.au/sites/default/files/20150220-toohey-forest-track-map.pdf>

JULY 23RD BEERBURRUM MOUNTAIN

Sunday 9.00am. Leader: Mike Anderson phone 32634502

Register by phone (as above) or by email to excursion@qnc.org.au with Subject "Beerburrum Mt"

Beerburrum Mountain is one of the Glasshouse Mountains climbed by Matthew Flinders. It is just west of Beerburrum Township and just off the Caboolture - Beerburrum Road. There is a parking area and tables at the base of the mountain. There is a concrete walking track of steep grade up to the top where there is a Forestry Fire Tower. The track goes through dry eucalypt forest and a small amount of rainforest species. There is an excellent 360 degrees view of the surrounds from the first level of the fire tower.

If time permits, there is the opportunity after the walk to travel to the Glasshouse Mountains Lookout for another short walk and/or smoko/lunch. Alternatively, people may wish to go on to the Beerwah Pub for lunch.

Directions: Travel north along the Bruce Highway and turn left into Steve Irwin Way. At approximately 4.8 kilometres, turn left into Beerburrum Township and then turn right on to a gravel road to the start of the walk to Mount Beerburrum Lookout.

AUGUST 13TH NORMAN CREEK at the COMMON PARK, COORPAROO.

Walking with Life: Exploring our Living Catchments series

Sunday 1.45 for 2pm - 4pm, Leader: Helen Schwencke phone 0423 127 492

Registration Options:

- Email excursion@qnc.org.au with the subject "WWL Norman Creek 13/8/17"
- By phone (as above)
- At <http://www.meetup.com/Walking-with-Life-in-our-catchments-Nature-Excursions/> QNC's Meetup website (become a member first)

Meet at the parking area on off Cambridge St., Coorparoo, (Google Maps -27.488848, 153.051907, UBD Map 160, H20)

Norman Creek and its tributaries comprise 24km of waterways that flow into the Brisbane River. Watersheds in Toohey Forest feed this creek. The area is heavily developed and, in the past, the creek-line has been modified and channelled into drains. Bike paths have been installed throughout the catchment. The Norman Catchment Coordinating Committee has been working on many revegetation projects in the area since 1996 and is working on natural channel design in some of its project areas. We will explore the vegetation and revegetation projects in this area. For more information: https://www.brisbane.qld.gov.au/sites/default/files/know_your_creek_norman1.pdf

AUGUST 16TH (Ekka Wednesday)

ENOGERA RESERVOIR

Leader: Judy Haines. Phone 0402 236359

Register by phone (as above) or by email to excursion@qnc.org.au with Subject "Enoggera Reservoir"

Meet at 8.30 am in the lower car park. It is a flat, fairly easy walk around the lake (if we want to go that far) with usually a good variety of birds and some moist forest plants in places. Bring insect repellent as well as sunscreen and morning tea. We will return to the cars by lunchtime so options are to bring your own lunch or buy something at the Walkabout Cafe.

AUGUST 26TH & 27TH

CHINCHILLA WILDFLOWERS

Leaders: Peter and Leith Woodall and local leaders from the Chinchilla Field Naturalists' Club. Phone: 3848 4757 (on the day 0447 446 635).

Register by phone (as above) or by email to excursion@qnc.org.au with Subject "Chinchilla Wildflowers". Please include all names and contact details.

Chinchilla is an area well known for its display of spring flowers. Twenty years ago, the QNC held a long excursion here and found a great deal of interest. We will return this year with local expertise and guiding provided by members of the Chinchilla Field Naturalists Club. We are very grateful to Frank and Kath Truscott for assisting with the organisation of this outing.

We will be travelling on forestry roads, 4WD is not necessary but reasonably high clearance is needed. We will car pool in Chinchilla before setting off. If there is heavy rain immediately before the outing, we will have to cancel it because of likely damage to the roads.

Meet at 8.00 am outside the Chinchilla Tourist Park, 264 Zeller St, Chinchilla QLD 4413. From there we will drive off to the wildflower areas. Bring lunch and drinks for both days.

Saturday 26th: All day outing to Barakula.

Sunday 27th: Half day excursion to Gurulmundi.

Accommodation: Chinchilla is about a 4 hours' drive from Brisbane. There is a range of accommodation available. Booking for any of these is the responsibility of the individual member.

- Cabins and caravan sites at: <http://www.chinchillatouristpark.com.au/>
- Cabins at: <http://www.cypressinestouristpark.com.au/>
- A range of hotel, motel and motor inns. Details can be found at: http://www.outbacknow.com.au/index.php/accommodation/town/queensland/the_downs/chinchilla
- Free camp at Chinchilla Weir. Chinchilla Weir is a bush campground and day use area suitable for self-sufficient caravaners and campers. Set in a pleasant bush setting on the banks of the weir 10kms from town on the Tara/Condamine Road. The weir offers a limited number of power outlets, a boat ramp, and wood bbq's, picnic tables, toilets and bins. Stays are limited to 48 hours and an honesty system operates for power usage - donations taken at the Chinchilla Visitors Information Centre. Allow 15 mins to get from here to the meeting point at Chinchilla Tourist Park.

Publications:

Chinchilla Field Naturalists' Club have produced an excellent range of publications including *Going Bush With Chinchilla Nats* (currently out of print), *Some Mistletoes & Other Semiparasitic Shrubs, Fungi out West, 60 Wattles of the Chinchilla and Murilla Shires* and *Wildflowers of Southeast Inland Queensland*.

For further details see <http://www.chinchillanaturalists.com.au/publications/download/85/books-for-sale-1/books-published-by-members-of-the-cfnc.pdf>.

If you would like any of their books, please let Leith or Peter know and they will have them available for sale on the Saturday.

FORTHCOMING EXCURSIONS FOR YOUR DIARY – DETAILS IN NEXT NEWSLETTER

Wednesday, October 11th Mt Coot-tha Botanic Gardens Conservation Collection, Dr. Dick Date

Wednesday November 15th Sherwood Arboretum, Dr Dick Date

COUNCIL NEWS

SIGN-ON SHEETS ON EXCURSIONS The Club is now asking all people who attend excursions to sign an Attendance Sheet. This provides a record of your attendance in case it may ever be necessary to make an insurance claim. It also offers the option of recording your email address so you can receive a species list from the excursion.

MEMBERSHIP FEES are due on 1st July. A renewal form can be found on the last page of this newsletter. Prompt payment of fees is greatly appreciated by our Treasurer.

THANK YOU TO LYNETTE HASELGROVE Council would like to formally acknowledge the important contribution Lynette Haselgrove made as Newsletter Editor over the past four years and thank her most sincerely for her enthusiasm and various initiatives, especially the establishment of the digital version of the News.

COUNCIL VACANCIES

The roles of Senior and Junior Vice-Presidents remain vacant. These are preparatory roles for future Presidents and important in ensuring continued good management of the Club. A permanent Newsletter Editor is also required. If you would like to know more about this position, please contact at news@qnc.org.au the Assistant Secretary, Ruth Thomson, who is covering it temporarily.

QNC CALENDAR 2018

Sheryl Backhouse has again generously offered to produce the Club's Calendar. This is a significant fund-raising project for the Club but one which depends on the support of members not only to buy it but also to supply the photographs. So that the calendar can be ready by the October General Meeting, Sheryl requests that photos be submitted to sheryl.backhouse@bigpond.com as soon as possible and not later than August 31. Inquiries to Sheryl at 3289 4198. She has provided the following checklist:

Landscape format	No hands/boxes of matches/rulers etc. to
High resolution best – 750kb minimum	compare size
No shadows on the main subject	Location required
Taken on a sunny day	Name of photographer

EXCURSION REPORTS

APRIL 14 - 17 (EASTER) - SHEEP STATION CREEK, NSW.

The Easter excursion was held on the property of Philip and Leigh Baxter. It is adjacent to the Border Ranges National Park and is approached via the Lions Road.

Rainforest and eucalypt forest were the predominant vegetation types. Ideal autumn weather made for a most enjoyable weekend.

115 plants, mainly rainforest, were noted, 25 of which were vines, the most interesting being *Clematis fawcettii*. The many red cedars, *Toona ciliata*, on the property showed little, if any sign of damage by the cedar tip moth. Two mistletoes were recorded, one on a rough-barked apple (*Angophora woodsiana*) and one on a grey gum, possibly *Eucalyptus major*. Nine different fungi were photographed.

The birds seen included a Paradise Riflebird. In the evening, a colony of horseshoe bats was observed in the property's old dairy shed, as was a brown tree snake, lying in wait above the doorway.

While access to the site was made more difficult due to recent heavy rain, and the number of attendees was down, those who participated had a very pleasant weekend.

Our thanks to Philip and Leigh for allowing the Club to visit their property.

Plant, fungi and bird lists will be available on the Club's web site.

Barney Hines

APRIL 29 - MAY 1, 2017 MAY LONG WEEKEND CAMP – YANDILLA VIA KILCOY

Seven families and a handful of regular Nats enjoyed a great May camp at Yandilla. The weather was magnificent. Participants enjoyed excursions along sections of Kilcoy Creek and beyond. Bird highlights included glossy black cockatoos lounging around the camp. A wompoo pigeon and numerous figbirds were observed feeding on the fruits of the white cedar *Melia azedarach*. Sittellas were also observed feeding in the woodlands. Conditions were warm enough to observe a few herps including a carpet snake and a yellow-faced whipsnake and the rainbow skink *Carlia pectoralis* (right). Purple spotted gudgeons were observed in the creek.



Plant highlights included a magnificent Red Bean *Dysoxylum mollissimum* which was in full flower. Also in flower were the she oaks, *Casuarina cunninghamiana*, growing along the creek. Other plants of note were an *Acalypha*

with its separate male and female flowers which were in bud. Bunya pines were observed by those adventurous few who travelled furthest up Kilcoy Creek.

Our thanks again to the McCowans for yet again hosting a successful Nats camp.

Barney Hines

MAY 27TH COLLEGES CROSSING, BRISBANE RIVER

Seventeen members enjoyed lovely autumn weather for this outing to Colleges Crossing on the Brisbane River. We assembled at the car park and then walked over to an observation platform where we could overlook the lagoon. A single Great Crested Grebe was the highlight here.

We then started walking along the track to the peninsula that separates the lagoon from the Brisbane River. We saw a number of interesting birds including a Double-barred Finch carrying nesting material and a Striated Heron (pictured on right) which sat on some reeds in the sun. Raptors were plentiful: we had good views of a pair of Brahminy Kites; an eastern Osprey having a bath; a



juvenile White-bellied Sea-eagle; and, on the way back, a kite that caused some difficulty for identification. Later examination of our (distant) photographs confirmed that it was a Square-tailed Kite. Altogether we recorded 51 species of birds.

Many invertebrates were also out in the sunshine. We had 8 species of butterfly, 5 dragonflies and damselflies and 4 species of ladybirds (these were only identified from later examination of photographs). The Black-headed Skimmer *Crocothemis nigrifrons* gave some close-up views.

We were fortunate to have Dr Alan and Mrs Joan Cribb with us and they identified a Bird's nest fungus,



growing prolifically in the garden beds, as *Cyathus stercoreus*. Further on Alan identified a Ribbon Weed (left) growing in the Brisbane River as *Valisneria nana* and described how the male flowers float free and pollinate the female flowers on the surface of the water. The petioles of the female flowers then coil, dragging them under the water.

In true Nats fashion it took us about 4 hours to cover under 2 kms, but we had a great time and gathered in the shelter sheds to discuss our findings (any many other topics) over a drink.

Peter Woodall

JUNE 3RD GREATER GLIDER CONSERVATION AREA (GGCA), ALEXANDRA HILLS.

Thirteen members joined Susan Nelles on a lovely sunny day at the Greater Glider Conservation Area. Several different eucalypts were identified including the koala food trees *Eucalyptus microcorys* (Tallowwood) and *Eucalyptus racemosa* (Scribbly Gum.) Though Susan alerted us to koala odour at the base of various trees, we did not manage to locate any animals.

Among the 27 species of birds seen were an Eastern Spinebill, a Square-tailed Kite, a White-breasted Woodswallow, a Striated Pardalote (right) and both Golden and Rufous Whistlers.



Golden Orb and St Andrews Cross spiders were seen and the nine species of butterfly included an Orange Ringlet, a Brown Ringlet and a Large Grass-yellow. The small gecko found under the bark of a tree appears, unfortunately, to have been a House Gecko *Hemidactylus frenatus*. There were a few plants noted which were not listed on the extensive plant list for the area compiled by U3A. These included the Tree fern *Cyathea cooperi* which was identified by the pale straw-colored scales at the base of the fronds and the

Slender Brake fern *Pteris ensiformis*. Another fern seen was the Climbing Fern *Lygodium microphyllum*.

Fungi were surprisingly numerous and included *Boletellus emodensis*, a rather reddish form of *Pycnoporus coccineus* and the purple *Cortinarius archeri*. After lunch, Susan Nelles took us on another path to see a fine clump of the luminescent fungus *Omphalotus nidiformis*. There were a number of beetles on this fungus and they have been identified by the Queensland Museum as belonging to the fungus-eating family Erotylidae.

Peter Woodall





EXHIBITS

Mike Hines forwarded this photo of a marine mystery. See page 15 for the answer



Exhibits for general meetings may be in the form of specimens, books, digital images etc.

If you have a PowerPoint or jpeg image to display, please bring them to the Club computer by 7.15pm.

If you take an exhibit to a meeting, a written description to accompany it would be greatly appreciated by the Secretary and Newsletter editor. Your natural history observations can then be shared with all members via:-

- The club website - email text and photos to web@qnc.org.au
- Our Facebook page - contact Leith for help at facebook@qnc.org.au
- In the QNC News - email text and photos to news@qnc.org.au

This variety of formats allows all members, including non-Brisbane members, to share their experiences.

No exhibits to report from the May and June General Meetings

FOR ARMCHAIR NATURALISTS

ABC RADIO NATIONAL – OFF TRACK

Saturday 10.30am repeated Sunday 5:30am & Friday 7.30pm and available as a podcast afterwards.

Stories from Australia's natural environment. Recent ones have been from Lord Howe Island and Edgbaston Reserve.

FORT BUSHLAND RESERVE NATURE NOTES

Mr John Lahey, a founding member of the Fort Bushland Reserve Bushcare Group at Oxley, Brisbane, has, since November 2006, produced a monthly nature note, illustrated with exceptional photos about the plant and animal life in the reserve. They make very interesting reading and are worth looking for at <https://drive.google.com/drive/folders/0ByASOTUAEuC8WUU5UnRvLUxfemc>
Information about the Reserve is at <https://fortbushlandreserve.wordpress.com/>

CORRESPONDENCE FROM MEMBERS

FROM FASENY MCPHEE concerning the BCC's Oxley Creek Transformation Project:

How many of you have visited Oxley Creek Common? How many of you have seen all 208 species of birds recorded there? This open space is a section of Oxley Creek, between Corinda High School and Sherwood Road, and is a valuable natural resource for a wide range of birds, snakes, insects and plants, only ten kilometres as the crow flies from Brisbane CBD. It is part of a natural corridor along Oxley Creek, where five Bushcare Groups are restoring habitat. One reason for such a large bird population is the diversity of habitat, which includes grassland, open forest, mangroves, lagoons and pockets of rainforest. Professor Hugh Possingham, of the University of Queensland and Chief Scientist for the Nature Conservancy in Washington, has made monthly counts of bird species for 14 years.

Oxley Creek Common is important to many people. Corinda SHS leases the land for grazing, as part of its Agriculture Course. An after-school environment group meets at the Common. The track is used by walkers, bird-watchers, photographers and families. People picnic there, exercise their dogs, hold parties and meetings or just enjoy the quiet atmosphere.

Oxley Creek Common is part of a flood plain, which floods regularly. Look at those markers showing the 1974 flood levels. There is still a drum high in a gum tree near the lagoons, as a reminder of that flood. Even the effects of Cyclone Debbie were devastating.

The area has been a working farm and for many years was part of Yeerongpilly's Animal Research Institute Research facilities. Since the research facilities moved to Gatton 14 years ago, Oxley Creek Common has remained Queensland State Government land.

Members of the Bushcare Groups along Oxley Creek were amazed and shocked when, just before the last election, the Lord Mayor pledged \$100 million over the next 20 years to "upgrade" Oxley Creek from Laparinta to the creek's mouth. This was also part of the new clean green policy of BCC, launched on 4th June 2017. The plans are downloadable from BCC website. The plans for Oxley Creek, on page 52, include sports fields, eat streets and public aviaries. The idea of an aviary is anathema to bird-watchers and bush-carers.

Last year, Lord Mayor Graham Quirk formed the Oxley Creek Transformation Pty Ltd. Its charter is to plan his "vision". The BCC website states public stakeholders will be consulted during the planning of this "renovation" of Oxley Creek but to date no email address, phone number or website for this company is available to the public. Several groups such as Friends of Oxley Creek Common, Oxley Creek Catchment Association, Birds Queensland and QNC plus private individuals have gone through the Lord Mayor's Office and the BCC call line to register as stakeholders.

Many of the public are concerned that the Board appointed by Mr Quirk may submit plans to the Council, which will be irreversible. Friends of Oxley Creek Common and other stakeholders, believe public awareness and consultation is imperative. On 4th June 2017, we were informed some plans should be released before the end of 2017, but to date no details have been announced.

Over a hundred responses to a Friends of Oxley Common survey want the open space and natural habitat to be respected and maintained. Visitors come from all over Brisbane, south-east Queensland, interstate and overseas to enjoy this wonderful natural environment. We believe it is short-sighted to ignore their contribution to the local economy and to replicate a café culture in a unique habitat. Let's use our imagination and enhance a world-class natural environment, which sustains the native flora and fauna and can be enjoyed and appreciated by all.

Faseny McPhee and Mary Lou Simpson,

friendsofoxleycreekcommon@gmail.com

To follow this topic, visit <http://www.oxleycreekcatchment.org.au/team-quirks-oxley-creek-vision/>

FROM MIKE HINES

The following website and its associated articles which I think will be of interest to many members <https://digital-photography-school.com/5-quick-tips-outdoor-macro-photography/>

WOULD YOU BE INTERESTED IN A TRIP TO SOUTH AFRICA NEXT YEAR?

Long-time member and botanist, Dr Flora McKenzie of Toowoomba, is planning a trip to South Africa for three weeks in August/September 2018, primarily to look at the vegetation, but also the wildlife and the local markets. Globetrotters Travel Agency has prepared an itinerary including provision of an African guide and a driver for the duration of the trip. Hotel accommodation and all meals will be included. She is looking for people who may be interested in undertaking this trip both for sharing the experience and reducing individual costs. The current cost estimate for one person is approximately \$8,500 but would be less for a larger group. Airfares using South African Airways from Brisbane to Capetown via Perth would add approximately \$2000 return. If you are interested in discussing this with Flora, she can be contacted at flora.mckenzie@bigpond.com or phone 07 46 356395

From CSIRO An invitation to join the 'Recent Ecological Change in Australia' Project

QNC members have been invited to participate in a national online survey being conducted by the CSIRO and the Department of the Environment and Energy to help understand how Australia's bushland and biodiversity has been changing in recent years and also whether the 1°C increase in surface temperature experienced over the past century may have contributed to these changes.

If you have a strong, long-term relationship with the land and are passionate about the future of Australia's special plants and animals then the CSIRO would love to hear from you. The survey will collect first hand observations, insights and stories about places that are changing and places that aren't changing. For example, you may have observed new species appearing, plants flowering at unusual times, or trees dying in your area. Or you may not have observed any changes. This will provide a unique and important historical record for Australia.

To participate, you need to be able to select a natural area that you have been familiar with for at least the last 10 years e.g. a Nature Reserve, urban bushland, your local region or farm.

The survey will take about 30 minutes and can be found at

<https://research.csiro.au/biodiversity-knowledge/projects/recent-history-climate-driven-ecological-change-australia/reca-survey/>



LIBRARY & FACEBOOK

These books have been added to the QNC library. Reviews of them will be published in *The Queensland Naturalist* (vol 55, nos;1-3) due out in June.

Rocks and landscapes of the national parks of southern Queensland by Willmott, Warwick; Brisbane, Queensland: Geological Society of Australia, Queensland Division, 2014, QNC Library number: 559.432/WIL

Family bushwalks in South East Queensland by Mark Roberts and Gillian Duncan; Sinnamon Park, Qld.: Mark Roberts and Gillian Duncan, 2016, QNC Library number: 796.51/ROB

The club's Facebook page is open to the public and can be found at QNC Facebook Page.

If you find any interesting natural history items which you think would be of interest to our Facebook followers, please send information to the librarian@qnc.org.au *Leith Woodall*

QUEENSLAND NATURAL HISTORY AWARD 2018

The Queensland Natural History Award is presented annually by the Queensland Naturalists' Club Inc. to give recognition to persons who have made outstanding contributions to Natural History in Queensland. Nominations may be made by individuals (a proposer and a seconder) or by organisations. Criteria for assessment include scientific research, publications of books or popular articles, contributions to organisations, gifting, teaching and administration. Nominations must be received by the Secretary by 31st August each year and remain current for three years. Information in the form of three documents – Rules, Guidelines and Nomination Form – are available on the Club's website or from the Secretary.

WHAT'S ON!

QUEENSLAND HERBARIUM SEMINARS FM Bailey Room, at 12 noon

The Herbarium hosts free public seminars at the Mt Coot-tha Botanic Gardens from noon until 1pm on the second Monday of the month (March to November) - FM Bailey conference room in the Herbarium building. No need to register.

www.qld.gov.au/environment/plants-animals/plants/herbarium/seminars-events

10th July *Drones, mine rehabilitation and burning buffel grass*

Peter Erskine (Program Leader, Ecosystem Assessment, Restoration and Resilience Program, UQ) and Phill McKenna (Research Officer, Ecosystem Assessment, Restoration and Resilience Program, UQ)

14th August *Grazing and erosion risks*

Hélène Aubault (PhD, Griffith University)

BRISBANE BIODIVERSITY SEMINAR – CARNIVOROUS MARSUPIALS

Sponsored by the Brisbane City Council

Tuesday 11th July Kenmore Library, Kenmore Village, 9 Brookfield Road, Kenmore 6.30pm - 8.30pm

Speakers: Martin Finland, Thomas Mutton, Rob Nitschke and Ruth Farrell.

Topics: an overview of carnivorous marsupials' ecology in the greater Brisbane region, the Brush-tailed Phascogale *Phascogale tapoatafa* and the recently discovered Buff-footed Antechinus *Antechinus mysticus*.

Register by phone to Andrew Wills 3407 0215 or at <https://www.eventbrite.com.au/e/brisbane-biodiversity-seminar-series-carnivorous-marsupials-tickets-34309646075>

CHINCHILLA FIELD NATURALISTS' CLUB 50 YEARS CELEBRATION

Saturday 22nd July Chinchilla Historical Museum, Villiers Street, Chinchilla, 10.30am to 2.30pm.

QNC members have been invited to this celebration.

Please reply by Friday July 7th to Kath Truscott. Phone 07 4668 9054 or email mangrove@bigpond.com

MYALL PARK BOTANIC GARDENS SPRING DAY - Sunday, August 20th from 11am.

Featuring bush tucker and useful plants with cooking demonstrations and plant stall.

Morning tea and lunch available. Entrance \$10, under 14 free. www.myallparkbotanicgardens.com

THECA MEETINGS www.theca.asn.au

The Hut, 47 Fleming Road, Chapel Hill 7pm – 9pm Dr John Moss

23rd August *An Introduction to the Mistletoes of Eastern Australia or Are Mistletoes Good or Bad?*

NATIVE PLANTS QUEENSLAND SPRING WILDFLOWER SHOW & NATIVE PLANTS MARKET 16th-17th September Brisbane Botanic Gardens, Mt. Coot-tha 9am-3pm

Photo credits: Peter Woodall (Valisneria, Pardalote, Omphalotus, Pycnopus); Ruth Thomson (Cortinarius)

Leith Woodall (Striated Heron); Barney Hines (Amateur Naturalists, Rainbow Skink)

Mystery Marine Image ID from Jeff Johnson, QM

It is the skull, dorsal fin spine and anterior vertebrae of a fork-tailed catfish (family Ariidae). There are at least 3 species of ariids in the Moreton Bay area and many more in waters of north Qld.

Annual Membership Subscriptions

DUE 1st JULY

Family \$40; Single \$25; Student /Junior \$15; Replacement Club Badges \$15

Options for Payment of Subscriptions

❖ **By Post to**

The Treasurer, Mr Mike Anderson, 164/462 Beams Rd, Fitzgibbon 4018
with a bank cheque or money order and this completed form.

OR

❖ **At a General Meeting:**

Handed to the Treasurer in an envelope with this completed form
OR

❖ **By EFT to:- Account:** The Queensland Naturalists' Club Inc.

Bank: Westpac *BSB:* 034-068 *Account No.:* 901249

Reference: Your Name

And also email your details to: treasurer@qnc.org.au

including your preference for receipt of Newsletter (see below).

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