

June 2021

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FIELD NATURALISTS' ASSOCIATION OF CANBERRA INC. GPO BOX 708 JAMISON CENTRE ACT 2614

# FIELD NATTER

## MEETING—Thursday 3 June 2021

7:30 pm Australian National University

Jan Anderson Seminar Room, R. N. Robertson Building, Biology Place, ANU, ACT  
details back page

### AGM

**Speaker: Various members (hopefully)**

**This is our first face-to-face meeting since early last year so it will be good to see many members present to catch up. Please don't be put off by it being the AGM.**

**Here's a challenge for us:** After the formalities of the AGM, we would like to hear from any member who has two or three photos to share and give a few words about. Please bring and share examples of how natural history, citizen science and information can be or has been presented through stories and via a diversity of media, or any photos you'd like to share.



*The National Arboretum looking resplendent in its autumn cloak*

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## Observations: wonder and awe for the AGM

To celebrate Field Nats' resumption of evening meetings on Thursday 3 June we're inviting you to PLEASE bring a USB with 5–10 photos or a short video that shows what you've been inspired and intrigued by in the time since Covid restrictions began.

If you'll 'talk to' your images we'll all enjoy sharing your learning and your investigations. We'll understand more about what 'makes us tick' as naturalists and one species among millions!

Alison has agreed to co-ordinate our efforts and will be able to bring some of her discoveries in that same 'Covid' period.

As an example:

I found this 10–12cm cocoon whilst gardening in the front yard on 4 May. Expecting the cocoon to be empty, I took it inside, and eventually to the

laundry windowsill with the idea of adding it to my 'nature table' collection.

Next morning it obviously wanted OUT. It was placed near the back-door (among genuine Flynn rocks accumulated over 4 decades as we altered the garden.)



Since then I've used Canberra Nature Map to start the identification journey and the research necessary to reach *Metura elongatus*, Saunder's Case Moth.

If the weather's warm enough the larva partially emerges and moves itself around over the grass. If startled it rapidly withdraws into the cocoon. Overnight it seals up the entrance with silk attaching a thread or two to a grass stem or, once, hanging the cocoon from the house walls.

Obviously I'd seen the cocoons before but this astonishing individual spurred me into further investigations, wonder and awe.

Please also let me know if you're able to be part of this Members' Night on 3 June.

**Rosemary Blemings**

## Photographic Field Guide to Australian Frogs

Author: Mark Sanders, published by CSIRO Publishing

The *Photographic Field Guide to Australian Frogs* aims to provide a detailed and wonderfully illustrated guide for adult frog identification. Frogs can be subtly different and often lack consistent features for identification. Species recognition may require gaining an overall impression or appearance based on a variety of subtle differences such as shape, size, behaviour, habits, call and habitat. This is referred to as 'jizz'. However, relying on jizz for identification presents a problem – it requires prior experience or a reference for comparison. The *Photographic Field To Australian Frogs* overcomes this limitation by providing detailed comparative photos of key identification characters.

For those less familiar with frogs, a 'dichotomous key' is provided to quickly identify genus or groups of similar looking frogs. Like so much else in the book, this key is illustrated using in-life examples.

In contrast with other published frog guides the book provides individualised distribution maps depicting geographical features, which separate similar taxa

such as rivers, mountains, or towns. These maps are supported by detailed text documenting when similar species overlap, abut or even areas where hybrids have been recorded. For those taxa where call is vital, parameters are provided such as dominant frequency, pulse rate, pulses per note and the number of notes per call.

Overall, this book is a field guide to Australian frogs unlike any other. Wonderfully detailed, extensively comparative, superbly illustrated and, most notably, useful for identifying Australian frogs. The *Photographic Field Guide To Australian Frogs* is available from early June. You can purchase online from CSIRO Publishing (<https://www.publish.csiro.au/book/7951/>) or order your copy at all good bookstores.

*Mark G Sanders is professional field naturalist, ecologist, and fauna surveyor with more than 25 years of experience. He is a well-known wildlife photographer and currently runs an environmental consultancy conducting surveys across Australia.*

# Feral desert donkeys digging wells, giving water to parched wildlife

30 April 2021: Erick Lundgren, Arian Wallach, Daniel Ramp, Disclosure statement  
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In the heart of the world's deserts – some of the most expansive wild places left on Earth – roam herds of feral donkeys and horses. These are the descendants of a once-essential but now-obsolete labour force.

These wild animals are generally considered a threat to the natural environment, and have been the target of mass eradication and lethal control programs in Australia. However, as we show in a new research paper in *Science*, these animals do something amazing that has long been overlooked: they dig wells—or 'ass holes'.

In fact, we found that ass holes in North America—where feral donkeys and horses are widespread — dramatically increased water availability in desert streams, particularly during the height of summer when temperatures reached near 50°C. At some sites, the wells were the only sources of water.

The wells didn't just provide water for the donkeys and horses, but were also used by more than 57 other species, including numerous birds, other herbivores such as mule deer, and even mountain lions.

Incredibly, once the wells dried up some became nurseries for the germination and establishment of wetland trees.

## Ass holes in Australia

Our research didn't evaluate the impact of donkey-dug wells in arid Australia, but Australia is home to most of the world's feral donkeys, and it's likely their wells support wildlife in similar ways.

Across the Kimberley in Western Australia, helicopter pilots regularly saw strings of wells in dry streambeds. However, these all but disappeared as mass shootings since the late 1970s have driven donkeys near local extinction. Only on Kachana Station, where the last of the Kimberley's feral donkeys

are protected, are these wells still to be found.

In Queensland, brumbies have been observed digging wells deeper than their own height to reach groundwater.

Feral horses and donkeys are not alone in this ability to maintain water availability through well digging.

Other equids — including mountain zebras, Grevy's zebras and the kulan — dig wells. African and Asian elephants dig wells, too. These wells provide resources for other animal species, including the near-threatened argali and the mysterious Gobi desert grizzly bear in Mongolia.

These animals, like most of the world's remaining megafauna, are threatened by human hunting and habitat loss.

## Digging wells has ancient origins

These declines are the modern continuation of an ancient pattern visible since humans left Africa during the late Pleistocene, beginning around 100,000 years ago. As our ancestors stepped foot on new lands, the largest animals disappeared, most likely from human hunting, with contributions from climate change.

If their modern relatives dig wells, we presume many of these extinct megafauna may have also dug wells. In Australia, for example, a pair of common wombats were recently documented digging a 4m-deep well, which was used by numerous species, such as wallabies, emus, goannas and various birds, during a severe drought. This means ancient giant wombats may have dug wells across the arid interior, too.

Likewise, a diversity of equids and elephant-like proboscideans that once roamed other parts of world,

may have dug wells like their surviving relatives.

Indeed, these animals have left riddles in the soils of the Earth, such as the preserved remnants of a 13,500-year-old, 2m-deep well in western North America, perhaps dug by a mammoth during an ancient drought, as a 2012 research paper proposes.

## Acting like long-lost megafauna

Feral equids are resurrecting this ancient way of life. While donkeys and horses were introduced to places like Australia, it's clear they hold some curious resemblances to some of its great lost beasts.

Our previous research published in *PNAS* showed introduced megafauna actually make Australia overall more functionally similar to the ancient past, prior to widespread human-caused extinctions.

For example, donkeys and feral horses have trait combinations that mirror those of the giant wombat. This suggests — in addition to potentially restoring well-digging capacities to arid Australia — they may also influence vegetation in similar ways.

Water is a limited resource, made even scarcer by farming, mining, climate change, and other human activities. With deserts predicted to spread, feral animals may provide unexpected gifts of life in drying lands.

Despite these ecological benefits in desert environments, feral animals have long been denied the care, curiosity and respect native species deservedly receive. Instead, these animals are targeted by culling programs for conservation and the meat industry.

However, there are signs of change. New fields such as compassionate conservation and multispecies justice are expanding conservation's moral world, and challenging the idea that only native species matter.

# Field Naturalist excursion: A look back in time

Register (Adelaide, SA : 1901 - 1929), Wednesday 31 August 1927, page 17

Clarendon was the goal of a char-a-banc party of field naturalists, who set out for the charming hills township on Saturday afternoon. At Chandler's Hill a halt was called, and the attention of the party was directed to the alternations of ridges and gullies stretching in long parallel north-south lines. These were explained by Dr. Charles Fenner, as evidence of extensive and deep-seated faulting. The country originally formed a vast peneplain, with a gently undulating surface. Tremendous stresses gradually but inexorably acting upon the unyielding rock, resulted in deep fissures. One portion was upraised, and the other subsided, thus producing sharply defined ridges, with longer slopes to the east. The streams, working slowly through long periods of time, carved out deep channels, and rounding and hollowing the edges of the precipitous Scarps.

From the hill on which the party stood, these successive blocks could be plainly discerned. Indeed a visiting German geologist, Professor Geisler affirmed that probably in no other part of the world were similar mountain scarps so clearly defined. The series included the Willunga Block, the Bull's Creek Block, the Noarlunga to Mount Lofty ridge, cut deeply into by the Torrens Valley, and continued to Mount Gawler, thence gradually flattening out. The Sturt gully constituted another well marked scarp edged ravine. The succession of ridge and ravine extended below the plains in the direction of the

Abattoirs, and under the sea. The bed of the Gulf of St. Vincent was the result of a deep-seated fault, forming a trough below the level of the waters of the Southern Ocean, which consequently advanced to occupy the depression.

Yorke's Peninsula represented a ridge or uplifted block, while Spencer's Gulf and Eyre's Peninsula repeated the striking phenomenon. This conformation too, accounts for the occasional earth tremors that visit the plains. The constant denudation of the hills by streams and rainstorms destroys the equilibrium of the various blocks, which, as a result, undergo adjustments, causing a widespread disturbance.

A mound of the so-called 'white ants' (properly termites) was examined. The mounds are formed of finely divided wood, mixed with excreta, and are constructed so that the moisture readily drains down the outer slope. Like the bees, the government of the little colony is a 'limited monarchy,' with a queen, who may be distinguished by her length being about 1 in.

The community maintains many species of domestic animals to supply their several needs. Visiting naturalists have wondered at the number of animal communities to be found under the bark of our eucalypts. This is due mainly to the refuge afforded by the loose bark, which is not generally to be observed in other kinds of trees. Cockroaches have increased and multiplied largely owing to their indiscriminate appetite, nothing

that can be masticated coming amiss to these omnivorous feeders.

After the temporary halt, the party proceeded on their way amid some of the most delightful scenery in the hills. Wattle, with their golden glory, and blackwood, with their snowy blossoms, clothed the hillsides.

At Clarendon the water at the weir was 25 ft deep, and a great volume of turbid, seething water tumbled into the pool below.

Galls are prevalent both in gums and wattles. Small insects pierce the leaves and are covered with the juices that exude. It is a remarkable fact that the plant responds differently to the several species of gall insects, each producing a gall of different type. Several species of mistletoe, too, prey upon the trees, but the berries are much relished by birds. Another parasite, the native cherry, grew near a gum tree. It has been conclusively proved that this tree is a parasite, and cannot live when all surrounding vegetation has been removed, though it can thrive for a time on grass. Buttercups were abundant, wattles of several species were in full flower, also the native lilac. Several of the party examined the great tunnel, and the large iron pipe. The Happy Valley Reservoir is full to overflowing, and the flood water over the weir is allowed to take its natural course. There is comparatively little silt, but by permitting the water to flow down the bed of the river, the supply to the reservoir is kept pure from foreign matter.

Submitted by Kevin McCue

## Raffle prizes needed

The raffle is our only fund-raising event and is funded through members' generous donations, mostly consisting of items no longer needed or wanted at home. Fresh garden produce is also highly prized. With no actual meetings for the past year the raffle coffers are no doubt dry.

The past 12 months or so have given us plenty of time to go through our cupboards for all those little items we no longer use or want. Please bring them along to donate as raffle prizes. As the saying goes, 'One man's junk is another man's treasure' (or woman as the case may be), and if you are a gardener with fresh produce to donate, this would be greatly appreciated.



## Recent activities

### Weetangera Cemetery... natural and post-settlement history in West Belconnen

On Thursday 13 May, 13 members of the Friends of Hall Museum's volunteer team visited the Weetangera Cemetery and Methodist Church site, hidden from view but part of the Land's End property west of William Hovell Drive. Our informative guide was Kingsley, one of the Southwell family's descendants. Forebears of his Kilby cousins built the original Land's End homestead, the site of which is at least a kilometre from another section of the Old Weetangera Road that's now named Drake-Brockman Drive.

Weetangera Cemetery hasn't been as fortunate as some of the region's other old cemeteries as remnants of Natural Temperate Grassland species have been swamped by introduced grasses and weeds. Microlaena, Red Grass, Spear grass and a few Wallaby Grass plants were visible. Sheep have been used to control grass height in the past but it's not clear what the management program is since the ACT Government purchased the surrounding Land's End property a few years ago.

Beyond the paddock that became the church's one acre and the cemetery's acre is a further acre used by worshippers' horses and the remnants of a Stringybark Woodland with a few other eucalypt species. One assumes any wattles were eaten out or eaten as saplings by hungry stock. How long can eucalypts remain healthy without Acacias nearby?

Striking for their size and the density of their foliage are two conifers planted on either side

of the entry gate. Near them is a cairn that marks the spot where the church stood until its demolition in 1955.

The 20' by 12' Weetangera church began its life in 1869, in what is now the suburb of Lyneham. Aborigines were paid one shilling a sheet to bring bark from woodland trees to roof the stringy bark slab building. Each of the slabs was marked with Roman numerals before the move and the reassembly for the huge parish of Weetangera and its widely scattered farming families.

Forty-four burials took place at the cemetery, 42 of these are marked, with 21 being the Southwells' final resting places. The family's Society continues to be active in maintaining the cemetery. I noticed when walking in past 'new' Land's End that the delightful slab shed I photographed in 2017 has vanished.



By the underpass that allows the Bi-Centennial Equestrian trail from The Pinnacle's south to cross William Hovell Drive was a population of invading Euphorbia plants that have escaped Hawker gardens.

How can places, nature, post-settlement heritage, Indigenous culture and the habitats that we treasure be cared for and protected



from neglect in perpetuity, from those with different 'mindsets' and lack of supportive funding?

**Rosemary Blemings**

### The Pinnacle

On 11 April I wandered around a section of The Pinnacle Nature Park. Fresh air and Nature was required. My mobile phone was plugged into the power at home, so no photos. This turned out to be an advantage as my attempts to photograph sometimes disturb the wildlife and I don't always get to keep still. I found myself in the midst of a feeding flock of a Willie Wagtail pair, a Treecreeper, Grey-fantails and Silvereyes. I have never seen so many Silvereyes or Fantails in one place before - all busy flitting here and there, the Fantails out to catch a disturbed insect, the Silvereyes finding berries on a bush a metre from where I was standing. Bliss! The next day, armed with my mobile, and in a different patch, I discovered them in an area with little undergrowth, this proved fruitless as I was more visible. However, I heard Kookaburras and Currawongs, saw Red-wattle birds, Crimson Rosellas, a Treecreeper, and the Grey-fantails again. On another walk along the 'Back Track' (renamed by the authorities as the 'Springvale Track') I observed several Gang Gangs trying to feed peacefully in various trees as they were always shunted off and followed by Currawongs. I reprimanded the miscreants but they paid no heed. While a choir of calling Currawongs does sound rather beautiful, it's their misdeeds that spoil their image I'm afraid. Do enjoy the sunshine.

**Rosemary von Behrens**



Field Naturalists' Association of Canberra Inc.

### Who are the Field Naturalists?

The Field Naturalists' Association of Canberra (FNAC) was formed in 1981. Our aim is to foster interest in natural history by means of meetings and regular field outings. Meetings are usually held on the first Thursday of each month. Outings range from weekend rambles to long weekends away. Activities are advertised in our monthly newsletter. We emphasise informality and the enjoyment of nature. New members are always welcome. If you wish to join FNAC, please fill in the member application below and send it in with your subscription to the FNAC Treasurer at the address below.

**President:** Rosemary Blemings, et al

**president@fieldnatsact.com**

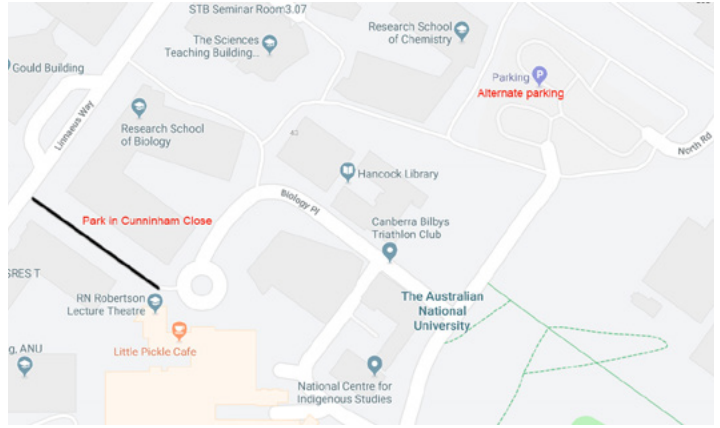
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**Monthly meeting venue:** Jan Anderson Seminar Room, R. N. Robertson Building, Biology Place, Australian National University

**Field Naturalists' Association of Canberra**  
**GPO Box 708**  
**Jamison Centre ACT 2614**



### Membership application or renewal

Surname: ..... First name: .....

If a family membership, please include the first names of other members of the family:

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How did you hear about FNAC? Please circle: Friend

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Subscription (Single/Family \$25) Donation: \$.....

*Subscription renewals are due on 1 July each year*

**Pay by post (include completed form)**

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**Bank transfer (renewals only: form not needed)**

Account name: Field Nats  
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