

February 2013  
ISSN: 1836-2761

OBJECT: To foster an interest in nature

**MEETING—THURSDAY 7th February**  
**7:30pm Australian National University**  
Gould Seminar Room, Building 116, Daley Road, ANU, ACT  
details back page



## Southern Brush-tailed Rock Wallaby Research at Tidbinbilla.

### Scott Ryan, Senior Wildlife Officer

Scott will discuss Tidbinbilla's breeding program using Yellow-footed Rock-wallabies as foster mothers for the Southern Brush-tailed Rock-wallaby joeys. This enables more joeys to be produced by their original mothers.

This research is "part of a national recovery breeding program being undertaken between several agencies including the ACT Government (Tidbinbilla), Victorian Government (Department of Sustainability and Environment), Parks Victoria, Adelaide Zoo and Waterfall Springs Sanctuary."

<http://www.tidbinbilla.com.au/learn/tidbinbilla/breeding/>

Scott has been the senior wildlife officer work at the Tidbinbilla Nature Reserve since December 2011  
He has around 20 years experience working with native wildlife, at such places as National Zoo & Aquarium, Australian Reptile Park & Featherdale Wildlife Park.

**OUTING February 10, 2013**  
**Lake Ginninderra & Creek**  
**8:00 am Morning tour**

Meet at (East) Diddams Close (off Ginninderra Drive)

Contact: Tony Lawson ph 61619430

See what community Landcare groups do for the environment as well as viewing the local wildlife. The walk will start by walking under the Ginninderra bridge.

## When was the last time you looked at a snail closely?

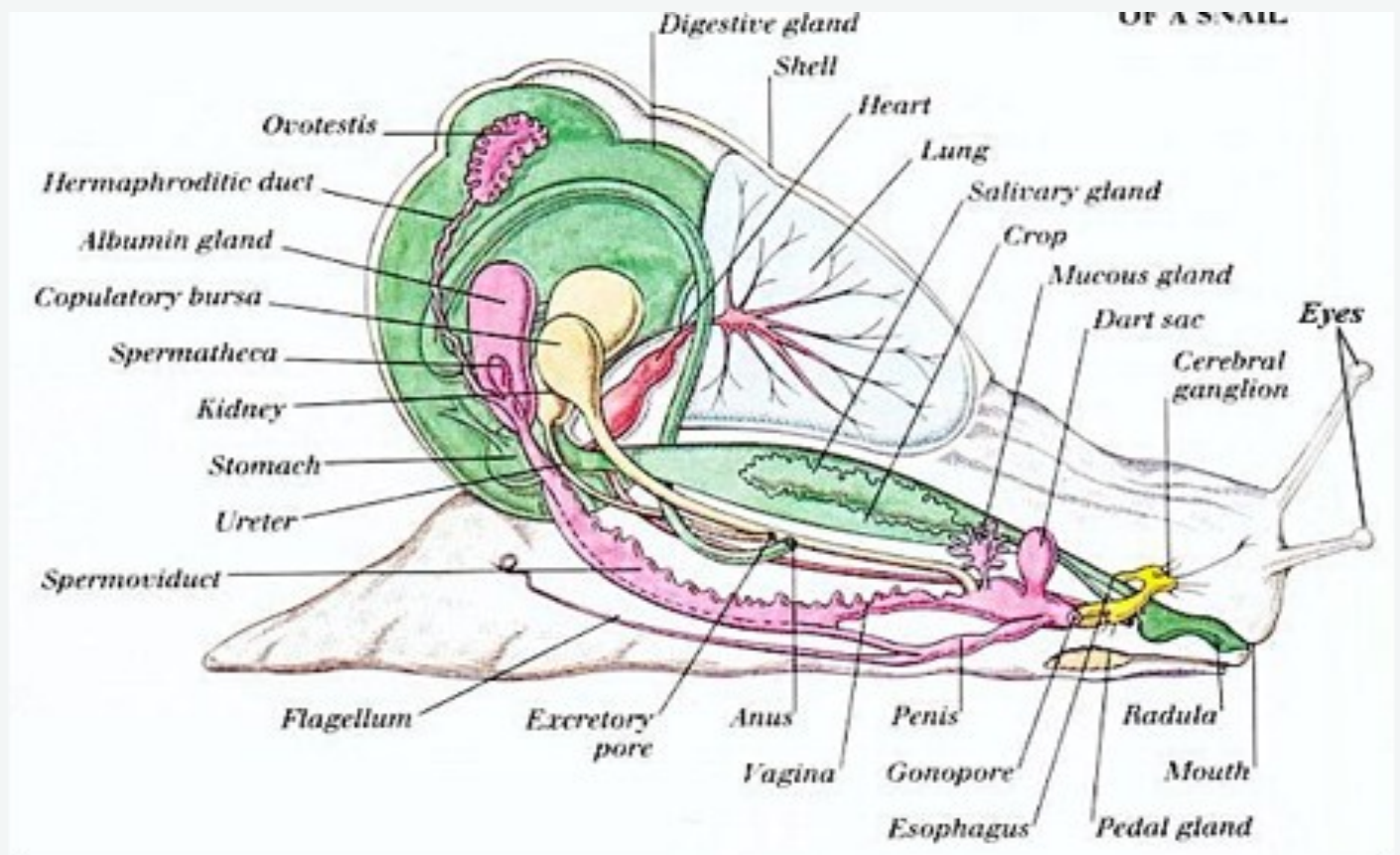
At a recent dinner party the topic of the sex life of garden snails arose. Our guest had seen a couple coupling for about 3 days and thought it about time they parted company. As she pulled them apart she saw they were connected by a long narrow tube. I had to admit I didn't know much about the garden snail, so I gathered some facts from the internet (Australian museum) and from an old text book.

There are over 1000 species of native Australian snails and slugs. However, most of the snails and slugs we find in our gardens are not natives.

Most snail species arrived accidentally in Australia on potted plants, or stuck to packing cases, pallets and shipping containers. A few species seem to have been deliberately smuggled in to be bred and eaten as delicacies. Unlike other exotic species, there is no evidence to suggest that these 'immigrant' snails have affected the survival of Australia's native snail fauna. In fact, most of these introduced snails invade places only after humans have destroyed the habitat of native snails.

Over 65 land and freshwater snails and slugs have been introduced to Australia from overseas. But only a few of these have become pests.

The common garden snail, *Helix aspersa*, has been in Australia for well over 120 years. Today, it is by far the most widespread of all our introduced species, existing in all states and territories. These snails live in non-tropical areas and avoid desert country. In Europe, predators such as thrushes and blackbirds keep *Helix* populations in check and cold winters limit their breeding to warmer months of the year. In Australia, warm winters allow *Helix* to breed for most of the year, and the lack of predators have led to it becoming a major pest. Most of us have a healthy populations of snails in our gardens. When conditions are dry, snails retreat into their shell and seal the entrance. When conditions are dry they can then survive in a state of suspended animation for several months.



The first sign of movement from a snail is usually the emergence of the head followed by a tentative extending eye-stalk or 'tentacle'. Land snails have two pairs of tentacles, with eyes on the tips of the longest pair. The ability to turn your eyes inside out is not something I aspire to, but it is an amazing adaptation to protect their eyes and is a great space saver. The eye-stalks actually invert when they are withdrawn – just like a rubber glove being pulled back inside itself. Even as their bodies are still emerging, snails can start to move off, although as we know, this is not exactly with a jolt of acceleration. The top speed of a Garden Snail is around 0.048 km/h. Still, their unique method of sliding along on a single 'foot' while releasing a bed of low-friction mucus is perfect for their way of life, but does require a humid or wet environment to avoid drying out. Cruising this way has its advantages; you can travel anywhere; upside down, and also over sharp objects. A snail can slide over the edge of a razor blade without cutting itself!

Sharp teeth? Surely not, however it's exactly what they have – and hundreds of them. Snail teeth or Radula (snail teeth) as they

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(Continued from page 2) **When was the last time you looked at a snail closely?**

are called, are tiny and attached to their ribbon-like tongues. Snails' teeth are shaped to suit their particular diet, particularly letters in our letter box!

Being hermaphrodites, garden snails each have both male and female reproductive organs, but the union of two animals is necessary for the fertilization of the eggs, because the spermatozoa of an individual do not unite with the eggs of the same animal. The *spermatozoa* arise in the *ovotestis* (see diagram); they pass through the coiled *hermaphroditic duct* and into the *sperm duct*; they then enter the *vas deferens* and are transferred to the vagina of another animal by means of a cylindrical *penis*, which is protruded from the *genital pore*.

The *eggs* also arise in the *ovotestis* and are carried through the *hermaphroditic duct*; they receive material from the *albumen gland* and then pass into the *uterine canal*; they move from here down the *oviduct* into the *vagina*, where they are *fertilized* by spermatozoa transferred to the *seminal receptacle* by another snail. In almost all other land snails impregnation is mutual, each animal acting during copulation as both male and female.

*Helix* has a dart sac that secretes a calcareous spicule, which is discharged into a potential mate. It is thought to stimulate effective copulation and thus serves as the equivalent of cupid's arrow.

In the last issue of "Field Natter", I included a short piece written by Charles Darwin. This month comes from Carl Linnaeus (1707-1778) the founder of the modern biology classification system

Linnaeus' basic scientific creed was written in *Systema*. He explained:

Wisdom's first step consists in knowing things in themselves. Knowledge consists in a true idea of objects, and, by the properties with which the Creator has endowed them, to distinguish the similar from the dissimilar so that this knowledge can be communicated to others by affixing a name to each thing to distinguish each from the others; for if the name be lost the knowledge of the thing is also lost. For these shall be the basis of literacy without which none can read for, in ignorance of the particular subject, no accurate description can be transmitted, or accurate demonstration made but only errors committed. Method is the soul of science. . . .

All his life Linnaeus had been making lists and arranging groups. The outcome of his thinking was that the world conveniently had five sub-divisions: class, order, genus, species, variety. He was convinced that the order his system imposed upon the natural world was essentially what God had put there for him to discover.

Linnaeus didn't like cold-blooded animals and created a class (*Vermes* -worms) that included creatures such as molluscs and starfish.

His six classes were:

|             |                           |
|-------------|---------------------------|
| Quadrupedia | Mammals                   |
| Aves        | Birds                     |
| Amphibia    | Frogs, lizards and snakes |
| Pisces      | Fish                      |
| Insecta     | Insects                   |
| Vermes      | Everything else           |

#### EDITORIAL

Welcome to 2013. I find January a quiet time for field nattering, especially with the hot start we have had to the year. Another of my activities is to play golf (very badly) at Yowani. Yowani has a lake system that runs through the central area of the course. Of natural history interest is the considerable waterfowl life that exists. Dominant are wood ducks and coots, literally there are 100-200 coots. Other species are masked lapwings, cormorants, a few moorhens, hardheads and ibis. (Recently, I spotted one straw-necked ibis a first that I had seen on the course.

Why so many birds compared with other suburban catchment ponds? Maybe it is due to the system having existed for many years, with a build up of resources. But, I think more likely is that the course provides a degree of protection from predators.

#### BIRD COURSE

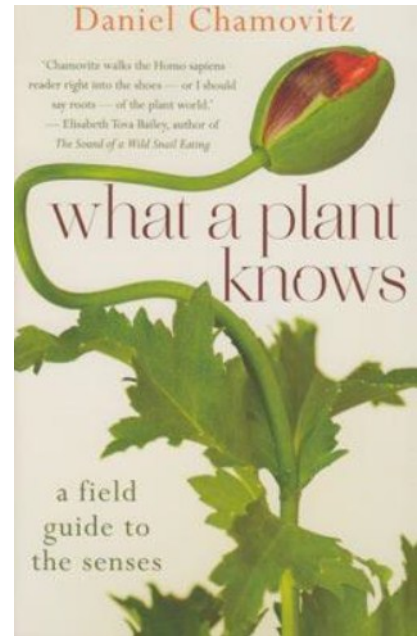
I am repeating the U3A course I ran last year. This time at Hughes from July 25 for six weeks. The course is filling up quickly, So If you belong to U3A and want to attend let me know as soon as possible.

Chris Bunn 6241 2968

## SOME RECENT BOOK REVIEWS BY IAN FRASER

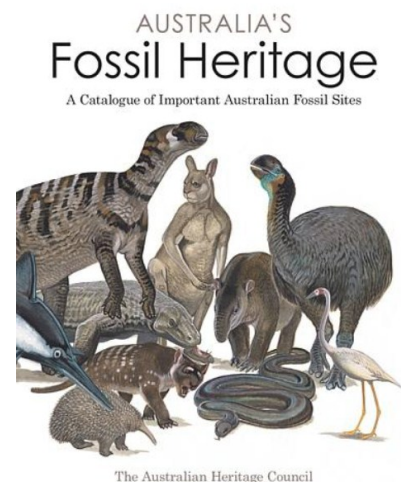
***What a Plant Knows; a field guide to the senses*** Daniel Chamovitz  
Scribe. 177 pages. RRP \$49.95

Fortunately Daniel Chamovitz, a respected botanist at Tel Aviv University, has decided it's time to introduce the rest of us to the real and sometimes remarkable science that's been revealing the various senses of plants for centuries. Sadly, the whole field was set back decades by the anti-scientific fruit-loopery of the 1973 *Secret Life of Plants*, by Tompkins and Bird, which purported to show that plants are sentient, and even supernatural, and which made many botanists nervous about being lumped with them if they did serious work on the subject. While careful to avoid any *Secret Life* suggestions that plants use the same senses that we do, Chamovitz uses human sense terms – seeing, smelling, hearing and feeling, plus remembering – to discuss plant responses. The key is not *how* these senses work, but what they respond to. And there is no doubt that plants respond in different ways to light, to chemicals in the air, to sensations such as wind movement, touch, heat and cold, and being chewed. There are even tentative indications that plants might respond to some sounds, including those produced by either pollinating or hungry insects. (This has nothing to do with the very dodgy „experiments“ conducted by Dorothy Retallack in the US and published in 1973 as *The Sound of Music and Plants*; all this revealed was that plants unsurprisingly shared her love of muzak and distaste for Hendrix.) This book is full of wonderful information based on up-to-date research; e.g. the parasitic vine dodder sniffs out, and grows towards, its preferred host plant species – and within that species can identify and select healthy individuals over less desirable sickly ones. Truly fascinating reading, and totally accessible.



***Australia's Fossil Heritage; a catalogue of important Australian fossil sites*** Australian Heritage Council CSIRO Publishing. 200 pages. RRP \$59.95

Australia has a rich and ancient history, and much of it is told in the rock pages in the form of fossils. Sites of world significance include Riversleigh and Naracoorte (mammals), Ediacara (ancient soft-bodied marine life), the Pilbara stromatolites (oldest recorded life on earth) and Lark Hill (world's most extensive dinosaur footprints). This detailed guide to major fossil sites, in each state and the Northern Territory (but not the ACT) is based on the recommendations of museum palaeontologists. The nature and significance of every site is explained, with photos and a series of painted reconstructions of ancient habitats and their inhabitants by the admirable Peter Schouten, who has previously worked with Tim Flannery to our great benefit (and illustrated the next book); these are fascinating, but sadly uninterpreted. This is not a book for everyone – most of the sites are not open to the public, so it's not an excursion guide – but it's a key reference, and an accessible story of our past for anyone interested.



## Mr Shane Rattenbury MLA

ACT Minister for Territory and Municipal Services

### THE FIRST 100 DAYS

as Minister responsible for land management in the ACT: Implications for Biodiversity Conservation

**\*\*\*WHEN\*\*\***

Wednesday 20th February 2013 @ 5:30pm (6pm start)

**\*\*\*VENUE\*\*\***

Location: Pilgrim House, 69 Northbourne Ave, Canberra

Register for this FREE community event at Eventbrite

For information contact **6229**

**3209 orcommunications@conservationcouncil.org.au**

This year the President and committee are advanced in their planning for the monthly meetings. Speakers may change, but it is a good start for the year. Outings will aim to reflect the topic of discussion for that month

| MONTH       | SPEAKER             | TOPIC   |
|-------------|---------------------|---|
| FEBRUARY 7  | Scott Ryan          | Brush-tailed rock-wallaby research at Tidbinbilla.  |
| MARCH 7     | Bat person          | Bats!   |
| APRIL 4     | Tonya Haff          | White-browed Scrub Wren   |
| MAY 2       | Richard Baker       | "Traditional Ecological knowledge: the Yanyuwa"   |
| JUNE 6      | Marianne Horak      | The scribbly gum moth (Canberra the scribbly moth capital)  |
| JULY 4      | Under construction  |   |
| AUGUST 1    | Ric Longmore        | Dangerous snakes of Australia   |
| SEPTEMBER 5 | AGM, members' night | Member's choice   |
| OCTOBER 3   | Trish McDonald      | Macquarie Island, rabbit, rat, mouse control during her time as station manager for the Australian Antarctic Division |
| NOVEMBER 7  | Under construction  |   |
| DECEMBER 5  | Christmas party     |   |

*Bob reported to the committee that the development of a new website is now well advanced and when finished we will have a website better than ever.*



**Field Naturalists' Association of Canberra Inc.**

**Who are the Field Naturalists?**

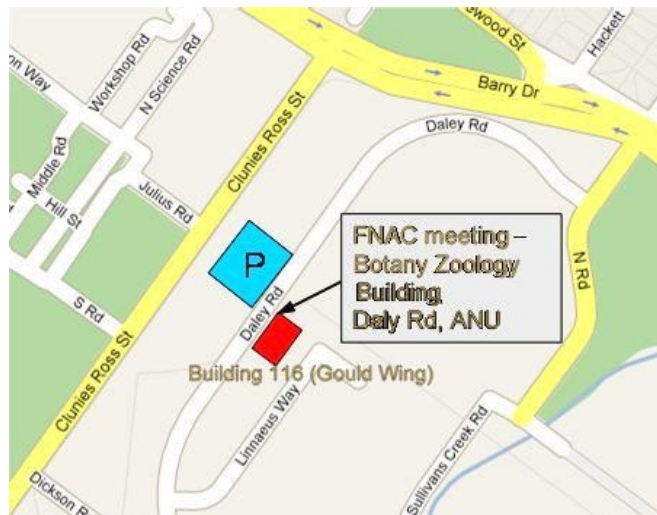
The Field Naturalists' Association of Canberra (FNAC) was formed in 1981. Our aim is to foster interest in natural history by means of meetings and regular field outings. Meetings are usually held on the first Thursday of each month. Outings range from weekend rambles to long weekends away. Activities 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 von Behrens pH: 6254 1763

**Email:** fieldnaturalist@yahoo.com.au

**Website:** under construction

All newsletter contributions welcome.



**Monthly meeting venue:** Division of Botany and Zoology, Building 116, Daley Rd, Australian National University. Park (the Xmas meeting is at the adjacent building 44 and will start at the earlier time of 6:30 pm)

**Field Naturalists' Association of Canberra**

**GPO Box 249**

**Canberra ACT 2601**



**MEMBERSHIP APPLICATION OR RENEWAL**

Family name: ..... First name: .....

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

.....

Postal address: .....

Suburb: ..... State: ..... Postcode: ..... Home phone: .....

Work phone: ..... Email address: .....

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

How did you hear about FNAC? Please circle: FRIEND? OTHER? Please specify: