March 2007

FIELD NATURALISTS' ASSOCIATION OF CANBERRA

FIELD NATTER

OBJECTS: To foster an interest in an awareness and an understanding of nature

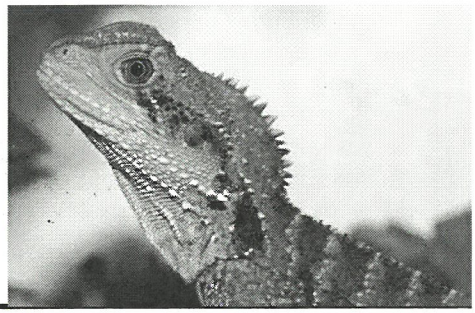
MEETING THURSDAY MARCH 1
8:00 pm Australian National University
Meeting details back page

Water Dragons

Sean Doody
ANU

Sean is a research officer at the University of Canberra with an intereset in evolutionary ecology, physiological ecology and conservation biology of reptiles and amphibians.

His talk relates to a project undertaken throughout 2003-05 set out to determine by what mechanisms do water dragons adjust their offspring sex ratios during range expansion and climate change. Results (including those from ANBG) showed that the pivotal temperature (the incubation temperature that divides the offspring sexes) is not adjusted to produce viable sex ratios throughout various climates, but rather lizards adjusted sex ratios by nesting in areas with different canopy openness indices



EDITORIAL

Next month we have a speaker on a very hot subject. Dr Andrew Glikson, an Earth Scientist in the Australian National University, will talk about "**Planet H/eaters - a global warning**" when he will explore the nature and origin of the current climate change including the consequences of anthropogenic combustion of the carbon products of more than 400 million years of biological evolution.

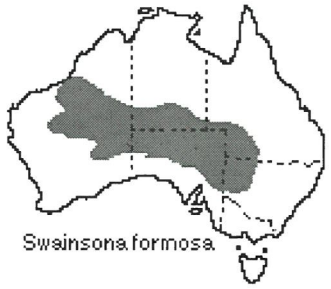
My apologies because of going overseas, this newsletter has been produced much earlier than usual and I have not had the opportunity to put in details about our next outing Chris

Species of the Month—Sturt's desert pea

Did you know that another famous explorer and not Sturt originally described this unique Australian wild flower, famous for its distinctive blood-red leaf-like flowers, each with a bulbous black centre, or "boss". It is native to the arid regions of central and north-western Australia, and its range extends into all mainland Australian states with the exception of Victoria.

Specimens of Sturt's Desert Pea were first collected by William Dampier on 1st September 1699. "a creeping vine that runs along the ground ... and the blossom like a bean blossom, but much larger and of a deep red colour looking very beautiful".

These specimens still exist in the Sherardian herbarium at Oxford University.



Taxonomy

The taxonomy of Sturt's Desert Pea has been changed on a number of occasions. First named before the Linnaen system by John Ray as *Colutea Novae Hollandiae, with large scarlet flowers, arranged inan umbrel, marked with a purple spot.* Thank goodness for Linneas! It was initially treated in the 17th Century in the genus *Clianthus* as *Clianthus dampieri* , and in 1950 became more widely known as *Clianthus formosus* (*formosus* is Latin for "beautiful"). However it was later reclassified in 1990 under the genus *Swainsona* as *Swainsona formosa*, the name by which it is officially known to-day.

A further reclassification to *Willdampia formosa* was proposed in the publication *Western Australian Naturalist* in 1999; however this proposal was rejected by the scientific community in 2000.

The common name honours Charles Sturt, who recorded seeing large quantities of the flowers while exploring central Australia in 1844: "we saw that beautiful flower in splendid blossom on the plains. It was growing amid barrenness and decay, but its long runners were covered with flowers that gave a crimson tint to the ground".

The second version of the scientific name honours the naturalist William Swainson, who ran a garden of botanic specimens in Twickenham (England) and the third (rejected) version of the scientific name was intended to honour the explorer William Dampier.

Sturt's Desert Pea is a member of Fabaceae, subfamily Faboideae, however its flowers are so different from its relations that it is almost unrecognisable as a member of the pea family. The flowers are around 9 centimetres in length and grow in clusters of around half a dozen on thick vertical stalks, which spring up every 10-15 centimetres along the prostrate stems, which may be 1 to 1.5 metres in length. The plant blooms from spring to summer, particularly after rain. There is a natural pure white form, as well as hybridised varieties which can have flowers ranging from red to pink, as well as yellow, with or without the central boss. Approximately 15 silky grey-green leaves rise from each prostrate branch; both branches and leaves are covered with soft hair-like filaments. The fruit is a legume, about 5 centimetres long, and yields several flat, kidney-shaped seeds at maturity.

Most forms of the plant are low-growing or prostrate, however in the Pilbara region of north-western Australia varieties growing as tall as 2 metres have been noted.

Life Cycle

A short-lived perennial, it is often treated as an annual when domestically grown. However if the roots are left undisturbed, flowering may resume in the next season.

It is well adapted to life as a desert plant. The small seeds have a long viability, and can germinate after many years. The hard seed coat, which protects the seed from harsh arid environments until the next rainfall, inhibits germination in normal domestic environments.

Once germinated, seedlings quickly establish a deep tap root, vital for desert survival. This means that if domestically grown, they should either be planted in their intended final location, transplanted as soon as possible after germination, or grafted as a seedling on to a different root. They do not tolerate disturbance of their roots but, once established in well-drained soil, require little and infrequent watering, and can withstand extreme heat and sunshine, as well as light frosts.

Sturt's Desert Pea was depicted on the 20 cent stamp as part of a set of six stamps issued in 1968, featuring floral emblems of the Australian States. It is again dominant with the current release of 50 cent Australian wildflower stamps

Global warming: dust off those notebooks

A Call for help

In the northern hemisphere there are many studies linking the already observed warming temperatures to changes in the environment, such as flowering and fruiting occurring earlier, changes in mating behaviour and animals breeding earlier.
So what is happening in Australia? We don't have much information, although, with the help of naturalists we have already discovered that a number of Western Australian birds have changed the timing of their migration and that plants in the Greater Melbourne region have altered when they flower—but the Australian picture is sparse and ***we need your help.***
However, as many of our species only occur in Australia what is happening in the northern hemisphere might not apply to our flora and fauna.. This makes it critical to determine the impact of climate change on the Australian environment to enable us to better mange it into the future.
The greatest hurdle to achieving this is knowing what information has already been collected and then how to get access to it.
This led to the development of the National Ecological Meta Database, a project run by the Bureau of Meteorology, the University of Melbourne, Macquarie University and the Australian Greenhouse Office. This database is located at http://www.bom.gov.au/nemd/ and access is to anyone free of charge.
We need people who have been recording information, such as breeding records, daily or weekly presence/absence, flowering dates, bird arrival dates etc...to list their records on this website. The website will only collect information about your records and how to gain access to them; the records remain in your custody, giving you final say in who and for what purpose they can be used. The website can also be used to search for other organisations or individuals that may have records of interest to you.
If you want to know more about the project or have any queries please visit our website http://www.bom.gov.au/nemd/ or contact Dr Lynda Chambers at the Bureau of Meteorological Research Centre.

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Snippets from around Australia

(NT Field Naturalists Club)

UNDERWATER NESTING

The Snake-necked Turtle (*Chelodina longicollis)* is unusual in laying its eggs underwater, in freshwater, instead of burying them on dry land. Laying their eggs underwater speeds up incubation and enhances survival. Eggs can cope with inundation for 25 weeks, although the optimum is six weeks. Along with the timing of laying, this strait is well matched to the expected wet season.

SALTWATER CROCODILES ON THE MOVE

A recent study has confirmed an increase in numbers of saltwater crocodiles in freshwater reaches of rivers. In the Daly and Roper rivers, densities in upstream areas have increased, and in the Daly river the species has extended upstream. Saltwater crocodiles now occur as far as 235 km inland and to 126 metres above sea level.

SOME EATABLE AUSTRALIAN PLANTS

(From the Launceston Field Natualists newsletter)

Some Australian plants have value for use in the kitchen.
Leptospermum scoparium, a Tea tree, was used to prevent scurvy and make *beer.*
Eucalyptus amygdalena can be used for tea making as well.
Bulbine bulbosa leaves can be used as spring onion and the bulbs can be roasted in olive oil or butter.
The Sea Parsley can be used as parsley on roast potatoes.
Arthropodium milleflorum bulbs can be chopped and roasted for use in dips etc.
Tasmannia lanceolata, Mountain Pepper, leaves make a great addition in any recipe using pepper.
Prostanthera rotundifolia provides a mint flavour in biscuits or other mint recipes or tea.
Boronia citriodora provides a fine lemon herb taste.

AWARD TO GARTH DIXON

Australian Day celebrations had special depth in 2007 as we welcomed the news that Garth Dixon had received an OAM *for service to conservation and the environment.* The citation emphasised his *long-standing contribution to the preservation of native vegetation in the South East Region of NSW.*

For many years we have had enthusiastic support from Garth and Ros which often included interpretive visits to their properties. Warriwillah, near Michelago was the site of specific replanting of local species and an arboretum. Garth, quite recently, published a practical guide to replanting with local species. It's based on practical principles, keen observation and plants being able to survive the establishment phase with only rainfall.

Thank you Garth for sharing so much bush-lore, your love of flora and fauna , the art and spirituality of the land. **CONGRATULATIONS!!**

Rosemary

Neville Cayley - a major bird painter

N. W. Cayley (1886—1950) was a chief painter of Australian birds. His most distinctive and influential work was done through the medium of books. The first of these was *What Bird is That?* (1931), in which every Australian bird was illustrated in colour and which ran to many editions. Cayley's other chief works were *Finches in Bush and Aviary* (1932), *Budgerigars in Bush and Aviary* (1933), *Australian Parrots* (1938), and *The Fairy Wrens of Australia* (1949). In addition, Cayley executed the colour drawings for G. A Waterhouse's *What Butterfly is That?* (1932) and also the figures in E. Troughton's *Furred Animals of Australia* (1941).

(*Information from ANBG website)*

FLOWERS OF BLOOD

A wealth of Dreamtime legends were handed down by the Aboriginal people who lived in the area now known as Central Australia. The following is one of these complex and varied tellings--a rather sad one.

Purlimil was a pretty young girl. She was kind, carefree and in love with a man called Borola. The two of them wanted to be married but it was the elders who made the rules about marriage.
"You must marry Tirlta," they told Purlimil.
"But," she protested, "I don't like him. He is old and cross."
"That is true," the elders agreed, "but he says he will be good to you. You must obey our decision."
Upon hearing this, Purlimil began to cry. When Borola tried to comfort her, she sobbed to him, "What can we do?"
"We could run away," he suggested.

Purlimil agreed although she knew this would be dangerous.

The two waited for dark and then, together, they left the camp. After travelling a long way, they came to the shores of a beautiful lake where some of Borola's relatives lived. Here they were married and for many seasons, they lived happily.
Tirlta, however, had not forgotten Purlimil. When he thought of how he had been tricked, a great rage would fill the man who spent many days planning his revenge. Tirlta kept trying to find the young couple and his efforts were finally rewarded when he heard of them from a group of travelling hunters.
He decided to take some men with him and attack the lakeside camp. Carefully he chose his companions, cruel and mean fighters. This band waited until night, crept into the peaceful camp and without warning, attacked the sleeping people.
The lakeside people, aroused suddenly, fought bravely. Surprise, though, had lent an advantage to the attackers and everyone in the camp was killed, including Purlimil and Borola.
It had been a cruel battle and the grassland was stained with blood as Tirlta and his men walked away.
The ancestor spirits, watching from the sky world, were very distressed. They knew that Purlimil, Borola and the friends who had accepted them had not deserved to die in such a way.
So distressed were the spirits that they cried for many days. Their tears, without ceasing, rolled into the nearby lakes, causing the water in them to become quite salty.
One season later, the cruel Tirlta, still proud of the cowardly revenge he had taken, returned to the shores of the lake to gloat over the bodies of the people he had killed...to enjoy his victory.

But he found no bodies to gloat over.

Instead of bodies, Tirlta found mass upon mass of scarlet flowers--beautiful flowers the ancestor spirits had caused to grow from the blood of the good people who had been so heartlessly murdered. They had ensured, by this, that they would not be forgotten.
On seeing the flowers, Tirlta realized what had happened and became very frightened. Those same spirits might well be hovering overhead at that very moment--watching him.
He turned to run away.
As he did so, he was struck in the back by a spirit spear.

Spirit spears do not miss.

Tirlta fell dead and was changed instantly into a pebble, indistinguishable from every other pebble that had, just a moment before, been under his feet.
To this day the inland lakes of that area hold only salt water, as if the tears of the ancestor spirits remain,

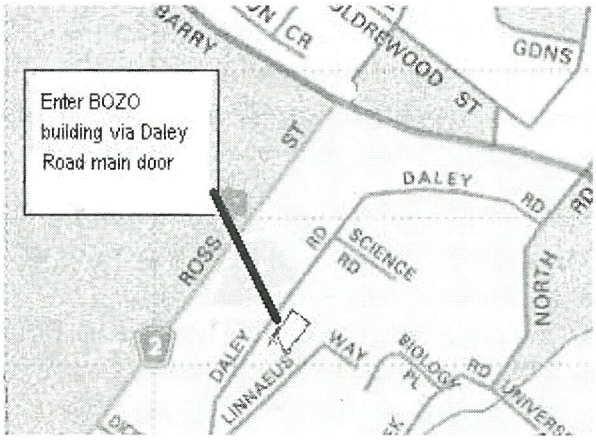
bearing witness to their grief.

Bright red flowers such as Tirlta saw still bloom in great numbers throughout the outback of Central Australia. Most call them Sturt's Desert Pea. Those who know the story of Purlimil and Borola, though, call them *Flowers of Blood.*

Field Naturalists' Association of Canberra

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: Benj Whitworth, tel w 6272 3192 h 0409 544 557
Secretary: Rosemary Blemings, tel 02 6258 4724
Website: www.geocities.com/fieldnaturalist/index.html
Newsletter editor: Chris Bunn <chris_b@webone.com.au
Tel 02 6241 2968. Member contributions welcome.



Monthly meeting venue: Division of Botany and Zoology, Building 116, Daley Rd, Australian National University. Park (occasionally the adjacent building 44). Meetings start at 8 pm and are followed by refreshments.

FIELD NATURALISTS ASSOCIATION OF CANBERRA INC.
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MEMBERSHIP APPLICATION OR RENEWAL

Family name: ..... First name: .....
If a family membership, please include the first names of other members of the family:

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Subscription enclosed: $.....(Single/Family $20) Donation: $.....

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