NEWSLETTER

AUTUMN 2010
NUMBER 19
Editor: Peter Bird

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New members are welcome. Contact Jennifer Gardner, Manager Waite Conservation Reserve, above

'President's' Page

In January President Chris Kaczan with Wendy and Anna packed up and moved to a new life on the idyllic north coast of New South Wales. Secretary Joe Haslam and I are sharing presidential duties until the AGM in May.

I first met Chris almost 30 years ago on the committee of the Nature Conservation Society of South Australia, an indication of his long-standing dedication to conservation. Living virtually on the reserve boundary and working as a teacher at nearby Urrbrae Agricultural High School, Chris' love of outdoors & passion for conservation led him inevitably to the Friends of Waite Conservation Reserve. Chris was part of the inaugural committee in 2001 and took on the Presidency in 2003.

Quietly spoken and measured of word, Chris nonetheless provided firm and passionate leadership to the group. He sought and listened intently to a broad range of advice and consequently his opinions were always thoughtful and well considered. Chris was a hands on president, never failing to get those hands dirty weeding and planting at working bees. He was also considerate of the membership, keen to provide interesting speakers and diverse events to keep members challenged and enthused.

Chris is back in Adelaide for the second school term so take the opportunity to catch up.

Losing a president is only part of our loss. Wendy has been a tireless worker for the Friends, rarely missing working bees and other events. Few if any Friends would have cut and swabbed more olives or planted as many trees! As well we'll miss her wonderful cakes which were a regular feature at Friends' events. And not forgetting Anna the inquisitive and observant bare-footed urchin for whom the reserve was her extended backyard. David and Michael are staying on and hopefully will continue to fit Friends activities in around their busy young lives. The Kaczans will be sorely missed not just for their contributions but for their friendship over many years. We wish them well in their new adventure.

Another person I have known for a long time is South Australia's bat man Terry Reardon. Terry is this year's speaker at the AGM on 19 May. Terry is one of those rare beasts, a scientist with an uncommon gift for communicating his passion in inspiring ways. Bats were not included in our 2008 biological survey so Terry's presentation will provide insights into

the species which occur on our patch. On the matter of the AGM, this is your opportunity to join the committee; I commend it to you. Contact Joe to put your name forward.

After the heat of summer the program of fortnightly working bees (accompanying this newsletter) has already commenced. Ecological restoration of the reserve is our core business and working bees are the means by which we conduct this business. Yes, it can be tough but there is honour in hard work, and nothing beats the taste of a bush barbequed snag and cuppa after you've been working. So come along and bring a friend or two; we need to at least fill the Kaczan void.

Known for his 'botanica' series, Peter Lang has shown his versatility by tackling the 'entomologica' in this issue with a cracker article on the reserve's Jewel Beetles. Pete's superb photos demand this issue be published in colour. And not to be outdone Helen Pryor has produced an article on the reserve's 'etymologica' – the derivation of the names of some familiar features in the reserve. Enjoy.

Peter Bird

'Ripping bat stories from the world to the Waite'

South Australia's batman - Terry Reardon will give a free illustrated talk

7.30 pm Wednesday 19 May 2010

Following a brief AGM

Urrbrae House

University of Adelaide, Waite Campus

(Enter from Fullarton Road, just south of Cross Road, Urrbrae)

Enquiries: 8303 7405

Supper will be served after the meeting. All welcome

entomologica:

Some hidden jewels of the Reserve

My interest in Jewel Beetles (family Buprestidae) was sparked in 2006 when I was shown a copy of Shelley Barker's just published handbook on *Castiarina*, complete with colour illustrations and descriptions for all 481 species of this single large and enormously diverse genus. These are showy beetles, mostly 10 to 15 mm long, with an amazing array of patterns and colours.

Waite Conservation Reserve (WCR) is not ideal habitat for Buprestids, lacking much intact understorey and the heath-like flowering shrubs required for the more conspicuous flower-visiting species. While I have not yet found any *Castiarina* in the Reserve, much to my surprise, I have found, to date, 12 species from other Buprestid genera. This one beetle family provides but a small sample of the wealth of hidden native fauna that may be observed with keen eyesight (and the help of a very large net!)

Buprestidae species recorded in WCR:

Species	Host plant*	Total no. of visits*	Total no observed
Agrilus hypoleucus	GW	4	>50
Anilara adelaidae?	GW	2	2
Anilara obscura	GB,BG	2	20
Chrysobothris perroni	RG	1	1
Cisseis modesta	GW	4	16
Cisseis nubeculosa	GW	1	1
Dinocephalia transsecta	S	1	2
Germarica lilliputana	S	2	>25
Germarica sp.	S	2	>10
Melobasis simplex	GW	1	1
Melobasis sordida	GW	2	2
Melobasis vittata	GW	1	1

* GW = Golden Wattle; GB,BG = Grey Box, Blue Gum (dead foliage); RG = Red Gum (wood); S = Sheoak
Visits on: 30/11/2008, 24/11/2009, 20/12/2009, 1/01/2010

Invertebrates, "the hidden 99%", are often overlooked in biodiversity conservation, yet the impacts of ecological impoverishment, local extinctions, and species loss are just as surely experienced at this level. Jewel beetles may be seen as a flagship group, just like butterflies and more popular plant families such as orchids. They are the tip of the iceberg in terms of overall invertebrate diversity, but have the advantage of being reasonably well studied compared to many other insect groups in which even basic species identification is often not possible.

Jewel Beetles have both pigmented colours and metallic colours; the latter are produced structurally by micro-sculpturing and never fade. Mostly the larvae are wood-borers and the adult beetles emerge in spring or summer to feed on the flowers or leaves of particular host plants. Three main ecological groupings are recognised.

The colourful **flower-feeders** are probably the best known group and well-deserve the name of "jewel beetles". Many have brush-like mouth parts specialized for mopping up nectar and will also chew stamens and petals. Flower-feeders can be further divided into Spring and Summer emerging subgroups. The Spring subgroup, which mostly comprises *Castiarina,* is well represented in the Adelaide Hills, and is often found on white-flowered myrtaceous shrubs such as Tea tree (*Leptospermum*) and Fringe-Myrtle (*Calytrix*). The absence of such plants makes the WCR habitat generally unsuited for *Castiarina.* However there are three later Spring species (*C. crenata, C, colorata, C. media*) which conceivably might turn up on Christmas Bush (*Bursaria spinosa*) flowers in WCR, having been recorded on that species in Belair NP and elsewhere.

Another subgroup of flower-feeders emerges in summer to feed on Eucalypt blossoms and these include some large species of the genus *Temognatha* (2 to 7 cm long). Two rarely collected local species, *Temognatha flavomarginata* and *T. lessonii* seem to be associated with Red Gum and Grey Box respectively, and are prime candidates for flowering eucalypts in the Reserve. However they would be hard to detect high up in canopies except when in flight with their loud buzzing.

The second major ecological group are **leaf-eaters** and these Buprestids tend to have strong associations with particular plant hosts. Nearly all of the species recorded in the WCR belong in this group; they are well represented but hard to detect unless sweeping foliage with a long-handled hoop net. Golden Wattle is an important host plant for many of these beetles.

A third, much smaller group of species are **gall-makers**. The emerged adults of this group may be leaf-eaters or flower feeders, but their larvae, rather than boring in wood or bark, live a cosseted life inside galls. These species induce an abnormality in plant growth causing the stem to form a swelling around the larva. As a result the larva is protected and able to feed on soft tissue produced within the gall.

One gall-maker, *Dinocephalia transsecta* has been found in the Reserve on Sheoaks, although its galls have not been located. There are two other gall makers that might also occur here. *Ethonion leai* is only known to form galls in Orange Parrot-pea *(Dillwynia hispida)* but the populations of that plant in the WCR are very small and any occurrence would be transient. A second *Ethonion* species, *E. reichei* is known to develop in galls just below the surface of the ground in Twiggy Bush-pea *Pultenaea largiflorens* and is a more likely candidate for the reserve.

BUPRESTID SPECIES FOUND IN WCR:

Agrilus hypoleucus (length: 9 mm) on Golden Wattle foliage. Perhaps the most common Jewel Beetle in SA. Larvae feed in the outer wood just below the bark of Golden Wattle, but are also known from a number of other wattle species.

Cisseis modesta (length: 5.5 mm) on Golden Wattle foliage. Also found on a selection of other *Acacia* species.

Anilara obscura (length: 5 mm) from Quartz Hill, WCR, on dried foliage of fallen branch of Grey Box, 20 Dec 2009. The adults are attracted by the distinctive scent released by drying Eucalypt foliage and lay their eggs in the fallen branches.

Cisseis nubeculosa (length: 11 mm), single female from Quartz Hill, WCR, found 1 Jan 2010 on Golden Wattle foliage. The males of this species are smaller with a metallic green thorax and were originally described as separate species.

Chrysobothris peronni (length: c. 1 cm) remains extracted from exit hole in a fallen branch of Red Gum on western boundary of WCR. This individual would have become stuck on emerging head first from its pupa just below the wood surface. The adults are rarely seen but visit dead or dying timber to lay their eggs.

Dinocephalia transsecta (length: 5 mm) on Sheoak foliage. Two males of this gall-making species were found on Quartz Hill summit on 24 Nov 2009 by netting Sheoak, with one observed flying around canopy. A rare species (or at least rarely encountered) with no collections in the S.A. Museum. Only the two original SA collections known when genus was revised in 1988 (Barossa Valley & Yorketown), but I have recently also collected three individuals from the Barossa Range. An exciting discovery for the Reserve!

Germarica lilliputana (length: 2.5 mm) on Sheoak foliage. The species name is entirely appropriate on account of its tiny size. Preliminary results from DNA studies indicate that there is a second very similar local species which occurs together with this one.

Melobasis vittata (length: 8 mm) from Hardy Block East, WCR, on Golden Wattle foliage on 1 Jan 2010.

BUPRESTID SPECIES THAT MIGHT OCCUR IN WCR:
The next eight species are worth looking for in the Reserve.

Melobasis simplex male (length: 9 mm) on Golden Wattle shoots. The males are a shiny, bright, metallic green, but females are darker and duller. With their stream-lined shape, smooth shiny surface, and the legs pulled in, as Buprestids do, this is a very difficult object for birds to grab hold of in their beak.

Temognatha flavomarginata, a large jewel beetle (length: 3.5 - 4 cm) associated with Red Gums in the Adelaide area. Emerges in summer to feed on the flowers. *T. lessonii* is slightly smaller with quite different coloration and seems to be associated with Grey Box.

Melobasis sordida female (length: 11 mm) from Quartz Hill, WCR, on 20 Feb 2010 on Golden Wattle foliage. Has been treated as a bronze form of *M. simplex* with which it often occurs, but DNA studies confirm that it is actually a distinct species.

Melobasis propinqua (length: 10 mm) is a leaf-chewer turned flower-visitor, found on pea-flowers including Twiggy Bush-pea (*Pultenaea largiflorens*). It requires good stands of *Acacia* for larval stages, and may turn up in Hardy Block East where Twiggy Bush Pea and Golden Wattle are common. It is distinguished from *M. simplex* by grey hairs on its head.

Castiarina crenata (length: 10.5 mm) on Christmas Bush *(Bursaria spinosa)* in Belair NP. This is a widespread Jewel Beetle found on a variety of flowering host plants. Like the next two flower-feeding species, it persists into summer and may turn up on flowering *Bursaria* in the Reserve.

Castiarina media (length: 11 mm) on Christmas Bush *(Bursaria spinosa)* in Belair NP.

Castiarina colorata (length: 8 mm) on Christmas Bush *(Bursaria spinosa)* which it often frequents. This is a smaller flower-feeding species, also recorded from Belair NP.

The gall-forming *Ethonion reichei* (length: 6 mm) on Twiggy Bush-pea (*Pultenaea largiflorens*) flowers at Belair, where it has been found to develop in woody galls at the base of Twiggy Bush-pea stems just below the ground surface. There is a reasonable chance that it may be found on these plants in the Reserve.

The gall-forming *Ethonion leai* (length 6.5 mm) on flowers of Orange Parrot-pea (*Dillwynia hispida*). This Mt Lofty Ranges endemic species occurs in Grey Box Woodland at Belair. It is only known to breed in Orange Parrot-pea, a plant that is rare within the Reserve, so there is a small chance that it may turn up here.

Ethonion leai galls on basal stems of Orange Parrot-pea (*Dillwynia hispida*).There is an unopened gall (centre right) and a number of hatched galls with circular exit holes where the beetles have eaten their way out after lying dormant over winter.

Names in the reserve: what's in a name?

A lot! "*Words influence our perception and thinking; and our stories and phrases shape the way we experience and manage the environment.*" [1]

The name 'Waite Conservation Reserve' was only coined in 1992 but from the 1920s it was used for cropping, grazing and agricultural research under the name 'Waite Research Institute'. Going back to 1836 it was used for logging, mining, quarrying, agriculture, horticulture, spring water (Springfield) and even a rubbish dump (history repeats itself)!

Prior to this the land was occupied for thousands of years by Aboriginal people. Imagine how many names must have been used over all those years for this one piece of land!

"*Each domain of language evokes a different landscape and demands a different map. It enables people to change, regulate or ameliorate it.*" [1]

Here are some names from the reserve with notes on their source:

Urrbrae Ridge Nostalgic early settlers often took inspiration from their European places of birth. Robert McGeorge, the owner of Urrbrae prior to Peter Waite, was born in the town of Urr in Scotland. He added the Scottish 'brae' for the stream flowing through the property.

Tanks Ridge The word 'tank' is derived from the Gujarati (Indian) word meaning reservoir. Soldiers of the NSW Corps who served in India introduced this and other, now 'Aussie', words, including verandah!

Groundberry Gully, Wild Dogs Glen, Peregrine Point and Koala Gully Physical characteristics, plants and animals have always featured strongly, their use propagated as much by present day housing developers as by past explorers!

Yurrebilla Trail This Kaurna word is derived from 'Yurridla' denoting the two ears (Mt Lofty and Mt Bonython) of the prostrate body of the mythical giant from the east (Mt Lofty Ranges). Piccadilly is from 'Pikudla' meaning eyebrows.[2]

Harold's Lookout Places are often named for important people including politicians, explorers or wealthy benefactors. Professor Harold Woolhouse, botanist and Director of the Waite Agricultural Research Institute, was certainly an important person as it was he who advocated for the creation of the Waite Conservation Reserve.

And of course the Reserve itself is named for Peter Waite, important pastoralist and philanthropist who bequeathed his land for public use.

1. Bonyhady, T. & Griffiths, T. 2002. (Eds.) *Words for Country Landscapes and Language in Australia . UNSW Press.* Sydney.
2. Anon. 2002. *Walking Trail Guide Karrawirra Parri (River Torrens) & Adelaide City Area.* DECS.

Name the 'dump'!

While on names, can anybody come up with an appropriate name for the soil dump site just north of Springfield gate? With an intensive revegetation program under way the name should get plenty of exercise over the next few years.

While tempting to call it 'Springfield Wastelands' it might be nicer to take inspiration from what it might look like after 10 years of revegetation and regeneration.

Ultimately the University has the final say in the naming rights but Email suggestions to: jennifer.gardner@adelaide.edu.au *for your chance at immortality … or the naming rights at least until someone else changes your name!*

STAFF WORK OVER SUMMER

Over the summer months extensive olive control was undertaken in the Reserve by University staff, mostly along previously established fronts. This is most visible from the Yurrebilla Trail around Netherby Spur and Netherby Gully, above the trail in Koala Gully, and where the trail enters Carrick Hill. Other olive work was done in less obvious parts of the Reserve, such as Stone Reserve, Hardy Block, the southern boundary and Groundberry Gully.

Netherby Spur ***BEFORE***

Netherby Spur ***AFTER***

Staff maintained the revegetation site along the road in from Springfield Gate (Gate 82) by weeding and watering. Seed was also collected there for use in future revegetation projects, particularly the 'Plant Accelerator Revegetator' (my name for the soil 'dump').

Planting tube-stock for revegetation was undertaken on a hitherto unseen scale for the Reserve, creating a nursery of plants which were maintained over the hot and dry summer months.

A warning to dog owners: fox baiting recommenced in the Reserve in February. In the months since the last active baiting programme, fox numbers had increased in the Reserve, with frequent sightings and much evidence of their presence. Since baiting began, baits have been regularly taken and there is a lot less evidence of foxes.

Survival rates from last year's plantings were good. Together with the previous year's plantings and the continued success of direct seeding in areas disturbed by weed control the improvements to the Reserve through revegetation are obvious.

Likewise, the success of weed control in the Reserve is also clear with a low failure rate on olive control. The secondary and subsequent control of grasses, broadleaf weeds and bulbs gives an opportunity for natural and assisted revegetation to occur in what were previously weed infested areas. Some follow up control has been required in the areas worked a few years ago by the Correctional Services work crew, but we spend very little time reworking our own olive control. The positive of this is that the olive-free area in the Reserve is expanding all the time.

Vehicle access around the southern boundary fence has been reinstated by judiciously removing a handful of Grey Box saplings. The improved access for the ute will not only improve safety but will enable Friends to access these areas for rehabilitation works during working bees.

Stephen Wait

WORKING BEE ACTIVITIES

The first two Working Bees for the year were held on 18 April and 1 May. We began the task of rehabilitating the 'dump' site where landfill was deposited during building construction on the University campus. There was a good attendance on both days, including Mark from the Arboretum with his trusty watering tank.

It was a successful beginning for the site with 200 tube-stock of 10 species planted on the first day. This effort was dwarfed however by the second day when 350 tube-stock were planted, helped by a more efficient planting system.

The plan is to establish a self sustaining, self seeding population of native plants which can be expanded upon and supplemented with additional species in years to come. As well as Working Bees, the site will also be worked by University staff, and Land Management students from Urrbrae TAFE.

The emphasis will be on intensive planting with grasses, saltbushes, wattles and other understorey species. In addition there will be a direct seeding programme over a wider area of the site. It is planned to hold the May and June Working Bees here, but we may also return in November and December to weed the area before summer.

Crumbweed (*Chenopodium pumilio*) is already colonising the area. This plant looks like a summer growing broadleaf weed, hence its common name, but is a local endemic salt bush. Hopefully it will help to out-compete broadleaf weeds whilst natives are being established. Two self-seeded grey box were spotted next to our work site, and I have since found a red gum seedling growing further down the slope.

The Reserve is in the process of purchasing its own water tank. This will fit on the Reserve vehicle, allowing us to take water closer to planting sites in future which will increase efficiency.

Any Friends who are able to care for a box of newly sown wallaby grass (*Austrodanthonia*) or spear grass (*Austrostipa*) during winter should contact me. They will be planted out in spring, and should require only very occasional watering until then. Any volunteers who have grown seedlings for the Reserve over summer can bring them to working bees, but some notice would be appreciated for planning and to ensure we have species appropriate to each site.

The meeting place for Working Bees on May 16 and June 5 and 20 is Springfield Gate (Gate 82) off Hillside Rd, Springfield at 9.00am.

Stephen Wait Mob: 0410 695 719
stephen.wait@adelaide.edu.au

Friends of the Waite Arboretum

In the spirit of cooperation between the three Friends groups on Waite campus: (Friends of Urrbrae House, Arboretum and Conservation Reserve) the three Presidents have agreed to publicize each other's groups and activities. The following was kindly supplied by Bryan Milligan, President of the Friends of Waite Arboretum.

The *Friends of the Waite Arboretum* was founded in 1995 to foster interest in the care and use of the Arboretum and to raise funds for its development and promotion. The role of the group also includes the gardens of Urrbrae House.

Our current membership is around 130 and we are supported by a large group of volunteers. Our Patron is Sophie Thomson, presenter on ABC's *Gardening Australia* and writer for the *Gardening Australia Magazine* as well as local papers.

If you have not had a tour of the Arboretum you could join one of the free tours on the first Sunday of each month at 11.00 am (meet at the front of Urrbrae House).

You are also welcome to attend the following forthcoming functions which the *Friends of the Waite Arboretum* will present in Urrbrae House:

- Talk by Sophie Thomson
  (Sun 9 May, 2.00 pm)
- Classical Guitar Concert
  Aleksandr Tsiboulski & Jacob Cordova
  (Wed evening 18 August)
- Beryl Martin Exhibition
  (10–17 October, 11 am–4 pm daily)
- Twilight talk by Meliesa Judge, Liquid Metal Studios followed by a walk to look at her sculptures in the gardens and Arboretum
  (Fri 19 November, 6.00 pm)

For more information on the arboretum see:
www.waite.adelaide.edu.au/arboretum

Bryan Milligan (President)