Wild News

Nature interpretation newsletter for La Trobe University’s Wildlife Sanctuary

Issue 15: Winter 2012

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From the Editor:
It was announced in May that Parks Victoria has been appointed to take over management of Gresswell Forest, Gresswell Hill and the Habitat Link. This welcome news will result in the creation of a new management plan and additional works and resources being allocated for track maintenance weed control and fire management.

Following on from other changes that have recently taken place at the Sanctuary, Head Ranger George Paras has returned from long service leave and resumed his usual role on a part-time basis. Welcome back George!

While day length has been gradually increasing, temperatures are obviously slow to follow! Despite this, visitors to the Sanctuary may notice the distinct smell of flowering Small-leaf Clematis. Some other local plants including the Grey Parrot Pea, Pink Bells and Purple Coral-pea are also coming into bloom.

Several species of wattle (Acacias) also flower at this time of year, adding a splash of colour to the bush. Wattles are one of the largest and most diverse groups of plants in Australia, and are the focus of this edition of Wild News.

Twilight Tours

Eastern Grey Kangaroos graze on lush growth sustained by winter rainfall and cool temperatures, while Sugar Gliders feed mainly on the sap of wattles and eucalypts at this time of year. Female Ringtail and Brushtail Possums are carrying pouch young, and can still be seen foraging on cold nights. Few frogs remain active during winter, although choruses of male Common Froglets and Southern Brown Tree Frogs can be heard as they attempt to attract and mate with females. Tawny Frogmouths and Boobook Owls continue to try their luck hunting for insects and small vertebrates.

Twilight Tours run for approximately 1.5 hours and leave the Learning Centre at twilight. Bookings are essential.

Cost:
Minimum tour cost: $150. Additional adults: $25.00, children: $10.00, La Trobe staff/student and concession: $15.00. Entry is free for children under 3 years of age accompanied by a paying adult.

Call the Sanctuary office on 9479 1206 or email wildlife@latrobe.edu.au to make a booking.

Sanctuary opening hours

The Sanctuary is open to the public between 10:00 am – 3:00 pm Sunday - Friday (closed on Saturdays). Entry is a gold coin donation.

Indigenous plant nursery

The nursery is open between 10:00 am and 3:00 pm on Tuesdays, Thursdays, Fridays and Sundays. A range of gardening products are available for purchase in addition to the usual range of indigenous tube stock and advanced plants.

Phone 03 9479 5061 or email plants@latrobe.edu.au for more information.

Currently in flower: The Yellow Gum (Eucalyptus leucoxylon ssp. connata) grows naturally on the basalt plains, drier slopes and ridgelines mainly to Melbourne’s north and west including Plenty Gorge. Clusters of cream-white flowers usually appear from May to September, and are an important food resource for a range of resident and migratory nectar-feeding birds during winter. Although Yellow Gum cultivars are commonly sold in commercial nurseries, planting the local subspecies should be encouraged to minimise the risk of genetic ‘pollution’ through cross-pollination with wild plants.

Upcoming events:

Sunday 26th August – La Trobe University Open Day: wildlife, weeds and wetlands
Visit the Wildlife Sanctuary on Open Day and take walk though the River Red Gum Woodlands, buy plants from the nursery or assist the Friends of the Wildlife Reserves with weed control at Fossie’s Wetland. Enter off La Trobe Avenue (Melways 19, G5).

Predator-proof fence update:

Another section of predator-proof fence has recently been installed along the eastern boundary of the Sanctuary near Hideaway Turn, leaving two more stages to go in along Main Drive and behind residences on Ernest Jones Drive. The Sanctuary has been in correspondence with Banyule Council and is awaiting a decision on the construction of a roundabout at the intersection of Trott Avenue and Main Drive before that section of fence can be installed.
Wattles belong to the largest genus of plants in Australia (Acacia), with approximately 950 native species having so far been described. Of the 100 or so species found in Victoria, about 20 occur within the greater Melbourne area. Wattles can be found over almost every forested part of the country, and even dominate some central Australian ecosystems. The family Mimosaceae which includes the Australian wattles is of Gondwanan origin, also represented in Africa and Latin America. This is one of three families of legumes, characterised by having seeds contained in pods.

Seeds are attached to the inside of the pod by way of a stalk or ‘funicle’. This is further adapted in wattles to form an oily, protein-rich package on the outside of the seed called an elaiosome. These vary in colour, shape and position on the seed, and can assist in distinguishing between different species. The illustration on the left is of a Lightwood (Acacia implexa) seed which has a highly-folded elaiosome. This attracts ants which collect and transport the seeds to their underground nests, consuming the elaiosome but leaving the embryo inside the hard outer coating or ‘testa’ intact. This association with ants not only assists in dispersing the seeds but also protects them from hazards such as predators and intense bushfires. A number of birds attracted to the seeds, including Rosellas and Bronzewings, are also likely to assist in dispersal. Although the hard seed coat protects the embryo, it also poses a mechanical barrier to water uptake, and needs to be broken before germination can take place. This often occurs gradually through repeated wetting and drying out, or can result from rapid heating when a bushfire passes by. The outcome may be hundreds of wattles germinating at the same time and growing to form thick, impenetrable stands.

As is the case with other legumes such as peas, wattles have an association with nitrogen-fixing bacteria of the genus Rhizobium which form nodules on the roots. These convert atmospheric nitrogen into an organic form (ammonium) which is able to be used by the host plant. In return, the bacteria are provided with oxygen, carbohydrates and proteins. Wattles and other legumes play an important ecological role in many ecosystems due to their association with nitrogen-fixing bacteria, contributing to the nitrogen content of soils and replacing that lost due to leaching and denitrification (the return of nitrogen to the atmosphere). This also lends some wattles to potential use in agricultural systems where they can be planted as windbreaks between paddocks or crop rows.

Wattles not only play an important role in the nitrogen cycle, but provide an important foraging resource and structural habitat for a range of native animals including several species of seed-eating birds, and Sugar Gliders which chew into the bark and lap up the sap of several taller species. This serves as a valuable source of carbohydrates in winter when nectar and invertebrates are in short supply.

Despite wattles possessing a pair of compound (pinnate) leaves as germinants, most species develop modified leaf-stalks called ‘phyllodes’ as they mature. These are often broad and leathery, while the phyllodes of some species such as Spreading Wattle (A. genistifolia) are hardened and sharply pointed. A few species such as the Lightwood and Blackwood (A. melanoxylon) undergo a transition from juvenile bipinnate leaves to phyllodes when they mature, while others such as the Black Wattle (A. mearnsii) and Silver Wattle (A. dealbata) retain feathery bipinnate foliage into adulthood. The Silver Wattle is one of the first of the taller wattles to flower towards the end of winter, with bright yellow globular balls appearing in long inflorescences from July to October. This species often grows on moist, deeper soils and is often a common component of the midstorey along many of Melbourne’s creeks and rivers. The Black Wattle and Silver Wattle look similar, and are often most reliably distinguished by the differing arrangement of the glands on the central stalk of the leaves; spaced at regular intervals in the Silver Wattle and irregularly spaced in the Black Wattle.

Like these bipinnate-leaved acacias, Blackwoods often grow into large shrubs or understorey trees. The Blackwood is one of the most common and widespread acacias in eastern Australia, occupying a range of habitats from rainforest gullies to dry eucalypt woodland. The durable wood of this species is popularly used in furniture-making, and was used by the Wurundjeri and other Indigenous clans to make weaponry and hunting implements such as shields, spear-throwers, clubs and boomerangs. The Wurundjeri name for the Blackwood is Burn-na-look.

Some species of wattle such as the aptly-named Prickly Moses (A. verticillata) have flowers arranged in elongated, spikes rather than balls. While not as prickly as the Spreading Wattle or Kangaroo Thorn (A. paradoxa), this shrub provides an important refuge for smaller bush birds. The closely-related Snake Wattle (A. aculeatissima) is one of Melbourne’s smallest acacias, never growing more than about half a metre tall. It is also one of the earliest wattles of the season to bloom, with flowers beginning to appear in June. The less-common Juniper Wattle (A. ulicifolia) flowers throughout winter, with pale yellow balls present from March to September.

One of the most familiar of the local phyllode-forming acacias is Australia’s floral emblem; the Golden Wattle (A. pycnantha), framing the shield on our National Coat of Arms. This species occurs over much of Victoria, southern New South Wales and south-eastern South Australia, often growing on dryer slopes and ridgelines. It is also a common understorey species in River Red Gum Woodland, and forms thickets with Lightwood in some parts of Gresswell Forest.

While some acacia species such as the Woolly Wattle (A. lanigera) are of regional conservation concern given their rarity in the Melbourne area, several opportunistic species including the Cootamundra Wattle (A. baileyana), Early Black Wattle (A. decurrens) and Sallow Wattle (A. longifolia) have been introduced from interstate or other parts of Victoria and become serious environmental weeds.
The variety in size and form of Melbourne’s indigenous wattles make them adaptable to almost any situation, adding colour to the landscape at a time of year when few other plants are in flower. The added ecological benefits of enhancing landscape connectivity and providing understorey habitat for native wildlife make wattles a valuable addition to both ornamental and restoration plantings.

**Winter Wildlife Diary**

**Short-beaked Echidnas** (*Tachyglossus aculeatus*) mate in July and August. This usually involves a procession or ‘mating train’ consisting of a female pursued by up to ten males. Being one of only two species of egg-laying mammal in Australia, the Short-beaked Echidna produces a single soft-shelled egg about two weeks after mating. The egg is carried in a pouch on the female’s belly until hatching about ten days later. Females create temporary burrows where they incubate and suckle their young, occasionally leaving them behind to go and forage. Unlike most small to medium-sized native ground mammals, Echidnas have been able to persist in many suburban bushland remnants including the Wildlife Sanctuary and adjoining conservation reserves. This is largely thanks to their defensive behaviour of curling into a spiky ball or rapidly burrowing into the ground to protect their vulnerable underside from attacks by introduced predators such as dogs and foxes.

**Australian Admirals** (*Vanessa itea*) are one of the only butterflies that may be seen flying on sunny days throughout winter, and are joined by **Painted Ladies** (*Vanessa kershawi*) toward the end of August. The Painted Lady has one of the longest flying periods of any Victorian butterfly, concluding in late April.

Translucent tubular flowers appear on the woody, older stems of **Honey Pots** (*Acrorhiza serrulata*) as early as June, although most plants flower in August and September. Unusually, pollen is present on hairs at the tips of the petals (corolla) instead of stamens, and is followed by a female phase where the corolla is removed and stigma exposed. The honey-scented flowers were sought by the Wurundjeri and other indigenous clans for their nectar, and are likely to provide an important food resource for some species of mammal and lizard at a time of year when few other low-growing plants are in bloom. The Wurundjeri name for Honey Pots is Burgil Burgil.

Gelatinous egg clusters belong to the **Southern Brown Tree Frog** (*Litoria ewingi*) can be seen attached to submerged plants along the edges of many of the Sanctuary’s wetlands, including the above-ground swimming pool outside the Bio Shack. Tadpoles hatch four to six days after laying, completing their transformation into adult frogs (metamorphosis) up to six months later. Breeding continues throughout winter, although tends to peak in autumn and spring.

**Grey-backed Silveryeyes** (*Zosterops lateralis*) are augmented by individuals that have migrated from Tasmania. While silveryeyes on the Australian mainland remain largely sedentary for much of the year, those from Tasmania are highly migratory, travelling as far as southern Queensland and occasionally reaching New Zealand. Much of their migration has been documented to take place at night, stopping intermittently to feed during the day on insects, seeds, nectar and fruit.

The **Early Nancy** (*Warbua dioica*) is one of the first lilies of the year to flower, hence its common name. This is one of the most common lilies that can found in bushland remnants throughout greater Melbourne, although it remains dormant over summer when plants die down to underground tubers. The white honey-scented flowers begin to appear in July, and may either be dioecious; having both male and female reproductive organs, or monocious; being of a single sex.

**Correction to Wild News Issue 14:** In the last edition of Wild News, the common name ‘Bent-wing Swift Moth’ was used in reference to the Rain Moth or ‘bardi’ (*Tricentra atripalpites*). This name (or more appropriately; Bent-wing Ghost Moth) is more commonly used for the moth *Zelotypia stacyi* from eastern NSW and south-east Queensland.

**References and selected reading:**


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