LA TROBE UNIVERSITY
LA TROBE WILDLIFE SANCTUARY

Wild News

Quarterly newsletter for La Trobe University's Wildlife Sanctuary

Issue 12: Winter 2011

In this edition:

From the Editor:

As many readers would by now be aware, the University will cease management of Gresswell Forest, the Gresswell Habitat Link and Gresswell Hill as of the 30th of June.

Management of these reserves will be handed over to the state or local government while the La Trobe Wildlife Sanctuary will continue to be managed by the University. A transition plan is currently in place to ensure a smooth transfer of management to the new responsible authority.

In the meantime, La Trobe staff, volunteers and the Friends of the Wildlife Reserves will continue to undertake habitat restoration and ecological monitoring in the Sanctuary.

Winter is a relatively quiet time of year in the Sanctuary with few plants in flower and many reptiles, frogs, bats and invertebrates becoming dormant or less active. Even so, a number of birds have migrated from the hills north and east of Melbourne to spend winter at lower altitudes and arboreal mammals such as possums and Sugar Gliders are raising their young.

Non-flowering plants including ferns are also evident at this time of year, and are the interpretive topic for this edition of Wild News.

Twilight tours

Although many nocturnal animals tend to be less active in winter than in other seasons, it is an important time of year in the lives of some animals. Ringtail Possums are raising their young and Sugar Gliders begin to breed. Tawny Frogmouths can be heard calling and Grey-headed Flying Foxes can also be heard and seen as they feed on the flowers of non-indigenous Spotted Gums. The Common Froglet and Southern Brown Tree Frog are often the only frogs heard in the Sanctuary wetlands at this time of year.

Tours leave from the Education Rooms at 6:00 pm and run for approximately 1.5 hours. 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 six days a week (closed on Saturdays). Entry is a gold coin donation.

Indigenous plant nursery

The newly renovated indigenous nursery is open between 10:00 am and 3:00 pm on Tuesdays, Thursdays, Fridays and Sundays. The official re-opening will be on Sunday September 4th – come along and celebrate!

Phone 03 9479 2871 or email plants@latrobe.edu.au for more information.

Currently in flower: The **Common Heath** (*Epacris impressa*) is Victoria's floral emblem, having gained particular notoriety when it appeared on car registration stickers up until 2006. Both pink and white flowered forms are found in the Greater Melbourne area, with white flowered plants generally being more common in open, sunnier areas. The Common Heath responds well to pruning and looks particularly impressive when planted *en masse*.

Upcoming events:

Sunday 31st July – National Tree Day

Take part in Australia's largest community tree planting event with the Friends of the Wildlife Reserves and thousands of other volunteers around the country on National Tree Day. This year, the Friends of the Wildlife Reserves will add to years of revegetation work undertaken in the La Trobe Wildlife Sanctuary.

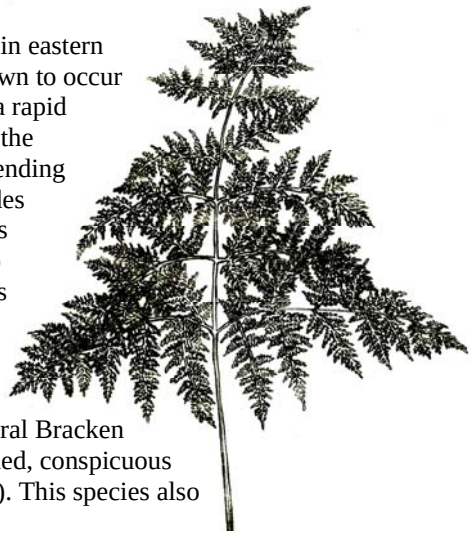
Meet outside the Ranger's Office at the La Trobe Wildlife Sanctuary at 10:00am (Melways 19, G5).

Sunday 28th August – Nest box monitoring

Join the Friends of the Wildlife Reserves as they inspect nest boxes in the Sanctuary for signs of animal occupation and identify boxes in need of maintenance or repair. Bring binoculars if you have them. Meet outside the Ranger's Office at the La Trobe Wildlife Sanctuary at 10:00am (Melways 19, G5).

Ferns

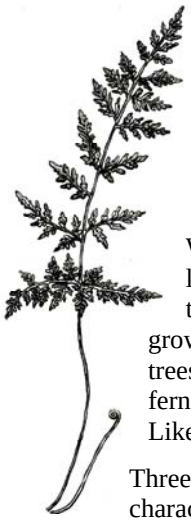
Like flowering plants, conifers and cycads, ferns have a vascular system consisting of conductive tissues for the transport of water and nutrients. However, like the non-vascular mosses and liverworts, they rely on the dispersal of spores rather than seeds for sexual reproduction. Fertilisation depends on the availability of free water to enable the male reproductive cells to make their way to the eggs, confining ferns to relatively moist environments. Ferns are therefore often common in the understorey of wet gullies and rainforests in south-eastern Australia, although a few species have adapted to grow in drier environments including the hills and plains to Melbourne's north.



Austral Bracken (*Pteridium esculentum*) is perhaps the most ubiquitous and well-known fern in eastern Australia, although it was only recently discovered growing in Gresswell Forest and is not known to occur in any of the other conservation reserves currently managed by the University. This species is a rapid coloniser of disturbed habitats and responds favourably to fire, often forming dense thickets in the understorey of recently burnt areas. It produces spores like other ferns but spreads mainly by sending out underground rhizomes. Bracken is considered a weed by many pastoralists as it often invades paddocks and although its specific name means 'edible', it is poisonous to livestock. Despite its vigorous habits and means of rapid reproduction in the wild, Bracken is particularly difficult to propagate in the nursery and is rarely grown for use in revegetation. Although the fronds of this plant are poisonous if eaten, they are a favoured food by Black Wallabies and the sap from young tips is said to relieve the pain of insect bites! Local Aboriginal clans also ate the rhizomes of this plant after roasting them in hot ashes and beating them into a paste.

The False Bracken or Rainbow Fern (*Calochlaena dubia*) is very similar in appearance to Austral Bracken but can be distinguished from this species by its softer, lighter-coloured fronds and more rounded, conspicuous sori (swellings on the frond made up of tiny capsules called 'sporangia' that contain the spores). This species also spreads mainly by underground rhizomes and responds well to disturbance such as fire.

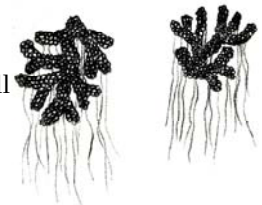
The moist forests in the ranges to the north and east of Melbourne including Kinglake and the Dandenongs generally receive in excess of 1000 mm of rainfall annually and support the greatest diversity of ferns in the greater Melbourne area. A few common species such as the Common Maidenhair (*Adiantum aethiopicum*) and Necklace Fern (*Asplenium flabellifolium*) are relatively widespread throughout moist habitats in the greater Melbourne area, while others such as the Strap Water Fern (*Blechnum patersonii*) and King Fern (*Todea barbara*) are relatively restricted in the region and are more common in damp habitats further afield.



Given the demands of their reproductive cycle, few ferns are capable of growing in exposed situations where they are subject to regular drying out. There are a small number of species, however, that are adapted to do just that. The **Rock Fern** (*Cheilanthes austrotenuifolia*) grows on stony soils, in rock crevices and in soil on large boulders in dry sclerophyll forests, and occurs on Gresswell Hill. It is not as invasive as Austral Bracken but will also grow in pasture and is poisonous to livestock. The fronds of this fern are tolerant of direct sunshine and drying winds, and are capable of rehydrating after shrivelling and becoming brittle. Plants often die down completely to their rhizomes during summer before regenerating after autumn rains.

While many ferns grow on the ground, others are aquatic, some are epithytic (growing on trees) and some are even lithophytic (growing on rocks). Three species of Filmy Fern (H*ymenophyllum*) occur in the greater Melbourne area, two of which; the Austral Filmy Fern (*H. australe*) and Common Filmy Fern (*H. cupressiforme*) can be found growing on moist, mossy rocks in wet forests and cool temperate rainforest. These species also grow on the trunks of trees and tree ferns. The Kangaroo Fern (*Microsorum pustulatum*) is perhaps the best known of Melbourne's epithytic ferns, commonly growing on logs and the trunks of tree ferns in wet gullies and on sheltered slopes in the Dandenongs. Like the two species of Filmy Fern mentioned above, it will also grow on rocks where sufficient moisture is available.

Three species of Nardoo (*Marsilea*) are known to occur in the greater Melbourne area. These aquatic ferns are characterised by their clover-like appearance, possessing four wedge-shaped leaflets at the top of each frond. These species grow in bogs, wetlands, along slow-flowing waterways and on floodplains subject to seasonal inundation. The fronds of the Common Nardoo (*M. drumondii*) float on water when the stems are submerged and are held upright when growing on boggy soil. Plants have been recorded growing in water up to 1 m deep but are more usually found at depths of less than 30 cm. Spores are formed in hard, nut-like structures called sporocarps which are borne on unbranched stalks up to 5 cm high in late spring and summer. Sporocarps usually form when plants are growing out of the water and can remain closed for several years until they are subjected to substantial flooding. Indigenous people created dough from the sporocarps of this plant by grinding them with water. Burke and Wills also ate bread made from the ground sporocarps of nardoo, although it is said that the high levels of thaiaminase (an enzyme that breaks down thiamine) in this plant contributed to their deaths by causing severe thiamine deficiency! This is likely to have been due to the different way in which they prepared the bread. By grinding the flour with water and keeping it out of contact with other organic matter as indigenous people did, the enzyme activity rapidly diminishes.



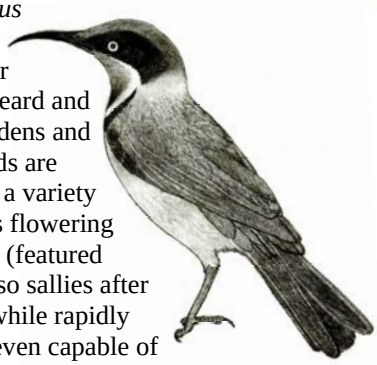
Pacific or **Red Azolla** (*Azolla filiculoides*) is another aquatic fern with fronds that float on water, although unlike Nardoo, it is free-floating with its roots dangling below the surface. This species can rapidly form carpets over still or slow-flowing water although it tends to die off in winter. The similar-looking Ferny Azolla (*Azolla pinnata*) can be distinguished from Red Azolla by its branched roots and the rougher under-surface of its more regularly-branched fronds. Both of these species can be found in the Sanctuary wetlands.

Despite their requirement of free water for reproduction, ferns have adapted to thrive in a wide range of local environments. Even so, many species have substantially declined in the greater Melbourne area and the future conservation of vulnerable species will depend on the on-going preservation and enhancement of their remaining habitat.

Winter Plant and Wildlife Diary

The Toothed or **Slaty Helmet Orchid** (*Corybas incurvus*) flowers from June to September. This local orchid is widespread throughout much of Victoria, growing on moist soils in a variety of habitats including low open forest, on sheltered slopes and in gullies. The rounded, dark reddish flower is approximately 1 cm across and held close to the base of the single, rounded, ground-hugging leaf which grows to 3 cm. Orchids in this genus are referred to as Helmet Orchids as the dorsal sepal (uppermost outer part of the flower) largely hoods the remainder of the flower. The name *Corybas* is thought to have been derived from the Greek word *Korybas*, referring to the priest of an ancient Greek goddess, Cybele. This may have come about because of the resemblance of the flower to a priest's head-dress. Orchids in this genus are generally thought to be pollinated by tiny fungus gnats.

Eastern Spinebills (*Acanthorhynchus tenuirostris*) have undergone localised movements to spend winter at lower altitudes and can often be heard and seen in well-vegetated suburban gardens and adjoining bushland. These small birds are honeyeaters, feeding on nectar from a variety of introduced, native and indigenous flowering plants including the Common Heath (featured on page 1). The Eastern Spinebill also sallies after and gleans insects from vegetation while rapidly flitting from branch to branch. It is even capable of hovering for short bursts, not unlike the hummingbirds of North and South America.



The tiny, bright-red fruiting bodies of the **Ruby Bonnet** fungus (*Mycena viscidocruenta*) can be found among dead twigs and leaf litter in the Sanctuary up until about July. The fruiting bodies grow to about 3 cm high, rising above the fluffy white mycelium (mass of filamentous thread-like cells that release enzymes and absorb nutrients from organic matter). The gluten-covered stem and caps of this fungus give it a slimy appearance and texture.

Immature **Crimson Rosellas** (*Platycercus elegans*) form small flocks as they disperse from wetter mountainous areas north and east of Melbourne. While adult birds are rich crimson with blue cheek patches, tail and flight feathers, juveniles look substantially different, having a green belly and back. Juvenile birds also possess blue cheek patches and have a red breast and undertail coverts, gradually moulting into the rest of their adult plumage from about eight months of age.

The **Spreading Wattle** (*Acacia genistifolia*) bears fragrant lemon or cream-coloured ball-shaped flowers along its branches mainly from winter to early spring. The Spreading Wattle is tolerant of both wet and dry soils, although is usually more common in drier sclerophyll forests. This small shrub grows to around 2 m in height and provides an important refuge for small birds due to its covering of stiff, prickly phyllodes.

Sugar gliders (*Petaurus breviceps*) begin breeding in June and July. Females usually produce two young which remain in the nest for up to four months before venturing out to forage. Before dispersing at around seven to ten months of age, the young remain with their maternal group which consists of up to seven (but usually less) adults and other offspring. In winter, a large part of the Sugar Glider's diet consists of sap from Acacias such as the Black Wattle, Silver Wattle and Golden Wattle as well as some Eucalypts. At other times of year, nectar, pollen, lerps and invertebrates such as beetles and moths make up a greater proportion of its diet.

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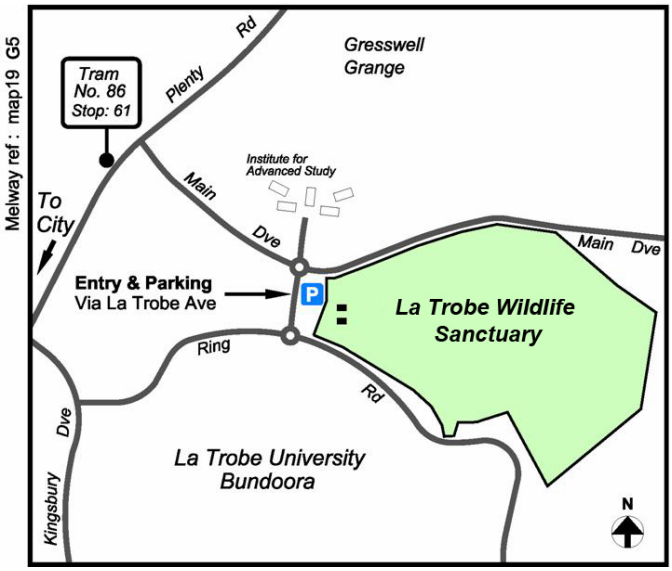

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