

Wild News

Quarterly newsletter for La Trobe University's Wildlife Sanctuary

Issue 11: Autumn 2011

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From the Editor:

The onset of one of the strongest La Niña events on record in about April 2010 resulted in months of above average rainfall across most of the state.

A number of usually seasonal wildflowers such as the Chocolate Lily, Bulbine Lily, Bluebells and Golden Weather-glass have extended their flowering, with some persisting well into autumn.

Several ephemeral wetlands north of the city also filled for the first time in several years, stimulating a variety of frogs and waterbirds to breed including threatened species such as the Blue-billed Duck, Australasian Shoveler and Growling Grass Frog.

As well as making the most of the short-term expansion of suitable habitat, many predatory wetland animals have benefited from the large numbers of emerging invertebrates.

Aquatic invertebrates can broadly be divided into two groups depending on their habitat preferences; those living in fast-flowing (lotic) waters and those occupying slow-flowing or still (lentic) waters.

This latter group is characteristic of the Sanctuary's wetlands and provides the topic of discussion for this edition of Wild News.

Twilight tours

Higher rainfall over the past year has sustained increased plant growth, resulting in an abundance of herbivorous insects. These in turn provide food for a range of mammals and birds including Sugar Gliders, Microbats and Tawny Frogmouths, which can often be seen foraging after dusk. Eastern Grey Kangaroos, Ringtail Possums, Brushtail Possums and Grey-headed Flying Foxes are also frequently encountered. Earlier in the season, Southern Brown Tree Frogs, Spotted Marsh Frogs, Eastern Banjo Frogs and Peron's Tree Frogs can be heard calling from the Sanctuary's wetlands.

Tours leave from the Education Rooms at 8:00 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.

Indigenous plant nursery

The Nursery is open between 10:00 am and 3:00 pm on Tuesdays, Thursdays, Fridays and Sundays. Please note that the Sanctuary is open to the public six days a week (closed on Saturdays) from 10:00 am – 3:00 pm.

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

Currently in flower: The River Bottlebrush (*Callistemon sieberi*).

As its common name suggests, this species naturally occurs on wet to moist soils along watercourses, although it is adaptable to drier conditions once established. Bird-attracting cream to pink flower spikes to 5 cm long appear mainly from November to March. The River Bottlebrush makes an attractive ornamental feature or screen and responds well to pruning.



Upcoming events:

Sunday 27th March – Woody weed patrol

Join the Friends of the Wildlife Reserves on a walk through Gresswell Habitat Link in search of woody weeds. Seven years of restoration by the Friends has resulted in a substantial reduction in the cover of woody weeds and today's efforts will focus on removing some of the last remaining infestations.

Meet at the Gresswell Road entrance to the Habitat Link (Gate 7) at 10:00 am (Melways 19 K5).

Sunday 17th April – Gresswell Forest restoration

Assist with the hand removal of woody and herbaceous weeds in the eastern sections of Gresswell Forest, starting in an area that was once a 'Telecom' telegraph pole depot.

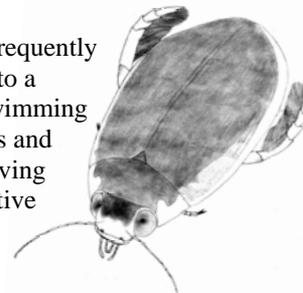
Meet at the Linacre Street entrance to Gresswell Forest (Gate 3) at 10:00am (Melways 20 C4).

Wetland water bugs

Freshwater wetlands support some of the most diverse aquatic habitats in south-eastern Australia, providing resources for a variety of vertebrate fauna including waterbirds, frogs and fish. Wetlands also provide habitat for a variety of invertebrate life, and although many groups are less abundant in still waters than they are rivers and streams, aquatic invertebrates still constitute the dominant fauna in these habitats.

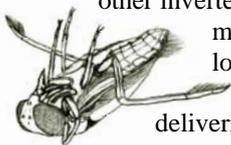
Most insect orders living in wetlands only do so as larvae, emerging as terrestrial adults after an extended immature stage. The adults of stoneflies, mayflies and caddisflies have relatively short lives compared to their larval stage, and some do not even feed once they have undergone metamorphosis. Other freshwater invertebrates including molluscs, crustaceans, flatworms, leeches, sucking or 'true' bugs and many species of water beetles spend most of their adult lives living under water.

The **Green Diving Beetle** (*Onychohydus scutellaris*) is common in the Sanctuary wetlands, although not frequently encountered. This species is one of the largest predatory diving beetles in south-eastern Australia, growing to a maximum size of over 3 cm. The lower sections of the enlarged hind legs are lined with hairs to aid with swimming and males possess suction discs on their forelegs that assist them to grasp females while mating. Both adults and larvae are predatory, feeding on other aquatic invertebrates as well small fish and tadpoles. The larvae of diving beetles are often known as water tigers due to their voracious feeding habits, injecting their prey with digestive fluids and sucking out the dissolved flesh! Adult Green Diving Beetles are often kept on live display in the Sanctuary office.



While the term 'bug' is often used to describe insects and other invertebrates in general, true bugs belong to the order Hemiptera and include several aquatic representatives such as water boatmen, water striders, giant water bugs, needle bugs and backswimmers.

Hemipterans are also known as sucking bugs as they have piercing and sucking mouthparts which they use to scavenge or prey on other invertebrates. **Backswimmers** (family Notonectidae) can be found in both flowing and still waters and are one of the more commonly encountered water bugs in wetland habitats. Live specimens are easily distinguished from similar-looking water bugs such as water boatmen by their habit of swimming upside-down. Even though these bugs are relatively small (between 5 and 10 mm long), they have extremely powerful mouthparts and are capable of delivering a painful bite to any unsuspecting water-watch volunteer who handles them with bare fingers!



Giant Water Bugs *Diplonychus eques* can grow up to five times longer than many backswimmers and are capable of inflicting a bite of a similar increase in magnitude! As well as feeding on other invertebrates, this species is large enough to predate on small fish and tadpoles. Somewhat surprisingly, the males of this species show a significant degree of parental care, carrying eggs on their backs and circulating water over them until the young hatch. These bugs are common in some of the larger wetlands in the sanctuary including Small Lake, but are often difficult to catch as they are fast swimmers.

Adult dragonflies and damselflies (order Odonata) are often prominent around wetlands where they dart around the banks and over the water in search of prey. They have fantastic eyesight and are exceptional aerial predators, capturing and dispatching flying insects with the aid of their spine-covered legs and large, biting mouthparts. The larvae are also predatory, most relying on their camouflage to sneak up on prey while moving slowly along the bottom or among vegetation. Although dragonfly larvae often appear slow, they are capable of achieving astonishing bursts of speed when threatened by predators by jetting water out of their abdomen.

Dragonflies, damselflies, water bugs and diving beetles often dominate the top of invertebrate food webs in wetland ecosystems, feeding on other invertebrates and even smaller vertebrates such as fish and tadpoles. Herbivores are often toward the lower end of food webs, breaking down and consuming living and dead plant material as well as algae and bacteria. These can be further split into groups based on their methods of feeding.

Filter feeders are most prominent in flowing streams and rivers where they collect fine organic material from the water column using specialised hairs on their legs or mouthparts. Freshwater mussels draw water in through a siphon at the rear of the shell toward the gills, where tiny hairs draw in food and sediment particles before they are caught by mucous and make their way to the mouth. The freshwater mussel *Velesunio ambiguus* was introduced from a central Victorian population and successfully established in the University moat system outside Glen College in the late 1960's. These and other mussels in the same family usually live in the soft bottom sediments of larger lowland river systems, although may also occur in adjoining dams and billabongs.

Other molluscs such as water snails use tiny teeth on their radula (a hard, tongue-like projection) to scrape algae and bacteria from the surface of submerged rocks, plants and woody debris. The introduced snail *Physa acuta* is common in the Sanctuary wetlands and is easily distinguished from other species of water snail by its mottled mantle which can be seen through the shell. Native and introduced pond snails in the family Lymnaeidae are also common and can be identified by their flattened, triangular tentacles and dextrally (right-opening) coiled shells.



The larvae of many herbivorous caddisflies and mayflies also graze on algae while others collect detritus or shed plant material. The larvae of most caddisflies occurring in still or slow-flowing waters live in portable cases constructed from plant material. Some such as *Tripletides* construct their silk-lined cases from hollowed-out twigs, while others live in the hollow stems of rushes or use silk to fasten together bits of shredded leaves. Many stream-dwelling caddisfly larvae make their cases by binding together grains of sand or gravel, and some have even been kept in artificial watercourses to produce jewellery out of gold flakes!

Freshwater invertebrates not only play key ecological roles in wetland ecosystems as predators, prey, herbivores and detritivores, but can also be used to monitor the health of aquatic habitats. As different families of freshwater invertebrates vary in their tolerance to pollution, the range and abundance of invertebrates in a water body can often be indicative of its condition. This can be measured by collecting invertebrates from different microhabitats within a water body and assigning a pollution tolerance ranking to each family in the sample.

Autumn Wildlife Diary

The **Mosquito Orchid** (*Acianthus pusillus*) flowers from about April through to August, dying back to an underground tuber over summer. This is one of the smallest orchids in the Greater Melbourne area, growing to a maximum height of around 20 cm. Plants can divide vegetatively by giving rise to daughter tubers and are capable of forming extensive colonies in suitable conditions. Each tuber gives rise to a single heart-shaped leaf supported by a short stem rising a few centimetres off the ground. The taller flowering stem supports up to about a dozen green-maroon coloured flowers, each measuring about 1 cm long, which are thought to be pollinated by tiny wasps and flies. This species is relatively easy to propagate due to its colonising habit and is often available for purchase at the Sanctuary's nursery.

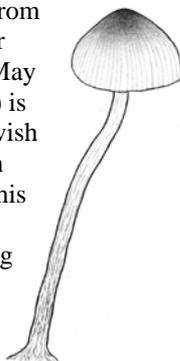


Many of Melbourne's **Grey Fantails** (*Rhipidura albiscapa*) begin to migrate further north, returning in spring. These are replaced by darker individuals arriving from Tasmania. Grey Fantails are constantly on the move, fanning out and wagging their tails from side to side while foraging for insects. Individuals can occur singly, in pairs or sometimes form small flocks, and can often be seen foraging among dense thickets of wattles and eucalypt saplings in the Sanctuary.

Golden Whistlers (*Pachycephala pectoralis*) are altitudinal migrants, with resident individuals being augmented by birds moving out of taller forests in Victoria's central highlands before winter sets in. Although the brilliantly coloured males stand out with their white throat, black head and chinstrap contrasting against a yellow nape and underparts, these birds are more often heard than seen. Golden Whistlers forage singly or in pairs, gleaning insects from foliage in the mid-upper storey of eucalypts.

Although most butterflies begin to end their flying period by late March, female **Common Brown Butterflies** (*Heteronympha merope*) remain active until about the end of April. Some **Australian Admirals** (*Vanessa itea*) overwinter and may be seen basking on sunny days throughout autumn.

Abundant moisture and warmth retained in the soil from recent bursts of sunshine provide ideal conditions for fungi to begin fruiting, usually peaking from about May to July. The **Dung Fungus** (*Stropharia semiglobata*) is easily recognised by its distinctively rounded, yellowish cap supported on a slender, pale stem to about 10 cm high. Both the cap and stem are slimy when fresh. This fungus is coprophytic, obtaining its energy from herbivore dung, and can sometimes be found growing on kangaroo scats in the Sanctuary. The size of the fruiting body is largely influenced by the size and nutrient content of the dung that it grows on.



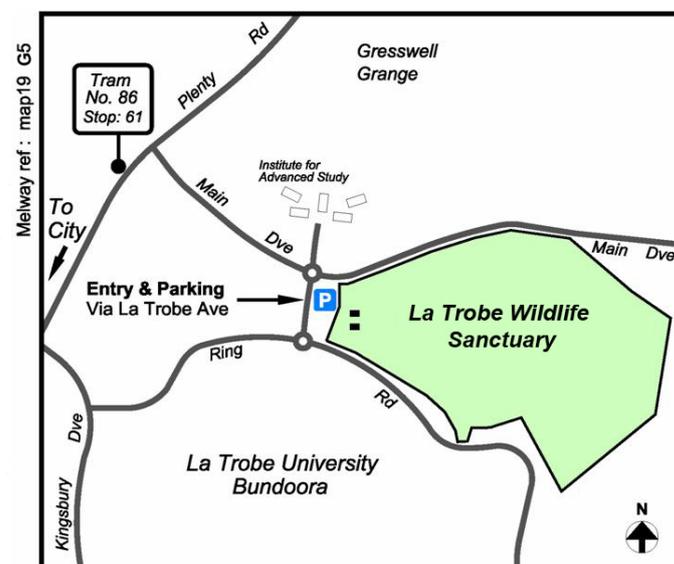
In late April, male **Common Ringtail Possums** (*Pseudocheirus peregrinus*) consort females, grooming and foraging with their suitors before mating takes place in early May. In the south of its range, this species roosts and breeds in spherical nests constructed in tree hollows or dense undergrowth that are lined with eucalypt leaves, grass or bark. Two young are usually born in May or early June and are primarily cared for by the female, although males are also known to share some parental responsibilities. Pairs may breed again in late October if conditions are suitable,

producing a second litter in mid-late November. Male Common Ringtails usually incorporate the ranges of two females in their own home range, and although largely monogamous, may mate with a second female after the first litter is born.

Most **Eastern Banjo Frog** (*Limnodynastes dumerilii dumerilii*) tadpoles have now completed metamorphosis and are dispersing as juvenile frogs. Although this species prefers to breed in deeper water bodies such as dams and permanent billabongs, individuals are capable of travelling significant distances across land and spend much of their time foraging in open areas away from water.

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