

The Bushland Whistler

Friends of Forrestdale Newsletter ♦ 9th Edition ♦ August 2014

WINTER BELL (*Blancoa canescens*)

ANSTEY-KEANE DAMPLAND is brimming with botanical gems, and flowering now in the banksia woodland is a treasure known as winter bell, or red bugle.

Belonging to the family Haemodoraceae—along with *Conostylis* and the better-known kangaroo paws (*Anigozanthos*)—winter bell is a relatively uncommon species and the sole representative of the genus *Blancoa* (named for a nineteenth-century Spanish botanist, Francisco Manuel Blanco). It grows in sandy woodlands from approximately Eneabba to Serpentine south of Perth.

Winter bell is a perennial that in favourable situations will spread into large clumps which are covered with red, nodding flowers between June and September. The bugle-shaped flowers of the winter bell are pollinated by nectar-feeding birds such as New Holland and White-cheeked honeyeaters which typically settle on the ground to probe the low-growing flowers with their long curved bills. (When photographing winter bell, it is also often necessary to be at ground level—flat on ones stomach in other words—to get the best viewpoint of the flowers and to glimpse their golden interior.)

Much of the woodlands around Perth where winter bell once grew have been cleared or have become degraded through disturbance and weed invasion; so it is fortunate that conservation reserves containing them have been established. This should ensure that, in these areas at least, these charming plants can continue to be appreciated well into the future. ✧



STICK-NEST ANTS

WHILE WALKING in your local bushland in the cooler months around Perth, you may have noticed curious dome-shaped mounds of dry plant material which on closer inspection are seen to be bustling with ants. These are the stick-nest ants (*Iridomyrmex conifer*) and the mounds are their wintertime homes.

Ants of many species abound in and around Perth; some native, others introduced, and while certain species can cause problems—introduced ones particularly—most native ants are inoffensive and are an essential and long-established part of the ecosystem.

Stick-nest ants are native to the southwest of Western Australia and have an unusual and resourceful system of above and underground nest construction triggered by temperature. At about the end of September, or when temperatures begin to rise, the ants vacate their stick nests that they have occupied all winter, and start to go underground. This is a sensible move. Their subterranean nests insulate the colony from the summer heat and the ants are less vulnerable to bushfires. Underground nests comprise several chambers connected by passages and are situated in shaded, sheltered areas near a food source.

Stick-nest ants feed chiefly on nectar which they obtain from a range of flowers including banksia and balga inflorescences and eucalyptus blossom. When flower nectar is in short supply, the ants feed on honeydew secreted from certain insects belonging to the suborder Homoptera which include aphids, scale insects and leafhoppers. Stick-nest ants have also been observed carrying to their nests particles from the remains of insects and other animals.

When summer is over and temperatures drop below about 22°C, stick-nest ants start to make their aboveground nests and they use whatever suitable material they can find. Small twigs and leaves, dry grass stems, little lumps of charcoal, tiny seedpods and scraps of bark are all carried or dragged by the ants to build the mounds. Grains of sand and, if available, tiny pebbles are also used to add bulk to the nests, which when complete average about 30 centimetres in height.

Moving aboveground in winter is a sensible tactic too. The ants position these nests in open sunny spots usually with a northerly aspect to take advantage of the warmth from the winter sun. A further motive for constructing aboveground mounds may be to avoid possible waterlogging of the soil after rain.

Interestingly, active mounds are practically impervious to rain. This is because the ants continually coat the



exterior of the nests with a waterproofing excretion using their mandibles—disused nests, on the other hand, become thoroughly soaked when it rains.

Stick-nest ants remain fairly common in undisturbed bushland around Perth, but once an area becomes degraded they disappear.

The presence, therefore, of these innovative, hard-working ants is a good indication that the bushland they inhabit is still in healthy condition. ✧

Left: Stick-nest ants work tirelessly to furnish their mound nests with material that they collect from the woodland floor, and they often convey items long distances over ground fraught with obstacles. Here two individuals struggle to dislodge a stick that has become snagged while they've been dragging it over difficult terrain to their nest.



A stick-nest ants' nest built in the middle of a clump of winter bell.

WINTERTIME AT ANSTEY-KEANE DAMPLAND

GOOD FALLS OF RAIN since the beginning of May have meant that Ansteys-Keane Dampland has once again come into its own as a true wetland. Areas that during summer are hot and dry are now inundated and should remain so for weeks to come providing the current level of rainfall keeps up.

Once the water arrives, aquatic creatures burst into life as if by magic. Seasonal pools and flooded tracks and firebreaks teem with tadpoles and other freshwater life, and the air rings with the croaking of frogs.



In the damplands where water lies just below the surface, plants such as the swamp rainbow (*Drosera heterophylla*) (left) can be seen flowering in their thousands at this time of year. These carnivorous plants have adapted to growing in winter-wet soils and are unusual among *Drosera* species in that their flowers have more than the typical four or five petals—the flowers of the swamp rainbow can have from eight to a dozen or more petals, giving them the appearance of a daisy flower.

As with other *Drosera* species, the swamp rainbow uses digestive enzymes located in its leaves to ingest nutrients from small insects that become trapped in the sticky mucilage on the leaf tentacles. The nourishment derived from the insects compensates for the nutrient-poor soils in which

these plants grow.

Typical victims of *Drosera heterophylla* are midges, mosquitoes and small flies. Sometimes, as illustrated below, many tiny insects can be caught at the same time in a single leaf. Note how the leaf tentacles fold inwards when an insect is trapped, drawing the prey towards the lamina. This allows maximum contact between the insect, the tip of the tentacle which contains glands that release digestive enzymes, and the lamina where further digestive juices are located.





Above: Flooded firebreaks and seasonal pools at Anstey-Keane Dampland in winter. These areas of water contain numerous species of aquatic life that have adapted over eons to the cyclical wet and dry conditions of this land.



A small sample of the myriad forms of life found in seasonal pools and flooded firebreaks at Anstey-Keane Dampland during winter. **Clockwise from top left:** 1. The shield shrimp, or tadpole shrimp (*Lepidurus apus viridus*) is considered a living fossil as it has remained unchanged in body form for at least 250 million years; it has adapted to wetlands that frequently dry out, and its eggs, which withstand drought, are very fine and can be dispersed by the wind. 2. Squelching froglets (*Crinia insignifera*) in amplexus. 3. Tadpoles (unidentified). 4. A backswimmer, so called because these aquatic insects typically swim upside down. 5. A water tiger, the larva of a species of diving beetle. ✧

