Land for Wildlife and Garden for Wildlife

Central Australia Newsletter

December 2018

From the Coordinator.

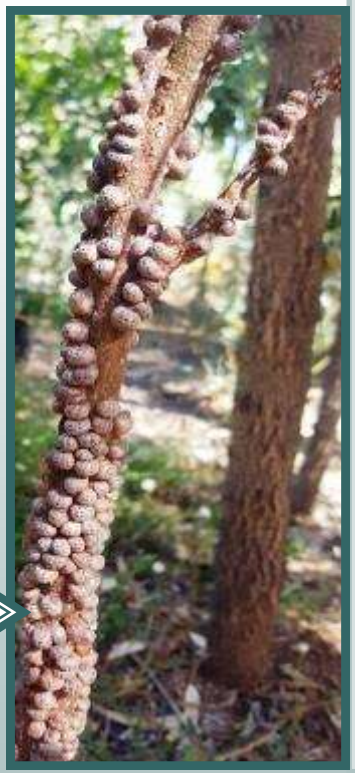
In our final Land for Wildlife and Garden for Wildlife Newsletter for 2018, the LfW & GfW team have taken this opportunity to reflect on the year's adventures, achievements and interesting goings on.

2018 has been another successfully productive year for both the Land for Wildlife and Garden for Wildlife programs, with a lot of on-ground effort put into community engagement and member support, as well as additions and changes to the LfW & GfW team.

Over the last 12 months our team have provided information at community events, connected with students at the 'EcoFair Schools Day' activities run by Arid Lands Environment Council (ALEC), run a number of themed workshops, including: feral animal trapping; property planning; bat box making, and; seed collection. A Backyard Birdbath Biodiversity survey provided camera footage and data of bird presence and use of member's properties and gardens.

Our staff were guests on ABC Alice Springs Radio on a number of occasions during 2018 and discussed the LfW & GfW programs in Central Australia. We took these valuable opportunities to promote our members conservation activities, workshops we were running and community events we were involved in. The ABC also interviewed the new LfW & GfW Central Australian Coordinator, Kate Stevens, introducing her to ABC listeners and welcoming her to the Alice region.

(*continued on page 2*)



Right: Different species of lerps can be found on a variety of trees around Alice. Read how Caragh found some stunning lerps on a members property recently.
(*Image: Caragh Heenan*)

In This Issue

"He that plants trees loves others besides himself."
—Thomas Fuller

One of the highlights in 2018 was the launch of the online NT Register of Significant Trees. The Register began as a collaborative effort between Greening Australia and the National Trust 35 years ago. The program has been hosted by Land for Wildlife Central Australia for a number of years and this year was launched as a fully digitised online resource which can be accessed via our website. The aim of the Register of Significant Trees is to increase public awareness about the importance of trees in NT life, culture and history and for their conservation.

In the second half of the year LfW & GfW bid a sad farewell to the valuable duo of Caragh Heenan and Candice Appleby, while welcoming Kate Stevens from regional Victoria to the team. Caragh and Candice have already forged ahead on new adventures and achievements on the northern NSW coast. Thankfully, both remain involved with LfW & GfW Central Australia and the NT Register of Significant Trees from where they are now located. It must be said that the C & C duo have undoubtedly left an indelible legacy of environmental awareness from their years in the Central Australian region.

Excitingly, a new addition to our newsletter is unveiled this month: The Land for Wildlife Quiz. Some of the answers can be found in this month's newsletter, so you might have to read an article to find it!! Other questions will be based on previous editions, or simply a curiosity that the Coordinator has researched for members interest and information. We hope you enjoy this new initiative and that it satisfies the curious, and the trivia fanatics (like myself!) amongst you. We are always keen for your input so let us know what you think. Check it out on the last page.

Clockwise from left: An Alice family joins the LfW fold; Holly Grevillea; Galahs enjoy the fruits of LfW members labour; Gecko using GfW habitat. *(Images contributed by*

As we again reach this time of the year with all its seasonal activities and cultural practices, on behalf of all our LfW & GfW team and the staff of our host organisation (Low Ecological Services), we'd like to wish all our members, friends and readers of Land for Wildlife and Garden for Wildlife newsletter a very relaxing, rejuvenating and safe holiday season. We are looking forward to 2019 to offer more LfW & GfW news, information, member's stories, activities, workshops, education and tips and hints about habitat and wildlife conservation.

~ Kate Stevens, Coordinator | Land for Wildlife & Garden for Wildlife Central Australia

DID YOU KNOW...???

The Secret Life of Weaving Spiders.

The Golden Orb Spider (Genus *Nephila*) is so named for its ability to build large, strong orb webs with a golden sheen that can easily be seen in bright sunlight. Sometimes called the Golden Orb Weaver, females of the species have large body sizes (2 cm - 4 cm) and are quite colourful, with silvery-grey to plum coloured bodies and brown -black legs that often display yellow bands. Paradoxically, males of the genus are tiny (5 mm) and are red-brown to brown.

Golden Orb Spiders are found throughout Australia in a variety of habitats, including dry open forest and woodlands, coastal sand dune shrubland and mangrove habitats. All orb weaving spiders make suspended, sticky, wheel-shaped orb webs that are semi-permanent. Webs are placed in openings between trees and shrubs where insects are likely to fly. Typical prey items of these spiders include flies, beetles, locusts, wood moths and cicadas. Sometimes their strong webs manage to trap small birds or bats, and the spider will wrap them and feed upon them too!

Golden Orb Spiders remain in their webs day and night and gain some protection from bird attack by the presence of a 'barrier network' of threads on one or both sides of the orb web. They will vibrate their webs to distract potential predators, and sometimes form aggregations of a tangled network of overlapping webs (often called 'maiden's hair') that also help to deter predators. Golden Orb's play host to kleptoparasitic spiders from the genus *Argyrodes*. These smaller spiders inhabit the larger spider's web and eat small insects that become trapped, helping to keep the web clear of debris.

Spinning a yarn - A spider's silk-making tools

A spider's anatomical adaptations for spinning silk is truly remarkable as well as highly complex. In web-building species, such as the Golden Orb Spider, silk glands hold the initial liquid which occupy a large amount of abdominal space. Spiders have six spigots which, depending on the property and use of silk required, vary in their structure. Spiders use of their silk may vary amongst species, and for the Golden Orb spider, includes attachment disc silk, dragline (safety line) and web frame silk, the orb web spiral line, glue -like sticky catching silk, swathing silk and protective egg sac silk

A sudden abundance of spider webs and drag lines in the environment is termed 'a mass-ballooning' event. This one occurred during floods in Tasmania in June 2016. (*Image: ABC News 2016*)

(continued on page 4...)

DID YOU KNOW...???

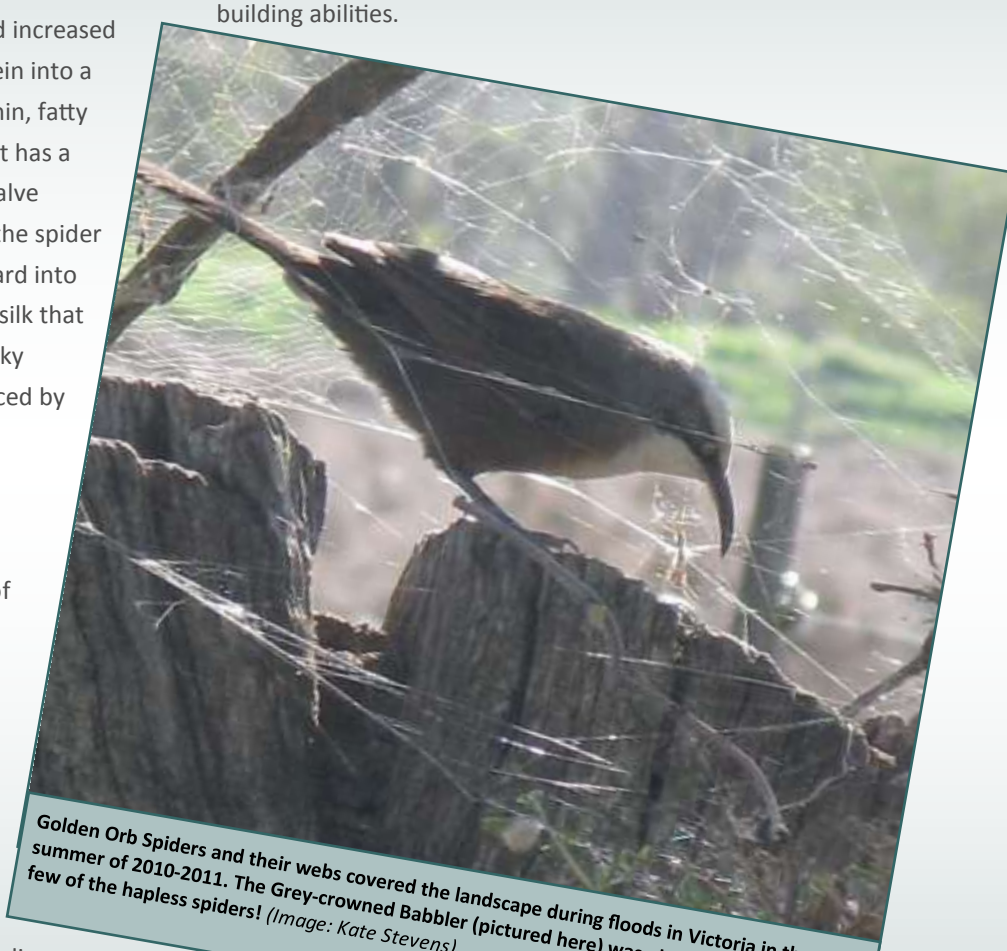
The Secret Life of Weaving Spiders...(*contd*.)

How silk is produced

Although silk is produced as a liquid within the silk glands, as the spider moves away from an attachment point, the silk usually emerges from the spigots as solid silk fibres. Silk glands secrete different types of proteins (spidroins) into the gland cavity which allow an inner core and an outer sheathing layer to form. The very viscous silk flows as a liquid crystal fluid through a long, progressively narrow duct whose lining cells extract water from the protein. It is then subjected to a mild acidic bath and increased pulling stress which helps to convert the liquid protein into a solid fibre. The final section of the duct provides a thin, fatty coating to the silk line. The large drag-line gland duct has a valve at this point, before it enters the spigot. The valve potentially provides both a means of braking when the spider drops on its dragline, and a pump to move silk forward into the spigot duct after a silk line has broken. The only silk that remains as a liquid after leaving the spigot is the sticky catching silk of the orb web weavers which is produced by the aggregate glands.

Working in a world wrapped in spider webs
~ Kate Stevens

Over the summer of 2010/2011, widespread areas of south-east Australia experienced extensive flooding which managed to break a 12 year-long drought. During this period I (the author) was conducting my PhD field work in north-central and north-east Victoria and was forced to relocate several study sites when they were suddenly submerged under a 'pop-up' lake!!To cope with the rapidly changing environment, the region's wildlife – including spiders – had to adapt and I witnessed many extraordinary events and moments occurring all around me. Bushland (obviously right where I was studying birds!) became covered in large tangled webs overnight. I particularly noted the plethora of Golden Orb Spiders which set up temporary homes to escape the rising water levels, as well as opportunistically utelise a sudden abundance of prey items. A profusion of flying insects of all kinds appeared, making their presence felt which was just as uncomfortable as being covered in spider webs. The consequences of this amazing experience were numerous. I learnt how to quickly readjust my sight to focus only a meter or so in front of me (behaviour I didn't realise I was doing until I did the same walking down the street!), I began a trance-like 'Wilson-blessing' of the bush as I walked forward waving my 1.5 m measuring stick perpendicularly to clear webs, and importantly, I got over my spider phobia!!! I became completely fascinated with all the different spider species I encountered, the ingenious ways of utilising the surrounding habitat and their web building abilities.



Golden Orb Spiders and their webs covered the landscape during floods in Victoria in the summer of 2010-2011. The Grey-crowned Babbler (pictured here) was observed feasting on a few of the hapless spiders! *(Image: Kate Stevens)*

Follow the links below for further fascinating Golden Orb Spider facts and foibles
Museum Australia: The Golden Orb Weaving Spider
Museum Australia: Silk; the spider's success story
ABC News: Spider ballooning event in Tasmania

Reintroducing Bilbies to the Piliga.

On-ground action helps to increase wild population numbers of Bilbies

Following our article in the Land for Wildlife November newsletter about the 'Bilby Blitz', an innovative survey program run by Indigenous rangers in northern WA and the NT, we are pleased to report more news of positive on -ground action to help save Bilbies from extinction.

The Australian Wildlife Conservancy (AWC) and NSW National Parks have been working together to initiate the release of a number of Bilby's into a 5,800-hectare feral predator-free fenced area in the Pilliga National Park, NSW. The rapid four month construction of the 32.1 km predator-proof fence earlier this year, will enable six locally extinct mammals to be reintroduced to the Pilliga: Bilby, Western Quoll, Western Barred Bandicoot, Brush-tailed Bettong, Bridled Nailtail Wallaby and Plains Mouse. The release of the Bilby spells the first of 13 species pegged for reintroduction under the NSW Government's 10-year 'Save Our Species' program, into areas across NSW where they have become locally extinct.

The Bilbies that were released in the Piliga were sourced from a Bilby population previously re-established by the AWC in a feral predator-free area at Scotia Wildlife Sanctuary in far western New South Wales. The last record of a Bilby in NSW was over 100 years ago in 1912.

Above: One of the first Bilbies to go back to a NSW national park after more than 100 years is released by NSW Environment Minister Gabrielle Upton, AWC CEO Tim Allard and AWC Wildlife Ecologist Dr Greg Holland. (*Image: Wayne Lawler/AWC)*

From the LfW Coordinator:

Establishment of new Bilby populations in western and central NSW could potentially facilitate population connectivity with Bilby populations in NT and WA. You may consider that unlikely, but consider this: by incorporating Bilby habitat into Land for Wildlife and Garden for Wildlife properties *now*, suitable habitat areas will *already* be established when (and if) dispersing Bilbies arrive from the east... They can move straight in! PLUS, making your property or garden Bilby-friendly will benefit a whole host of other native species that have similar requirements and you will automatically be increasing available habitat areas and biodiversity in the Alice Springs region.

FrogID Week; A Successful Citizen Science Survey

Research's from the Australian Museum received over 4250 submissions of frog calls and pictures and have almost 6000 records of 91 species from FrogID Week! Head to the FrogID website to stay up to date on the latest results as they happen.

***Above*: Red Mulga Lerp (*Austrotachardia acacia*) (*Image: Caragh Heenan*).**

At a recent Land for Wildlife property assessment, I came across a great example of Red Mulga Lerp that I wanted to share with members. Red Mulga Lerp (*Austrotachardia acacia*) is a structure produced by the larvae of psyllid bugs, also known as lerp insects, or jumping plant lice (singular: louse). The Red Mulga Lerp is, as the name suggests, found on Mulga (*Acacia aneura*). The crystallised structure is produced when the branches are attacked by the lerp insect and feed on the sap. The lerp insect then excretes a delicious sugary gum (called the honeydew), which crystallises around the insect larvae.

It is suggested that the psyllid bug larvae produce the structure as protective cover in an insect-plant interaction, where the herbivorous insect would likely have evolved long after the plant itself. Honey Ants (*Camponotus inflatus*) are fed by the honeydew made by the Red Mulga Lerp. The Honey Ants can then protect the psyllid larvae from other predators, while receiving their sugary reward. The honeydew is used by the worker Honey Ants to feed to the repletes (living larders), which are found in nests up to 2 m deep on the shady side below Mulga trees.

The red lumps (lerp) that form along the Mulga stems are edible and can be peeled or sucked off the branches The lerps are commonly used by many Central Australian Indigenous groups as bush food. While we are talking about Mulga and the pantry of food that can be found among their branches, it is commonly known that Mulga seeds can be roasted and ground to a paste and eaten. In addition, the species produces an edible gall known as a Mulga Apple (as well as several other forms of inedible galls). These galls are produced by a Wasp larva and taste like dried apple...*Yum!*

Right: Honeydew from Lerp is eaten and fed to repletes of Honey Ant (*Camponotus inflatus*) (*Image: Caragh Heenan*).

WHERE THE LIGHTS SHINE BRIGHT(-EST)

Attracting pest insects *OUT OF* your garden...

A constant concern of gardeners in Alice Springs town is the prevalence of insect predators, intent on destroying horticultural efforts. I have a theory as to why this may be more serious than it ought to be.

During my career there were occasions when I worked with Entomologists, and was employed at the former CSIRO Division of Entomology. To collect nocturnal specimens, a bright light was used to attract a large assortment of insects. These were trapped, to be dealt with taxonomically. When camped out in the bush there were times when a profusion of insects would be attracted to a light being used for writing notes or, to a lesser extent to the camp-fire flames.

Once, returning from a trip late at night I decided to have a final night camp, although just 40km south of Alice Springs. In the darkness a corona of light was visible, originating from the Alice Springs area. I thought that such a light must certainly attract many insects.

A demonstration of how this could be proved came when our family took residence in a house on the Arid Zone Research Institute. Being keen gardeners we went to work on the fertile soil in the area. We had little trouble with hungry insects but there were enough to be noticeable.

After a while, a radio station was built across the road from the Institute. It was advertised by a large, brightly lit sign at night at which insects could be seen fluttering actively. Although the sign was some distance from our place, we learned to use it to our advantage.

Two outside lights were attached to our house, one in front and one out the back. By switching these on for a few minutes at night we attracted our local flying creatures. When the lights were turned off we could watch as our local bugs streamed across the paddock to the commercial sign. Soon we noticed we were getting fewer insects to our lights.

Our children were prize winners in the horticulture section of the Alice Springs Show for many years.

Our present home is in part of the Alice Springs rural area which is dark at night as we are a long distance from any roadside light. We have almost no problem from insect invaders.

Gardeners in town often make requests for ways to deal with insects. Not too long ago, the town suffered from a profusion of grass-hoppers. Out our area of dark nights those insects were a rarity.

These observations are presented for comment; some may consider that the manipulation of lights may help control insect plant pests.

~ Des Nelson: LfW Member

Hildegardia australiensis — Hildegardia

Scientific Name:

Hildegardia australiensis

Common Name:

Hildegardia

Location of Tree:

Pul Pul, Kakadu Stage 3

Categories of Significance:

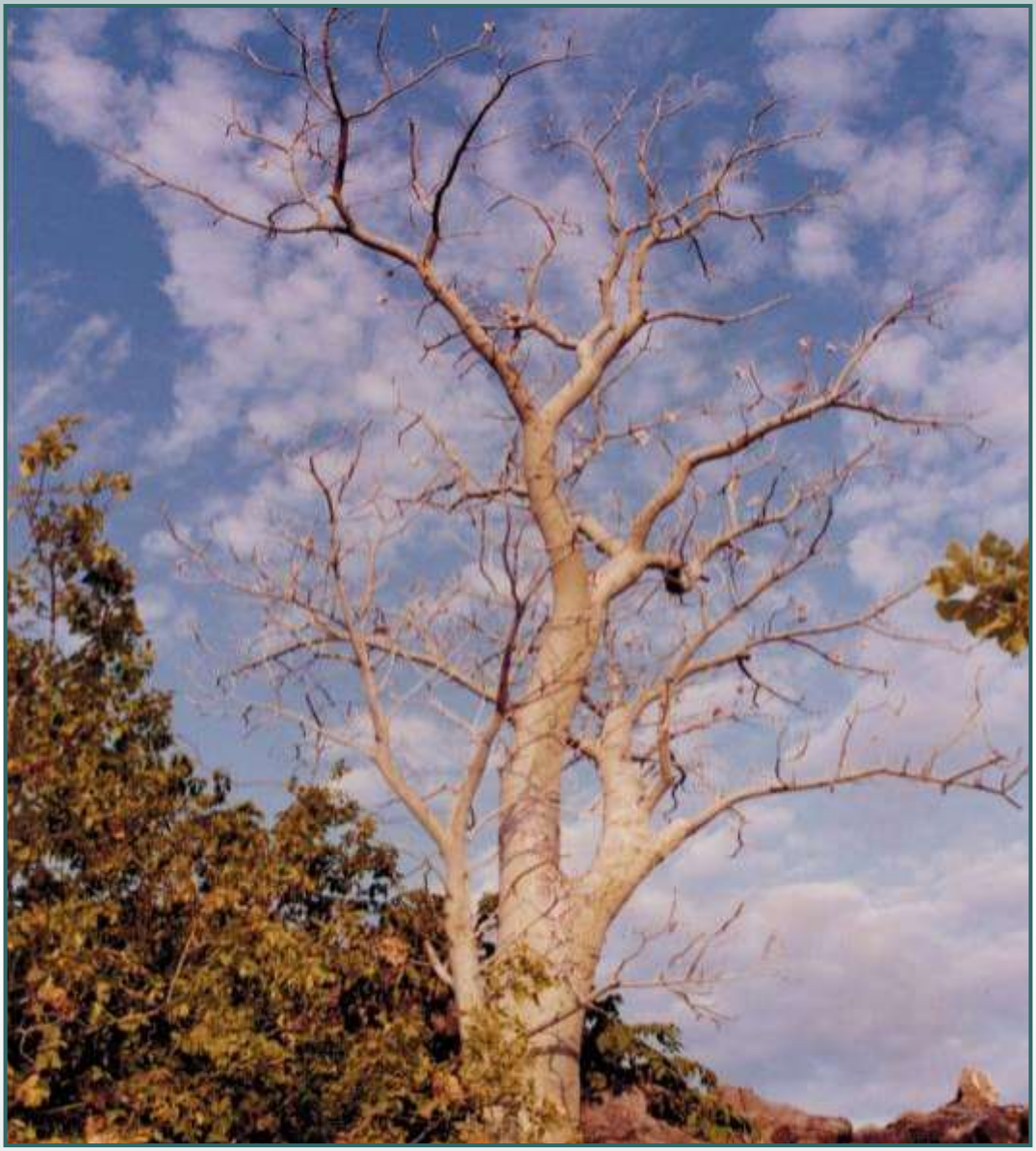
Rare

Number of Trees:

>200

Year Listed:

1994



MORE ABOUT TREES

Find out what the oldest tree species in Australia are and where you can find them.

Follow the link in the 'Further Reding' section on the last page of this month's newsletter.

The genus *Hildegardia* was first discovered in Australia in 1991 when two samples were collected from Kakadu National Park. *Hildegardia* is considered significant for its rarity, and because of a restricted genus with disjunct populations, which occur along the Arnhem Land escarpment.

There are currently 14 known populations of this species with an approximate total of only 1000 individuals. The second largest population is found at Pul Pul and falls within the Katherine region of the Significant Tree Register. The Pul Pul population has been included on the NT Register of Significant Trees because of its location. Hence the population contributes information that provides a better understanding of Australian natural history.

» View the NT Register of Significant Trees page to learn more about the register. *The NT Register of Significant Trees was established by the National Trust NT and Greening Australia and is managed by Land for Wildlife Central Australia.*

I'M DREAMING OF A WEED-FREE CHRISTMAS...2019

No 'white Christmas' for Alice please

At this time of year, old Christmas Carols and songs are often heard through sound systems of businesses, shopping centres, radio stations, churches, parks, gardens and family homes (admittedly some of these areas may not reverberate with musical Christmas cheer!) But Land for Wildlife Central Australia request that you be mindful of what song you sing along with and don't go 'Wishing for a White Christmas' (original score 'I'm dreaming of a white Christmas' by Irving Berlin in 1940 & first publicly sung by Bing Crosby on Christmas Day 1942.) So having sent out the request, I am actually using this song to segway into highlighting an important environmental issue for our Land ... & Garden for Wildlife member's information.

Recently a pretty flowering plant caught my attention and prompted me to whistle that very tune and consider what an appropriate time of year that it should be flowering. *However*!!! Upon identification I was disappointed to discover that the attractive snowy-looking flowers belong to an introduced plant species called the Kapok Bush (*Aerva javanica*). The plant is native to northern Africa and south-east and southern Asia. It was originally used in Australia for soil stabilisation and revegetation of disturbed lands e.g. mine sites, as well as a garden ornamental. The plant has, unfortunately, established itself as a weed in areas of the NT, including the Alice region and is now considered a pest species. Typical of a pest species, the seeds disperse easily and being light they utelise wind, water, animal fur and feces, human clothing, vehicles and machinery. In Alice the plant may be found in gardens, roadsides, urban development areas and pastoral lands.

Removing without spreading the seed

The Kapok Bush has a woody taproot and may prove a little difficult to remove by hand. However, removal is nothing that a good hoe or shovel, and a bit of grunt, can't handle. What is most important when removing or ridding the area of the plant is to not disperse any seeds during the removal process. This can easily be avoided by placing a plastic bag over the plant and tying it tightly at the base. If you are using a herbicide, make sure you capture the seeds as the plant dies by again placing a bag over the bush and removing the plant with bag attached once it has died. Make sure you destroy the plant and seeds appropriately by ***not*** placing them in a household compost bin or loose in your garbage bin where the plant/seeds will be taken to the tip only to disperse there.

An attractive fluffy white florescence for sure. However the Kapok Bush (*Aerva javanica*) is a weed species, introduced from south-east Asia for the purposes of soil stabilisation and rehabilitation of mine sites and pastoral lands.
(Image: Kate Stevens)

The Land for Wildlife Quiz...???

1. Which genus of Australian plants are commonly known as bottlebrushes, and typically have bright red flowers? Is it a) Banksia, b) Acacia, c) Callistemon, or d) Jacaranda?
2. What is the common name of the species of spider displayed on page 1 of this month's newsletter?
3. Do you know what the name of the spider refers to?
4. What is the colloquial term used to describe fallen leaves and twigs at the base of Eucalypt (or other) trees?
5. What is the common name of the caterpillar species, sacred to the Arrernte people, presented in sculptural form in the Alice Springs Cultural Precinct gardens?
6. Where does the attractive plant species *Aerva javanica* originate from?

Answers will be in next month's newsletter

Further Reading

Click the link symbol to be redirected to the article

Webpage • **Curious Kids at Christmas**. A website produced by The Conversation that answers questions sent to them by curious kids on many and varied topics

Article • **Where the Old Things Grow**. Australia's oldest trees, where they are, and how they grow

Article • **Habitat for Butterflies in your Garden.** A new website launched by Butterfly Conservation South Australia

Happy New Year, ***Kate, Caragh, Candice and Bill***

Do you have any stories or images to share? Get in touch! We are always looking for members to share their experiences via our social media and newsletter. Email us with your suggestions of articles or topics that you

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