

# Kimberley Weeds NETWORK

Issue 2 / September 2020

## Sharing tips and working together

By Danielle Bain, Environs Kimberley

### Who would have thought that a global pandemic would improve communication and knowledge-sharing about weeds across the Kimberley?

Due to Covid-19 restrictions, the Kimberley Weeds Network was forced to meet online for its May meeting, which went so well that it was decided to continue meeting online to discuss weed priorities and share weed information about the Kimberley Region. We heard a presentation by Bruce Webber from CSIRO on the Western Australian Biodiversity Science Institute (WABS) and their prioritised research program for WA <https://youtu.be/j4Ne1vfvv68>

At our second meeting in July we heard three presentations:

- 1) Development of a multi-disciplinary Northern Australian neem project — presented by Karen Bell (CSIRO-UWA) <https://youtu.be/dzeHv5VL-Vk>
- 2) Early stage trial of DiBak fungus and other methods of controlling Neem — presented by John Szymanski (West Kimberley RubberVine and Aquila Project) <https://youtu.be/0PDe2kuuEfK>
- 3) East Kimberley Rubbervine control program — presented by JP Slaven (DPIRD)

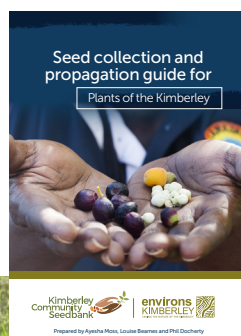
These presentations have been recorded and uploaded to the Kimberley Weeds Network youtube channel. Access links are provided after the meetings to those on the network email list. Do let us know if you would like to be on the list.

The network is supported by Aboriginal rangers, government representatives, researchers, private contractors and community members from within and outside the region. People involved are passionate about managing healthy landscapes and protecting natural, agricultural and cultural values from the threat of weeds. The Network is about sharing knowledge about weed distribution, threat and control, learning from each other, developing stronger relationships and breaking down physical and financial barriers to working together.

Being part of the Kimberley Weeds Network means simply being on an email list, receiving the occasional helpful email, and electing to participate in or listen to our (almost quarterly) mini-forum meetings. If you would like to be part of the network, please send an email to me at [weeds@environskimberley.org.au](mailto:weeds@environskimberley.org.au)

### Guess the weed competition

The first person to email [weeds@environskimberley.org.au](mailto:weeds@environskimberley.org.au) with the correct answer will get a free copy of Environs Kimberley's soon to be published **Seed collection and propagation guide for plants of the Kimberley**



Siam Weed awareness-raising campaign is coordinated by the NT Govt  
Image credit: NT Govt

## Siam Weed

By Susan King, Senior District Weeds Officer - Katherine, NT

Siam weed is listed as a C1 Declared Pest and prohibited in the whole of WA.

Frighteningly, it is considered to be one of the world's worst invasive plants and, while not yet in the Kimberley, it was found in the Top End in 2019. It is very important that people on the ground keep an eye out for any incursions and report them straight away.

Siam weed survives in tropical and subtropical coastal areas where the rainfall exceeds 1000 millimetres per annum. If it took hold in our region it could have disastrous consequences for biodiversity, cultural sites and agricultural industries like crops and cattle. It dies back to the crown in dry periods, re-shooting again after rain. It has killed cattle in other countries, and can cause allergic reactions in humans.

After the sighting in 2019, The NT began an awareness-raising campaign to encourage landowners to 'look out for the pitch-fork weed' and report any sightings. Early eradication is key to stopping an outbreak. It is very important you don't try to remove it yourself without first contacting authorities.

In WA, if you spot Siam Weed, please immediately ring PaDIS (WA Pest and Disease Information Service) on (08) 9368 3080.

# Tackling the Sneaky Bush in Broome's Minyirr Park

By Hamsini Bijlani, Environs Kimberley

Nestled amongst the dunes of the stunning Cable Beach, Minyirr Park coastal reserve is one of Broome's great natural attractions. It contains ecologically and culturally significant monsoon vine thickets, which are an endangered dry rainforest ecosystem. However, one of the biggest threats to the health of the reserve is the prevalence of several weeds, which are strangling the beautiful native plants.

Coffee bush (*Leucaena leucocephala*), a highly invasive woody weed, is one of the more abundant weed species found in Minyirr Park. It is regarded as an environmental weed in Western Australia and one of the 100 worst invasive alien species in the world. Also known as 'sneaky bush', *Leucaena* can grow almost unseen in sheltered and shaded areas of dense vegetation. Environs Kimberley staff and volunteers have been working on treating this weed in Minyirr Park to help the Yawuru Country Managers and the Department of Biodiversity Conservation and Attractions protect the reserve and the monsoon vine thickets contained within it.



Before weeding



After weeding



Coffee bush pile

Whilst the main aim is to rid the reserve of this sneaky weed, we are also trialling different treatment methods to refine and prioritise *Leucaena* treatment in the future. Four different treatment methods are being trialled. Two of the methods employ the chemical herbicide Vigilant, which is either applied to cut stumps using the cut-and-paint method, or used in a variation of the basal-barking method, whereby cuts are made into the bark at the base of the plant and the herbicide is applied to the cut surfaces. Another method we are using is basal-barking (saturating the bark of the plant with a chemical mixture from the base up to a height of 30cm) with a mixture of Access and diesel as guided by off-label permits. This is one of the most widely accepted methods of treating coffee bush. The team is also testing the effectiveness of basal barking using diesel alone. This has been trialled in Queensland and the Pacific Islands with some success.

The plants' response to the different treatments is regularly observed and by the end of the trial we hope not only to develop a set of standard operating procedures for treating this nuisance weed in the area, but also to remove all mature seeding coffee bush trees in Minyirr Park.



Volunteer Kirrily and Environs Kimberley intern Courtney working hard



Department of Biodiversity, Conservation and Attractions



## Upcoming Grants

**Australian Department of Agriculture, Water and the Environment**

**National Landcare Smart Farms Program: Smart Farms Small Grants- Round 4**

- Closes 9th Oct 2020
- \$5,000–100,000 available in competitive grant process

Your project must contribute to improving Australian food, fibre and forestry business sustainability, productivity and profitability, and must contribute to protecting or improving natural resources in Australia including vegetation and threatened species.

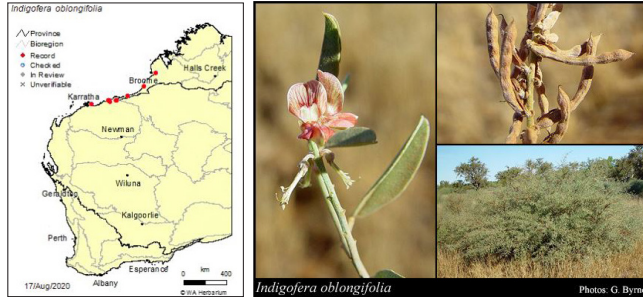
See here for more information:

<https://www.communitygrants.gov.au/grants/smart-farms>

# A new weed for the Kimberley — if you let it happen

By Andrew Mitchell, Botanist

Tall indigo (*Indigofera oblongifolia*) is a weed that has been spreading rapidly in the Pilbara. It is now a common sight in Port Hedland and abundant on the De Grey floodplain east of Port Hedland. A population was found at Anna Plains in 2017 on an old floodplain. A small population was found in the road reserve on Roebuck Plains in 2013 and the Yawuru Rangers removed that population of 20 to 30 plants. They removed more in 2017!



Photos and maps from Florabase 2016

The De Grey flood plain was an almost treeless grass plain when I first saw it in the 1970s. It is now dotted with tall indigo. A large number of these trees seem to have died during the dry summer of 2015/16. The cattle have grazed them to some degree. John Bettini of De Grey tells me the cattle graze tall indigo when there is nothing else left. It is not poisonous. It was brought into the Pilbara/Kimberley as a garden plant by CALM when they had nurseries in Karratha and Broome. These nurseries grew and distributed species that would grow in the region. The first record of tall indigo as a weed was in Port Hedland in 1982, and I collected a sample in 1988 on the Pardoo/Wallal Station boundary on the old coast road. Its spread since then has been impressive. It is not a declared species. In its native range, southern Africa to India, it is on the IUCN red list as a plant that is slightly threatened!

**It looks set to colonise Roebuck Plains if we let it. It may be able to move into other Kimberley**



Tall indigo dominating the vegetation on the road verge on the De Grey floodplain. It seems to compete well with buffel grass!

Whilst driving from Broome to Port Hedland in 2017 I noticed that tall indigo had re-established a population the Yawuru Rangers had previously removed, but the 30 or so plants were relatively small, about 0.6m tall. I am told the rangers removed the new population in 2017. More significantly, I had already seen two plants about 3 km to the north and one further north again. These are the colonists of new areas, if you let them go.



About 30 plants; location: 17.5km from Roebuck Plains Roadhouse on Great Northern Highway



One plant; location: 9.2km south of Roebuck Plains Roadhouse on Great Northern Highway



Two plants; location: 11.3km south of Roebuck Plains Roadhouse on Great Northern Highway

# Celebrating Kimberley Weed Warriors

**Name:** John Szymanski

**Location:** Willare

**Organisation:** West Kimberley RubberVine Eradication Program — Willare

**Role:** Project manager, Team Leader, Field worker

**What is your favourite part of the Kimberley to visit?**

Freshwater parts of the Fitzroy River

**How long have you been a weed warrior?**

15 years

**What/who inspired you in the beginning of your weed warrior journey?**

Mick Everett, DIPRD, sadly no longer with us, started my journey by supporting me in my baby steps, and of course my wife, Michelle, who has always been an environmentalist.

**If you had three million bucks in hand for a three-year rapid (eradication) response, what three new and emerging Kimberley weeds would you choose and why?**

Neem, in my patch on the Fitzroy River at Udialla, because right now we could succeed.

Chinee Apple at Willare, because we are still early enough to eradicate it too.

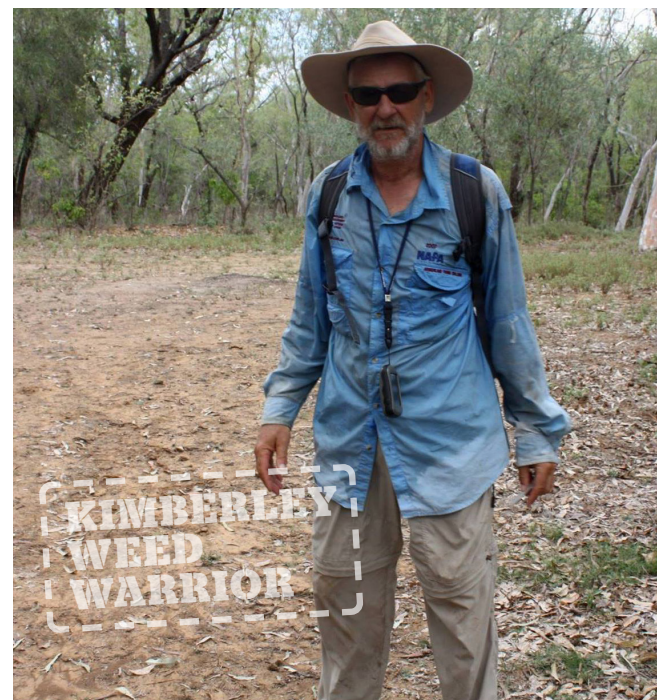
Bellyache at Willare, because it would only take a week. But more importantly on the Lennard River, because it is in the middle of the Kimberley and three million bucks could go a long way to eradicating it there.

**What is the hardest part of being a weed warrior?**

Dealing with the procrastination of government agencies and the never-ending mantra of "We don't have any money", particularly when we know that government agencies can always find money for their priorities. Currently the Australian Government has found hundreds of billions of dollars in an instant, from goodness knows where, when they say they have no money for the environment. Makes you wonder how serious they really are. That's hard.

**What is your most satisfying weed warrior moment?**

Coming back to areas we have controlled and finding the environment free of weeds as nature intended.



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# Understanding an ecosystem approach to invasive species management and restoration.

By Judy Fisher, Theme Leader IUCN CEM Ecosystems and Invasive Species



I have been working with local governments developing and implementing the IUCN Commission on Ecosystem Management, Thematic Group's ecosystem approach to invasive species management and restoration. You can find more about our Group at this web page.

<https://www.iucn.org/commissions/commission-ecosystem-management/our-work/cems-thematic-groups/invasive-species>

We have developed a methodology to establish a baseline of weed invasion in the field. Five categories of weed cover are measured. Using a mapping application, we establish 'polygons' or 'areas' with the same weed-cover value and record the native and weed species present within these areas. The values for weed cover are 0–20%, 20–40%, 40–60%, 60–80% and 80–100%. This information recorded in the field is incorporated from the mapping application into a Geographic Information System (GIS), from where land managers, traditional owners and others can make informed decisions on where and how to manage weed species. Once weed management has occurred, we return to the 'polygons' or 'areas' and again record the weed-cover value of each area and the weeds and native species within that area. We can measure ecological change, both by weed-cover value and weed species present over time. In addition, we keep a record of funds spent managing and or restoring that area, including volunteer time, and calculate how successful our weed work has been. This 'Success Indicator' is based on the ecological change and the economic investment in the area. The Success Indicator allows us to adapt our approaches according to a quantitative understanding of how effective our weed work has been. Funders of weed work are impressed by this approach and have invested more funds in it, as they can see that their money is improving biodiversity.

Judy Fisher PhD,  
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Fisher Research Pty Ltd  
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# Neems to Go — Kimberley

By Allan Wedderburn

We need your help. Earlier this year Kimberley Animals, Nature and Education (KANE) was successful in obtaining a Department of Industry, Innovation and Science Communities Environment Grant of \$10,000. The grant is for Neem public awareness education, and co-ordination of direct management efforts in and around Kununurra. This is a significant boost for KANE, as previous Neem control was largely funded through donations received.

As part of the project KANE has developed a communication and community engagement plan; however, we are looking for someone who is already passionate about Neem management to assist us with the implementation of the plan. This could be undertaken remotely by you! Yes, you! KANE would be able to reimburse you for your time at volunteer rates.

This project complements the work already undertaken around Lakeside and Mirima National Park, and will expand into the rest of Kununurra townsite. It includes door-knocking to obtain access to individual properties that have the Neem tree. Unless the Neem is cleared from residential locations, these Neems will re-infest areas that have been cleared previously. The idea is to clear a large, cohesive area with a buffer zone around it. The buffer zone will need constant management to prevent re-infestation. Once a critical mass is cleared it will be easier to extend the buffer zone each year to the boundaries of the existing Neem infestations.

Key stakeholders, such as the Department of Communities, the Shire of Wyndham East Kimberley and MG Corporation Rangers, will be approached to co-ordinate efforts and undertake clearing, using their resources in a more meaningful and targeted way for clearing Neem. Previously, the Department of Biodiversity, Conservation and Attractions cleared parts of surrounding National Parks, but could not clear outside the Parks. This project will allow for clearing where other organisations are not allowed to clear.

A targeted public awareness program is currently being undertaken. The last comprehensive program was 10 to 15 years ago and, with the high transient population in the Kimberley, it's an appropriate time to increase public awareness, especially now the Neem

is a declared weed in WA. The public awareness program will be supported by direct approaches to property managers, such as real estate agents, landscape contractors, and organisations that rent a large number of properties in Kununurra, to encourage them to clear Neems, request the owners to clear the Neems, or allow others access to clear them.

A by-product of the increased awareness will be larger property owners outside the townsite clearing Neems.

If this is something you can assist KANE with, please don't delay – call Allan Wedderburn on 041 049 2782 to progress this exciting opportunity to make a difference.

Allan Wedderburn  
[redspinifex@icloud.com](mailto:redspinifex@icloud.com)



# Neem (*Azadirachta indica*)

By Danielle Bain, Environs Kimberley

Now that Neem is a declared pest in WA, it is all systems to go to control it right across the Kimberley. Here are a few facts about Neem:

1. Neem is a shady tree that grows to 15m
2. Lots of small white flowers are followed by yellow fruits.
3. A single mature neem tree can produce up to 50,000 seeds per year. These seeds are dispersed by birds and bats that ingest the fruit. This has contributed to significant spread along waterways.
4. Neem trees produce suckers, which enable dense stands to develop.
5. They are similar to white cedar (*Melia azedarach*), which is native to Australia. They have similar leaves, bark and flowers.

## Controlling Neem

- The best time to treat neem is from March to May but large trees should be controlled before they produce fruit — usually November to April.
- Prioritise the control of seedlings
- When controlling neem on your property, ask for help from local experts, council and state government. Care should be taken to correctly identify neem to avoid accidentally killing white cedar trees (see number 5 above).
- Join weed-control community groups that work with neem, or form your own
- Help raise awareness in your community

If you would like more information please contact [weeds@environskimberley.org.au](mailto:weeds@environskimberley.org.au)

Environs Kimberley, with CSIRO, University of Western Australia, Western Australian Science and Biodiversity Institute and others are developing a project to harness scientific and community partnerships to close the door on neem in Northern Australia. Together we are seeking additional partnerships and collaborations across WA, NT and Qld to address critical knowledge gaps to:

- Identify and quantify impacts of neem on biodiversity, social and cultural values and the economy.
- Predict and reduce future impacts and determine the risk of neem invasion in new localities, especially those in ecologically sensitive and culturally important habitats, and prioritise surveillance.
- Trial and evaluate low-impact control technologies and land management activities to reduce neem and enhance ecosystem recovery.

If you are interested in being a part of this project, please contact Karen Bell or Louise Beames for a copy of the project brief and for further discussions.

[karen.bell@uwa.edu.au](mailto:karen.bell@uwa.edu.au) Tel: (08) 64882541  
or [louise@environskimberley.org.au](mailto:louise@environskimberley.org.au)



Neem leaves D.Pasfield



Neem fruit L.Beames



Neem tree D.Pasfield

## Find out more...

You can find out more about the Kimberley Weeds Network as well as Issue #1 (Dec 2019) of the Kimberley Weeds Network News at our website: [www.environskimberley.org.au/kimberley\\_weeds\\_network](http://www.environskimberley.org.au/kimberley_weeds_network).

Thank you to those that have contributed articles for this newsletter. If you have any weed news big or small that you would like to share in the next newsletter please contact Danielle at [weeds@environskimberley.org.au](mailto:weeds@environskimberley.org.au)

This newsletter was produced by Environs Kimberley.

The Kimberley Weeds Forum and Network is an initiative of the Kimberley Nature Project, Environs Kimberley and has received support from the State NRM WA and the Australian Government's National Landcare Program.

