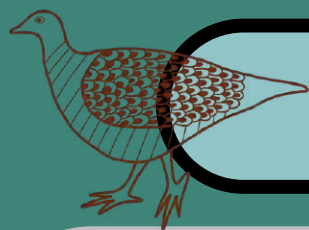
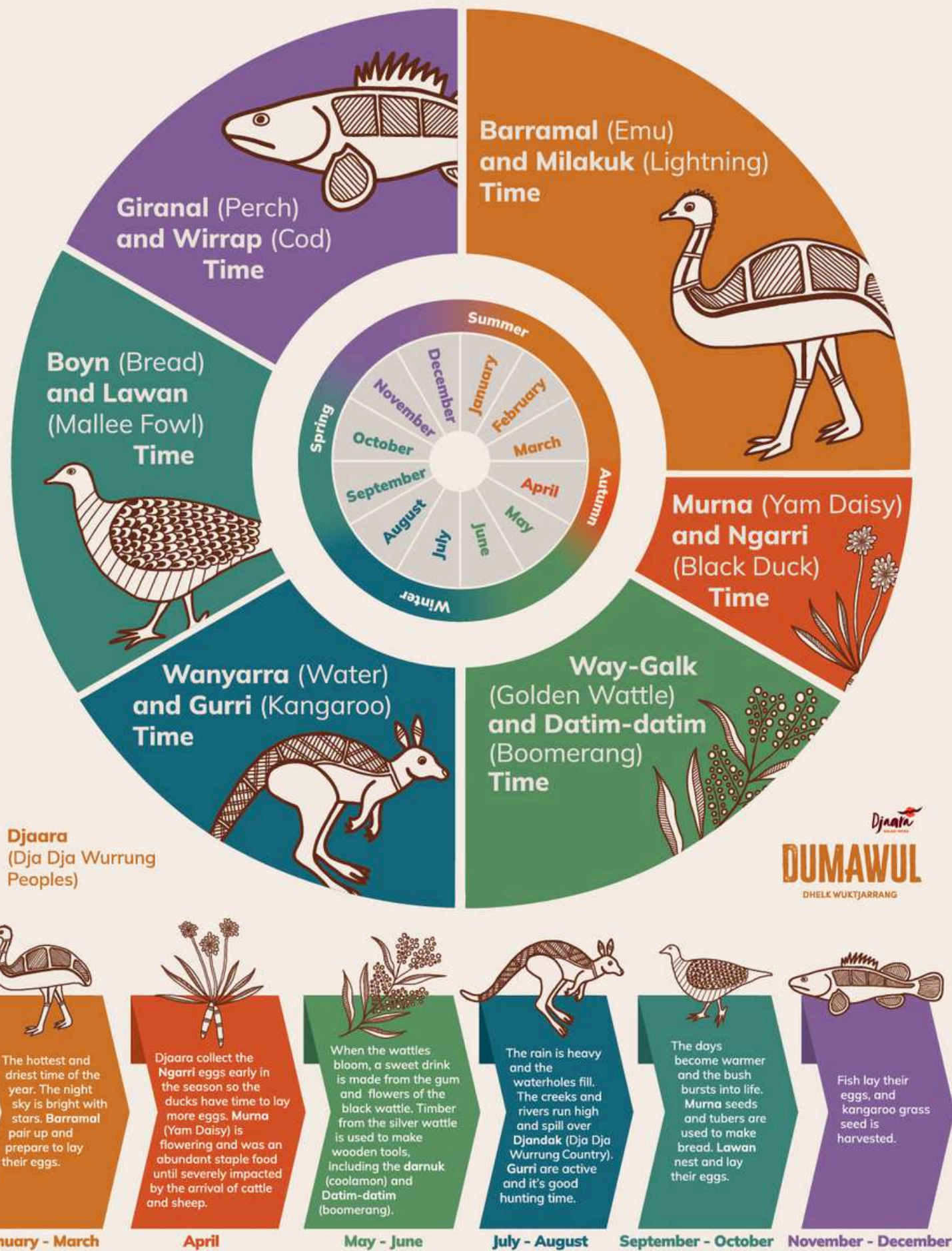


The Djaara Seasonal Calendar



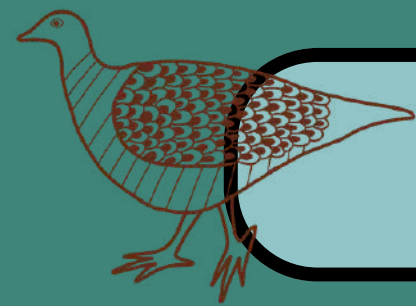
Boyn (Bread) and Lawan (Malleefowl) Time



The temperature is warming up and the bush is full of life and green from the winter rains. This is a time of flowering and growth. Waterways are high and the sounds of **Dum** (frogs) fill the air in the evening. **Djandak Wi** (cultural burning) begins again, clearing weeds before they grow and preparing the bush for hot weather. **Lawan** (Malleefowl) nest and lay their eggs.



The information in this document is a collection of expressions and experiences of different individual Dja Dja Wurrung people. It does not represent the Collective Expression of the entire Dja Dja Wurrung Community.



Boyn (Bread) and Lawan (Malleefowl) Time



The temperature is warming up and the bush is full of life and green from the winter rains. This is a time of flowering and growth. Waterways are high and the sounds of **Dum** (frogs) fill the air in the evening. **Djandak Wi** (cultural burning) begins again, clearing weeds before they grow and preparing the bush for hot weather. **Lawan** (Malleefowl) nest and lay their eggs.

Djaara People



- Becoming active again after wet season
- Moving around Country and closer to waterways
- Preparing fish traps
- Harvesting fibres for weaving
- Trade picks up

Galk-Galk & Malak

Forest and Plants



- **Murna** (Yam Daisy) begin to flower
- **Gitjawil matom** (Chocolate Lily) flower
- Many other plants, including rare orchids, flower and return colour to Djandak
- A time of growth for trees as they reawaken after the cold months

Wura-Wura-Yi Dja Sky Country



- Lyra (**Lawan** - Malleefowl) is fading in the sky. When it disappears into the sunset, it means eggs are ready to be gathered
- **Barramal** (Milky Way) slowly moving lower in the sky to the south west
- Altair (**Bundjiyl**) sits just above Lawan in the sky

Djandak Wi Country Fire



- Begins when it dries out enough, but stops before flowering of native plants
- Used to manage weeds before flowering
- Promotes renewal of grasses like **Buwatj** (Kangaroo Grass)

Yapuka, Wirrap & Murrin Dja

Birds, Fish & Animals



- **Lawan** (Malleefowl) finish building nests and start laying eggs
- Fish become more active as water warms
- **Wirrap** (Murray Cod) begin breeding
- **Ware-pil** (Wedge Tail Eagle) chicks hatch. Adults busy hunting. First flight of chicks happens late in the season.
- **Yapitj** (Yabby) begin to wake up, once water gets above 15degrees
- **Gurri** (Kangaroo) joeys begin to emerge from pouches
- **Barramal** (Emu) chicks hatch, travelling with their father as they learn to feed
- **Watjarang** (Platypus) mating season. Females carrying vegetation into burrows to make nests soft and humid
- **Dum** (frogs) are loud and present in the waterways. Breeding season begins

Gatjin Water

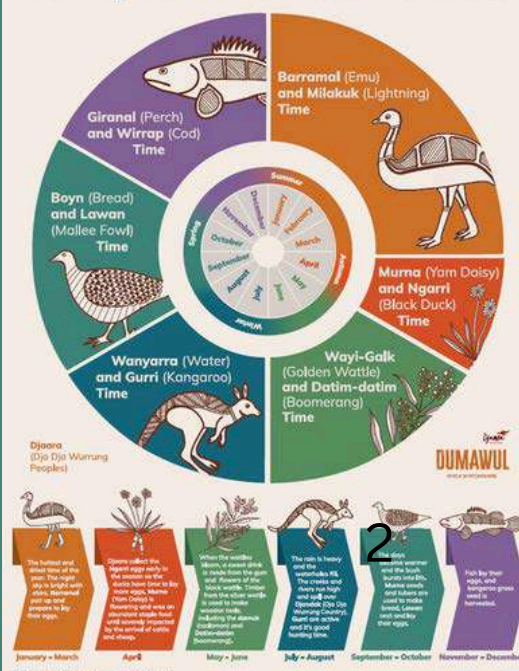


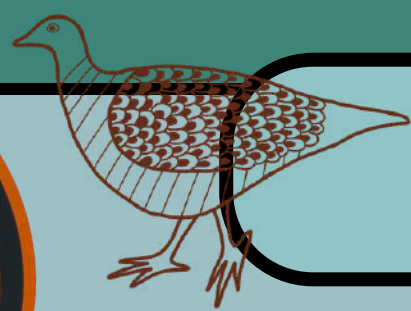
- Waterways are full from winter rains but slowly starting to drop
- Care taken as ponds are deep and water can still be fast moving

Weather

- Day and night becoming equal in length
- Temperature warming
- Rain continues
- Can still be frosts

The Djara Seasonal Calendar





Boyn (Bread) and Lawan (Malleefowl) Time



Introduction

Lawan are one of the world's most unique birds, and they call **Djandak** home! They are a ground dwelling bird that builds large mounds to incubate their eggs. **Lawan** are of great cultural importance to **Djaara**, and a key species that supports the health of Country. Due to pest species and land clearing, **Lawan** are now vulnerable and need our help to survive.

Sacred

Djaara wouldn't eat the Malleefowl, but if it was the right time they would eat an egg. One egg is much bigger than a chicken's egg. Due to sustainability of the species, eggs are now not eaten.

Sky Country

Djaara know it is mound building time when the Lyra constellation appears in the sky at sunrise. When it fades in the sky in October, it means the eggs are ready for sustainable harves

Conservation

There are only a few breeding pairs of **Lawan** currently remaining on **Djandak**. **Djaara** are working with other groups, such as the National Malleefowl Recovery Group and the state and federal governments, to increase the population of **Lawan** on **Djandak**.



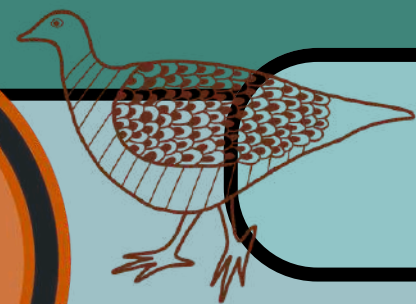
Ceremony

Lawan is a very important part of **Djaara** ceremony and culture.

Djandak

Lawan used to be found all over the north part of **Djandak**. Now they only live in the north west, near Wedderburn.





Boyn (Bread) and Lawan (Malleefowl) Time



Fun facts



Mating Up

During the breeding season, a male and female usually form a pair and work together to care for their nest mound. The male does most of the work building and looking after the mound, while the female lays her eggs in it. They usually lay one egg every three or four days.

Feet

The Malleefowl has large and powerful feet, which it uses to build enormous egg-incubating mounds.

Eggs

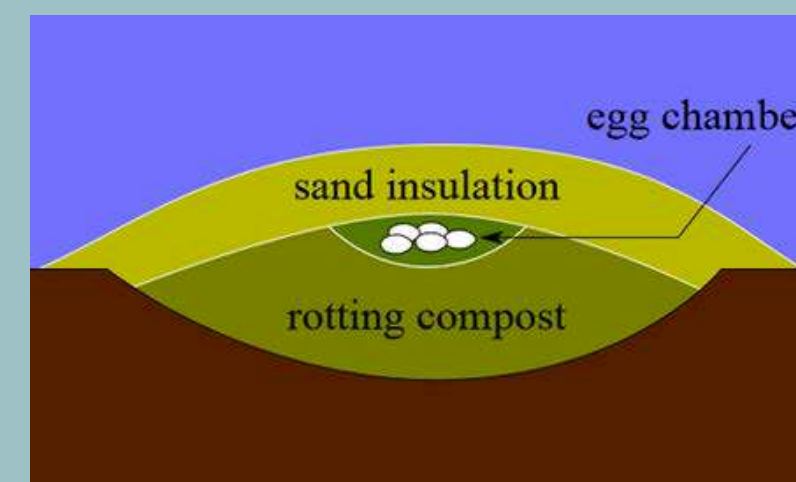
Even though they are similar size birds, a Lawan's egg weighs 210 grams on average. An average chicken egg is around 50-60 grams.

National Malleefowl Recovery Group

For heaps more interesting information and facts we recommend exploring the NMRG website at: <https://www.nationalmalleefowl.com.au/>

Mounds

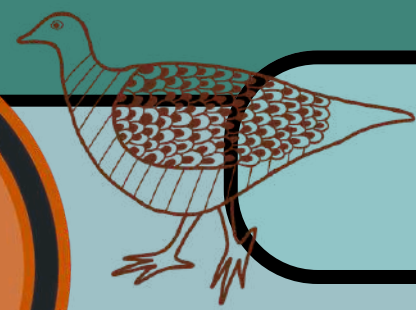
They construct large nesting mounds using sand, soil, and leaf litter. Mounds can reach up to 5 metres wide and 1 metre high. Heat generated by decomposing vegetation incubates the egg.



Lawan
Mallee Fowl

Living Thermostat

Throughout the breeding season the male has to ensure that the temperature inside the mound is maintained at about 33°. He maintains this temperature in the nest by adding or removing sand and vegetation on the mound.



Boyn (Bread) and Lawan (Malleefowl) Time



Sharnie's Story

Sharnie Hamilton

Sharnie is a Dja Dja Wurrung and Wamba Wamba person. She has a deep passion for Country and educating others on culture and heritage. Sharnie has worked for many different organisations caring for Country, including leading the Djaara Rangers team for Parks Victoria.



FOUNDATION

Lawan/Malleefowl



Lawan is a special bird for my mob.

It tells us about life.

When Lawan lays its eggs, warm time is coming.

The plants will start to grow.

Lawan lays its eggs in scrub.

Hard scrub on red dirt country.

The stars tell us the story of Lawan.

When the right star is in the sky, it is Lawan time.

Not many Lawan on Djaara Country now.

Can you help my mob bring them back?

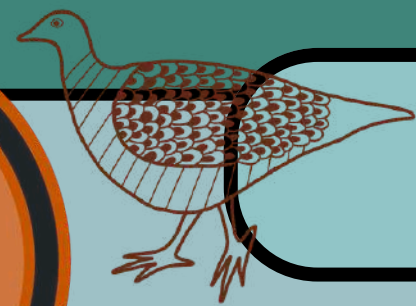


This story is the intellectual property of Sharnie Hamilton



Lawan used to be found all over the north part of Djandak. Now they only live in the north west, near Wedderburn.





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LOWER PRIMARY

Lawan / Malleefowl



Lawan is a special bird for my mob.
It is part of our ceremony.
It tells us about life and the beginning of life.

The Lawan constellation appears in the sky at the start of the cool weather, and tells us it's time for the Lawan to start building their nests.

After a few months, when the constellation disappears in the evening sun, we know it's time for Lawan to lay their eggs.

Warm weather time. Growing time.

And time for some of the older children to start to become adults.

They say Bunjil made the land, and that the snake made the rivers, but that the Lawan made its own home.
The hard scrub that protects it's young.
That old red dirt country.

There's not many Lawan left now on Djaara Country.

We are doing all we can to protect them and bring them back.

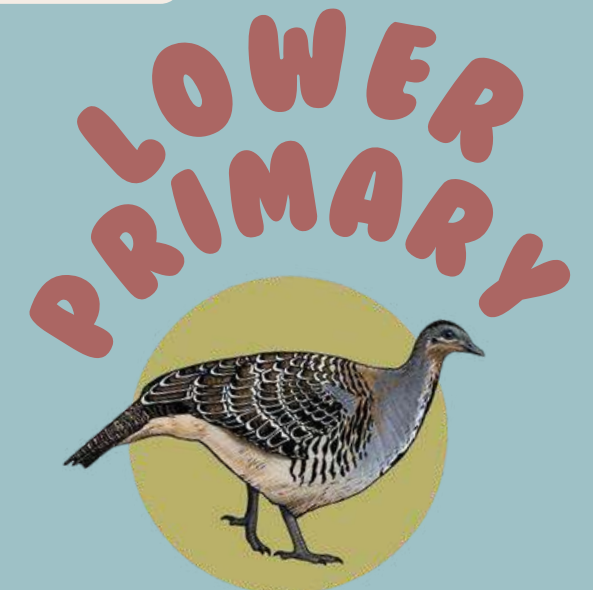
Can you help us?

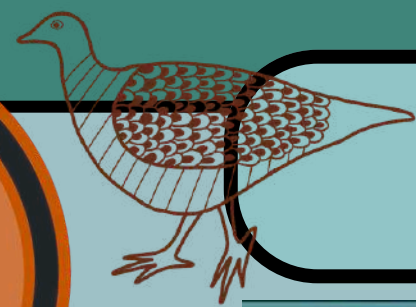


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Boyn (Bread) and Lawan (Malleefowl) Time



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UPPER PRIMARY

Lawan / Malleefowl



Lawan is a special bird for my mob. It represents life and the beginnings of life. We do ceremony for it.

You used to be able to find this bird all over Djaara Djandak (Country), right down to near Bendigo.

Anywhere there is that good old hard Mallee scrub.

They say the Malleefowl created that hard scrub. That hard scrub that protects their young ones.

Bunjil created the land, and the serpent the waterways, but then the Lawan created its own space in the landscape.

That old country, the red dirt country.

Djaara know the Lyra constellation as Lawan. When it appears at the start of the cold season, it tells us that the Lawan are beginning to build their nesting mounds.

On Djaara Djandak, there is a sacred stone arrangement of the Lawan.

It aligns all the spring sky country, the constellations and the equinox.

When the Lawan constellation, Lyra, disappears in to the evening sun, this means it's Lawan time. Time for ceremony again.

1



This story is the intellectual property of Sharnie Hamilton



UPPER PRIMARY

Lawan / Malleefowl



Time for the Lawan to lay their eggs, and for the weather to get warm again. Time for the wattle flowers to come out.

This time is significant for us because it's the start of regrowth time, where everything is renewing.

But that also means death. Death and life go together.

And Lawan represents that for us as well.

Change.

Lawan tells us when it is initiation ceremony time, time to transition into adulthood.

The cycle of the Lawan on the ground mirrors the constellation in the sky. It teaches us balance.

Djaara are doing all we can to protect Lawan on Djandak.

There aren't many left. But we hope with care we can bring them back to their home, to where they need to be.

Can you help us?

2

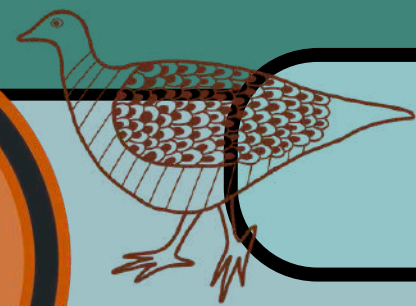


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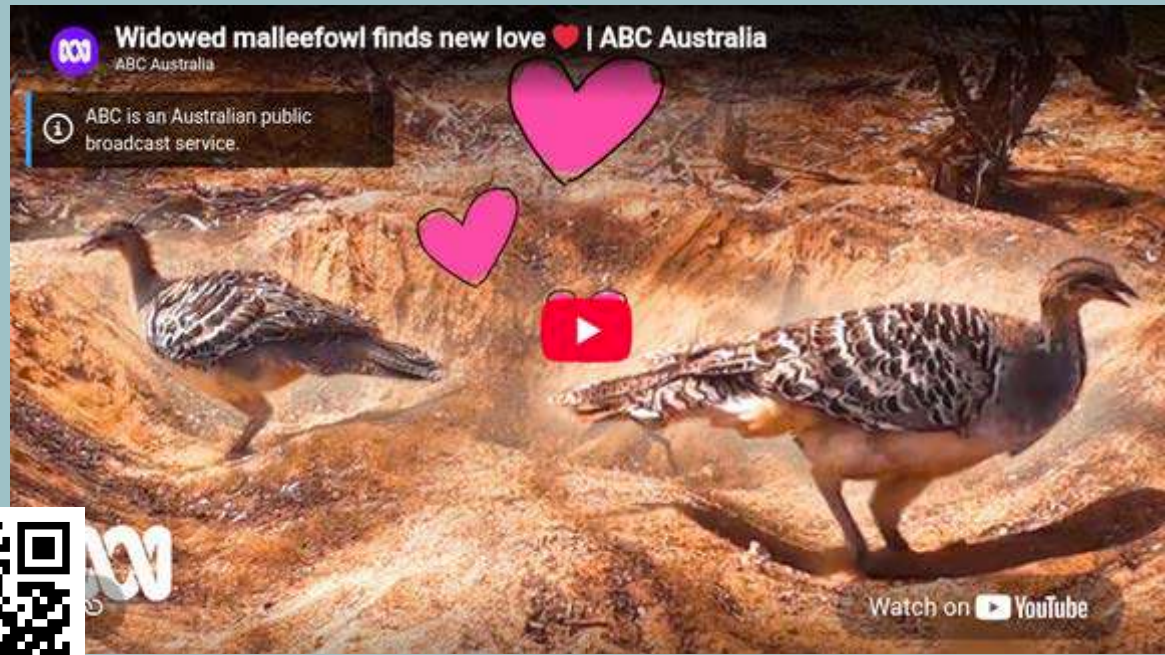




Boyn (Bread) and Lawan (Malleefowl) Time



Videos/Media



Highly Recommended!



Listen to Dr Joe talk about the Malleefowl nest.

Unfortunately, we couldn't make these interactive, but you can search them on YouTube, or scan the QR code next to each video.

Can you and your class make your own mound?



Boyn (Bread) and Lawan (Malleefowl) Time



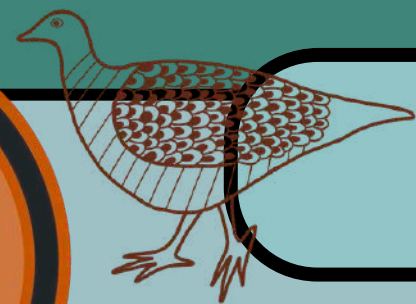
Educational Ideas - Sky Country

For thousands of years, **Djaara** people have used the night sky to tell stories and to hold knowledge. The night sky above is as important as the Country below. The stars, planets and constellations match what is happening on **Djandak**. For **Djaara**, the star Vega matches the cycle of the **Lawan**. Where Vega is in the sky, informs **Djaara** about the cycle of the Malleefowl.

Mapping the Malleefowl Mound

1. Go to Stellarium - <https://stellarium-web.org/> - make sure location is set for your school on **Djandak**
2. Search for Vega (the star that **Djaara** associate with **Lawan**)
3. Set the date to July 1st and the time to 8pm
4. Move the days forward - continue until Vega is no longer visible at sunset - around start of November
5. Move the days back and forward
6. What shape does Vega make as it moves across the sky? Draw it on a big piece of butchers paper and hang at the front of class
7. Compare the shape that Vega makes to the shape of a Malleefowl mound - what do you notice? Why might **Djaara** have chosen Vega as the star that represents the Malleefowl?
8. Go outside and collect leaves and sticks - glue them to the shape you have drawn and create your own Malleefowl Mound - or ask the students to draw their own leaves or sticks and stick them to the mound





Boyn (Bread) and Lawan (Malleefowl) Time



Educational Ideas - Lower Primary

Dance

Ask students the create their own version of the **Malleefowl Shuffle**, a dance that represents the mallefowl raking leaves and sratching through vegetation.

VC2ADA2C01

Geography

Read **Sharnie's Story**. Djandak (Djaara Country) is important to Sharnie because it has Malleefowl on it. What is a place that is special to you? Why is it special?

VC2HG2K01

Health

Describe the characteristics of the Mallefowl.

How do these characteristics help it survive in its environment?

Which of the characteristics do you think you have?

Create character profile cards of the Malleefowl and yourself.

VC2HP2P01

Mathematics

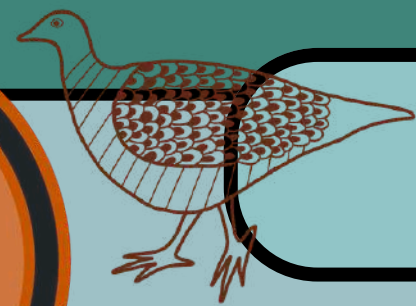
In laying season, Malleefowl lay an egg every 3 or 4 days. Using a calendar, figure out how many eggs might be laid in a month by counting up.

VC2MFN03

Art / Reading

Using this description only, draw your own version of the Malleefowl:

'The Malleefowl is a large ground-dwelling bird with strong feet and a short bill. The head and neck are mostly grey, with a dark stripe extending down the foreneck from the throat to the upper breast. The underparts are mostly creamy-coloured, and the upperparts are more striking. The upperwings are a complex combination of mottles, barring and variegations of grey, cream, black and rufous. The bill is blackish, and the legs and feet are pale greyish. The sexes are similar (Birdlife n.d.). Expert Anangu trackers are able to tell the sex of a Nganamara (Malleefowl) from its tjina (tracks).'



Boyn (Bread) and Lawan (Malleefowl) Time



Educational Ideas - Upper Primary

Geography

Using this description, colour in a map of Australia with the range of the previous range of the Malleefowl:

'The original distribution of Malleefowl covered much of the southern half of the continent from the west coast to the Great Dividing Range in the east and the species was widespread in every mainland state except Queensland. It ranged as far north as the Tanami Desert in the Northern Territory and to within 60 km of Melbourne in the south.'

Search a map of current **Lawan** distribution and discuss the differences.
VC2HG6S03

Mathematics

Survival rate of Malleefowl eggs is around 70%. Research how this compares to other bird species and lay the data out in a table. What differences do you notice between species? What might cause these differences?

VC2M5ST03

Science

Students attempt to create their own **Lawan** mound. Using leaf litter, water etc. can they keep the temperature regulated like the **Lawan** do? How can heat either be generated or transferred out of the mound?

VC2S4U09

Mathematics

A malleefowl is about the size of a large chicken - they average 1.5-2.5kg, however their eggs average 210grams compared to a chicken's which is around 60grams.

If we use the average of 2kg, what percentage of body weight is the malleefowl's egg? What about the chicken's? What is the difference in percentage?

VC2M5N04

Writing

Write a creative piece from the point of view of a malleefowl chick emerging from the nest and surviving the first 24 hours. How can you communicate the experience of a malleefowl chick to your readers?

VC2E5LE05

Art

Recreate a famous artwork, replacing a key figure with a Malleefowl. E.g. Andy Warhol's work using Marilyn Monroe.

Students should explain why they chose that particular artwork and how the features of it suited their adaption.

VC2AVA4D01

Health

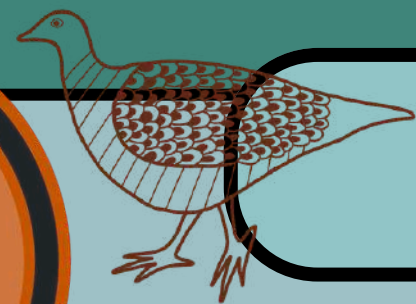
Watch 'The Amazing Malleefowl' video with Dr Joe (scan QR). List down the different roles and jobs taken by the female and male Malleefowl.

How does this compare to other birds or animals?

How does it compare to human gender stereotypes we have in Australia?

VC2HP4P03





Boyn (Bread) and Lawan (Malleefowl) Time



Educational Ideas - Secondary

Science

Watch the following video from 2017.

In the video, it discusses some of the measures that the government will take against feral cats.

Research the current state of feral cats. Were the targets set in the video achieved?

VC2S8I05



Scan the QR code to watch the video

Mathematics

Use mathematical modelling to predict Malleefowl numbers in the year 2050. What is a best or worse case scenario? How might climate change and rainfall affect these numbers?

VC2M9A06

Civics and Citizenship

Watch 'The Amazing Malleefowl' with Dr Joe and create a list of threats and concerns for survival of Malleefowl.

Create some actions that you can take as an individual, family, class, school, community, state government or federal government to help the malleefowl survive.

VC2HC8S07

Geography

Read Sharnie's story. Sharnie's family were moved off Country and forbidden Cultural practice such as using sacred places for ceremony.

Discuss with your class how this dispossession would have affected their connection to animals such as Lawan, and in turn their connection to Country and the world around them.

What effect would this dispossession have had for Lawan?

VC2HG8K09