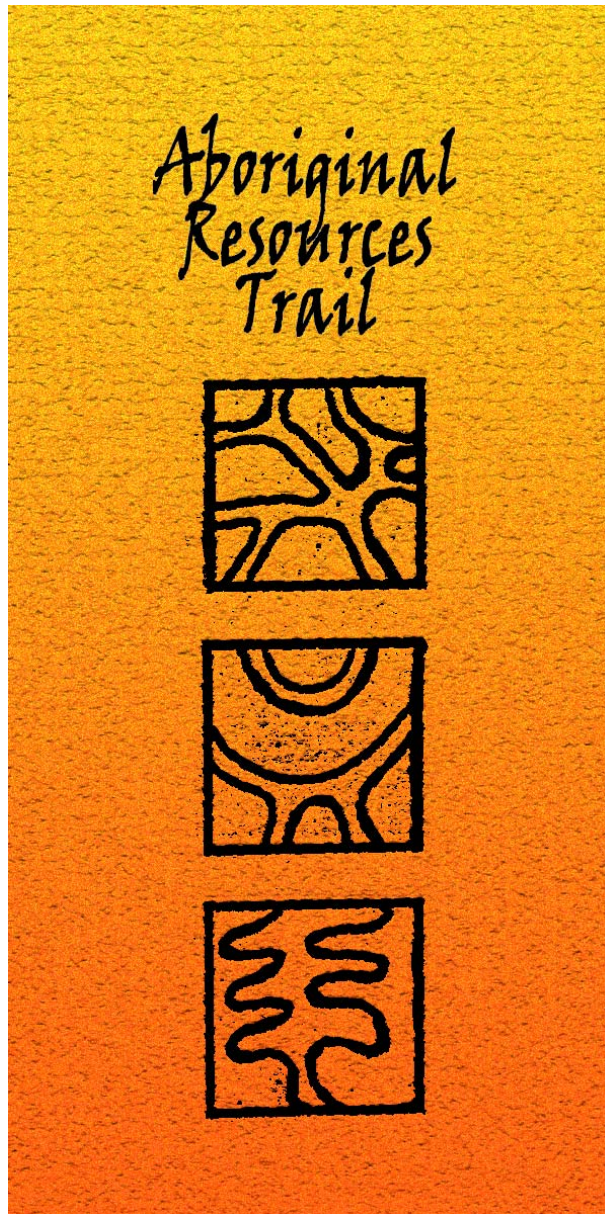


Royal Botanic Gardens Melbourne Education Service

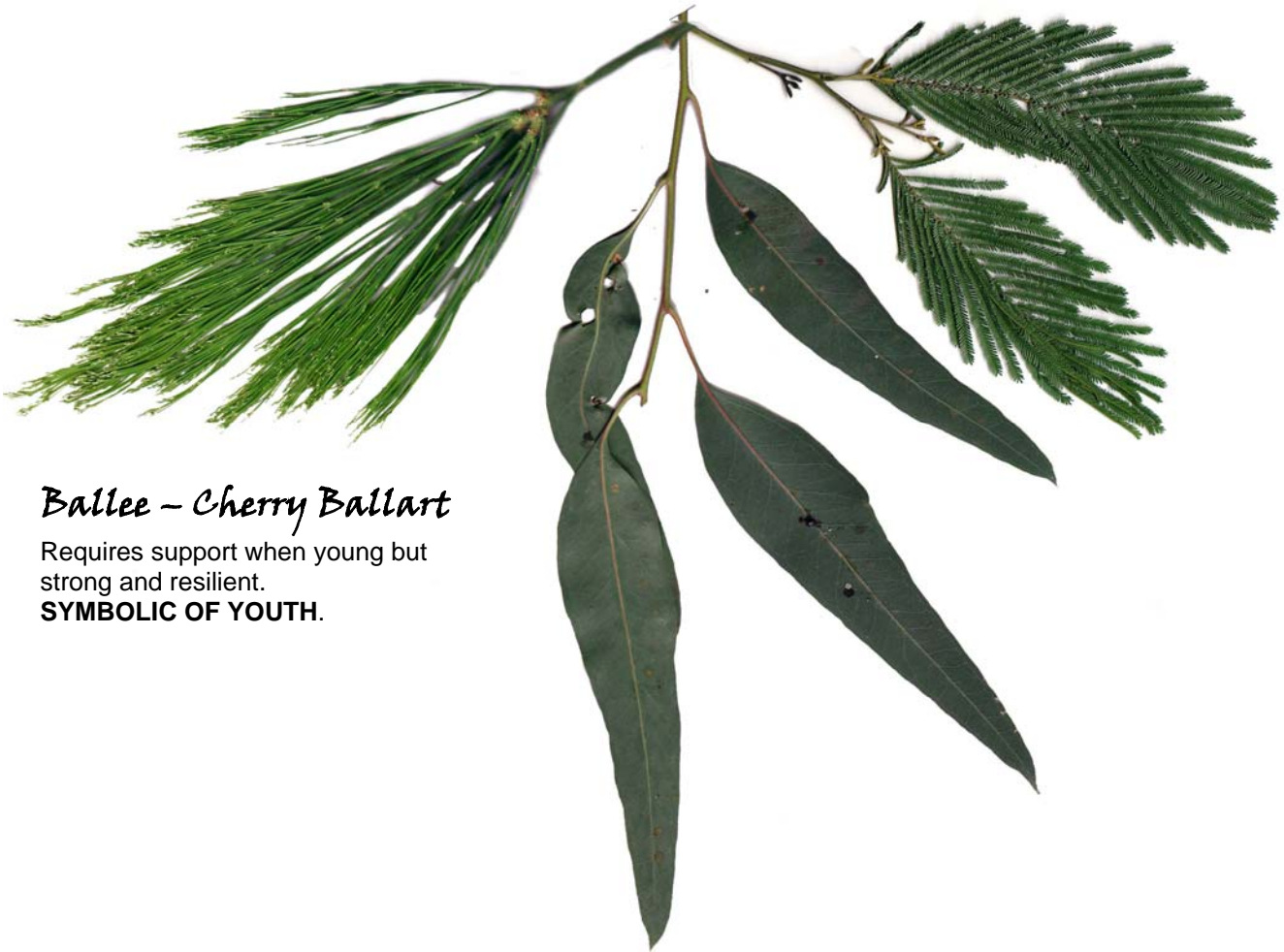


Teachers Kit

MUYAN - WATTLE

Vital to local clans, every part was used.

SYMBOLIC OF THE ELDERS



Ballee - Cherry Ballart

Requires support when young but strong and resilient.

SYMBOLIC OF YOUTH.

Biel - River Red Gum

Most dominant tree in Australia.

SYMBOLIC OF THE ENTIRE COMMUNITY AND RESPECTIVE ACCESS TO THE LAND AND ITS RESOURCES.

PEOPLE PLANT & PLACE

KULIN KALK & BIK

Information and ideas for teachers to complement the Aboriginal Resources Trail at the Royal Botanic Gardens

Curriculum relevance

The Aboriginal Resources Trail (ART) is designed to give students a greater understanding and respect for Aboriginal culture, particularly of the local Victorian communities.

The Gardens have more than 100 species of plants used by Aboriginal people. In the two hour, Education Officer led program, students explore the Gardens learning how these plants were used. Activities include trying bush food, viewing Aboriginal artifacts, making bark paintings and using plant fibre to make string. While exploring the Gardens, the students will look at how plants were used for food, medicine, tools, and hear stories about how the Aboriginal people lived with the environment.

This education program addresses all the Key Learning Areas of the CSF, particularly in **SOSE** level 3 to level 4: -

Australian Peoples and Places	3.1	3.2	3.3	
History	4.1	4.2	6.1	6.3
Geography	4.3			

The program can be adapted for older students eg VCE Environmental Science/Outdoor Education.

The program has been designed to easily fit into an Enquirer-based, integrated curriculum that takes students through the following stages:

Tuning in - getting students interested in the topic.

Preparing to find out - students develop learning skills that include; deciding what they need to know; making predictions, and working out how to find information. During this stage teachers have the opportunity to find out what the students know, (essential for program development and effective evaluation)

Finding out - students find out new information about the topic.

Sorting out - Processing new information.

Drawing conclusions - students develop attitudes about issues related to the topic.

Taking action - personal or class action based on new information and attitudes.

The Royal Botanic Gardens education experience is best suited to be used as a 'finding out' activity, however it can also be used as a 'tuning in' activity. For more information regarding this approach read ***Integrating Naturally. Units of work for Environmental Education***, Kath Murdoch, Dellastra Pty. Ltd., 1992.



Background

The Royal Botanic Gardens Melbourne (RBGM) rests on land that for countless generations was a traditional and highly significant camping and meeting place for the local custodians of the area – the *Boonwurrung* and *Woiwurrung* of the *Kulin* people.

These people had, and still have, an intimate relationship and deep connection with the land – how its seasons worked, plants grew and animals behaved. After thousands of years of Aboriginal interaction, the country still yielded a leisured and healthy lifestyle for the clans. Theirs was not a nomadic hand to mouth existence, but rather an observant, effective and economic strategy for sustaining their needs and their environment. Skills were learned by observation, imitation, real life practice and from the oral tradition.

The daily needs and the needs of future generations were synonymous. They knew about environmental sustainability.

There were defined clan territories and favoured places.

The RBGM was one such place.

Animals and roots were the primary foodstuffs of the people. By the river (*Birrarung*- river of mists), eels were caught in weirs of stone and woven funnels. Mussels, fish and tortoise were harvested. Ducks were caught using returning boomerangs (*wonguims*) in birrarung billabongs. Kangaroo and emu were stalked and hunted.

Roots – underground plant storage organs, available all year – were numerous in the area, their abundance promoted by the firestick farming practiced by the clans. Roots included numerous lilies, orchids, geranium, clematis and bracken. The yam daisy – *murnong* – was the most important of these. Aquatic plants such as bulrush and water ribbons provided more starchy roots. The local suburb name Toorak comes from the Woiwurrung word *Turruk* meaning ‘water surrounded by reeds’, or ‘swamp with reeds’. The first Europeans called these areas swamps, today we call them wetlands.

The firestick farming burns most likely occurred in late summer and early autumn before the rains. It was controlled and mosaic in pattern. Firing the country in patches kept the denser vegetation from shading out the important lilies and murnong, and promoted the new tender grass for grazing kangaroos, that other important resource of the clans. Women worked these patches of land with their digging sticks (*kannan*) as they dug for murnong, thinning out the clumps, aerating the soil, and replacing root pieces much like gardeners do today with irises and daffodils.

Kangaroo had many uses – food, bone utensils, teeth for necklaces, tail tendon for sewing, skin for clothing. Possums were pulled from tree hollows and clubbed. Their skins were then crafted into warm and waterproofed cloaks decorated in the clan motifs. All the Woiwurrung and Boonwurrung people wore possum skin cloaks.

Seasonal fruits were collected. Kangaroo apple, coprosma, native raspberry and appleberry being placed into woven bags (*bilang*) and wooden dishes (*tarnuks*) to be shared back at camp. Greens included native spinach and pigface. Wattle gum was a favoured addition to the diet, as was banksia nectar and manna, the white sugary secretion.

Fibre plants included carex and lomandra to process and weave into bags; eel traps (*arrabine*) and belts. The hard straight wood of austral mulberry and the soft shafts of grass tree flower spikes were essential for firemaking. Teatree,

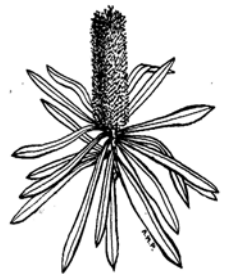


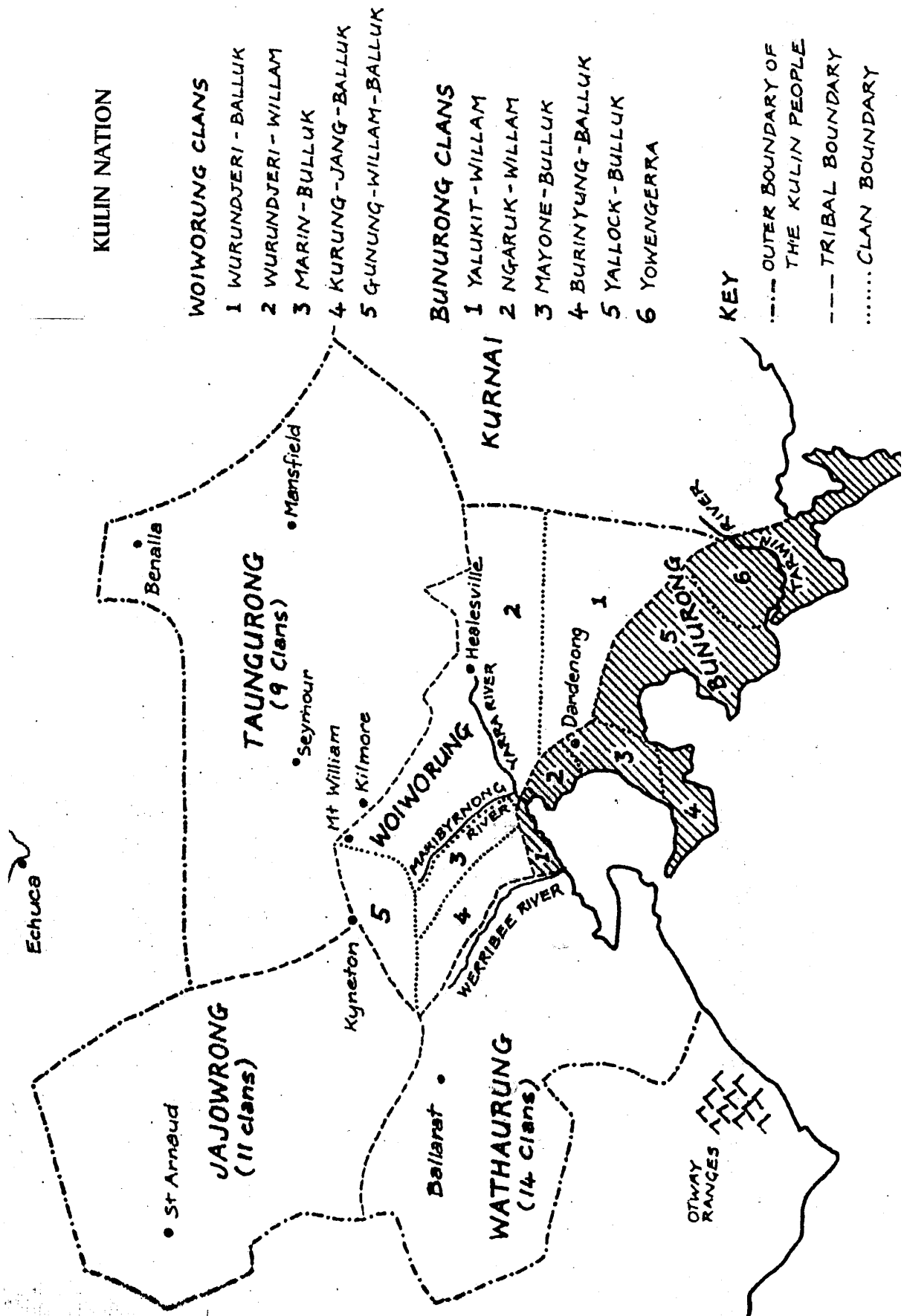
'old man weed', river mint and gum tree resin were their medicines. Plant resins mixed with shell and charcoal were their glues.

On the ART, students will meet many of these plants and more. All are extensively listed in these notes for further reference – including plants from the local Yarra river habitat together with the plantings from other regions of the east coast of Australia. In fact, the RBGM is a very multicultural botanic setting, with the sweeping English lawns just one element.

In meeting these plants, students are also encountering another way of resource management. How people can modify their environment to make the best use of what it has to offer, while at the same time maintaining the integrity of the land.

We may ask our students that 60,000-year question: - what were the first Australians doing that enabled the land to be continually renewed and productive?





PEOPLE

KULIN

"They knew what to do, the old people. They lived with nature all the time. They knew when the seasons was coming, and where to get the different sorts of food for the different seasons. They knew all about things. That's how they survived, they knew nature"

Uncle Banjo Clarke (quoted in Gott and Zola, 1996, p.19)

We see the RBGM today as a place of beautiful vistas and secluded spaces. A place where people meet plants on a grand scale. It has also been the focal point for the meeting of two completely separate cultures.

During the 19th century, Aboriginal people gathered to meet and camp as families or larger community groups under the shade of the river red gums of the RBGM. They were often referred to by the early settlers as the 'two Melbourne tribes' – the 'coastal tribe' and the 'Yarra Yarra' tribe. However, Aboriginal society at that time was poorly understood.

The basic unit of Aboriginal society was the land owning group, the clan. Clans had the responsibility of maintaining the ecological health of the land. These clans were affiliated with other clans who shared the same 'wurrung' or language. The wurrungs in the Melbourne area were called Woi wurrung and the Boon wurrung. Today we know the 6 clans of the Boon wurrung were the coastal tribe, and the 5 clans of the Woi wurrung, the Yarra Yarra tribe. The *Wurrundjeri* clan of the Woi wurrung occupied the Yarra Valley (see map). Within these groupings was also the *Bunjil* and *Waa* moiety, where every individual was either born Bunjil (wedge tail eagle) or Waa (little raven). The distinctive calls of the little ravens can still be heard here. Waa lives on. Bunjil and Waa were the symbols of being Kulin, the people of this country. Their descendents still live in the Melbourne area, with a strong community centred around Healesville, in the Yarra Valley.

The first attempt by the English to settle this region of New Holland was in 1803 at Sorrento on the Mornington Peninsula. This was quickly abandoned and it was not until thirty years later when John Batman arrived in 1835 at Port Phillip Bay that Kulin life changed dramatically forever. From 1837 – 39 a short-lived Anglican mission occupied part of the RBGM under the direction of Rev. George Langhorne. A plaque by Gate H commemorates this. Aboriginal names associated with this mission include Wurrundjeri elder and artist William Barak, Derrimut and Tullamarine. William Buckley (the escaped convict from that earlier Sorrento settlement who spent those intervening 30 years with local clans) was briefly employed here as an interpreter.

By 1837 the British Government had developed a policy for 'dealing' with indigenous people throughout the Colonies. To avoid the mistakes that had occurred with the Aboriginal people in Tasmanian in the 1820s, a scheme was proposed to 'civilise' the Aborigines of Victoria. The Anglican clergyman, Rev. George Langhorne was appointed to set up the first Mission Station and



Aboriginal reserve in Victoria on 895 acres of what is now part of the Royal Botanic Gardens. The site was chosen in part because of its diversity and richness in flora and fauna. Langhorne was sceptical of adult Aborigines staying in one place and accepting 'an artificial mode of living', but undertook to do his best. Although this was one of the first positive steps taken in Victoria towards the Aboriginal people it was made with little or no understanding of the Aboriginal culture and limited Government support. Despite all the best intentions of George Langhorne, in March 1839 the Mission was abandoned.



The significance of the RBGM to the new settlers of Melbourne continued with the setting aside of this site – described as 'a veritable Garden of Eden' – by Superintendent Latrobe in 1846. By 1850 this was the place to gather when the Separation from a Sydney administration occurred – the founding of the colony of Victoria. A plaque by the Separation Tree, between A Gate and the lakeside tearooms, acknowledges this event. The two great characters in the transformation of the site from bushland to botanic garden were Baron Ferdinand Von Mueller and William Guilfoyle in the period 1853 – 1909, and included in this period were the straightening of the Yarra and creation of the RBG lake system. Inside Gate F are two sculptures that catch the spirit of these two directors.

Today the Royal Botanic Gardens is the most visited spot in Victoria. Not unlike all those years ago.

Questions to investigate at school

What do your students already know and what can they gather through further research?

These activities are designed to-

- find out what students already know about Australian Aboriginal people.
- Initiate group discussion on topics related to Australian Aboriginal people.

As a class brainstorm a list of words relating to the topic of Aboriginal Studies.

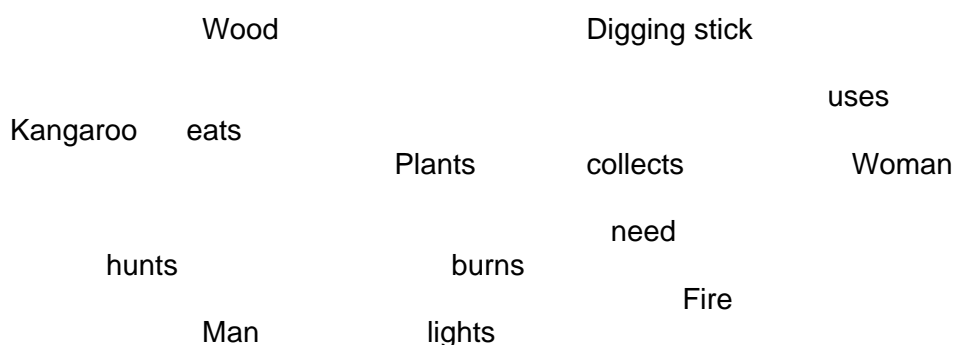
Some questions to get the ball rolling may be-

What was Australia like before Europeans arrived?

Where did Aboriginal people get their food?

What work did the men, women, and children do?

Each student chooses ten words from the list. Students then write the words chosen on paper strips. Students can then connect the words with lines and arrows in a way that is meaningful to them. The students may choose to write words along the connecting lines. By sharing their map with a friend the students can discuss similarities and differences. An example of a concept map can be seen below.



Variations

Working in small groups, students are given a set of concept words and a large piece of paper. Instruct the students to cut the words out and arrange the words in a way that makes sense to them. This is done by joining words with arrows and phrases that show connections e.g. BANKSIA Flower– nectar/strainer/comb. When finished, the concept maps can be decorated and discussed with the class.

Repeating this exercise at the conclusion of the unit allows teachers a means of evaluating student's understanding of the topic and the knowledge gained.

What is a mission, why was one started?

What was the impact of the mission? What belief system was being introduced?

Where else in Victoria were mission stations and reserves established by the government? Coranderrk near Healesville was where Barak lived his later years.

Have your students seen a wedge tail eagle, or raven?



Activities to try at school

- Ask students to prepare a concept map of aboriginal words and people of early Melbourne by reviewing what they have learnt at the Gardens.
- Research some early characters of Melbourne: Batman, Barak, Buckley, Derrimut, Tullamarine, Latrobe.
- Ask students to draw the map of Aboriginal Melbourne clan groups (see p.6).
- What clan land is the RBGM on? Where is your school on this map?
- Are there Aboriginal street and suburb names in your area. You now know what Toorak means – research more.
- Read stories of Dean and Paola (p.27/8).
- What have they to say today? After reading and discussing these, write a response that articulates the connections between the writers' ideas and values and their own. Write a reply to the authors, what would they like to ask them?

PLANTS

MURNONG

“ The land is open and available in its present state, for the purposes of civilised man. We traversed it in two directions with heavy carts, meeting no other obstruction than the softness of the rich soil; and in returning, over flowery plains and green hills, fanned by the breezes of early spring. I named the region Australia Felix’

Major Thomas Mitchell 1836

Victoria's park like landscape, recorded in approving tones by European explorers, was created by Aboriginal 'firestick farmers'. Fire was their tool to maintain open grassy woodlands.

The Yam Daisy *Microseris lanceolata* is a small dandelion-like plant, which was a staple for Aboriginal people in south eastern Australia. Known as murnong, it was abundant prior to European colonisation of the Port Phillip district in 1835. Aboriginal women and children dug up the potato like tubers using digging sticks. Broken pieces of murnong were put back into the holes to ensure propagation of further plants.

The washed tubers were put into specially constructed rush baskets and roasted in the coals of a fire. Available all year from nature's cupboard, it was sweetest in spring.

Today murnong is rare; having been replaced by introduced weeds such as flatweed *Hypochoeris radicata*. Sheep were known to dig up and entirely eat the tubers of murnong.

By 1838 there were 310,000 sheep in the colony of Port Phillip, shipped in from Tasmania and overlanded from New South Wales. Hooves now stomped the earth.

Today at the RBGM murnong has been replanted on Long Island and at O Gate in the Grassy Woodland. Look for the nodding green buds on tall stems that open into yellow daisies.

Questions to investigate at school

As a preliminary activity, ask students to keep a record of food eaten by them over a week and list food items in categories – plant source, animal source.

Ask the students to categorise this list into what part of the plant is used such as roots, stem, leaves, fruit, seeds etc.

Students can then make a list of the plant foods they believe the Aboriginal people of Australia would have eaten before European contact. This list can be reviewed after a visit to the Gardens.

Murnong was a staple of the local people's diet. What is a staple food?

Name some from your diet. What fills you up?

Where is murnong now? Why has it gone?

How did the removal of murnong by sheep differ from that of the local people?

How did the people harvest it? Whose job was it to harvest?

Weed patches such as flatweed have been called 'white man's footsteps'. What might be meant by this?

Who would have noticed the disappearance of murnong from the land –British settlers or the local people?

What would you do if your staple was no longer there to be eaten?

(starve, accept mission handouts)



About the same time, in another part of the world, a people lost their staple too. This is called The Famine in Ireland. What was their staple?
 (where did potato growing originate? - the potato is actually from indigenous American cultures, brought to Europe by Sir Francis Drake)
 Ask students to prepare a past and present menu.
 Where do we – you and people like Cathy Freeman -get their food from today?
 Is it chargrilled wallaby with baked murnong, or roast lamb and potatoes?!

Activities to try at school

Roots -what roots do you eat?

Bring a variety of roots to school to roast or eat raw.

Investigate their nutritional value and methods for growing. Grow them at school.

Seed grinding – make flour from acacia seed or birdseed. What tools and techniques are needed for this?

Update the list your class made of plants that the Australian Aboriginal people used for food. Categorise these into what part of the plant is used. eg. roots, stem, leaves, fruit, seeds etc. Students can choose some plants from the list and describe the process of preparation before the food can be eaten.

Choose some plants from the first list of plants eaten today and describe the process of preparation before they can be eaten. eg. the seed from wheat is collected and ground into flour, mixed with water and yeast and then baked in the oven to make bread.

Bread making – make damper on an open fire

Propagating – eg potato eyes /like women did with murnong

Roleplay- Rev.Langhorne/Protector Thomas/Chief Protector Robinson and issue of food supplies being destroyed with Barak/Tullamarine/Derrimut. Develop a script.

Compose a poem/song/painting - about the disappearance of the plants:

murnong

forgotten song

whispering back

words along

that hungry track

Discuss –what would you prefer your ‘footsteps’ over the land to be?

View video ‘*Women of the Sun Pt 1: Alinta the Flame*’, and ask students to identify and record the different seasonal land uses of the clan. Form research teams of 4 members with each member given a specific task e.g. one member records food gathering techniques, another the approaches to hunting animals, a third food preparation methods and a fourth food taboos. Students can consider similarities and differences to food eaten by themselves and indigenous people of past eras. Issues such as availability of food and the contemporary notions of a ‘balanced diet’ could be explored.



PLANTS

STORY PLANTS

“ when the wattle blooms again.....”

Barak

Plants were many things to the people, not just as food. Plants have symbolism, and were used ceremonially. Today modern Koorie people continue this tradition in ceremonies such as ‘Tanderrum’, ‘Smoking Ceremony’ and ‘Welcome to Country’. The 2000 Sydney Olympic Games contained Aboriginal ceremony.

Tanderrum is a ceremony opening the bush to a visiting group. In traditional times, visitors were presented to Elders by an interim group, one known by all parties.

Eucalypt leaves were used to indicate that the visitors were free to partake of the land during their stay. Water was shared from a tarnuk, sipped through a reed straw. This same reed was used for making spears, when broken it symbolised that no harm would come to you during your stay.

The modern adaptation of the tanderrum welcomes many cultures to this land and asks all to respect the gifts it has to offer. Wurrundjeri elder Joy Murphy Wandin began her Australia Day 2003 talks by saying -

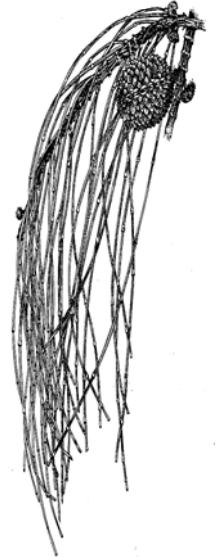
Wominjeka Wurndjeri Balluk yearmenn koondée bik

Welcome to the land of Wurundjeri people

In a local Smoking Ceremony, leaves of three plants may be used – Cherry Ballart (*ballee*), River Red Gum (*biel*) and Silver Wattle (*muyan*). The cherry ballart is a plant that requires support when young but has strong resilient wood. This symbolised youth. The wattle was vital to local clans, every part being used: seeds, bark, wood and gum. It represented the elders. The red gum is the most widespread eucalypt in Australia and was symbolic of the entire community and the community’s access to the land and its resources. As you walk through this smoke, you are also walked through and protected by a physical merge of the old and the new. Smoke cleanses the visitor, and was a ritual to discourage bad intent. These plants – Cherry Ballart, Wattle and Gum are shown at the front of this resource.

John Batman arrived at the Yarra River in 1835 intending to exchange goods for land with the Wurundjeri. In return for blankets, knives, tomahawks, and flour he attempted to buy 230,000 ha or about half their traditional land. There has been a lot of controversy about the legitimacy and authenticity of the documents associated with the transaction. It has been suggested that in agreeing to the deed that elders of the Wurundjeri group were following their custom of Tanderrum - the exchange of gifts for the temporary use of land and its resources. Settlers soon arrived with large flocks of sheep, claiming huge areas of the native grassland prepared by the Aboriginal people for grazing by the indigenous animals. Today there is less than 1% of native grasslands remaining in Victoria.

At least 26,000 years ago, a young woman from another area of south eastern Australia died at Lake Mungo in NSW. *Mungo Lady* as she is usually known today, appears to have been cremated and buried by her family on the south side of the lake. We can only guess at the exact circumstances of her death and burial, the fact that a special cremation took place suggests that she was a



member of a community as concerned with rituals and beliefs as Australians today. *Lady Mungo's* burial is the world's oldest known ritual cremation and burial, her lands now being protected under World Heritage status. Pink coloured ochre had been scattered over at the time of burying. As this ochre did not occur there naturally, it must have been brought in from a place more than 100 km's away.

Ceremony to the people was just as important as the hunting and gathering and fishing.

On Oak Lawn can be found an enormous tree planted by Lady Loch, wife of the Governor of Victoria in 1889. When the Loch's arrived from England to take up their ceremonial vice regal posts in the 1880's at nearby Government House, they requested to see a corroboree (*gayip* in Woi wurrung). "Show us some local culture and ceremony", they asked. This became known as the 'corroboree dispute'. But by this period, the Board for Protection of Aborigines was opposed to this form of cultural expression. The Loch's had to settle for one of Barak's drawings of a corroboree instead.



Questions to investigate at school

- What are ceremonies?
- What's a celebration?
- Where do they take place?
- Can you name a few?
(church/ sports events/ welcomes/ birthdays/ anniversaries/ funerals)
- What is meant by the term Elder?
- What is ochre and where can it be found?
- How do we use plants as symbols? Does your school have a plant emblem?
- How do we include plants in our ceremonies and customs?
(giving flowers, decorating Christmas trees, offering olive branches etc)
- If you welcomed people to your school what plants would you use? Why?
- What do you want the plants to represent? How would you use these plants?
- If welcoming is a way of sharing, what would you offer your guests?
- How does this raise awareness about the importance of plants in our lives?

Activities to try at school

Find a dreaming story from the Aboriginal language group of your area. These stories are designed to be heard, so the teacher can read to the class or record it on tape.

Discuss what the story was about. Did it tell how a feature or animal was created? Was there a moral in the story? When discussing the story the teacher should be prepared to accept different interpretations, as there is no right or wrong answer to the issues raised in the story.

Discuss some rules that are important to the class and have students make up a story to explain why that rule is important.

Students may like to do an artistic representation of the story. Examples may include a 2D pictorial or a 3D clay and found object sculpture.

How important are plants in these stories (also animals, and the natural world)?
eg. eucalypts –most schools have one- find a leaf and crush it, smell it.

Timeline – using a 40m builders/athletics tape students can stand along imagining each metre a thousand years, with students playing role of pyramid/Capt. Cook/volcanoes etc along this tape. How long have Aboriginal people been here?

To encourage students to think about how information was passed from one generation to the next try this activity -

You will need 4 pieces of fruit e.g. apple, pear, banana and an orange, a vegetable knife and a cutting board. Get the students to sit in a circle with the teacher. Place the fruit in front of the student on the right of the teacher. Get the class to imagine that these are fruit that nobody has tasted before so they do not know whether they are good or bad to eat. Whisper the instructions of how to prepare the food to the student on the left of the teacher. They then whisper it to the person on their left and so on until it has passed all the way around the group to the student with the fruit.

An example of the message may be "You can eat the banana, but it must be peeled and mashed to get rid of the poison, the pear is OK to eat but the apple is poisonous, the orange is good to eat but it must be peeled and cut into four pieces." The last student then prepares the food for eating, and you will see if the information has traveled around intact. The complexity of this activity may be modified to suit the age level.

As a class, discuss what would happen if someone passed on the wrong information.

Ask students to imagine they are a person in one generation. The person who gave them the message was their mother or father and the person they gave it to was their son or daughter.

Discuss where all the information is stored and what happens to it if an older person dies before passing their knowledge on.

What are some other methods of passing information from one person to another, without writing it down, or by telling someone by word of mouth. Examples may include artwork, dance, story or song. Working in groups the students can try one of these methods to pass on the message about food preparation to the class or a message of their own choosing.

Ask students to list things their parents tell them frequently.

To explore contemporary views of Aboriginal Australians, the best strategy is to invite Aboriginal speakers to the school to give a personal account of their culture. This allows students an opportunity to ask questions directly. The teacher could approach the local co-operative and speak to the Cultural Officer. The Cultural Officer may be able to come to the school to give a presentation or may know of any Elders of the Community who would be willing to share their experiences with the students.

As a class activity, create a 'Then and Now' mural or collage. Using the school library, media sources, art work, construct a large mural or collage demonstrating the differences and similarities between traditional and contemporary Aboriginal Culture.

Let no one say the past is dead

The past is all about us and within.....

Deep chair and electric radiator

Are but since yesterday

But a thousand thousand campfires in the forest

Are in my blood

'The Past' by Oodgeroo Noonuccal

AT THE GARDENS I FOUND OUT THAT.....'

Students form a circle with the teacher standing in the middle. The teacher throws a ball to each student in turn. When the student catches the ball they must throw it back and respond by saying 'At the Gardens I found out that.....'. Students can not repeat an earlier statement, and the ball continues being passed around the circle until no new responses are generated.



PLANTS

TECHNOLOGY

“ it’s a wonguim and people call it a boomerang, but it’s really a wonguim. They’re beautiful. They are made with wood and a special oil to smooth ‘em up. Uncle Ronnie made ‘em with a cuttin’ axe rock. He puts his name on them with a burning pen. Uncle is Wamba Wamba.”

Marbee and Ngarra, 5 year old twins 2001

The local people had appropriate technology to suit their environment and lifestyle. Light portable and multifunctional possessions included : boomerang (wonguim), digging sticks, spearthrower, woven bag, wooden carrying dish.

There are many types of boomerangs (wonguims) -

for fighting, hunting, play, fire, music, ceremonial, tourists.

Tarnuks had many uses – carrying babies, winnowing seeds, preparing food in, to eat food from are just some.

Questions to investigate at school

What is a wonguim?

How is it made?

What is a tarnuk?

How is it made?

Find pictures to share.

The notion of men’s business/women’s business was very strong in traditional society. What chores are considered men’s / women’s work in your home ? How are decisions made?

Activities to try at school

Type boomerang into a www search engine, and see what comes back !

Try making a wonguim from thick card, and decorate with paints and glued on seeds. Turn these into a class mobile.

Find pictures of different styles.

Tarnuks had many different uses.

List all the uses and make a list of all the utensils in your home that meets these needs (bowl, spade, cradle etc)

PLACE

BIRRARUNG

"..the Yarra is my father's country, there's no mountains for me on the Murray....." Barak 1876

The RBGM we see today of sweeping lawns down to lakes was once banksia, sheoak and eucalypt woodland ringing the now straightened bends and wetlands of Birrarung.

It was indeed described by Latrobe as a veritable Garden of Eden in 1846.

It was here where clan groups of 15-20 people walked, men hunting women gathering. It was good catering around here. This place was also managed through fire to favour an open woodland with murnong and grass. Murnong for the people, grass for the 'roos.

Much is said of how indigenous people hunted and gathered. Much more could be said of how they sustainably managed their country for 100's of human generations. Modern Australia is still catching up on this knowledge. We still hunt fish and gather woodchips from unfarmed areas.

Questions to investigate at school

Students in small groups make lists of questions about how the Aboriginal people made use of the environment in which they lived. Review this list after your visit.

Can 'reading' natural events identify the seasons in a local area ? Discuss this with students and invite them to draw/photograph examples for inclusion in their workbooks.

From the text *Banksias and Bilbies* have students copy the Middle Yarra calendar for Melbourne into their workbooks. Then ask students:-

Can you recognise any seasons in this 'new' calendar?

What season are you in now?

Do you agree with the author's point that school resumes in the hottest part of the year?

Given the fact that Christmas is a fixed date, could you devise a school term program that had the summer holidays taking place in the actual summer for Victoria?

Would this be preferable?

Based on their experience and collection of data, and on their own observations of seasons in their suburb or town, invite students to design a new seasonal calendar for the region. Suggest they include the long school holidays in the most appropriate time of the year.

Why is a water source, such as Birrarung, so important?

Read the story about the Yarra as told by Barak (p.26). Find more stories and newspaper articles today. What attitudes do we have towards the Yarra?

What's a Garden of Eden supposed to be?

What do the terms biodiversity and sustainability mean?

Why is environmental sustainability important?

Flake from the fish shop and the chipboard computer table - are these farmed/hunted or gathered? Name some products that are sustainably produced. Does your school have any special environmental programs?

How is this place – the RBGM - cared for today?



What is an eel? Have you or someone you know eaten eels? How can they be caught?

Activities to try at school

Places today: -

Do you have a special place?

Where is this favourite place?

How did it become special?

How do you maintain connections with that place?

How do you feel when you spend time there?

Ask class members to share places they have formed connections with.



Places past: -

Organise an excursion to a natural location accessible to your school eg river, bayside area, national park or local reserve.

Imagine this area 200 years ago : -

- What attraction might this area have for Koorie people ?
- How would families have sheltered from the elements ?
- Is there a suitable spot for a family group to camp ?
- Would this be a good spot to host a family gathering ?
- What foods would have been gathered ?
- Would suitable plants be available for weaving baskets ?
- Provide students with a map of the area and have them label it based on the previous questions: identify and list mammals, birds, lizards, shell fish, fish that may have been found and made use of.
- How long might the group have stayed ?
- Where to next ?!

What was here before?

Individual students can undertake a research project to find out which indigenous plants and animals inhabited the area in which they live before 1835. Which Aboriginal language group lived in the area? What are some words from the language? Are any of the words used as place names? Information could be sought from local councils, libraries, indigenous nurseries, Aboriginal Advancement League, Local Aboriginal Educational Consultative Groups (LAECG), Council for Aboriginal Reconciliation, Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS), Koorie Heritage Trust and local historical groups.

What is here now?

The Aboriginal people had intricate and refined systems of land management and conservation based on a deep respect for the land. A visit to the Gardens can provide a basis for a comparative study of the local plant communities. Using the Aboriginal people's appreciation of the environment as an example, students could organise Environmental Action Teams to undertake projects.

Students can look at-

- remnant indigenous vegetation
- positive and negative effect of humans on the area
- how harmful effects can be minimised
- action that people can take to improve the environment
- Action may be tailored to suit students needs. Here are a few-
- recycling
- rubbish management
- rubbish free lunches
- reducing paper waste

- reducing energy use
- community clean up days
- composting at school and at home
- presenting projects to other classes
- joining an environment group
- articles in school newsletters and local papers
- writing to local, state and federal politicians regarding environmental issues
- develop or improve an indigenous garden within the school grounds or in the local community
- participating in local revegetation and environment projects
- visit 'Alien Invaders' at <http://www.rbg.vic.gov.au/education/alienhome.html>
- develop an indigenous garden containing plants with food, fibre and medicinal value

Some of the indigenous plants present on the RBG site, were:

Drooping Sheoak – *Allocasuarina verticillata*

Sweet Prickly Box – *Bursaria spinosa*

Coast Banksia – *Banksia integrifolia*

Swamp Paperbark - *Melaleuca ericifolia*

Blackwood (Wattle) - *Acacia melanoxylon*

Black Sheoak - *Allocasuarina littoralis*

Native Raspberry - *Rubus parvifolius*

Kangaroo Grass - *Themeda triandra*

Murnong, Yam Daisy - *Microseris lanceolata*

Chocolate Lily - *Arthropodium strictum*

River Mint - *Mentha australis*

River or Blunt-leaf Tea-tree - *Leptospermum obovatum*



Botanic Gardens

Aboriginal Resource Trail

1. **Black Bean or Morton Bay Chestnut** - *Castanospermum australe*.

The large brown, chestnut-like seeds received elaborate treatment before being eaten. One method was to slice them thinly with a shell, place in a bag in running water for about 10 days, pound into flour, make into cakes, bake and eat. It is said that they tasted like coarse ship's biscuits.

Additional Information - Fabaceae - A promising anti-cancer compound has been derived from the seeds and plants are being grown in USA for further testing. The dark brown well figured wood known as Black Bean is a valuable furniture timber. It is a very poor conductor of electricity and before synthetics, was used for electrical switchboards.

2. **Wilga or Sheep Bush** - *Geijera parviflora*.

The aromatic leaves were chewed to relieve toothache, and an infusion of leaves was used to treat internal and external pain.

Additional Information - Rutaceae - Leaves were baked, powdered and smoked in hollow tubes in conjunction with other narcotic plants to induce drowsiness and drunkenness. Some groups only smoked after a successful hunt.

3. **Queensland Kauri or Kauri Pine** - *Agathis robusta*.

The gum exuded from damaged bark of this and other conifers was used to fix spearheads to shafts, etc.

Additional Information - Araucariaceae - Tree to 50m; The valuable creamy white to pale brown softwood, has a very even texture and was used for cabinet making, floorings and because it has no smell, butter boxes.

4. **Possums and Birds eggs.**

Different species of possums and birds nest in hollow trees of many species, such as the Red Flowering Gum - *Corymbia ficifolia*. If the tree needed to be climbed the men usually did it. Birds' eggs were usually eaten raw. Possums, which sleep during the day were caught, killed, gutted, skinned and cooked in coals before being eaten. The skins were sewn together to make cloaks or rugs



Corymbia ficifolia

5. **Saw Banksia** - *Banksia serrata*.

The greenish yellow flower heads to 16x10cm contain much nectar and the Aborigines, who had few sweet foods in their diet, soaked the flower heads in water in a tarnuk, and drank the sweet fluid. They sometimes ran their hands down the flower heads and licked the nectar from their hands, prompting the early settlers to call banksias honeysuckles.

Additional Information - Proteaceae - About 70 other species were used similarly. Because the dried up flowers remained attached to the cones the dried inflorescence were used as strainers. Sometimes the mixture of nectar and water was allowed to ferment to produce an alcoholic brew.

6. Rough Shell Queensland Nut - *Macadamia tetraphylla*.

An important food for Aborigines eaten raw or roasted. Macadamia nuts have very high oil content (about 70% mainly mono-unsaturated).

Additional Information - Proteaceae - Now rare in their original area owing to agricultural clearing, and that native bees are more efficient pollinators than are the feral European bees, however, widely cultivated in Australia and Hawaii. Trees can bear nuts for at least a century. Initially cultivated into a multi-million dollar industry earlier this century by the Americans in Hawaii. Cultivation in Australia started in 1963.

7. Downy Leaf Rasp Pod, Cudgerie or Silver Ash - *Flindersia schottiana*

The rasp-like back of the woody valves of the fruiting bodies were used as rasps to prepare food for cooking.

8. King or Rock Orchid - *Dendrobium speciosum*.

The swollen stems or pseudobulbs were beaten to a pulp, spread on hot stones, cooked, and eaten. The viscous sap from stems used as fixative for ochre for rock and body paintings. Strongly fragrant flowers.

Additional Information - King Orchids are the largest of the Denrobiums with psuedobulbs commonly growing to 50cm or more, and numbering in excess of 50.



9. Hoop Pine or Colonial Pine - *Araucaria cunninghamii*.

The resin exuded from the damaged bark was warmed in the hands and used to caulk holes and leaks in canoes and also to join shafts to heads of weapons and implements.

Additional Information - Araucariaceae - Tree to 50m; Early settlers prepared a solution of resin in alcohol and 20-30 drops were given to treat kidney complaints, 3-4 doses were said to be sufficient for a cure. The excellent timber was the most extensively used of all native pines and very few good stands remain in Australia

10. Austral Mulberry - *Hedycarya angustifolia*

The hard upright shoots taken from the base of this plant were used as fire drills. A dry piece of stem about 1cm in diameter was drilled by hand into a softwood, usually the flower stalk of the Grass Tree, to produce a smoldering dust. The dust was poured onto some dry grass or bark and gently blown to start a fire.

Additional Information - The hard wood was so highly prized it was traded over hundred kilometers from the Yarra area up to groups along the Murray River.

11. Matrush - *Lomandra longifolia*.

A plant that demonstrates the multifunctional nature of Indigenous plant use – it was a food, fibre and medicinal plant.

The strongly scented, nectar rich inconspicuous flowers were eaten; also the soft white base of the new shoots which taste like fresh green peas. The strap-like leaves were split into strips and softened by drawing through hot ashes before being woven into baskets, bags, mats, bands, and eel traps. The leaves bound wounds after having gum applied, lessening the pain.

Additional Information - Xanthorrhoeaceae - Present in all states, widespread along streams.

12. Foam Bark - *Jagera pseudorhus*.

Bark was used to poison fish in both fresh and salt water. Bark scraped from the trunk and cooked in ground ovens, was eaten.

Additional Information - Sapindaceae - The bark contains toxic saponins. The saponin interferes with the up take of oxygen over the gill, leaving the flesh edible.

13. Plum or Brown Pine - *Podocarpus elatus*.

The succulent, resinous, bittersweet basal appendage of the seed was eaten raw. The centre has a strong resin taste and is best avoided.

Additional Information - Podocarpaceae - It would be incorrect to call this a fruit since it was not derived from a flower, but from a primitive cone. The seeds ripens from March to July.

14. Smooth Barked Apple - *Angophora costata*.

Aborigines used the dark red kino exuded from the bark, which is rich in tannins, to make a drink to treat diarrhoea.

15. Bird Catching Plant - *Pisonia umbellifera*.

The sticky fruit were arranged in a ring on the ground and seeds were placed in the middle to attract birds. Small birds were often caught and eaten when the sticky fruit stuck to their feathers preventing them from flying. A favourite roosting place for seabirds.

Additional Information - Nyctaginaceae - Seed pods are at their stickiest from April to June. The sticky coating probably assists the plant with seed dispersal by attaching to birds and other animals.

16. Giant Stinging Tree - *Dendrochne excelsa*.

The acidic fruit was eaten and the fibrous root bark was chewed until the fibres were sufficiently separated to be twisted into cord which was used to make fishing lines and nets. The chewed bark was used also as a mop for extracting honey from native bees' nests. Inner green bark was beaten to make a rough cloth and an infusion of bark was used to treat mange in dogs and rheumatism, which was also treated by flogging the affected area with bark.

Additional Information - Urticaceae - Leaves and young stems are covered with hollow, stiff, siliceous needles with a bulb containing an intensely irritating and virulent toxin. Even dead leaves sting. Constituents are acetylcholine, histamine and hydroxytryptamine. From the early days of settlement this tree has been much feared by men and women who had to work in rainforests, and even today it is a serious problem to forestry workers. The affects of the plant can be felt years after contact if the area is immersed in cold water.

17. Cabbage Palm - *Livistona australis*.

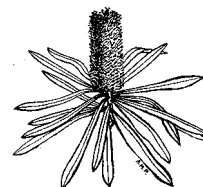
Twine made from the leaf fibres was used to make bags, baskets, fishing lines and nets. Baskets made from leaves. The growing heart of the crown was eaten, though this will kill the plant.

Additional Information - Palm-tree grows to 30m tall. Flowers Aug-Sept. This is the only native palm that occurs naturally in Victoria



18. Coast Banksia - *Banksia integrifolia*.

Aborigines obtained the copious nectar from this and about 70 other species by stroking the flower heads with their hands and then licking them - or by steeping the flower heads in water in a tarnuk over night to obtain a sweet drink. There were few sweet foods available to them. Eating too much nectar results in a headache. The fruiting bodies were used as hair brushes.



Additional Information - Proteaceae - Early settlers used the nectar as a syrup for sore throats and colds and used the porous fruiting bodies as a base for candles by impregnating them with fat. The timber is reddish and decorative, and was once used for bullock yokes, and the natural bends were sought after for boat knees.

19. Burrawang or Zamia Palm - *Lepidozamia peroffskyana*.

The seeds of most Cycads were eaten after elaborate treatment. The female fruit of this species resembles a large pineapple and contains many large orange-red seeds. One method of treatment was: Bake seeds in ashes for some time, cut in half, soak in water for 6 - 8 days, then eat. A second was: Roast seeds, pound into flour, put in bag in running water for 2-3 weeks, then eat. A third was: Soak seeds for some days, place in a hole lined with rushes, cover with sand and leaves of a grass tree for 2-3 weeks before eating.



Additional Information - Zamiaceae - One of the Cycads, living fossils, remnants of a large group which formed a substantial part of earth's vegetation over 200 million years ago. Wind pollinated, separate male and female plants. Seeds contain a high proportion of starch and the nitrogenous glycoside, macrozamia. During the first visit by Captain Cook to Australia it was noted that the Aborigines had some seeds at their camp, and some members of the expedition cooked and ate some of the seeds. He noted in his diary "They were very busy, both above and below."

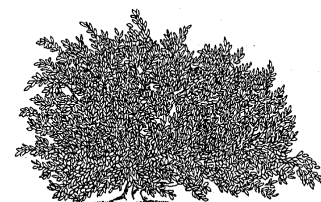
20. Queensland Spear Lily - *Doryanthes palmeri*.

Roots were pounded between stones and baked in ashes or on hot rocks. Crushed ants sometimes added as flavouring. Flower stems, which grow can grow to 5ms high, were cut when they were about 50cm high and as thick as a man's arm, soaked in water, roasted, and eaten like giant asparagus. String made from the leaves.

Additional Information - Agavaceae - Rope made from the leaves was shown at the 1851 Great Exhibition in London.

21. Sandpaper Fig - *Ficus coronata*.

The rough silica-impregnated hairs on the leaves are abrasive and leaves were used like sandpaper to smooth wooden weapons and tools. The milky exudate was used to treat wounds and the palatable fruit was eaten after removal of the hairy skin.

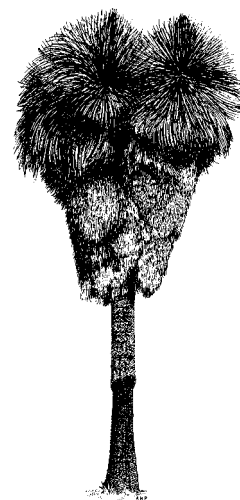


Additional Information - Moraceae - One of the sweetest of the native figs. The figs do not ripen well in the Melbourne climate. Fully ripe fruits are about 2.5cm long and purple-black in colour. Distribution; Qld., N.S.W., Vic., N.T..

22. Grass Tree - *Xanthorrhoea australis*.

Copious nectar from the numerous flowers in the flower stalk. Seeds were crushed to make flour. Soft white leaf bases (containing 5% sugar) were eaten and have a sweet nutty taste. Trunk resin used to attach spearheads to shafts, etc. Edible grubs found near the base. Fire made by rubbing the dried flower stalk with a piece of hard timber, igniting the fine wood dust inside. Flower spike also used a spear shaft.

Additional Information - Xanthorrhoea - Xanthorrhoea species only grow in Australia. A very slow growing plant, they may grow to be several hundred years old. Some people believe even over 1000 years. The resin out of the trunk was used by early settlers as a furniture varnish. The resin was sometimes used for the production of picric acid, which can be converted into explosives. The dried resin burns off to give an aromatic odour and is used as an ingredient of incense used in Australian churches.



23. Bottle Tree - *Brachychiton rupestris*.

The softwood was used to make fires and shields. Aborigines would obtain water from roots, and also chew the softwood and jelly-like mucilage from the trunk when water was scarce. The sap, new shoots and young roots were eaten. Seeds were pounded into flour to eat - many seeds were collected from crows' droppings.



24. Prickly Paperbark - *Melaleuca styphelioides*.

The thick soft bark was used for roofing, blankets, rain capes, bandages, plates, caulking for canoes, rafts to take material across rivers, slings to carry babies, and padded rings to carry loads on heads. Leaves crushed and sniffed for colds and headaches. An infusion of the leaves was used as a wash for skin irritations.

25. Scrub breadfruit - *Pandanus* sp.

Several species similar to *Pandanus forsteri* were used in northern Australia. The soft, white bases of the young leaves were eaten raw or cooked. The large fruits were roasted to destroy an irritating principle and then chewed to obtain the pleasant flesh. The seeds were eaten raw or roasted. The white liquid obtained from crushing the stems and roots was applied to wounds or used as a mouthwash to relieve toothache or sore throats.

The aerial roots were pulverised, soaked in water and applied externally to treat colds and headaches. The stem pith was pounded, mixed with urine, and applied hot to ulcers and sores. Leaf fibres were used to make bags, arm bands, mats, etc.

The seeds of the fruit, although hard to extract were an important food source. Very rich in lipid (44-50%) and protein (20-30%), and have a delicious nutty taste eaten raw or cooked.

26. Flame Tree - *Brachychiton acerifolium*.

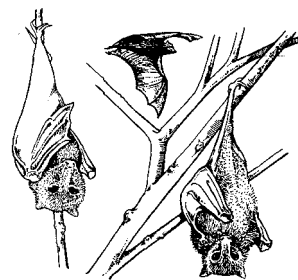
Flame Tree seeds are highly nutritious, comprising of about 18% protein, 25% fat, with high levels of zinc and magnesium. The hairs inside the seedpod are a skin irritant were removed before roasting the seeds. When cooked the seeds have a pleasant nutty taste.

27. Fruit Bat or Grey-headed Flying Fox.

Pteropus poliocephalus

A greatly appreciated food source for Aboriginal people and some early settlers. Usually roasted whole in coals, only the wings being removed first. Skin not eaten. The flesh of excellent flavour resembling chicken.

Additional information: One of the 13 species of 'megabats'(megachiroptera). A large bat weighing between 600-800g. Predominantly feed on nectar and fruit, and sometimes leaves. Distribution from Townsville down to Victoria with the camp at the RBGM being the most southerly colony in the world. Arrived in the autumn of 1981 and 1982 to create a summer camp at Fern Gully and started a permanent camp in the late 80's. Bat numbers in May 1995 reached 2600 and dropped to 1260 in September. By 2002 summer camp numbers approach 20.000. *Pteropus* does not use echolocation for navigation, they have large light sensitive eyes. The bats have special ligaments in their legs to lock their feet onto the branch when they roost so they do not expend any energy at rest. Fruit Bats can mate all year round but the main season is March-April. Births occur in September-October. Mother carries the young for 6 weeks then the young are left in creches at night in December-January when the mother feeds. Feeding range extends up to 30km from the RBGM. Attempts are being made to relocate camp to Ivanhoe due to stress on Fern Gully's canopy. For more information go to web site nre.vic.gov.au click on Plants and Animals and type Flying Fox in search.



28. Soft Tree Fern - *Dicksonia antarctica*.

The upper part of the trunk was split open and the soft pithy tissue which is rich starch, eaten either raw or cooked.

Additional Information - Dicksoniaceae - Early witnesses describe the core as a turnip-like substance as thick as a man's arm, tasting variously bitter, sweet, astringent or "like a bad turnip". Removal of the core kills the fern. Crowns favourite campsite for possums. The sap of the young fronds was placed onto insect bites to relieve the itchiness and pain.

29. Bangalow or Piccabeen Palm - *Archontophoenix cunninghamiana*.

The Aborigines removed the old leaves at the apex to use the growing bud and new sheath. This killed the palm. Bud and sheath were eaten either raw or cooked. Large leaves and sheathing base used as rain capes and large sheathing base used to give children rides along forest paths. Large scoops made from these bases. Carrying vessels made by tying both ends and running skewers through them, a large stick between each end as a carrying handle. Other species were also used for these purposes.

Additional Information - Arecaceae - Usually called Bangalow Palm in NSW and Piccabeen Palm in Qld after the aboriginal name for a vessel - pikki.

30. Birds Nest or Crows Nest Fern - *Asplenium nidus*.

Infusion of fronds used by Aboriginal women to ease labour pains; and a lotion obtained by pounding fronds in water was used to cool a fever.

31. Moreton Bay Fig - *Ficus macrophylla*.

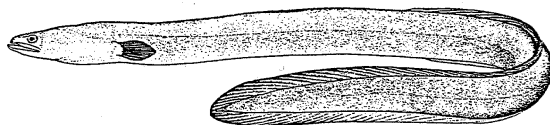
Tasty figs eaten and the exudate, a milky latex, used to treat small wounds. Durable fibres from the root bark used in the fabrication of scoop fishing nets and dilly bags. The inner bark forms a loose fabric if taken off carefully.

Additional Information - Moraceae - One of the strangling figs. Important food source of the Grey Headed Flying Fox.



32. Short-finned eel - *Anguilla australis*.

Caught, using traps woven from matrush, and eaten. In fresh water, men would muddy shallow water and feel for eels with their feet. Hand nets used in salt water. Spears sometimes used. Tortoises in the lake were also caught and eaten.



Additional Information - Anguillidae - For pains in the joints fresh skins of eels were wrapped around the place, flesh side inwards. (The same cure was very common in Scotland for a sprained wrist.). Eels are nocturnal animals. Females grow to around 1m in length, weighing approx. 3kg. The females prefer freshwater the males stay in the salt water. When the eels reach sexual maturity (7-15 years for females, 12-25 years for males) they migrate distances of up to 3000km to the Coral Sea where they. It is believed the adults die after spawning. The females can release more than 2 million eggs, which float in the currents down the east coast of Australia. The eggs hatch into glass eels, which migrate down the coast and into the estuaries. The glass eels that migrate up the rivers into the lakes and swamps develop into females, the ones remaining around the estuaries develop into males. Short finned eels migrate from the RBGM from winter to late spring. If an eel's water supply is drying up it may travel up to 1.5km over land to find another source.

33. River Red Gum - *Eucalyptus camaldulensis*.

The small seeds were eaten, probably in poor seasons. Manna, an insect secretion forming a flaky crust on the leaves, was favoured by adults and children. It is on record that 23 kg of manna have been collected in a single day. Of the 5 or so species producing manna, *Eucalyptus viminalis* was the most abundant. Wood was used for making utensils- digging sticks and bowls. In spring and summer, large sections of bark were carefully removed and shaped to make canoes, shields and carrying utensils. The canoes had holes stopped with clay and were used on Victorian rivers. Eucalyptus leaves were also used medicinally in steam baths. A powerful anti-septic made by boiling the inner bark. The liquid is used for skin irritations and sores.



Additional information - Myrtaceae - Tree to 45m. Common along watercourses and alluvial flats, all states except Tasmania. Extremely valuable timber trees, prized by apiarists for fine nectar. Branches liable to fall on hot, still days. Leaves used as dye for wool and using different mordents, produce colours of fawn, lemon, tan and brown.

34. Bunya Pine - *Araucaria bidwillii*.

The large egg-shaped seeds contained in the large glossy-green female cones to 30x20cm. They were a favourite food and families apparently owned individual trees. Each year in March, the female cones are ripe at the top of the tree. When raw, the seed is starchy and delicious with a taste like water chestnuts, when cooked, they taste like a combination between roast chestnuts and roast potatoes.

Additional Information - Every 3 years, there is a heavy crop and groups of people for about 300km around would be invited to the feast. The young men of the owning families would climb the trees by means of a vine around them and the trunk of the tree. They would pick one cone to check ripeness and then knock the remainder to the ground, where the women would collect the seeds. They were carried to the open plains, shared and a feast occurred. Some were buried and later dug out, cooked and eaten.

HOW THE YARRA RIVER WAS FORMED.

as told by Barak

One day two boys were playing in the bush, throwing their toy spears at whatever bird they saw. After a while they tired of this game, and sighting an old wattle tree went up it in the hope of finding some wattle gum, of which they were very fond.

They saw some gum on a bough fairly high up, and one of the boys climbed the tree and reached it. He begun to throw the gum down to the other boy, who was waiting for it underneath the tree. But when the lumps of gum reached the ground the disappeared, and the boy who had remained below could not find them. At last he noticed a hole, and thinking that the gum may have rolled down it, he poked the end of his little spear in it.

As soon as he did this a deep growling voice was heard, and the ground seemed to shake. An old man, who had been sleeping underground with his mouth open, suddenly made his appearance. He picked up the frightened boy, and shuffled off, dragging his feet, because he was old and the boy was heavy to carry.

As the old man huddled along he made a furrow, which deepened into a gutter, then into a creek, and lastly became the Yarra River. All this time the little boy was crying with fright. At last Bunjil heard him. He put sharp stones in the path of the old man, over which he fell, and cut himself to pieces. The boy ran off to his home.

Just before the old man died, Bunjil appeared, and said to him; 'let this be a lesson to all old men. They must be good to little children.'

From *'When the wattle blooms again. The life and times of William Barak. Last chief of the Yarra Yarra Tribe'* Shirley W.Wiencke 1988

A picture of Barak can be seen in the new Australian Gallery at Federation Square, as can one of his paintings, of men in possum skin cloaks.

Barak was a ngurungaeta, or headman, of his clan

Today, Wurundjeri Elder Joy Murphy Wandin describes William Barak as a gentle man who had a gift with people. He was a diplomat, once walking from Coranderrk, outside Healesville, to Government House to deliver a letter of protest.



Paola's Story

I am a Wamba Wamba woman from the Murray River. I grew up on the Murray in Echuca, Yorta Yorta country. I was taken on visits to Moonacullah, Wemba Wemba land on the Edwards River to camp with my large extended Aboriginal family. There and in Echuca we literally grew through the water, the gums that towered above us while picking the Old Man Weed for my grandmother.

I am also of Italian and Chinese heritage so I have respect and understanding of diversity at work!

But my heart lies in my Aboriginal identity and the passion I have for education is fuelled and motivated by my ancestors and the understanding that I am part of the oldest living culture in the world.

An oral culture with a basis in education, Elders teaching the young ones.

I love teaching and appreciate every opportunity to interpret my culture for people.

The Royal Botanic Gardens provides me with these opportunities to teach in a culturally relevant manner, in a setting that enhances understanding of plants, place.

And people.

I believe that the inclusion of environmental education is essential in the education of students in Australia, to not only educate the future generations about their role in environmental sustainability.

But also to understand their place in this country and that they are continuing a long tradition started by its Indigenous people.

A tradition that is about connections with the Earth and all that grows upon it and how we understand our place within it.

Dean's Story

Ancestrally, my mob, my community, is Wamba Wamba, up in Swan Hill. That's where all the Stewarts and the Murrays originate from, so that's where my country is. I've lived the majority of my life in metro Melbourne. I was incredibly lucky with my childhood in the country, catching yabbies, mucking around in the haystack, cow paddocks. As I hit adolescence, we moved into the city: and all of my friends from the country now are here too. I was in a country town, Kyabram, just out of Shepparton (my aunt was a primary teacher in Ky and is still retired there now). So many people in Melbourne came from Kyabram, I find these people all over the place its unbelievable.

The culture side of my life's journey isn't something that's always been there. My father, who's the Wemba Wemba side, the indigenous side, he left when I was a little tacker. I basically grew up on the white side of life, as many indigenous people in Melbourne have done. It was a major part of my upbringing.

I always hark back to when I was being looked after by one of my aunties on my mother's side, the European side. There was a large Aboriginal family living next door and I wasn't allowed to look over the fence. I was always amazed and really interested because they had the big 44 gallon drum and there used to be people sitting around and they had people singing songs. And it wasn't until five years ago I realised they were my cousins. Its just part of that experience I'm starting to explore and investigate.

I've predominately been interested in the environment. I worked at Eltham, now Nillumbuk. Council as the conservation volunteer coordinator. I looked after all the LandCare groups, friend's groups, trying to revegetate the creeks and public reserves with indigenous vegetation. I did that for many years.

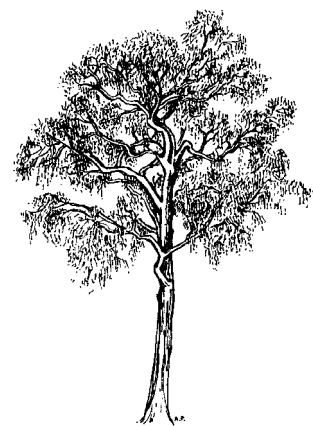
I've been with the Royal Botanic Gardens for a few years now. I started with a small group of Aboriginal people that came on to look at putting an Aboriginal perspective into the Gardens that hadn't really been here.

Too many things have happened to me. For me, coincidence doesn't exist; things happen for a reason. Even the position I'm in now, when I look back, everything just went click click click to where I am today. I really try to follow those messages. And I s'pose in a way, that's what indigenous people do well. They observe and look at those deeper things.

That's what I've tried to achieve with the Garden's Aboriginal Heritage Walk. In two hours I try to give visitors on the walk an appreciation of those things. I made it a point not to throw the boomerang or play the didgeridoo, not to grind seeds on a rock. I leave that up to other places. For a walk through the Gardens is about three words: spirit, connection and land. To try to get people to connect and look at where they fit, how rhythms and that spirit are still as relevant and as necessary in our lives today as they were for indigenous people a couple of millennia ago. And reconciliation as a whole, as part of that process.

RESOURCES

to take your classes further



Web Sites/CD ROM

For general searching try BLACK TRACKA an indigenous Australian search engine

www.dreamtime.net.au

Apart from your school library, try this site for stories, all students need to do is press play – stories include text and audio versions

www.abc.net.au/message/

Direct links to all ABC's Indigenous programming

www.yarrahealing.melb.catholic.edu.au

Fantastic site for teachers and students, with a site map linking information on the Kulin Nation – the 5 Aboriginal language groups of Port Phillip; identifies key resources already in schools, and includes important understandings

Also a CD -ROM

Meet the Eastern Kulin: The Aboriginal People of Central Victoria, Teacher Resource Book and CD –ROM Hawker Brownlow Education 2001

Designed for secondary students and teachers, an extraordinary resource for student research – visit the Monash Uni web site for a taster –

www.arts.monash.edu.au/cais/ekulin

www.loreoftheland.com.au

Stories and discovery tours for students to explore, designed to encourage all to live in harmony with each other and the land. Also a CD -ROM.

www.yothuyindi.com

A colourful and interesting site that provides a slightly different way into Aboriginal culture – that of band Yothu Yindi

Resources mentioned in activities

- book on a natural calendar

Banksias and Bilbies : Seasons of Australia Ian Reid, Gould League. 1995

- video on traditional land use

Women of the Sun Pt 1'Alinta the Flame' Ronin Films, Canberra 1991

- artwork of William Barak

Aboriginal Artists of the 19th Century Andrew Sayers, Oxford Uni Press 1996

Background reading

Gott, Beth & Zola, N. 1996 ***Koorie Plants Koorie People: Traditional Aboriginal Food, Fibre and Healing Plants of Victoria*** Koorie Heritage Trust, Melbourne

Eidelson, Meyer 1997, ***The Melbourne Dreaming: A Guide to Aboriginal Places of Melbourne*** Aboriginal Studies Press. Canberra

Presland, Gary. 1985, ***The Land of the Kulin*** or

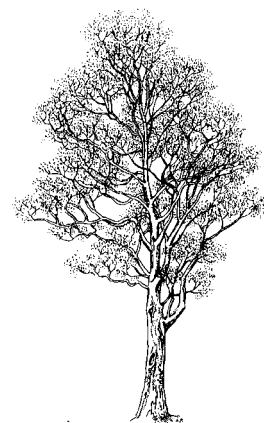
Presland, Gary. 1994, ***Aboriginal Melbourne*** Penguin, Ringwood

Both excellent texts have interesting overlays of street directory maps – past meeting present. Gary's 'Big 5' map is reproduced on p.6 of this kit.

TIME LINES

Early Port Phillip, Victoria

with ref. to the Royal Botanic Gardens



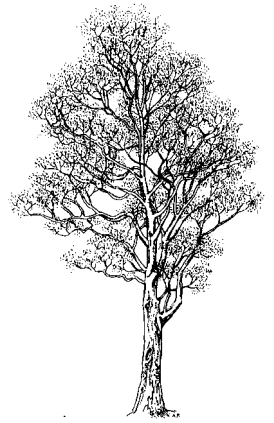
- Dec 1801** **Lt. Murray** lands on the peninsula. Shoots at a group of Bunurong.
- Apr 1802** **Matthew Flinders** charts Port Phillip Bay
- Oct 1803** First attempted settlement of Victoria, at Sorrento. Fails in first year due to lack of water & natives (via Lt. Col. Collins & Lt. Tuckey & convicts aboard the 'Calcutta' & the 'Ocean'. 1 Koori shot, others wounded at Corio Bay) William Buckley & 2 other convicts escape
- 1833** **London Govt.** abolishes slavery Empire-wide "Exeter Hall"
- 25May 1835** **Batman** sails through Indented Heads. (executor of the Van Dieman's Port Phillip Ass. Aboard the 'Rebecca')
- 6Jun 1835** **Signing of 'Dutigalla' "Treaty"**
(Pt. Phillip Ass.re Batman and local Aboriginal headmen sign over 600,000 acres for annual trinkets)
- 12Jul1835** **William Buckley** (escaped convict) emerges from the bush at Indented head after 30 years living with Wathurung. (Buckley becomes an important interpreter b/w white & black)
- 13Oct 1835** **Fawkner** arrives on Melb. site and settles (aboard the 'Enterprise')
- Sept 1835** **Richard Bourke** (Gov.of NSW) declares 'Batman Treaty' Invalid and the settlement illegal due to "Terra Nullius" belonging to no-one"
- Sept 1835** **Captain William Lonsdale** (Police Magistrate) arrives in Melb.
- 5 Aug1836** English Colonial Office publishes Preliminary report by the 'Select Committee Inquiry' into the condition of Aboriginal people. The final report lay before parliament Jun1837. The report was principally the work of Thomas Fowell Buxton. Implementation included the formation of "protectors".
- Dec 1836** **George Langhorne** (an Anglican minister) chosen in England.
- 24 Jan 1837** **G. Langhorne** arrives in Melb. (aboard the 'Swallow')
- 25 Mar 1837** **Official approval of Mission site** (RBG) given. Langhorne concentrates his efforts on the Woiworung people.

- 18Sept 1837** **Langhorne** granted Mission staff (2 overseers, later 1 teacher). By Oct. 1838 both teacher & overseer resign, no replacements. Many Aboriginal parents are leaving their children with the Mission for extended periods the newly formed Native Police force.
- 28OCT1837** **Lonsdale** appoints Charles de Villiers as commandant of The unpaid Aboriginal force drew mainly from the able bodied men of the Woiworung clan. The station was near present day Dandenong (the Police Paddocks).
- Jan1838** **De Villiers** resigns his post. Due to feud between Rev. Langhorne and himself. (allegations of drinking & unacceptable behaviour)
- 22Apr 1838** **Tulla Marine** (Kulin male) was caught stealing potatoes from Mr. Gardiner's farm. Rifle butted and chained. He was placed in Melb's. first gaol which he set fire to and escaped. Recaptured he was sent to Sydney, instantly released, forced to walk from Syd. to Melb. and died at the Mission on his return.
- Sept1838** **De Villiers** offered Native Police commandant job again. (Resigned for good at the end of 1838).
- 8Jan 1839** **Protectors James Dredge, William Thomas & families** arrive in Melb. (aboard the 'Hope')
- 28Feb 1839** **Chief protector, George Robinson & family** arrive in Melb.
- 5May 1839** Disease epidemic reported ravaging Kulin community
- Mar 1839** RBG site surveyed by Robert Hoddle (Govt. surveyor) "consisting of hilly forest land, thin of trees".
- 28Mar 1839** A grand fete (an attempted goodwill b/w white & black) 400 – 500 Kulin people gather to meet Robinson and belief they would be supplied with provisions and justice. Aboriginal exhibitions of athletes, a corroboree & fireworks.
- 14May 1839** **G. Langhorne** officially resigns (to finish 31Jul 1839)
- 27May 1839** **10.20pm Tulla Marine** (recent widow) dies Buried on south side of Yarra (within RBG site)
- 25Dec 1839** Yarra river in flood. Settlement inundated (p.115 G.A Robinson Journal)
- 30Dec 1839** Mon. The camp was broken up by general consent and was removed to the head of the lagoon near to Langhorne and opposite to my residence. (G.A Robinson Journal p.115)
- 13Jan 1840** Gun battle b/w H.F Gisbourne Border Police & Kulinat Yering (opp. Yarra Glen). Jackie Jackie captured, handcuffed but escaped.
- 11Oct 1840** Sunday "Sabbath" morning. Govt. troops raid (Major Lettsom & 80th Reg) on a camp of 400+ Kulin.



Windberry a notable Wurundjeri man was shot dead
 Every man, woman & child of the community were marched
 through the main street of Melbourne by bayonet to a compound
 All hunting possessions burnt. "Unwarranted" violence by soldiers
 reported. All released that day except 30 Taungurong

- 11Oct 1840** (night of) Escape attempt by the 30 Taungurong from a small storeroom. **Nerruknerbook** shot
- 16Nov 1840** All but 10 Taungurong released as no charge were found them.
- 6Dec 1840** Taungurong 10 placed on trail. (9 found guilty of theft sentenced to 10 years transportation)
- Jan 1841** All Taungurong, except one escape. The men were being ferried down the Yarra to a larger Sydney ship. At a predetermined signal all leapt overboard before the guards could react and though leg chained made their escape. The trails legality was challenged and all charges dropped.
- 24Feb1842** **Henry Pulteney** Dana appointed as commandant of the reformed Native police. (Henry a Western district squatter with military experience used local Aboriginal police almost exclusively against other Aboriginal people at squatters' requests. He died 24Nov1852.
- 1Mar 1846** **John Arthur** made superintendent of RBG
 John dies Jan. 1849 (age 45) from drinking polluted water from the Yarra. (possibly cholera)
- 16Mar 1846** **Gov. Gipps** approves development of RBG
- 1851** Discovery of Gold in Victoria
- 1853** Disbandment of the Native Police. (after 1 decade of service)



TIMELINES: EARLY PORT PHILLIP, VICTORIA (with ref. To RBG)

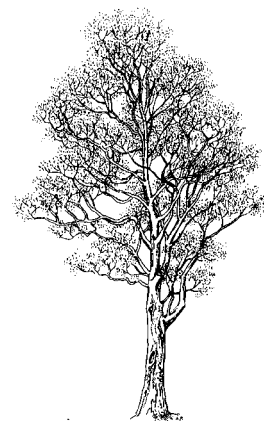
YEAR	Colonists	Sheep	Cattle	Horses
OCT 1835 (1)	200	25,500	100	57
Late 1837 (1)	1,000	~	~	~
Census 1838 (2)	2,278	700,000	500,000	2,000
1841 (1)	20,000	~	~	~
Sept 1851 (3)	80,000 (Melb.23,000)	6,647,557	483,202	2,916



- (1) 'Aborigines in Colonial Victoria' M.F Christe 1979 p.29
 (2) 'Bushland to Botanic' RBG Guides 1996 p.6
 (3) 'The Life and Adventures of William Buckley' J. Morgan 1852 (re. 1996)
 p.161-170 "Statistics of the Province of Victoria 1851"
 Additional census data 1851 re. Acres under cultivation 51,536
 Victoria pop. 80,000* (Melb.23,000, Geelong 8,000+*), NSW 192,000
 (Sydney 44,000), Sth Aust. 68,000 (Adelaide 15,000), Tas. 68,000 (Hobart
 20,000)
 * ~ Due to Gold rush population explosion i.e. Jan1852 arrival of 6,209 to
 the port of Melb. In one month alone! (p.177)

KULIN WURRUNG

- Aboriginal words of the Melbourne Area



Aboriginal Culture was an **oral** tradition. Handed down from Elders to community, parent to child, it is still an essential part of Aboriginal culture today.

Consider the vast tracts of traditional language now lost, or at various stages of deterioration, of the **350+** known Indigenous languages spoken within Australia. Only a handful are still used as a first language ~ (not mentioning the diverse localized dialects that make up these regional languages, equaling in excess of 500 dialects).

This, more than most exemplifies the immensity of the cultural disintegration, and dislocation in the face of European contact. It is truly a great loss.

However today those parts of traditional language that have survived the massive changes of the last 2 centuries are being protected; rejuvenated ~ A resurrection of Aboriginal language is happening.

Below are a few words in the local **Kulin** tongue that could/should be incorporated into your Aboriginal classes/talks. So you too can be an active part in ensuring a reversal of the past local cultural erosion, by speaking & passing on traditional words, long believed forgotten in this part of the world. Ensuring a continuity of that oral tradition.

Important note:

As a consequence of the two centuries of European impact and the fact that traditionally no formally written Aboriginal language existed, the spelling, pronunciation and origins of words vary markedly today.

The words you see here being really 19th Century Anglo-Saxon interpretations* of a millennia-old oral form of Cultural communication ~ All researched and re-interpreted, again in the late 20th Century by professional linguists, professors etc.

Subsequently these words can only be considered as a 'best representation' we have today. It should be stressed that the few words shown here are not the only way, due to the many variables already mentioned.

** from the 1800's diaries, studies and musings of colonial farmers, squatters, preachers, amateur anthropologists, government officials etc. who in turn came from different levels of education, social positions, religious persuasions, even countries of origin.*

The local Kulin translations that follow come from the well-respected book titled...

"The Handbook of Australian Language" Vol. 4 RMW Dixon & Barry J. Blake 1991

Usage hints:

- Pick just a few relevant words and slowly add as appropriate.
- English word is first, followed by the most commonly used local Kulin word in **bold**.
- (---) refers to similar traditional spelling of same thing.
- The capitals **T,W,B** = 3 main Aboriginal communities from the Melbourne area where the word translation was commonly recorded
T = Taungurong (Thagungwurrung), W = Woiewurrung, B = Boonwurrung
- Lower case letter refers to the historian:...
h = Hercus, t = Thomas, William (in Brough Smyth)



Other good sources of local Aboriginal language

VACAL "Victorian Aboriginal Corporation of Aboriginal Language"
238 High St. Northcote (ph) 9486 7860

KULIN WURRUNG

Language ~ **Wurru (ng)** (wurrung)TWB (also see mouth/lips)

TOOLS/EQUIP daily use

Hut ~ **wilim** WB (see camp)

Boomerang* ~ **wonguim** (wanguim) * Boomerang is a Qld term for similar tool.

Woomera* (spear-thrower) ~ **garrik** TWB marriwan (h) *Central Aust term

Message Stick ~ **mungu**

Wood/Reed Spear* ~ **djirra** traditionally many different spears with diff. names.

Fighting spear ~ **guyan**

Shield ~ **gayaam** WB

Axe ~ **ngarruk**

Canoe ~ **gurrong** TWB

Fire drill ~ **djiel-warrk*** TW *same name given to local tree Austral Mulberry

Digging Stick ~ **kannan** (ganan)

Dilly Bag ~ **bilang bilang**

Basket ~ **binak**

Wooden bowl (small)/Coolamon* ~ **tarnuk** (darnuk WB)* coolamon is a Qld term.

String ~ **wugel-wugel** Wt

THE ELEMENTS

Fire ~ **wiin** TWB

Moon ~ **mirnian**

Star ~ **djurt**

Wind ~ **murnmut** WB

Sea ~ **warrin** WB

Country/place/ground ~ **biik** TWB

Tree ~ **darrang** TWB

Sun ~ **ngawan** WB

Water ~ **baan** TWB

Lake ~ **bollok** (buluk)

Leaf ~ **djerrang** TW

Smoke ~ **burt** TWB

Grass ~ **buath** or **banum** TWB

Wood/stick ~ **galk** TWB

THE PEOPLE

Kulin (gulin) ~ name given to the Federation of the 5 communities that make up the Melbourne & Port Phillip district (totalling several million acres). Being the Boonwurrung, Woiewurrung, Taungurong, Wathaurung, Djaja wurrung

God/the Creator ~ **Bundjil** (also see eagle)

Aboriginal man ~ **kulin** (gulin)

Aboriginal woman ~ **bagurrk*** (badjurr) * gurruk ~ blood

Chief/Leader ~ **ngurungaeta** (arweet B)

Father ~ **maman**

Mother ~ **baba**

Baby (child) ~ **bubup**

KULIN WURRUNG

THE PEOPLE

Young man ~ **yan-yan**
Young woman ~ **murnmundik** WB
Doctor/healer/shaman ~ **wirrirrap**
White man ~ **ngamudji**
Spirit/soul ~ **murrup**

Head ~ **gawang**
Eye ~ **mirring**
Mouth ~ **wurrung** (also see language)
Hand ~ **marnang** (marnong)
Foot ~ **djinang**
Track/footmark ~ **barring**

ANIMALS/FAUNA

All Kulin had an incredibly close affiliation with the entire natural world, but animals held a special place. They feature prominently in all aspects of Kulin existence physically, socially, astronomically, ceremonially & spiritually.

Raven (Crow) ~ **Waa** (wang)
Bird ~ **guyip-guyip** TWB
Emu ~ **barraimal** TWB
Swan (black) ~ **gunuwarra**
Black Duck ~ **dulum** (toolim)
White Cockatoo ~ **ngayuk** WB
Willy-Wag tail ~ **djirri djirri**
Lyre Bird ~ **bulen-bulen*** origin of Bulleen
Magpie ~ **barrawarn** (barrwang)
Kookaburra ~ **gurrug gurrung** TW
Brolga ~ **gurruk** TWB
Egg ~ **dirrandirr** TWB
Wombat ~ **warin**
Platypus ~ **dulaiwurrung*** *proud lips
Echidna ~ **gawarn**
Possum ~ **walert**
Eagle Wedge –Tail (Eaglehawk) ~ **Bundjil** (also see God/Creator)
Bandicoot ~ **bung**
Wallaby ~ **wimbi**
Kangaroo ~ **kuyim** WB (Marram) TW
Dingo (dog) ~ **wirringgan*** TWB *origin of Warrigal
Koala ~ **gurrborra**
Snake* ~ **kaan** WB *different snakes had diff. names
Tortoise ~ **bundabun**
Fish ~ **duat** TW
Eel ~ **yuk**
Yabbie ~ **duyang** WB

