

# Women with Clever Hands

## Gapuwiyak Miyalkurruwurr Gong Djambatjimala Attachments - Practical Exercises

### MAKING A BASKET

#### SOURCING AUSTRALIAN NATIVE FIBRES

The parts of many plants provide fibre to make string, bags, rope, baskets and mats. Fibres come from the following plant parts:

- The underground stems (rhizomes) of plants such as the bulrush
- The leaves and stems from grass-like plants such as the mat-rush
- The bark of trees and shrubs such as some species of acacia and native hibiscus

After the plant parts have been collected the fibrous material must be extracted or separated.

Some materials are soaked in water until the non-fibrous tissue rots away. Chewing or being scraped with a shell or sharp rock then softens the remaining fibres.

The stems of the Spiny-headed Mat-rush and similar plants are split while still fresh and dried in the sun. They are later soaked in water to make them pliable. The sappy inner bark of trees and shrubs is collected from strips of bark by separating it at one end and peeling it away from the outer bark. Paperbark needs little preparation; it is peeled from the trees and used to make water containers, mats, wallets and liners for babies' baskets. Traditional designs and materials have undergone modifications today. For example in Arnhem Land cardboard boxes are boiled along with the plant fibre material to extract the blue/grey ink from the paper.



Melanie Evans harvesting *Lomandra*, Wagga Wagga August 2010

## NATURAL DYES AND PIGMENTS

Pigments and dyes have artistic and decorative uses for the Gapuwiyak people, who have used ochres and iron as colorants for aesthetic purposes like body decoration. The use of pigments has now been extended for various purposes like coloring paint, ink, plastic, fabric, cosmetics, food and other materials.

Natural dyes consist of end products of roots, nuts, and flowers. They are termed as natural dyes because they are extracted from natural sources like plants, animals or minerals. Natural dyes used by the Gapuwiyak women are the result of knowledge and skill, which have been handed down through generations.

## DYES

Broadly, there are three types of natural dyes: plant-based dyes, animal-based dyes and dyes made from minerals, coloured clays and earth oxides. Plant-based dyes include madder and indigo. Indigo is a popular dye which produces variations on blue, from pale blue to almost black. Animal-based dyes can be created from shellfish. Deep red or crimson dyes are produced from a species of scaled insects, Cochineal. In addition, there are dyes made from minerals, colored clays and earth oxides. An example is ochre which has been used since the earliest times.



Mistletoe or Snotty gobbler leaves being boiled for dye

Records of the use of natural dyes dates back as far as 2600 BC in China. The medieval world also used dyes extensively and it was an extremely important part of medieval trade. One tree was the Sappanwood (*Caesalpinia sappan*) which was said to produce a high quality red dye and was favored by the Portuguese who named it bresil or brasil. When they landed in South America, it was replete with Sappanwood trees and they called the land, Brazil.

## PIGMENTS

Pigments are substances that impart colour to other materials and are the basis of paints. For thousands of years, various cultures have been using pigments for different purposes. Pigments are ground colours extracted mostly in the form of ground earth or clay. Using spit or fat the Gapuwiyak people make a range of natural dyes. Pigment and dyes differ in a basic sense. While pigments are insoluble, dyes are either liquid or soluble. Colourants can be used as a pigment or a dye, depending on the vehicle that is used.

Historically pigments were made by grinding minerals, plants, and animal parts to a fine powder- like form. Indian yellow, gold, vermilion and ultramarine, made from lapis lazuli, were regarded as the best type of pigments. Ochres and iron oxides are naturally occurring pigments. A pigment was frequently named after the place where it was produced on a large scale.



## NATURAL PIGMENT CHEMISTRY

Iron oxide and hydroxide minerals occur in a variety of colours and have been used as pigments since prehistoric times. In France and northern Spain, cave paintings using iron oxide pigments have been dated at about 30 000 years BC and in Australia, Aborigines mined ochre which was transported throughout the continent via an extensive nationwide trade network. Wilgie Mia red ochre deposit in the Weld Range, Western Australia, is a well-documented example, and the Bookartoo red ochre deposit in the northern Flinders Ranges is a local example of past Aboriginal mining activity.

The principal pigment minerals are:

- haematite,  $\text{Fe}_2\text{O}_3$  (red)
- magnetite,  $\text{Fe}_3\text{O}_4$  (brown to black)
- goethite,  $\text{FeOOH}\cdot x\text{H}_2\text{O}$  (yellow)
- lepidocrocite,  $\text{FeOOH}\cdot x\text{H}_2\text{O}$  (yellow).

Impurities such as manganese, clay and organics enhance the colour range of natural iron oxide pigments. Umber, for example, is a dark brown manganese-rich variety.

The chemical industry has developed a wide range of synthetic iron oxide pigments with superior uniformity, colour quality and chemical purity, but natural deposits remain competitive for many applications by virtue of their abundance and low extraction costs.



Arnhem Land colours dyed onto silk at Gapuwiyak, July 2010

## DYEING PROCESS

### Gathering plant material for dyeing

Blossoms should be in full bloom, berries ripe and nuts mature. Never gather more than 2/3 of a stand of anything in the wild when gathering plant stuff for dyeing.

### To make the dye solution

Chop plant material into small pieces and place in a pot. Double the amount of water to plant material. Bring to a boil, then simmer for about an hour. Strain. Now you can add your fibre to be dyed. For a stronger shade, allow fibre to soak in the dye overnight.

### Colour Fixatives

You will have to soak the fibre in a colour fixative before the dye process. This will make the colour set in the fibre. Especially if you use fabric such as cotton, wool or silk. You cannot dye synthetic materials.

Salt Fixative (for berry dyes) 1/2 cup salt to 8 cups cold water

Plant Fixatives (for plant dyes) 4 parts cold water to 1 part vinegar

Add fibre to the fixative and simmer for an hour. Rinse the material and squeeze out excess. Rinse in cool water until water runs clear.

## Dye Bath

Place wet fibre in dye bath made up of selected bark, skin, blossom or root and water. Simmer together until desired colour is obtained. The colour of the fibre will be lighter when it is dry. Muslin, silk, cotton and wool work best for natural dyes and the lighter in colour the fabric the better ie: white or pastel colours.

NOTE: It's best to use an old large pot as your dye vessel. Wear rubber gloves to handle the fibre that has been dyed, as the dye can stain your hands. It's also important to note that some plant dyes may be toxic: check with the Poison Control Centre if unsure.

## LIST OF COLOURS

These materials are easily accessible and fairly non-toxic. There are many more for you to research and experiment with.

### Orange

Onion skin

Carrot (roots)

Turmeric dyed fibre will turn orange or red if it is dipped in lye.

### Pink

Strawberries

Cherries

Raspberries (red)

Roses and Lavender, with a little mint and some lemon juice to activate the alkaloids, can make both a brilliant pink dye and a very tasty pink lemonade.

### Green

Tea Tree (flowers) green/black

Spinach (leaves)

Grass (yellow green)

Barberry root (wool was dyed a greenish bronze-gold)

Red onion (skin) (a medium green, lighter than forest green)

Carrot tops

Chives

### Red

Rose (hips)

Beetroot

Rhubarb

### Black

Ironbark (leaves and bark)

### Yellow

Onion (skins)

Marigold (blossoms)

Willow (leaves)

Celery (leaves)

Dandelion flower

Turmeric (spice)

Sunflowers (flowers)

### Brown

Tea Bags (light brown)

Coffee Grinds

### Blue/Purple

Grapes (purple)

Blueberries



Iris and rhubarb being boiled for dye

## **BASKET MAKING**

Native grasses or any other plant material should be gathered and dried thoroughly in the sun (for bleached colours) or in the shade (to retain green colour). Before the basket making process begins, dried material should be soaked in warm water for at least half an hour to regain its flexibility. Over-soaking for hours may damage some basket materials

Embroidery thread or waxed nylon string is suitable for coil basket stitching, and can be easily threaded onto a needle. Natural materials, such as raffia, may also be used, but you will have to splice in new strands quite often. The instructions provided here apply to right handers for whom the direction of work usually spirals counter-clockwise (clockwise for left handers). The 'best side' of a basket depends upon which side is stitched into; from the outside - in, or from the inside - out. Generally the side of the basket which the needle and string enters into is the 'best side', although careful attention to where the needle enters and exits can result in a neat, orderly appearance on both sides of a basket.

### **Instructions for Round-bottom Coil Baskets**

1. Cut a piece of stitching string about five feet long to start the basket. Thread one end of the stitching string through a needle. Do NOT double thread, instead use a single thickness of string in wrapping and stitching.
2. Use 4 to 6 individual native grass strands to produce the foundation at the bottom center of the basket. Lay several centimetres of the loose end of the string alongside the end of the native grass strands (and extending in the opposite direction.)
3. With one hand, hold the short end of the string in place, and with the other hand wrap the long stitching string around both the string's end and the native grass bundle (about 10 - 15 times), producing a coil about 5cm long. Be sure to leave an initial centimetre of native grass strand.
4. Bend the wrapped 5cm bundle of grasses very gently into a 'U' shape and bind both the long and short ends of the grasses together (wrap 6 or 8 times). This will form an elliptical circle or ring foundation. (Try to make the hole in the centre of the ring as small as possible). This piece forms the centre of your spiraling basket.
5. Start the coiling process. Bend the loose end of the wrapped native grass bundle around. The bundle of loose grasses should lay snugly along side the ring foundation. Stitch around the bundled grasses and through the hole at the centre of the ring. Use a standard buttonhole/blanket stitch. Keep stitches close and adjacent to each other in this first round. Continue wrapping around the native grass bundle and through the centre of the ring one full time around (this should be about 10 to 20 stitches). The first round of the basket bottom is now joined to the central ring.
6. For the second round of stitches, do NOT stitch through the hole at the centre of the ring any more. Now stitch around the bundle being added, and then through middle of the bundle making up the ring. Keep in mind the 'best side' of the basket.
7. In the second round, make small even spaces between the stitches so you can see the bundled grasses in between. Uneven stitches at the bottom of a basket get amplified as the coiling progresses, and are hard to correct farther along. The second round should also have 10 to 15 stitches, depending upon the thickness of the string. The initial stitches secure the start of the coiling process, try to maintain a nice circular disk for the bottom of the basket. Also try not to let the bundled native grasses twist as they are coiled around.



8. In the second round of the basket bottom start adding native grasses to the bundle. Hold the bundle of grasses with the thumb and fingers of the left hand, while the coil is stitched around with the right hand. Three or four individual grasses may have to be added every other stitch- have patience, the finished product is worth it!

9. Continue adding grasses to gradually increase the diameter of the bundle to that of a pencil (about 16 individual native grasses) for a medium sized basket. Add foundation material as needed while coiling the basket, maintaining a consistent bundle width.

10. Select a type of stitching to use from those provided here for the third and subsequent rounds of the basket. Experiment with combing several rows of different types of stitching.

### **Splicing in new string to continue stitching**

1. Weave the short end back down through the coils, following the path of previous stitches, and cutting off the excess flush with the 'worst side' of the basket. Thread a new string on the needle, starting 2 or 3 coils below the one being added.

2. Weave the new string up along the path of previous stitches to the bundle being attached.

3. Increase the number of stitches when stitches become too widely spaced to hold the bundle together securely (5cm). This can be accomplished by making two separate stitches where there would normally be one, or increase the number of stitches with a round of 'V'stitches.

## **COIL BASKET FORMS**

### **Flat Bottomed-Basket**

Basket form is determined by the specific placement of the coil being added. The flat basket bottom is achieved by joining each coil directly to the side of the last coil added, spiraling in an outward direction. When the desired diameter of basket bottom is reached (5cm for a medium sized basket) then the added coil is joined, almost at a 45 degree angle, on top of the last coil added. This 'turns the corner' (a hard angle) from the basket bottom to building up the wall of the basket.

### **Cylindrical Basket**

Cylindrical shaped basket form is achieved by adding each coil exactly on top of the last coil. The basket wall will expand gradually into a bowl shape, if the new coils are placed slightly to the outside of the previous coils.

### **Vase/Constricted Basket**

A vase or constricted form is formed when the coils added are placed slightly to the inside of previous coils.

## **FINISHING**

Coil basket rims are finished using the same stitch used for the basket walls. When the desired size of the basket is reached, taper the coil of native grasses, with each element in the bundle a different length, and continue stitching until the bundle runs out and tapers to nothing. You may stitch back through the same holes in the reverse direction around the rim, resulting in a 'double-wrapped' rim. This not only adds strength to the basket rim, but

also creates a pleasing 'X' design on the basket rim.

## **VARIATIONS OF SIMPLE CLOSED-COILING STITCHES**

### **Separate:**

Use buttonhole or blanket stitch around the coil being added, and insert the needle through the bundle of grasses below it midway between the stitches in that last round. Be careful not to pierce the stitch from a previous coil. The stitches should appear separate, often as if placed on top of one another, on the basket wall.

### **Interlocking:**

A stitch where the needle is inserted diagonally through the top of the stitch just below it in the previous coil. The stitches spiral up the basket wall and appear interlocked resembling a chain.

### **Split:**

Sew around the coil being added and through the centre of the stitch in the previous round. This creates a split or bifurcate design where the needle and string goes through the stitch below it in the previous coil.

### **V-stitches:**

After producing a single simple stitch, sew through the same spot a second time, creating v-shaped forms. V-Stitches can be continued for additional coils by passing the needle through middle of a previous round of V-stitches.

Split stitches can also be used in combination with V-stitches, the slant of the spiraling pattern depending upon whether the left or right side of a 'V' is split .

Step by step guides can be useful. Examples:

<http://www.basket-making.com/how-to-make-baskets.html> <http://www.princetonol.com/groups/iad/lessons/middle/Sue-baskets.htm>

<http://basketmakers.org/topics/tutorials/construction.htm>

<http://www.craftyarnCouncil.com/projects/desert2.html>



Coiled container by Gail Manderson at a workshop, Wagga Wagga Art Gallery 2010

## DRAWING EXERCISE

Encourage the students to:

Experience the difference in drawing by taking inspiration directly from a photograph of a favorite object from the exhibition.

Keep going even when they think it's not working – particularly in the early stages of setting up the drawing. Every drawing has a 'crunch' moment they will need to break through.

Get them to stand back repeatedly from their drawings. Perhaps even leave the room, take a short break, and come back. They will look at their drawings with fresh eyes and notice any areas that jar or are 'off' much more easily than if they stay up close to their work for prolonged periods of time.

Always check the tonal values in their drawings – how dark are the darkest areas? Even the tiniest dark spot in one area can transform a pencil drawing giving it a sense of depth.

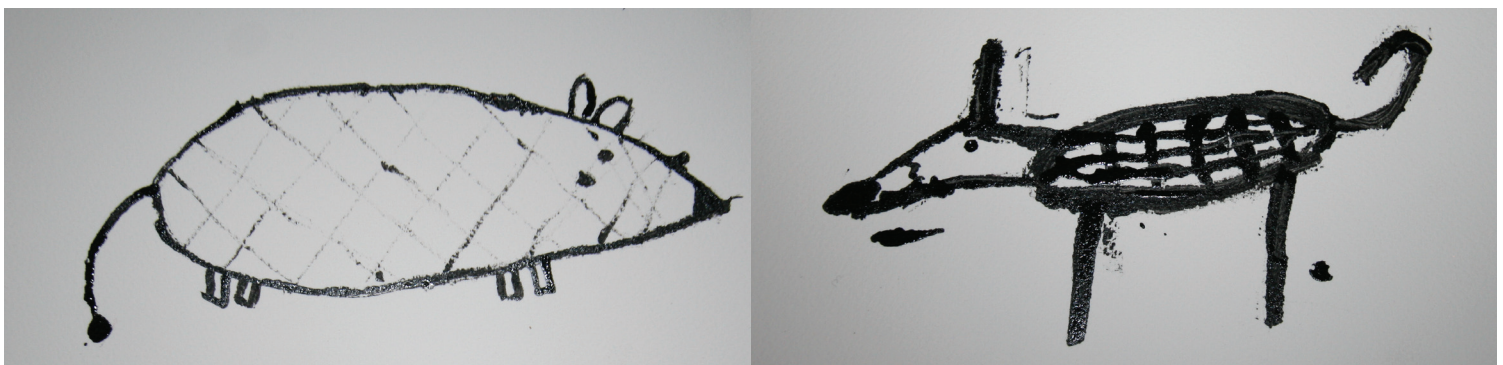
Feel free to 'edit' their drawings. After taking a break from the work, solutions to problems can become clearer. It might be a case of adding to or taking away from the details in the texture.

Get out of the comfort zone and use alternate drawing material. See what happens when you sketch with sticks and ink or mud and skewers. Washes can be made with strong solutions from tea and coffee. What else can be used?

Paperbark trees are sometimes used as council nature strip trees. Contact the local council and see if you can collect some to use instead of paper.

Remember that it is only a drawing! The students will always have an opportunity to do another one - give them permission for it not to be perfect.

Create a students' exhibition of drawings inspired by your experience at ***Women with Clever Hands: Gapuwiyak Miyalkurruwurr Gong Djambatjimala.***



Examples of Ink and stick drawings from ArtBlast! workshops, Wagga Wagga Art Gallery September 2010



## UNDERSTANDING TWINING

This is a physical exercise to understand how the technique of twining works. This can be done in small groups but it needs at least 8 students to enable the pattern to develop.

Resources required: 2 x 10 metre ropes (different colours)

1. Get the students to stand in a row an arm's length apart.
2. Select four students to be the rope guiders.
3. Get one student holding the rope to weave behind and in front of students until they get to the end of the line. Makes sure another student holds the other end of the rope at the beginning of the line.
4. Get the other two students to hold and weave the rope the opposite way to the first group.
5. Once completed students in the line should see that they are the stake for the twined rope.

Variations:

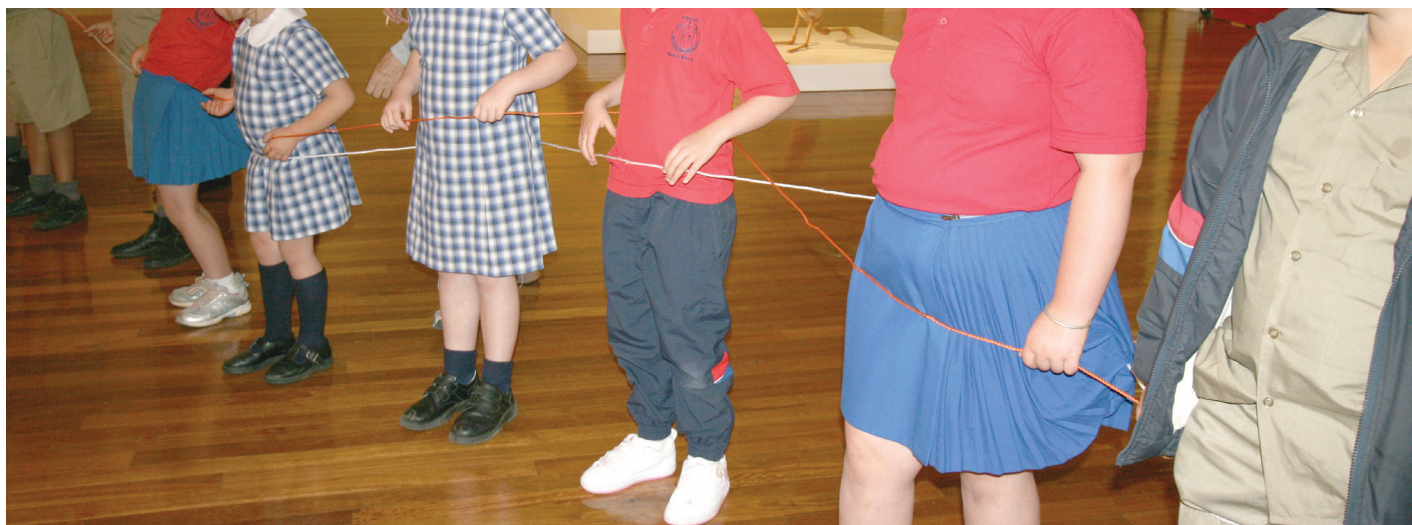
Use longer ropes and keep twining back and forth on top of the previous rope.

Use multiple ropes and colours.

Get students to stand in a circle.

Chairs can be used if you do not have enough students.

This task can be adapted to work with groups.



Students learning to twine at Wagga Wagga Art Gallery October 2010

## EXTENSION ACTIVITIES

Work in pairs and make bangles from rope and using raffia to coil over.

Wrap rope with wool to form colourful bangles.

Add found items such as seeds and pods to embellish bangles.

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