Haawka!

This is a botanical introduction to **Kumeyaay** basketry

The Kumeyaay are the original native people of San Diego and Northern Baja

We'll be answering the following questions:

1 - What is basketry used for?

2 - What are the main Kumeyaay basketry methods?

3 - Which native plants are used to make baskets?

4 - What botanical properties make those plants useful for basketry?

5 - How are basketry plants gathered?

Katy Chappaz

Basketry Uses

Here are some of the many uses for basketry:

- Gathering, preparing and storing resources, such as food
- Granary baskets store acorns
- Flat baskets can be used as trays, sieves, and for toasting and winnowing
- Basketry is used to make mats and hats
- To carry and boil water
- To make cradleboards for carrying infants

Tray types:

- **Sawil**, or flat trays are used for winnowing, sifting, toasting and storage
- **Jilu**, or upright baskets, are used for gathering and storage

Katy Chappaz

Basketry Methods

1. Coiled

The coiled method starts with a bundle of split strands of spiny rush or deergrass, tied in a knot. This is the ayul (foundation). From there, d inhaler strand of split basket rush is sewn and coiled around the foundation, creating a watertight basket.

2. Twined

The twined technique involves making spokes then weaving threads in and out of the spokes. This method leaves openings between the strands. It can be used for leaching shaawii (acorn mush), whereby the shaawii clumps up and the water drains out.

3. Plaited

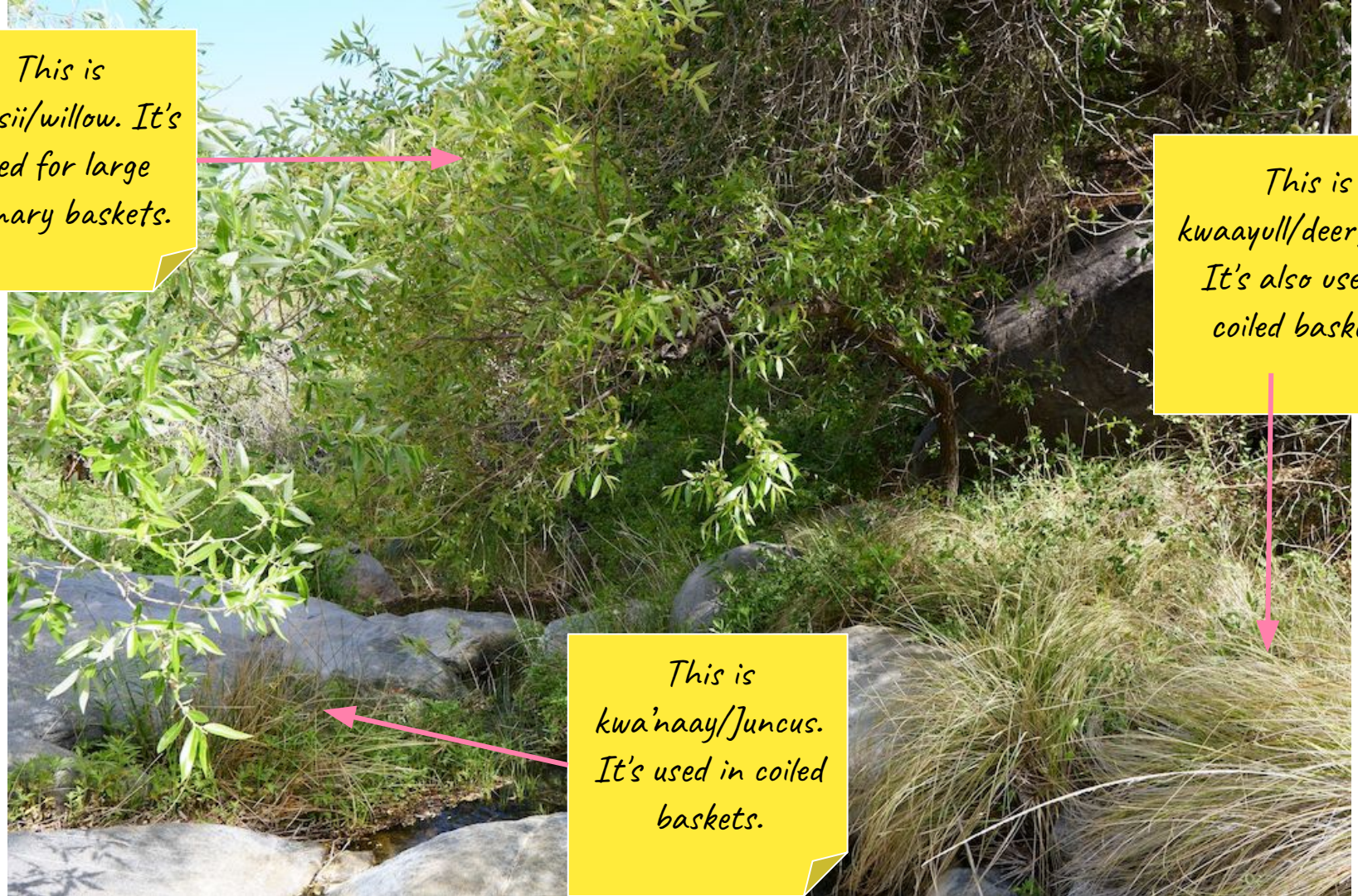
Used for headband for cradleboard.

Katy Chappaz

These flat baskets are coiled

Can you identify the native species used for basketry in this photo?

Katy Chappaz/Photo taken in Kitchen Creek


This is halasii/willow. It's used for large granary baskets.
This is kwaayull/deergrass. It's also used in coiled baskets.
This is kwa'naay/Juncus. It's used in coiled baskets.
Katy Chappaz

This is Pellychaa, or basket bush (Rhus trilobata).

Not to be confused with Kuupaay/poison oak!

Photos by Katy Chappaz

Species

Here are some of the local plants used in basketry

Kumeyaay Name	English Name	Scientific Name	Plant Family	Basketry Use
Kwa'naay	basket rush	*Juncus textilis*	Juncaceae	Coil basketry - weaver strand or weft
Shiull, Psilj	spiny rush	*Juncus acutus*	Juncaceae	Foundation for coil baskets
Halasii	arroyo willow	*Salix lasiolepis*	Salicaceae	Acorn storage baskets
Halasi	sandbar willow	*Salix exigua*	Salicaceae	Granary baskets
Hwiiw	pine species	*Pinus* sp.	Pineacea	Small baskets, see next page
Kwaayull	deergrass	*Muhlenbergia rigens*	Poaceae	Foundation for coil baskets
Pellychaa	basket bush	*Rhus trilobata*	Anacardeaceae	Color and structure (weft)

Cool factor

At the Kumeyaay market there are elegant little baskets made from pine needles.

Check out how the needle sheaths are part of the structure and aesthetic of the basket

Photos by Katy Chappaz

Deep Dive! Kwa'naay

Basket Rush / *Juncus textilis*

General Biology:

- Grows in riparian areas, in the shade of oak woodlands
- Spreads from underground rhizomes forming stands
- Cylindrical stem is up to one and a half meters tall

Basketry Uses:

- The stems are first split lengthways
- Used as the hilo (weaver strand) or weft in coil basketry
- Used as sewing material for coiled baskets, basket hats, pendants, utilitarian uses like leeching, and gift baskets
- By contrast, Shiull (*Juncus acutus*) is seen more in twine baskets

Adonis (Don) Tate/Calphotos

Las Pilitas Nursery

Deep Dive! Kwa'naay

Basket Rush / *Juncus textilis*

Several properties make Kwa'naay suitable for basketry

- *Juncus* has no leaves, no nodes (except at very bottom). Just a sheath covering a stem. This makes it straight and smooth; the whole stem can be used.
- Stem is reddish brown at the base, which makes this species useful for creating designs.
- Basket rush is stronger and more flexible than Spiny Rush; stem is split lengthwise into several parts and retains tensile strength.
- Dried *Juncus* swells when wet, making a watertight basket

Steve Matson/Calphotos

Deep Dive! Halasii

Keir Morse/Calphotos

General Biology

- Willows grow directly in streambeds or close enough for roots to take advantage of water
- Dioecious - separate male and female trees

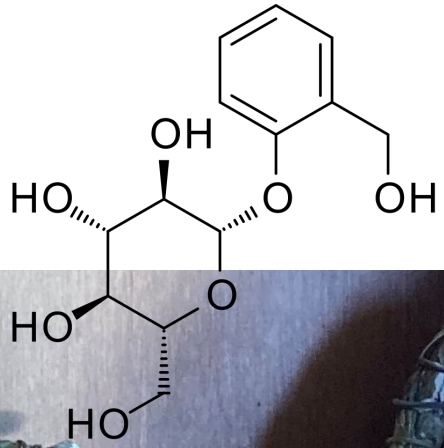
Basketry Uses

- Willow leaves and flexible shoots are used to make granaries (chiqui)
- Sandbar willow (*Salix exigua*) is used to make large granary baskets
- Halasii (arroyo willow/*Salix lasiolepis*) is use in the construction of acorn storage baskets

Here's a Youtube video of a sandbar willow granary basket being made: https://www.youtube.com/watch?v=GIIV4B-nojE

Deep Dive!
Halasii

Halasii produce secondary metabolites such as salicin (pictured right) to defend themselves against pests. The same metabolites are useful for keeping insects out of stored food.



Baskets and lids made from willow leaves and stems

Katy Chappaz

Where do the colors come from?

We already saw how the base of the Kwa'naay stem is used to add a **reddish-brown** color to basket designs.

The **black designs** are achieved when dried Kwa'naay strands are dyed with soil, with tannins from oak, or with bark or leaves from elderberry and walnut. This process creates a shiny black dye.

Link to article about plants and the moon: https://www.science.org/content/article/moon-through-trees

Gathering Methods

Kwa'naay:

- *Juncus* is collected while green and fresh, then cured in the shade until it is properly pliable and usable (bring inside at night)
- Stems are harvested individually by gently pulling upward
- The Kumeyaay have a prayer-like song that they sing while gathering kwa'naay that strengthens their relationship with the plant, with their basketry, and with each other
- Kwa'naay is collected at the full moon when the stems are strongest. Weavers prepare the kwa'naay by splitting it lengthwise. They also have to pull hard on each strand while basket-making. Kwa'naay collected at other times breaks more easily when split or pulled.
- Indeed, the moon has been found to affect plants physiologically; specimens planted at the full moon grow better, and sap flows more vigorously

Halasii:

- Female willows make better baskets because they have more leaves

Katy Chappaz

Gathering With Respect

Make a prayer
Ask for permission
Give intent

Just try it. You'll see.

Many baskets include a rattlesnake design. The story goes that when an elder became injured, her family lay her on a mat with some shaawi (acorn mush) but at night the mice would steal her food. A rattlesnake had been watching the ordeal and came out to eat the mice. The elder was able to eat, and recovered.

Basically, there's rattlesnake energy woven into these food trays so don't even think of scavenging!

Rattlesnake story relayed by Dr. Stan Rodriguez.

Sources

Books:

Keater, Glenn
California Plant Families West of the Sierran Crest and Deserts, 2009.

Wilken-Robertson, Michael
Kumeyaay Ethnobotany - Shared Heritage of the Californias. 2018

KCC Ethnobotany Lectures:

Lectures taught by Michelle Garcia and Richard Bugby on 5 April, 2022, 7 April, 2022, and 24 April, 2022

KCC Ethnobotany Panel Discussion:

Panelists Stan Rodriguez and Martha Rodriguez on April 26, 2022