



relational.science@gmail.com



relationalsciencecircle.com



[Ancestral.science.podcast](https://www.instagram.com/Ancestral.science.podcast)



[Ancestral Science Podcast](https://www.facebook.com/Ancestral.Science.Podcast)

The Ancestral Science Podcast explores scientific topics through conversations between Knowledge Keepers and Scientists, while *experiencing* the origins and depth of science on and with “the Land”. Join us as science COMES ALIVE when knowledges are shared alongside ancestor plants, rocks, animals, and rivers, creating connections between personal, Indigenous, and global science. The Ancestral Science podcast is a place for *everyone* to see themselves in science, to be inspired by the SCIENCE that is all around them and expand the definitions of both *ancestor* and *science*.

SEASON 2 : Episode 18 ([audio/video](#)) with **Hweqwidi HANFORD MCCLOUD** “Pullin’ Cedar, Ancestral Trees, & the Fish Wars”

We were honoured to be recording in a cedar longhouse on the ancestral [Nisqually lands](#) of **HANFORD M CLOUD**. The pod chatted with Hanford alongside relatives Juan Carlos Chavez, Alvin Harvey, and a furry friend for support. Amongst the aroma of cedar and displays of relational and practical science of canoe and basket-making, we chatted about cedar bark as insect repellent, trees as teachers and wise helpers, FishWars, how to make waterproof woven cedar baskets, the difference between a canoe and a boat, and using your hands to teach and heal through pulling cedar.

Hand to heart to support from [Indigenous Screen Office](#) and [BESPOKE Productions](#)
Take a moment to like, share, follow, and rate, it is much appreciated.

Check out some of Hanford's cedar hats, woven with science, spirit, and ancestral stories, at [MccloudCreations.com](#)

Remember, you can support the pod and rock some unique Indigenous Science merch at www.relationalsciencecircle.com/shop, all proceeds go towards Knowledge Keeper honoraria, following protocols, and keeping the pod going.

Please like, share, follow, and rate the pod, it goes a long way to share this knowledge.

SHOWNOTES:

-How to “Pull Cedar”

- there are times of the year to do this, when it’s easier to remove and without pitch
- only take what you need (which is what your hands can hold), ask the tree first
- how are you giving back to the tree for its gift to you?
- processing the cedar taking a lot of time, love, and scientific understanding

-cannot rush this process, the tree needs time to process and tell you what it needs and wants to be

-Cedar as Natural Mosquito Repellent

-Indigenous people didn't need science to *validate* this knowledge, but in case you want to read it, check it out in the Journal of Medical Entomology "[Use of Novel Compounds for Pest Control: Insecticidal Acaricidal Activity of Essential Oil Components from Heartwood of Alaska Yellow Cedar](#)"

-Importance of "hands"

- from strength and misguidance to healing and reciprocity
- connecting with cedar ancestors through their bark.
- close your eyes, use your hands to pull the cedar

-Cedar Hats and Baskets

- MccloudCreations.com

-combining cedar and copper

-copper has long been used by Indigenous communities for its antimicrobial and therefore protective and healing properties.

-turquoise and copper are connected, and significant to and often connected with Navajo Nations

-[here](#) is a Western Science article about copper

-please note, many tribal lands have been decimated (past and present) through mining practices of Western development and science. There is often a guise of collaboration and mutual beneficiary processes, the majority of which are absolutely BS with little to no "free, prior, informed, consent."

-want to know more? Read [UNDRIP](#) for Free, Prior, Informed, Consent.

-want to dig deeper, check out this AMAZING article: by Rebecca Tsosie "[Indigenous Peoples and Epistemic Injustice: Science, Ethics, and Human Rights.](#)"

-each basket is unique to the weaver

-each basket is made for what you are healing for

-powerful healing when you pull cedar

-waterproof with oils and resin/pitch

-Natural Dyes

-Adler Tree: makes yellow or red dye

-Birch Bark Biting

-Pat Bruderer "Birch Bark Biting" [video](#)

- <https://bearclawgallery.com/artists/pat-bruderer-birch-bark-biting/>

-Canadian Encyclopedia: [Birch Bark Biting](#)

-using teeth as creative tool

-visioning the design that is then "biting" that design with the eye teeth. Birch bark is harvested through protocols and reciprocity, and at the correct time of year so that it doesn't harm the tree. The thin skin is folded like if you were making a snowflake, and designs were bite into the bark.

-Tree Teachings

- Trees are medicine
 - each has its own teachings
 - but clear-cutting and development of colonization has removed a lot of these teachings and practices.
- companion trees that grow together to help one another through their different gifts, teachings, and medicines.
- learning from and listening to the wisdom of the trees

-Canoe-Making

- traditional canoes were made out of bark and had a sail
- the sail was woven out of the cedar (like the hats)
 - [Polynesian woven sails](#)
 - [Burke Museum](#)
- different methods
 - making a mold for the slates of wood to be shaped
 - hollowing out a tree for canoe
 - larger trees more difficult to harvest for this (less trees because of clear cutting and the forest industry)
 - the tree to make these canoes find you, you don't find them
- difference between a canoe and a boat?
- a canoe receives life and a name only when it has been in the water
- [Hökūle'a](#): founded in 1973, the Polynesian Voyaging Society's mission is to perpetuate the art and science of traditional Polynesian voyaging and the spirit of exploration through experiential educational programs that inspire students and their communities to respect and care for themselves, each other, and their natural and cultural environments. Through voyaging, PVS hopes to inspire humanity to care for the earth by highlighting the vital importance of oceans, indigenous knowledge, communities, education and sustainability.

-Canoe Ceremony and Journey

- gathering on the river
 - communities from up and down the river and sea would gather to share teachings, medicines, and songs.
- ["Indiginews"](#) Tribal Canoe Journey (2023)
- [Wsáneć Canoe Journey](#)
- reconnect with traditional methods of travel
- canoe: powered by humans, boat: powered by motor

-Fishwars

- ["The Fish Wars"](#): What kinds of actions can lead to justice" (webpage)
- ["Treaty Justice"](#) by Charles Wilkinson (book)
- ["The Last Fish War: Survival on the Rivers"](#) by Lawney Reyes (book)
- their gear taken, told they were illegally fishing
- "what is fishing? To me, fishing could be anything. We were gathering salmon, that's who we are as Indigenous people. We're not fisherman"

- this is what was bestowed onto us by colonial people, they said “these guys are fishing” but we were only harvesting and gathering what we needed, only what we needed, nothing more.
- fishing to the colonial people was about the money
 - saying “you should be canning, you should be doing this...that...to make money”
 - “every fish is a dollar to a fisherman” This doesn’t make sense to Hanford, fish used to be food, now it’s commodity
- harvesting fish was about food, sustaining us over the winter
- “what is the 50%”
 - where Indigenous peoples of the area would get 50% of the fish, but how do you know how many fish there are? In reality, they only got 2-5%.

-Soil and Immunity

- tasting soil! The importance of “getting your hands dirty” to both connect with the land and to build immunity.

-Yucca Weaving (from Juan Carlos Chavez)

- weaving yucca more with the teeth.
- tasting the medicine of the plant

-Weaving is an Ancient Practice that is still valued today

- Deborah Holland- weaving goes back 35,000 years
- a way to bring people together, weave together

-Mount Tacoma/Rainier

- the beacon of life, a pillar to look up to
- it represents everything beautiful
- she tells us “**don’t forget the water**”
 - keep track of the snow and ice on the mountain to prepare for summer
 - she teaches us balance
- there will be a purification period from Mother Earth
 - cleanse through fire
 - a time when you better know your language and your ways!

-Aging in Humans

- humans now are scared of aging, they want to look younger
 - trying different things to do this, many artificial
- but Indigenous people want to be Elders, they want to be wise, they want to age.
- people now want to live to 70 or 80, but Hanford’s ancestors lived to 200 years old because there wasn’t stress.
 - healthy food when living off the land- salmon, berries, deer, ect..

-Advantages of being a Shorter Human

- Nisqually people were shorter humans, average 5’8
- moving around the bushes and overgrowth easier/faster

-Salmon Run

- harms when humans interfere and “bring the salmon upstream when they can’t”
- this mixes stock/salmon communities
- shows hierarchy/power humans want
- important part of salmon lifecycle is that journey and struggle
- human “entitlement” to salmon and fishing/animals/land in general
- we used to sing, pray, dance for the salmon
- not about money or power
- “[Human activities impact chinook salmon size and spawning success](#)” (article)
- but IS this a success?
- “[Being Human: Encountering the Wild in Us and Us in the Wild](#)” by Martin Lee Mueller (book)
- [Extreme Environmental Impacts on Pacific Salmon](#) (Government of Canada)

Want more Indigenous Science Resources? Check out [Relational Science Circle](#).

Want to learn more about Indigenous Science, Indigenous Science/Mathematics Teacher PD sessions, or have an idea for a guest or topic for the Ancestral Science Podcast, email relational.science@gmail.com

Gratitude to the support from JUAN-CARLOS CHAVEZ, the editing and audio skills of EMIL STARLIGHT of Limelight Multimedia, and ALEX FLETT for marketing and pod support.

