

A detailed painting of a forest scene. In the foreground, there are large, lush green ferns. The middle ground is filled with tall, slender trees, their trunks and branches creating a complex web of lines. A path or clearing leads from the bottom center towards the background, where the light is brighter, suggesting a distant opening or a body of water. The overall color palette is dominated by greens, browns, and a soft, hazy light in the background.

# 5. Ecological Knowledges Traditional Ecological Knowledges

ENGL133 Imagining Nature

# Course Stuff

Midterm on 3/7

-Study guide is posted on Canvas

# Traditional Ecological Knowledge (TEK)

- oral accounts and stories of natural phenomena in the context of local community
- combines extraction model (humans take animals as prey) with respect for nonhuman nature as existing independently of human needs and ends
- how does TEK differ from western natural science?
  - founded on the idea that all things are connected (“kinship of the world”)
  - based in an idea of community that links human and beyond human community members in a given place
  - does not prioritize the human at the expense of other community members
  - nature exists on its own terms, independent of human use value
- how does TEK do more than “confirm” Western scientific hypotheses? How can it be an alternative framework for understanding the natural world?



## Some examples of North American TEK and Land Management

- Indigenous burn practices in California have suppressed wildfires and contributed to increased biodiversity
- The knowledge of Inuit Inupiaq hunters made possible a study of Alaskan wolf ecosystems to understand population numbers
- TEK has proved that mixed species hunting groups of marine birds and mammals forage cooperatively rather than competitively (sea lions, whales, and dolphins use gulls to locate prey and then both groups feed more successfully)

Source: Pierotti, Raymond, and Daniel Wildcat. "Traditional Ecological Knowledge: The Third Alternative (Commentary)." *Ecological Applications* 10, no. 5 (2000): 1333–40.





Kimmerer, "Mishkos Kenomagwen: The Teachings of Grass"





## TEK: What is an experiment?

“To me, an experiment is a kind of conversation with plants: I have a question for them, but since we don’t speak the same language, I can’t ask them directly and they won’t answer verbally. But plants can be eloquent in their physical responses and behaviors. Plants answer questions by the way they live, by their responses to change; you just need to learn how to ask. I smile when I hear my colleagues say “I discovered X.” That’s kind of like Columbus claiming to have discovered America. It was here all along, it’s just that he didn’t know it. Experiments are not about discovery but about listening and translating the knowledge of other beings.” (158)

-cf Val Plumwood on cross species representation as an act of translation  
(speaking *with* not *for*)

# What is the lesson of sweetgrass?

“We are all the product of our worldviews— even scientists who claim pure objectivity. Their predictions for sweetgrass were consistent with their Western science worldview, which sets human beings outside of “nature” and judges their interactions with other species as largely negative. They had been schooled that the best way to protect a dwindling species was to leave it alone and keep people away. But the grassy meadows tell us that for sweetgrass, human beings are part of the system, a vital part.” (163)

- “Sweetgrass thrives where it is used and disappears elsewhere”
- “If we use a plant respectfully it will stay with us and flourish. If we ignore it, it will go away.”
- “the question was, how do we show respect?”

# Forms of Natural Knowledge: Indigenous bark paintings

“Each pattern in this painting represents a different body of water belonging to the Dhalwangu clan. At the top, tight rows of diamonds refer to the sacred freshwaters of Gulutji, from which Barama emerged to deliver Yirritja Law. At the base, the zig-zag lines signify the rolling waves of the saltwater estate of Garrapara. In the central section, Waturr has depicted the site where the floodplain of Baraltja flows into the bay.”

Waturr Gumana, “Dhalwangu Law” (2004)

Source: <https://madayin.kluge-ruhe.org/experience/pieces/dha%e1%b8%bbwanu-rom-dha%e1%b8%bbwanu-law/>







Bark paintings of the Yolngu people who live around Yirrkala in northern Australia's Arnhem land. Eucalyptus bark is stripped during the wet season. Artists learn their clan songlines and their clan motifs from older artists in the community.



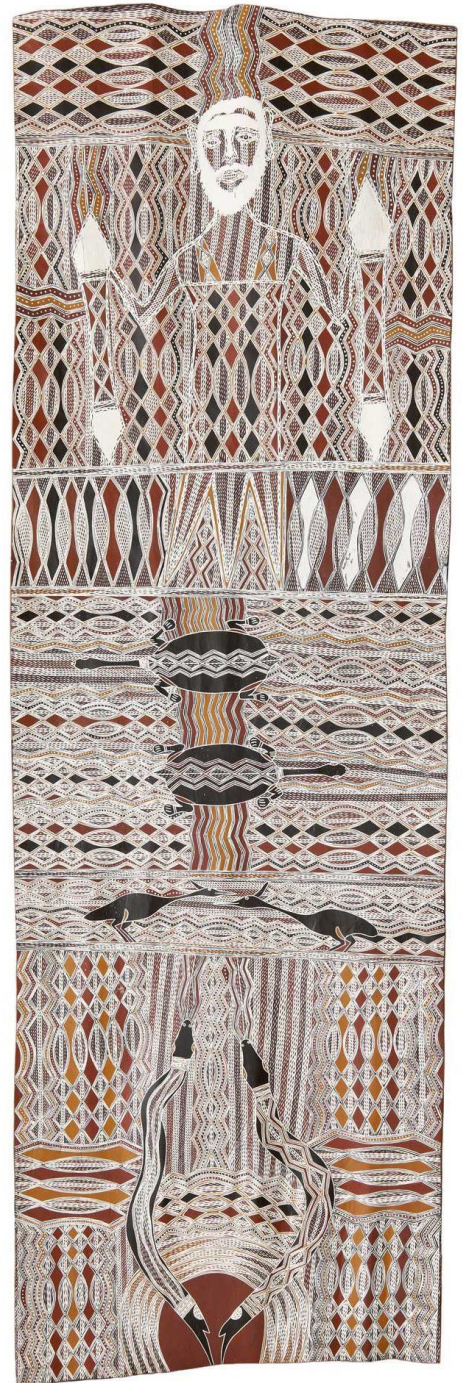
# Bark Paintings as Creation Stories

“You can see Barama at the top, the central creator, thinking our Country into being, distributing different sacred objects, Law and ownership to the Yirritja clans. Barama was living in Gängän, and that is how we maintain the Law that he passed on to our ancestors, through our forefathers, for generation after generation. We carry on this legacy of the leadership that Barama laid down in our Country.

And down the bottom, you can see minhala, the long necked turtle. It is an important animal that we sing. It holds a story that has been sung for thousands of years by my people. And then there is gany'tjurr, the heron, looking down to the Gängän waterhole. And you can see the two lightning snakes, burrut'ji, meeting each other, their tongues coming together and communicating to each other, as well as to others across Arnhem Land.”

– YINIMALA GUMANA

Source: <https://madayin.kluge-ruhe.org/experience/pieces/dha%e1%b8%bbwanu-minytji-dha%e1%b8%bbwanu-clan-designs/>





## Archive: Yolnu Bark Painting

- some of the clan designs are found in rock paintings in the region that go back 28,000 years
- the designs were also used in body painting and ceremonial objects
- most of the aboriginal bark paintings date only from the early 20<sup>th</sup> c. when the Yolnu began painting their clan designs on bark so that *balanda* (non-Indigenous people) could understand the essential bond that they have with their land



# Bark Painting as Traditional Ecological Knowledge: Country

- the aboriginal concept of “Country”
- based on the Dreaming, the ancient stories of Ancestors, who created the landscape and all living things
- clans have different songlines
- Yolnu communities include humans, animals and features of the landscape as equal members
- cf. Deloria’s idea of Kinship

“For Yolŋu, the term Country encompasses land, sea, sky and everything therein. It includes plants, animals, soil, seasons, weather, constellations and all relationships in the natural world. Country was shaped during the wanarr (creation period) by ancestral beings, who left their spiritual essence in the land. This essence is innately perceptible and observable to Yolŋu people today.

Yolŋu belong to Country and Country belongs to Yolŋu.”

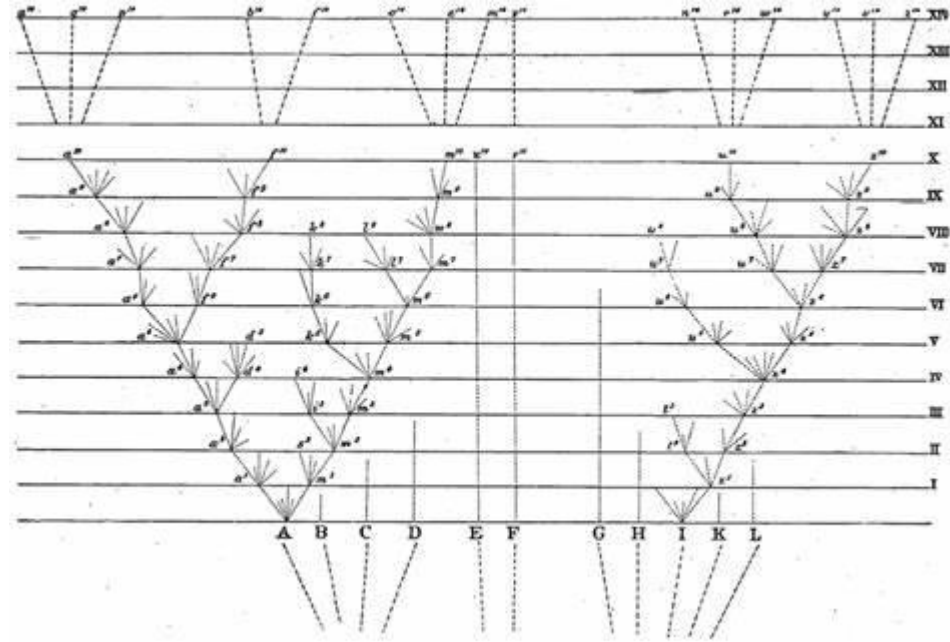
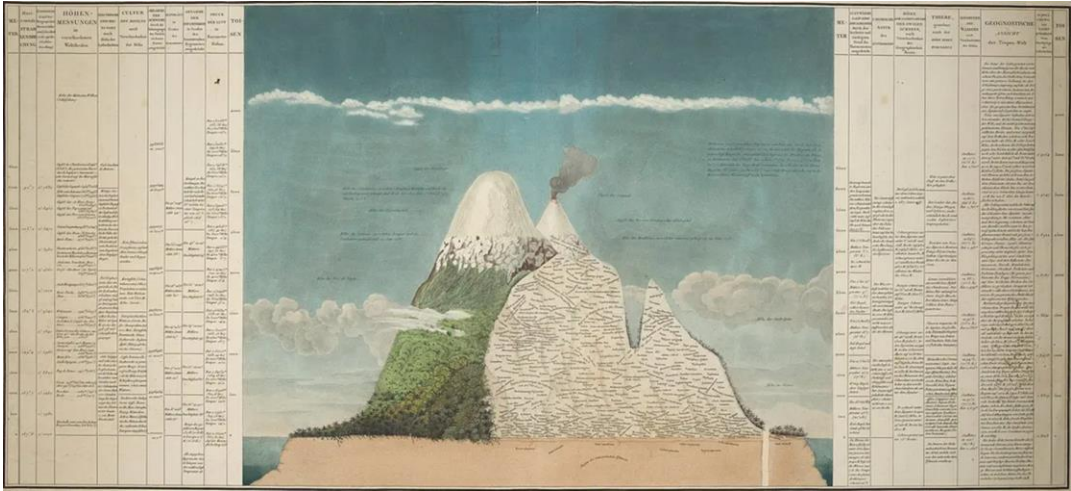
Source: <https://madayin.klugeruhe.org/experience/country/>



# Bark Painting: Environmental Justice and Land Rights

- documents land claims and generational familial succession
- Legal function: establishes indigenous rights and sovereignty
- In 1963, aboriginal people used two signed bark paintings to try to convince the Federal Government to stop bauxite mining on their lands
- the government did not stop the mining but excluded certain sacred sites and set up a monitoring commission
- in 1976, the first aboriginal land rights laws were passed







# Traditional Ecological Knowledges

- not “dominion over nature” because not based on instrumental use value of nature
- not a “stewardship” model because humans are not in a superior position to the rest of nature
- the goal of TEK is often to motivate humans to show respect for nonhuman nature
- this respect is one way of preventing overexploitation of natural resources
- but also of imagining shared human-nonhuman relationships for the flourishing of all (“the lesson of sweetgrass” and country)





**Cruikshank, “Are glaciers ‘good to think with’?  
Recognising indigenous environmental knowledge”**





## **In class writing: How to read a critical article (and, how to write an argumentative essay)**

Work with a partner but write down your answers separately with your name on it so you can turn it in at the end of class (unless you are both in the same section). Feel free to consult Cruikshank's essay but no other resources.

1. What is Cruikshank's thesis? How do you know where to find it? What visual clues tell you where to find it? What made finding it easy or difficult?
2. Identify two major pieces of evidence that the author puts forward in support of this thesis. How did the essay signpost their importance and where to find them?
3. Name at least two of the essay's major conclusions. At what places in the essay do you find them?