I chose to do my final project on *Yucca glauca* Nutt. named by Thomas Nuttall in 1818. This plant is found in abundance in the sandhills of western Nebraska where I grew up. They also grow in upland prairies, plains, hillsides and limestone soils (Kindscher, p. 220). I had always heard this plant referred to as “soapweed”, alluding to one of its many botanical uses. Other common names include: Yucca, Amole, Spanish Bayonet, Adam's needles, Datil, Spanish Dagger (Kindscher, p. 220). It is most easily identified by its basal spiny-tipped rosettes and large tan lily-like flowers. Due to it’s spiky and sharp nature, I always avoided getting too close to this plant.

During my research, I found that *Yucca g.* was one of the cornerstone plants of the Plains Indians ethnobotanical history. It has a myriad of ethnobotanical uses and I chose to try a couple of these. I used the long, sharp leaves to make cordage and the roots to make soap or shampoo. I will explain my techniques along with information about this plant’s history, traditional uses, nutritional and chemical components.
According to the Medicinal Plants of the Great Plains, the Plains Indians “pulverized the roots of the small soapweed or yucca, mixed them with tepid water, and drank the resulting tea for stomach ache. When mixed with the roots of the prickly pear cactus, the roots were used to to help mothers give birth” (Kindscher, pg. 221). The Blackfeet also used the plant as a tonic to prevent hair loss (McClintock, 1909, p. 274). Furthermore, the yucca root was used to treat breaks and sprains, inflammations from injury, and stop bleeding (Kinscher, pg. 221). Besides its medicinal uses, the emerging flower stem and immature seed pods of the small soapweed and other Yucca species were a source of food for several tribes (Kindscher, 1987, pp. 225-27).

When I was younger, I would help my family with the annual cattle drive where we would move the cattle from their winter grazing back up to their summer grazing pasture. The cattle who normally plodded along with a content docility, would run out of their way, almost with a crazed ambition, to strip the long yucca stalk of its flowers. I have noticed that deer also enjoy these tender flowers. The chemical structure of Yucca glauca gives us more information about its current and potential uses.

Soapweed contains a large amounts of saponins. These substances are bitter and characterized by their ability to foam when shaken with water. The saponins are steroid derivatives and have been extensively studied as starting materials for the synthesis of cortisone and related corticoids (Tyler, 1981, p. 235). The steroidal saponins found in both the leaves and roots of Y. glauca include sarsapogin, smilagenin, and tigogenin (El-Olemy et al., 1974, p. 489).


The first step in my process was harvesting in a respectful and safe manner. My parents own land that has an abundance of Yucca g. growing. They live in the countryside far away from busy roadways that might pollute the plants. Soapweed is very hardy and spiky so I brought gloves, a large knife and a spade. I chose a plant that was in a large cluster of other Yucca g. plants and I removed only part of the root, leaving most of the root structure in the ground. These plants have very deep root structures for seeking water deep in the ground. The plains are known for their periodic droughts and only the toughest plants can survive. I only took what I needed to make a small batch of soap and some cordage. In The Boreal Herbal, Gray says, “We are visitors, guests, and receivers of gifts on wild lands and in forests. Be gracious that the plant community can continue to grow and exist in vitality” (pg. 22). I was mindful of respecting the plant and it’s community when I harvested.
I soaked the leaves in warm water for 2 days in order to soften them for making cordage.

Next, I used a dull knife to scrape all of the excess plant material from the leaves to reveal the fine fibers.

Taking the fibers in hand, I bent them in half so that one end was higher than the other. I put the bent edge in my mouth so that I could use both hands for twisting. Starting with the longer side I began twisting away from my body and then laying the one strand over the other strand. I then twisted the other side of the cordage in the opposite direction. By repeating this motion of twisting in opposite directions, the cordage stayed together. I would then splice in
more pieces of cordage when my original piece got to short. At the end, I simply trimmed the ends that stuck out from splicing and I had a nice long cordage that was extremely strong.

Next, I made soap out of the roots. I used a sharp knife to cut off a chunk of the root from the plant. I then skinned off the bark layer to reveal the white pithy part of the root that contains a large amount of saponins. I cut these into small pieces and placed them into a jar of warm water. I let them sit for about 10 minutes and then shook the jar vigorously. I then ran this mixture through a strainer to remove the big chunks of roots and debri, leaving only the soap. Although, it didn’t lather as much as regular soap, it does a good job of removing dirt and oils from the skin and hair.
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