

# Ma's, Montana's Original Plant-Based Food

BY ROSALYN LAPIER

*"Now I shall give you a root-digger, and you may go out to dig roots; but you are not to dig that big turnip there, because it is medicine," said the Moon to her new daughter-in-law Feather Woman.*

## Women and Plants

The most widely harvested plant-based food on the northern Great Plains before interaction with Europeans or Americans was the tuber *Pediomelum esculentum*—or *Ma's* (pronounced "mahs," with the vowel like the "ah" in "father"), as it is called by the Blackfeet.

*Pediomelum esculentum*, formerly called *Psoralea esculenta*, is from the Fabaceae or legume family. It is native to the Great Plains and it grew all across the prairies in (what is now) central and eastern Montana.

A common misconception about Indigenous people of the northern Great Plains is that they only ate meat, such as bison (*Bison bison*), elk (*Cervus canadensis*) or white-tailed deer (*Odocoileus virginianus*). But this is incorrect. According to anthropologist Eugene Hunn, Indigenous peoples of the past probably "obtained in the neighborhood of 70 percent of their food energy needs from plant foods harvested by women."

Recent research has hypothesized that millions of *Pediomelum esculentum* tubers were gathered each year by Indigenous women on the Great Plains. If Indigenous people ate plant-based diets, and *Ma's* was such a widely harvested plant, how is it that we know so little about *Pediomelum esculentum*?



The most likely reason is that the first European and American explorers, traders, and settlers were men. These men usually talked to, observed, and recorded the lives of Indigenous men. They rarely interacted with Indigenous women. If they had they would have learned about the plant-based foods and medicines that women harvested from the wild or grew in their gardens.

Contemporary scientists are now working to correct this bias in the historical narrative and focusing new research on the lives of Indigenous women. They are learning that the prairies were the realm of women harvesting plant foods and medicines, not just men hunting bison.

*The story of Ma's centers on a human, Feather Woman, who married a star, Morning Star, the son of the Moon and Sun. Feather Woman moved to the Sky World to live with her new husband and in-laws. The Moon became her mentor, teaching Feather Woman about the various plants in the Sky World, the importance of water, and several religious rituals.*

## Ma's, the Original Root

I learned about *Pediomelum esculentum* from my Blackfeet grandmother Annie Mad Plume Wall. (She is profiled in “Blackfeet Botanist,” *Montana Naturalist*, Fall 2005). My grandmother shared stories of this essential plant food, its mythological origin story, and its importance to Blackfeet religion.

The Blackfeet word *Ma's* translates as “root.” This may seem like a simple name, but it is the “original root” of Blackfeet mythology and their most important food item.

It became widely known by its French name *pomme-de-prairie* or *pomme-blanche*—prairie apples or white apples—after first contact. And then early Americans called it “prairie turnip,” which remains its common name today.

*Moon also gave her daughter-in-law a digging stick for harvesting, but instructed Feather Woman not to dig up a particularly large Ma's in the Sky World. Of course, as a human, Feather Woman's curiosity grew and one day she dug it up.*

## Harvesting Roots

*Pediomelum esculentum* is a perennial that grows in the early summer. The plant itself is small, usually only two to six inches tall, with palmate leaves and densely packed light blue flowers. It has a short life span before going dormant. It can grow each year, or in times of drought remain dormant for up to two years. The tuber is harvested when the plant begins to seed and before its leaves and stems dry up and blow away.

*Feather Woman eventually returned to Earth and brought with her numerous wonderful objects important to humankind, which the Moon and other deities shared with her, including Ma's and a digging stick used by women to harvest.*



### Opposite page:

George Catlin described Chin-cha-pee, Assiniboine, in 1832, as “fine looking...in a handsome dress of the mountain-sheep skin, holding in her hand a stick curiously carved, with which every woman in this country is supplied; for the purpose of digging up the...prairie turnip.”

Left: *Pediomelum esculentum* looks like the familiar lupine, or *Lupinus* spp., which is poisonous.



## Digging Roots

Historically, Indigenous women and girls harvested *Pediomelum esculentum*. It has a brief harvesting season, because it has a short growing season. Once the plant goes dormant, the leaves and stems blow away and leave little evidence of its existence, so Indigenous women could not return to harvest at a later time. This is probably why it was important to know exactly where to go each season to harvest this valuable resource.

Indigenous women made digging sticks out of green ash (*Fraxinus pennsylvanica*) or other hard wood. They were about three to four feet in length and their tips were sharpened and then hardened over fire. Some digging sticks were personalized with carvings, bone handles, or decorations. Digging sticks became lifelong personal possessions and were highly prized.

An Indigenous woman would position her stick next to the plant and move the stick back and forth to push it into the ground. The tubers, usually the size of a small egg, were not far below the surface. Indigenous harvesters removed the outer covering of the tuber to expose the white inner flesh, then used the long taproot to braid together dozens of tubers to preserve and store them for future use.



## Preserving & Eating Roots

Blackfeet and other Indigenous women historically preserved plants for food and medicine by drying them. The braids of *Ma's* tubers were commonly three feet long, but could be up to six feet long, and were hung up to dry in the sun.

Once a plant was dried it could be stored for years. Dried *Ma's* could be rehydrated whole or pounded into a flour. It was usually boiled and added whole into a soup or stew or the flour was added as a thickener.

*Pediomelum esculentum* is very nutritious. It is high in carbohydrates, protein, vitamins, and minerals. Its high-quality protein is similar to the levels found in quinoa (*Chenopodium quinoa*). And it has high levels of iron, magnesium, zinc, and potassium.

*Ma's* tastes mild or plain, such as other carbohydrates like polenta or potatoes. Its flavor can be enhanced with spices or by



**Above:** *Pediomelum esculentum* stems usually emerge in May and June, the flowers in June and July. It grows in low-elevation grasslands east of the Continental Divide from northern Saskatchewan south to Oklahoma.

**Left:** Hidatsa elder Owl Woman with strings of dried *Pediomelum esculentum* gathered on the North Dakota prairies near the Missouri River in 1916.

**Opposite center:** Non-Native Americans should avoid harvesting *Pediomelum esculentum* because it is a culturally important plant to Native Americans and is rare in many locations on the prairies.



*Feather Woman returned to Earth as the teacher and she taught women how to harvest and preserve Ma's, berries, and other plants.*



adding it to other foods. Early American explorers and settlers commented that Indigenous people could subsist on *Ma's* for a long time without any meat, and noted that *Ma's* was good to eat in any season of the year.

*Ma's* became a popular trade item because of its longevity when dried, easy rehydration, and taste. In the mid-19th century four arm's-length braids of *Ma's* could be traded for one basket of shelled corn or a bison robe on the Missouri River.

*Ma's came from the Sky World and because of this the Blackfeet revere it. Blackfeet women were careful not to overharvest it. They managed the landscape, through fire or reseeding, to keep it abundant.*

### Revering Roots

*Ma's* was not just a staple food. The Moon called it “medicine” or sacred.

The Blackfeet and other Indigenous people view certain plants, animals, and other natural resources as sacred. A plant or animal is revered because it is a gift from the divine, a part of an origin story, introduced from the supernatural realm, or used for spiritual healing.

Indigenous people will often have restrictions on the use of these plants, either not harvesting them at all or setting restrictions over harvesting. Or they might restrict who can harvest and then use them. They will also develop land management strategies to sustain their abundance within certain ecosystems. Understanding how these ecosystems work is key to sustainable use.

This blending of ecological knowledge and religious understanding is called “traditional ecological knowledge.”



### Ma's Today

*Ma's* is no longer a staple in the Blackfeet diet. This is due to land loss, colonization, and the creation of the reservation that is near the mountains. Elders on the Blackfeet reservation rarely harvest *Ma's* today, because it grows on the prairies in their former homelands, not up against the mountains. Modern farming and ranching have changed the

natural landscapes where it grows as well. It is still abundant in small undeveloped areas on the central and eastern Montana prairies, and Indigenous people in those regions still harvest it today.

Despite this, each summer its story is told within an elaborate ceremony at the *O'kan*, or sundance. Blackfeet women play the central role within the *O'kan*. They serve as its religious leader, or medicine woman, as instructed by the Moon. They incorporate the imagery, symbolism, songs, and story learned from Feather Woman as part of their regalia for the sundance, such as wearing a headdress with eagle plumes that symbolize the leaves of the *Ma's* and walking

with the digging stick given by the Moon.

There is hope for the future of *Ma's*. Many young Blackfeet women are interested in learning about the stories of *Ma's*, Blackfeet plant-based foods, and the role of women in religious practice. They are interested in restoring our natural landscapes so that native plants can flourish. They are interested in revitalizing our traditional Blackfeet foods systems for both human health and the health of the planet. And they are showing their interest by learning traditional ecological knowledge from elder women in the tribe and helping pass that knowledge to other young women and girls. 🦋

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*Feather Woman's most important role was teaching the Blackfeet about the O'kan, or sundance. Her story is retold and reenacted, similar to a Passion play, every summer to the next generation at the O'kan.*



Religious rituals like the *O'kan* often incorporated and celebrated certain plants, such as *Pediomelum esculentum*.