

The Sacred Turnip

Dietary clues gleaned from tuber traditions

By RON COWEN

"We rode out over the treeless plains until, from the crest of a ridge, about twenty miles from the main range of the Rockies, we looked down upon a scene which I will never forget because of its novel and exceeding beauty.

"In a luxuriant tract of meadow, and on the shore of a lake, lay the tribal camp of the Blackfoot, pitched in the form of an enormous circle. The undulating ridges which surrounded it were brilliant with blue lupines and velvet-leaf sunflowers. Great herds of horses were contentedly feeding on the rich bunch grass. Smoke from the evening fires was rising from the lodges. A faint breeze, laden with pleasant fragrance from the meadows, brought distinctly the sounds of an Indian camp, the shouts of men and women, the crying of children, the barking of many dogs and the slow, measured beating of Indian tom-toms in dances and ceremonial gatherings."

— Walter McClintock, *The Old North Trail* (1910, Macmillan, London)

Government surveyor Walter McClintock first happened upon this thanksgiving dance, honoring the sun, more than a century ago. The ceremony he witnessed took place each year among many Plains Indians tribes, but historians say the week-long sun dance adopted by the Blackfoot confederacy of Montana and Alberta, Canada, appears unique in that it gives special recognition to a stringy, bulbous tuber called the prairie turnip.

A Canadian ethnobotanist is now scrutinizing the sun dance ceremony and other Blackfoot traditions in search of clues to the prairie turnip's role in daily tribal life. So far, she says, the findings suggest that this lowly legume earned its sacred status by serving as a nutritional staple.

A key part of the Blackfoot sun dance began with the transfer of a sacred bundle to a holy woman who had pledged allegiance to the sun, says Sandra Peacock of the Fort Calgary (Alberta) Historic Park. The bundle held special garments and accessories, including a wooden stick and a headdress of buffalo hide adorned with feathers and pendants of weasel skins. According to tribespeople interviewed by Peacock, the stick symbolized the tool used to unearth the prairie turnip, while the feathers represented turnip leaves.



A 1957 photograph of a Blackfoot holy woman depicts an additional adornment: a bunch of dried, twisted roots tied to the headdress. That photo, Peacock says, sparked her fascination with the prairie turnip.

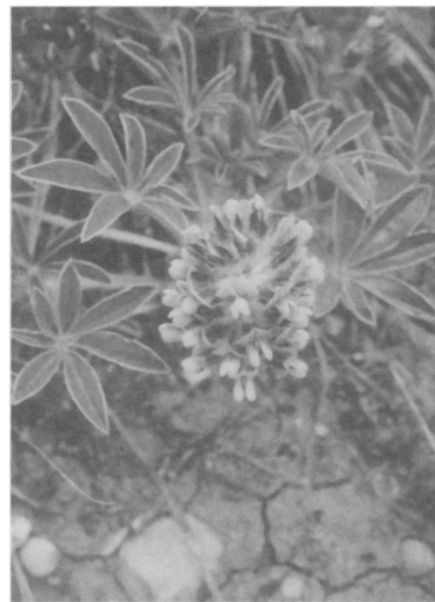
"To me it looked like the huge root of a [prairie] turnip right in front," she recalls. "It kind of triggered it all for me."

Indeed, she notes, the Blackfoot name for the headdress, *natoas*, a contraction of the words "sacred" and "edible root," means sacred prairie turnip.

References to the turnip turn up elsewhere in the Blackfoot language. Cowley, Alberta — a region traditionally populated by one of the Blackfoot tribes — bears the moniker "place of many turnips," Peacock says. And to this day, tribespeople tell folktales that feature the sacred vegetable.

Despite its name, the prairie turnip (*Psoralea esculenta*) bears little resemblance to the more familiar root vegetable known as the turnip (*Brassica rapa*). The latter is not a legume and has a more rounded, smooth appearance than the elongated, scraggly prairie turnip, which resembles a skinny potato.

Historical reports from the 1800s and early 1900s indicate that Plains Indians, especially those living in the more prairie-like regions south of Montana, once cultivated *P. esculenta* widely. The three tribes of the Blackfoot confederacy — the Piegan, the Blood and the Blackfoot — do not eat the prairie turnip today, but Peacock says the plant's extensive roots in Blackfoot legend and language strongly suggest that it once ranked along with buffalo meat as a vital element in



Photos: Peacock

The scraggly roots (left) and flowering foliage of the prairie turnip, *Psoralea esculenta*. Despite its name, this legume has little in common with the more familiar root vegetable European descendants call the turnip.

their diet.

"Even though these people are not living the traditional way and haven't for over a hundred years, it's still in their mythology. When you have nothing else, that can still give you an idea that it may have been an important food resource in the past," says Peacock, who described her work in March at the annual meeting of the Society of Ethnobiology in St. Louis.

She adds: "We don't find any other plant incorporated into the mythology, the ritual, the way the [prairie] turnip is."

Peacock launched her ethnobotanical investigation last summer while a graduate student at the University of Calgary. At the Piegan reserve near Pincher Creek, some 100 miles south of Calgary, she showed samples of *P. esculenta*, along with other indigenous plants she was studying, to several tribal elders.

"No one [on the reserve] really collects the prairie turnip anymore; it's not used in an economic sense," she says. "Yet all the old people can still identify it. A few said, 'Oh, this is the turnip we use in the sun dance.'"

As the interviews progressed, elderly Piegan women began telling her a folk tale involving *ma's*, the Blackfoot word for prairie turnip. The story — virtually identical to one reported in 1909 by Smithsonian researchers Clark Wissler and David C. Duvall — mythologizes the introduction of the prairie turnip and hints at the Blackfoot's reverence for the plant.

In *They Dance in the Sky* (1987,

Houghton Mifflin, Boston), Jean Guard Monroe and Ray A. Williamson summarize the tale as it was told to the Smithsonian researchers. Essentially, the story goes as follows:

On a clear night in Montana, a Blackfoot maiden spied the Morning Star and wished she could marry him. Several days later, the star, a handsome young man, came down from the sky and claimed the maiden as his bride, taking her back with him to the heavens. Morning Star's mother, the Moon, gave her new daughter-in-law a special gift: a root digger. But she warned the bride not to harvest a certain turnip, which was sacred and thus might bring evil if touched.

Each day, the young woman gathered vegetables with the root digger, studiously avoiding the turnip. But eventually her curiosity won out and she dug up the plant. Peering through the resulting hole in the sky, the young wife saw her old tribe and grew homesick. When her husband and his parents discovered the hole, they ordered the woman and her newborn child to return to the Blackfoot people. Using spider silk as a ladder, the woman — carrying her baby, the digging stick and the sacred turnip — descended through the turnip hole and received a hearty greeting from the tribe.

Peacock speculates that ceremonies and legends depicting the prairie turnip as sacred may reflect the tribes' need to conserve the plant, which the nomadic Blackfoot may have had difficulty harvesting as they moved from one site to the next. On the other hand, she notes, Blackfoot elders recall that any tribe member could dig up the tuber without restriction.

The vegetable's prevalence in tribal customs could also signify that it held special status in the Blackfoot diet, Peacock suggests.

In an attempt to determine the prairie turnip's dietary significance for the northern tribes, Barry Kaye and DW. Moodie of the University of Manitoba in Winnipeg analyzed the tuber's nutritional content. Their study, published in the November 1978 *PLAINS ANTHROPOLOGIST*, found that the leguminous tubers contain about 7 percent protein — much more than potatoes (2 percent) and nearly as much as maize (9 percent). The plant also contains a significant amount of vitamin C — 17.1 milligrams per 100 grams of weight. This approaches the vitamin C concentrations in fresh citrus fruits (25 to 30 mg per 100 g) and freshly dug potatoes (24 mg per 100 g), Kaye and Moody reported. Moreover, they said, a flour made by pounding dried prairie turnips (a common tribal practice) would lose little of its vitamin C during storage unless subjected to moisture.

The analysis suggested that *P. esculenta* "was widely and regularly used [among tribes of the northern plains] and formed a valuable food resource of high nutritional quality," the researchers concluded.

Historical accounts from Canadian expeditions in 1857 and 1859 describe women and children harvesting prairie turnips with fire-hardened, slightly curved digging sticks, Kaye and Moody noted. The tuber's hard, dark skin was easily removed, exposing a white, fleshy interior. Some ate the tuber raw; others boiled it, roasted it, or dried it and then crushed it to a powder.

But scientists still lack definitive evidence of the prairie turnip's place in the prehistoric Blackfoot diet, says Peacock, who maintains that most studies of tribal lifestyles have instead focused on buffalo bones, and occasionally the remains of medicinal plants. To clinch the issue, she proposes that archaeologists undertake an extensive search for the burnt remains of *P. esculenta* and other pit-roasted plants, since charring would have protected them from chemical or bacterial degradation.

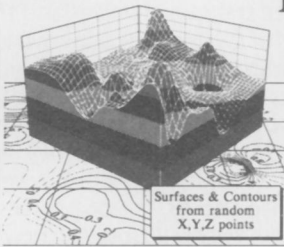
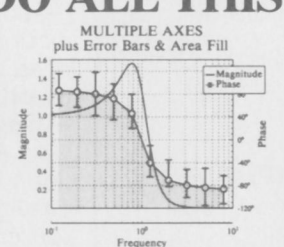
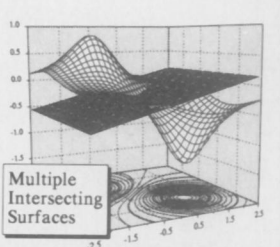
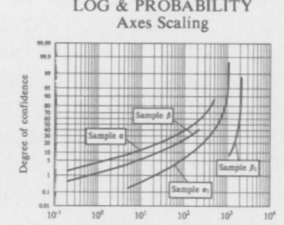

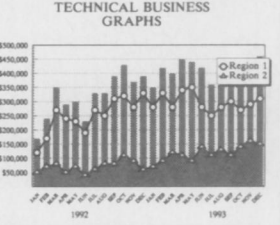
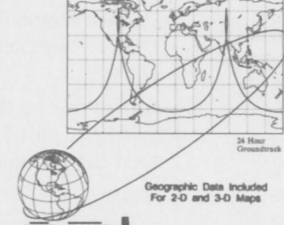
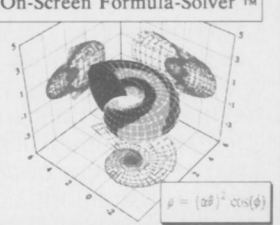
In the meantime, Peacock continues to compile ethnographic data on the prairie turnip. This summer, she hopes to witness her first sun dance and view the full costume worn by the holy woman, replete with headdress and digging stick.

McClintock viewed the sun dance more than a dozen times during the quarter-century he spent frequenting Blackfoot territory in Montana and Alberta. But toward the end of that period, he encountered tribal changes that dampened his enthusiasm. In 1910, he wrote:

"I found the once noted chief and medicine man, Brings-down-the-Sun, in a small poor lodge on the outskirts of the camp, unnoticed and seemingly unknown by the younger generation of the Blackfoot. He had come down from his home in Alberta to attend their tribal [sun dance] festival, and to lead in the ceremonials of the Sun-lodge. I saw him standing in his customary position before the sacred booth, praying and waiting. But, instead of having the people come before him for his blessing, as in former days, they were thronging the horse races and social dances, and the young men were engaged in a baseball game by the side of the Sun-lodge."

Yet the footsteps of the sun dancers still reverberate among their descendants. Peacock reports that a great-grandson of the medicine man McClintock wrote about, along with the great-grandson's wife, have begun to teach others the elements of the ceremony. And in the foothills of the Rockies, the tribespeople still delight in telling tales of the sacred turnip. □

CAN YOUR GRAPHICS SOFTWARE DO ALL THIS?

 <p style="font-size: small;">Surfaces & Contours from random X,Y,Z points</p>	 <p style="font-size: small;">MULTIPLE AXES plus Error Bars & Area Fill</p>	 <p style="font-size: small;">Multiple Intersecting Surfaces</p>
 <p style="font-size: small;">LOG & PROBABILITY Axes Scaling</p>	 <p style="font-size: x-small;">PG MAGAZINE EDITORS' CHOICE March 26, 1991 Graftool, Version 3.3</p>	 <p style="font-size: small;">TECHNICAL BUSINESS GRAPHS</p>
 <p style="font-size: x-small;">Geographic Data Included For 2-D and 3-D Maps</p>	<p style="font-size: small;">Experience the power & simplicity of the world's leading PC graphical analysis system.</p> <ul style="list-style-type: none"> - curve fitting, statistics, zooming, rotation, mouse support, scientific spreadsheet & more! 	 <p style="font-size: small;">On-Screen Formula-Solver™</p>
<p style="font-size: small;">GRAFTOOL \$495 • Interactive Demo Available • Academic Discounts Call 1 (800) SAY-GRAF • 1 (213) 540-8818 • FAX 1 (213) 540-3492</p> <h1 style="margin: 0;">3-D VISIONS</h1> <p style="font-size: x-small;">412 S. Pacific Coast Highway, Second Floor, Redondo Beach, CA 90277</p>		