

3,500 years of Native stewardship of camas

An Oregon State University study has found evidence that Indigenous groups in the Pacific Northwest were intentionally harvesting edible camas bulbs at optimal stages of the plant's maturation as far back as 3,500 years ago.

The findings contribute to the growing body of research around traditional ecological knowledge and practices, demonstrating the care and specificity with which Indigenous groups have been stewarding and cultivating natural resources for millennia.

Camas is an ecological and cultural keystone, meaning it is a species that many other organisms depend on, and that features prominently within many cultural practices.

"If you think about salmon as being a charismatic species that people are very familiar with, camas is kind of the plant equivalent," said Molly Carney, an assistant professor of anthropology in OSU's College of Liberal Arts, and lead author on the study.

"It is one of those species that really holds up greater ecosystems, a fundamental species which everything is related to."

An eye-catching blue flower that grows widely



throughout the Pacific Northwest, camas is referred to in Indigenous calendars across the region, with the plant's growth stages used as a sort of seasonal benchmark. It is often included in traditional First Food ceremonies, in which tribal communities mark the coming of spring with the first salmon run or the first edible roots after a long winter, Carney said.

Camas bulbs must be baked for two to three days to render them edible. Once soft, the bulbs taste a bit like sweet potato, Carney said. Traditional baking was done in underground ovens using heated rocks.

The archaeological record Carney examined included the remains of these large pit ovens. After cooking the bulbs, Indigenous peoples had many ways to process camas and were able to store

it for many months at a time. (Even Lewis and Clark's diaries mention eating camas they were given by Nez Perce tribal members.)

In the recent study, published in the *Holocene*, Carney looked at camas bulbs from the Willamette Valley in Oregon dating back 8,000 years to determine when in their life cycle they were harvested. Similar to how tree rings help to estimate how old a tree is, counting the interior leaf scales of a camas bulb lets you estimate its age. Camas grows to harvestable size in three to five years, depending on soil conditions.

Camas baking ovens from 4,400 years ago have been recorded at a Long Tom River archaeological site near Veneta, Oregon, but for several thousand years, the bulbs appeared to have been harvested somewhat indiscriminately. Carney found that around 3,500 years ago, the bulbs started being harvested more selectively at the point when the plants were four or five years old and had reached sexual maturity.

This timing in the Late Holocene period lines up with broader climatic shifts in the region, the researchers noted, coming around the same time as low-magnitude fires became more commonplace in

the landscape. Carney also studied lake-core evidence from the floor of Beaver Lake, collected by Central Washington University researcher Megan Walsh, that gives credence to the theory that controlled burns were used intentionally to create optimal conditions for camas and other plants starting 3,000 to 4,000 years ago.

Based on her research, Carney says it's clear that Native communities at the time were not selectively harvesting for the biggest possible bulbs, but rather stewarding camas to be sustainable over time.

"They were trying to maintain the age structure of these camas populations within a pretty narrow window," she said. "When I had the opportunity to harvest alongside tribal communities, as they harvest, they replant the smaller bulbs as they go."

The shift from haphazard harvesting to selective stewardship among tribal communities appears to have occurred at approximately the same time throughout the Pacific Northwest, Carney said.

Co-author on the study was Thomas Connolly from the Museum of Natural and Cultural History at the University of Oregon.

Warm Springs End of School Year K8 POWWOW

June 11th, 2024 - K-8 Football Field - 1-2:30PM

Intertribals - Honorings - Social Dance - Round Dance

PI-UME-SHA TREATY DAYS JUNE 28-30, 2024 WARM SPRINGS, OREGON

VENDORS, QUEEN CANDIDATES, AND FAMILIES
SPONSORING SPECIALS ARE ASKED TO
CONTACT SHARON KATCHIA AT 541-295-6046

FOR PARADE INFORMATION
CONTACT RAMONA BAEZ 541-460-0077

Medardo
Owner, Villas Market
Lowered his bills, now he can
offer more to his community.

WHAT POWERS YOU?

Offering energy **savings** and **solutions** that power your life.

Find cash incentives and resources at energytrust.org

