Handbook of Indian Foods and Fibers of Arid America, pg. 479-481

Most of the species [of *Atriplex*] are very salt-tolerant. Some of the herbaceous species are grazed by cattle, their salty taste probably increasing their palatibility. The Pima made a very nutritious meal from the parched seeds of the various saltbushes. They drank the meal with water, taking a pinch of dry meal alternately with a sip of water. They also used the leaves and young shoots as greens, sometimes boiling them with other foods to provide a salty flavor (Russell, 1908). The Hopi usually boiled the greens with meat (Hough, 1897).

Fourwing saltbush (*Atriplex canescens*; pl. 45*a*).

> Erect, much-branched shrub, 0.4-2 m high, grayish scurfy, with spreading or ascending terete branches; dioecious, the male glomerules in terminal panicles of dense spikes, the female in dense leafy-bracted spikes and panicles; flowers small, pale yellow; the four-winged fruit is prominent, appearing in large bunches; seeds brown, 1.5-2.5 mm long. Common on dry slopes, flats and washes, below 2,250 m, South Dakota to Oregon, south to northern Mexico.

Indians ground the seeds of *A. canescens* for meal and sometimes ate the leaves (Sweet, 1962). The Hopi were said to have used the ashes of *A. canescens* as a substitute for baking powder (Kearney and Peebles, 1960). In New Mexico the Zuñi ground the roots and blossoms of *A. canescens*, moistened the ground product with saliva, and applied this mixture to ant bites (Sweet, 1962).

Wild Plants and Native Peoples of the Four Corners, pg. 152-154

Fourwing Saltbush
Goosefoot family
(Atriplex canescens)

Wherever you travel throughout the West, you're likely to encounter the ubiquitous fourwing saltbush shrub growing on sandy desert washes, grassy uplands, piñon-juniper woodlands, or salty, alkaline flats. Its foliage is more gray than green, and its canoe-shaped, inch-long evergreen leaves characterize this rounded shrub that can grow as tall as an adult person. These plants are dioecious, which means the male and female flowers are borne on separate plants. In late summer and fall female plants are striking with their huge clusters of glistening seeds, each bearing two pairs of papery wings that give this plant its common name.

Fourwing saltbush is especially abundant on the floor of Chaco Canyon, but you'll also find it along the trails at Aztec Ruins, Hovenweep, and Canyon de Chelly. Most of Mesa Verde is too high and forested for the plant, but it does grow there in a few woodland openings.

Saltbush was highly valued during Ancestral Puebloan times. Seeds regularly turn up in desiccated human feces recovered from these sites. At Antelope House in Canyon de Chelly, the prehistoric occupants made brushes with shredded saltbush limbs. It is thought to have been a major source of fuel for Chacoans and even earlier peoples during the Archaic period.

The Hopi continued the tradition of collecting saltbush wood for fuel until the introduction of the metal axe, which facilitated a shift from shrub to tree fuels. Hopi still consider saltbush one of the four shrubs prescribed for their kiva fires. Tradition also calls for their mixing saltbush wood ash with blue cornmeal to provide the alkali necessary for maintaining the color when it is

used to make blue piki wafer-bread. The people of Hano, refugees from Rio Grande pueblos who settled on Hopi First Mesa in the 1700s to escape Spanish persecution, had a slightly different dye use for saltbush ashes. They stirred them into their dough in order to turn it from purplish gray, the natural color of meal ground from blue kernels, to greenish blue.

Probably all Indians living in the Four Corners once collected saltbush seeds for food. Southern Paiute people were recorded as having ground the seeds of fourwing and two other species of saltbush to make a mush or bread. The Navajo parched and ground the seeds to make flour.

Navajo medicinal uses seem endless. Plant parts were ingested as a home remedy for eating discomfort, while the roots might be boiled in a sweat bath for stomach pain. Leaves and roots are ground to concoct a cough medicine, roots for a toothache, and leaves for snuff, as well as for a poultice for ant bites. Then for hair tonic, leaf and stem ashes are rubbed into the scalp.

The Navajo produce several shades of yellow dye by boiling saltbush leaves and blossoms with raw alum. Wool yarn is then added to this mixture and boiled up to three hours. The Hopi once sprinkled saltbush ashes on buckskin moccasins that had been painted a deep red, which was derived from mountain-mahogany or alder bark dye, in order to bring out the color.

Ethnobotany of the Navajo, pg. 43

Atriplex sp. Saltbush. Tiwójiih (bushy; i. e. bushy [plant]: the greasewood). The stings of ants, bees, and wasps are treated by chewing *Atriplex* and placing it on the swelling caused by the sting (24:117).

…

Atriplex canescens (Pursh.) Nutt.

Calligonum canescens Pursh. Fourwing Saltbush, Shad Scale, Orache. Tíwójiiłpáih (greasewood, grey). This plant is used by the Navajo as forage for his cattle, sheep, and goats (13:17). It is used especially in the winter and early spring when other forage is scarce (83:204). The leaves and twigs are also used in coloring wool yellow (19:3).

Nanise', pg. 108-110

SALTBUSH *(Atriplex)*

…

Atriplex; Greek for "orache," a species of this genus that is eaten as a spinach

…

fourwing saltbush, chamiso

Atriplex canescens (Pursh) Nutt. ('a-trih-pleks kuh-'ness-senz)

canescens: Downy gray; becoming grayish

Navajo Name: *Díwózhiiłbeii*, "gray greasewood"

Description & Distribution

Fourwing saltbush is a fairly compact and symmetrical grayish shrub up to 6 feet tall. Pale yellow stems become tan and then gray with age. Leaves are linear to elliptical,

green-gray, and as long as 2 inches but average about 1 inch. Fruits bear four “wings,” which discolor from pale gray-green to yellowish to brownish as they age.

Tolerant of slightly saline and alkaline soils, fourwing saltbush associates with black greasewood *(Sarcobatus vermiculatus)* but also grows in other shrublands, woodlands, and dry, open forests. Elevational range is up to almost 7,000 feet. Other associates are big sagebrush *(Artemisia tridentata)*, rubber rabbitbrush *(Chrysothamnus nauseosus)*, desert wolfberry *(Lycium pallidum)*, and yuccas (*Yucca* sp.).

Navajo Uses

Medicinal: Fourwing saltbush is used to treat a variety of skin irritations. The leaves are chewed and used as a poultice on ant, bee, and wasp bites. A wartlike growth on chamiso is mixed with juniper mistletoe (*Phoradendron juniperinum*) and used to treat toothaches and stomachaches. The same mixture can be taken during a sweatbath to increase perspiration. Chamiso leaves and roots can be made into a cough medicine. The plant can also be used as snuff to relieve nasal problems.

Ceremonial: *Díwózhiiłbeii* is used as an emetic in Evil Way and Navajo Wind Way ceremonies.

Other: Chamiso was used for food. The leaves give a salty flavor to corn roasting in a pit. The seeds were parched and ground into a meal, which could be used alone or added to other flour. Flowers were added to puddings. Navajo livestock eat *díwózhiiłbeii* in winter and early spring when other foliage is scarce. A mixture of chamiso and juniper (*Juniperus* sp.) twigs is used to treat sheep who bloat from eating chamiso in warm weather. The ashes of the leaves and twigs are rubbed on the scalp for a hair tonic.

Fourwing saltbush has several dye uses. The leaves and twigs make a yellow dye, with raw alum (aluminum sulfate; found at the base of rock cliffs on the reservation) used as the mordant. Ashes of the leaves and twigs are added to red buckskin dye to intensify the color.

References

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Ethnobotany of the Ramah Navaho, pg. 24

116. **Atriplex canescens** (Pursh) Nutt.

Chamiso, fourwing saltbush

WH 147 -- “chamiso” (40) or gray chamiso (41)

Sheep feed (5): in warm weather it may cause sheep to bloat if they overeat, but a decoction of chamiso and juniper leaves will relieve them if administered quickly enough (conf. A.L. & D.L., 1940). Emetic (26): home remedy for distress after eating (10); used by singer before a ceremonial to insure a “good strong voice”; tops or roots, boiled, taken during sweat

bath or at any time for gastric pain (7). Evilway (2) and Navaho Windway emetic. Snake figurine for snake infection: root, about 12 inches long (6) (conf. A.L. & D.L.). Bad cough: leaves or roots, decoction (2). Toothache: root, ground and heated on a rock, applied to tooth. Nose trouble: leaves, snuff. Ant bite: leaves, poultice. Hair tonic: ashes of leaves and stems, rubbed on scalp. Leaves placed on coals in pit for roasting corn, to impart a salty taste. Yellow dye for wool: young leaves and twigs (3). To intensify red color of buckskin dye: ashes of leaves and twigs.

Contemporary Ethnobotany among the Apache of the Clarksdale, Arizona Area, pg. 113-114

Atriplex canescens (four-wing saltbush, chamiso): This shrub can adapt itself to very diverse areas and conditions. It has been found in association with creosote, sagebrush, pinon, and even ponderosa pine.

The blossoms were once mixed with water and used as a shampoo and body soap. A large quantity of flowers was needed to make a good lather. The soap has not been used in many years.

Apache name: The name could not be remembered.

Ethnobotany of the Hopi, pg. 73

Atriplex canescens (Pursh) Nutt. Fourwing Saltbush *su'ovi*

Very abundant shrub near the Hopi towns.

Use: Burned, and ashes used as alkali necessary to maintain the blue coloring present in the blue corn meal used in making blue *piki* (wafer bread). (See *Zea mays*, blue corn, page 67.) Occasionally other shrubs may be substituted, and even baking powder may be used. Hough (1898) lists this as one of the four kiva fuels. Used in manufacture of *paho* (prayer-sticks) (Dorsey and Voth, 1901).