

BIG SUMMIT PRAIRIE/LOOKOUT MTN

An overview and plantlist by Stuart G. Garrett, MD

Big Summit Prairie is located 30 miles east of Prineville, Oregon in the Ochoco Mountains at an elevation of 4500 ft. It is a 5 by 7 mile basin that drains into the Crooked River system. The Prairie is an unexpected meadow island in the dramatic old growth ponderosa pine forests that surround it. During the spring it has unsurpassed displays of wildflowers. The Prairie has supported herds of antelope, deer, and elk that remind some of the African savannah. Although the main Prairie is privately owned, the surrounding lands are public and open for all to appreciate.

The Prairie is a core of older rocks surrounded by younger lavas. Big Summit Prairie is composed of 30 to 35 million-year-old volcano-clastic deposits of the John Day Formation. It is encircled by the 19 million-year-old Columbia River Basalts, which make up local prominences such as Lookout Mountain and Mt. Pisgah. These flood basalts were erupted over millions of years from vents hundreds of miles distant. How did this "window" of older rocks develop? The most conventional explanation for the formation of this basin would be differential erosion. Erosive forces could have broken through the capping Columbia River Basalts into the John Day Formation and sculpted-out the prairie. However, at least one geologist has speculated that perhaps the area where the Prairie is located was once a highland that became surrounded by the fluid Columbia River Basalts when they flowed through the area. This "island" structure is called a kipuka or steptoe. In this scenario the elevated area was then eroded to leave a basin encircled by the younger lavas.

The Columbia River Basalts were erupted between 12 and 19 million years ago. They flowed from eastern Oregon and Washington over 300 miles west to the ocean and reached a maximum depth of over three miles. These huge eruptions are rare throughout geologic history.

Another postulate is that the large oval basin could represent an ancient caldera. However, local geology seems to negate this idea. There is also no evidence that it was once a lake bed. It is important to note that the ideas presented here are speculation; no one has proven any hypothesis. No matter how it was formed, this isolated basin in the mountains is host to some spectacular wildflowers and has been settled and ranched since the early days of Euro-American settlement.

By the mid-1880's several families had filed claims on Summit Prairie. Lydia O'Kelley, who came to the Prairie in 1885 at the age of 13 recalls:

"There were several families there then. The snow in winter was quite deep, often four feet or more, and we had fun sleigh riding to one another's homes. There was lots of wild game - bears, deer, foxes, grouse, sage hens, and hundreds of cranes in the spring. The Warm Springs Indians would camp up there in the spring and hunt deer and the women would dig camas. They would cook it, then dry it and grind it on rocks, then make cakes and bake them on hot rocks - that was most of their bread."

Mae Smith, a descendent of the pioneer Merritt family notes:

"Before the ranch was sold in 1939, there were still traces of the circle worn in the ground around the Prairie where the Indians held their annual pony races. Camas grew profusely in the field south of the ranch house. We had to keep the cows out of it, as it made their milk taste like garlic or onions."

Local residents say that the Warm Springs Indians still come in the spring to dig the Camas. There is a rich archaeological legacy in and around the Prairie, which is being explored by the US Forest Service. What appear to be camas ovens have been located on the north of the prairie.

A series of now-abandoned ranches dot the Prairie. The Schmidt Mansion is on the western end and at one time was the fanciest home in Crook County - and that was when Crook County took in what is now Jefferson and

Deschutes Counties. To the east is the Muddy Ranch, which served as headquarters when the Hudspeth Family owned the Prairie. Further east is the Merritt House. An imposing structure, it was built in about 1904 and served as a social center, with dances being held in the upstairs. Nine children were raised here and one can imagine the isolation and therefore the importance of entertaining friends and guests. The last place to the east is the Lowery Place (also called the Howard, Taylor, or Connell Place). Of interest is the fenced-off grave (on private property owned by Les Schwab) of Brandon Lowery and an infant son and 16 year old daughter, Janie. It has been fenced off since 1934 and bunchgrass and native shrubs are lush inside the enclosure.

Ranching has been an integral part of the recent history of the Prairie. It is hard to imagine the lush meadow grasses and bunchgrasses that must have enticed the first ranchers. Native rye grass grew six to eight feet high around the edge of the Prairie. Meadow grasses would have been extensive in moister areas. Willow, aspen, and cottonwood lined the stream-courses. The effects of grazing on soils and riparian systems can be observed.

Mining for gold, silver, and mercury has taken place around the Prairie. The first gold discovery was at Scisserville in 1871. In 1889, cinnabar (mercury) was discovered in the Johnson Creek area. First production was from the Mother Lode Mine in 1906 and has continued intermittently since with a peak in the 1930's. The largest mine was the Blue Ridge, located north of the road before one enters the Prairie. The large two-story structure was a bunkhouse built in 1930 by mine-owner C. T. Takahashi, a Seattle dentist. It could accommodate 24 Japanese workers who were paid \$5 a day and charged \$3 a day for room and board. The mine is now flooded.

Beaver have returned to the streams surrounding the Prairie. Antelope are frequently sighted in the area and deer and elk are common. Sagegrouse are occasionally found on the prairie. The area supports at least one rare plant, which is also on the endangered list: Calochortus longebarbatus var peckii (Peck's mariposa lily). Its only globally known location is in this vicinity and it blooms in June and July.

Ponderosa pine forests surround the Prairie. Fire is an important part of the natural ecosystem, probably occurring every 10 to 20 years. The effects of fire can be seen on stumps and in the prescribed burns on the way to the Prairie. The silver-bordered meadow fritillary butterfly (Boloria selene tollandensis) is found in its only Oregon location here. Its larvae feed at night on one of the violets, which grow in the area.

Potential stopping spots include the Prineville Overlook, the Ochoco Ranger Station, Biggs Spring, and several spots around the Prairie, and possibly the Tastee Treat in Prineville.

Sources:

- 1) Larry Chitwood, geologist for Deschutes National Forest
- 2) USGS Misc Geol Invest Map I-568, 1969, Swanson
- 3) Ochoco NF plantlist by Christy Steck
- 4) Butterflies of Oregon by Dornfield
- 5) "Big Summit Prairie," a pamphlet by Crook County Historical Society 1980
- 6) "Crook County Historical Society Field Trip Notes," Sept, 1990

A SELECTIVE PLANTLIST

This list includes plants that are rare, common, showy, useful, or otherwise notable.
It is not meant to be comprehensive or complete.

FORBS

Achillea millefolium (yarrow)
Allium acuminatus (onion)
" tolmiei
Amsinckia intermedia (fiddleneck)
Antennaria rosea (rosy everlasting)
Arabis divaricarpa (rock cress)
Arnica cordifolia (heart leaf arnica)
Astragalus purshii (milk vetch)
" whitneyi (speckled pod)
Balsamorhiza sagitata (balsamroot)
Berberis repens (Oregon grape)
Blepharopappus scaber
Brodiaea douglasii
Calochortus longebarbatus var peckii (Peck's mariposa lily) T&E
Camassia quamash (camas)
Castilleja sp (paintbrush)
Chaenactis douglasii
Clarkia pulchella
Clintonia uniflora (queens cup)
Collinsia parviflora (blue lips)
Delphinium nuttallii (larkspur)
Dodecatheon alpinum (shooting star)
" conjugens
Epilobium paniculatum (fireweed)
Erigeron linearis (narrow leaf daisy)
Eriogonum nudum (buckwheat)
" strictum
" umbellatum
Eriophyllum lanatum (Oregon sunshine)
Erysimum asperimum (wallflower)
Fragaria virginiana (strawberry)
Gentian sceptrum
Geum trifolium (Old Mans Beard)
Habenaria dilatata (bog orchid)
Hesperochiron pumilis
Hydrophyllum capitatum (waterleaf)
Ipomopsis aggregata (scarlet gilia)
Iris missouriensis
Lewisia rediviva (bitter root)
Lithophragma bulbifera (prairie star) saxifrage fam
Lithospermum ruderales (gromwell)
Leucocrinum montanum (sand lilly)
Lomatium cous (biscuitroot)
" gormanii
" nudicauli
" triternatum

Lupinus latifolia (lupine)
Mertensiana ciliata (lungwort)
" longiflora
Mimulus guttatus (monkeyflower)
" nanus
Monardella odoratissima
Montia linearis (narrow leaf montia)
" perfoliata (Miners lettuce)
" sibirica (candy flower)
Myosotis sylvatica (forget me not)
Orobanche uniflora (broomrape)
Orthocarpus tenuifolius (owlclover)
Paeonia brownii (peony)
Penstemon cinicola (figwort)
" speciosus
Phacelia heterophylla
Phlox hoodii (Hoods phlox)
Phoenicaulis cheiranthoides (daggerpod)
Polemonium pulcherrimum (Jacobs ladder)
Polygonum bistortoides (bistort)
Potentilla gracilis (cinquefoil)
Ranunculus glaberrimus (buttercup)
" testiculatus
Saxifrage oregana (saxifrage)
Scutellaria sp (skullcap)
Sedum stenopetalum (stonecrop)
Senecio canus (groundsel)
Sidalcia sp (checker mallow)
Sisyrinchium inflatum (grass widows)
Swertia albicaulis
Thalictrum fendleri (meadowrue)
Trifolium macrocephalum (big clover)
Veratrum californicum (cornlilly)
Viola adunca (violet)
" nuttallii (yellow prairie violet)
Wyethia amplexicaulis (yellow mules ears)
" helianthoides (white ")
Zygadenus venenosus (death camas)

GRASSES

Agopyron spicata (wheatgrass)
Elymus cinereus (giant rye)
Festuca idahoensis (Idaho fescue)

SHRUBS

Artemisia tridentata (big sage)
Prunus virginiana (chokecherry)
Purshia tridentata (bitterbrush)
Ribes aureum (golden currant)

" cereum (red currant)
Rosa nutkana (wildrose)
Salix bebbiana (willow)
" sp
Sambucus racemosa (red elderberry)
" cerulea (blue elderberry)

TREES

Juniperus occidentalis (western juniper)
Larix occidentalis (western larch)
Pinus contorta var latifolia (lodgepole pine)
Pinus ponderosa (ponderosa pine)
Populus tremuloides (aspen)

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